एनटीपीसी
NTPC

एन टी पी सी लिमिटेड
(भारत सरकार का उद्यम)
NTPC Limited
(A Govt. of India Enterprise)

केन्द्रीय कार्यालय/Corporate Centre

Ref. No.: 01: SEC: LA
Dated: 3/9/2021

To

General Manager
Department of Corporate Services
BSE Limited
Floor 25, Phiroze Jeejeebhoy Towers
Dalal Street
Mumbai-400 001

Manager
National Stock Exchange of India Limited
Exchange Plaza
Bandra-Kurla Complex
Bandra(E)
Mumbai-400 051

Sub:

- **Notice of 45th Annual General Meeting to be held though Video Conferencing (VC) / Other Audio Visual Means (OAVM) along with the Integrated Annual Report of the Company for the Financial Year 2020-21**
- **Details regarding e-Voting and Book Closure for the purpose of AGM**

Dear Sir,

This is to inform that the 45th Annual General Meeting (AGM) of the members of NTPC Limited shall be held on Tuesday, 28th September, 2021 at 10:30 A.M. through Video Conferencing (VC)/Other Audio Visual Means (OAVM). In accordance with the applicable circulars issued by the Ministry of Corporate Affairs and Securities Exchange Board of India, notice of the AGM along with the Integrated Annual Report 2020-21 is being sent only through electronic mode to those members whose e-mail addresses are registered with the Company/Depository/Depository Participant(s).

Integrated Annual Report 2020-21 along with notice of 45th AGM is enclosed. Same is also available on the website of the Company i.e. www.ntpc.co.in, websites of BSE and NSE i.e. www.bseindia.com & www.nseindia.com respectively. Notice of AGM shall also be available on the e-voting website of CDSL i.e. www.evotingindia.com .

For the purpose of AGM, register of members and share transfer books of the Company will remain closed from 22nd September, 2021 to 28th September 2021 (both days inclusive).

The Company is providing remote e-voting facility to all its members to cast their votes on all resolutions as set out in the notice of the 45th AGM. Remote e-voting period commences on Friday, 24th September, 2021 at 9:00 AM (IST) and ends on Monday, 27th September, 2021 5:00 PM (IST). During this period, members of the Company, holding shares either in physical form or in dematerialized form, as on the cut-off date i.e. Tuesday, 21st September, 2021, shall be entitled to avail the facility of remote e- voting. Further, e-voting facility shall also be available at the AGM for members (as on cut-off date) who had not casted their votes through remote e-voting.

NTPC Limited NEW DELHI

The details regarding manner of registering/updating E-mail address, casting vote through e-voting, attending AGM through VC/OAVM have been set out in the notice of 45th AGM.

Thanking you.

Yours faithfully,

Nandini Sarkar

NTPC Limited एनटीपीसी NTPC NEW DELHI

(Nandini Sarkar)
Company Secretary &
Compliance Officer

Encl.: Annual Report -2020-21

Generating
Power & Smiles
24x7
for the Nation

एनटीपीसी
NTPC

45th INTEGRATED ANNUAL REPORT 2020-2021











VISION

To be the World's Leading Power Company, Energizing India's Growth

MISSION

"Provide Reliable Power and Related Solutions in an Economical, Efficient and Environment Friendly Manner, Driven by Innovation and Agility"

CORE VALUES

ICOMIT



Integrity
सत्यनिष्ठा



Customer Focus
ग्राहक को प्रधानता



Organisational Pride
संगठन पर गौरव



Mutual Respect and Trust
परस्पर विश्वास एवं आदर



Innovation and Learning
नवप्रवर्तन एवं ज्ञानार्जन



Total Quality and Safety
संपूर्ण गुणवत्ता एवं सुरक्षा

CORPORATE OBJECTIVES

BUSINESS PORTFOLIO GROWTH

- To sustain NTPC's position as the leading power generation company in the world.
- To broad base the generation mix with significant proportion of clean energy sources.
- To enable the generation fleet to operate at optimum efficiency while meeting the demand and stability in the grid.
- To diversify into emerging businesses and markets across the power value chain including coal mining, power trading, ancillary services, E-mobility, storage and related adjacencies.
- To establish a strong services brand in domestic and international markets.

CUSTOMER FOCUS

- To foster a collaborative style of working with customers, growing to be a preferred brand for supply of quality and reliable power.
- To expand the customer portfolio through profitable diversification into downstream business inter alia E-mobility and direct supply.
- To ensure rapid commercial decision making, using customer specific information, with adequate concern for the interest of the customer.
- To adapt business models and organisation structures to capture value which is progressively shifting towards the customers.

AGILE CORPORATION

- To ensure effectiveness in business decisions and responsiveness to changes in the business environment by:
  - o Adopting a portfolio approach to new business development.
  - o Continuous and co-ordinated assessment of the business environment to identify and respond to opportunities and threats.
- To create lean organization and business processes.
- To develop a learning organization having knowledge-based competitive edge in current and future businesses.
- To develop a culture of curiosity and innovation in learning and adopting new technologies, business models and operational philosophies in line with the evolving market and changing customer needs.

PERFORMANCE LEADERSHIP

- To continuously strive for innovation in reducing costs, enhancing operational flexibility and in addressing changing customer needs.
- To continuously improve on project execution time and cost in order to sustain long term competitiveness.
- To effectively leverage Information Technology to drive process efficiencies and enable system flexibility in line with the market needs.
- To create capabilities to attain leadership in the new and emerging businesses.
- To embed quality and safety in all systems and processes.
- Support evolution of power markets to meet customer needs through products, platforms, services etc. to create a win-win opportunity across stakeholders.
- To lead development efforts in the Indian power sector through stakeholder consultation.
- To assist in capacity creation of key stakeholders.

HUMAN RESOURCE DEVELOPMENT

- To enhance organizational performance by institutionalizing an objective and open performance management system.
- To align individual and organizational needs and develop business leaders by implementing a career development system.
- To build a lean organization with diverse skills and high ability to adapt to change.
- To build and sustain a learning organization of competent world-class professionals.
- To institutionalize core values and create culture of team-building, ownership, empowerment, equity, innovation and openness which would motivate employees and enable achievement of strategic objectives.

FINANCIAL SOUNDNESS

- To maintain and improve the financial soundness of NTPC by prudent management of the financial resources.
- To continuously strive to reduce the cost of capital through prudent management of deployed funds, leveraging opportunities in domestic and international financial markets.
- To promote innovative funding models to support entry into new businesses and sustain long term growth.
- To develop appropriate commercial policies and processes which would ensure remunerative tariffs, balance capital work-in-progress and minimize receivables.

SUSTAINABILITY AND CORPORATE SOCIAL RESPONSIBILITY

- To deliver business and environmental value through projects which are beneficial for business and larger ecosystem.
- To ensure sustainable power development by ensuring minimal wastage across operations.
- To actively contribute towards societal development.
- To lead the sector in the areas of resettlement and rehabilitation and environment protection including effective ash-utilization, peripheral development and energy conservation practices.

RESEARCH & DEVELOPMENT (R&D)

- To undertake R&D initiatives in sync with the overall business portfolio.
- To pioneer the adoption of reliable, efficient and cost-effective technologies by carrying out fundamental and applied research in alternate fuels and technologies.
- To collaborate with leading institutes, technology players and service providers, particularly in the area of power plant construction, generation technology, operations, renewable energy sources, storage, e-mobility etc. that can contribute towards efficiency, reliability and environment friendliness.

REFERENCE INFORMATION

Registered Office

NTPC Bhawan, SCOPE Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110 003
Phone No.: 011-2438 7333
Fax No. . 011-2436 1018
Email: ntpccc@ntpc.co.in
Web site: www.ntpc.co.in
CIN: L40101DL1975GOI007966

Registrar & Share Transfer Agent for Equity Shares

M/s Beetal Financial & Computer Services Pvt. Ltd.,
99, Madangir, Behind Local Shopping Centre,
Near Dada Harsukhdas Mandir, New Delhi - 110 062
Contact person: Shri Punit Mittal or
Shri Ratan Kumar Karna
Phone: 011-29961281 – 83, 26051061 & 26051064
Email: ntpc@beetalfinancial.com

Depositories

National Securities Depository Limited
Central Depository Services (India) Limited

Shares listed at

National Stock Exchange of India Limited
BSE Limited

NTPC's Subsidiary Companies (as on 31.3.2021)

NTPC Vidyut Vyapar Nigam Limited
NTPC Electric Supply Company Limited
Kanti Bijlee Utpadan Nigam Limited
Nabinagar Power Generating Company Limited
Bhartiya Rail Bijlee Company Limited
Patratu Vidyut Utpadan Nigam Limited
NTPC Mining Limited
North Eastern Electric Power Corporation Limited
THDC India Limited
NTPC EDMC Waste Solutions Private Limited
NTPC Renewable Energy Limited
Ratnagiri Gas and Power Private Limited

Company Secretary

Ms. Nandini Sarkar

Auditors

1. M/s. S K Mehta & Co.
2. M/s. S N Dhawan & Co LLP
3. M/s. Verma & Verma
4. M/s. Parakh & Co.
5. M/s. C K Prusty & Associates
6. M/s. B C Jain & Co.
7. M/s. V K Jindal & Co.

Bankers

AXIS BANK
बैंक ऑफ इंडिया Bank of India Relationships beyond banking.
केनरा बैंक Canara Bank
सेन्ट्रल बैंक ऑफ़ इंडिया Central Bank of India "CENTRAL" TO YOU SINCE 1911
HDFC BANK We understand your world
ICICI Bank
IDBI BANK
इंडियन बैंक Indian Bank
Indian Overseas Bank
IndusInd Bank
J&K Bank
Punjab & Sind Bank (A Govt. of India Undertaking)
punjab national bank
State Bank of India THE BANKER TO EVERY INDIAN
यूको बैंक UCO BANK
Union Bank
YES BANK



SUPPORT 'GREEN INITIATIVE'

GREEN INITIATIVE IN THE CORPORATE GOVERNANCE

The Ministry of Corporate Affairs has takes a "Green Initiative in the Corporate Governance" by allowing paperless compliances by the companies and has issued circulars stating that service of notice/ documents including Annual Reports can be send by e-mail to its members. To support this green initiative of the Government in full measure, members who have not registered their e-mail addresses, so far, are requested to register their e-mail address, in respect of electronic holdings with the Depository through their concerned Depository Participants. Members who hold shares in physical form are requested to get their e-mail address registered with Beetal Financial & Computer Services Private Limited, RTA of the Company.

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Annual General Meeting

Date : **28th September, 2021**

Time : **10:30 A.M.**

Venue/Mode : **Video Conferencing ("VC")/ Other Audio-Visual Means ("OAVM")**



Aerial view of ongoing Ramagundam Telangana Project

About the REPORT



SCOPE OF THE REPORT

The NTPC Integrated Annual Report has been prepared in accordance with the <IR> Framework laid down by the International Integrated Reporting Council (IIRC). Also, other frameworks such as GRI Standards "Comprehensive" with EUSS, National Voluntary Guidelines (NVGs), United Nations Sustainable Development Goals (UN SDGs) and the United Nations Global Compact (UNGC) principles has been referenced in the content preparation. The financial and statutory information in this report is in accordance with the requirements of the Companies Act, 2013, Indian Accounting Standards, the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 and the Secretarial Standards.

BOUNDARY OF THE REPORT

This report covers the business activities of NTPC Limited and its Joint Ventures & Subsidiaries covering electricity generation (Thermal, Renewables, Hydro), Consultancy, Business Development, NETRA and Energy Trading. All stations/ plants considered in current report are located in India and are under operation. The report covers data and information for the period April 1, 2020 to March 31, 2021. There have been considerable changes in the installed capacity of power generation plants during this reporting period. The details have been provided in the manufacturing capital section of this report.

REPORT METHODOLOGY

For collection of data on performance indicators, a uniform approach is followed across all NTPC stations. Collected data is then processed at individual operating stations in accordance with universally accepted methodologies following approaches of measurement, calculation and analysis. There is no re-statement or significant change in measurement methods applied in this report with respect to the previous report, except if mentioned, wherein applicable. Report content and aspect boundary provided in the report has been reviewed and approved by top management of the company.

ASSURANCE OF THE REPORT

Non-financial information in this report, has been independently assured by M/s KPMG , India. A reasonable assurance was conducted in accordance with ISAE 3000 Standards, covering qualitative and quantitative information.

NTPC appreciates feedback from all stakeholders. For any additional information regarding sustainability report, please reach out to the addresses given below

Headquarter

NTPC Limited
(A Govt. of India Enterprise)
NTPC Bhawan,
Core-7, Scope Complex
7, Industrial Area, Lodhi Road
New Delhi-110003

CSO's Office

CSO's Office
Engineering Office Complex (EOC)
NTPC Limited
Sector - 24, Noida - 201 301 (U.P.)
Email- sustainability@ntpc.co.in
Phone: (+91) 120 - 2410350,
Fax: (+91) 120 - 2410500

Greenbelt in and around Ramagundam Plant

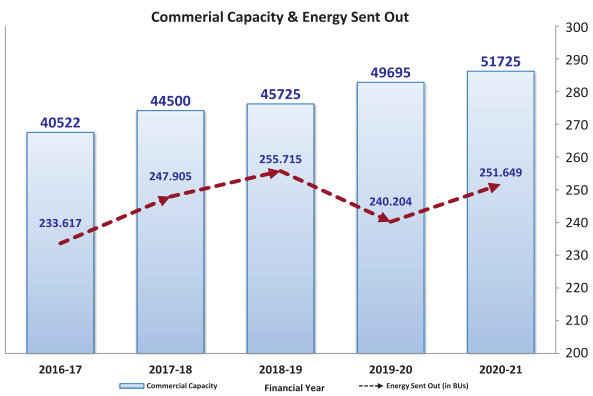


THE YEAR AT A GLANCE

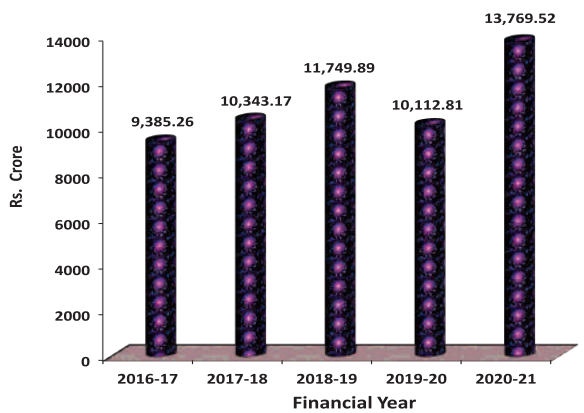
		2020-21	2019-20
Gross Generation	Million Units	270907	259618
Commercial Generation	"	269955	257829
Energy sent out	"	251649	240204
Sale of Energy (including Electricity duty)*	₹ Crore	98536	96841
Profit before tax	"	13916	14466
Profit for the year	"	13770	10113
Dividend	"	5531	2968
Dividend tax	"	-	608
Retained Profit	"	8239	6537
Total Fixed Assets	"	239887	230171
Net Worth	"	118985	113569
Total non-current borrowings including current maturities	"	161629	152694
Capital Employed	"	174649	147014
Net Cash from Operations	"	27058	21584
Value Added	"	42965	37587
No. of Employees	Number	16798	17398
Value added per Employee	₹ Crore	2.56	2.16
Debt to Equity	Ratio	1.37	1.35
Debt Service Coverage Ratio (DSCR)	Times	2.37	2.07
Interest Service Coverage Ratio (ISCR)	Times	4.44	4.45
Return on Capital Employed	%	10.86	10.48
Face Value Per share	₹	10.00	10.00
Dividend Paid Per Share	"	5.65	3.00
Book Value Per Share	"	122.71	114.78
Earnings Per Share	"	13.99	10.22

* Including Sale of Energy through trading.

Commercial Capacity & Energy Sent Out



Profit for the Year





Letter to Shareholders

Dear Shareholders,

Year 2020 has been a year of unprecedented disruption. The coronavirus pandemic and resultant economic distress has challenged the entire humanity. The second wave of the pandemic has had a significant impact on lives, livelihoods, and the businesses. At its peak, it put tremendous burden on the country's health care infrastructure.

As the government has taken steps for containing the spread of the virus and providing vaccination for all, your Company has responded rapidly by putting the safety, health and wellbeing of its employees, their families, and other stakeholders as the topmost priority.

Quick action was taken by your Company for upgradation of its health care infrastructure. The number of beds for COVID-19 treatment was enhanced from 192 to 1000 across hospitals in NTPC townships including over 550 beds with oxygen support. Two dedicated Covid care centers with 200 beds and oxygen support were set-up at Noida and Delhi and were made operational quickly. Action has also been taken for installation of 30 oxygen plants at various locations.

Your Company extended help to State Governments by way of strengthening their healthcare infrastructure, providing essential medical equipment etc. It is pertinent to mention that your Company took rapid action for rectification of two bulk oxygen plants in the vicinity of its power plants in the States of Madhya Pradesh and Bihar.

As the country's largest and responsible power company, your Company has ensured that its generators are on bar to meet the power requirement of the country while continuing fighting with the pandemic. Even when many employees were infected with the virus, your Company ensured 24X7 power supply, which is essential for running the hospitals and other economic activities.

Despite our utmost efforts, unfortunately we lost a few employees and family members. My heartfelt condolence to their families. For taking care of the families of deceased employees, your Company was the first to put in place policies to help them. In fact, quite a few organizations have formulated similar policies to help their employees.

With the starting of vaccination programme in the country, your Company has tied-up with State Governments and major hospital chains for prioritizing vaccination for its employees, families, and associate members and we have helped vaccinate over 1,50,000 persons.

Even in these difficult times, the commitment of employees and cooperation of the stakeholders has helped in ensuring that our growth trajectory remains intact.

As the pandemic continued to rage, we also had to contend with the natural calamity that afflicted Uttarakhand and our Tapovan Vishnugad hydro project. I would like to extend my deepest condolences for the families of all those who lost their lives in this natural calamity. We would like to put on record our gratitude to the Govt. of Uttarakhand, District authorities, SDRF, ITBP, Indian Army and NDRF for all the support which they extended for rescue and search operations.

The efforts and actions of your Company in the face of extreme difficulties demonstrated its character and resilience.

Growth with energy transition:

Your Company made significant achievements during this period and took several new initiatives for transforming NTPC to a more robust organization. Your Company strengthened its fundamentals further and laid significant steps for spearheading energy transition to make NTPC a **"Sustainable Integrated Energy Company".**



In the past year, your Company improved its realization, established leadership in winning RE bids, started foray into e-mobility, participated in bidding of distribution, continued capacity addition programme and met capex targets.

On generation front, your Company set new benchmarks and registered highest ever generation of 314 BUs, an increase of over 8% over previous year even as the country's generation remained at the same level. Your Company crossed 1BU/day generation mark for the first time on January 18, 2021 and recorded highest ever single day gross generation of 1192.41 MUs (Group) on March 19, 2021, and 990.65 MUs (Standalone) on March 20, 2021.

Your Company's coal stations have maintained a positive difference of over 12% compared to the national PLF of coal stations once again. Further, your Company's oldest units Singrauli#1 and Korba#2 achieved over 100% PLF again and stood as top performing Units in the country which underlines your Company's standing as the best in class.

Your Company's bills realization has crossed Rupees one lakh crores for the first-time registering realization of 100% of the billed amount.

Your Company achieved capacity addition of 4160 MW and commercial capacity addition of 3824 MW including 904 MW capacity from renewable and Hydro sources in FY 2020-21. Further, 1075 MW has been added in FY 2021-22 till date taking NTPC group installed capacity to 66,885 MW.

Robust Financial Performance:



In FY 2020-21, your Company registered its highest ever profit of ₹ 13,769.52 Crore as against ₹ 10,112.81 Crore in the corresponding previous year, registering an increase of 36.16%. The total income stood at ₹ 1,03,552.71 Crore as against previous year income of ₹ 1,00,478.41 Crore.

In FY 2020-21, the Board of your Company has recommended final dividend @31.50% of paid-up capital i.e @ ₹ 3.15 per share subject to approval of Shareholders in the Annual General Meeting in addition to the interim dividend @ 30% of paid-up capital, i.e @ ₹ 3 per share already paid. This is the 28th consecutive year that the company has paid dividend. Additionally, your Company has also done buyback of 2% of its paid-up capital in FY 2020-21 for the first time.

In FY 2020-21, your Company incurred capital expenditure of ₹ 20,686 Crores.

Next level of growth and excellence:

Renewables:



With the focus shifting towards cleaner sources of power and the Government setting a target of 450 GW of RE capacity by 2030, your Company has also sharpened its focus on RE as the next pillar of growth. Your Company has prepared its business plans to tap this opportunity appropriately while continuing work on operating its thermal fleet efficiently, economically, and reliably to meet the growing energy needs of the country.

NTPC Renewable Energy Limited (NTPC REL), a 100% subsidiary has been incorporated to add renewables through focused approach. Your Company has also made plans for creating its renewables portfolio which could be as large as the thermal portfolio. Accordingly, the renewable targets have been revised to 60 GW from 30 GW by 2032.

A total of 15% (1560 MW) of renewable bids finalized in the country have been won in FY 2020-21 and 325 MW in FY 2021-22 till date by competing with various players in the sector. It is pertinent to mention that your Company had won solar capacity in the GUVNL tender at a record low tariff of ₹1.99/kWh, which set a new benchmark in the sector. This underlines the seriousness of your Company on its RE strategy.

Currently, your Company has nearly 1.5 GW of operational renewable capacity, 3 GW projects are in development stage and tenders have been issued for 5 GW of new capacity. Under outsourced/ developer mode, 4.7 GW is operational, and 790 MW is under construction. During the year, your Company has commissioned 225 MW solar project at Bilhaur, which is the largest solar project in the state of Uttar Pradesh.

NTPC REL has also received approval from the Ministry of New and Renewable Energy for setting up of 4750 MW renewable energy park in Rann of Kutch in Gujarat, which is the largest in the country. Approval has also been received from Government of Madhya Pradesh for development of solar plant in the land acquired for a coal-based plant. Additionally, discussions are also in progress with various State Governments for allocation of land parcels and water bodies. Further, efforts are on for partnering with National Investment and Infrastructure Fund (NIIF) and ONGC for exploring opportunities in acquisitions and development of renewable assets including offshore wind.

Green Hydrogen:



Hydrogen is expected to be the future of energy and the momentum for "Green Hydrogen" is gaining traction across the globe. Your Company believes that Green Hydrogen is going to occupy significant energy space in future and the interplay between electrons and molecules would lead to significant benefits. Accordingly, your Company has initiated development projects as well as field demonstration projects for Hydrogen production. An agreement has been signed with Union Territory of Ladakh for setting up of country's first green Hydrogen mobility project in the region.

Your Company has also taken up pilot projects on fuel cell-based storage and short-term energy storage micro grid project. Additionally, R&D works are in progress for development of High Temperature Steam Electrolysers, Static Hydrogen Compression System, and development of sea water electrolyser.

Your Company is exploring various options using Hydrogen like transport, blending with natural gas, green ammonia, methanol etc. and aspires to lead "Hydrogen Economy" in India and globally.

Competitive Debt to accelerate growth:

Competitive debt plays a very critical role in the current business regime especially when we need to compete to win capacity in the tenders. Your Company's sound financials enable it to mobilize the required amount of debt at optimal cost. Your Company enjoys the most favored borrower status due to its prudent management of debt financing.



The proactive refinancing strategy adopted by your Company to leverage market conditions for availing low-cost debt has resulted in your Company being able to raise the most competitive debt in the market.

During FY 2020-21, your Company has entered into a foreign currency loan agreement with the Japan Bank for International Co-operation (JBIC), the Japanese Government policy-based financial institution, for JPY 50 billion (approx. USD 475 million or ₹3,500 crore). The facility is extended under JBIC's initiative entitled 'Green action for Reconciling Economic growth and Environment preservation' ("GREEN") for projects which ensure conservation of global environment. The loan proceeds shall be utilized by the Company for funding its capex for Flue Gas Desulphurization (FGD) and Renewable Energy projects. FGD substantially reduces the SOx emission in the flue gases of thermal power plants and is a positive step towards environmental sustainability. This is the first and the largest loan under JBIC's GREEN operations in India.

Sustainability:



I would like to reaffirm that your Company is committed to make fundamental changes in its business to transform itself into the most sustainable power producer as well as to become more transparent in the timely disclosure of its social, environmental, and economic performances. Your Company has already adopted integrated reporting for its sustainability performance disclosures along with financial disclosures. Your Company's ability to manage, utilize and transform the six capitals – Natural, Human, Manufactured, Intellectual, Financial and Social and Relationship– is the key to creating value for our stakeholders.

In our quest to deliver sustainable and affordable energy, we have declared our Energy Compact goals at UN and became the 1st energy company across world to do so. Aligned to our "The Brighter Plan 2032" goals, we have been able to reduce our specific GHG emission to 840 gm/ kWh (-3.4 % y-o-y reduction). This has been achieved due to our various energy efficiency measures and increased production from non-fossil sources including Biomass. Our current zero-carbon based energy capacity is around 7.5 % and with our further massive RE addition, we anticipate reducing our specific CO_2 emissions substantially over few years.

Operating in a water intensive sector we consider it as our moral responsibility to undertake water efficiency measures at war scale and set tougher targets. Towards this end, your Company has become signatory of UN CEO Water Mandate to better its water stewardship programs as part of long-term Sustainable Development goals. Your Company is committed to champion circular economy through exploring multiple avenues of ash utilization and Waste-to-energy projects. In mere six years, our ash utilization has increased from 41 % in FY 2015-16 to 79 % in FY 2020-21. To improve safety at our workplace, your Company has imparted 1.3 million Man-hours of safety training (including contract workers) in FY 2020-21, an increase of 26 % over previous year even amid tough times of COVID.

Being a responsible corporate organization, community engagement is one of your Company's business priorities. In FY 2020-21, your Company has spent around ₹419 crore towards various CSR activities. It gives me immense pleasure to share with you that your Company has partnered with Archery Association of India since 2018 and the Indian athletes are representing India at Olympic Games Tokyo 2020.

Power Sector Outlook: Challenges and Opportunities

Indian power sector is undergoing a significant change that has redefined the industry outlook. Sustained economic growth continues to drive electricity demand in India. The Government of India's focus on reducing the carbon footprint has accelerated growth of renewable capacity addition in the country and the renewable capacity targets have been revised to 450 GW and more by 2030.

Many power sector reforms are being introduced by the Government for bringing efficiency and discipline in the sector including proposed amendment to Electricity Act. Along with this, new market mechanisms are under discussion to promote competition thereby providing affordable power to the consumers. Additionally, Government has also recently issued guidelines allowing distribution companies to exit from Power Purchase Agreement (PPAs) of Central Generating Units which have completed 25 years of life.

While these policies and reforms offer new opportunities and bring discipline into the sector, they will also offer certain challenges. Your Company is geared up to adapt to these changes and is working on various models to maintain leadership in the sector.

Indian power sector is evolving at a fast pace and the power demand is increasing rapidly. India recently witnessed all-time high peak demand of 200.57 GW and energy met of 4508 MUs in a day on July 07, 2021. The country also registered a generation growth of 17.17% in Q1FY 2021-22. The growth in demand augurs well for your Company. These numbers coupled with 'Atmanirbhar Bharat' initiative indicate that there is huge potential for growth in the power sector going forward.

Proactive Corporate Governance:



Your Company believes in setting standards of transparency and sound systems. Your Company is committed to sound corporate practices based on conscience, transparency, fairness, professionalism, and accountability.

Your Company has put in place well defined Risk Management Framework in place involving risk optimization, risk strategy, risk reporting structure and its monitoring. For its exemplary practices, your Company has received CII-Sustainability award under "Corporate Governance" category in FY 2019-20 as well.

Developments and Excellence in Other Business Areas:

Your Company is working on improving and achieve excellence in every facet of its business. Some of the most significant achievements in other areas are:



NVVN, the trading arm of your Company traded over 18 BUs of power in FY 2020-21 which is the highest volume since its inception. NVVN has started plying 40 nos. e-buses in Port Blair and won tender for supplying and operating 90 nos. e-buses to Bangalore Metropolitan Transport Corporation (BMTC). With this, your Company has forayed into e-mobility.



In captive coal mining, your Company achieved 11.00 MMT of coal production in FY 2020-21. Dulanga coal mine has been declared commercial and works are in advance stage for opening two more mines.

Your Company has participated in bidding for Union Territory Discom privatization. Your Company has taken initiative for setting up of captive industries and sought Expression of Interest for the same which are under evaluation.

Talcher Thermal Power Station, having installed capacity of 460 MW in Odisha, which was the oldest plant in NTPC's portfolio, has been shut down permanently w.e.f. March 31, 2021.

Your Company believes in digitalization and automation as the key drivers for improving business efficiency, speed, transparency, and efficacy. Accordingly, your Company is deploying various digital, AI/ML tools for power plant operation to increase efficiency, safety, cost optimization, ensuring cyber security and to reduce downtime.

Your Company is actively pursuing various option for increasing its geo-strategic reach. Your Company has undertaken PMC assignments at many countries under partnership with International Solar Alliance (ISA).

Your Company has secured 38th rank in Great Place to Work (India). Your Company has been conferred "Excellence" in the prestigious CII-ITC sustainability award-2020 in "Corporate Social Responsibility" category. Further, your Company has secured 5th position (Utilities segment) in Forbes – World's Best Employer list – 2020 and 1st in PSUs (India). The overall rank is 261st.

To improve the gender diversity, your Company conducted a special recruitment drive for women. Your Company has been conferred with the prestigious FICCI "Jury Commendation Certificate" under the Category "Women Empowerment". The award has been received for your Company's flagship "Girl Empowerment Mission" Project. Your Company has also received "Role Model" award in HR domain from CII.

Committed For Brighter Tomorrow:

Your Company is constantly working on imbibing agility in workforce, improving the capability of its employees and building a strong leadership pipeline. Various initiatives have been taken in Human Resource front to make the organization future ready including introduction of job rotation, compulsorily undergoing training before taking up new responsibility.

Your Company is focusing on delivering high performance levels in all facets of its business. Your Company is constantly working on improving its competitiveness. Efforts are underway for improving the profitability and thereby increasing the wealth of the shareholders. With constant efforts, the under-recoveries on account of fuel were eliminated in FY 2020-21. Additionally, with strong focus on efficiency improvements, adoption of best O&M practices and optimization of fuel linkages, the Energy Charges Rate (ECR) of your Company's coal plants were reduced, which resulted in savings to the tune of ₹5000 crore for the beneficiary states.

I take this opportunity to place on record my sincere thanks and gratitude to the Government of India, particularly Ministry of Power, Ministry of Coal, Ministry of Railways, Ministry of Environment, Forest and Climate Change, Ministry of New and Renewable Energy, DIPAM, CERC, CEA, CAG, State Governments, our valued Customers, Auditors, Vendors, other authorities and agencies that provide unstinted support.

I convey my appreciation to my colleagues on the Board for their invaluable contribution in strengthening the Company. I express my sincere thanks to investors, shareholders, employees, and customers for their unstinted support. Your Company values your trust and confidence and shall continue to work tirelessly to take it forward.

With best wishes,

Yours sincerely,

(Gurdeep Singh)

Chairman & Managing Director

NTPC Limited
CIN: L40101DL1975GOI007966
Regd. Office: NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road,
New Delhi-110 003
Tel. no.: 011-24360959 Fax: 011-24360241
Email: csntpc@ntpc.co.in Website: www.ntpc.co.in

NOTICE

NOTICE is hereby given that the 45th Annual General Meeting of the Members of NTPC Limited will be held on Tuesday, 28th September, 2021 at 10.30 A.M. (IST) through Video Conferencing ("VC")/ Other Audio-Visual Means ("OAVM"), to transact the following businesses:

ORDINARY BUSINESS:

1. **To consider and adopt (a) the Audited Standalone Financial Statements of the Company for the financial year ended 31st March 2021, the reports of the Board of Directors and Auditors thereon; and (b) the Audited Consolidated Financial Statements of the Company for the financial year ended 31st March 2021 and the report of the Auditors thereon and, in this regard, to consider and if thought fit, to pass, with or without modification(s), the following resolutions as an Ordinary Resolutions:**

   a) Resolved that the audited financial statement of the Company for the financial year ended 31st March 2021 and the reports of the Board of Directors and Auditors thereon, as circulated to the Members, be and are hereby considered and adopted.

   b) Resolved that the audited consolidated financial statement of the Company for the financial year ended 31st March 2021 and the report of Auditors thereon, as circulated to the Members, be and are hereby considered and adopted.

2. **To confirm payment of interim dividend and declare final dividend for the financial year 2020-21 and, in this regard, to consider and if thought fit, to pass, with or without modification(s), the following resolution as an Ordinary Resolution:**

   Resolved that an interim dividend @ 30.00% (₹ 3.00 per equity share of ₹ 10/-) on the paid up equity share capital of the Company and final dividend @ 31.5% (₹ 3.15 on per equity share of ₹ 10/-) as recommended by the Board of Directors be and is hereby declared out of the profits of the Company for the financial year 2020-21.

3. **To appoint Shri Anil Kumar Gautam (DIN: 08293632) Director (Finance), who retires by rotation as a Director and, in this regard, to consider and if thought fit, to pass, with or without modification(s), the following resolution as an Ordinary Resolution:**

   Resolved that in accordance with the provisions of Section 152 and other applicable provisions of the Companies Act, 2013, Shri Anil Kumar Gautam (DIN: 08293632), who retires by rotation at this meeting, be and is hereby appointed as a Director of the Company.

4. **To appoint Shri Dillip Kumar Patel (DIN: 08695490) Director (HR), who retires by rotation as a Director and, in this regard, to consider and if thought fit, to pass, with or without modification(s), the following resolution as an Ordinary Resolution:**

   Resolved that in accordance with the provisions of Section 152 and other applicable provisions of the Companies Act, 2013, Shri Dillip Kumar Patel (DIN: 08695490), who retires by rotation at this meeting, be and is hereby appointed as a Director of the Company.

5. **To fix the remuneration of the Statutory Auditors for the financial year 2021-22 and, in this regard, to consider and if thought fit, to pass, with or without modification(s), the following resolution as an Ordinary Resolution:**

   Resolved that the Board of Directors of the Company be and is hereby authorised to fix an appropriate remuneration of Statutory Auditors of the Company, appointed by the Comptroller and Auditor General of India for the financial year 2021-22.

SPECIAL BUSINESS:

6. **To reappoint Shri Gurdeep Singh (DIN: 00307037), as Chairman & Managing Director of the Company and, in this regard, to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:**

   Resolved that pursuant to the order No. 8/2/2020-Th-1 dated 16th October 2020 issued by the Ministry of Power and statutory provisions, as may be applicable, Shri Gurdeep Singh (DIN: 00307037) be and is hereby re-appointed as Chairman & Managing Director on terms & conditions as fixed by the Government of India.

7. **To increase borrowing powers of the Company from ₹ 2,00,000 Crore to ₹ 2,25,000 Crore and, in this regard, to consider and if thought fit, to pass the following resolution as a Special Resolution:**

   Resolved that in supersession of the resolution approved by shareholders on 21st August, 2019, consent of the Company be and is hereby accorded to the Board of Directors (hereinafter referred to as "the Board" which term shall be deemed to include any Committee thereof constituted for this purpose) under Section 180(1)(c) and other applicable provisions, if any, of the Companies Act, 2013 (including any statutory modification(s) or re- enactment(s) thereof) and applicable laws, rules and regulations, guidelines etc., if any, to borrow money for the purposes of the business of the Company as may be required from time to time either in foreign currency and /or in Indian rupees, as may be deemed necessary, on such terms and conditions and with or without security as the Board may think fit, which together with the monies already borrowed by the Company (apart from the temporary loans obtained from the bankers of the Company in the ordinary course of business) at any time shall not exceed in the aggregate ₹ 2,25,000 Crore (Rupees Two Lakh Twenty Five Thousand Crore only) irrespective of the fact that such aggregate amount of borrowings outstanding at any one time may exceed the aggregate, for the time being, of the paid-up capital, securities premium and free reserves of the Company.

Further resolved that the Board be and is hereby authorised to do or cause to be done all such acts, matters, deeds and other things as may be required or considered necessary or incidental thereto, for giving effect to the aforesaid resolution.

8. **To mortgage or create charge over the movable and immovable properties of the Company in favour of lenders in connection with the borrowings of the Company and, in this regard, to consider and if thought fit, to pass the following resolution as a Special Resolution:**

Resolved that pursuant to provisions of Section 180(1)(a) and other applicable provisions, if any, of the Companies Act, 2013 (including any statutory modification(s) or re-enactment(s) thereof), the consent of the Company be and is hereby accorded to the Board of Directors (hereinafter referred to as "the Board" which term shall be deemed to include any Committee thereof constituted for this purpose) to create such charges, mortgages and hypothecations in addition to existing charges, mortgages and hypothecations created by the Company, on such movable and immovable properties, both present and future and in such form and manner as the Board may deem fit in favour of Banks/ Financial Institutions/ Agents/ Trustees etc. (hereinafter referred to as "Lenders") for securing the borrowings availed/to be availed by way of rupee/foreign currency loans, other external commercial borrowings, issue of debentures / Bonds etc. on such terms and conditions as may be mutually agreed with the lenders of the Company towards security for borrowing of funds for the purposes of business of the Company.

Further resolved that the Board be and is hereby authorized and it shall always be deemed to have been so authorized to finalize and execute with the Lenders the requisite agreement, documents, deeds and writings for borrowing and/ or creating the aforesaid mortgage(s) and/ or charge(s) and to do all such other acts, deeds and things as may be necessary to give effect to the above resolutions.

9. **To ratify the remuneration of the Cost Auditors for the financial year 2021-22 and, in this regard, to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:**

Resolved that pursuant to the provisions of Section 148 and all other applicable provisions of the Companies Act, 2013 and the Companies (Audit and Auditors) Rules, 2014 [including any statutory modification(s)], the Company hereby ratifies the remuneration of ₹ 42,52,000/- (Rupees Forty-Two Lakh and Fifty-Two thousand only) as approved by the Board of Directors payable to Cost Auditors appointed by the Board of Directors of the Company to conduct the audit of the cost records of the Company for the financial year 2021-22 as per detail set out in the Statement annexed to the Notice convening this Meeting.

Further resolved that the Board of Directors of the Company be and is hereby authorized to do all acts, deeds, matters and things as may be considered necessary, desirable or expedient for giving effect to this resolution.

10. **To raise funds upto ₹ 18,000 Crore through issue of Bonds/Debentures on Private Placement basis and, in this regard, to consider and if thought fit, to pass following resolution as a Special Resolution:**

Resolved that pursuant to Section 42 and other applicable provisions of the Companies Act, 2013 read with Rule 14 (1) of the Companies (Prospectus and Allotment of Securities) Rules, 2014 and any other applicable statutory provisions (including any statutory modification or re-enactments thereof) the Board of Directors of the Company (the "Board") be and are hereby authorized to make offer(s) or invitation(s) to subscribe to the secured/unsecured, redeemable, taxable/tax-free, cumulative/ non-cumulative, non-convertible debentures ("Bonds") up to ₹ 18,000 Crore in one or more tranches/series not exceeding 30 (thirty), through private placement, in domestic market for capex, working capital and general corporate purposes, during the period commencing from the date of passing of Special Resolution till completion of one year thereof or the date of next Annual General Meeting in the financial year 2022-23 whichever is earlier in conformity with rules, regulations, notifications and enactments as may be applicable from time to time, subject to the total borrowings of the Company approved by the shareholders under Section 180 (1)(c) of Companies Act, 2013.

Further resolved that the Board be and is hereby authorized to do or delegate from time to time, all such acts, deeds and things as may be deemed necessary to give effect to private placement of such Bonds including but not limited to determining the face value, issue price, issue size, tenor, timing, amount, security, coupon/interest rate, yield, listing, allotment and other terms and conditions of issue of Bonds as it may, in its absolute discretion, consider necessary.

By order of the Board of Directors

Nandini Sarkar

(Nandini Sarkar)
Company Secretary

Place: New Delhi
Date: 26th August, 2021

Notes: -

1. In view of Covid-19 pandemic situation, the Ministry of Corporate Affairs ("MCA") has vide its circular dated January 13th, 2021 read together with circulars dated April 8th, 2020, April 13th, 2020 and May 5th, 2020 (collectively referred to as "MCA Circulars"), permitted convening the Annual General Meeting ("AGM"/"Meeting") through Video Conferencing ("VC") or Other Audio Visual Means ("OAVM"), without physical presence of the members at a common venue. In accordance with the MCA Circulars, provisions of the Companies Act, 2013 ("the Act") and the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("SEBI Listing Regulations"), the AGM of the Company is being held through VC/OAVM. The deemed venue for the AGM shall be the Registered Office of the Company.

2. In compliance with the statutory guidelines, Notice of the AGM along with the Annual Report 2020-21 is being sent only through electronic mode to those Members whose email addresses are registered with the Company/ Depositories. Members may note that the Notice and Annual Report 2020-21 will also be available on the Company's website www.ntpc.co.in, websites of the Stock Exchanges, i.e., BSE Limited and National Stock Exchange of India Limited at www. bseindia.com and www.nseindia.com respectively. The AGM Notice is also disseminated on the website of Central Depository Services (India) Limited (CDSL) (agency for providing the Remote e-Voting facility and e-voting system during the AGM) i.e. www.evotingindia.com. Shareholders are advised to contact Registrar and Share Transfer Agent (RTA), at the address mentioned in Para 13 below, with details like name, folio no. and self attested copy of PAN & AADHAR in order to update their email ID.

3. Since this AGM is being held through VC/OAVM pursuant to the MCA Circulars, physical attendance of members has been dispensed with. Accordingly, the facility for appointment of proxies by the members will not be available for this AGM. Hence, Proxy Form and Attendance Slip are not annexed hereto. However, in terms of the provisions of Section 112 and Section 113 of the Act, representatives of the Members such as the President of India or the Governor of a State or body corporate can attend the AGM through VC/OAVM and cast their votes through e-voting.

4. The attendance of the Members attending the AGM through VC/OAVM will be counted for the purpose of ascertaining the quorum under Section 103 of the Companies Act, 2013.

5. Members of the Company under the category of Institutional Investors are requested to attend and vote at the AGM through VC. Corporate Members/ Institutional Investors intending to appoint their authorized representatives pursuant to Section 113 of the Act, to attend the AGM through VC or OAVM or to vote through remote e-voting are requested to send a certified copy of the Board Resolution to the Scrutinizer by e-mail at **kaushal.acs@gmail.com.**

6. Pursuant to Section 139 of the Companies Act, 2013, the Auditors of a Government Company are to be appointed or re-appointed by the Comptroller and Auditor General of India (C&AG) and in pursuant to Section 142 of the Companies Act, 2013, their remuneration is to be fixed by the Company in the Annual General Meeting or in such manner as the Company in general meeting may determine. The Members of the Company, in 44th Annual General Meeting held on September 24th, 2020, had authorized the Board of Directors to fix the remuneration of Statutory Auditors for the financial year 2020-21. Accordingly, the Board of Directors has fixed audit fee of ₹ 2,19,24,000/- (Rupees Two Crore Nineteen Lakh Twenty Four Thousand only) for the Statutory Auditors for the financial year 2020-21 in addition to applicable GST and reimbursement of actual traveling and out-of-pocket expenses for visits to accounting units. The Statutory Auditors of the Company for the year 2021-22 are yet to be appointed by the C&AG. Accordingly, the Members may authorize the Board to fix an appropriate remuneration of Statutory Auditors as may be deemed fit by the Board for the year 2021-22.

7. The Register of Members and Share Transfer Books of the Company will remain closed from 22nd September 2021 to 28th September 2021 (both days inclusive) for the purpose of AGM.

8. The relevant explanatory statement pursuant to Section 102 of the Companies Act, 2013, in respect of Special Businesses, as set out above is annexed hereto.

9. Brief resume of the Directors seeking appointment or re-appointment at Annual General Meeting (AGM), as required under Regulation 36 of SEBI Listing Regulations is annexed hereto and forms part of the Notice.

10. None of the Directors of the Company is in any way related with each other.

DIVIDEND:

11. The Board of Directors, in its meeting held on 4th February 2021 had declared an interim dividend @ 30 % (₹ 3.00 per share) on the paid-up equity share capital of the company which was paid on February 26, 2021. Further, the Board of Directors, in its Meeting held on 19th June 2021 has recommended a final dividend @ 3.15% (₹ 3.15 per share) on the paid-up equity share capital of the Company.

12. The Company has fixed 10th September 2021 as record date for the purpose of payment of the final dividend. Final dividend, if approved at the AGM shall be paid on or after 8th October 2021.

TDS on dividend:

13. Pursuant to the Finance Act, 2020, dividend income is taxable in the hands of the Shareholders w.e.f. April 1, 2020 and the Company is required to deduct TDS from dividend paid to the Members at rates prescribed under the Income Tax Act, 1961 ("IT Act"). In general, to enable compliance with TDS requirements, Members are requested to complete and / or update their Residential Status, PAN, Category as per the IT Act with their Depository Participants ('DPs') or in case shares are held in physical form, with the Company/RTA by sending the required documents by Friday, September 10, 2021. For the detailed process, please visit website of the Company https://www.ntpc.co.in/investors/Dividend TDS Communication. The aforesaid documents, as applicable, are required to be emailed at **tdsdiv@ntpc.co.in** and **dividend_ntpc@psmg.co.in**, to enable the Company to determine the appropriate TDS rates. No communication on the tax determination/deduction received post Friday, September 10th, 2021, 1730 Hours (IST) shall be considered for payment of the Final Dividend.

    Further, in order to receive the dividend in a timely manner, Members holding shares in physical form who have not updated their mandate for receiving the dividends directly in their bank accounts through Electronic Clearing Service or any other means are requested to send the following documents to our RTA - Beetal Financial & Computer Services Pvt. Ltd. at 3rd Floor, Beetal House, 99, Madangir,Delhi-110062 latest by Monday, September 6th, 2021:

    a) A signed request letter by the first holder, mentioning the name, folio number, complete address and following details relating to bank account in which the dividend is to be received:

        i. Name of Bank and Bank Branch;

        ii. Bank Account Number & Type allotted by your bank after implementation of Core Banking Solutions; and

        iii. 11-digit IFSC Code;

        iv. 9 digit MICR Code.

    b) Original cancelled cheque bearing the name of the Member or first holder, in case shares are held jointly;

    c) Self-attested copy of the PAN CARD; and

    d) Self-attested copy of any document (such as AADHAR CARD, Driving License, Election Identity Card, Passport) in support of the address of the Member as registered with the Company.

    Members holding shares in demat form may please note that their bank details as furnished by the respective DPs to the Company will be considered for remittance of dividend as per the applicable regulations of the DPs and the Company will not entertain any direct request from such Members for change/addition/deletion in such bank details. Accordingly, the Members holding shares in demat form are requested to update their Electronic Bank Mandate with their respective DPs. Any instruction pertaining to the remittance of dividend would not be entertained other than the particulars that are mapped with the DPs.

INVESTOR EDUCATION AND PROTECTION FUND:

14. Pursuant to the provisions of section 124(5) of the Companies Act, 2013, the Company has transferred the unpaid or unclaimed interim dividend and final dividend for the financial year 2012-13 and interim dividend for the financial year 2013-14 to the Investor Education and Protection Fund (IEPF) established by the Central Government. Pursuant to the provisions of IEPF Rules & amendments thereto, the Company shall upload the details of unpaid and unclaimed amounts lying with the Company as on the date of closure of financial year i.e. March 31, 2021 on the website of the Company (www.ntpc.co.in) and also on the website of the Ministry of Corporate Affairs (www.iepf.gov.in).

15. Attention of the members is drawn to the provisions of Section 124(6) of the Act which require a company to transfer all shares in respect of which dividend has not been paid or claimed for 7 (seven) consecutive years or more, in the name of IEPF Authority. In accordance with the aforesaid provisions of the Act read with the Investor Education and Protection Fund Authority (Accounting, Audit, Transfer and Refund) Rules, 2016, Company has transferred shares to the IEPF authority from time to time. Members are advised to visit the web-link: https://www.ntpc.co.in/en/Investors/miscellaneous-download to check details of shares transferred to IEPF authority. The procedure for claiming shares from IEPF account is also available on the website of the Company.

16. Unclaimed final dividend for the financial year 2013-14 and Interim dividend for the financial year 2014-15 will be due for transfer to the Investor Education and Protection Fund of the Central Government on or before November 1st, 2021 and March 30th, 2022 respectively pursuant to the provisions of Section 124 of the Companies Act, 2013. Accordingly, corresponding shares on which dividend has not been paid or claimed for seven consecutive years shall also be liable to be transferred to the account of IEPF.

WEBCASTING:

17. In compliance with the provisions of Regulation 44(6) of the SEBI Listing Regulations, the Company shall provide live webcast of proceedings of AGM from 10.30 A.M. (IST) onwards on Tuesday, 28th September 2021.

PROCEDURE FOR INSPECTION OF DOCUMENTS:

18. The Register of Directors and Key Managerial Personnel and their shareholding maintained under Section 170 of the Act, the Register of Contracts or Arrangements in which the directors are interested, maintained under Section 189 of the Act will be available electronically for inspection by the members during the AGM. All documents referred to in the Notice will also be available electronically for inspection without any fee by the members from the date of circulation of this Notice and up to the date of AGM. Members seeking to inspect such documents can send an email to agm2021@ntpc.co.in.

OTHER INFORMATION:

19. Members holding shares in multiple folios in physical mode are requested to apply for consolidation to the Company or its Registrar & Transfer Agent (RTA) along with relevant Share Certificates.

20. SEBI, vide notification dated 8th June, 2018 has mandated that after 4th December, 2018, except in case of transposition and transmission of shares, requests for effecting transfer of securities shall not be processed unless the securities are held in the dematerialized form with a depository. Accordingly, Shareholders holding shares in physical form, are advised to dematerialize their shares.

21. Members, holding shares in physical form, may avail the facility of nomination in terms of Section 72 of the Companies Act, 2013 by nominating in the Form-SH 13 as prescribed in the Companies (Share Capital & Debentures) Rule, 2014, any person to whom their shares in the Company shall vest on occurrence of event stated in the Form. Persons holding shares in physical form may send Form-SH 13 in duplicate to RTA of the Company. In case of shares held in dematerialized form, the nomination has to be lodged with the respective DP.

22. The Securities and Exchange Board of India (SEBI) has mandated the submission of Permanent Account Number (PAN) by every participant in securities market. Members are, therefore, requested to update their PAN with their DP/ RTA of the Company.

23. Annual listing fee for the year 2021-22 has been paid to all Stock Exchanges wherein shares of the Company are listed. Also, the Annual Custodian Fee for the year 2020-21 was paid to both Depositories i.e. Central Depository Services (India) Limited and National Securities Depository Limited.

24. Since the AGM will be held through VC/OAVM, the route map of the venue of the Meeting is not annexed hereto.

Annexure to Notice

EXPLANATORY STATEMENT
PURSUANT TO SECTION 102 OF THE COMPANIES ACT, 2013

The following statement sets out all material facts relating to Special Businesses mentioned in the accompanying notice:

Item No. 6: Re-appointment of Shri Gurdeep Singh as Chairman & Managing Director

Shri Gurdeep Singh (DIN: 00307037) was appointed as Chairman & Managing Director, by the President of India vide Ministry of Power letter No.8/1/2016-Th-I dated 28th January, 2016 for a period of five years from the date of assumption of charge of the post, or until further orders. The appointment of Shri Gurdeep Singh as Chairman & Managing Director was approved by the shareholders in the 40th Annual General Meeting of the Company held on 20th September 2016. Subsequently, Ministry of Power acting on behalf of the President of India, through letter no. 8/2/2020-Th.1 dated 16th October, 2020, has communicated that in pursuance of the Secretariat of Appointments Committee of the Cabinet's (ACC) order No.20/04/2016- EO (ACC) dated 9th October, 2020, the tenure of Shri Gurdeep Singh, CMD , NTPC is further extended w.e.f. 4th February, 2021 till 31st July, 2025, i.e. the date of his superannuation, or until further order, whichever is earlier. Pursuant to order of Ministry of Power, the Board of Directors of your company in its meeting held on 2nd November, 2020 had accorded approval for extension of tenure of Shri Gurdeep Singh till 31st July, 2025 i.e the date of his superannuation or until further order, whichever is earlier.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Gurdeep Singh, is in any way, concerned or interested, financially or otherwise, in the resolution.

The Board recommends the resolution for your approval.

Item No. 7 & 8: Increase in borrowing limit from ₹ 2,00,000 Crore to ₹ 2,25,000 Crore and to create charge on the assets of the Company in connection with the borrowings of the Company

NTPC is India's largest energy conglomerate and a Maharatna Company having presence in the entire value chain of the power generation business. NTPC is primarily engaged in the business of generation of electricity from thermal, hydro or Renewable energy sources. The Company has installed capacity of 64,496 MW (including generation from subsidiaries & joint ventures) as on 31st March 2021. To strengthen its core business, the Company has diversified into the fields of Coal Mining, Consultancy, Ash utilization etc. The Company is in rapid capacity addition mode. The projects, except renewable energy projects, of the Company are to be financed by debt & equity in the ratio of 70:30. Renewable Energy Projects are financed by debt & equity in the ratio of 80:20. The main constituents of the Company's borrowings are generally in the form of bonds/ debentures, rupee term loans from banks and financial institutions, foreign currency loans, foreign currency bonds etc.

As per the requirements of Section 180(1)(c) of the Companies Act, 2013, the shareholders of the Company by a special resolution passed at the 43rd Annual General Meeting of the Company held on 21st August 2019 had authorized Board of Directors to borrow upto ₹ 2,00,000 Crore i.e. in excess of paid up share capital, free reserves and balance in share premium account. Keeping in view the future Capex requirements and funds to be tied up for the same and to take care of forays into new business vertical and any unanticipated investment requirements in future, a need is felt to enhance the existing borrowing limits. It is therefore proposed to increase the prescribed limit for borrowing to ₹ 2,25,000 Crore from current approved limit of ₹ 2,00,000 Crore.

Further, in terms of the provisions of Section 180(1)(a) of the Companies Act, 2013, a Company cannot sell, lease or otherwise dispose off the whole or substantially the whole of the undertaking or undertakings of the Company without the consent of the Shareholders of the Company by way of a Special Resolution.

The large portion of capital expenditure requirement of the Company has to be funded by debt. The raising of funds through debt usually requires creation of security on the immovable/movable properties, present or future, of the Company in favour of lenders which may tantamount to otherwise disposing of the undertakings of the Company.

In view of the above, approval of the Shareholders of the Company is being sought by way of Special Resolution (s) under provisions of Section 180 (1)(c) and Section 180 (1)(a) of the Companies Act, 2013, for authorizing the Board of Directors to borrow money from time to time, exceeding the paid up share capital, free reserves and share premium of the Company provided that total amount so borrowed (apart from the temporary loans obtained from the bankers of the Company in the ordinary course of business) shall not at any time exceed ₹ 2,25,000 Crore and for creation of charge/mortgage on the assets of the Company in connection with the borrowings.

The Board of Directors of the Company in its 499th Meeting held on 19th June 2021 had approved the above proposal and recommended the same for approval of shareholders.

The Directors or Key Managerial Personnel or their relatives do not have any interest, financial or otherwise, in passing of the said Special Resolution(s), except to the extent of their shareholding in the Company.

Item No. 9: Ratification of Remuneration payable to Cost Auditors

Based on recommendation of Audit Committee, appointment of Cost Auditors for the Financial year 2021-22 was decided by the Board of Directors. The Board of Directors in its meeting held on 23rd August, 2021 has accorded approval for payment of total fee of ₹ 42,52,000/- (Rupees Forty Two Lakhs and Fifty Two Thousand Only) for cost audit for the Financial year 2021-22. The fee structure for cost audit is broadly based on station capacity and number of stations. The reimbursement of applicable statutory taxes/levies shall be in addition to fees.

As per Rule 14 of Companies (Audit and Auditors) Rules, 2014 read with Section 148(3) of the Companies Act, 2013, the remuneration recommended by the Audit Committee shall be considered and approved by the Board of Directors and ratified subsequently by the shareholders.

Accordingly, members are requested to ratify the remuneration payable to the Cost Auditors for the financial year 2021-22.

The Board of Directors recommended the passing of the proposed Resolution by members of the Company.

The Directors or Key Managerial Personnel or their relatives do not have any concern or interest, financial or otherwise, in passing of the said Ordinary Resolution, except to the extent of their shareholding in the Company.

Item No. 10: To raise funds up to ₹ 18,000 Crore through issue of Bonds/Debentures on Private Placement basis

The Company is the largest power producer in India. As the Company is under a rapid capacity expansion mode, major portion of capital expenditure requirement of the Company has to be funded by debt. The Company borrows in the form of non-convertible bonds/debentures, rupee term loans from banks and financial institutions, foreign currency borrowings, foreign currency bonds etc. The non-convertible bonds/debentures are raised by the Company under public issue route or through private placement basis.

In addition to capital expenditure requirement as explained above, Company also needs to borrow for meeting its working capital requirement and other general corporate purpose which is partly proposed to be met through issuance of non-convertible bonds.

The provisions of Section 42 of Companies Act, 2013 read with Rule 14(1) of the Companies (Prospectus and Allotment of Securities) Rules, 2014 require the Company to seek a Special Resolution from its shareholders for raising the NCDs on private placement basis. However, in case of offer or invitation for "non-convertible debentures", it shall be sufficient, if the Company passes a previous Special Resolution only once in a year for all the offers or invitations for such debentures during the year.

In view of the above, approval of the Shareholders of the Company is being sought to authorize the Board of Directors to make offer(s) or invitation(s) to subscribe to the secured/unsecured, redeemable, taxable/tax-free, cumulative/non-cumulative, non-convertible debentures ("Bonds") up to ₹18,000 Crore in one or more tranches/series not exceeding 30 (thirty), through private placement, in domestic market for capex, working capital and general corporate purposes during the period commencing from the date of passing of Special Resolution till completion of one year thereof or the date of next Annual General Meeting in the financial year 2022-23 whichever is earlier, subject to ceiling approved by the shareholders under Section 180(1)(c) of Companies Act, 2013.

The Board of Directors of the Company in its Meeting held on 31st July 2021 has approved the proposal and recommends the passing of the proposed Special Resolution.

The Directors or key managerial personnel or their relatives do not have concern or interest, financial or otherwise, in passing of the said Special Resolution, except to the extent of their shareholding in the Company.

By order of the Board of Directors

Nandini Sarkar

(Nandini Sarkar)
Company Secretary

Place: New Delhi
Date: 26th August, 2021

****

A. GENERAL INSTRUCTIONS FOR SHAREHOLDERS JOINING MEETING, REMOTE e-VOTING AND e-VOTING DURING AGM:

1. The Members can join the AGM in the VC/OAVM mode 15 minutes before and after the scheduled time of the commencement of the Meeting by following the procedure mentioned in the Notice. The facility of participation at the AGM through VC/OAVM will be made available to at least 1000 members on first come first serve basis. This will not include large Shareholders (Shareholders holding 2% or more shareholding), Promoters, Institutional Investors, Directors, Key Managerial Personnel, the Chairpersons of the Audit Committee, Nomination and Remuneration Committee and Stakeholders Relationship Committee, Auditors etc. who are allowed to attend the AGM without restriction on account of first come first serve basis.
2. The voting period begins on **Friday, 24th September, 2021 at 9:00 AM** and ends on **Monday, 27th September, 2021 at 5:00 PM.** During this period, shareholders of the Company, holding shares either in physical form or in dematerialized form, as on the cut-off date of **Tuesday, 21st September, 2021** may cast their vote electronically. The e-voting module shall be disabled by CDSL for voting thereafter. The voting rights of Members shall be in proportion to their share of the paid-up equity share capital of the Company as on the cut-off date.
3. Shareholders who have voted through Remote e-Voting will be eligible to attend the meeting. However, they will not be eligible to vote at the AGM.
4. Shareholders are encouraged to join the Meeting through Laptops/iPads for better experience.
5. Further, shareholders will be required to allow Camera and use Internet with a good speed to avoid any disturbance during the meeting.
6. Please note that Participants Connecting from Mobile Devices or Tablets or through Laptop connecting via Mobile Hotspot may experience Audio/Video loss due to fluctuation in their respective network. It is therefore recommended to use Stable Wi-Fi or LAN Connection to mitigate any kind of aforesaid glitches.
7. Shareholders who would like to express their views/ask questions during the meeting may register themselves as speakers by sending their request in advance at least seven days prior to meeting mentioning their name, Demat account number/folio number, email id, mobile number at **agm2021@ntpc.co.in.** The Company reserves the right to restrict the number of questions and number of speakers, depending upon availability of time as may be appropriate for smooth conduct of the AGM. Members who are not able to join this Meeting over video conferencing will be able to view the live webcast of proceedings of AGM on the website of the Company. The shareholders who do not wish to speak during the AGM but have queries in respect of items of businesses proposed to be transacted at the meeting, may send their queries in advance 7 (Seven) days prior to meeting mentioning their name, demat account number/folio number, email id, mobile number at **agm2021@ntpc.co.in.** These queries will be replied by the company suitably by email.
8. Those shareholders who have registered themselves as speakers will only be allowed to express their views/ask questions during the meeting.
9. Only those shareholders, who are present in the AGM through VC/OAVM facility and did not cast their vote on the Resolutions through remote e-Voting and are otherwise not barred from doing so, shall be eligible to vote through e-Voting system available during the AGM.
10. If any Votes are cast by the shareholders through the e-voting available during the AGM and if the same shareholders have not participated in the meeting through VC/OAVM facility, then the votes cast by such shareholders shall be considered invalid as the facility of e-voting during the meeting is available only to the shareholders attending the meeting.

B. LOGIN METHOD FOR E-VOTING AND JOINING VIRTUAL MEETINGS FOR INDIVIDUAL SHAREHOLDERS HOLDING SECURITIES IN DEMAT MODE

1. In terms of SEBI circular no. SEBI/HO/CFD/CMD/CIR/P/2020/242 dated 9th December, 2020 on e-Voting facility, Individual shareholders holding securities in demat mode are allowed to vote through their demat account maintained with Depositories and Depository Participants. Shareholders are advised to update their mobile number and email Id in their demat accounts in order to access e-Voting facility.

2. Pursuant to abovesaid SEBI Circular, Login method for e-Voting and joining virtual meetings for Individual shareholders holding securities in Demat mode is given below:

Type of shareholders	Login Method
Individual Shareholders holding securities in Demat mode with CDSL	Users who have opted for CDSL Easi/Easiest facility, can login through their existing user id and password. Option will be made available to reach e-Voting page without any further authentication. The URL for users to login to Easi /Easiest are https://web.cdslindia.com/myeasi/home/login or visit www.cdslindia.com and click on Login icon and select New System Myeasi. After successful login the Easi/Easiest user will be able to see the e-Voting option for eligible companies where the evoting is in progress as per the information provided by company. On clicking the evoting option, the user will be able to see e-Voting page of the e-Voting service provider for casting your vote during the remote e-Voting period or joining virtual meeting & voting during the meeting. Additionally, there is also links provided to access the system of all e-Voting Service Providers i.e. CDSL/NSDL/KFintech/BEETAL/LINKINTIME, so that the user can visit the e-Voting service providers' website directly. If the user is not registered for Easi/Easiest, option to register is available at https://web.cdslindia.com/myeasi/Registration/EasiRegistration Alternatively, the user can directly access e-Voting page by providing Demat Account Number and PAN from a e-Voting link available on www.cdslindia.com home page. The system will authenticate the user by sending OTP on registered Mobile & E-mail as recorded in the Demat Account. After successful authentication, user will be able to see the e-Voting option where the e-Voting is in progress and also able to directly access the system of all e-Voting Service Providers.
Individual Shareholders holding securities in demat mode with NSDL	If you are already registered for NSDL IDeAS facility, please visit the e-Services website of NSDL. Open web browser by typing the following URL: https://eservices.nsdl.com either on a Personal Computer or on a mobile. Once the home page of e-Services is launched, click on the "Beneficial Owner" icon under "Login" which is available under 'IDeAS' section. A new screen will open. You will have to enter your User ID and Password. After successful authentication, you will be able to see e-Voting services. Click on "Access to e-Voting" under e-Voting services and you will be able to see e-Voting page. Click on company name or e-Voting service provider name and you will be re-directed to e-Voting service provider website for casting your vote during the remote e-Voting period or joining virtual meeting & voting during the meeting. If the user is not registered for IDeAS e-Services, option to register is available at https://eservices.nsdl.com. Select "Register Online for IDeAS "Portal or click at https://eservices.nsdl.com/SecureWeb/IdeasDirectReg.jsp Visit the e-Voting website of NSDL. Open web browser by typing the following URL: https://www.evoting.nsdl.com/ either on a Personal Computer or on a mobile. Once the home page of e-Voting system is launched, click on the icon "Login" which is available under 'Shareholder/Member' section. A new screen will open. You will have to enter your User ID (i.e. your sixteen digit demat account number held with NSDL), Password/OTP and a Verification Code as shown on the screen. After successful authentication, you will be redirected to NSDL Depository site wherein you can see e-Voting page. Click on company name or e-Voting service provider name and you will be redirected to e-Voting service provider website for casting your vote during the remote e-Voting period or joining virtual meeting & voting during the meeting.
Individual Shareholders (holding securities in demat mode) login through their Depository Participants	You can also login using the login credentials of your demat account through your Depository Participant registered with NSDL/CDSL for e-Voting facility. After Successful login, you will be able to see e-Voting option. Once you click on e-Voting option, you will be redirected to NSDL/CDSL Depository site after successful authentication, wherein you can see e-Voting feature. Click on company name or e-Voting service provider name and you will be redirected to e-Voting service provider website for casting your vote during the remote e-Voting period or joining virtual meeting & voting during the meeting.

Important note: Members who are unable to retrieve User ID/ Password are advised to use Forget User ID and Forget Password option available at abovementioned website.

Helpdesk for Individual Shareholders holding securities in demat mode for any technical issues related to login through Depository i.e. CDSL and NSDL

Login type	Helpdesk details
Individual Shareholders holding securities in Demat mode with CDSL	Members facing any technical issue in login can contact CDSL helpdesk by sending a request at helpdesk.evoting@cdslindia.com or contact at 022-23058738 and 022-23058542/43.
Individual Shareholders holding securities in Demat mode with NSDL	Members facing any technical issue in login can contact NSDL helpdesk by sending a request at evoting@nsdl.co.in or call at toll free no.: 1800 1020 990 and 1800 22 44 30

C. LOGIN METHOD FOR E-VOTING AND JOINING VIRTUAL MEETING FOR SHAREHOLDERS OTHER THAN INDIVIDUAL SHAREHOLDERS HOLDING IN DEMAT FORM & PHYSICAL SHAREHOLDERS.

1) The shareholders should log on to the e-voting website www.evotingindia.com.
2) Click on "Shareholders" module.
3) Now enter your User ID
   a. For CDSL: 16 digits beneficiary ID,
   b. For NSDL: 8 Character DP ID followed by 8 Digits Client ID,
   c. Shareholders holding shares in Physical Form should enter Folio Number registered with the Company.
4) Next enter the Image Verification as displayed and Click on Login.
5) If you are holding shares in demat form and had logged on to www.evotingindia.com and voted on an earlier e-voting of any company, then your existing password is to be used.
6) If you are a first-time user follow the steps given below:

	For Shareholders holding shares in Demat Form other than individual and Physical Form
PAN	Enter your 10 digit alpha-numeric PAN issued by Income Tax Department (Applicable for both demat shareholders as well as physical shareholders) Shareholders who have not updated their PAN with the Company/Depository Participant are requested to use the sequence number sent by Company/RTA or contact Company/RTA.
Dividend Bank Details or Date of Birth (DOB)	Enter the Dividend Bank Details or Date of Birth (in dd/mm/yyyy format) as recorded in your demat account or in the company records in order to login. If both the details are not recorded with the depository or company, please enter the member id / folio number in the Dividend Bank details field as mentioned in instruction (3).

(ii) After entering these details appropriately, click on "SUBMIT" tab.

(iii) Shareholders holding shares in physical form will then directly reach the Company selection screen. However, shareholders holding shares in demat form will now reach 'Password Creation' menu wherein they are required to mandatorily enter their login password in the new password field. Kindly note that this password is to be also used by the demat holders for voting for resolutions of any other company on which they are eligible to vote, provided that company opts for e-voting through the CDSL platform. It is strongly recommended not to share your password with any other person and take utmost care to keep your password confidential.

(iv) For shareholders holding shares in physical form, the details can be used only for e-voting on the resolutions contained in this Notice.

(v) Click on the EVSN for the relevant <Company Name> on which you choose to vote.

(vi) On the voting page, you will see "RESOLUTION DESCRIPTION" and against the same option "YES/NO" for voting. Select the option YES or NO as desired. The option YES implies that you assent to the Resolution and option NO implies that you dissent to the Resolution.

(vii) Click on the "RESOLUTIONS FILE LINK" if you wish to view the entire Resolution details.

(viii) After selecting the resolution, you have decided to vote on, click on "SUBMIT". A confirmation box will be displayed. If you wish to confirm your vote, click on "OK", else to change your vote, click on "CANCEL" and accordingly modify your vote.

(ix) Once you "CONFIRM", your vote on the resolution, you will not be allowed to modify your vote.

(x) You can also take a print of the votes cast by clicking on "Click here to print" option on the Voting page.

(xi) If a demat account holder has forgotten the login password then Enter the User ID and the image verification code and click on Forgot Password & enter the details as prompted by the system.

(xii) Facility for Non – Individual Shareholders and Custodians– **Remote Voting**

- Non-Individual shareholders (i.e. other than Individuals, HUF, NRI etc.) and Custodians are required to log on to www.evotingindia.com and register themselves in the "Corporates" module.
- A scanned copy of the Registration Form bearing the stamp and sign of the entity should be emailed to helpdesk.evoting@cdslindia.com.
- After receiving the login details a Compliance User should be created using the admin login and password. The Compliance User would be able to link the account(s) for which they wish to vote on.
- The list of accounts linked in the login should be mailed to helpdesk.evoting@cdslindia.com and on approval of the accounts they would be able to cast their vote.
- A scanned copy of the Board Resolution and Power of Attorney (POA) which they have issued in favour of the Custodian, if any, should be uploaded in PDF format in the system for the scrutinizer to verify the same.
- Alternatively Non Individual shareholders are required to send the relevant Board Resolution/ Authority letter etc. together with the attested specimen signature of the duly authorized signatory who is authorized to vote, to the Scrutinizer at e-mail Id **kaushal.acs@gmail.com** and to the Company at the email address viz; **agm2021@ntpc.co.in** (designated email address by company), if they have voted from individual tab & not uploaded same in the CDSL e-voting system for the scrutinizer to verify the same.

D. INSTRUCTIONS FOR SHAREHOLDERS ATTENDING THE AGM THROUGH VC/OAVM & E-VOTING DURING MEETING ARE AS UNDER:

1. The procedure for attending meeting & e-Voting on the day of the AGM is same as the instructions mentioned above for Remote e-voting.
2. The link for VC/OAVM to attend meeting will be available where the EVSN of Company will be displayed after successful login as per the instructions mentioned above for Remote e-voting.

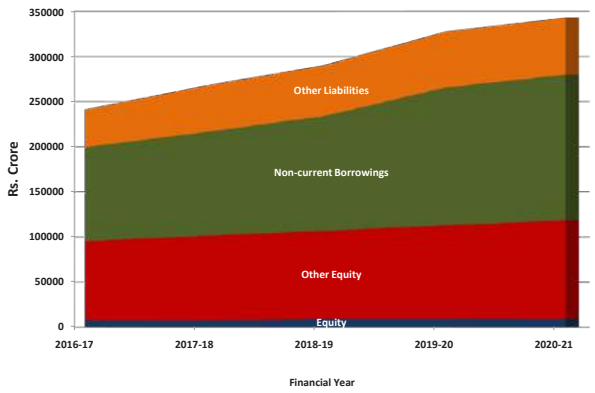
If you have any queries or issues regarding attending AGM & e-Voting from the CDSL e-Voting System, you can write an email to helpdesk.evoting@cdslindia.com or contact at 022- 23058738 and 022-23058542/43.
All grievances connected with the facility for voting by electronic means may be addressed to Mr. Rakesh Dalvi, Sr. Manager, (CDSL) Central Depository Services (India) Limited, A Wing, 25th Floor, Marathon Futurex, Mafatlal Mill Compounds, N M Joshi Marg, Lower Parel (East), Mumbai - 400013 or send an email to **helpdesk.evoting@cdslindia.com** or call on 022-23058542/43.

Brief resume of Director seeking appointment/re-appointment:

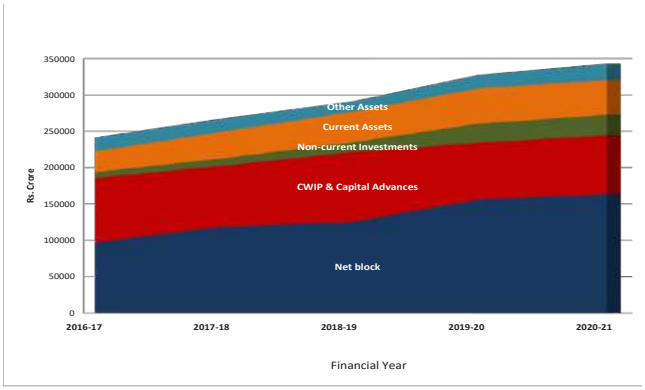
Name	Shri Gurdeep Singh	Shri Anil Kumar Gautam	Shri Dillip Kumar Patel
Date of Birth & Age	7.7.1965 56 Years	25.5.1962 59 Years	30.4.1964 57 Years
Date of Appointment	4.2.2016	18.10.2019	1.4.2020
Qualifications	Mechanical Engineer from NIT, Kurukshetra and Management Education Program from IIM Ahmedabad	Graduate in Commerce, fellow member of the Institute of Cost Accountants of India and LLB	Graduated in Mechanical Engineering from NIT, Rourkela and Post Graduate Diploma in Business Management (HR & Finance) from MDI, Gurgaon
Expertise in specific functional area	He has over 30 years of experience in power sector. He started his career in 1987 as an Engineer Trainee with NTPC and has worked his way through various ranks in both public and private sectors. He has worked at CXO/Senior positions in Indian companies as well as in multi-national companies. Prior to joining NTPC, Shri Gurdeep Singh was Managing Director, Gujarat State Electricity Corporation Limited.	He has more than 37 years of rich experience in various aspects of Finance & Accounts including financial reporting & structuring, strategic planning, long & short term debt financing in domestic and international markets, cost & Internal controls, acquisitions, corporate governance & risk management, budgeting, investors' relations, taxation and regulatory affairs and Enterprise Resource planning.	He has an illustrious career spanning over more than three decades entailing both line and HR functions. After initial exposure of working in Operation & Maintenance, he took a leap in his career and switched to core HR function in 1997. He looked after various facets of HR and subsequently moved on to become the Head of HR of Koldam, the first hydro project of NTPC. He had been Head of HR at various projects of NTPC such as NSPCL-Bhilai, Sipat, and Tanda for about 13 years. He had a short stint as Regional Head of HR of Easter Region-II before being appointed to the post of Director (HR) in NTPC.
Directorship held in other companies	1. Bangladesh-India Friendship Power Company Private Limited (Foreign Company)	1. NTPC Vidyut Vyapar Nigam Limited 2. Meja Urja Nigam Private Limited 3. THDC (India) Limited 4. North Eastern Electric Power Corporation Limited	1. Aravali Power Company Private Limited 2. NTPC SAIL Power Company Limited 3. NTPC Electric Supply Company Limited 4. Patratu Vidyut Utpadan Nigam Limited
Memberships/ Chairmanship of Committees across all Public Companies*	Audit Committee: NIL Stakeholders' Relationship Committee: NIL	Audit Committee: 1. NTPC Vidyut Vyapar Nigam Limited- Chairman 2. North Eastern Electric Power Corporation Limited – Member Stakeholders' Relationship Committee: 1. NTPC Limited - Member	Audit Committee: NIL Stakeholders' Relationship Committee: NIL
No. of Shares held in NTPC Limited as on 31.3.2021	5,828	12,370	NIL
Attendance in Board Meetings held during 2020-21	No. of meetings held:14 No. of meetings attended:12	No. of meetings held:14 No. of meetings attended: 14	No. of meetings held: 14 No. of meetings attended: 14

*In line with Regulation 26 of SEBI (Listing Obligations and Disclosure Requirements) Regulations 2015, membership of the Audit Committee and Stakeholders' Relationship Committee have only been taken into consideration.

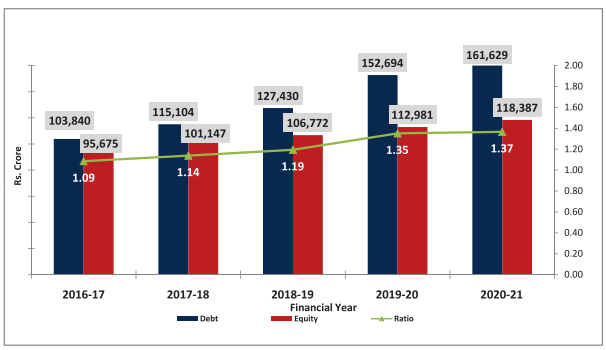
Source of Funds



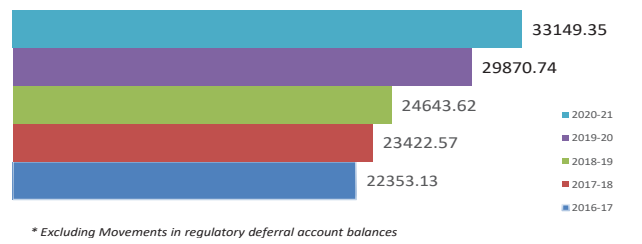
Application of Funds



Debt to Equity

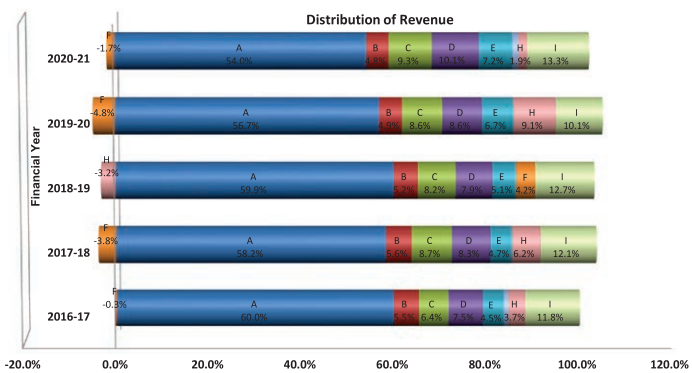


EBITDA* (₹ in Crore)



** Excluding Movements in regulatory deferral account balances*

Distribution of Revenue



A B C D E F G H I

A:Fuel (including Energy purchased for trading)
B:Employee Benefit Expenses
C:Other Expenses
D:Depreciation,Amortization & Impairment
E:Finance Costs
F: Movements in Regulatory Balances
G:Exceptional Items
H:Tax
I: Profit

GRAPHS REPRESENTING NTPC's GROWTH

STATION & REGION WISE NTPC GROSS GENERATION 2020-21

NTPC Stations	Gross Capacity (MW)	Gross Generation (MU)
NR COAL		
Singrauli	2000	14960
Rihand	3000	23399
Unchahar	1550	7157
Tanda	1760	5816
Vindhyachal	4760	36998
AURAIYA GAS	**663**	687
NR SOLAR		
Unchahar	10	14.20
Singrauli	15	21.18
Auraiya	20	7.52
Bilhaur	210	61.93
Singrauli small Hydro	8	19.32
TOTAL NR	**13996**	89140
DBF COAL		
Dadri Coal	**1820**	3958
DBF GAS		
Dadri	830	1783
Faridabad	432	902
DBF SOLAR		
Dadri	5	6.65
Faridabad	5	6.75
TOTAL DBF	**3091**	6656
WR-1 COAL		
Mouda Station	2320	6698
Solapur	1320	3586
WR-1 GAS		
Anta	419	364
Kawas	656	1029
Gandhar	657	829
WR-1 SOLAR		
Bhadla	260	440.42
Wind		
Rojmal	50	83.9
TOTAL WR-1	**5683**	13031
WR-2 COAL		
Korba	2600	21333

NTPC Stations	Gross Capacity (MW)	Gross Generation (MU)
Sipat	2980	23525
Gadarwara	1600	4674
Lara	1600	6430
Khargone	1320	4340
WR-2 SOLAR		
Rajgarh	50	78.57
Mandsaur	250	401.62
TOTAL WR -2	**10400**	60782
ER-1 COAL		
Farakka	2100	11929
Kahalgaon	2340	13231
Barh	1320	7833
Barauni	470	1402
TOTAL ER-1	**6230**	**34395**
ER-2 COAL		
Talcher Kaniha	3000	21897
Talcher Thermal	Decommissioned on 31.3.21	3405
Bongaigaon	750	2977
Darlipali	800	4782
ER-2 SOLAR		
Talcher Solar	10	13.81
TOTAL ER 2	**4560**	**33076**
SR COAL		
Ramagundam	2600	16712
Simhadri Stage	2000	8680
Kudgi	2400	4711
RGCCPP LIQUID	360	101
SR SOLAR		
Ramagundam Solar	10	14.14
Andaman solar	5	5.27
Ananthpuram solar	250	381.54
TOTAL SR	**7625**	**30605**
HYDRO		
Koldam	800	3221
TOTAL NTPC	**52385**	**270906**

Share of installed Capacity (as on 31st March 2021)

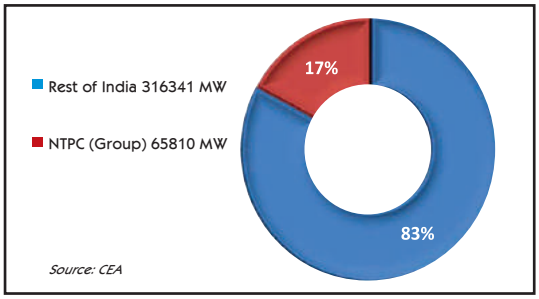
	Installed Capacity (MW)	% Share
NTPC Group	**65810**	17.22
Rest of India (Incl.RE)	**316341**	82.78

Share of electricity generated (FY 2020-21)

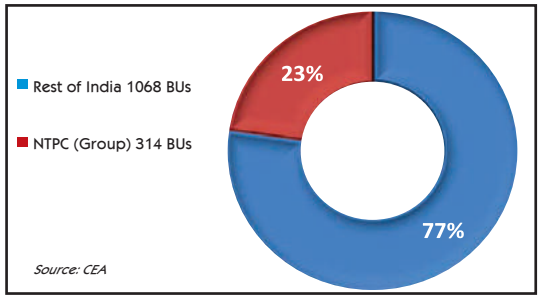
	Electricity generated(BU)	% Share
NTPC Group	**314.07**	22.72
Rest of India (Incl.RE) **	**1068.09**	77.28

****All India generation is excluding Bhutan Import**

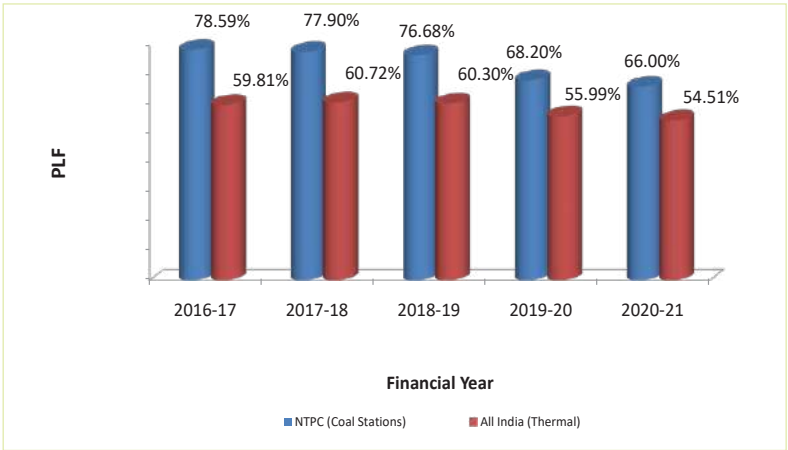
Share of Installed Capacity



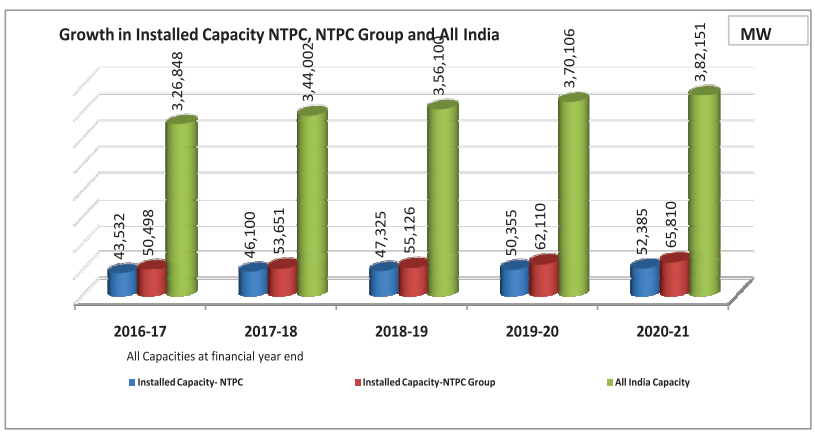
Share of Electricity Generated



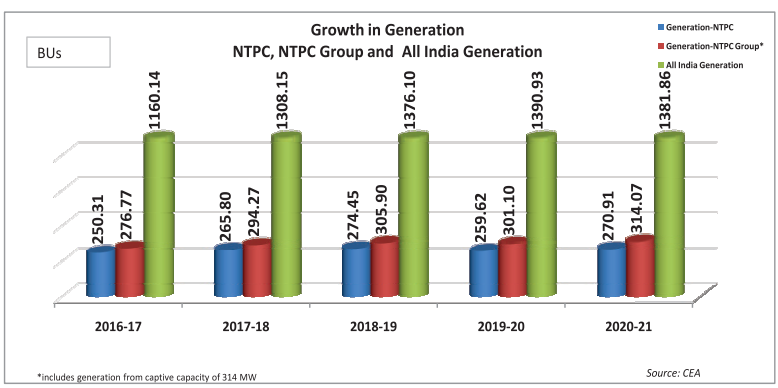
NTPC PLF Vs All India PLF



Growth in Installed Capacity NTPC, NTPC Group and All India



Growth in Generation NTPC, NTPC Group and All India Generation



GRAPHS REPRESENTING NTPC's GROWTH



SELECTED FINANCIAL INFORMATION*

(₹ Crore)

		2020-21	2019-20	2018-19	2017-18	2016-17
A	**Revenue**					
	Revenue from operations	99,206.72	97,700.39	90,307.43	83,452.70	78,273.44
	Other income	4,345.99	2,778.02	1,872.13	1,755.25	1,068.86
	Total revenue	**1,03,552.71**	**1,00,478.41**	**92,179.56**	**85,207.95**	**79,342.30**
B	**Expenses**					
	Fuel	52,849.64	54,241.82	52,493.74	48,315.47	47,572.19
	Energy purchased for trading	3,031.25	2,776.44	2,713.68	1,313.51	-
	Employee benefits expense	4,942.19	4,925.60	4,779.89	4,734.67	4,324.60
	Other expenses	9,580.28	8,663.81	7,548.63	7,421.73	5,092.38
	Profit before depreciation, finance cost and tax	**33,149.35**	**29,870.74**	**24,643.62**	**23,422.57**	**22,353.13**
	Depreciation, amortization and impairment expense	10,411.80	8,622.85	7,254.36	7,098.86	5,920.82
	Profit before finance cost and tax	**22,737.55**	**21,247.89**	**17,389.26**	**16,323.71**	**16,432.31**
	Finance costs	7,459.03	6,781.97	4,716.74	3,984.25	3,597.20
	Profit before exceptional items tax and regulatory account deferral account balances	**15,278.52**	**14,465.92**	**12,672.52**	**12,339.46**	**12,835.11**
	Exceptional Items (+) income/ (-) loss	(1,363.00)	-	-	-	(782.95)
	Profit before tax	**13,915.52**	**14,465.92**	**12,672.52**	**12,339.46**	**12,052.16**
	Total Tax expense	1,925.39	9,181.95	(2,918.71)	5,257.14	2,930.82
	Profit for the year before regulatory deferral account balances	**11,990.13**	**5,283.97**	**15,591.23**	**7,082.32**	**9,121.34**
	Net movement in regulatory deferral account balances (net of tax)	1,779.39	4,828.84	(3,841.34)	3,260.85	263.92
	Profit for the year	**13,769.52**	**10,112.81**	**11,749.89**	**10,343.17**	**9,385.26**
	Other comprehensive income/(expense) for the year (net of income tax)	(68.19)	(327.22)	(201.87)	(14.48)	(203.38)
	Total comprehensive income for the year	**13,701.33**	**9,785.59**	**11,548.02**	**10,328.69**	**9,181.88**
	Dividend	5,531.06	2,968.37	4,922.55	4,040.28	3,595.03
	Dividend tax	-	607.80	1,000.49	816.40	727.79
	Retained profit	8,238.46	6,536.64	5,826.85	5,486.49	5,062.44
C	**Assets**					
	Property, plant & equipment	1,63,892.12	1,56,273.02	1,25,290.68	1,19,427.57	97,443.34
	Capital work-in-progress	75,343.60	73,066.76	90,808.89	78,606.91	81,921.82
	Intangible assets	556.74	538.28	329.94	331.60	293.02
	Intangible assets under development	94.90	292.52	397.80	469.36	434.63
	Total Fixed Assets (Net block)	**2,39,887.36**	**2,30,170.58**	**2,16,827.31**	**1,98,835.44**	**1,80,092.81**
	Investments in Subsidiaries, JVs & Others (Non-current)	28,125.65	26,400.89	13,145.94	10,047.48	8,248.11
	Other non-current financial assets	2,686.96	2,003.86	1,968.67	2,288.53	2,440.36
	Other non-current assets	13,790.02	11,464.50	13,269.30	11,547.73	16,852.53
	Current assets	47,585.68	48,504.86	42,133.74	36,731.25	28,420.85
	Regulatory deferral account debit balances	11,143.72	9,122.76	3,406.00	8,381.66	5,450.67
	Total Assets	**3,43,219.39**	**3,27,667.45**	**2,90,750.96**	**2,67,832.09**	**2,41,505.33**
D	**Liabilities**					
	Borrowings					
	Non-current borrowings	1,51,229.62	1,46,538.70	1,19,698.08	1,08,697.60	97,339.28
	Current maturities of non-current borrowings	10,399.25	6,154.92	7,732.40	6,406.69	6,500.37
	Total borrowings	**1,61,628.87**	**1,52,693.62**	**1,27,430.48**	**1,15,104.29**	**1,03,839.65**
	Other Non-current liabilities	12,569.73	10,182.85	6,151.34	12,716.06	9,153.62
	Current liabilities	58,440.14	54,704.16	55,354.00	42,554.76	36,177.32
	Less: Current maturities of non-current borrowings	10,399.25	6,154.92	7,732.40	6,406.69	6,500.37
	Net Current liabilities	48,040.89	48,549.24	47,621.60	36,148.07	29,676.95
	Deferred Revenue	1,994.41	2,672.30	2,139.37	2,085.90	2,121.14
	Regulatory deferral account credit balances	-	-	-	-	482.74
E	**Net-worth**					
	Equity	9,696.67	9,894.56	9,894.56	8,245.46	8,245.46
	Other Equity	1,09,288.82	1,03,674.88	97,513.61	93,532.31	87,985.77
	Networth	1,18,985.49	1,13,569.44	1,07,408.17	1,01,777.77	96,231.23
	Networth excluding Fly ash utilisation reserve fund & Corporate social responsibility (CSR) reserve	1,18,387.41	1,12,980.96	1,06,771.54	1,01,146.56	95,674.55
	Total Liabilities	**3,43,219.39**	**3,27,667.45**	**2,90,750.96**	**2,67,832.09**	**2,41,505.33**
F	**Capital employed (other than deployed in under construction projects)**	1,74,649.34	1,47,014.07	1,31,354.03	1,19,711.03	1,00,757.21
G	**Value added**	42,965.45	37,586.93	33,570.80	31,163.69	29,159.02
H	**Number of shares #**	9,69,66,66,134	9,89,45,57,280	9,89,45,57,280	9,89,45,57,280	9,89,45,57,280
I	**Number of employees**	16,798	17,398	18,359	19,739	20,593
J	**Ratios**					
	Return on capital employed (%)	10.86	10.48	12.51	11.52	13.39
	Return on net worth (%)	17.27	14.80	16.72	15.14	17.68
	Book value per Share (₹)	122.71	114.78	108.55	102.86	97.26
	Earnings per share (₹) @	13.99	10.22	11.88	10.45	9.49
	Current ratio	0.81	0.89	0.76	0.86	0.79
	Debt to equity	1.37	1.35	1.19	1.14	1.09
	Value added per employee (₹ crore)	2.56	2.16	1.83	1.58	1.42

* Standalone

\# During FY 2018-19, 164,90,92,880 bonus shares were issued. Number of shares for all previous years have been changed accordingly for comparability.

@ Earning per share for the year ended 31 March 2021 has been computed on the basis of weighted average number of shares outstanding during the year i.e., 984,46,77,868 shares considering buy back of 19,78,91,146 fully paid-up equity shares completed on 30 December 2020.

Generating Power & Smiles 24x7 for the Nation

DIRECTORS' PROFILE



Chairman & Managing Director

Shri Gurdeep Singh, (DIN: 00307037), (aged 56 years), took over as Chairman & Managing Director on February 04, 2016. Prior to joining NTPC, he was Managing Director of Gujarat State Electricity Company Limited.

He has an illustrious career spanning over three decades in the power sector. He started his career in 1987 as an Engineer Trainee with NTPC and has worked his way through various ranks in public and private sector including MNCs.

He graduated in mechanical engineering from NIT Kurukshetra and has undergone Management Education Program from IIM Ahmedabad. He has also received management and leadership inputs from renowned global institutions like Saïd Business School-Oxford (UK), Harvard-Kennedy School (USA), Darden School of Management - Virginia (USA), Singapore Civil Services College (Singapore) and ISB Hyderabad (India).

He is currently the co-chair for the taskforce on Energy & Resource efficiency, B20 Italy and the stewardship Board of the platform for Energy & Materials with World Economic Forum. He is also on the Clean Energy Ministerial Hydrogen initiative advisory group, IEA.

He firmly believes in delegation and empowerment. He has launched a series of initiatives to sustain NTPC's growth and bring about cultural changes necessary to maintain NTPC's position as a leading global energy company.

He has positioned NTPC at the forefront of energy transition and has started many initiatives like aggressive renewable addition, green Hydrogen, Biomass, W2E, W2F, CCU, distribution, acquisitions, global presence etc. to transform NTPC from merely a "Coal based Power Generating Company" to a "Sustainable Integrated Energy Company".

His strong focus on increasing competitive edge helped NTPC winning various tenders and emerged as a strong player in renewables. His thrust on minimizing environmental footprint, maximizing sustainability efforts and a focussed approach of 'Low-Cost Low Emission' aligns with India's ambitious target of cleaner and affordable power for all and helped in conceptualisation of coal swapping, freight rationalisation, priority in scheduling of cheaper stations and flexibility in scheduling schemes.



Director (Finance)

Shri Anil Kumar Gautam, [aged 59 years], [DIN:08293632], is a Honours Graduate in Commerce and a fellow member of the Institute of Cost Accountants of India. He is also a Law Graduate. He joined NTPC in the year 1984 and has around 37 years of rich experience in various aspects of Finance & Accounts.

He has experience in financial reporting & structuring, strategic planning, long & short term debt financing in domestic and international markets, cost & Internal controls, acquisitions, corporate governance & risk management, budgeting, investors' relations, taxation and regulatory affairs and Enterprise Resource planning.

Prior to joining the Board of NTPC, he was Executive Director (Finance) in the Company.

Shri Gautam is also chairman of Meja Urja Nigam Private Limited and NTPC Vidyut Vyapar Nigam Limited. He is also a part time director on the Boards of THDC India Limited and North Eastern Electric Power Corporation Limited (NEEPCO).



Director (HR)

Shri Dillip Kumar Patel, [aged 57 years], [DIN:08695490], has taken charge as Director (HR), NTPC on 1st April 2020. He started his career in NTPC way back in 1986 as an Engineering Executive Trainee (XI batch). Shri Patel's ascent from his humble beginning as an Executive Trainee to the top echelons of HR function in NTPC signifies his passion, commitment and hard work. He graduated in Mechanical Engineering from NIT, Rourkela and did his Post Graduate Diploma in Business Management (HR & Finance) from MDI, Gurgaon. He has also received management and leadership training inputs from ESCP-EAP (Paris, Berlin & Turin), Harvard Business School (USA), ISB Hyderabad & XLRI Jamshedpur.

He has an illustrious career spanning over more than three decades entailing both line and HR functions. After initial exposure of working in Operation & Maintenance, he took a leap in his career and switched to core HR function in 1997. He looked after various facets of HR and subsequently moved on to become the Head of HR of Koldam, the first hydro project of NTPC. He had been Head of HR at various projects of NTPC such as NSPCL-Bhilai, Sipat, and Tanda for about 13 years. He had a short stint as Regional Head of HR of Easter Region-II before being appointed to the post of Director (HR) in NTPC.

He has undertaken various challenging assignments and has successfully managed HR functions while working at various locations comprising of thermal, hydro, JVs as well as taken-over projects. He firmly believes in the philosophy of "People before PLF". His varied experience and deep understanding of the underlying culture of the organization will help HR to excel and achieve new heights in the days to come in NTPC.



Director (Operations)

Shri Ramesh Babu V, [aged 57 years], [DIN:08736805], a Mechanical Engineering graduate from NIT Srinagar and Masters in Thermal engineering from IIT Delhi , joined NTPC as 12th batch Executive Trainee in 1987. He has over 33 years of vast experience with outstanding contribution in management of large size plants in the area of power plant operation & maintenance, Renovation & modernization of old units and in area of efficiency and systems improvement of thermal plants. He, as a Professional Manager and Strategic Planner has led several initiatives for improving reliability and efficiency of Plants.

Shri Ramesh Babu's experience in power sector includes Senior Management level exposure as a "Business Unit Head" of NTPC Talcher Kaniha & NSPCL Durgapur. Prior to elevation to the post of Director (Operations), he was working as ED to CMD & was working on system improvement activities and strategies related to operational excellence of NTPC power plants.

Shri Ramesh Babu is also Part time Chairman on the Board of NTPC Tamil Nadu Energy Company Limited (NTECL), Kanti Bijlee Utpadan Nigam Limited (KBUNL), Bhartiya Rail Bijli Corporation Limited (BRBCL) and Nabinagar Power Generation Company Limited (NPGCL). He is also permanent Invitee on the board of Northern Coalfields Limited & member of Central Pollution Control Board. He was also holding additional charge of Member (Technical) of Damodar Valley Corporation (DVC) till 18.1.2021.

As Director (Operations), NTPC, he is responsible for overall planning for Safe, Reliable and Efficient operation of all power generating stations of NTPC group Portfolio, while ensuring fuel security & environmental compliance of all Power Stations.



Director (Commercial)

Shri Chandan Kumar Mondol [aged 58 years], [DIN:08535016], has taken charge as Director (Commercial), NTPC Limited w.e.f. 1st August, 2020.

Shri Mondol has been with NTPC for over 36 years and has held several key leadership positions across multiple business units.

Shri Mondol joined NTPC as 9th Batch Executive Trainee (ET) in 1984. He has vast experience and comprehensive knowledge of the power sector and has worked in both power plant and corporate functions. He started off his journey with the project execution and commissioning of (3X500 MW) units at Ramagundam and (4X210 MW) units at Kahalgaon.

As a strategic planner, Shri Mondol has led several initiatives at NTPC. In 1998, Shri Mondol joined Corporate Commercial where he worked towards developing commercial & marketing strategies, execution of domestic and international Power Purchase Agreements (PPAs), formulation of Tariff Regulations with CERC, participation in Ultra Mega Power Plant (UMPP) bidding, etc.

He joined Corporate Planning in 2012 as head of Strategic Planning Division and was also responsible for periodic review of Business Plan, Organisational Restructuring, identifying risks of the company and its mitigation through comprehensive Enterprise Risk Management Policies etc. Shri Mondol took charge as Business Unit Head (BUH) of Khargone in March 2015 and was responsible for execution of 1320 MW Green Field Power Project involving land acquisition, Right of Use, Right of Way, R&R plan, Project Planning & Construction, Boundary Management with the local administration, State Government and other statutory authorities.

Before his appointment as Director (Commercial), he has worked as RED-WR-1, RED (DBF & Hydro), ED (PP&M) and ED (Commercial).



Director (Projects)

Shri Ujjwal Kanti Bhattacharya [aged 57 years], [DIN:08734219], joined NTPC in Ninth Batch of Executive Trainees recruited in 1984.

He started his career in Project Construction, followed by Operation & Maintenance at 1600 MW Farakka STPP.

He has also been a member of NTPC Team credited for turnaround of 460 MW Talcher TPS during 1996-98.

He has contributed NTPC Business Development in Domestic as well as International Arena with special focus on NTPC's diversification into hydroelectricity with acquisition of Koldam and setting up of subsidiary company NESCL for electricity distribution business. He has been at the forefront of JV formulation & Project conceptualization for 1320 MW Maitree Power Project at Bangladesh.

Before appointment as Director (Projects), NTPC he has worked as MD and CEO (Bangladesh India Friendship Power Company Limited), ED (International Business Development) and ED(Projects), NTPC.



Government Nominee Director

Shri Vivek Kumar Dewangan [aged 54 years], [DIN:01377212], an Indian Administrative Service Officer of Manipur Cadre [1993 Batch], is B.E. in Electronics from NIT, Bhopal and P.G. in Optoelectronics & Optical Communication from IIT, Delhi. During his illustrious career of 26 years as IAS officer, he has held various administrative positions in the areas of Finance, Power/ Energy, Elections/ Law & Justice, Commerce & Industries, Minister's Office [Corporate Affairs/Agriculture & Food Processing Industries], Education/Human Resource Development, Sericulture/Agriculture & Cooperation, Economic Affairs, Economics & Statistics, Petroleum & Natural Gas, District Administration [Surguja & Raipur District in Chattisgarh and Senapati District in Manipur], Divisional Admn. Currently, Shri Dewangan has been working as Additional Secretary, Thermal, Ministry of Power.



Government Nominee Director

Shri Ashish Upadhyay [aged 57 years], [DIN: 06855349], IAS, Additional Secretary & FA, Ministry of Power, Govt. of India joined as a Part-time Official Director on the Board of NTPC on 22.01.2020. Shri Upadhyay is an IAS Officer of 1989 Batch belonging to Madhya Pradesh cadre. Having done his post-graduation in History from St. John College, Agra, he joined the civil services and has served for more than 32 years in various capacities in the State Government of M.P. including tenure in coal bearing areas of Anuppur, Shahdol and Umaria as the Addl. District Collector. He has been Collector for more than 5 years in 3 districts of M.P. & Chhattisgarh. Shri Upadhyay has served at the State level as Secretary and Principal Secretary of various departments including Home, Higher Education and Finance for many years. As Joint Secretary, Coal, he has been instrumental in developing systems by application of space technology for curbing the menace of illegal mining. He has academic bent of mind and while being in the service, he continued his pursuit of education and completed post-graduation in Economics and LLB He also did his Master's degree in Public Administration from Maxwell School of Citizenship, Syracuse University in U.S.A. Shri Upadhyay has been working as Additional Secretary & FA , Ministry of Power since 14th November, 2019.

SENIOR MANAGEMENT TEAM

(As on 24.8.2021)

S. No.	Executive Directors S/Shri	Position Held
1	Sudarsan Chakrabarti	ED (Engineering)
2	MSD Bhattamishra	ED (HR)
3	Sanjay Madan	RED (WR-2 & South)
4	Awadhesh Kumar	ED (OS)
5	Subhajit Ghosh	ED (OS)
6	Dhurjati Sesha Chalapathi Rao	ED (ER-2)
7	Sunil Kumar Satya	RED (ER-2)
8	Anil Kumar Pandey	RED (WR-1 & Unified shared Service)
9	Debashis Sen	RED (NR)
10	Munish Jauhari	ED (Vindhyachal)
11	Vinay Kumar	RED (Hydro)
12	Ashim Kumar Goswami	ED (North Karanpura)
13	Ashwini Kumar Tripathy	ED (OS)
14	Partha Mazumder	RED (Coal Mining)
15	Praveen Saxena	RED (ER-1)
16	Manish Kumar Srivastava	ED (IT\ERP\Communication)
17	Mohit Bhargava	ED (Renewable Energy)
18	Harekrushna Dash	ED (CC&M)
19	DSGSS Babji	ED (Farakka)
20	Velivala Sudharshanbabu	ED (Kahalgaon)
21	Ramesh Kher	ED (Talaipalli)
22	Sudip Nag	ED (Biomass)
23	Subrata Mandal	ED (Bongaigaon)

S. No.	Executive Directors S/Shri	Position Held
24	Dileep Kumar	ED (FM)
25	Debasish Chattopadhyay	ED (Singrauli)
26	K Srinivasa Rao	ED (Talcher Kaniha)
27	Alok Gupta	ED (Lara)
28	Biswarup Basu	ED (Korba)
29	OK Murukadas	ED (PM)
30	Satish Upadhyay	ED (Rammam)
31	Shambhu Nath Tripathi	ED (Barh)
32	Arabinda Kumar Munda	RED (WR-1)
33	MVR Reddy	ED (Pakri Barwadih)
34	Renu Narang	ED (Finance)
35	Aditya Dar	ED (Finance)
36	Anil Nautiyal	ED (Commercial)
37	C Sivakumar	ED (Safety, EMG, ASH ManagemenT & SD)

Posted in Subsidiary / Joint Venture Companies and others

S. No.	Executive Directors S/Shri	Position Held
1.	P K Bondriya	CEO-NSPCL
2.	Vijai Singh	CEO-NPGCL
3.	A K Samanta	ED-(Ratnagiri)
4.	Rakesh Prasad	CEO-UPL
5.	Prem Prakash	ED-Patratu
6.	Rakesh Kumar	CEO-Meja
7.	Sital Kumar	MD-TELK



Team NTPC

DIRECTORS' REPORT

Dear Members,

Your Directors are pleased to present the 45th Annual Report on the business and operations of the Company along with the Audited Standalone and Consolidated Financial Statements for the year ended March 31, 2021 and Auditors' Report thereon on behalf of the Board of Directors.

Financial Year 2020-21 had been yet another year of achievements for your Company.

Major highlights of your Company for the financial year 2020-21 are:

- Your Company topped the 300 BUs generation (on Group basis) mark for the 2nd time and registered highest group generation since inception. Further, your Company recorded highest ever single day gross generation of 1192.41 MUs (Group) on March 19, 2021 and 990.65 MUs (Standalone) on March 20, 2021.
- Plant Load Factor (PLF) of 66.00% as against all India PLF of 54.56% maintaining a spread of over 11%. 4 coal stations of your Company were among the top 10 performing stations in the country in terms of PLF. It included Korba with 93.66%, Sipat with 90.12%, Rihand with 89.04% and Vindhyachal with 88.73% PLF.
- Your Company has achieved capacity addition of 4,160 MW and commercial capacity addition of 3,824 MW including 904 MW capacity from renewable and hydro Projects. Your Company (Group) is now a 65.80 GW company.
- Your Company raised a loan in JPY 50 Billion for funding FGD and RE projects at a very competitive rate. Further, through proactive refinancing, the weighted average cost of borrowings stood at 6.24%, which is one of the best in the market.
- Group Capital Expenditure (CAPEX) including CAPEX of JV/ subsidiaries of your Company for the year 2020-21 was ₹ 33,981.64 crore and on stand-alone basis was ₹ 20,685.99 crore on cash basis.
- Revenue from operations was ₹ 99,206.72 crore and total revenue was ₹ 1,03,552.71 crore. Net Profit after Tax (PAT) was ₹ 13,769.52 crore.
- Dividend of ₹ 6.15 per share comprising interim dividend of ₹ 3.00 per equity share paid in Feb. 2021 and recommended final dividend of ₹ 3.15 per equity share for the year 2020-21, subject to your approval in the upcoming Annual General Meeting.
- Cash contribution of ₹ 6,678.82 crore to Government of India's exchequer through dividend, buy back tax and income tax in the financial year 2020-21.
- Planted approx. 10.45 lakh trees during 2020-21 to mitigate the GHG emissions arising out of plant operations, thereby bringing total to about 3.60 crore planted trees till end of 31.3.2021.
- Your Company has been conferred "Excellence in the prestigious CII-ITC sustainability award- 2020 in "Corporate Social Responsibility" category.
- Your Company secured 5th position (Utilities segment) in Forbes - World's Best Employer list - 2020 and 1st in PSUs (India). The overall rank is 261st.
- Your Company has been selected as one of the Best Workplaces in Asia 2020 under the Large Category by Great Places to Work. Your Company also received "Role Model" award in HR domain from CII.
- Your Company has been conferred with the prestigious FICCI Jury Commendation Certificate under the Category "Women Empowerment". The award has been received for your Company's flagship "Girl Empowerment Mission" Project.
- In its endeavour towards more sustainable power generation, your Company has started using agro- residue-based pellets.
- Your Company has saved 3.3 crore paper which is equivalent to 4,000 fully grown trees annually by going paperless. Project "PRADIP" has been implemented for digitization of documents and paperless processes.

You will appreciate the fact that the company recorded growth and excellent performance despite numerous challenges before the sector like Environmental concerns, Non-availability of Gas, strict emission norms, etc.

Further, during the COVID-19 crisis, your Company has worked (24X7) to provide uninterrupted power supplies every day to millions of Indians. As a responsible corporate citizen, it is our duty to follow the directives issued by Government of India (GoI) from time to time to fight against COVID-19 pandemic.

Despite all the challenges, Team NTPC worked tirelessly at its Power Plants to keep up the generation and meet the power demand of the nation.

1. FINANCIAL RESULTS (STANDALONE)

Particulars	2020-21		2019-20	
	₹ Crore	US $ Mn*	₹ Crore	US $ Mn*
Income				
Revenue from operations (including energy sales, sale of energy through trading, consultancy fee etc.)	99,206.72	13,395.45	97,700.39	13,192.06
Other income	4,345.99	586.82	2,778.02	375.10
Total income	1,03,552.71	13,982.27	1,00,478.41	13,567.16
Expenses				
Fuel cost	52,849.64	7,136.06	54,241.82	7,324.04
Electricity purchased for trading	3,031.25	409.30	2,776.44	374.89
Employee benefits expense	4,942.19	667.32	4,925.60	665.08
Finance costs	7,459.03	1,007.16	6,781.97	915.74
Depreciation and amortisation expense	10,411.80	1,405.86	8,622.85	1,164.31
Other expenses	9,580.28	1,293.58	8,663.81	1,169.84
Total expenses	**88,274.19**	**11,919.28**	**86,012.49**	**11,613.90**
Profit before exceptional items, tax and regulatory deferral account balances	**15,278.52**	**2,062.99**	**14,465.92**	**1,953.27**
Exceptional Items	1,363.00	184.04	-	-
Profit before tax and regulatory deferral account balances	**13,915.52**	**1,878.95**	**14,465.92**	**1,953.27**
Tax expense	1,925.39	259.98	9,181.95	1,239.80
Profit for the year before regulatory deferral account balances	**11,990.13**	**1,618.97**	**5,283.97**	**713.47**
Net movement in regulatory deferral account balances (net of tax)	1,779.39	240.26	4,828.84	652.02
Profit for the year	**13,769.52**	**1,859.23**	**10,112.81**	**1,365.49**

Appropriations	2020-21		2019-20	
	₹ Crore	US $ Mn*	₹ Crore	US $ Mn*
Transfer to general reserve	6,500.00	877.67	6,500.00	877.67
Dividend paid	5,531.06	746.83	2,968.37	400.81
Tax on dividend paid	-	-	607.80	82.07

*1US $= ₹ 74.06 as on March 31, 2021

2. FORMATION OF NTPC EDMC WASTE SOLUTIONS PRIVATE LIMITED AND NTPC RENEWABLE ENERGY LIMITED

In order to develop & operate state of art/modern integrated waste management and energy generation facility using municipal solid waste, your Company has incorporated a JV Company with 74:26 shareholding with East Delhi Municipal Corporation (EDMC) on 1.6.2020.

Further, NTPC Renewable Energy Limited (NTPC RE), a wholly owned subsidiary of your Company was incorporated on 7.10.2020 with a target to accelerate the RE capacity addition plan. Thus, your Company is taking steps to make its energy portfolio greener by adding significant capacities of Renewable Energy (RE) Sources by 2032.

3. BUY BACK OF SHARE

The Board of Directors of your Company had approved buyback of equity shares in its meeting held on 2.11.2020. Accordingly, your Company has bought back 19,78,91,146 equity shares of the Company for an aggregate amount of ₹ 2,275.75 crore being 2% of the total paid up equity share capital at ₹ 115.00 per equity share.

4. DIVIDEND

Interim and Final Dividend:

Your Company has declared and paid interim dividend of ₹ 3.00 per equity share in February 2021 and the Board of Director of your Company has recommended a final dividend of ₹ 3.15 per equity share for the financial year (FY) 2020-21. Total dividend for FY 2020-21 will be ₹ 6.15 per equity share. This will be the highest ever dividend per share in the history of Company.

The dividend pay-out ratio during the last five year was as under:

S.No.	Financial Year	Dividend Pay-out Ratio
1	2016-2017	42.00%
2	2017-2018	40.82%
3	2018-2019	46.18%
4	2019-2020	30.82%
5	**2020-2021**	**43.31%**

The total dividend payout ratio for FY 2020-21 will be 43.31%. The final dividend shall be paid after your approval at the upcoming Annual General Meeting.

The dividend has been recommended in accordance with your Company's Dividend Distribution Policy. Further, as per Regulation 43A of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("SEBI Listing Regulations"), the top 1,000 listed companies shall formulate a dividend distribution policy. Accordingly, the policy was adopted to set out the parameters and circumstance that will be taken into account by the Board in determining the distribution of dividend to its shareholders and/ or retained profits earned by the Company. The policy is also available on the Company's website https://www.ntpc.co.in/sites/default/files/downloads/DividendDistributionPolicyofNTPCLimited.pdf.

5. OPERATIONAL PERFORMANCE

During the year, the power stations of your Company generated 270.91 BUs (314.07 BUs including JVs & Subsidiaries) of electricity. This was 19.60% (22.73% including generation by JVs and Subsidiaries) of the total power generated in India. Previous years' generation was 259.62 BUs by your Company (290.19 BUs including JVs & Subsidiaries).

The total generation contributed by coal stations was 260.43 BUs during the financial year 2020-21 against generation of 249.71 BUs in financial year 2019-20. Generation from coal-based units could have been still higher but due to less generation schedule, there was opportunity loss of 94.12 BUs. The coal-based stations operated at an average Plant Load Factor (PLF) of 66.00% (All India Coal PLF was 54.56%) and average Availability Factor (DC) of 91.43% during the year.

Korba Thermal Power Station with a PLF of 93.66% was ranked 2nd in the country and 8 Stations (including JVs) of your Company were in the top 25 in the country in terms of PLF. Five coal based stations out of twenty four commercial Stations achieved PLF of more than 85%.

The gas stations having a capacity of 4,017 MW achieved annual generation of 5.7 BUs at a PLF of 16.19 % as against 4.97 BUs last year. Opportunity loss due to less generation schedule on Gas was at 28.29 BUs. Generation contributed by Koldam Hydro Power Station was 3.22 BUs against 3.45 BUs achieved in last year. Less generation was due to low water inflow. Generation contributed by RE Projects/stations (Solar, wind, small hydro) of your Company was 1.56 BUs.

6. COMMERCIAL PERFORMANCE

6.1 Billing and Realisation

Your Company has realized 100% of its current bills raised for energy supplied in 2020-21. Your Company has also successfully achieved the target for realization of dues set by Government of India (GoI) for energy supplied in 2020-21. Most of the beneficiaries have made timely payments and availed attractive rebates as per Company's Rebate Scheme.

Your Company has in place a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). Apart from the LCs, payment is secured by the Tri-Partite Agreements (TPAs) signed amongst the State Governments, Government of India (GoI) and Reserve Bank of India (RBI). As per the TPAs, any default in payment by the State owned Discoms can be recovered directly from the account of the respective State Governments in association with RBI.

The original TPAs signed during 2000-01 were valid up to 31.10.2016. As per the decision of the Union Cabinet and as agreed by the various States and the RBI, these TPAs have been extended for a further period of 10 to 15 years. As of now, 29 out of total 31 States/UTs have signed the TPAs extension documents. The signing of TPAs extension by remaining States is being taken up.

6.2 Rebate Scheme for realization of dues

In order to encourage early and full realization of dues, your Company issued 'Rebate Scheme' for the year 2020-21. 1.65% rebate was allowed for amounts credited to your Company's accounts for any payments against provisional bills and advance payments made on 1st day of the Billing Month and graded gradually to 1.590% till 5th day of the billing month. 1.575% rebate was allowed for amounts credited to your Company's accounts for any payments made on 6th day and graded gradually to 1.5% till 11th day of the billing month. For amounts credited to your Company accounts from 12th day of the Billing Month till 18th day of the month next to Billing Month, graded rebate was offered from 1.485% to 0.020%.

6.3 Commercial Capacity

Commercial Capacity totaling to 3,824 MW of your Company including those of JV's and subsidiary companies was added during the year 2020-21:

Project/ Unit	Capacity (MW)	COD*
1.Owned by your Company		
(A) Coal Based Power Projects		
Khargone Unit# 2	660	4-Apr-20
Lara Unit# 2	800	7-Nov-20
Gadarwara Unit#2	800	1-Mar-21
Total (A)	**2,260**	
(B) Renewable Projects		
Auraiya Solar	7	10-Nov-20
Auraiya Solar	8	4-Dec-20
Auraiya Solar	5	20-Feb-21
Bilhaur Solar	140	18-Jan-21
Bilhaur Solar	70	28-Mar-21
Total (B)	**230**	
Total (A+B)-I	**2,490**	
2. Under JVs & Subsidiaries		
(A) Coal Based Power Projects		
Meja Unit #2 (JV with UPRVUNL)	660	31-Jan-21
(B) Renewable Projects		
Dhukwan SHP	24	5-May-20
Kasaragod Solar	50	31-Dec-20

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Project/ Unit	Capacity (MW)	COD*
(C) Hydro Projects		
Kameng HEP Unit #1	150	17-Jun-20
Kameng HEP Unit #2	150	1-Jul-20
Kameng HEP Unit #3	150	22-Jan-21
Kameng HEP Unit #4	150	12-Feb-21
Total (A+B+C)-II	**1,334**	
Total Capacity declared commercial during 2020-21 (I)+(II)	**3,824**	

* COD- Commercial Operation Date

As on 31.3.2021, the Commercial Capacity of your Company stood at 51,725 MW* (49,695 MW as on 31.3.2020) and your Company Group's Commercial Capacity stood at 64,490 MW (61,126 MW as on 31.3.2020):

Owned by your Company	Capacity MW
Coal based projects	45,750
Gas based projects	4,017
Renewable Energy Projects	1,158
Hydro Projects	800
Sub-total	**51,725**
Joint Ventures & Subsidiaries	
Coal based projects	7,154
Gas based projects	2,494
Renewable Energy Projects	192
Hydro Projects	2,925
Sub-total	**12,765**
Total	**64,490**

*Talcher thermal 460 MW was decommissioned on 31.03.2021.

6.4 Tariff Regulations

Central Electricity Regulatory Commission (CERC) has issued the CERC (Terms and Conditions of Tariff) Regulations, 2019 on 7.3.2019, which are applicable for the period 1.4.2019 to 31.3.2024. The tariff of electricity generated from various stations of your Company is in the process of determination by CERC based on station-specific petitions filed as per these Regulations for the above-mentioned period. Further, CERC has also issued the First Amendment to Tariff Regulations, 2019 regarding servicing of capital and operational expenditure incurred on installation and operation of Emission Control Systems through determination of supplementary capacity charges and supplementary energy charges. CERC has also issued Second Amendment to the Tariff Regulations, 2019 regarding determination of transfer price of coal from captive coal mines by the generating company.

6.5 Security Constrained Economic Dispatch (SCED)

1. The mechanism of Security Constrained Economic Dispatch (SCED) is under implementation on Pilot basis starting from 1.4.2019. This mechanism helps in optimization of total schedule of the Inter State Generating Stations based on the variable cost, resulting in savings in cost of procurement for the Discoms.
2. Starting from 1.6.2020, this Pilot has been extended twice by CERC, first till 31.3.2021 and then again till 30.9.2021. During these periods, the scope of the SCED has been expanded to include the state regulated generating stations and the merchant generators based on their willingness to participate in the scheme.
3. SCED has resulted in cumulative savings of ₹1660 crore in generation cost from start of the SCED pilot in April 2019 up to March 2021 thereby resulting in increased saving in the cost of power procurement of the Discoms.
4. The generating stations of your Company are participating in the SCED mechanism starting from April 2019 and contributing in a significant way in reduction in power purchase cost of the Discoms.

6.6 Strengthening Customer Relationship

Customer Focus is one of the core values of your Company (ICOMIT). In line with this, your Company has taken up several initiatives targeted towards the external Customers. Customer Relationship Management (CRM) and Customer Satisfaction Index (CSI) are some of the important parts of these initiatives.

As part of the CRM, your Company has been implementing several structured activities with the objective of sharing its experiences and best practices with the customers, capturing their feedbacks and expectations and addressing their issues. Some of these activities are described below:

- Your Company provides various support services to the beneficiaries, which involves identifying potential areas of cooperation and sharing of each other's best practices. In the financial year 2020-21, total 8 such programs have been conducted for the customers on the basis of requirement expressed by them.
- Your Company offers training programs to the representatives of beneficiary companies at Power Management Institute (PMI), the apex training institute of your Company on free of cost basis. In 2020-21, 18 participants from various customer organizations attended training in 5 programs.
- Your Company has also put in place Customer Satisfaction Index (CSI) Survey scheme, to gather customer's feedbacks through a survey and respond to their requirements. This CSI survey has been conducted in 2020-21 and the score falls under excellent category.

6.7 Power Trading in Power Exchange

In line with CERC (IEGC) (5th Amendment) Regulations 2017, a generating company can sell the un-requisitioned surplus (URS) power based on consent of the beneficiary states. The gains realized from the sale of URS are to be shared with beneficiaries in the ratio of 50:50, subject to a cap of 7 paisa per kwh for the generators as per applicable provisions.

6.8 Real Time Market (RTM)

RTM has been implemented in the country since 1st June 2020 with participation on voluntary basis. The main objective of Real Time Market (RTM) is to provide a market mechanism to the generating stations to sell their surplus power in the market. This also provides an opportunity to the Discoms to buy power from the market to meet their contingent requirements. For generators, to sell their URS in the RTM, no consent is required from the beneficiaries. RTM is being implemented in the form of 48 half-hourly auctions conducted during the delivery date and provides options to the generators and the Discoms to participate in the market through price sensitive bidding. The gain sharing principle remains same as that the URS sale in the Day Ahead Market (DAM).

Your Company has been participating in both the DAM and the RTM for selling URS power in the Power Exchange through its trading arm NVVN. Besides selling the URS power, it has also been selling any regulated power or merchant power also in the Power Exchanges. In the FY 2020-21, around 920 Million Units of power has been sold in the DAM and RTM in Power Exchanges. Corresponding gains for this sale has been shared with the beneficiaries as per the extant regulatory provisions.

6.9 Renewable Energy:

1. **Following PPA / Power Usage Agreements have been signed:**
   a. Agreements for power under CPSU Scheme (1,692 MW) has been tied up with Telangana.
   b. PPA for 90 MW Anta Solar has been initialed with KSEBL.
   c. PPA signed with GUVNL by NREL for 200 MW Solar PV plant.
   d. PPA for 300 MW signed with TBEA Energy India Pvt. Ltd. and ABC Renewables Private Limited.
   e. PSA for 100 MW signed on 5.1.2021 with Puduchery for Solar Power from TBEA Energy India Pvt. Ltd.
   f. PPA for Nokh 190 MW signed in developer mode with Rising Sun.
2. **Following new units have been declared commissioned/ commercial:**
   a. Solar unit of Bilhaur 140 MW declared commercial on 18.1.2021.
   b. Solar unit of Bilhaur 70 MW out of 85 MW declared commercial on 28.3.2021.
   c. Solar unit of Auraiya 20 MW declared commercial on 20.2.2021
   d. Developer mode unit of Ananthapuramu Solar (Ayana Power) 250 MW declared commercial on 8.3.2021.
   e. Developer mode unit of Ananthapuramu Solar (Sprng Energy) 152 MW of total 250 MW got commissioned this year.

7. INSTALLED CAPACITY

During the year 2020-21, your Company added 4,160 MW to its installed capacity (including those of JV & Subsidiary Companies) as per details given below:

Project/ Unit installed	Capacity (MW)
Owned by your Company	
(A) Coal based Power Projects	
Lara Unit # 2	800
Gadarwara Unit #2	800
Tanda Unit #6	660
(B) Renewable Projects	
Auraiya Solar	20
Bilhaur Solar	210
Total (A+B)	**2,490**
Under Subsidiaries and Joint Ventures	
(A) Coal Based Power Projects	
Meja Unit #2	660
NPGCL Unit #2	660
(B) Hydro Projects	
Kameng HEP Unit #3	150
Kameng HEP Unit #4	150
(B) Renewable Projects	
Kasaragod Solar	50
Total by Subsidiaries and JVs	**1,670**
Total Addition during FY 2020-21	**4,160**

Further, Talcher thermal (460 MW) Project of your Company was decommissioned on 31.3.2021.

The total installed capacity of your Company Group as on 31.03.2021 has become 65,810 MW (62,110 MW as on 31.3.2020) as tabulated below:

Project/Unit Installed	Capacity MW
Owned by your Company	
Coal based projects	46,410
Gas based projects	4,017
Renewable Energy Projects	1,158
Hydro Projects	800
Sub-total	**52,385**
Joint Ventures & Subsidiaries	
Coal based projects	7,814
Gas based projects	2,494
Hydro	2,925
Renewable Energy Projects	192
Sub-total	**13,425**
Total	**65,810**

8 CAPACITY ADDITION PROGRAMME

8.1 Projects under Implementation

In addition to furthering Capacity addition through Coal based power projects, your Company has been pursuing enhancement of its power generation portfolio through Hydro and Renewable Energy projects.

Various projects of your Company having aggregate capacity of 17,989 MW including 8,369 MW being

undertaken by Joint Venture and Subsidiary Companies are under implementation in India and abroad. Total Capacity under construction comprises of 12,850 MW of Coal (Including 6,240 MW being undertaken by Joint Venture and Subsidiary Companies), 2,255 MW of Hydro (Including 1,444 MW being undertaken by Subsidiary Companies) and 2,884 MW of Renewable projects (Including 685 MW being undertaken by Subsidiary Company).

The details of such projects as on 31.3.2021 are as under:

Ongoing Projects	
NTPC Owned Projects/Units	**Capacity (MW)**
I.A. Coal Based Projects	
1. Barh-I, Bihar (3x660MW)	1,980
2. Darlipalli-I, Odisha (2x800 MW)	800
3. North Karanpura, Jharkhand (3x660 MW)	1,980
4. Telangana Phase-I, Telangana (2x800 MW)	1,600
5. Barauni St.-II, Bihar (2x250 MW)	250
Sub Total (A)	**6,610**
I. B. Hydro Electric Power Projects (HEPP)	
6. Tapovan Vishnugad,Uttarakhand(4x130 MW)	520
7. Lata Tapovan, Uttarakhand (3x57 MW)@	171
8. Rammam Hydro, West Bengal (3x40 MW)	120
Sub Total (B)	**811**
I. C Renewable Energy Projects	
9. Ramagumdam, Solar F, AP	100
10. Simhadri, Solar F, AP	25
11. Kayamkulam, Solar F, Kerala	22
12.Kayamkulam, Solar F, Kerala	70
13. Jetsar, Solar G, Rajasthan	160
14. Rihand, Solar G, UP	20
15. Auraiya, Solar F, UP	20
16. CPSU-I: Shimbhoo Ka Burj, Solar G	250
17. CPSU-I: Devikot, Solar G, Rajasthan	150
18. CPSU-I: Shimbhoo Ka Burj, Solar G	300
19. CPSU-II: Nokhra, Solar G, Rajasthan	300
20. CPSU-II: Fatehgarh, Solar G, Rajasthan	296
21. CPSU-II: Navalakhapatti, Solar G	230
22. CPSU-II: Devikot, Solar G, Rajasthan	90
23. CPSU-I: Gandhar, Solar G, Rajasthan	20
24. Kawas Solar G/F	56
25. Anta Solar G	90
26. Bilhaur, Solar, Uttar Pardesh	15
Sub Total (C)	**2,214**
Total I (A)+(B)+(C)	**9,635**
II Projects under JVs & Subsidiaries	
II. A Coal Based Projects	
27. Nabinagar- JV with Railways (BRBCL), Bihar, (4x250 MW)	250
28. Nabinagar (NPGCL), Bihar (3x660MW)	660
29. Patratu Expansion, JV with JBVNL	2,400
30. Rourkela, JV with SAIL (NSPCL), Odisha	250
31. Durgapur, JV with SAIL (NSPCL), West Bengal (2x20MW)	40
32. Khulna, JV with BPDB (BIFPCL), Bangladesh (2x660MW)	1,320
33. THDC - Khurja (2x660 MW)	1,320
Total II (A)	**6,240**
II. B Hydro Projects	
34. THDC - Tehri PSP, Uttarakhand	1,000
35. THDC - VishnugadPipalkoti, Uttarakhand	444
Total II (B)	**1,444**
II. C Renewable Projects	
36. Chattargarh, Solar G	150
37. Bhensara, Solar G	320
38. Surendernagar, Solar G	200
Total II (C)	**670**
Total II (A+B+C)	**8,354**
Total On-Going Projects as on 31.03.2021 (I)+(II)	**17,989**

@Work of Lata Tapovan HEPP stopped as per orders of the Hon'ble Supreme Court dated 7.5.2014.

8.2 New Technology & Initiatives

Your Company has always laid stress on efficient utilization of resources and use of technological advancements for improving energy efficiency.

With emphasis on efficiency of electricity generation, your Company has adopted Ultra-super critical technology by improving the steam parameters for North Karanpura (3X660 MW) to 260 kg/cm^2, 593°C/593°C. For Khargone (2X660 MW) and Telangana (2X800 MW) the steam parameters are 270 kg/cm^2, 600°C/600°C. The Plant efficiency of Ultra-super critical (USC) units is up to 42% which is significantly higher than efficiency of conventional sub-critical 500 MW unit. Ultra-super critical based units of Khargone (2X660 MW) STPP are already commissioned where 600°C temperature was adopted for main steam and reheat steam for the first time in India.

For the first time in your Company, Air Cooled Condenser (ACC) system has been adopted at North Karanpura STPP and Patratu STPP which will bring a significant reduction in specific water consumption for these projects.

8.2.1 Biomass Co-firing Utilization of Agro residue for Power Generation & reduce pollution

As part of its commitment towards clean environment, your Company has taken a new initiative to utilise agro residue for power generation. This is intended to cut down carbon emissions and also to discourage crop residue burning by farmers after harvesting by adding economic value to the crop residue and providing extra income to farmers and employment in rural sector.

Biomass co-firing is a unique method to utilize coal-based power plant infrastructure to produce renewable energy by simply replacing some of the coal with biomass-based fuel. Being carbon neutral fuel, biomass co-firing is a technology recognized by UNFCCC as a measure of reducing greenhouse gas emission.

After successfully demonstrating biomass co-firing at your Company's Dadri station, we have started commercial scale biomass co-firing at other stations of your Company also. Your Company has forayed into large scale procurement of biomass for Co-firing by issuing a Long Term (LT) tender on 18.9.2020 for procurement of ~20 MMT biomass for 17 projects of your Company over the period of four years (i.e. 5 Million Metric Tonne Per Annum (MMTPA). It is expected to place the award under the long term tender before the next harvesting season in October-November.

Besides Limited tender, your Company has awarded contracts for procurement of 4.56 LMT of biomass pellet under short term contracts (9 months). Supply has already started at 7 stations of your Company under short term contracts and also under orders placed for 280 TPD for four years (approx. 4 lakh tonnes) at Dadri station. Your Company has already fired ~28,500 metric tonnes of biomass pellets at its various stations by March'21.

8.2.2 Waste to energy (WtE) and disposing municipal solid waste (MSW)

Keeping its commitment towards clean & green environment and Swachh Bharat Mission (SBM), your Company has taken several initiatives to support & leverage Government of India's effort towards realising SBM thereby ensuring pollution free environment for people's health and welfare.

Your Company has successfully revamped and made functional the "Waste to Compost" plant at Karsara, Varanasi and is now managing Operation & Maintenance (O&M) of this entire 600 Tons per Day (TPD) capacity plant. The plant is processing about 600 TPD of MSW and generating about 60-80 TPD of compost. Sanitary land fill facility and Leachate treatment facility have also been created at Varanasi to ensure scientific disposal of municipal solid & liquid waste.

In addition, your Company has commissioned 24 TPD thermal gasification-based demonstration scale WtE plant at Varanasi. The Municipal Solid Waste (MSW) is first converted to produce gas, which is then used to generate approximately 200 kW of electric power. Further, to promote Make in India concept, this Project has been awarded to Micro, Small & Medium Enterprises (MSME) vendor.

Further, your Company has also signed tri-partite MoU on 30th June 2020 with IOCL and SDMC for development of Waste to Energy (WtE) pilot Plant at Okhla landfill site utilizing Municipal Solid Waste (MSW).

Under the said MOU, it is proposed to set up Plasma Enhanced Gasification (PEGS) technology-based Waste to Energy pilot plant at SDMC Okhla Landfill site utlising 50 treatment, storage and disposal (TSD) refuse derived fuel (RDF) and generating one MW of Electricity. The technolgy is eco-friendly as there are hadrdly any flue gases or bottam ash waste. The Pilot Plant is being setup for technology demonstration.

8.2.3 Renewable energy

Renewable energy is central focus for your Company. To be in step with ambitious targets, the Company is exploring all avenues for renewable capacity addition to look beyond conventional large scale solar and wind parks. Your Company is utilizing roofs of power plant buildings for solar power generation and integrating to the existing plant infrastructure. Your Company is also going ahead with floating solar at reservoirs of its projects which is a step towards saving of land and water conservation by reducing water surface evaporation.

8.2.4 Welding

There is immense application of welding during manufacturing of various power plant components, during erection and maintenance/overhauling of units. The advance metallurgy of components exposed to high temperatures in new coal based Supercritical/ Ultra Super Critical 660 MW & 800 MW thermal units of your Company, imposes much greater challenges in welding. The challenge to achieve defect free weld joints always requires highly skilled, well trained and qualified manpower to do the welding and also to conduct quick, accurate and correct inspection of weld joints through advance Non-Destructive Testing (NDT) techniques meeting the governing standard requirements. All these requires proper understanding of metallurgy, welding, advanced NDT techniques and the governing standards.

To meet all those challenges, several new initiatives in welding & NDT were taken by your Company especially in Welding Skill Development, Competency Development in Welding Inspection and advanced NDT techniques through world renowned "The Welding Institute (TWI) – UK/India". Welding Failure Analysis were conducted to understand the root cause and suitable corrective actions were taken to ensure that such failures do not happen again in any other unit. Repair Weldings were ensured by following proper welding procedure specifications and initiatives were taken to make aware the latest welding equipment, welding techniques & its implementation at site. New initiatives were also taken in meeting the challenges of developing Welding procedures & NDT techniques in even higher & complex metallurgy involved in AUSC components.

A blue print of your Company's own state of the art Welding Training Center at selected project to train & produce highly skilled high-pressure welders and Welding & NDT Engineers has been developed. A Welding Research

Institute is envisioned in one of the upcoming projects and the study is undertaken. These actions are now being carried forward and should impact the complete power sector and other industrial sectors also.

8.2.5 Smart Township & Eco Park

Smart Township:

In CPSE conclave 2018, idea to convert some of CPSE townships to "Mini Smart Cities" was mooted. Your Company has awarded the work of converting two of its townships "Solapur" and "Khargone" to "Smart Townships". The work of Khargone is under final stages of execution and commissioning. However, Solapur has been commissioned on 17.7. 2021.

The work in these townships involves applications of smart solutions like Pan-Township security and surveillance system, smart water metering, leakage identification and water quality monitoring, smart energy metering and use of renewable energy sources, robust IT infrastructure and FTTH connectivity, rainwater harvesting, solid and liquid waste management, use of smart bicycles, electric vehicle (golf carts), Electric Vehicle (EV) Chargers, open gym and citizen services etc.

Application of these smart solutions will provide enhanced quality of life to the residents in an environment friendly and sustainable manner.

Eco Park:

Your Company is developing an Eco Park on the ash disposal area of Badarpur Thermal Power Station (which has since been shut down), to have environmentally sustainable neighborhood and to enhance quality of life. The design concept is taken from the immediate surroundings of Yamuna River itself and the area is being developed as a green island to become a breathing space for the urban area of Delhi, NCR apart from becoming a lively and attractive space. This shall also help in conservation of natural ecosystem and protection of environment.

8.2.6 Initiative for Use of Treated Sewage Water from Municipal Sewage Treatment Plants (STP)

Your Company has already taken up active steps to use treated sewage water from STPs of nearby Municipal bodies for bulk water requirement in its power plants, replacing precious fresh water from rivers/lakes/reservoirs/dams meant for other priority uses like agriculture, drinking, pisciculture, water body preservation, etc. Treated sewage water will be used for Condenser Cooling Water system makeup for your Company's power stations falling within 50 km distance from STPs meeting the order of closeness criteria as notified in Tariff Notification of GOI dated 28.1.2016. Your Company has identified some projects viz. Meja, Mouda, Solapur, Korba, Sipat, Dadri and Telangana where treated STP water can be used for the plant cooling water system.

Further, based on various recent orders & guidelines issued from time to time by Ministry of Power (MoP) & Central Electricity Authority of India (CEA), specifying scope division, modalities, quality standards etc. for use of treated sewage water in thermal power plants, draft agreements have been shared and discussions under process with respective municipal bodies associated with above stations.

8.2.7 Advanced digital and control technology use

Your Company is on the Digital path and implementing its Digital Strategy Roadmap. The initiatives of Advance Process Control (APC) for enabling flexible operation and Advanced Monitoring of Stockyard (hot spot detection and 3D profiling of stock pile) have been commissioned as a pilot project. Implementation in subsequent units is being planned.

Your Company has also taken initiatives of Advanced Performance Management-APM (Maintenance optimization suite), Application of IIOT in General-AIG (IIOT to enhance process visibility), Asset Information Management-AIM (digital twin with lifecycle documentation) to enhance reliability of equipment and processes. Further ART (Augmented reality/Virtual Reality based training) has been completed as a pilot and Turbine Training modules of ART are under implementation.

For capacity building of operating personnel, your Company is developing full-fledged replica Simulators for all available combinations of SG & TG sets of supercritical units, out of which 8 nos. have already been commissioned.

Technology intensive security system with centralized control and multiple layers of security is being envisaged in place of manpower intensive security currently in place. It has centralized control and multiple layers of security to enhance security with optimized manpower. Pilot project of the same has been completed in your Company's Dadri station. Further, it is being implemented at five (5) projects of your Company.

Your Company has taken the initiative to further secure control systems by augmenting the present defense-in-depth Cyber Security Posture for Operational Technology (OT).

Initiatives have also been taken for upgradation against obsolescence which will patch all cyber vulnerability of obsolete systems and make the latest upgraded systems much more secure.

8.2.8 Dry Bottom Ash Handling System

To minimize water consumption, in recent times your Company has taken initiative for adopting Dry Bottom Ash Handling System instead of conventional Wet Bottom Ash Handling System for Coal Based Thermal Power Project at Patratu (subsidiary company) under construction

and same is being planned for R&M project at Rihand-I. Dry Bottom Ash Handling System facilitates extraction of bottom ash in dry form and practically water requirement will be eliminated for handling bottom ash with meagre quantity of water which would be required for conditioning and dust suppression. The system not only reduces water consumption required for disposal of bottom ash in wet form, but also results in reduction in power consumption for Bottom Ash Disposal and facilitates separation of bottom ash which will result in better utilization of bottom ash.

8.2.9 Change-over to safer Chlorine-di-oxide system from conventional gas Chlorination system for disinfection of plant water system

Keeping commitment to environment and safety, your Company has embarked upon to the more advanced, safer and compact in-situ Chlorine-di-oxide generation system from earlier practice of Gas chlorination system through a comprehensive policy change for its entire fleet of existing power stations as well as all upcoming power stations which is under implementation in various projects and stations of your Company.

8.2.10 Zero Liquid Discharge (ZLD) from Thermal Power Plants

Your Company has already taken proactive approach to become a Zero Liquid Discharge company for all its operating station by identifying and implementing water management initiative, adopting innovation in water use in its Thermal Power Plant. Some of the stations of your Company have already become zero liquid discharge compliant and implementation is under progress in balance stations. Under the scheme, plant effluent water is segregated from storm water and is reused after treatment in the area of Ash handling plant, Coal Handling Plant, FGD make up, service water etc.

Out of 40 stations (37 closed cycle and three open cycle except TTPS), 15 stations of your Company has already achieved ZLD, 5 stations have completed the ZLD work as per schemes and technical specifications in FY 2020-21, 9 more stations likely to complete the ZLD related work by July 2021, 10 Stations will complete the ZLD related work by December 2021 and balance one station will become ZLD compliant by March 2022.

8.2.11 Energy Conservation, Technology Absorption and Foreign Exchange Earnings and outgo

Details of conservation of energy, technology absorption and foreign exchange earnings and outgo in accordance with Section 134(3)(m) of the Companies Act, 2013 read with Companies (Accounts) Rules, 2014 forms part of this Director report is placed at Annexure-III.

8.3 Project Management

Your Company has adopted an integrated system for the planning, scheduling, monitoring and control of approved projects under implementation. To co-ordinate and synchronise all the support functions of project management, the Issuer relies on a three-tiered project management system known as the Integrated Project Management Control System (IPMCS), which integrates its engineering management, contract management and construction management control centers. The IPMCS addresses all stages of project implementation, from concept to commissioning.

Your Company has established state-of-the-art IT enabled Project Monitoring Centre (PMC) for facilitating fast track project implementation. PMC has advanced features like Web-based Milestone Monitoring System (Web-miles), Project Review and Internal Monitoring System (PRIMS), etc. PMC facilitates monitoring of key project milestones and also acts as decision support system for the management.

PMC is an integrated enterprise-wide collaborative system to facilitate consolidation of project related issues and their resolution. Features like SMS based information delivery real time video capture, storage and retrieval facility and video conference facility are extensively utilized for project tracking, issues resolutions and management interventions. PMC has helped in providing effective coordination between the agencies and has provided enhanced/ efficient monitoring of the projects leading to better and faster project implementation.

8.4 Capacity addition through Subsidiaries and Joint Ventures (JVs) of your Company

Besides adding capacities on its own, your Company develops power projects through its subsidiaries and joint ventures, both in India and abroad.

The information of Indian Subsidiaries and JV Companies along with details of partners of joint ventures engaged in power generation is given below:

Name of Company	JV Partner(s)	Details
KBUNL (Kanti Bijlee Utpadan Nigam Limited)	A wholly owned subsidiary of your Company	The commissioned capacity of KBUNL is 610 MW Stage-I: 2X110 MW and Stage-II: 2X195 MW. Generation in FY 2020-21 was 2904.64 MUs at 54.21% PLF and Availability Factor was 70.21%.

Name of Company	JV Partner(s)	Details
BRBCL (Bhartiya Rail Bijlee Company Limited)	Ministry of Railways	A subsidiary of your Company in joint venture with Ministry of Railways with equity contribution in the ratio of 74:26 respectively for setting up power project of 1000 MW (4X250 MW) capacity at Nabinagar in Bihar. Unit-I, II & III have been declared commercial and Unit-IV is under construction. Generation in FY 2020-21 was 4264.44 MUs at PLF 64.91%, and Availability Factor was 88.48%. BRBCL has paid dividend of ₹ 190.28 crore during FY 2020-21 to your Company.
NSPCL (NTPC-SAIL Power Company Limited)	Steel Authority of India Limited (SAIL)	A 50:50 Joint Venture Company between your Company and SAIL, owns and operates Captive Power Plants of SAIL at Durgapur (2 x 60 MW), Rourkela (2 x 60 MW) and Bhilai (2 x 30 + 1 x 14 MW). NSPCL has also implemented 2 x 250 MW Bhilai Expansion Power Plant. Total installed capacity of NSPCL is 814 MW. NSPCL generated 5,520.07 MUs at 77.41% PLF and Availability Factor was 96.78% in FY' 2020-21. NSPCL has paid dividend of ₹ 95.00 crore during FY 2020-21 to your Company. **Under Implementation**- New Coal based Capacity at Rourkela PP-II Expansion (1 x 250 MW) & Durgapur PP-III (2 x 20 MW) is under construction.
NTECL (NTPC Tamil Nadu Energy Company Limited)	Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO)	A 50:50 JVC has commissioned 3x500 MW coal-based power project at Vallur, Tamil Nadu. All the units have been declared on commercial operation. Generation of NTECL during FY 2020-21 was 4368.97 MUs at 33.25% PLF and Availability factor was 90.17 %. NTECL has paid dividend of ₹ 51.41 crore during FY 2020-21 to your Company.

Name of Company	JV Partner(s)	Details
APCPL (Aravali Power Company Private Limited)	Indraprastha Power Generation Company Ltd. (IPGCL) and Haryana Power Generation Corporation Limited (HPGCL).	This JVC is operating 3X500 MW coal-based Indira Gandhi Super Thermal Power Project. Your Company, IPGCL and HPGCL have contributed equity in the ratio of 50:25:25. Generation of APCPL during FY 2020-21 was 3,842.79 MUs at 29.17% PLF & Availability factor was 91.97%. APCPL has paid dividend of ₹ 350 crore during FY 2020-21 to your Company.
MUNPL (Meja Urja Nigam Private Limited)	Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL)	A 50:50 JVC is implementing 1,320 MW (2X660 MW) coal based power project in the state of Uttar Pradesh. Unit-1 of 660 MW capacity has been declared commercial on 30.4.2019. Unit-2 on 31.1.2021. Generation of MUNPL during FY 2020-21 was 3,928 MUs at 58.35% PLF and availability was 79.79%.
NPGCL (Nabinagar Power Generating Company Limited)	A wholly owned subsidiary of your Company.	NPGCL is setting up a 3x660 MW Coal based plant at Nabinagar. Construction activities are in progress. Unit#1 declared commercial on 6.9.2019 and Unit#2 full load was achieved on 24.3.2021. Unit#3 first synchronization was achieved on 28.3.2021. Generation of NPGCL during FY 2020-21 was 4,639.69 MUs at 80.25% PLF and availability was 88.71%.

Name of Company	JV Partner(s)	Details
RGPPL (Ratnagiri Gas and Power Private Limited)	MSEB Holding Company Limited	RGPPL owns and operates gas based Dabhol Power Project of 1967 MW (1 X 640 MW + 2 X 663.50 MW) in Ratnagiri district of Maharashtra. On 31.12.2020, your Company has executed agreement for a Composite Resolution Plan with Lenders of RGPPL, wherein outstanding debt liabilities of RGPPL have been settled through One Time Settlement (OTS) by your Company. As per the Resolution Plan, the Company has provided inter corporate loan of ₹ 885 crore to RGPPL for settlement of loan with the lenders, 35.47% of Lenders Equity in RGPPL has been transferred to your Company. Your Company's Shareholding increased to 60.98 % on 31.12.2020 and RGPPL has become a subsidiary of your Company with effect from 31.12 2020. Further, your Company has executed Share Purchase Agreements with GAIL (India) Limited (GAIL) on 23.2.2021, for purchase of GAIL's share (25.51%) in Ratnagiri Gas and Power Pvt. Ltd. (RGPPL) and sale of your Company's share (14.82%) in Konkan LNG Ltd. (KLL) to GAIL. With this transaction, your Company has fully exited KLL and your Company's shareholding in RGPPL has become 86.49%. Generation of RGPPL during FY 2020-21 was 2573.83 MUs at 14.94 % PLF and Availability was 34.48%.
ASHVINI (Anushakti Vidhyut Nigam Limited)	Nuclear Power Corporation of India Limited (NPCIL)	Your Company is having a stake of 49%. The company was formed to set up Nuclear Power Project as may be mutually discussed and agreed between the parties, subject to establishment of techno-commercial viability. JVC may also explore the possibilities of entering into business activities related with the Nuclear Power generation and front-end fuel at an appropriate stage. Currently, no activities are being taken up by the Company.
PVUNL (Patratu Vidyut Utpadan Nigam Limited)	Jharkhand Bijli Vitran Nigam Limited (JBVNL)	PVUNL has been incorporated on 15.10.2015 as a subsidiary of your Company with 74% stake in the Company and 26% of stake held by JBVNL to acquire, operate & maintain existing and setting up of the new units. Supplementary Joint Venture Agreement was signed on 1.3.2018 for expansion units (Phase-I 3X800 MW). EPC package was awarded to BHEL on 8.3.2018. Construction work is in progress.
NREL (NTPC Renewable Energy Limited)	A wholly owned subsidiary of your Company	NTPC Renewable Energy Limited (NTPC RE), a wholly owned subsidiary of your Company's was incorporated on 7.10.2020 with a target to accelerate the RE capacity addition plan.
THDCL (THDC India Limited)		THDC India Ltd was a joint venture of the Government of India (74.496%) and the Government of Uttar Pradesh (25.504%) and was a Mini-ratna Category-I CPSE. Your Company executed a Share Purchase Agreement with GoI on 25.3.2020 and acquisition of 74.496% equity stake in THDC completed on 27.3.2020. With this acquisition, THDC has become a subsidiary Company of your Company. Presently, THDC has a portfolio of 13 projects (Hydro, Thermal, Wind & Solar), totaling to an installed capacity of 5,539 MW, which includes 1587 MW Operational and balance under various stages of development/ implementation. THDC has paid dividend of ₹ 527.25 crore during financial year 2020-21 to your Company.

Name of Company	JV Partner(s)	Details
NEEPCO (North Eastern Electric Power Corporation Limited)	A wholly owned subsidiary of your Company	North Eastern Electric Power Corporation Limited ("NEEPCO") was a Mini-ratna Category I Central Public Sector Enterprise. NEEPCO is primarily engaged in the business of generation and sale of electricity in the north-eastern region of India. Your Company executed a Share Purchase Agreement with GoI on 25.3.2020 and acquisition of 100% equity stake in NEEPCO was completed on 27.3.2020. NEEPCO operates 7 hydro, 3 thermal and 1 solar power stations with a combined installed capacity of 2057 MW. NEEPCO commissioned its largest 600 MW Hydro Project Kameng (4 x 150 MW) in the N.E. Region, Commercial operation of Unit-I, 2, 3 & 4 were declared on 17.6.2020, 1.7.2020, 22.1.2021 and 12.2.2021 respectively. NEEPCO has paid dividend of ₹ 25 crore during financial Year 2020-21 to your Company.

8.5 Hydro Power Projects

Your Company, as you are already aware, has been in renewable energy sector and now has solid footprints in green energy by developing hydro projects as detailed below:

A. **Koldam HEPP (4x200 MW)** is on the river Satluj, in District Bilaspur (Himachal Pradesh). All the four units of 200 MW were declared commercially operational in 2015. Since then the project has been running exceedingly well. The generation for the financial year 2020-21 has been 3,221.40 MUs against design energy of 3,055 MUs. Owing to excellent operation and maintenance practices, the Station achieved yearly DC of 108.51% in FY 2020-21, which was highest amongst all the Hydro Power Stations in the country for the last five years in a row. Koldam has been accorded Integrated Management Systems (IMS) Certification which includes ISO 9001:2015 for Quality Management System, ISO 45001:2015 for Environment Management System & ISO 14001:2018 for Occupational Health & Safety Management System in March 2021. Koldam was bestowed with HP Environment Leadership award by Hon'ble Chief Minister of Himachal Pradesh on the occasion of World Environment day at Shimla for second time. Station was also awarded with Greentech Environment & Safety Awards, Growcare India Environment Award. Towards water conservation, backwash water from the Water treatment plant and effluent from the Sewerage Treatment plant is being used for Horticulture purposes in Township area.

B. **Tapovan Vishnugad HEPP (4x130 MW)** is on river Dhauliganga, in District Chamoli (Uttarakhand). The Project is under advanced stage of construction with a physical progress of nearly 75%. Generator Transformer & Switchyard Package is completed. Powerhouse works are completed and architectural works are in progress. Erection and testing of three out of four turbines is completed.

On the morning of 7.2.2021, there was a massive glacial outburst, avalanching into Rishiganga River. This caused an unprecedented, devastating flash flood in the river consisting of debris, silt, boulders, ice, rock pieces, soil, trees etc. Due to this debris flow, huge quantity of muck got deposited in Barrage area, Desilting Chambers, Intake structure, Head Race Tunnel, Silt Flushing Tunnel, HRT Adits etc. entrapping the manpower and equipment/vehicles in these areas engaged for the purpose of ongoing work. Rescue operation was started immediately with the help of ITBP, Army, NDRF, SDRF and Govt of Uttarakhand. Presently rescue and restoration works are under progress in all the affected areas. It includes muck removal from tunnels and desilting Chamber, River diversion from left to right bank, creating embankment/Bund to prevent further flooding in Monsoon and rectification of damaged roads, on priority. The progress of work has been affected due to this natural disaster.

C. **Lata Tapovan HEPP (3x57 MW)** is in upstream of Tapovan Vishnugad HEPP, in District Chamoli in Uttarakhand. All Construction activities at LTHPP were stopped since 8.5.2014 in compliance of Hon'ble Supreme Court order dated 7.5.2014 for 24 Hydro Projects in the State of Uttarakhand including Lata-Tapovan. MOEF & CC had constituted an expert body which, in October 2015, recommended for implementation of Lata Tapovan with compliance of certain additional conditions. Your Company submitted in Court that the conditions recommended by expert body shall be fully complied. On the hearing held on 26.4.2016 also, Additional Solicitor General informed the Court that Lata –Tapovan Project should be implemented. The Court asked GoI to submit a combined affidavit of all three concerned ministries. The said affidavit is yet to be submitted. The last hearing in the case was held on 28.2.2020. After that, the matter could not be listed because of restrictive functioning of the court due to COVID related restrictions. The matter is still pending with Hon'ble Supreme Court.

D. **Rammam-III HEPP (3x40 MW)** is situated on river Rammam in Teesta Basin, Darjeeling (West Bengal) in south and Sikkim in north. Construction activities

at Power House, Switchyard, HRT and Barrage structures are in progress at site. In Barrage, two bays shall be completed before 2021 monsoon for 2nd stage river diversion to carry out construction activities at other bays.

E. **Seli HEP (4x100 MW) & Miyar HEP (3x40 MW)** are the two new projects allotted to your Company in Chenab Valley by Govt of Himachal Pradesh (GoHP). MoU was signed with GoHP on 25.9.2019. Finalization of terms and conditions with Govt of Himachal Pradesh (GoHP) is in progress as one of the earlier awardee companies has approached High Court of Shimla for redress of its grievances with GoHP.

8.6 Capacity addition through Renewable Energy (RE) Sources

Renewable energy (RE) is the central focus for your Company. To be in step with ambitious targets of the Government of India (GoI), your Company is attempting all avenues for renewable capacity addition to look beyond conventional large scale solar and wind projects. Your Company is also going ahead with floating solar at reservoirs of its projects which is a step towards saving of land and water conservation by reducing water surface evaporation. Your Company is also utilizing roofs of power plant buildings for solar power generation.

By 2032, your Company plans to have over 60 GW capacity through RE sources constituting nearly 50% of its overall power generation capacity.

Your Company is pursuing capacity addition in RE projects in two modes namely Own capacity addition mode and Developer Mode. In Own capacity addition mode, your Company sets up Renewable Energy projects on its own investment. In Developer Mode, your Company acts as an intermediary procurer where it procures power from the Developers and sells to DISCOMs with a trading margin.

The initiatives for hydrogen technologies are being pursued through RE and it is envisaged that RE capacity of your Company shall power the future hydrogen initiatives. The green hydrogen thus generated shall be utilized for various applications ranging from mobility to green chemical to energy storage.

Projects under Own Capacity Addition

A) Commissioned Projects: your Company has a commissioned capacity of 1,350 MW of RE projects including 192 MW owned by the subsidiaries. It covers solar (ground and floating), wind and small hydro installations spread over the country: -

S No.	Project	State/UT	Capacity (MW)
A	**Solar (ground mounted)**		
1	Dadri	Uttar Pradesh	5
2	Port Blair	Andaman & Nicobar	5
3	Faridabad	Haryana	5
4	Ramagundam	Telangana	10
5	Talcher Kaniha	Odisha	10
6	Unchahar	Uttar Pradesh	10
7	Singrauli	Uttar Pradesh	15
8	Auraiya	Uttar Pradesh	20
9	Rajgarh	Madhya Pradesh	50
10	Bihaur-I & II	Uttar Pradesh	210
11	Mandsaur	Madhya Pradesh	250
12	Ananthapuramu	Andhra Pradesh	250
13	Bhadla	Rajasthan	260
B	**Wind**		
1	Rojmal	Gujarat	50
C	**Small Hydro**		
1	Singrauli	Uttar Pradesh	8
	SUB-TOTAL		**1,158**
D	**Subsidiaries**		
1	Patan Wind (THDC)	Gujarat	50
2	Devbhumi Dwarka Wind (THDC)	Gujarat	63
3	Dhukwan Small Hydro (THDC)	Uttar Pradesh	24
4	Kasargod Solar (THDC)	Kerala	50
5	TGBPP Solar (NEEPCO)	Tripura	5
	SUB-TOTAL		**192**
	GRAND-TOTAL		**1,350**

B) Projects Under Implementation: 2,884 MW of RE projects are under implementation comprising of solar (ground and floating) projects: -

S No.	Projects	State	MW
A	**Solar (floating) 237 MW**		
1	Auraiya	Uttar Pradesh	20
2	Simhadri	Andhra Pradesh	25
3	Kayamkulam I & II	Kerala	92
4	Ramagundam	Telangana	100
	SUB-TOTAL		**237**
B	**Solar (ground) 2,647 MW**		
1	Bilhaur	Uttar Pradesh	15
2	Rihand	Uttar Pradesh	20
3	Gandhar	Gujarat	20
4	Kawas	Gujarat	56
5	Anta	Rajasthan	90
6	Chhattargarh	Rajasthan	150
7	Jetsar	Rajasthan	160
8	Surendranagar	Gujarat	200
9	Ettayapuram	Tamil Nadu	230

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S No.	Projects	State	MW
10	Devikot-I & II	Rajasthan	240
11	Sambhu Ki Bhurj-I	Rajasthan	250
12	Fatehgarh	Rajasthan	296
13	Sambhu Ki Bhurj-II	Rajasthan	300
14	Nokhra	Rajasthan	300
15	Bhensara	Rajasthan	320
	SUB-TOTAL		**2,647**
	GRAND-TOTAL		**2,884**

- The Ground Mounted Solar projects of 2,647 MW are spread across UP, Rajasthan, Tamil Nadu, Gujarat and Kerala. Further 1,692 MW out of 2,647 MW are being implemented under CPSU scheme. Under this scheme it is envisaged to set up solar projects using domestically manufactured cells and modules with VGF support from Ministry of New and Renewable Energy (MNRE). The power is sold in WTO compliant manner only to government entities under a power usage agreement.
- Floating Solar projects of 237 MW are spread across UP, Telengana, Andhra Pradesh, and Kerala. Your Company is promoting large scale floating solar projects and towards this a 100 MW project is being set up in Telangana. Incidentally when completed in 2021, this project will be the largest one in the country.

Developer Mode Projects

- In this regard MNRE has accorded its approval to the Company to act as a designated agency for issue of tenders for setting up of renewable power projects covering wind and solar mode.

  A) Commissioned Projects: 4,385 MW of RE projects has been commissioned.

  B) Projects under Implementation: 1,188 MW of RE projects are under implementation.

New Initiatives/Major Highlights:

- Incorporation of NTPC Renewable Energy Limited (NTPC REL), a wholly owned subsidiary company of your Company on 7.10.2020 to undertake RE business independently.
- Introduction of high efficiency solar PV Modules (490 Wp) in floating solar projects at Kayamkulam and Auraiya.
- Winning a total of 1,510 MW solar capacity in different projects under tariff based competitive bidding of SECI/States.
- MoU signed with DVC on 12.3.2021 for development of UMREPP and projects in DVC reservoirs and land.
- MoU signed with ONGC on 21.5.2020 for developing offshore wind projects.
- JVA finalized between NIIF and your Company and approved by Board of Director of your Company

UMREPP (Ultra Mega Renewable Energy Power Park):

MNRE has issued UMREPPs scheme on 15.6.2020 to provide land upfront to the project developers and facilitate transmission infrastructure for adding RE capacities with solar/wind/hybrid mode and also with storage system, if required.

Projects totaling 16.94 GW are under various stages of development in states of Gujarat (4.75 GW), Maharashtra (2.64 GW), Rajasthan (5 GW, Madhya Pradesh (0.55 GW) and Andhra Pradesh (4 GW).

Further, THDC Limited, a subsidiary of your Company has created a 74:26 subsidiary company (namely TUSCO Limited) with UPNEDA for implementing UMREPP in the state of Uttar Pradesh.

Hydrogen Energy:

Your Company is in the process of exploring opportunities for production of green hydrogen using electricity from RE sources and using green hydrogen for various applications. These are for mobility, production of green fuel (methanol, ammonia), establishing microgrids, NG blending with hydrogen for CGD system etc. and are steps of decarbonization effort of the Company.

Following initiatives are pursued at different locations:

A. Green mobility in Ladakh and Delhi

1. MoU being planned with UT, Ladakh and Ladakh Autonomous Hill Development Council (LAHDC) for allied green hydrogen initiatives and majorly setting up hydrogen filling stations.
2. Delhi has been chosen to set up hydrogen filling stations so that intercity transport using FCEV buses like Ladakh is supported.

B. Green Chemical production

1. Green Methanol (10 TPD) pilot at Ramagundam using green hydrogen and carbon captured from flue gases of thermal project.
2. Green Ammonia pilot (20 TPD and 50 TPD), using two different technologies where green hydrogen and nitrogen from air is treated together in reactors.

8.7 Capacity addition through acquisition

Your Company has submitted final Resolution Plan on possible acquisition of Jhabua Power Limited (under NCLT) having 600 MW Coal based thermal power plant in the Seoni district of Madhya Pradesh. Resolution Plan has been approved by Committee of Creditors (CoC) and sent to NCLT for its approval.

9. STRATEGIC DIVERSIFICATION

9.1 In order to strengthen its competitive advantage in power generation business, your Company has diversified its portfolio to emerge as an integrated power major, with presence across entire power value chain through backward and forward integration into areas such as coal mining, power equipment manufacturing, power trading and distribution.

Your Company continuously explores business opportunities through market scanning and adopts new business plans accordingly.

9.2 The details of subsidiary companies engaged in business other than in power generation are as under:

9.2.1 NTPC Electric Supply Company Limited (NESCL), a wholly owned subsidiary, transferred and vested all its operations, with effect from 1.4.2015, to your Company.

NESCL was incorporated for the distribution business and later started deposit and consultancy works. The transfer and vesting of existing operations would enable a focused business approach in the area of distribution, the objective for which NESCL was incorporated.

NESCL is actively looking for acquisition of power distribution and had participated in bid process of UT Chandigarh, Daman & Diu and Dadra & Nagar Haveli.

9.2.2 NTPC Vidyut Vyapar Nigam Limited (NVVN), a wholly owned subsidiary, is engaged in the business of Power trading. NVVN has a trading License under Category I (highest category). It undertakes sale and purchase of electric power, to effectively utilize installed capacity and thus enable reduction in the cost of power.

The Company has been nominated as Settlement Nodal Agency (SNA) for settlement of Grid operation related charges with neighboring countries, namely, Bangladesh, Bhutan, Nepal and Myanmar. The Company is also implementing a 50 MW gas power project in Andaman & Nicobar.

In the FY 2020-21, NVVN traded 18.54 billion units (BUs). Besides this NVVN has also undertaken various other Business activities

A. Renewable Projects:

NVVN has ventured into renewable energy business and has signed MoU with Airport authority of India for implementing Ground/ Rooftop Solar PV Projects at identified airports/ buildings. Accordingly, the tender for 2 MW solar project at Agartala airport has been floated by NVVN and price for the same has been discovered by reverse auction. The project is likely to be commissioned by March 2022. Further, feasibility study and survey of various other airports to identify possible solar capacity installation is under process.

In addition to the above NVVN has also signed MoU's with South Delhi Municipal Corporation (SDMC) and IIT Jodhpur for development of solar projects.

B. E-Mobility

NVVN has forayed into the e-mobility segment including providing vehicles and related services as a part of turnkey solution in various vehicle segments. Based on this, the L1 Bidder for 450 E-buses has been selected through tendering process. These E-buses are planned to be provided to State / City Transport Authorities / Corporates / Govt. bodies etc. on commercial arrangements.

NVVN has signed agreement with Department of Transport, Andaman and Nicobar Islands for supply of total 40 E-buses. Further, NVVN has won Bengaluru Metropolitan Transport Corporation (BMTC) tender to supply 90 E-buses.

NVVN is adopting the integrated business strategy to increase its respective business portfolio. Therefore, the signed MoU's with AAI and SDMC includes development of charging infrastructure as one of the major components of the scope of work.

C. Fuel Cell Electric Vehicle

Besides Battery based E-mobility, NVVN has also planned to enter Hydrogen Mobility business. Pilot projects based on green Hydrogen are planned to be carried out in Leh and Delhi with 5 nos. of Fuel cell electric buses at each location. NIT for the Hydrogen buses (Fuel cell electric vehicle) has been issued.

D. Waste to Energy and disposing municipal solid waste (MSW)

Keeping commitment towards clean & green environment and Swachh Bharat Mission (SBM), NVVN has taken several initiatives to support & leverage Government of India's effort towards realising SBM thereby ensuring pollution free environment to people's health and welfare.

In addition to this, NVVN has also signed Memorandum of understanding with Municipal Corporations of Surat, East Delhi, Varanasi, Indore, Bhopal and Hubli Dharwad for setting up state of the art Waste to Energy plant/ Municipal solid waste to Charcoal plant.

To fast-track the technology development, NVVN, has organized technology challenge aptly named as Green Charcoal Hackathon. The purpose of the event is to leverage the innovative Indian mind to bridge the technology gap, with the prime objective to clean the air by eliminating farm fire, producing renewable energy out of the agro residue, to promote local entrepreneurship, and to increase the income of the farmers. The final evaluation has been completed.

NVVN has paid dividend of ₹ 30 Crore during FY 2020-21.

9.2.3 NTPC Mining Limited (NML), In order to ensure focused management of mining business, your Company has incorporated a wholly owned subsidiary, NTPC Mining Limited (NML), on 29.8.2019 for handling its mining business. It is expected that undertaking of mining business by this subsidiary would result in timely development of mines with efficient handling of contracts by dedicated team. This will ultimately achieve substantial efficiency and increased competitiveness.

9.2.4 NTPC EDMC Waste Solutions Private Limited (NEWS), In order to develop and operate state of art/modern integrated waste management and energy generation facility using municipal solid waste. Your Company has incorporated a JV Company with 74:26 shareholding with East Delhi Municipal Corporation (EDMC). The power plant capacity will be 12 MW and shall utilize approx. 2000 T/day of municipal waste and will comply to latest environmental norms.

9.3 The details of joint venture companies incorporated in India which are taking up activities in other related business areas are given below:

Name of Company	JV Partner	Activities Undertaken
UPL (Utility Powertech Limited)	Reliance Infrastructure Limited, Space Trade Enterprises Private Limited, Skyline Global Trade Private Limited and Species Commerce And Trade Private Limited	A 50:50 JVC takes up assignments of construction, erection and supervision of business in power sector and other sectors like O&M services, Residual Life Assessment Studies, non-conventional projects etc. UPL has paid dividend of ₹ 5.00 crore to your Company during FY 2020-21.
NGSL (NTPC GE Power Services Private Limited, earlier NTPC Alstom Power Services Private Limited)	GE Power India Limited	A 50:50 JVC provides R&M services for coal-based power plants in India to renovate, modernize, refurbish, rehabilitate, upgrade, reverse engineering, component damage assessment and RLA, utilizing state of art technology. R&M including RLA work orders are under execution. NGSL is diversifying to take up new business assignments in area of FGD, Ash Utilization, O&M and RE. NGSL paid ₹ 0.25 crore as dividend to your Company during FY'20-21
EESL (Energy Efficiency Services Limited)	PFC, PGCIL and REC	Your Company is having a stake of 47.15%. The Company was formed for implementation of Energy Efficiency projects and to promote energy conservation and climate change. EESL is working on Energy Audit of Buildings, Perform Achieve Trade (PAT) scheme work and standard & leveling work of BEE, Consultancy work, implementing Bachat Lamp Yojana and Agricultural & Municipal Pump replacement for various State Governments. The Company is taking up different energy efficiency improvement related works like replacement of bulbs, Street Light National Programme (SLNP), & other new business areas like Electric Vehicle (EV), Electric Charging Infrastructure etc.
NHPTL (National High-Power Test Laboratory Private Limited)	NHPC, PGCIL, DVC and CPRI	Your Company is having a stake of 20.00% in JVC. The Company was formed to establish a research and test facility for the power sector such as an "Online High Power Test Laboratory" for short circuit testing facility and other facilities as may be required for the same in the country. HVTR test Laboratory set up at Bina, M.P. was declared Commercial w.e.f 1.7.2017.
NBPPL (NTPC-BHEL Power Projects Private Limited)	Bharat Heavy Electricals Limited	A 50:50 JVC was incorporated for taking up activities of engineering, procurement and construction (EPC) of power plants and manufacturing of equipment. In 2018 both Promoters had approached respective Ministries to exit from NBPPL/ closure of NBPPL. MoP had advised your Company to consider buy out of BHEL stake in NBPPL. Your Company vide letter dated 20.10.2020 to MoP has suggested that since both NBPPL & BHEL are under administrative control of DHI and NBPPL is in the field of EPC and Manufacturing, which has more synergy and alignment to BHEL's business, therefore, DHI/BHEL may be impressed upon to buy out your Company stake in NBPPL.
BF-NTPC (BF-NTPC Energy Systems Limited)	Bharat Forge Limited	Your Company is having a stake of 49% in JVC. This Company was incorporated to manufacture castings, forgings, fittings and high-pressure piping required for power projects and other industries. However, since the project could not take off, it has been decided to wind up BFNESL. Liquidator has been appointed and voluntary liquidation of the company is in progress.

Name of Company	JV Partner	Activities Undertaken
TELK (Transformers and Electricals Kerala Limited)	Govt. of Kerala	Your Company is having a stake of 44.60% in JVC. The Company deals in manufacturing and repair of Power Transformers. Your Company has accorded in-principle approval for withdrawal from TELK on 28.4.2016. Government of Kerala (GoK) through Additional Chief Secretary to Government requested your company to review the decision to quit TELK. The matter is under consideration.
ICVL (International Coal Ventures Private Limited)	CIL, SAIL, RINL, NMDC	Your Company is having a stake of 0.09% in JVC. ICVL was formed for acquisition of stake in coal mines/ blocks/ companies overseas for securing coking and thermal coal supplies. In view of lack of suitable commercially viable opportunities for thermal coal, your Company has decided to exit from ICVL. As the Company was formed by a directive from the Government of India, approval of the Government is awaited for exit.
HURL (Hindustan Urvarak & Rasayan Limited)	CIL, IOCL, Fertilizer Corporation of India Limited (FCIL) and Hindustan Fertilizer Corporation Limited (HFCL)	Your company is having a stake of 29.67% in JVC. HURL was incorporated on 15.6.2016 to establish and operate new fertilizer and chemicals complexes (urea- ammonia and associated chemical plants) at Gorakhpur, Sindri and Barauni and market its products. Lumpsum Turnkey contract was awarded for Gorakhpur, Baruani and Sindri with a completion schedule of 36 months. Construction work in all the three projects are in progress.
CNUPL (CIL NTPC Urja Private Limited	Coal India Limited (CIL)	A 50:50 JVC was incorporated on 27.4.2010 between your Company. and Coal India Ltd to undertake the Development of Brahmini and Chichro-Patsimal coal mine blocks in Jharkhand and subsequently their operation and maintenance and integrated coal-based power plants. In June 2011, Ministry of Coal, GoI has de-allocated Brahmini and Chichro-Patsimal coal blocks which were earlier allotted to the JV Company. CNUPL is exploring new business area for implementation of solar projects. MoU is to be signed by CNUPL with Northern Coalfields Limited (NCL) to support as Project Coordinator for development of 50 MW Solar PV Power Project in the vacant land of NCL at Nigahi mine, M.P.

9.4 Foray in Packaged Drinking Water Business

Your Company's research arm, NETRA, has developed technology for sea water desalination using waste heat from flue gas from the power plant. The cost-effective technology is now being utilized for packaged drinking water. An MoU in this regard has been signed with IRCTC on January 15, 2018 for setting up a packaged drinking water facility at your Company's Simhadri Station. Commercial arrangement is being finalized with IRCTC. Construction of Bottling Plant is under progress by IRCTC.

9.5 New Business Areas

MoU was signed on 24.7.2019 with BHEL for forming a joint venture company to set up 800 MW Technology Demonstration Plant (TDP) based on Advanced Ultra Supercritical Technology (AUSC) at Sipat, Chhattisgarh. PIB Proposal for Financial support to proposed JV Company between your Company and BHEL, for setting up of 1 X 800 MW capacity Technology Demonstration plant (TDP) to establish AUSC technology for coal fired thermal power plants is under consideration by GoI.

9.5.1 JV with National Investment and Infrastructure Fund (NIIF). Your Company has signed an MoU with NIIF on 16.7.2020 for investment in Renewable Energy Domain and also exploring the possibility of venturing into the field of supply and distribution of electricity. Joint Venture Agreement with NIIF for the above collaboration

was approved by Board of Directors in its meeting held on 4.2.2021 to form a Joint Venture Company, with 51:49 equity participation by NIIF and your Company respectively. Approval of National Institution for Transforming India (NITI Aayog) has been obtained.

9.5.2 Exploring business opportunities for setting up Industrial Park at your Company's Power Stations. In a first of its kind initiative your Company has issued an Expression of Interest in 21.9.2020 to develop Industrial parks at land parcels available at various power plants of your Company. Three stations of your Company, Kudgi (Karnataka), Solapur (Maharashtra), and Gadarwara (Madhya Pradesh) are selected for the initiative on a pilot basis and interests have been received from several industries which are willing to setup energy-intensive manufacturing facilities at your Company Power Stations. M/s KPMG has been engaged by your Company to prepare a Strategic blueprint and Roadmap for execution of the Industrial parks.

9.5.3 EoI for setting up of CO_2 to Methanol production in your Company's plants

Keeping focus on decarbonisation of the Indian energy sector, India's commitment to COP 21 for reducing GHG emissions and 'Methanol Economy' program initiated by NITI Aayog, your Company intends to set-up commercial scale CO_2 Capture, H_2 Generation & Conversion to Methanol (composite facility) in aggregator mode on BOO basis at its various plants in India. In the proposed facility, CO_2 will be captured from flue gas and will be converted to Methanol by utilizing appropriate hydrogen production facility to be set up for this purpose. In this regard, your Company has invited Global Expression of Interest (EoI) on 28.1.2021 from Indian/Global Company /their consortium/Affiliates/Representatives. The EoI has been issued to evaluate the industry response, identification of suitable technologies for Carbon Capture, Hydrogen Production and Methanol production thereof, assess the financial viability and the best possible option for commercialization.

9.5.4 Setting up of Energy Intensive (Chemical) manufacturing facility in your Company Plants- Your Company is in the process of engaging a suitable consultant for carrying out market survey for setting up Caustic Soda manufacturing facility in one of the your Company's station located in Southern or Western Region.

9.5.5 Exploring new Hydro Power Projects and Pump Storage Hydro (PSH) Projects – Your Company is in discussion with Govt. of Arunachal Pradesh for allocation of suitable Hydro Power projects in the state of Arunachal Pradesh. Your Company is also taking up with Govt. of Andhra Pradesh for allocation of suitable Pump Storage Hydro Projects.

9.5.6 Common Backend Infrastructure Facility (CBIF)

Your Company is in process of setting up of Common Backend Infrastructure Facility (CBIF), for supporting nationwide rollout of smart meters, through EESL.

10. GLOBAL INITIATIVES

10.1 Bangladesh-India Friendship Power Company Private Limited (BIFPCL), a 50:50 JV company with Bangladesh Power Development Board (BPDB), is implementing a (2x660) MW Maitree Super Thermal Power Project at Khulna in Bangladesh. Milestones of Unit#2 TG erection start and Unit#1 Boiler Drainable Hydro Test at design pressure were achieved during the year.

10.2 Trincomalee Power Company Limited (TPCL), For development of the proposed 300 MW LNG Power Project at Kerawalapitiya, Sri Lanka, JVSHA with Ceylon Electricity Board (CEB) was signed in 2019. Discussions are underway for incorporation of a 50:50 JV company which would then develop the project.

Further, a 50 MW solar PV power project at Sampur, Trincomalee is envisaged to be developed by the existing JV Trincomalee Power Co. Ltd. for which draft JVSHA has been shared with Sri Lankan side for their confirmation.

10.3 Other Opportunities Abroad:

a. Project management consultancy assignments under ISA platform secured for 500 MW in Republic of Mali in June 2020 and 100 MW in Republic of Malawi in March 2021. Total capacity under implementation is now 885 MW including earlier secured 285 MW in Republic of Togo;

b. Collaboration for international business through signing of MoUs with EGENCO, Malawi in May 2020 and with IOCL in Dec 2020. Further three MoUs have been approved in March 2021 for signing viz. with Inter RAO Exports of Russia, Bank Muscat of Oman and Masen of Morocco. Through this route your Company intends to have more effective presence in respective focus regions and be able to contribute further in power sector development;

c. Consultancy assignments viz. Energy audit of cement factory in UAE and Evaluation of PPA methodology of PP9 in Saudi Arabia were completed during the year of which payment for energy audit assignment was also received in March 2021;

d. Your Company is providing Project management consultancy & DPR preparation services under ISA platform to 47 LDC & SIDS member countries of ISA for implementation of solarisation pilot projects such as solar water pump, solar powered cold storage and solar rooftop solutions to primary healthcare centers. Agreement for the same was signed by your Company & ISA in Sept' 2020; and

e. A total of 6 RFPs, 6 RFQs and 28 EOIs have been submitted so far in this financial year for power sector opportunities overseas. Your Company has been shortlisted in 10 of them while results of most are awaited.

11. CONSULTANCY SERVICES

Your Company supports Indian Power Industry with its vast experience & expertise and offers Consultancy services "From Concept to Commissioning and beyond...." in areas of Engineering, O&M, Project Management, Contracts & Procurement, Renovation & Modernization, Quality & Inspection, Training & Development, Human Resource, IT, Solar & renewable power projects, compliance to Environmental norms for power stations etc.

Consultancy services are being provided in India and abroad viz. Gulf countries, Bangladesh, Myanmar, Mali, Togo, Malawi & ISA Member countries. Around 130 assignments are presently under execution.

Some of the Major ongoing assignments are as follows:

- Project Management Consultancy (PMC) for implementation of (2X660 MW) Khurja STPP of THDC and (2X660 MW) Buxar TPP of SJVN.
- Post Award Review Engg. & Project Monitoring services at (1X660 MW) Panki Extn.TPP (2X660 MW) Obra Extn. TPS & (2X660 MW) Jawaharpur TPS of UPRVUNL.
- Commissioning support to UPRVUNL Harduaganj Extn -II (1x 660 MW).
- Engineering review of (2x20 MW) AFBC Unit of NSPCL Durgapur.
- Solar Projects.

International:

- PMC of Dalwak in Dapaong (35 MWp) and in Mango (250 MW) in Savanes Region, Govt. of Togo.
- PMC of 500 MW in The Republic of Mali
- PMC of 100 MW in Malawi.

Domestic:

- PMC of 50 MW solar project of NCL **(Northern Coalfields Ltd)**
- DPR of 1200 MW solar projects of THDC
- 24 Consultancy Assignments pertaining to compliance of new environment norms through implementation of FGD, Combustion modification, ESP R&M etc. are under various stages of implementation.

Your Company's Consultancy clientele includes Govt. organizations such as UPRVUNL, APGENCO, CSPGCL, HPGCL, DVC, PSPCL, OCPL, JPVL, NALCO, Haldia Energy, NLC, PFC, CCL, SCCL, Pollution control Boards, WBPDCL, KPCL, Joint Venture companies of your Company and member countries of International Solar Alliance (ISA).

Highlights of FY 2020-21

- Your Company Consultancy received orders worth ₹ 266.66 Crore during FY 2020-21, which includes orders worth ₹ 200 Crore for implementation of Solar projects.
- In first of its kind consultancy project, your Company Consultancy prepared Feasibility report for utilizing waste flue gas heat for air-conditioning at BPCL's Cochin refinery.
- Your Company is working as Project Management consultant (PMC) for implementation of solarization projects in 47 Least Developed Countries (LDC) and Small Island Developing States (SIDS) member countries of ISA.

Consultancy Wing of your Company is looking ahead for future business opportunities in areas such as Complete O&M of thermal power plants, Solar & Renewable power projects, Owner's Engineer for major power projects, PMC for implementation of new environmental norms e.g FGD, ZLD, DNOx & ESP R&M, IT services e.g. ERP implementation, PRADIP, Dreams 2.0, PI systems, etc.

- International project management consultancy for setting up of solar projects for Togo and Mali in Africa under ISA initiative are under execution.

12. FINANCING OF NEW PROJECTS

The capacity addition programs shall be financed with a debt to equity ratio of 70:30, in case of thermal and hydro projects of your Company and that of 80:20 in case of solar/ wind projects. Your Directors believe that internal accruals of the Company would be sufficient to finance the equity component for the new projects. Given its low-geared capital structure and strong credit ratings, your Company is well positioned to raise the required borrowings.

Your Company is exploring domestic as well as international borrowing options including overseas development assistance provided by bilateral agencies to mobilize the debt required for the planned capacity expansion program.

Further, your Company is consistently doing debt swapping in case of domestic loan and cheaper loans are being utilised to repay the older loans with higher rate of interest without paying any repayment penalty to bank.

The details of funding are discussed in the Management and Discussion Analysis Report which forms part of this Report at Annexure-I.

13. FIXED DEPOSITS

Your Company has discontinued the acceptance of fresh deposits and renewal of deposits under Public Deposit Scheme with effect from 11.5.2013. As such, there were no deposits which were not in compliance with the requirements of Chapter-V of the Companies Act, 2013.

The details relating to deposits, as per the Companies Act, 2013 are as under:

(a)	Accepted during the year	Nil
(b)	Remained unpaid or unclaimed as at the end of the year	6 Deposits amounting to ₹ 15.91 lakh*
(c)	Whether there has been any default in repayment of deposits or payment of interest thereon during the year and if so, number of such cases and the total amount involved: (i) At the beginning of the year (ii) Maximum during the year (iii) At the end of the year	 NIL NIL NIL

* Pending for completion of legal formalities/ restraint orders/ non-receipt of claims.

14. FUEL SECURITY

During the year 2020-21, the supply position of coal and gas of your Company is given as under:

14.1.1 Long Term Coal Supply Agreements

- In line with the Model Coal Supply Agreements (CSA) signed between your Company and Coal India Limited (CIL) in 2009, 2012 and under Shakti Policy, Long-term Coal Supply Agreements (CSAs) are in place with the subsidiary coal companies of Coal India Ltd. (CIL) for an Annual Contracted Quantity (ACQ) of 166.69 Million Metric Tonnes (MMT) for the existing thermal stations. In addition, CSA is in place with Singareni Colliery Company Ltd. (SCCL) for Ramagundam for an ACQ of 11.20 MMT. Fuel supply Agreement (FSAs) are valid for a period of 20 years with a provision of review after every 5 years.
- In FY 2020-21, your Company has signed new Long-Term Fuel Supply Agreements (FSA) for 1.851 MMTPA with NCL for Vindhyachal-V Unit-13 (500 MW) and 2.805 MMTPA with NCL for Gadarwara (2X800 MW). Further, with handover of Barauni TPS from BSPGCL (Bihar State Power Generation Company Ltd.) to your Company, FSA of Barauni-I (2X110 MW) for 0.885 MMTPA with ECL has been transferred to your Company.
- Under coal linkage rationalization policy of GoI, Mouda-II (2X660 MW) FSA has been shifted from distantly located MCL mines to nearby WCL mine-specific sources, thereby reducing cost of generation from the plant. Accordingly, your Company has signed FSA for 4.72 MMTPA with WCL. Further, due to suspension of coal mining activities, coal linkages of Farakka and Bongaigaon with NEC (CIL) have been shifted to various other subsidiary coal companies of CIL. However, the transferred FSAs to this effect are expected to be signed in FY 2021-22.
- Linkage under Scheme to Harness and Allocate Koyla (Coal) Transparently in India (SHAKTI) policy for upcoming units: After grant of Long-term coal linkage by SLC (LT), during the year, your Company has secured Letter of Assurance (LoA), 5.61 MMTPA for Singrauli-III from NCL.

  Short Term Coal Supply Agreements Signed and coal supply agreement modified during the financial year 2020-21

Agreement with SCCL

- A bilateral Memorandum of Understanding (MoU) was signed with SCCL for financial year 2020-21 with the validity of one year for a quantity of 8.00 MMT, which can be further increased to 10 MMT, on best effort basis. The MoU was signed for supply of coal to Kudgi plant under Bridge Linkage and other stations of your Company as per requirement at Notified prices as per notification of SCCL applicable for power consumers.

Bridge Linkages

- Pursuant to recommendations of SLC (LT), GoI for grant of Bridge Linkage for Barauni Extn. Unit 8 and Unit 9 (2X250MW) for three years from the date of transfer /allotment of linked Badam coal block, your Company has signed Bridge Linkage MoUs with CCL and ECL for 1.392 MMTPA and 0.426 MMTPA respectively, both valid up to 31.3.2022. Further, Bridge linkage of Tanda, Lara, Kudgi and Darlipalli allocated by MoC under the Bridge Linkage policy to bridge the start of supply from the captive mines to requirement of coal of plant is valid up to the 2021-2022. Further, Bridge Linkage of Barh is valid up to 2022-23.
- Your Company had been allocated short-term tapering linkage for Telangana-Phase- I Project (2X800 MW) from WCL (cost-plus source). During the year, based on your Company's requests, SLC (LT), GoI in its meeting dated 27th July 2020 recommended transfer of the tapering linkage from existing WCL to nearby SCCL mines. The Tapering linkage MoU for 6.846 MMTPA with SCCL is expected to be signed in FY 21-22.
- To leverage potential of rationalization of coal linkages, your Company had signed a Supplementary Agreement with CIL and CIL subsidiaries for all owned JV/ Subsidiary stations on 12.4.2017 for implementation of Govt. policy on "Flexibility in utilization of domestic coal for reducing cost of power generation". Under the Supplementary Agreement, your Company can allocate coal to any station of its own or any JV/ Subsidiary for optimising the Energy Charges. During the year 2020-21, your Company has used 10.50 MMT of coal under Flexibility Utilization to address AFC under recovery and generation loss.
- As per directives of Govt., Central Institute of Mining and Fuel Research (CIMFR) started coal sampling in Jan. 16. During the period 2020-21, sampling is being done at all loading end sidings except Bukru and Phulbasia of CCL. Sampling at unloading end of all stations is already under progress.

Agreements for supply of imported Coal

- To mitigate the shortage of coal from domestic sources and for the blending purpose to improve the quality of coal, your Company has awarded imported coal contracts for procurement of 1.50 MMT in October 2019 and restored the contract of 2.25 MMT in March 2019 for supply of imported coal to Mouda and Dadri. Your Company received 1.08 MMT of imported coal during the financial year 2020-21. No fresh contract for import of coal has been awarded.

14.1.2 Domestic Coal and Imported Coal Supplies

- During 2020-21, your Company received 173.09 MMT of Coal as against 174.84 MMT in 2019-20. Out of 173.09 MMT of Coal, 153.25 MMT was from Annual contracted quantity of Coal, 7.97 MMT through Bridge Linkage/SCCL Bilateral MoU, 10.78 MMT from Captive Mines and 1.08 MMT from Imported Coal.

14.1.3 Gas & RLNG supplies

- Your Company has long-term Gas Supply Agreements (GSAs) with GAIL for supply of Administered Price Mechanism (APM) gas and Non-APM gas, which are valid upto 6th July 2021. These agreements may be extended based on Government of India (GoI)

directions. Your Company also has a long-term agreement with GAIL for supply of 1.1 MMSCMD RLNG on firm basis, valid upto December 2023.

- To meet the shortfall in supply of long-term domestic gas/RLNG, your Company procures Spot RLNG on limited tender basis from domestic suppliers and on 'Single Offer' basis from Public Sector gas marketing companies. These regasified liquefied natural gas (RLNG) supplies are contracted on 'Reasonable Endeavour' basis with no penalty on either party for short supply/short off take. Further, your Company has started procuring Spot RLNG on commitment basis since March 2020 from domestic suppliers, subject to consent of the beneficiary Discoms. Further, adequate stock of liquid fuel is maintained for meeting Grid requirement.
- Further, in line with Ministry of Petroleum and Natural Gas (MoP&NG) guidelines for 'Clubbing/diversion of gas between two or more power plants' and with the approval of Ministry of Power (MoP), your Company entered into arrangement with GAIL for flexibility of diversion of APM and Non-APM gases between its gas stations in NR and WR region on daily basis. With the diversion of unutilized gas from the Company's WR stations to NR stations, additional 1.65 BUs (approx.) of electricity has been generated at NR gas stations during financial year 2020-21.
- During 2020-21, your Company received annual average 2.48 MMSCMD of Domestic gas as against 2.53 MMSCMD of Domestic gas received during 2019-20. Long Term RLNG & Spot RLNG off-takes during 2020-21 were 0.43 & 0.54 MMSCMD as against 0.49 & 0.14 MMSCMD during 2019-20 respectively.
- There has been no loss of station availability on account of lack of availability of Domestic gas / RLNG / Liquid fuel during the year.

14.2.1 Snapshot of Coal Mining Portfolio of your Company is as under:

- Your Company has seven coal blocks with an estimated mine capacity of 71 MMTPA.
- Your Company has achieved a total coal production of 11 MMT during FY 2020-21 and cumulative production was 32.36 MMT till the end of FY 2020-21.
- Pakri-Barwadih coal mine was declared commercial w.e.f 1.4.2019 with an estimated mine capacity of 18 MMTPA. 7.07 MMT coal produced in FY 2020-21
- Dulanga coal mines was declared commercial w.e.f 1.10.2020 with an estimated mine capacity of 7 MMTPA. 3.12 MMT coal produced in FY 2020-21
- Coal extraction was commenced from Talaipalli w.e.f 1.11.2019 with an estimated mine capacity of 18 MMTPA. 0.81 MMT coal produced in FY 2020-21.
- Further Coal extraction targeted to start in Kerandari & Chatti-Bariatu coal blocks from FY 2023.

14.2.2 Development of Coal Mining Projects

Your Company has started coal production from three mines i.e Pakri-Barwadih, Dulanga & Talaipalli. Other mines i.e. Chatti-Bariatu, Kerandari & Badam are in various stages of development. Development activities are also going on in Banhardih mine, allocated to Patratu Vidyut Utapadan Nigam Ltd. (PVUNL), a subsidiary company incorporated between your Company & Government of Jharkhand.

Further, Pakri-Barwadih coal project of your Company has been awarded "Abheraj Baldota Environment Award" for best Environment Management System by Federation of Indian Mineral Industries (FIMI), New Delhi in FY 2020-21.

Amidst COVID-19 pandemic and stoppage of work for about 94 days during Jul-Nov'20 in Pakri-Barwadih mine due to resistance of the villagers, your Company has achieved a total coal production of 11 MMT from three mines during FY 2020-21. Cumulative 32.37 MMT of coal have been produced from these three mines, 26.21 MMT from Pakri-Barwadih, 5.16 MMT from Dulanga and 1 MMT from Talaipalli, till Mar'21.

For Chatti-Bariatu coal block, all statutory clearances and priority land for commencement of mining are available. NIT for appointment of Mine Developer and Operator (MDO) issued on 25.11.2020; Price Bids opened on 16.4.2021 are under evaluation.

In Kerandari coal block, priority land and major statutory clearances are in place except tree cutting permission from Jharkhand State Forest Department for which your Company is constantly pursuing. For this mine, your Company earlier decided for departmental mining with limited outsourcing, but against that tender response was inadequate. So, process has been initiated for appointment of a Mine Developer-cum-Operator and NIT has been issued on 28.6.2021.

In Badam coal block, though Stage-I Forest Clearance and Environment Clearance have been transferred to your Company by Ministry of Environment, Forest and Climate Change (MOEF&CC), proposals for Stage-II Forest Clearance, Government land transfer, Mining lease, etc. are pending with Govt. of Jharkhand for which your Company is constantly pursuing.

Your Company has incurred an expenditure about ₹ 39.33 Crore on community development in the coal mining projects and in the vicinity, in FY 2020-21 (cumulative expenditure of about ₹ 233 Crore), which has helped in improving the socio-economic conditions of the local community.

In Mandakini-B coal block, villagers were not allowing your Company and its agencies to carry out the work of drilling, site specific studies like SES, EIA/EMP, land acquisition notifications, etc. since 2018, in spite of intervention of Dist. Admn./State Govt./MOP/MOC. Your Company had no other option but to surrender the block to MOC on 26.12.2020. Performance Security (BG) of ₹ 168 crore was encashed by MOC on 22.3.2021 citing delay in achieving the milestones of efficiency parameters which were actually beyond the control of your Company. Your Company has approached MOP on 30.3.2021 to take up the matter in AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) for resolution of the dispute on BG encashment.

Because of geo-mining constraints, likely less percentage of coal extraction in two adjacent coal blocks, Banai & Bhalumuda and due to non-availability of any non-coal bearing land in the vicinity for OB dumping, your Company has surrendered these two coal blocks to MOC on 26.12.2020.

14.3 Initiatives through Joint Ventures and Subsidiaries:

For Banhardih coal block, being developed by PVUNL, a subsidiary company incorporated between your Company & Govt. of Jharkhand., in-principle approval of the mining plan has been accorded by MOC on 5.7.2021. For land acquisition, Section 11 notification under The Coal Bearing Areas (Acquisition and Development) Act, 1957 (CBA Act) issued by Ministry of Coal (MOC) on 15.6.2021.

Your Company incorporated a wholly-owned subsidiary Company named NTPC Mining Ltd. (NML) for its coal mining business. MOC has allowed for transfer of Pakri-Barwadih coal mine of your Company, to NML on 16.12.2020. Ministry of Coal (MOC) on 24.3.2021 conveyed that the request of transfer of the other mines allotted under CMSP & MMDR Acts cannot be acceded to. However, your Company is still pursuing with MOC for the same.

15. BUSINESS EXCELLENCE: GLOBAL BENCHMARKING

Your Company has developed and adopted a customized business excellence Model called 'NTPC Business Excellence Model' on the lines of globally accepted Performance Excellence frameworks such as the Malcolm Baldrige Model USA and European Foundation for Quality Management (EFQM) Model of Europe.

The assessment process is aimed at identifying the areas for enhancing stakeholders' engagement, improving critical processes and developing leadership potential.

The outcome of this model is identification of organizational strengths, opportunities for improvement, issues of concern and best practices.

In the financial year 2020-21, twenty-two generating stations were assessed by a team of certified assessors. Business Excellence Award for overall excellence was given to your Company's Singrauli project. Tanda has moved to next higher band as compared to last year. Ten stations are now at a higher band of 551-600. Capacity building in BE Model was undertaken and 92 senior level executives were trained in 3 batches.

Other contemporary total quality management (TQM) concepts and techniques like ISO, Quality Circles, Professional Circles, 5S etc. have been deployed across the organization. Dadri & Rihand Stations were certified by JUSE for 5S system. Annual Professional Circle Convention of your Company was held at Meja Urja Nigam Private Limited (JV company) on 6th March 2021 where in 17 teams participated. Likewise, Your Company's Quality Circle convention was held at Lara on 13th March 2021 with 15 teams participating. Both the events were organised "Online" on company's IT platform. Quality Circle team Anusandhan from Farakka station of your Company had qualified for the International QC Convention 2020 held at Dhaka, Bangladesh.

16. RENOVATION & MODERNISATION

Renovation and Modernization (R&M) of various units of your Company, especially the ones which have completed 25 years of commercial operation, is considered essential to achieve the objectives such as safe operation of the Units, compliance of latest statutory norms/revised Environmental norms/IEGC Code, Recovery/improvement of Efficiency of the Units, Reliability Improvement, flexible operations necessitated due to large scale integration of renewables, Sustenance of operations considering equipment health assessment observed during last 2 to 3 years, overcoming constraints on account of current operating conditions (changes in coal quality, water supply arrangements, change in law, etc.).

Investment approval accorded till date for R&M in 20 stations (Coal & Gas based) is ₹ 16,049.24 crore. As against this, cumulative expenditure till 31.3.2021 is ₹ 8,571.78 crore which includes R&M capital expenditure of ₹ 538.34 crore during financial year 2020-21.

As a responsible Corporate citizen, it has always been your Company's endeavour to ensure low levels of emission from its power stations. With a view to maintain a clean atmosphere by reduction of particulate emission levels from generating stations, Renovation and Retrofitting of Electrostatic Precipitator (ESP) packages have been awarded for 60 units in 20 stations totalling 16.70 GW and is under implementation. Out of total 60 units, work of 44 units have already been completed and for remaining 16 units works are in progress.

With a view to overcome technological obsolescence, Renovation of Control & Instrumentation (C&I) system has been taken up in nine (9) coal-based stations comprising of total forty-two (42) units. Out of these 42 units, work has been completed for 35 units. Similarly, Renovation of Control & Instrumentation (C&I) system has been taken up in five (5) gas-based stations. Out of these 5 stations, jobs completed in four (4) stations comprising of fifteen (15) Gas Turbines and seven (7) Steam Turbines. After completion of R&M, C&I systems in these units will be nearly at par with the new builds.

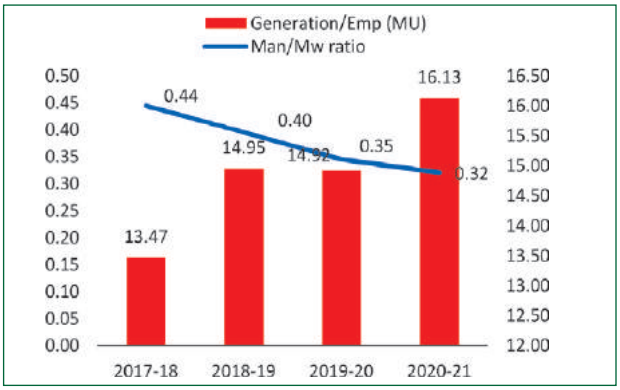
Your Company is also executing R&M of Steam turbines at its Ramagundam super thermal power station stage-I (3x210 MW) units and planning for R&M in few more units. These R&M interventions ensure life extension and restoration of heat rate towards design values.

At Rihand Stage-I, both Premier Air Pre Preheater (PAPH) of Unit#1 (NEI Design) were replaced by new (PAPH) which improved heat rate and also increased ID fan margin. With this renovation the unit achieves 105% capability. Also Purchase order was placed for Stage-I E Mill replacement by HP Mill which will reduce annual maintenance cost and also reduce auxiliary power consumption.

17. HUMAN RESOURCE MANAGEMENT

17.1 Your Company takes pride in its highly motivated and competent Human Resource that has contributed its best to bring the Company to its present heights. The productivity of employees is demonstrated by consistent

reduction of Man-MW ratio year after year. The overall Man-MW ratio for the year 2020-21 excluding JV/ subsidiary capacity is 0.32 and 0.29 including capacity of JV/Subsidiaries. Generation per employee was 16.13 MUs during the year based on generation of your Company's stations.



The total employee strength of your Company (including JV/ subsidiaries) stood at 18,509 as on 31.3.2021 against 19,165 as on 31.3.2020

Particular	FY 2020-21	FY 2019-20
Your Company		
Number of employees	16,798	17,398
Subsidiaries & Joint Ventures		
Employees of your Company in Subsidiaries & Joint Ventures	1,711	1,767
Total employees	**18,509**	**19,165**

The attrition rate of your Company is very low as most employees choose a lifetime career with your Company. During FY 20-21, our employee turnover rate was 0.32%.

17.2 Employee Relations

Employees are the driving force behind the sustained stellar performance of your Company over all these years of company's ascendancy. As a commitment towards your Company's core values, employees' participation in Management was made effective based on mutual respect, trust and a feeling of being a progressive partner in growth and success. Communication meetings with unions and associations, workshop on production and productivity, etc. were conducted at projects, regions and corporate level during the year.

Both employees and management complemented each other's efforts in furthering the interest of your Company as well as its stakeholders, signifying and highlighting overall harmony and cordial employee relations prevalent in your Company.

17.3 Safety and Security

Occupational health and safety at workplace is one of the prime concerns of your Company Management. Utmost importance is given to provide safe working environment and to inculcate safety awareness among the employees. Your Company has a 3-tier structure for Occupational Health and Safety Management, namely at Stations/ Projects, at Regional Head Quarters and at Corporate Centre. Safety issues are discussed in the highest forum of Management like Risk Management Committee (RMC), Management Committee Meeting (MCM), ROPR, ORTs, PRTs etc. Consultants are also engaged to strengthen process safety. On various occasions, CMD and the board members addressed Senior leaders and employees.

23 of your Company's stations are already certified with ISO:45001 and other stations are having OHSAS:18001 and are migrating to ISO:45001. The base line audit of four of the stations for international level NOSA accreditation in Safety and Environment has been done. Certification auditing of these stations shall be carried out after the easing out of the current pandemic situation of COVID-19. Regular plant inspection and review with Head of Project/Station is being done to guide from time to time and to ensure that safety systems are in place. Internal Safety Audits by team of Safety Officers are carried out every year. External Safety Audits by reputed organizations as per statutory requirement are carried out for each Project/ Station. Recommendations of auditors are regularly reviewed and complied with. Company level documents like Operation Directives (OD), Operation Guidance Note (OGN), Hazard Identification and Risk Assessment (HIRA) etc. have been prepared and shared with all stations. Specific Training modules for Contract workers have been launched and trainings as per job requirement is imparted by qualified and trained persons to enhance the safety knowledge and competency of workers. Safety modules have been released by Power Management Institute (PMI) for learning and enriching knowledge of the engineers working in O&M.

Various safety systems at work like Permit to Work (PTW), Job Safety Analysis (JSA), Standard Operating procedures (SOP) etc. are in place for ensuring safe work practices. Height work permit, hot work permit, confined space work permit and related check lists are implemented to ensure safety of workers while carrying out such specific jobs. Adequate numbers of qualified safety officers are posted at all units as per statutory rules/ provisions to look after safety of men & materials. Emergency Management Plan has been prepared by each station. Trainings have been done by each station to explain the responsibilities of key persons and regarding their role in handling of the emergency situations. Mock drills are conducted regularly to check the effectiveness of the system. Mock drills were conducted with National Disaster Response Force (NDRF) to prepare for any extreme on-site emergency. Sites are engaging the safety consultants of international repute to uplift safety standards.

For strict compliance and enforcement of safety norms and practices by the contractors, safety clauses are included in General Conditions of Contract/ Erection Conditions of Contract. Non-negotiable safety terms

and conditions are a part of the corporate awarded packages during tendering.

Most of your Company's plants have been awarded with prestigious safety awards conferred by various Institutions/ Body like Ministry of Labour & Employment-Govt. of India, National Safety Council, British Safety Council, Institute of Directors, Institution of Engineers (India), Safety awards instituted by different state governments, Apex Greenleaf Safety Foundation, Greentech Foundation, Global Safety Forum in recognition of implementing innovative safety procedures and practices.

Security: Your Company has established and is maintaining a secure working environment for all its installations, employees and associates by deploying CISF or SISF and/or DGR sponsored security agencies in all units as per norms / guidelines of Ministry of Home Affairs and Department of Public Enterprises. Further time to time concrete steps are being taken for upgrading surveillance systems at all projects/ stations by installing state-of-the-art security systems.

17.4 Training and Development

Your Company is successfully attracting, grooming, motivating and engaging talent. It believes in sustaining the organization as a learning organization and ensuring commitment and expertise at all times and situations so as to enable and drive business success. The Learning and Development (L&D) delivery infrastructure comprises the Power Management Institute (PMI) at the apex, the 7 Regional Learning Institutes (RLIs), the Safety Academy at Unchahar and the Employee Development Centres (EDCs) at the stations. L&D is actively engaged in making our people future ready in terms of technology, business acumen and leadership so as to unleash their full potential towards achieving the desired business outcomes in today's volatile, uncertain, complex and ambiguous (VUCA) world. The initiatives / programs are derived from business needs and designed to achieve the Company's strategic objectives and create value for stakeholders.

PMI has the state-of-the-art physical and digital infrastructure to impart learning in world class ambience. Its classrooms are equipped with modern facilities including smart boards, video conferencing and session-recording which supports contemporary pedagogy. Delivery modes include classroom, simulators, outbound activities, online (web based and Video-Conferencing), Virtual Reality and e-Learning with increasing emphasis on technology driven platforms. In fact, in the wake of COVID-19, almost all programs are being delivered virtually on MS Teams / other such platforms.

Innovative practices like theatre workshop and CSR exposure form part of your Company's flagship Executive Trainee program. Planned interventions [Foundation Course, Enhancing Managerial Competence (EMC) and Advance Management program (AMP)] of 11 days are provided at three identified stages of careers of executives along with job-rotation and transfer to ensure experiential learning. Total 1,756 training programs were conducted during FY 2020-21, resulting in a total of approximately 2,18,582 learning man-days.

Your Company takes pride in being a people friendly organization and strives to ensure safe workplaces. Through it's Safety Academy, your Company is conducting safety related certificate courses across the organization. In the year 2020-21, Safety Academy has coordinated and facilitated 12 weeks program on Industrial Safety Engineering through IIT- Kharagpur via NPTEL SWAYAM online portal of Government of India. It has also organized special interventions for Operation and Maintenance Heads through ASCI, Hyderabad on Human factors in Safety and for developing safety competency of agency supervisors.

In a first of its kind initiative, PMI started "NTPC Women Leaders Annual Conclave" on 8th March 2020 to celebrate women leadership, encourage networking and facilitate women leaders from all walks of life inspire and connect with each other. The second edition of the Conclave was held in 2021. Both the editions had Speakers from varied backgrounds like army, navy, science and technology, sports and fitness, entrepreneurship, media and academia share their journey. Moreover, gender sensitisation workshops are conducted both as standalone programs and as part of the planned interventions and ET program, to strengthen inclusivity,

Around 7,700 executives have been provided the opportunity to undertake Harvard Manage Mentor (HMM), a Company sponsored online certification course. Operation and Maintenance executives are being covered under the GpiLearn Online technical competency enhancement modules wherein, depending upon the station and department, learning paths have been created for both core-function and cross-functional learning followed by assessments. The courses are being accessed over internet, any time, at any place through computer or mobile.

PMI has also associated with NASSCOM to provide online access to all executives of your Company for completing courses on emerging technologies like AI, IoT, Big Data, AR / VR etc. and Project Management, Digital Leadership, Design Thinking etc. on the future skills platform. PMI is also providing instructor led online classes for participants who have enrolled to some of these courses.

Considering the Covid pandemic, a number of holistic wellness programs was conducted through external experts and reputed organizations like Isha Foundation, Brahmakumaris etc. Families were also included by leveraging YouTube for delivering such programs. Innovative practices undertaken during the year were Coaching, development of Virtual Reality (VR) training modules, online Employee Assistance (EAP) program on pilot basis and commissioning of Simulator training

at Tanda & Meja (JV Company) through remote at RLI, Solapur.

Besides building capability by training employees across the power sector, PMI is extending its support towards building capability among SAARC and African countries. In the year 2020-21, PMI has trained Engineering Executive trainees and executives from Chemistry from Bangladesh, Malawi and Eritrea.

In the L&D domain, your Company has received the globally acknowledged ATD Best Award for 2017, 2018, 2019 & 2020, Brandon Hall HCM Excellence Awards 2019 & 2020, the nationally acclaimed ISTD award for Innovative Training Practices for 2017-18, 2018-19 and 2019-20 and the BML Munjal Award in the Sustained Excellence category for 2018 (runner) and 2019 (winner).

17.5 Employee Welfare Trusts

Your Company has established following Trusts for welfare of employees: -

- NTPC Limited Employees Provident Fund Trust manages Provident Fund of employees of your Company.
- NTPC Post Retirement Employees Medical Benefit Trust manages post-retirements medical benefit fund of the employee including separated employee of your Company.
- NTPC Employee Gratuity Fund manages the gratuity fund of the employees for payment of gratuity as per the "The Payment of Gratuity Act" of your Company.
- NTPC Limited Defined Contribution Pension Trust manages the defined Contribution Pension fund of the Employee of your Company.

17.6 Women Empowerment

Women employees constituted nearly seven percent (as on 31.3.2021) of your Company's workforce. During the year, programmes on women empowerment and development, including programmes on gender sensitization were organized. Your Company actively supported and nominated its women employees for programmes organized by reputed agencies. To maintain work life balance and to manage career aspiration, paid childcare leave is provided to women employees. Further to improve the gender diversity, your Company conducted a special recruitment drive for women.

17.7 Other Welfare Measures

In your Company, an entire gamut of benefits, from paid Childcare leave, telemedicine, medical smart card for hospitalization cases to Post-retirement Medical benefits (PRMS) to Family Economic Rehabilitation to Sneh Kiran Scheme are extended to employees to meet any exigency that may arise in a person's life.

17.8 Employee Welfare & Quality of Work Life

Your Company is committed to provide quality work life for its employees. Far removed from the buzz of cities, our townships are the epitome of serenity, natural beauty and close community living. A range of welfare and recreation facilities including schools, hospitals, shopping centres, recreation centres, club, gym, pool etc. are provided at the townships to enhance the quality of life and the well-being of employees and their families. In addition, cultural programmes involving employees and their families are also conducted.

Further, on the occasion on 6th International Day of yoga, a session on yoga and meditation was organized for employees and their family at various Projects/stations/region/CC of your Company.

Your Company has partnered with Archery Association of India (AAI), through this partnership, your Company aims to provide platform to Indian youth to showcase their talent and elevate India's reputation in the field of Archery Globally.

Your Company has launched e-Paramarsh which helps employees and their families to access telemedicine and help to consult a Doctor in any of the reputed hospitals of the country.

Your Company had started online coaching facility for children of employees of your Company studying in classes 9th to 12th. The initiatives will help the children to get exposure of various professional courses and prepare for National and state-level engineering and Medical entrance exams.

18. SUSTAINABLE DEVELOPMENT

Sustainability at your Company is being driven by two motives:

a. To make fundamental changes in the way we operate our businesses to transform ourselves as the most sustainable power producer;

b. To become more transparent in the timely disclosure of our social, environmental and economic performances.

To achieve the first objective, your Company has become a pioneer among its peers (Power sector/ PSUs) by developing its Sustainability Strategies i.e. The Brighter Plan 2032. As part of this strategy, your Company has identified Decarbonization, Water, Biodiversity, Circular Economy, Safety, Supply chain and Business Ethics as priority sustainability areas and strategizing on them to ensure the Company's business sustainability. Your Company has developed short-term and long-term measurable goals and objectives pertaining to these areas which is also aligned to the Company's Corporate Plan 2032. Your Company has adopted the triple bottom line approach for focusing on people, planet and profit treating them as primary pillars for business sustainability. We believe that development should not endanger the environment & natural eco-systems.

Your Company has become one of the pioneers among PSUs to publish Integrated Annual Report in FY 2020, in compliance with Global Reporting Initiative (GRI) standard and as per IIRC pattern. In the report, SCOPE 2 & 3 data were also reported along with SCOPE 1 emission

data and Rain Water harvesting data. A credible and fair third-party assurance of our Sustainability Report is a critical part of our sustainability disclosures. Your Company received reasonable assurance (highest level) as per ISAE 3000 assurance standard by M/s KPMG.

Sustainable Development (SD) Plan for FY 2020-21 was prepared and approved by CSR & SD Board level Sub Committee of your Company. As part of SD agenda, Your Company is focusing on waste management, water management, promotion of renewable energy and biodiversity / afforestation activities. Action plan based activities have been implemented at various stations of your Company during the year. To further strengthen sustainable development activities, following new initiatives were taken during 2020-21.

- Awareness programs on Sustainability/ESG and The Brighter Plan 2032 were organized covering all major stations/ regions/ departments of your Company.
- Development of Sustainable Supply Chain Policy for capacity building of our suppliers on the evolving environmental, social and governance/compliance aspects of sustainable development.
- Your Company was declared winner of CII-ITC Sustainability Award 2nd time in a row i.e. in year 2019 and 2020. It is one of the most coveted award for sustainability in the country. Winning the Award has placed your Company among the top performers and further enhanced brand image of your Company.
- Your Company has increased frequency of regular communications with notable ESG rating analysts at global level to address controversies and sharing of data for improvement of your Company ESG rating. Your Company has been covered as a Case Study in CA100+ Global Progress Report 2020.
- In collaboration with US-AID, your Company is supporting a unique Biodiversity Project titled "Narmada Landscape Restoration Project" along River Narmada between Maheshwar and Omkareshwar dams. With an investment of about Rs 25 Crore, this project will be benefitting the local population, Indore City, and Madhya Pradesh at large as the project is aimed to enhance green cover, improve water retention, the crop diversity including to promote organic farming and marketing.

18.1 Inclusive Growth Initiatives for Social Growth

18.1.1 Corporate Social Responsibility (CSR):

CSR has been synonymous with your Company's core business of power generation. Your Company's spirit of caring and sharing is embedded in its mission statement. Your Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and thereafter-extensive community/peripheral development activities are taken up along with the project development. CSR Policy was formulated in July 2004 and revised in 2010, 2016 and 2019 respectively as "NTPC Policy for CSR & Sustainability" in line with Companies Act 2013 and Department of Public Enterprises (DPE) Guidelines for CSR. It covers a wide range of activities including implementation of a few key programmes through NTPC Foundation- a charitable Trust set up by your Company to mainly serve and empower the Physically Challenged and Under Privileged Sections of the Society & women.

Focus areas of your Company's CSR & Sustainability activities are Health, Sanitation, Safe Drinking Water and Education. Moreover, Capacity Building, Women Empowerment, Social Infrastructure livelihood creation and support through innovative agriculture & livestock development, support to Physically Challenged Person (PCPs), and activities contributing towards Environment Sustainability have also been taken up. Your Company commits itself to contribute to the society, discharging its corporate social responsibilities through initiatives that have positive impact on society, especially the community in the neighborhood of its operations by improving the quality of life of the people, promoting inclusive growth and environmental sustainability.

Preference for CSR & Sustainability activities is being given to local areas around Company's operations, ensuring that majority CSR funds are spent for activities in local areas. However, considering Inclusive Growth & Environment Sustainability and to supplement Government effort, activities are also taken up anywhere in the country. During the year, about 500 villages and more than 450 schools have been benefitted by your Company's various CSR initiatives at different locations. Your Company's CSR initiatives have touched, in one way or the other, the lives of around 18 lakhs people, residing at remote locations.

Apart from the CSR activities undertaken in and around stations to improve the living conditions of the local communities, other CSR initiatives undertaken pan- India are mentioned in the Annual Report on CSR activities annexed with this Report.

Your Company spent ₹ 418.87 Crore during the financial year 2020-21 towards CSR initiatives, which surpassed the prescribed two percent amount of ₹ 278.57 Crore, thus achieving a CSR spend of 3.04%.

18.1.2 NTPC Foundation

NTPC Foundation, funded by your Company, is engaged in serving and empowering the differently abled and economically weaker sections of the society.

Details of expenditure incurred and initiatives undertaken by your Company under CSR are covered in the Annual Report on CSR annexed as Annexure-VII to this Report.

18.1.3 Rehabilitation & Resettlement (R&R)

Your Company is committed to help the population displaced on account of land required for execution of the projects and has been making efforts to improve the Socio-economic status of the Project Affected Families

(PAFs). In line with its social objectives, the company has focused on effective Rehabilitation and Resettlement (R&R) of PAFs and Community Development (CD) activities in Project Affected Villages (PAVs) and vicinity.

R&R activities are initiated at your Company projects by undertaking need based community development activities in the area of health, education, drinking water, capacity building, infrastructure, etc. by formulating 'Initial Community Development (ICD) Plan' in consultation with concerned Panchayats, District Administration and opinion makers of the locality. Your Company addresses R&R issues in line with extant R&R Policy of your Company/ Central Govt./ State Govt. Policy/ Guidelines with an objective that after a reasonable transition period, the conditions of affected families improve or at least they regain their previous standard of living, earning capacity and production levels. Your Company revised its R&R Policy 2010 in the year 2017 to incorporate R&R entitlements as per 'The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013' (RFCTLARR Act, 2013). As per your Company's R&R Policy-2017, aligned in line with the RFCTLARR Act 2013, a Social Impact Assessment (SIA)/Census Survey will be conducted by the State Govt. during the process of land acquisition for the project so as to collect detailed demographic data of the area which shall form the basis for the preparation of 'Rehabilitation and Resettlement (R&R) Scheme by the appropriate Govt. The R&R Scheme consists of measures for Rehabilitation & Resettlement and need based CD infrastructure in Resettlement Colony (RC).

Additionally, your Company in its R&R Policy 2017 has kept provision for need based community development (CD) activities to be taken up in project affected villages where Project Affected Families (PAFs) continue to reside even after land acquisition as also in vicinity of the project so as to ensure that the displaced families in the RC or the affected families settling in neighboring villages may secure for themselves a reasonable standard of community life.

Expenditures on implementation of R&R Plan is part of Capital cost of the project and the Plan is implemented in a time bound manner so as to complete its implementation by the time the project is commissioned. On completion of the R&R Plan implementation, a Social Impact Evaluation (SIE) is conducted by a professional agency to know the efficacy of the R&R Plan implementation for future learnings.

A. R&R Achievements during the year:

- Rehabilitation and Resettlement (R&R) Plan:

  R&R activities were implemented at the Greenfield / Brownfield Thermal Power projects - North-Karanpura, Darlipali, Gadarwara, Khargone, Lara, Kudgi, Telangana, Mouda, Solapur, Tanda-II, Barh, Meja, NPGC, Kanti, Patratu, Hydro projects –Tapovan-Vishnugad & Rammam-III and Coal Mining Projects at Pakri-Barwadih, Chatti-Bariatu, Kerendari, Dulanga and Talaipalli as per the R&R/CD Plans which were finalized earlier in consultation & participation of the stakeholders and approved.

  Re-appropriations in cost provisions of R&R/CD Plans, as required on case-to-case basis, for specific projects and in view of request of stakeholders/ district administration were also approved to take care of the local needs & requirements.

B. Focus Areas for Community Development activities:

- **Drinking water** – Planning and implementation for access to drinking water for 100% coverage of all project affected villages of your Company projects under construction is being undertaken. Your Company's Policy- Jal Jyoti Mission embarks upon ensuring safe drinking water and rejuvenation of ponds in its project-affected villages.
- **Capacity building/Skill upgradation** – Training programs conducted by various projects towards skill enhancement. Specific focus is being kept on imparting training to villagers on modern farming methods for improving the output. The support to dependents of PAFs for ITI training was also extended by various projects.
- **Education** – Infrastructure created for Medical College-cum-Hospital at Sundargarh (Odisha) is ready for handover to Govt. of Odisha. A portion of the same for 200 bed facility is being used as Covid Care Centre cum Isolation ward for Corona virus infected patients. Financial assistance extended towards upgradation of infrastructure and other basic amenities including setting up of latest equipment in the Govt. Medical College at Raigarh (Chhattisgarh).

  Construction of Engineering College at Shivpuri (MP) has been completed and academic session 2020-21 has been started in on-line mode.

  Support has been extended for construction of Hydro Engineering College, Bilaspur (Himachal Pradesh). Building for Govt. Polytechnic at Dhak (Joshimath) was constructed.

  Your Company has the Policy on Improving Learning Outcomes & Quality of Education for children studying in Government Schools of its project-affected villages
- **Health** - For the benefit of PAFs and neighboring population, Mobile Health Clinics, Medical camps and dispensaries are being operated for comprehensive health coverage of PAFs at various projects. Support extended to District Administration, Peddapalli (Telangana) for augmentation of another floor and equipment at Govt. Hospital. Your Company has the Policy on Maternal and Child Health Care to provide 650 days of antenatal/prenatal & postnatal preventive health care to expectant & new mother and new born babies.

- **COVID-19 related support by your Company**
  - ✓ PPE Kits, Ambulances, Infrared Thermometers, DG Set, etc. to Uttarakhand.
  - ✓ Installation of Ventilators at Hazaribagh Govt. Hospital.
  - ✓ Covid ICU beds at District Hospital Khargone & Oxygen Bed Set-ups in 5 Blocks of Khargone.
  - ✓ Support extended by the Projects to the District Authorities and neighbouring communities by providing provisions such as food items, beddings, sanitizers, masks, etc. besides carrying out sanitization & awareness drives in villages.

18.2 Environment Management –

Environment Policy of your Company:

"To provide cleaner energy by committing to highest possible levels of performance in environmental compliance, practices and stewardship."

Your Company has always envisaged environment protection and management along with optimized usage of natural resource as inherent feature at the time of inception of all projects and focuses its efforts to minimize the impact of its plant operations on surrounding environment and concerned ecosystem.

Your Company undertakes comprehensive environment management plan right from conception of project, selection of site, source selection (Land, Coal & Water resources) and technology for power generation and pollution control. In case of old stations, your Company undertakes massive renovation & modernization to upgrade pollution control equipment wherever necessary. Your Company has also taken initiative for installation of Flue gas desulfurization (FGD) system for SOx emission control and optimization & implementation of appropriate technology for NOx emission control to comply with revised emission norms as per stipulated timeline for respective station/unit.

In new projects, around 18-23% of the project cost is spent on main environment pollution control systems such as High Efficiency Electrostatic Precipitators (ESPs), Effluent Treatment Plant (ETP), Ash Water Recirculation System (AWRS), Coal Settling and Separation Pit (CSSP), Dry Ash Extraction System (DAES), Dust Extraction & Dust Suppression system (DE&DS), Sewage Treatment Plant (STP), Flue Gas Desulfurization (FGD) and DeNOx systems. For Online monitoring of emissions and effluent monitoring, Continuous Emission Monitoring System (CEMS), Effluent Quality Monitoring System (EQMS), Continuous Ambient Air Quality Monitoring System (CAAQMS) are operational at all operating stations and included in main EPC packages for the upcoming units/ projects. Your Company has adopted advanced and high efficiency technologies such as super critical boilers at new stations, DeNOx and FGD in all upcoming green field projects are under erection.

Your Company is augmenting its capacity with green power by installing Solar Power, hydel power and wind power in a big way, hybrid power plant in combinations e.g. Wind & Solar, Solar & Thermal and small hydel power systems attached to its thermal power stations to encourage garnering of renewable energy resources. These measures are aimed not only to achieve reducing dependency on fossil fuel based thermal power, it also minimizes its contribution to pollution along with optimized consumption of precious natural resources. These efforts further lead to reduction in water and Carbon footprints of your Company. All stations of your Company are ISO: 14001 certified or in process of acquiring certification for their sound environment management systems and practices.

Your Company has signed Memorandum of Understanding (MoU) with Indian Institute of Technology, Kanpur to conduct comprehensive study on Source Apportionment Study of air pollution at and around Dadri station to evaluate the contribution of various pollution sources in ambient area of that region and contribution of coal based station in particular, if any.

Towards its commitment to reduce, reuse and recycle the most prestigious natural resource i.e. water in eco-friendly manner, your Company has revised and released "Water Policy-2021" to minimize the water footprint to the extent possible levels on basis of techno-economic approach in Company's operations.

Your Company has signed CEO water mandate on 23.3.2021, which is a highly collaborative partnership between the United Nations Global Compact, the Government of Sweden and a group of committed companies and specialized organizations dealing with the problems of water scarcity and sanitation. CEO Water mandate is designed as a private-public initiative with a focus on developing strategies and solutions to contribute positively to the emerging global water crisis.

18.2.1 Control of Air Emissions:

High efficiency Electro-static Precipitators (ESPs) with efficiency of the order of 99.97% and above with advanced control systems have been provided in all coal-based stations to maintain Particulate Matter (PM) emissions well below the applicable permissible limits. All upcoming units have been planned & designed with state of art Air Pollution Control systems (ESPs, DeNOx and FGD system) with high efficiency to meet new emission norms. Performance enhancement of ESPs operating over the years is being enhanced to achieve the desired emission level by augmentation of ESPs size (increased height, additional fields, charging of dummy fields, retrofitting of advanced ESP controllers, new technology i.e. MEEP (Moving electrode Electrostatic Precipitators) and adoption of sound O&M practices. Your Company has planned for Renovation & Modernization of ESPs in 64 units, out of which R&M work of ESPs has been completed in 48 units and in balance 16 units work is in progress as per schedule.

For control of SOx, first wet FGD has been commissioned and become operational at Vindhyachal Station. Your Company has commissioned Dry Sorbent Injection (DSI) based FGD in four units of Dadri Stage-I. Erection of wet FGD at Dadri Stage-II is in advanced stage. FGD based of dry sorbent injection (DSI) system erection work is in advanced stage of erection in two units of Tanda (Stage-I) to meet the emission norms for SOx. Your Company has awarded FGD packages for 60 GW+ capacity and execution are in progress to comply the new norms for SOx emission as per the timeline Notified by MoEF & CC vide notification dated 31.3.2021.

NOx control in coal-fired plants is presently achieved by controlling its production by adopting best combustion practices (primarily through excess air and combustion temperatures optimization). To lower down the NOx emission to the extent possible levels, combustion modification has been awarded for 20 GW+ capacity. Combustion modification work in 16 units has already completed and in balance units work shall be completed in next scheduled overhaul. To comply with new norms for NOx emission, pilot study based on SCR/SNCR technology was conducted and report was submitted to concerned authorities for consideration and finalization of technically viable emission limit and finalise the optimal solution and suitable technology for DeNOx system suitable for Indian Coal.

Change of secondary fuel from HFO to alternative fuel (LDO or LSHS having low sulfur content) scheme implemented in all stations of your Company in NCR and state of UP and Haryana to minimize the SOx emission during the startup of coal-based units.

Your Company has installed Dust Extraction and Dust Suppression systems in coal crusher house, transfer points, coal staking yard and coal unloading locations in the CHP areas of all coal-based stations. Your Company has taken appropriate measures for fugitive dust control system in ash handling areas and ash dyke areas to mitigate chance of fugitive dust scenario.

18.2.2 Control of water pollution:

Your Company as a responsible corporate entity for environment has proactively initiated steps towards water stewardship in power generation sector. Your Company released its revised Water Policy - 2021 and Rain Water harvesting Policy-2018 to set its own benchmark in water consumption in power generation by setting its aim and objectives for various water conservation and management measures by using 3Rs (Reduce, Recycle & Reuse) as guiding principle. Water bodies rehabilitation, rejuvenation & restoration, water withdrawal optimization depending on the sustainable water withdrawal capacity and rejection of water bodies as probable water source, which are recognized as environmentally sensitive due to their relative size and habitat for ecologically sensitive species.

All stations of your Company are equipped with advanced waste water treatment facilities such as state of art technology based Sewage Treatment Plant (STP), Liquid Waste Treatment Plants (LWTP), Coal Slurry Settlement Pit (CSSP), Ash Water Recirculation System (AWRS) for treatment and reuse of treated effluents. For optimum use of water, all stations of your Company are having closed cycle condenser cooling water systems with higher Cycle of Concentration (COC). Adoption of high concentration slurry disposal (HCSD) system, rain water harvesting system, reuse of treated effluent in ash slurry disposal and reuse of treated sewage effluent for horticulture purposes are few measures implemented in all stations. For effective monitoring of water use, flow meters with integrators have been installed at all designated locations in all stations of your Company.

In view of water stressed scenario and new norms for specific water consumption, water conservation and reduction in specific water consumption enables your Company to ensure compliance of new norms on specific water consumption. Your Company has planned to install Air Cooled Condenser at new projects at Patratu (Subsidiary Company) and North Karanpura, which will be trend breaking initiative in specific water consumption in power sector of country.

18.2.3 New Environmental Norms Implementation Plan and Challenges:

- **SOx, NOx & SPM reduction**

Indian power sector is undergoing a significant change that has redefined the industry outlook. The focus has now shifted to ensure a safer environment along with sustainable power generation. Being the premier power generating company in the country, the onus is on your Company for achieving the stringent new emission limits for the power plants across the country.

In order to comply with the applicable new environmental norms notified by MOEF & CC vide gazette notification dated 7.12.2015 pertaining to SO_2, FGD system will be required to be installed in the existing as well as under construction coal fired power plants. Your Company along with its JV Companies is having around 149 units (operating units as well as under construction units) of 64.40 GW capacity. Your Company is taking a lead role in the implementation of FGD. Your Company has already issued tenders for all units that covers operating as well as under construction units. Further, FGD in Vindhyachal Stage-V is already in operation and Dry Sorbent Injection (DSI) system (for reduction of SO_2) is commissioned in 4 units of 210 MW at Dadri Station of your Company. FGD installation Work in 58,940 MW is underway. This has also set up an example in the Industry for your Company's commitment towards the greener environment.

As a corporate trend setter, your Company is also providing consultancy for installation of various environmental control system to state utilities like HPGCL, PSPCL, UPRVUNL, DVC, SSCL, NALCO etc. Your Company is also continuously assisting CEA/MoP in formulating various measures in implementing new environmental norms.

For controlling the NOx, various De-NOx technique shall be implemented based on the limits prescribed in the norms. Your Company has started working on this. Combustion Modification in 15 units of around 7 GW including units located in NCR i.e. 2 units of Dadri, 3 units of Jhajjar have already been completed. Further, award is already placed for Combustion modification for 34 units of around 14 GW. According to the latest environmental norm, NOx emission from power plants will have to be below the limit of 100 mg/N.Cu.m. Selective Catalytic Reduction (SCR) is a proven technology for low ash coal for Nox emission control, however, it is yet to be proven for abrasive & high ash content Indian coal. In view of this, Pilot tests have been conducted at seven stations of your Company by various SCR system suppliers to assess the suitability of SCR technology for Indian coal. Results of the tests submitted to Hon'ble Supreme Court. Hon'ble Supreme Court has constituted a committee to review the NOx norm. Based on decision on NOx Norm, plan & strategy for future will be prepared.

For particulate emission reduction, most of the units of your Company are complying with the SPM norms. ESP R&M is underway in around 5 GW capacity in 16 units for meeting the new environmental norm.

The SO_2 & NOx emission levels in the country will plummet to 30% of what it is presently after installation of FGD technology even after adding capacity of another 70 GW from the present year.

➢ **Facilitation for Ash Utilization**

To facilitate ash utilisation, in recent time your Company has taken various initiatives like installation of dry bottom ash handling system, installation of de-watering bins, rail loading system for transportation of dry fly ash, feasibility study for large capacity Silo etc.

Dewatering bins for bottom ash are under implementation stage in North Karanpura Station. It is also under planning stages in few other projects/stations of your Company like Ramagundam, Sipat, Korba, Barauni etc.

In its endeavor to promote fly ash utilization, your Company is considering implementation of fly ash classification and Bagging Plant system for its future coal based thermal power projects. Further, feasibility report has been prepared for implementation of Classification system & Technical Specification of Bagging plant has been prepared for studying the feasibility of installation of bagging plants in your Company's different coal fired power stations.

Large scale ash utilization will be supplemented greatly when huge quantities of ash produced from coal fired thermal power plants could be transported to the distant location where demand of ash is more. To transport ash from power stations to distant demand Centres, rail transportation is being actively considered. To facilitate rail transportation of fly ash, ash rail loading system is under implementation in your Company's upcoming and under-construction coal fired projects. Further, plans are afoot for provision of such ash rail loading system in various operating power stations like Barauni, Sipat, Singrauli etc. Furthermore, for enabling temporary storage of massive quantities of fly ash at demand Center, initial study for construction of large capacity fly ash Silo at distant demand centre has been made. For unloading of huge quantities of fly ash from railway wagons at demand Centre, Technical Specification for fly ash unloading system from railway wagons has been prepared for implementation at Dadri Station. Discussions are also underway with Railway for required logistic supports.

18.2.4 Real Time Environment Monitoring System

Your Company remains a benchmark setter in Environment monitoring & protection. As pioneer in environment monitoring, your Company have already installed Ambient Air Quality Monitoring Stations (AAQMS) consisting of SO_2, NOx, CO, PM2.5, PM10 analyzers and Continuous emission monitoring systems (CEMS) consisting of SO_2, NOx, CO, CO_2, Particulate matter analyzers for Stack emission and Effluent Quality Monitoring System (EQMS) consisting pH, Conductivity, BOD, COD, TSS, oil in water analyzers for Effluent monitoring in all our Stations/ Units of your Company.

Mercury analyzers for emission and air monitoring are installed in all 800 MW units of your Company.

All required environmental monitoring data is made available to CPCB & SPCB as per their requirement online.

Your Company is already installing additional air and water pollution control systems at various projects to comply with the applicable new environmental norms notified by MOEF & CC vide gazette notification dated 7.12.2015.

Your Company has brought out Bio-Diversity Policy on 31.7.2018 and developed strategy for its implementation in and around its business units for conservation and enrichment of bio-diversity.

18.2.5 Tree Plantation:

Your Company has undertaken massive tree plantation in mission mode covering vast areas of land in and around its projects/stations since inception. A total of more than 36 million trees have been planted throughout the country under accelerated afforestation programme. Your Company planted 1 million saplings during financial year 2020-21 even after COVID-19 pandemic.

After successful demonstration of pilot project based on Miyawaki plantation technology at Ramagundam station during 2019-20, your Company has replicated the Miyawaki plantation technology based plantation work at 5 stations during 2020-21 and planted more than 18000 saplings whose biomass production per unit area is 16 times higher than the conventional plantation. Replication of this technology in plantation will create more efficient carbon sink for your Company.

The afforestation has not only contributed to the 'aesthetics' but also helped in carbon sequestration by serving as a 'sink' for pollutants and thereby protecting

the quality of ecology and environment. Further, your Company has embarked upon long-term Memorandums with State authorities to assist National Commitment of NDC in COP 21, by planting 5 million saplings during 2021-26 @ 1 million per year.

Your Company has also entered into long-term MoUs with state Authorities to assist National Commitment of Nationally Determined Contributions in COP 21, by planting 7 million saplings between 2019-26 @ 1 million per year.

18.2.6 ISO 14001 & OHSAS 18001 Certification:

Amongst all commercially operational stations of your Company, 19 stations have ISO - 14001 and OHSAS 18001 certifications and for four stations, certifications are under renewal by reputed National and International certifying agencies in recognition of its sound environmental management systems and practices. Certification is in process for newly commercial stations of your Company.

18.3 Quality Assurance and Inspection (QA & I)

Your Company lays great emphasis on the quality of plant and machinery that are sourced for power plant construction and also on the spares and consumables that are required to support the day-to-day operations of your Company.

The model followed for Quality Assurance seeks to ensure that the Plant Reliability is realized through thoughtful planning and building. Quality attributes start from raw materials, manufacturing, inspection and testing up to erection and commissioning. Each item/ sub-system required for construction is subject to rigorous tests and inspection at the appropriate stages to ensure conformity to specified requirements.

Your Company has committed adequate resources for maintaining effective Quality Management System. This includes Corporate level Quality Assurance team, Inspection Engineers at various locations and Field Quality experts at projects/ sites of your Company.

Your Company's robust performance on all operational parameters, is a testimony to the soundness of the quality system which is in operation. Your Company is represented in various technical committees of ISO, BIS and IEC and is actively contributing in upgradation of power sector related standards and technology to promote align with best practices followed internationally.

Your Company's digitalization initiatives are further strengthened with the launch of Integrated PRADIP (Pro-Active and Digital Initiatives to become Paperless) based QA & I business processes.

COVID-19 pandemic has not deterred your Company in carrying out inspections and testing at Vendors' works, despite several travel restrictions imposed during lock down period. Your Company has utilized digital technologies in carrying out Remote inspections at vendors premises this year by various Regional Inspection Offices (RIOs) thereby maintaining the continuity of project supplies with specified quality.

18.4 Clean Development Mechanism (CDM)

Your Company is pioneer in undertaking climate change issues proactively. Your Company has taken several initiatives in CDM Projects in Power Sector.

Five of its renewable energy projects viz. 5 MW Solar PV Power Project at Dadri, 5 MW Solar PV Power Project at Port Blair (A&N), 5 MW Solar PV Power Project at Faridabad and 8 MW small hydro power project at Singrauli and 50 MW Solar PV Plant at Rajgarh (MP) have already been registered with United Nations Frame Work Convention on Climate Change (UNFCCC) CDM Executive Board.

15 MW Solar PV Power project at Singrauli, 10 MW Solar PV project at Talcher and 10 MW Solar PV Power Project at Unchahar is registered in UNFCCC CDM Programme of Activities (PoA).

6,173 nos of Certified Emission Reductions (CERs) for 5 MW Solar PV Power Project at Port Blair (A&N) has been issued by UNFCCC CDM Executive Board. Another 5,842 nos. of CERs have also been issued by UNFCCC CDM Executive Board for 5 MW Solar PV Power Project at Dadri and 21,011 nos. of Certified Emission Reductions (CERs) has been issued for 5 MW Solar PV Power Project at Faridabad. Further, 80,278 nos. of CERs are expected shortly, after completion of verification exercise of 50 MW Rajgarh Solar project of your Company.

Registration of 50 MW Solar PV power project at Anantpur, 260 MW Solar PV power project at Bhadla, 250 MW Solar PV power project at Mandsaur and 50 MW Wind power project at Rojmal has been done in Verified Carbon Standard (VCS) program. A total of 10,85,005 Voluntary Emission Reduction (VERs) has been issued for these projects registered with VCS Board. Further, 21,17,005 VERs are expected shortly, after completion of verification exercise of these projects.

Prior consideration forms have been sent to United Nations Framework Convention on Climate Change (UNFCCC) and Ministry of Environment and Forests (MOE&F) for our upcoming following Solar Projects: 140 MW and 85 MW at Bilhaur, 20 MW at Auraiya,100 MW floating solar at Ramagundam, 25 MW floating solar at Simhadri, 70 MW & 22 MW floating solar at Kayamkulam, 160 MW at Jetsar, 20 MW floating solar at Auraiya, 20 MW at Rihand, 400 MW CPSU Scheme Tranche -I projects and 1,292 MW CPSU Tranche-II projects.

18.5 Ash Utilisation

During the year 2020-21, 624.56 lakh tonnes of Ash was generated and 77.83 % viz. 486.07 lakh tonnes of Ash had been utilized for various productive purposes by your Company.

Important areas of Ash utilization are – Cement & Asbestos industry, Ready Mix Concrete plants (RMC), Road Embankment, Brick making, Mine filling & Land development. 10 nos. of your Company stations achieved Ash utilization value of 100 % or above. Your Company is also pursuing new initiatives for Fly Ash utilization like Fly Ash based Geo-Polymer Road, setting up Ash based Light Weight Aggregate (LWA) plant. Transportation of Ash started through your Company owned BTAP rakes from Rihand station of your Company.

Pond Ash from all stations of your Company is being issued free of cost to all users. Fly Ash is also being issued free of cost to Fly Ash/Clay-Fly Ash Bricks, Blocks and Tiles manufacturers on priority basis over other users from all Coal based Thermal Power Stations of your Company. The fund collected from sale of Ash is being maintained in separate account and this fund is being utilized for development of infrastructure facilities, promotion and facilitation activities to enhance Ash utilization.

Your Company has an Ash Utilization Policy, which is a vision document dealing with the Ash utilization issue in an integral way from generation to product. This policy aims at maximizing utilization of Ash for productive usage along with fulfilling social and environmental obligations as a green initiative in protecting the nature and giving a better environment to future generations.

The quantity of Ash produced, Ash utilized and percentage of such utilization during 2020-21 from your Company's Stations is at Annexure - VIII of this Director Report.

18.6 Centre for Power Efficiency and Environmental Protection (CenPEEP) – towards enhancing efficiency and protecting Environment

CenPEEP is instrumental in implementation of Energy Efficiency Management System (EEMS) consisting of periodic assessments, field tests, performance gap analysis deviations and updation of action plans at all stations of your Company.

CenPEEP is working for efficiency and reliability improvement in stations through strategic initiatives, development and implementation of systems, performance and guarantee tests in new units and introduction of new techniques & practices. Critical efficiency parameters, draft power consumption, efficiency improvement through overhauling are monitored. PI based real time programs and dashboards are in use for real time tracking of plant parameters. These programs also assist operating engineers in tracking the gaps in heat rate and auxiliary power consumption, trending the degradation of equipment performance and taking corrective measures.

Your Company initiated a unique voluntary program of GHG emission reduction by establishing CenPEEP and under this program, it is estimated that cumulative CO_2 avoided is 53.78 million tonnes since 1996, by sustained efficiency improvements in your Company.

CenPEEP is also working towards reduction in specific water consumption and auxiliary power consumption in coal and gas stations of your Company. A dedicated group conducts regular energy audits to identify potential improvement areas and improvement actions. Further CenPEEP is also associated in carrying out water audits of stations and taking corrective actions for reduction in water consumption.

Water Withdrawal per year (in lakh KL)

Sl. No.	Type of Water	Quantity Consumed 2020-21
1	Total Water withdrawal	**5908.87 Lakh KL***
2	Per unit withdrawal	**3.03* Litre/kwh**
*** Your Company's coal and gas stations on closed cycle system.**		

CenPEEP is also involved in structured and statutory energy audits, which helps to identify potential areas of improvement in APC reduction to be addressed within time bound implementation schedule.

CenPEEP is actively involved in training and development of power professionals for the Company and other utilities in the power sector in the areas of performance improvement of Boiler & Auxiliaries, Turbine & Auxiliaries, Cooling Towers, new technologies like RCM, PdM technologies etc.

Your Company has taken EPRI membership in the areas of Boiler life & Availability improvement, Steam Turbine-Generators & Aux. system and Combustion & Coal Quality impacts to increase the knowledge, expertise of the Company and undertake collaborative research projects for improving efficiency and reliability of units of your Company.

CenPEEP coordinated implementation of Perform, Achieve & Trade (PAT) scheme under Prime Minister's National Mission on Enhanced Energy Efficiency (NMEEE) in your Company's coal & gas plants. As per notification, Company's coal and gas stations exceeded the Net Heat Rate improvement targets and earned net 1,70,653 EScerts (Energy saving certificates) in PAT-1 cycle. Your Company participated in EScerts trading & purchased required EScerts. Subsequent to the trading, your Company is having 1,61,759 EScerts that will be used for PAT – II cycle. After completion of PAT cycle - II & III in March 2019 & March 2020 respectively, M&V audits have been carried out in all stations of your Company. Notification of EScerts earned in PAT cycle - II & III is awaited.

Your Company has taken an initiative for complete replacement of existing lighting with LED light fittings at its all stations including townships. Till March 2021, 12.2 lakh LED fittings (94.80% of the population) have been replaced on Pan NTPC basis.

19. NTPC Energy Technology Research Alliance (NETRA)

Your Company understands the importance of R&D in the ever-changing dynamics of the energy sector. It also firmly believes that assimilation of knowledge and its conversion

into technologies shall be the key differentiator in coming times. Technological progress thus achieved, in aggregation, improves the country's energy security, economic growth and environmental sustainability. Concurrently, it plays a crucial role in determining the competitiveness of companies in the marketplace - both nationally and internationally.

We, in your Company, fully recognize R&D as the cornerstone of technological advancement. Therefore, we have incorporated R&D in our long term vision and strategy for the benefit of the Company and society at large. Your Company has been assigning more than 1% of PAT consistently for R&D related activities.

As we gaze towards the future, it is of paramount importance that your Company as power generation company needs to adapt to counter emerging challenges of power sector and at the same time it is equally important that we as a company should increase our presence across entire electricity supply chain and R&D is a vital step to achieve that. Your Company has always taken upon itself to incorporate innovative technologies to enhance the safety, reliability, and efficiency of power plants through a prudent mix of development, adoption, and adaption of frontier technologies. Through our R&D center, NETRA (NTPC Energy Technology Research Alliance), we are constantly making efforts to address the major concerns of the power sector - as well as exploring and tapping the potential opportunities available.

The focus areas of NETRA are - Efficiency Improvement & Cost Reduction; New & Renewable Energy; Climate Change & Environmental protection which includes water conservation, Ash utilization, carbon capture, and utilization & Waste Management. NETRA also provides Advanced Scientific Services to its stations and other utilities in the area Non-Destructive Examination (NDE), Metallurgy & Failure analysis, Oil/water chemistry, Environment, Electrical, Computational Fluid Dynamics (CFD), etc. for efficient and reliable performances. NETRA laboratories are ISO 17025 accredited.

Our R&D activities are constantly guided and steered by the Research Advisory Council (RAC) comprising of eminent scientists and experts from India and abroad. Padma Bhushan Dr. V.K. Saraswat, former Secretary, DRDO, and member of NITI Aayog is the Chairman of RAC. In addition, the Scientific Advisory Council (SAC) having Functional Director, Director (Operations) and other senior executives your Company as members who gives direction for improving plant performance & reducing cost of generation.

At NETRA, our focus is both on in-house technology development as well as collaborative research. We have networked with various prestigious national and international institutions to harness the specialized knowledge and expertise lying with those institutes. By collaborating with various institutes, we have been successful in promoting research in the field of Ash Utilization, Hydrogen, Carbon Capture, Sensors CFD, Robotics, Drones, Renewables, Environment, NDE and Water chemistry, etc. NETRA has collaborations with National Institutes such as IIT-Delhi, IIT – Bombay, IIT - Madras, IIT – Kanpur, IIT – Kharagpur, IIT Dhanbad, IISc - Bangalore, RGIPT - Amethi, CSIR lab's such as IIP - Dehradun, CMERI- Durgapur, CGCRI- Kolkata, NCCBM-Ballabgarh, CBRI - Roorkee, etc. We have also collaborated with international institutions such as NETL-USA, Curtin University-Australia; DLR - Germany and ISE-Germany etc.

Various institutional building activities such as training programs, workshops on various topics such as Advanced NDE & Metallurgy etc were conducted. NETRA journal, compendium of Metallurgy focused case studies, compendium on advance NDE methods and numerous research papers were published.

Further to boost our R&D activities, the Phase-II Building of NETRA is under construction.

20. IMPLEMENTATION OF OFFICIAL LANGUAGE

Your Company took several initiatives for the progressive use of Hindi in the day to day official work and implementation of Official Language policy of the Union of India in your Company. The compliance of Official Language policy in our projects and regional headquarters was inspected and need based suggestions were given to the respective Heads of offices in this regard.

Quarterly meetings of Official Language Implementation Committee were held in which extensive discussions took place on progressive use of Hindi and the ways and means to bring about further improvements.

Hindi Divas was celebrated on 14th September 2020 and Hindi Fortnight was organized from 1-15 September 2020 at the Corporate Centre as well as regional headquarters and projects/stations of your Company to create awareness among the employees, associates and their family members. Your Company biannual Hindi magazine "Vidyut Swar" was published (in digitized form) to promote creative writing in Hindi. We have been awarded the 2nd prize in the best magazine category by TOLIC (NARAKAS).

Employees were motivated to use Hindi in official work by organizing Hindi workshops, Unicode Hindi Computer Training along with Hindi e-tools and popularization of Hindi incentive schemes. Hindi webpage was updated with important information of Rajbhasha for employees of your Company.

The second sub-committee of Parliament on official Language had inspected our units; reviewed the progress of Rajbhasha implementation and appreciated our efforts.

Your Company's website also has a facility of operating in a bilingual form, in Hindi as well as in English.

21. WEB BASED CONTRACTORS' LABOUR INFORMATION AND MANAGEMENT SYSTEM (CLIMS)

Your Company has implemented an in house 'captive private cloud' based solution; 'Contractors' Labour

Information Management System (CLIMS)' to streamline the labour management processes, to ensure physical and social welfare of workers, statutory compliances and to get accurate picture of real time availability of workers.

It has also resulted in proper keeping of records in a digitalized format and ensuring that the wages and other benefits of labourers deployed at Plants of your Company are disbursed correctly and in time. The CLIMS application also has inbuilt features like bio-metric attendance, medical fitness, safety training/ clearances, ESI registration and other regulatory checks.

22. VIGILANCE

22.1 Vigilance Mechanism:

To ensure transparency, objectivity and quality of decision making in various operations, your Company has a Vigilance Department headed by Chief Vigilance Officer. The Vigilance set up in your Company consists of Vigilance Executives in Corporate Centre as well as in sites. In sites, the Vigilance Executives report to the Project Head in administrative matters and they report to the Chief Vigilance Officer in functional matters.

Corporate Vigilance Department consists of four Cells as under:

- Vigilance Investigation and Processing Cell
- Departmental Proceedings Cell
- Technical Examination Cell
- MIS Cell

These cells deal with various facets of vigilance mechanism. The vigilance works have been assigned region-wise to Vigilance officers at Corporate Centre (Regional Vigilance Executives) for speedier disposal. Senior officials of Vigilance Department comprising GM (Vigilance), Regional Vigilance Executives and Head of DPC/MIS Cell meet regularly to discuss common issues in order to ensure uniform working in all Regions. This facilitates Transparency, efficiency and effectiveness of Vigilance functionaries by making use of collective knowledge, experience and wisdom of Vigilance Executives as well as breaking of compartmentalization and abridging of strengths & weaknesses.

22.2 Vigilance work during FY 2020-21

Regarding Investigation of Complaints, during the year 2020-21, a total 84 complaints were investigated & out of these 64 complaints have been finalized while the remaining 20 are under various stages of investigation as on 31.3.2021. Appropriate disciplinary action has also been initiated against the involved employees along with system improvements, wherever found necessary. 187 Surprise Checks were conducted during the period and recovery of ₹ 46,32,242 was effected against various discrepancies detected during investigation. During the last year a total of 34 Preventive Vigilance Workshops were conducted at various projects/ places of your Company.

22.3 Implementation of Integrity Pact

Integrity Pact has been implemented in your Company since 2009. Presently, tenders having estimated value of ₹10 Crore (excluding taxes and duties) and above are covered under the Integrity Pact.

22.4 Implementation of various policies

Fraud Prevention Policy has been implemented in your Company and suspected fraud cases, referred by the Nodal Officers to Vigilance Department are investigated immediately to avoid/stop fraudulent behaviors as defined in "Fraud Prevention Policy". Whistle Blower Policy has also been in place at your Company as per SEBI guideline to strengthen a culture of transparency and trust in the organization, providing employees with a framework/ procedure for responsible and secure reporting of improper activities (whistle blowing) within the Company and to protect employees wishing to raise a concern about improper activity/serious irregularities within the Company. A complaint handling policy is also in place which is designed to provide guidance on the manner in which your Company receives and handles complaints against its employees, suppliers / contractors etc.

22.5 Vigilance Awareness Week - 2020

In line with the directive from Central Vigilance Commission (CVC) vide Circular ref. no. 020/VGL/036 dated 8.9.2020 Vigilance Awareness Week 2020 has been observed in all the Offices and Power plants of your Company , including the Joint Ventures and Subsidiaries spread across the country from 27th October to 2nd November, 2020 on the given theme -"Vigilant India, Prosperous India".

To align all your Company Units for conducting the Vigilance Awareness Week-2020 (VAW 2020) activities with strict adherence to extant COVID - 19 prevention guidelines, strict compliance to the economy measures issued by the Ministry of Finance vide the Department of Expenditure OM No. 7(2)E. Coord/2020 dated 4.9.2020 and following the code of conduct guidelines where elections were scheduled, review meetings were conducted through video conferencing with all sites on 5.10.2020 and 22.10.2020. The meetings were chaired by CVO of your Company and attended by Regional Heads of HR, Coordinators as identified for VAW 2020 and Vigilance executives from all locations of your Company.

Following activities were undertaken to observe VAW 2020: -

I. Administering Integrity Pledge

Vigilance Awareness Week 2020 formally commenced on 27.10.2020 with administration of Integrity-Pledge. At the Corporate Office, the pledge was administered by CMD of your Company. At Regional Head Quarters concerned Regional Executive Director administered the pledge and at the power plants, the pledge was administered by respective Business Unit Head. This

was done mostly on the digital platform of MS Teams and through Video Conferencing.

II. Publicity

Banners were displayed at strategic public locations inside plant premises and prominent locations in townships on "Vigilant India, Prosperous India". E-banners were widely used in local digital displays/ notice boards and online trainings and activities on the VAW theme. As a part of public outreach and to disseminate awareness messages in surrounding areas pamphlets were distributed and hoardings were put up on the VAW theme. Awareness messages and wide publicity for general public was done through publishing.

III. Competitions/Activities involving employees and stakeholders

Various activities were scheduled during this week for employees, their spouses, children, other residents in townships and contract labours to generate vigilance awareness among wide section of the society and further, in city based locations nearby colleges were involved in some of the thought provoking activities whereby their suggestions for Vigilant India were sought for.

IV. Trainings /Workshops

As a part of public outreach and interact with the young citizens of the country a talk on "Vigilance Awareness for nation building" was delivered by CVO of your Company for students of Dayal Singh Evening College, Delhi.

Three online Preventive vigilance courses were conducted by internal faculties from Vigilance department during this period whereby 504 employees joined the same from different location of your Company. In various power plant sites, lectures were organized where faculty from local district administration, CBI and retired senior executives from Vigilance function had delivered talks on role of an organization in curbing corruption, cybercrimes etc.

Gender sensitization workshops were held in different units. During this occasion Online suggestion was sought on gender equality by your Company and the same is under compilation.

V. Suggestions/Feedbacks/Grievance redressal of Stakeholders

Online Vendor meets were organized by Contracts and Materials department in the Shared Service Centre (SSC) groups in different regions. The participants were administered Integrity pledge. Vendors were apprised about the new initiatives taken by your Company, Government e-procurement policy, MSME, online payment status system, vendor code requirement etc.

22.6 System improvement measures undertaken during 2020-21

1) Modification of HRA Policy

On the basis of suggestion for system improvement from Vigilance Dept., your Company's House Rent Allowance was comprehensively reviewed and revised HRA Rules have been introduced on 17.9.2020.

2) Revised Policy and Procedure of Withholding and Banning of Business Dealings

Policy and Procedures for Withholding and Banning of Business Dealings have been revised on 29.8.2020 where pending investigation, provision to suspend business dealings with agency which is alleged to have committed fraud has been introduced, The revised policy and procedure of withholding and banning of business has been made applicable on your Company as well as its Joint Ventures & Subsidiaries Company.

3) Digitization of Complaint Handling system

Complaint handling system has been digitized reducing the process cycle time significantly as compared to physical file movement. Records are instantly available in system. Various reports can be automatically generated by the system thereby allowing more time for value addition activities by your Company.

4) Preventive Vigilance Modules in Mid-career trainings

On the advice of the Central Vigilance Commission, 2 days' module on preventive vigilance has been made mandatory in all planned intervention training programs for executives at different grades.

23. REDRESSAL OF PUBLIC GRIEVANCES

Your Company is committed for resolution of public grievance in efficient and time bound manner. General Manager (HR) has been designated as Director (Grievance) to facilitate earliest resolution of public grievances received from President Secretariat, Prime Minister's Office, Ministry of Power etc.

In order to facilitate resolution of grievances in transparent and time bound manner, Department of Administrative Reforms & Public Grievances, Department of Personnel & Training, Government of India (GoI) has initiated web based monitoring system at www.pgportal.gov.in.

As per directions of GoI, public grievances are to be resolved within two months' time. If it is not possible to resolve the same within two months period, an interim reply is to be given. Your Company is making all efforts to resolve grievances in above time frame.

24. RIGHT TO INFORMATION (RTI)

Your Company has implemented Right to Information Act, 2005 in order to provide information to citizens and to maintain accountability and transparency. Your Company has put RTI manual on its website, i.e www.ntpc.co.in for access to all citizens of India and has designated a Central Public Information Officer (CPIO), an Appellate Authority

and APIOs at all sites and offices of your Company.

During 2020-21, there were 1,712 applications (including 179 pending applications from FY 2019-20), out of which 1,666 were replied and 46 are pending to be replied/ resolved, under the RTI Act, 2005. Further, under the section 4(1)(b) of the RTI Act, your Company also got audited its voluntary disclosures by Indian Institute of Public Authority (IIPA), New Delhi.

25. Using Information and Communication Technology for Productivity Enhancement

The Information Technology in your Company is not only a service provider but also being used as a key business driver. Since 2008, your Company has implemented Enterprise Resource Planning (ERP) application to integrate all its business functions. PI data system has been implemented to capture, display and analyze the plant performance parameters on real time basis which is helping the operation and maintenance of your Company power plants. Non-ERP web-based applications have been developed in balance areas such as Engineering Drawings approval, Quality Control Management, Hospital Management, Contract Labour Management, Transit Camp Management, RTI, Security Control, Safety, Ash utilization etc.

As a commitment towards environment, your Company has re-engineered and redesigned the business processes to paperless mode. The digitization initiative in the form of Project PRADIP resulted in implementation e-Office, digitization of documents and paperless processes for different functions. This has not only saved tons of paper but also resulted in faster decision making, transparency and improved efficiency for your Company. This was the mainstay of your Company when lockdown was imposed.

Your Company was quick to switch to IT enabled virtual office when normal working was affected during the pandemic induced lockdown. PRADIP, Virtual office and internet access to major applications through VPN helped your Company perform as usual during the lockdown. This in a way enhanced efficiency and speed. This practice continues now after the lockdown also.

Your Company's plants and offices across India, are connected to Corporate Office and main Data-Centre (DC) through high-speed MPLS links at each site to facilitate seamless communication. The DC and DR (Disaster Recovery) site is connected with high bandwidth MPLS links for data replication. Both the Data centres at Noida & Hyderabad have been certified with ISO: 27001 certification during this period. The progress of ongoing projects and issues of the running power stations are discussed regularly over high definition Video Conferencing system at Project Monitoring Centre of Corporate Office. Desktop/laptop to desktop/laptop VC facility is now available to all executives in your company as part of virtual office and it is widely used.

To further leverage IT in your Company, an IT Strategy has been finalized. The IT Strategy aims to achieve 100% Paperless Office, Data Analytics for decision making, induction of new technology such as IIOT, AI, Machine learning etc. over next 2 years. A number of Pilots and proof of concepts have been completed in these areas.

Some of the highlights of the progress in IT/ERP area during the year 2020-21 are as follows:

- **Digitization** – All approved processes under E-Office was completed. Processes were redesigned for working in paperless mode and to enable shared service center model. Digital invoicing was implemented and all vendors were onboarded on PRADIP to submit their digital invoices and to track them. Also, management dashboard made ready to track payment status of your Company.
- **ERP** – A number of new modules were introduced in ERP as part of process improvements. ERP was implemented in two JV companies, i.e. APCPL and NTECL during this year.
- **Mail and Messaging Services** – The mail and messaging services were upgraded and migrated to Cloud as part of virtual office.
- **Security** – No major security breach was observed during the year 2020-21. A (24x7) Security Operation Centre (SOC) is in operation where round the clock monitoring of all external and internal data traffic is being done with latest tools through SOC and latest threat management tools are being applied to prevent any cyber-attack or data theft. The entire SOC hardware was refreshed during the year. Timely communication being sent to all users based on threat perception. Your Company's data centers at Noida and Hyderabad are ISO 27001 certified for security compliance.
- **New Technology** – Robotic Process Automation has been implemented in the field of commercial monthly billing.
  - A virtual team consisting of 21 executives has been formed and extensively trained through IIT Kanpur on AI/ML. The teams are now working on specific projects as identified by the users from different sites.
  - Centralised dashboard for RE asset monitoring and a water dashboard to monitor and optimize water consumption were implemented.
- **IT Consultancy assignments towards power sector improvement** – Implemented the following:
  - SAP-PM module in SCCL
  - PI System in JV companies of your Company
  - Advising NEEPCO in their ERP implementation
  - DREAMS 2.0 in PGCIL
  - TPIEA for NR discoms
  - All together consultancy works for ₹ 6.5 Crore were carried out.

- **Work From Home (WFH)** enablement due to COVID-19. During the lockdown, there was no disruption of any work as enablement through VPN access to critical applications to all the required employees and a VC facility through MS teams were provided.

26. GROUP COMPANIES: SUBSIDIARIES AND JOINT VENTURES

Your Company has 12 number of subsidiary companies and 17 nos. Joint Venture companies as on 31st March 2021 for undertaking specific business activities.

Your Company has decided to exit from International Coal Ventures Private Limited, in view of lack of suitable commercially viable opportunities for thermal coal and in respect of BF-NTPC Energy Systems Limited, after getting approval from Ministry of Power, the process of Winding Up had started and Liquidator was appointed for voluntary Liquidation of this JV Company.

A statement containing the salient feature of the financial statement of your Company's Subsidiaries, Associate Companies and Joint Ventures as per first proviso of section 129(3) of the Companies Act, 2013 is included in the consolidated financial statements.

27. INFORMATION PURSUANT TO STATUTORY AND OTHER REQUIREMENTS

Information required to be furnished as per the Companies Act, 2013 and as per SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015 and any amendments thereto are as under:

27.1 Statutory Auditors

The Statutory Auditors of your Company are appointed by the Comptroller & Auditor General of India. Joint Statutory Auditors for the financial year 2020-21 were (i) M/s S K Mehta & Co., Chartered Accountants, New Delhi (ii) M/s S N Dhawan & Co LLP, Chartered Accountants, New Delhi, (iii) M/s Varma & Varma, Chartered Accountants, Hyderabad, (iv) M/s Parakh & Co., Chartered Accountants, Jaipur, (v) M/s C K Prusty & Associates, Chartered Accountants, Bhubaneshwar, (vi) M/s B C Jain & Co., Chartered Accountants, Kanpur and (vii) M/s V K Jindal & Co., Chartered Accountants, Ranchi.

The appointment of the Statutory Auditors for the financial year 2021-22 is yet to be made by the Comptroller & Auditor General of India.

27.2 Management comments on Statutory Auditors' Report

The Statutory Auditors of your Company have given an un-qualified report on the accounts of the Company for the financial year 2020-21. However, they have drawn attention under 'Emphasis of Matter' to the following notes:

(i) Note No. 34(a) regarding billing and accounting of sales on provisional basis.

(ii) Note No. 46(a) in respect of one of the projects of Company consisting of three units of 800 MW each, where the order of National Green Tribunal (NGT) on the matter of environmental clearance for the project has been stayed by the Hon'ble Supreme Court of India, the matter is sub-judice and the units have since been declared commercial.

(iii) Note no. 46(b) in respect of one of the projects under construction consisting of two units of 800 MW each, where the National Green Tribunal (NGT) has passed an order to keep the environment clearance granted to the project in abeyance, and directed to carry out additional studies relating to environmental impact assessment, and the Company has filed an appeal before Hon'ble Supreme Court of India.

(iv) Note No. 57(iii)(b) with respect to appeal filed by the company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the Company and the related provision made/disclosure of contingent liability as mentioned in the said note.

The issues have been adequately explained in the respective Notes referred to by the Auditors.

27.3 Review of accounts by Comptroller & Auditor General of India (C&AG)

The Comptroller & Auditor General of India, through letter dated 13.8.2021, has given 'NIL' Comments on the Standalone Financial Statements of your Company for the year ended 31st March 2021 after conducting supplementary audit under Section 143 (6)(a) of the Companies Act, 2013.

The Comptroller & Auditor General of India, through letter dated 13.8.2021, has also given 'NIL' Comments on the Consolidated Financial Statements of your Company for the year ended 31 March 2021 after conducting supplementary audit under Section 143 (6)(a) read with Section 129 (4) of the Companies Act, 2013.

As advised by the Office of the Comptroller & Auditor General of India (C&AG), the comments of C&AG for both the stand-alone and consolidated financial statements of your Company for the year ended 31 March 2021 are being placed with the report of Statutory Auditors of your Company elsewhere in this Annual Report.

27.4 COST AUDIT

As prescribed under the Companies (Cost Records and Audit) Rules, 2014, the Cost Accounting records are being maintained by all projects/stations and Coal mines of your Company.

The firms of Cost Accountants appointed under Section 148(3) of the Companies Act, 2013 for the financial year 2020-21 were (i) M/s Chandra Wadhwa & Co., Cost Accountants, Delhi, (ii) M/s S. C. Mohanty & Associates, Cost Accountants, Bhubaneshwar, (iii) Dhananjay V. Joshi & Associates, Cost Accountants, Pune, (iv) M/s DGM & Associates, Cost Accountants, Kolkata, (v) M/s Tanmaya S. Pradhan & Co., Cost Accountants, Odisha, (vi) M/s K. L. Jaisingh & Co., Cost Accountants, U.P., (vii) M/s Niran & Co., Cost Accountants, Bhubaneshwar (viii) M/s A.

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C. Dutta & Co., Cost Accountants, Kolkata (ix) M/s R.M. Bansal & Co., Cost Accountants, Kanpur and (x) M/s ABK & Associates, Mumbai.

The due date for filing consolidated Cost Audit Report in XBRL format for the financial year ended March 31, 2020 was upto December 31, 2020 and the consolidated Cost Audit Report for your Company was filed with the Central Government on November 18, 2020.

The Cost Audit Report for the financial year ended March 31, 2021 shall be filed within the prescribed time period under the Companies (Cost Records & Audit) Rules, 2014.

27.5 Exchange Risk Management

Your Company is exposed to foreign exchange risk in respect of contracts denominated in foreign currency for purchase of plant and machinery, spares and fuel for its projects / stations and foreign currency loans.

In term of its Exchange Risk Management Policy, during financial year 2020-21, your Company has entered into derivative contracts amounting to EUR 7.20 million in respect of foreign currency loans exposure.

27.6 Policy for Selection and appointment of Directors' and their remuneration

Your Company being a Government Company, the provisions of Section 134(3)(e) of the Companies Act, 2013 do not apply in view of the Gazette notification dated 5.6.2015 issued by Government of India, Ministry of Corporate Affairs.

27.7 Performance Evaluation of the Directors and the Board

Ministry of Corporate Affairs (MCA), through General Circular dated 5th June, 2015, has exempted Government Companies from the provisions of Section 178(2) of the Companies Act, 2013 which requires of performance evaluation of every director by the Nomination & Remuneration Committee. The aforesaid circular of MCA further exempted Govt. Companies from provisions of Section 134(3)(p) of the Companies Act, 2013 which requires mentioning the manner of formal evaluation of its own performance by the Board and that of its Committees and Individual Director in Board's Report, if directors are evaluated by the Ministry or Department of the Central Government which is administratively in charge of the Company, or, as the case may be, the State Government as per its own evaluation methodology.

Further, as per MCA Notification dated 5.7.2017, in case the matters of performance evaluation are specified by the concerned Ministries or Departments of the Central Government or as the case may be, the State Governments and such requirements are complied with by the Government companies, provisions of Schedule IV w.r.t. performance evaluation of Directors are exempted for the Government Companies.

In this regard, Deptt. of Public Enterprises (DPE) has already laid down a mechanism for performance appraisal of all functional directors. DPE has also initiated evaluation of Independent Directors.

Your Company enters into a Memorandum of Understanding (MOU) with Government of India each year, demarcating key performance parameters for the company. The performance of the Company are evaluated by the Department of Public Enterprises vis-à-vis MOU entered into with the Government of India, MOP.

In terms of Regulation 25 of SEBI LODR, 2015, the performance of the Board as a whole and non-independent directors including Chairman & Managing Director were evaluated by the Independent Directors in a separate Meeting held on 23rd March 2021.

27.8 Declaration by Independent Directors

During the year, all the Independent Directors have met the requirements specified under Section 149(6) of the Companies Act, 2013 for holding the position of 'Independent Director' and necessary declaration from each Independent Director under Section 149 (7) of the Companies Act, 2013 was received. Also declaration under Regulation 25 of SEBI (LODR) Regulations, 2015 and Rule 6 of the Companies (Appointment and Qualification of Directors) Rules, 2014 are also obtained from all the Independent Director of your Company.

27.9 Management Discussion and Analysis

In addition to the issues stated in the Directors' Report, some issues have been brought out in report on Management Discussion and Analysis placed at Annexure-I and forms part of this Director Report, as per the terms of regulations 34(2)(e) of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.

27.10 Corporate Governance

A detailed report on Corporate Governance as stipulated under Regulation 34(3) of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 is placed at Annexure-II and forms part of the Directors' Report.

27.11 Business Responsibility Report

The Business Responsibility Report, as stipulated under Regulation 34(2) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, is given in Annexure-X and forms part of this Directors' Report.

27.12 Investor Education and Protection Fund (IEPF)

Details of transfer of unclaimed dividends and eligible shares to IEPF have been placed in the Corporate Governance Report at Annexure-II, which forms part of the Directors' Report.

27.13 Secretarial Audit

The Board had appointed M/s Chandrasekaran Associates, Company Secretaries, to conduct Secretarial Audit for the financial year 2020-21. The Secretarial Audit Report for the financial year ended March 31, 2021 is annexed here with marked as Annexure XI to this Directors' Report.

The Managements' Comments on Secretarial Audit Report are as under:

Observations	Management's Comments
Compliance of Regulation 17 of Securities and Exchange Board of India (Listing Obligations & Disclosure Requirements) Regulations, 2015 with regard to the requirements of having at least one half of the Board of Directors comprising of Independent Director including one Independent Woman Director on the Board of the Company.	During the financial year 2020-21, there is no Woman Director & Independent Woman Director as required under SEBI LODR. Further Independent Director was also less than the required limit. As per the provisions of the Articles of Association of the Company, the power to appoint Directors vests with the President of India. The Company had requested Ministry of Power, Government of India, being administrative ministry for appointment of Independent Director and Woman Independent Director from time to time for compliance of the above regulations.
Compliance of Regulation 17(10) of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, the Company has not carried out the performance evaluation of the Directors.	Refer Para 26.6 & 26.7
Compliance of Regulation 19(4) read with Schedule II Part D (A) of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, the required policies/criteria were not formulated	As the Government of India (GOI) is making appointment of Directors, evaluation of Directors are done by the GOI.

27.14 Particulars of contracts or arrangements with related parties

During the period under review, your Company had not entered into any material transaction with any of its related parties. The Company's major related party transactions are generally with its subsidiaries and associates. All related party transactions were in the ordinary course of business and were negotiated on an arm's length basis except with Utility Powertech Limited, which are covered under the disclosure of Related Party Transactions in Form AOC-2 (Annexure- IX) as required under Section 134(3) (h) of the Companies Act, 2013. They were intended to further enhance your Company's interests.

Web-links for Policy on Materiality of Related Party Transactions and also on Dealing with Related Party Transactions have been provided in the Report on Corporate Governance, which also form part of the Annual Report.

27.15 Significant and material orders passed by the regulators or courts or tribunals impacting the going concern status and company's operations in future.

No significant and material orders were passed by any regulator or court or tribunal impacting the going concern status and company's operations during the FY 2020-21.

27.16 Adequacy of internal financial controls with reference to the financial reporting: Your Company has in place adequate internal financial controls with reference to financial reporting. During the year, such controls were regularly tested and no reportable material weakness in the design, implementation and operation effectiveness was observed.

27.17 Loans and Investments

Details of Investments covered under the provisions of Section 186 of the Companies Act, 2013 forms part of financial statement, attached as a separate section in the Annual Report for FY 2020-21.

The loan granted by your Company to its Subsidiaries Company namely NTPC Renewables Energy Limited and NTPC Electric Supply Company Limited of ₹ 15 crore and ₹ 1.50 crore for meeting its immediate fund requirement covered under Section 185 and 186 of the Companies Act, 2013.

Details of Loans granted to subsidiaries and Joint venture companies are disclosed at Note 53 to the stand-alone financial statements for the year 2020-21.

27.18 Prevention, Prohibition and Redressal of Sexual Harassment of Women at Workplace

Your Company has in place a policy on Prevention, Prohibition & Redressal of Sexual Harassment of Women at Workplace in line with the requirements of the Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013.

Internal Committees (ICs) have been constituted at all Projects/Locations of your Company to redress complaints received regarding Sexual Harassment. All female employees (regular, contractual, temporary, trainees) are covered under the policy. Every three years, the constitution of these committees is changed and new members are nominated.

During the year 2020-21, two cases were reported to different ICCs across your Company, both were resolved and currently no case is pending.

27.19 Procurement from Micro and Small Enterprises (MSEs)

The Government of India has notified a Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012. The total procurement* made from MSEs during FY 2020-21 was ₹ 3,538.43 crore which was 50.73% of the total procurement of ₹ 6,975.38 crore against the minimum threshold of 25% as stipulated by the Public Procurement Policy for Micro and Small Enterprises (MSEs) Order.

The total procurement percentage made from MSEs owned by SC/ST and Women entrepreneurs during the year 2020-21 was 0.22% and 0.39% respectively.

*It excludes Primary fuel, Secondary fuel, steel, cement, project procurement including Renovation & Modernization and procurement from Original Equipment Manufacturer (OEM)/ Original Equipment Supplier (OES)/ Proprietary Article Certificate (PAC).

In FY 2020-21, your Company has recorded highest ever procurement from MSEs in terms of absolute value and procurement percentage in a financial year. Further, in FY 2020-21, your Company has recorded highest procurement percentage from MSEs among all Maharatna CPSUs.

Your Company has organised 20 Vendor Development Programs (VDPs), including 10 Special VDPs for MSEs owned by SC/ST and Women Entrepreneurs across the Company in FY 2020-21.

Your Company has on-boarded all the three Trade Receivables Discounting System (TReDS) platforms approved by Reserve Bank of India. Invoices worth ₹ 4.43 crore are discounted through the TReDS platform.

Annual procurement plan for 2020-21 from MSEs is uploaded on your Company website i.e. www.ntpc.co.in.

27.20 Particulars of Employees

As per provisions of Section 197(12) of the Companies Act, 2013 read with Rule 5 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014, every listed company is required to disclose the ratio of the remuneration of each director to the median employee's remuneration and details of employees receiving remuneration exceeding limits as prescribed from time to time in the Directors' Report.

However, as per notification dated 5th June, 2015 issued by the Ministry of Corporate Affairs, Government Companies are exempted from complying with provisions of Section 197 of the Companies Act, 2013. Therefore, such particulars have not been included and do not form part of this Directors' Report.

27.21 Extract of Annual Return:

Extract of Annual Return (MGT-9) pursuant to Section 92 (3) of the Companies Act, 2013 and rule 12(1) of the Company (Management & Administration) Rules, 2014 is annexed herewith as Annexure - VI to this Director Report. The Extract of Annual Return for the Financial Year ended 31st March 2021 is also available on your Company's website i.e www.ntpc.co.in.

27.22 Credit Rating

The Company's financial discipline and prudence is reflected in the strong credit ratings ascribed by rating agencies. The details of credit ratings are disclosed in the Management Discussion and Analysis Report, which forms part of the Annual Report.

27.23 Reporting Of Frauds By Auditors

During the year under review, neither the statutory auditors nor the secretarial auditor has reported to the audit committee, under Section 143(12) of the Companies Act, 2013, any instances of fraud committed against the Company by its officers or employees, the details of which would need to be mentioned in the Director's report.

27.24 Other Information

Information on Number of Meetings of the Board held during the year, composition of committees of the Board and their meetings held during the year, a chart or a matrix setting out the skills/expertise/competence of the board of directors, Total fees for all services paid by the listed entity and its subsidiaries, on a consolidated basis, to the statutory auditor and all entities in the network firm/ network entity of which the statutory auditor is a part, Details of utilization of funds raised through preferential allotment or qualified institutions placement as specified under Regulation 32(7A), if any , establishment of vigil mechanism/whistle blower policy and web-links for familiarization/training policy of directors, Policy on Materiality of Related Party Transactions and also on Dealing with Related Party Transactions and Policy for determining 'Material' Subsidiaries have been provided in the Report on Corporate Governance, which forms part of the Directors Report at Annexure-II.

27.25 Para on development of risk management policy including therein the elements of risks are given elsewhere in the Annual Report.

27.26 The Company has followed the applicable Secretarial Standards, i.e. SS-1 and SS-2, relating to 'Meetings of the Board of Directors' and 'General Meetings' respectively.

27.27 No disclosure or reporting is required in respect of the following items as there were no transactions on these items during the year under review:

1. Issue of equity shares with differential rights as to dividend, voting or otherwise.
2. Issue of shares (including sweat equity shares) to employees of the Company under any scheme.

The particulars of annexure forming part of this report are as under:

Particulars	Annexure
Management Discussion & Analysis	I
Report on Corporate Governance	II
Information on conservation of energy, technology absorption and foreign exchange earnings and outgo	III
Statistical information on persons belonging to Scheduled Caste / Scheduled Tribe categories	IV
Information on Differently Abled persons	V
Extract of Annual Return	VI
Annual Report on CSR Activities	VII
Project Wise Ash produced and utilized	VIII
Disclosure of Related Party Transactions in Form AOC-2	IX
Business Responsibility Report for the year 2020-21	X
Secretarial Audit Report in Form MR-3	XI

28. INTEGRATED REPORT

Your Company being one of the top companies in the country in terms of market capitalization, has voluntarily provided Integrated Report, which encompasses both financial and non-financial information to enable the Members to take well informed decisions and have a better understanding of the Company's long term perspective. The Report also touches upon aspects such as organization's strategy, governance framework, performance and prospects of value creation based on the six forms of capital viz. financial capital, manufactured capital, intellectual capital, human capital, social and relationship capital and natural capital.

29. BOARD OF DIRECTORS & KEY MANAGERIAL PERSONNEL (KMP)

Shri Dillip Kumar Patel had been appointed as Director (HR) w.e.f. 1.4.2020.

Shri Ramesh Babu V. had been appointed as Director (Operations) w.e.f. 1.5.2020.

Shri Chandan Kumar Mondol had been appointed as Director (Commercial) w.e.f. 1.8.2020.

Shri Ujjwal Kanti Bhattacharya had been appointed as Director (Projects) w.e.f. 28.8.2020.

Shri Prakash Tiwari ceased to be Director (Operations) of the Company w.e.f. 30.4.2020 on attaining the age of his superannuation.

Shri Anand Kumar Gupta ceased to be Director (Commercial) of the Company w.e.f. 31.7.2020 on attaining the age of his superannuation.

Shri P K Deb, Shri M. P. Singh, Shri Vinod Kumar, Shri Subhash Joshi and Shri Shashi Shekhar ceased to be Independent Director w.e.f. 7.9.2020 on completion of three years' tenure.

Dr. K.P.K. Pillay and Dr. Bhim Singh ceased to be Independent Director w.e.f. 16.7.2021 on completion of three years' tenure.

The Board wishes to place on record its deep appreciation for the valuable services rendered by Shri Prakash Tiwari, Shri Anand Kumar Gupta, Shri P K Deb, Shri M P Singh, Shri Vinod Kumar, Shri Subhash Joshi, Shri Shashi Shekhar, Dr. K.P.K. Pillay and Dr. Bhim Singh during their association with the Company.

The Board welcomes Shri Dillip Kumar Patel, Shri Ramesh Babu V., Shri Chandan Kumar Mondol and Shri Ujjwal Kanti Bhattacharya on the Board of your Company.

30. MATERIAL CHANGES AND COMMITMENTS AFFECTING FINANCIAL POSITION BETWEEN THE END OF THE FINANCIAL YEAR AND DATE OF THE REPORT

There have been no material changes and commitments, which affect the financial position of the Company, that have occurred between the end of the financial year to which the financial statements relate and the date of this report.

31. DIRECTORS' RESPONSIBILITY STATEMENT

As required under Section 134(3)(c) & 134(5) of the Companies Act, 2013, your Directors state that:

1. in the preparation of the annual accounts for the year ended March 31, 2021, the applicable accounting standards had been followed along with proper explanation relating to material departures;
2. the Directors had selected such accounting policies and applied them consistently and made judgments and estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the company as at March 31, 2021 and of the profit of the company for the year ended on that date;
3. the Directors had taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of the Companies Act, 2013 for safeguarding the assets of the company and for preventing and detecting fraud and other irregularities;
4. the Directors had prepared the Annual Accounts on a going concern basis;
5. the Directors had laid down internal financial controls to be followed by the company and that such internal financial controls are adequate and were operating effectively; and
6. the Directors had devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems were adequate and operating effectively.

32. ACKNOWLEDGEMENT

The Directors of your Company acknowledge with deep sense of appreciation, the co-operation received from the Government of India, particularly the Prime Minister's Office, Ministry of Power, Ministry of New & Renewable Energy, Ministry of Finance, Ministry of Environment, Forests & Climate Change, Ministry of Coal, Ministry of Petroleum & Natural Gas, Ministry of Railways, Ministry of Corporate Affairs, Department of Public Enterprises, Department of Investment and Public Asset Management, Central Electricity Authority, Central Electricity Regulatory Commission, Comptroller & Auditor General of India, Appellate Tribunal for Electricity, State Governments, Regional Power Committees, State Utilities, Stock exchanges and Office of the Attorney General of India.

The Directors of your Company also convey their gratitude to the shareholders, various international and Indian Banks and Financial Institutions for the confidence reposed by them in the Company.

The Board also appreciates the contribution of contractors, vendors and consultants in the implementation of various projects of the Company.

We also acknowledge the constructive suggestions received from the Office of Comptroller & Auditor General of India, Statutory Auditors and Cost Auditors of your Company.

We wish to place on record our appreciation for the untiring efforts and contributions made by the NTPC's family at all levels to ensure that the company continues to grow and excel.

The Directors of your Company regret the loss of life due to COVID-19 pandemic and are deeply grateful to and have immense respect for every person who risked his life and safety to fight this pandemic.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi

Date : 26th August, 2021

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NTPC


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MANAGEMENT DISCUSSION AND ANALYSIS

ECONOMIC AND SECTOR OUTLOOK

According to the provisional estimates of Annual National Income for the financial year 2020-21 and quarterly estimates of Gross Domestic Product for the Fourth Quarter (Q4) of the financial year 2020-21, released by National Statistical Office of Ministry of Statistics & Programme Implementation (MOSPI) on 31 May 2021, the growth rate in Gross Domestic Product (GDP) at constant (2011-12) prices for the financial year 2020-21 is estimated at (-) 7.3%, as against 4% in the previous year. The contraction in the economy is primarily due to the prevailing pandemic and this being a global phenomenon; the contraction is comparable to that of other developing economies.

As per World Economic Outlook Update, released by IMF in January 2021, the growth projection for India for the year 2021 is highest (11.5%) as against that for the other BRICS countries, i.e., Brazil (3.6%), Russia (3.0%), China (8.3%) & South Africa (2.8%). As per Monetary Policy Report of RBI published in April 2021, the real GDP growth for the financial year 2021-22 is estimated to be 10.50%.

Quarterly growth rate analysis shows that during Q1 (April-June) of the financial year 2020-21, GDP contracted to the extent of (-) 23.92%, but it started improving in the subsequent quarters. Growth rate was (-) 7.54% during Q2, 0.4% during Q3 and 1.6% during Q4 of the financial year 2020-21. The growth seems to be in line with growth projections made by IMF and RBI for the coming year.

For the electricity sector, Index of Industrial Production (IIP) has declined by 17.64% (average) from April to August with respect to previous year; however, it has grown by 11% (average) during the balance period of the financial year 2020-21. On annual basis, electricity sector has contracted 0.5% while the mining and manufacturing sectors have declined by (-) 7.8% & (-) 9.8% respectively during the financial year 2020-21. With economy projected to look up, IIP is very much likely to turn around.

Further, the outlook of the sector seems positive as represented through improvement in various global rankings. India's overall rank in World Bank's "Ease of Doing Business" is 63rd in 2020, improving from a rank of 142nd in 2015. Indian Power Sector has also improved its ranking to 22nd in 2020 from earlier ranking of 137th in 2015 in "Getting Electricity", which is one of the ten parameters of "Ease of Doing Business" ranking.

During the financial year 2020-21, the major reforms in the electricity sector are:

- **Revision of National Electricity Policy 2021,** with a focus on improving DISCOMs' financial viability, promotion of clean and sustainable power and development of an efficient electricity market. Emphasis has also been put on 'Make in India' and 'ATMANIRBHAR Bharat'.
- **National Electricity Plan 2022,** for integrated planning of generation capacity, transmission, fuel management, human resources and fund requirements with detailed plan until 2027 and perspective until 2032.
- **20th Electric Power Survey (EPS),** for projection of electricity demand from the financial year 2021-22 to 2031-32 (year-wise) and for terminal years 2036-37 and 2041-42.
- **Amendment of Electricity Act,** with proposed elements such as formulation of National Renewable Energy Policy, setting up of Electricity Contract Enforcement Authority, Tariff determination with direct benefit transfer (DBT) of subsidy by State Governments.
- Implementation of **Payment Security Mechanism** through LC and Smart Metering.
- **Electricity (Late Payment Surcharge) rules 2021,** to support the DISCOMs financially and for timely payment to Generators.
- **Electricity (Right of Consumers) Rules 2020,** for integration of the distributed renewable generation.

These reforms are likely to help the sector's growth in terms of renewable capacity, increase in investment in the sector, improvement in the health of DISCOMs, reduction in pending receivables of the generating companies etc.

Since March 2020, COVID 19 has affected the sector in terms of reduction in electricity demand due to countrywide lockdown and slow-down of industrial activities. However, during the 3rd quarter of the financial year 2020-21, the growth in peak demand turned positive with an increase of 4.4% on YoY basis and electricity demand increased by 8.4% to reach 317 BUs as compared to 293 BUs for the same period of the previous year.

INDUSTRY STRUCTURE AND DEVELOPMENTS

Power sector is a key enabler for India's economic growth. The sector with its three pillars: generation, transmission and distribution, is crucial to India's infrastructure and economic development. The global stature of Indian Power Sector is depicted well by its positioning in terms of generation capacity. India is ranked 3rd in the world in terms of electricity generation, 4th in installed renewable energy capacity and 6th in installed hydro capacity, as reported by international agencies like IEA, Statista, IRENA etc. The achievements and various issues/ challenges faced by the Power Sector and key initiatives undertaken by Ministry of Power are discussed in the ensuing paragraphs.

Snapshot 2020-21

- Gross annual generation of the country (including import from Bhutan and including renewables) decreased

marginally from 1,389 BUs in the previous year to 1,382 BUs in the financial year 2020-21.

- Generation from renewable sources increased from 138 BUs to 147 BUs, while generation from conventional sources decreased from 1,251 BUs to 1,235 BUs.
- Net generation capacity of 4,638 MW (excluding renewables) was added during the financial year 2020-21.
- With net addition of 7,407 MW, renewable energy capacity has reached 94,434 MW at the end of the financial year 2020-21, an increase of 8.51% over the previous year.
- 16,750 Ckms of transmission lines added during the year as compared to 11,664 Ckms in the previous year.
- 56,575 MVA of transformation capacity added during the year as against 68,230 MVA in the previous year.
- PLF of coal-based stations decreased to 54.56% in the financial year 2020-21 from 55.89% in the previous year.
- During the financial year 2020-21, energy deficit as well as peak demand deficit have reduced marginally from 0.5% to 0.4% and 0.7% to 0.4% respectively, on YoY basis.

Existing Installed Capacity

The total installed capacity in the country as on 31 March 2021 was more than 382 GW (including renewables) with Private Sector contributing about 47% of the installed capacity followed by State Sector with 27% share and Central Sector with 26% share.

Sector	Total Capacity (MW)	% share
Central	97,507	26
State	1,03,869	27
Private	1,80,775	47
Total	**3,82,151**	**100**

(Source: Central Electricity Authority)

Mode-wise installed capacity in the country as on 31 March 2021 is as under:

Mode	Total Capacity (MW)	% share
Thermal	2,34,728	61
Nuclear	6,780	2
Hydro	46,209	12
RES (Renewables)	94,434	25
Total	**3,82,151**	**100**

(Source: Central Electricity Authority)

Capacity Utilization and Generation

Sector wise PLF in % (Coal based stations)

Sector	2020-21	2019-20
Central	63.72	63.84
State	46.71	50.84
Private	57.18	62.49
Private IPP	54.23	54.01
All India	**54.56**	**55.89**

(Source: Central Electricity Authority)

Generation

Sector-wise and fuel-wise break-up of conventional generation (in BUs) for the financial year 2020-21 is detailed as under:

Sector	Thermal	Hydro	Nuclear	Bhutan Import	Total
Central	363	61	43	--	**467**
State	291	76	--	--	**367**
Private	379	13	--	--	**392**
Bhutan Import	--	--	--	9	**9**
Total	**1033**	**150**	**43**	**9**	**1235**

(Source: Central Electricity Authority)

Sector-wise share in Installed Capacity (conventional) vis-a-vis share in Generation (conventional):

Sector	Share in installed capacity (%)	Share in generation (%)
Central	26	38
State	27	30
Private	47	32
Total	**100**	**100**

(Source: Central Electricity Authority)

Central sector utilities have performed better as compared to State and Private sector utilities in terms of share in generation vis-a-vis share in installed capacity.

Consumption

The per capita consumption of power in India has reached 1,208 units in the financial year 2019-20 (provisional, at an average growth of 2.5% over the last 3 years). It is around 40% of the global average (3,049 units for 2019), providing enough room for growth in India.

In this context, Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) was launched with an objective to provide

energy access to all by providing last mile connectivity. Under this scheme, about 99.99% households have been electrified. Out of remaining 17,337 un-electrified & partially electrified villages, infrastructure work has been completed in 16,752 villages (97%) while physical work has been completed in 10 out of 15 districts.

The total electricity consumption in India decreased to 1,271 BUs in the financial year 2020-21 from 1,284 BUs in the previous year, mainly due to slowdown in economy due to the pandemic.

Major end users of power are broadly classified into six categories: Agricultural, Commercial, Domestic, Industrial, Traction & Railways and Others. Their shares of electricity consumption, during 2019-20, were approximately 17.7%, 8.1%, 24%, 42.7%, 1.5% and 6%, respectively. During the financial year 2020-21, because of lockdown affecting the economic activities, the consumption share of different sectors have gone through significant variations. For example, share of domestic consumption has increased significantly to about 36% whereas share of industry has reduced to about 32%.

Transmission

The total inter-regional transmission capacity of country has increased from 75,050 MW at the end of 12th plan to 105,050 MW as on 31 March 2021, with an average growth rate of 10% in last 4 years. During the financial year 2020-21, 3,000 MW inter-regional transmission capacity was added. This augmentation of the national grid is essential for supporting higher injection of renewables into the grid for transfer of power from RE rich states to other states.

Distribution

Distribution is the key link in realizing the Government of India's vision of supplying reliable 24x7 Power for All. For this, the financial health of distribution companies is of prime importance so that they are able to discharge their functions & responsibilities efficiently. Slowdown in the economy induced by the pandemic and subsequent decrease in industrial power demand has adversely affected DISCOMs on this aspect.

To improve the situation, Government of India (GOI) has provided a stimulus of ₹ 90,000 crore under the ATMANIRBHAR Bharat scheme. Further, under the Union Budget for the financial year 2021-22, a performance linked power distribution scheme has been launched with an outlay of ₹ 3,05,984 crore over a period of five years to aid DISCOMs in infrastructure creation including pre-paid smart-metering, feeder separation and upgradation of systems.

Electricity (Amendment) Bill, 2021 proposes amendments for adoption of de-licensing and franchise model for power distribution business to bring in competition. These steps are likely to reduce Average Cost of Supply-Average Realisable Revenue (ACS-ARR) gap and AT&C losses resulting in improved financial health of DISCOMs.

National Electricity Policy 2021, which is under revision by Ministry of Power, also emphasises on improving the financial viability of DISCOMs.

Power Trading

In India, power is transacted largely through long term Power Purchase Agreements (PPA) entered into, between Generating companies and the Distribution utilities. A small portion is transacted through various short-term mechanisms wherein the contract is of less than one-year period like electricity transacted through inter-State Trading Licensees and directly by the Distribution Licensees, power exchanges such as Indian Energy Exchange Ltd. (IEX) and Power Exchange India Ltd. (PXIL) and Deviation Settlement Mechanism (DSM).

In the financial year 2020-21, around 88% of power generated in the country was transacted through the long-term PPA route and about 12% of the power was transacted through short-term trading mechanisms.

Key Initiatives/Reforms & Regulatory Changes in Power Sector

1. **CERC Regulations**

   - CERC (Terms and Conditions of Tariff) Regulations, 2019 notified on 7 March 2019, which are applicable for the period 1 April 2019 to 31 March 2024. The tariff of electricity generated from various NTPC stations is determined by CERC, based on station-specific petitions filed before the Commission, as per these Regulations.
   - CERC (Terms & Conditions of Tariff) (1st Amendment) Regulations, 2020 regarding servicing of capital and operational expenditure incurred on installation and operation of Emission Control Systems through determination of supplementary capacity charges and supplementary energy charges.
   - CERC (Terms & Conditions of Tariff) (2nd Amendment) Regulations, 2020 regarding determination of transfer price of coal from captive coal mines by the generating company.
   - CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2020 effective from 1 November 2020. These regulations provide the framework for sharing of interstate transmission charges and losses by the various users.

2. **Renewable Purchase Obligations (RPO) targets**

   To achieve 175 GW of renewable capacity by 2022, Ministry of Power in consultation with MNRE has notified RPO trajectory. For the financial year 2020-21, RPO targets were set at 19% (8.75% for Solar and 10.25% for Non-Solar renewables).

   For the financial year 2021-22, RPO target of 21.18% comprising of 10.50% Solar and 10.68% Non-Solar renewables including 0.18% hydro has been notified. Further, a committee has been constituted by MNRE to

define RPO trajectory beyond the financial year 2021-22.

With the objective of adding more than 30,000 MW hydropower by the financial year 2029-30, MOP has also introduced Hydro Purchase Obligation (HPO) and specified long-term trajectory of HPO from the financial year 2021-22 to 2029-30. To achieve these targets, large hydro plants including pumped storage plants having capacity of more than 25 MW & commissioned after 8 March 2019 have been declared as renewable energy plants.

3. **Electricity (Late Payment Surcharge) Rules, 2021**

The Central Government has notified the Electricity (Late Payment Surcharge) Rules, 2021 applicable to Power Purchase Agreements (PPAs), Power Supply Agreements (PSAs) and Transmission Service Agreements (TSAs), where tariff is determined under Section-62 and Section-63 of the Electricity Act.

These rules provide for a graded late payment surcharge, applicable on outstanding amounts beyond the due date. This rule will reduce the burden on DISCOMs without affecting payment discipline as it has provision for debarment of DISCOMs from procuring power from a power exchange or grant of short-term open access if the dues remain unpaid beyond seven months.

4. **Electricity (Rights of Consumers) Rules, 2020**

Electricity (Rights of Consumers) Rules, 2020 has been notified in December 2020 to protect the rights of the consumers. It specifies time limits for giving various services to electricity consumers by DISCOMs.

These rules provide a framework for "prosumers" to set up distributed renewable energy generation units either by themselves or through a service provider. Guidelines for smart meters, online bill payments, reliability and quality of service, compensation & penalties for delay in service have also been provided.

After notification of above rules, MOP has proposed amendment to net metering limit i.e., up to 500KW or sanctioned load (whichever is lower). The amendment is aimed at promoting prosumers further.

5. **Green Term Ahead Market (GTAM)**

As a first step towards greening the Indian short-term power market, GOI has launched Green Term Ahead Market (GTAM) in electricity on 1 September 2020. This allows an additional avenue to the generators for sale of renewable energy; enable obligated entities to procure renewable power at competitive prices to meet their Renewable Purchase Obligations (RPO).

GTAM transactions are bilateral with clear identification of corresponding buyers and sellers. GTAM contracts are segregated into Solar RPO & Non-Solar RPO and within the two segments GTAM contracts consist of Green Intraday, Day Ahead Contingency, Daily and Weekly Contracts.

6. **Waiver of Inter State Transmission System (ISTS) charges and losses**

The Ministry of Power vide its order dated 15 January 2021 has provided that no ISTS charges will be levied on transmission of the electricity generated from solar and wind power plants (including solar-wind hybrid) with or without storage, commissioned up to 30 June 2023.

This waiver shall be applicable for power sale to distribution licensees, irrespective of whether this power is within the RPO or not, provided that the power has been procured competitively under the guidelines issued by the MOP.

Power from such solar and wind plants may also be used for charging of storage including Hydro pumped storage plants. The waiver shall be applicable for twenty-five years from commissioning of such projects.

7. **Coal allocation for short term power procurement**

In December 2019, Government had issued guidelines for Coal supply to power plants which (including private generators) do not have PPAs. These guidelines allow Coal Linkage to such plants through auction for a period of three months to one year, provided further that the power generated through that linkage is sold in Day Ahead Market (DAM) through power exchanges or in short term by a transparent bidding process through Discovery of Efficient Energy Price (DEEP) portal.

Further, on 12 May 2020, the Government has relaxed the eligibility criteria for participation in the coal linkage auction, permitting any commissioned power plant (single unit or multiple units located in the same premise) owned by Government or Private Companies for the capacity for which no PPA has been signed.

8. **Real Time Market (RTM)**

CERC has introduced Real Time Market (RTM) in electricity from June 2020, with a financially and physically binding framework in place. This real time market is likely to provide an alternate mechanism for DISCOMs to access a larger market. It provides for power transactions with separate market clearing price and market clearing volume for each time block of 15 minutes.

The generators having long-term contract and participating in this market for selling their un-requisitioned surplus (URS) power are required to share the net gains with the DISCOMs in the ratio of 50:50 subject to a cap of 7p/kWh.

9. **Utilization of Agro-residue for power generation & to reduce pollution**

The Government has taken initiatives to utilize Agro-residue for power generation. This is intended to reduce emissions by discouraging farmers from burning crop residue and to provide extra income to them through sale of crop residue.

Biomass has been recognised as a carbon neutral fuel and biomass co-firing is a technology recognized by UNFCCC as a measure of reducing greenhouse gas emission. Draft National Mission on use of Biomass is initiated by MOP to institutionalize the use of Biomass as a fuel. The mission will work on logistics, regulatory framework, and research on boiler modification to enable biomass firing.

10. Sale of 50% coal from captive blocks

Through the notified amendment in the Mines and Minerals (Development and Regulation) Amendment Act, 2021, the Government has relaxed the norms for sale of coal from captive mines. The amendment provides for sale of up to fifty percent of coal production from the captive mine after meeting the requirement of the linked end use plant. This will help in reduction in import of coal by increasing the production from captive mines.

OPPORTUNITIES AND THREATS/CHALLENGES

OPPORTUNITIES

1. Renewable Energy (RE)

Government of India has targeted to achieve 175 GW of RE capacity by 2022 and 450 GW by the year 2030. In this context, some of key measures leading to opportunities in the renewable energy sector are as below.

a. **Manufacturing:** In line with the ATMANIRBHAR Bharat, Production Linked Incentive Scheme 'National Programme on High Efficiency Solar PV Modules' has been launched to promote manufacturing of solar PV modules domestically.

b. **Energy Storage:** As per NITI AAYOG's report Energy Storage System (ESS) Roadmap for India: 2019 - 2032, by 2032, grid storage energy requirement is estimated to be ~33GWh.

c. **Ultra-Mega Renewable Energy Power Park (UMREPP):** MNRE has issued UMREPP scheme to provide land upfront to the project developers and facilitate transmission infrastructure for adding RE capacities with solar/wind/hybrid mode and with storage system, if required.

d. **National Offshore Wind Energy Policy** was notified in October 2015 with an objective to develop the offshore wind energy in the Exclusive Economic Zone (EEZ) along the Indian coastline of 7,600 km. Government of India has set a target of achieving offshore wind power of 30 GW by 2030.

e. **Renewable Purchase Obligation (RPO):** For the financial year 2021-22, RPO trajectory set by Government of India is 21.18% and a committee has been constituted by MNRE for projections of RPO targets beyond the financial year 2021-22. This is likely to enhance the opportunity for capacity growth in RE space.

To support the above measures, your Company has made a roadmap with a target of achieving 60 GW of RE based capacity by 2032. It is also assisting the Government of India in its National Solar Mission.

Following initiatives have been taken by your Company in this regard:

a. Incorporation of NTPC Renewable Energy Limited (NTPC REL), a wholly owned subsidiary company of NTPC Limited on 7 October 2020 to undertake RE business independently.

b. Under the UMREPP scheme, projects totaling about 16.94 GW are under various stages of development in States of Gujarat (4.75 GW), Maharashtra (2.64 GW), Rajasthan (5 GW), Madhya Pradesh (0.55 GW) and Andhra Pradesh (4 GW).

c. Introduction of high efficiency solar PV Modules (490 Wp) in floating solar projects at Kayamkulam and Auraiya.

d. Winning a total of 1,510 MW solar capacity in different projects under tariff based competitive bidding of SECI/States.

e. MOU signed with DVC on 12 March 2021 for development of solar projects in DVC reservoirs and land.

f. MOU signed with ONGC on 21 May 2020 for developing offshore wind projects.

g. JVA finalized between NIIF and NTPC to support future RE investment.

h. International project management consultancy assignments for setting up of 500 MW solar projects in Mali, 100 MW solar projects in Malawi and 285 MW solar projects in Togo, in Africa under ISA initiative are under execution.

Hydrogen Energy: NTPC is in the process of exploring opportunities for production of green hydrogen using electricity from RE sources for various applications. These are for mobility, production of green fuel (methanol, ammonia), establishing micro-grids, natural gas blending with hydrogen for City Gas Distribution (CGD) system etc.

In addition to above, following initiatives are pursued by your Company at various locations:

Green Chemical production

a. Initiatives have been taken for Green Methanol (10 TPD) pilot at Ramagundam using green hydrogen and carbon captured from flue gases of thermal project.

b. Initiatives have also been taken for Green Ammonia pilot (20 TPD and 50 TPD), using two different technologies where green hydrogen and nitrogen from air is treated together in reactors.

E-Mobility

Government of India has approved FAME-II (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) scheme with total outlay of ₹10,000 crore over the period 2019-20 to 2021-22.

The scheme envisages supporting 10 Lakh e-2Wheelers, 5 Lakh e-3Wheelers, 55,000 e-4Wheelers and 7,000 e-Buses and establishment of charging infrastructure across the country. At least one charging station shall be installed in a grid of 3 km x 3 km, charging stations are also proposed on major highways at an interval of about 25 km.

Your Company is envisaging providing hydrogen and pure electric powertrain based green mobility solutions for public transport, which includes providing hydrogen fuel cell based electric vehicles as well as pure battery-operated electric buses. It is also playing an important role of e-Mobility 'enabler' by creating a favourable eco-system.

Your Company plans to set-up 400 Chargers for creating charging infrastructure at various locations across the country. So far, 90 Chargers have been installed and balance are under progress. Your Company has commissioned a pilot project on the concept of battery charging and swapping at Faridabad for e-3wheelers. Your Company's subsidiary NVVN, is also offering complete e-bus solutions to state transport units.

Green mobility in Ladakh and Delhi

Besides battery-based E-mobility, your Company also has plans to enter green Mobility business. Pilot projects based on green hydrogen are planned to be carried out in Leh and Delhi with 5 nos. of Fuel cell electric bus and 5 nos. of fuel cell cars at each location. An EOI has been invited in this regard from Global FCEV (Fuel Cell Electric Vehicle) manufacturers.

Delhi has been chosen to set up hydrogen filling stations so that intercity transport using FCEV buses is supported. MOUs are being planned with UT, Ladakh and Ladakh Autonomous Hill Development Council (LAHDC) for allied green hydrogen initiatives and setting up hydrogen filling stations.

Through these steps your Company envisages to contribute towards low carbon pathway.

2. Cross Border Power Trading

The guidelines issued by MOP, CERC regulations and Procedure for Approval from the Designated Authority for cross border trading of power has opened opportunities to export power to neighbouring countries. Presently, India exports electricity to Nepal, Bangladesh and Myanmar. India imports power from Bhutan, but exports power during lean hydro season.

GOI has assigned NVVN, a subsidiary of your Company, the role of Nodal Agency for cross border trading of power. GOI has also nominated NVVN as Settlement Nodal Agency (SNA) for settlement of Grid operation related charges with neighbouring countries, namely, Bangladesh, Bhutan, Nepal and Myanmar. Accordingly, NVVN has signed SNA agreement with Nepal Electricity Authority while SNA agreement with Bangladesh Power Development Board shall be signed shortly.

NVVN has signed various Power Purchase Agreements with Bangladesh and Nepal aggregating to 710 MW and 350 MW respectively. NVVN has received LOI from Bangladesh Power Development Board on 31 January 2020 for supply of 500 MW power from GMR Upper Karnali Hydro Power Project, Nepal to Bangladesh. PPA for the same is being finalised.

NVVN has commenced the Cross Border Electricity Trade (CBET) in power exchange platform by supplying power to Nepal Electricity Authority through platform of Indian Energy Exchange (IEX). This is a first of its kind initiative by your Company and would help in further expanding its cross-border portfolio.

3. International Business

Your Company, by virtue of its growing project management and O&M experience with an expanding power generation portfolio, has made a global presence in various countries as detailed below:

a) **Bangladesh-India Friendship Power Company Private Limited:** Your Company has formed a joint venture company with Bangladesh Power Development Board (BPDB), called Bangladesh India Friendship Power Company Private Limited (BIFPCL), which is constructing a coal-based power plant of 1,320 MW capacity at Rampal (Khulna) and has been christened 'Maitree Super Thermal Power Plant'.

b) **Trincomalee Power Company Limited (TPCL):** A 50:50 joint venture between your Company and Ceylon Electricity Board was formed to undertake the development, construction, establishment, operation and maintenance of an electricity generating station in Sri Lanka. TPCL shall develop 50 MW solar power project at Sampur and a new JV company to be incorporated to develop the LNG based Power Project. The Joint Venture & Shareholders' Agreement (JVSHA) for incorporating a new JV company in Sri Lanka to develop the LNG Power Project at Kerawalapitiya has been signed between your Company and CEB on 25 October 2019.

Your Company has been awarded the following consultancy jobs abroad:

- UAE: Energy Audit of Factories in Ras Al Khaimah
- Togo: Appointed as PMC for implementation of a 35 MW solar project and a 250 MW solar park.
- Mali & Malawi: Project management consultancy assignments under ISA platform for 500 MW in Republic of Mali and 100 MW in Republic of Malawi.

Your Company has been registered as an overseas company in Kenya. Further your Company is associated as a corporate partner with International Solar Alliance (ISA) and has now been selected as Project Management

Consultant / Solar Project Developer to implement solar projects in ISA member countries. Your Company is also exploring business opportunities in the areas of power generation, PMC, O&M contracting, R&M of power plants, capability building and cross border power trading etc. in the countries such as Cuba, Indonesia, Vietnam, Oman, Egypt, Saudi Arabia, Qatar, Uzbekistan, Maldives, Malawi, Morocco, Botswana and Zimbabwe.

4. **Inorganic growth opportunities**

Your Company is looking for suitable opportunities for acquisition of stressed power projects subject to techno-commercial viability. Your Company has submitted Final Resolution Plan for possible acquisition of Jhabua Power Limited (under NCLT) having capacity of 600 MW. The coal based thermal power plant is situated in the Seoni district of Madhya Pradesh. Resolution plan submitted by the Company has been approved by the Committee of Creditors (COC) and filed for approval of NCLT by the Resolution Professional.

5. **Environmental aspects**

Your Company has been spearheading the adoption of Flue Gas Desulphurisation (FGD) systems and developing solutions for de-NOx that can be used for high ash content coal. Going forward, your Company shall be able to provide consultancy services for power plants across the nation for a smooth transition towards compliance of environment norms.

6. **Efficiency improvement**

Your Company has laid major stress on efficient utilization of resources and use of technological advancements for improving energy efficiency. Till March 2021, your Company, along with its JVs and Subsidiaries, has implemented 17,620 MW capacity based on Super Critical technology with commissioning of 3,580 MW of Super critical power plant capacity (Lara#2, Gadarwara#2, Tanda#6, Meja#2 and NPGCL#2).

Your Company has commissioned country's first two Ultra-Super Critical (USC) power units with a capacity of 1,320 MW (2 units of 660 MW each) at Khargone. Your Company aims to enhance the overall efficiency of its coal plants, thereby achieving substantial reduction in CO_2 emissions. Adoption of USC parameters shall result in a reduction of CO_2 emissions (as also others like NOx and SOx) by around 8% when compared to conventional subcritical power plants.

To achieve even higher efficiency, a program to develop Advanced Ultra Super Critical (AUSC) technology is underway by a consortium of NTPC, BHEL and IGCAR. The AUSC Project envisages development of indigenous technology for steam parameters of 310 Kg/cm^2 and 710°C/720°C temperature, much higher than the steam parameters used in contemporary plants globally and would result in top-of-the-line efficiency of 46%. It will also result in reduction of CO_2 emissions to the tune of 20% compared to a sub-critical plant.

For the first time, Air Cooled Condenser (ACC) System has been adopted at North Karanpura STPP and Patratu STPP, which will bring a significant reduction in specific water consumption for the projects.

7. **Blue Sky Initiatives by NTPC**

a. Your Company is contributing to reduction of greenhouse gas emissions by taking up the initiative to blend up to 10% of biomass-based fuels with coal at coal-based stations.

b. Waste to Energy Plants:

- Your Company has revamped & made functional the "Waste to Compost" plant at Karsara, Varanasi and has commissioned 24 TPD thermal gasification-based demonstration-scale Waste to Energy plant at Varanasi.
- New Joint Venture Company in the name of NTPC EDMC Waste Solutions Pvt. Ltd. (NEWS) has been incorporated for development of a 2000 TPD Integrated Waste Management Plant, utilizing Municipal Solid Waste (MSW), in Delhi.
- MOUs have been signed between IOCL & NTPC and amongst IOCL, NTPC & SDMC for development of Waste to Energy (WtE) facility at Okhla Landfill site. Under the MOU, it is proposed to set up Plasma Enhanced Gasification (PEGS) technology based WtE pilot plant utilising 50 TPD Refuse Derived Fuel (RDF) and generating one MW of Electricity.
- Further, MOUs have also been signed with Municipal Corporations of Surat, Indore, Bhopal and Hubli-Dharwad for setting up state of the art Waste to Energy plants.

THREATS/CHALLENGES/CONCERNS

1. **Solar and Wind Power - capacity growth:**

To integrate variable RE into the grid, coal-based power plants must regulate their generation to maintain grid balance. Therefore, influx of more RE power in the grid would require many coal-based plants to operate at technical minimum capacity, frequent load fluctuations and two shift operations. This will result in lower efficiency at partial load leading to higher cost of generation. Other factors like cost for balancing services, reduced life due to flexible operation of thermal plant would also adversely affect the cost of generation.

Further, imposition of basic customs duty on imported solar cells (25%) and modules (40%) starting from 1 April 2022 will increase the prices of solar panels. Disruption of supply chain due to pandemic has also slowed down the solar capacity addition.

2. **Environmental Concerns:**

The environmental concerns, particularly relating to coal based thermal stations, have emerged as a major challenge to the sector. To comply with new standards for water consumption, PM, SOx, NOx and mercury, thermal power plants need to install emission control equipment like FGDs (Flue Gas de-sulphurisation), SCRs (Selective Catalytic Reduction) / SNCRs (Selective Non-Catalytic Reduction), DSI (Dry Sorbent Injection) along with necessary combustion modifications and retrofitting of ESPs (Electrostatic Precipitator).

The cost of retrofitting appropriate systems to meet these norms will have adverse impact on tariff and merit order scheduling. Logistics and supply chain for sourcing the consumables and disposing of the waste generated impose additional challenges.

Further, as per new environment norms, all plants must achieve 100% ash utilization in a three-year cycle with a grace period of a year in the 'first compliance' cycle if the percentage of ash utilisation is between 60-80% and two years if it is below 60% as accounted during the financial year 2021-22.

3. **Non-availability of Gas**

Availability of GOI allocated domestic gas has been declining. Further, due to high reserve price and onerous terms & conditions, Power sector is unable to tie up new domestic gas from KG basin. Gas stations are dependent upon costlier RLNG for declaring capacity. This leads to higher costs and thus lower PLF. The gas-based plants of your Company are also under threat due to insufficient gas availability.

4. **Threat due to COVID-19:**

COVID-19 pandemic has repeatedly affected the entire world and India is no exception to it, particularly during the second wave of pandemic, India is amongst the worst affected countries. The electricity consumption, being dependent on the economic activities in the country, had seen a dip in the demand during the period of lockdown in the first two quarters of the financial year.

COVID-19 has also affected the supply chain, workforce availability, land acquisition and cash flows of your Company, which may affect the timely execution of the under-construction projects. COVID-19 pandemic is declared as a force majeure by the Government of India, the threat being an external one and affecting the entire nation, your Company's business may be adversely affected in near future.

Electricity being an essential service, your Company has supplied uninterrupted electricity to the country to support various relief measures. For this, the company has taken various proactive and preventive steps like SOPs for workplace and townships, monitoring and tracking mechanism for COVID, communication etc.

The top management of your Company has been involved in monitoring the situation on continuous basis regarding the steps to prevent and control effects of COVID, extension and upgrading of medical facility like KAWACH, telemedicine, establishing COVID wards, facilitating vaccine drives and various other measures.

Further to support the sector, deferment of capacity charges has been made to provide relief to DISCOMs during COVID. A rebate on the capacity charges billed to DISCOMs during the financial year 2020-21 has also been given by your Company including JVs.

OUTLOOK FOR THE COMPANY

Strategic focus of the Company

Your Company is a market leader in power generation, supplying around 23% of the country's electricity supply and thus plays a key role in India's economic activity. As a State-owned utility, your Company's priority is to provide accessible, affordable and reliable power to the consumers and support country's economic development.

During the financial year 2020-21, the country was amid a global public health crisis, which threatened the entire humanity, and the crisis is continuing. The spread of COVID-19 virus has presented extraordinary challenges to the global economy and human livelihood. NTPC being an essential service provider for the country, has been operating its power stations successfully during lockdown period to fulfill electricity demand of the country, besides following all COVID related guidelines issued by GOI.

Apart from offering all possible help to the nearby community, your Company contributed ₹ 250 crore to the PM CARES Fund. A portion of the Medical College cum Hospital at Sundargarh, Odisha with 200 bed facility has been handed over by NTPC to Government of Odisha. This has started functioning as a COVID-19 Care Centre cum Isolation ward for Corona virus infected patients.

Despite the COVID-19 threat, your Company has been continuing with its long-term Plan with a target to achieve total installed capacity of 130+ GW and a RE capacity of 60 GW, by 2032. These are to be implemented through development of green-field & brown-field projects, collaborations and acquisitions. NTPC Renewable Energy Limited (NTPC REL), a wholly owned subsidiary company of NTPC has been incorporated for a focused approach on green capacity addition.

Your Company envisages enhancing its current presence in consultancy, power trading and ancillary services and has targeted a 25% market share in ancillary services and storage by 2032 under its long-term plan. It is also planning to make a foray into Hydrogen Economy supported by research & development and collaboration with OEM/OES, research institutes etc.

Your Company has a diversified portfolio of coal, gas, solar, wind, hydro and small hydro-based power plants and has

integrated both backward and forward, into coal mining and power trading, respectively. The stature of your Company is well depicted by its world-wide rankings such as, 2nd Independent Power Producer (IPP) in Platts Top 250 Global Energy Company rankings and 14th in Fortune India 500 companies (2020).

Growth opportunities

Your Company is working in close co-ordination with global energy community and in association with international energy alliances. Your Company is looking for suitable opportunities for acquisition of power plants to fulfil its growth target, after due techno-economic diligence and appropriate valuation.

New Business Areas Initiatives

Your Company is in the process of exploring opportunities for production of green hydrogen using electricity from RE sources and using it for various applications. These are for mobility, production of green fuel (methanol, ammonia), establishing micro grids, natural gas blending with hydrogen for City Gas Distribution system etc. These are some of the steps towards low carbon transition of the Company.

In this regard, following initiatives are being pursued at different locations:

A. Green mobility in Ladakh and Delhi

i. MOU with UT, Ladakh and Ladakh Autonomous Hill Development Council (LAHDC) for allied green hydrogen initiatives and majorly setting up hydrogen filling stations.

ii. Delhi has been chosen for setting up hydrogen filling stations so that intercity transport using FCEV buses like Ladakh is supported.

B. Green Chemical production

i. Green Methanol (10 TPD) pilot at Ramagundam using green hydrogen and carbon captured from flue gases of thermal project.

ii. Green Ammonia pilot (20 TPD and 50 TPD), using two different technologies where green hydrogen and nitrogen from air is treated together in reactors.

To diversify its business further, your Company has also signed MOUs with multiple organisations as below.

- BHEL for forming a joint venture company to set up 800 MW Technology Demonstration Plant (TDP) based on Advanced Ultra Supercritical Technology (AUSC) at Sipat, Chhattisgarh. PIB Proposal for Financial support for proposed JV Company between your Company and BHEL, is under consideration by GOI.
- ONGC Ltd. has signed MOU with NTPC in May 2020 for exploring opportunities for setting up of offshore wind and other Renewable Energy Projects.
- National Investment and Infrastructure Fund (NIIF) and your Company has signed a MOU on 16 July 2020 for investment in Renewable Energy domain and exploring the other possibilities for co-operation in power sector. JV Agreement with NIIF for incorporation of JV Company with 51:49 equity participation by NIIF and your Company respectively, was approved by Board of Directors in its meeting held on 4 February 2021. Concurrence has been obtained from NITI AAYOG and DIPAM for formation of JV Company.
- New Joint Venture Company in the name of NTPC EDMC Waste Solutions Pvt. Ltd. (NEWS) has been incorporated on 1 June 2020 for development of an Integrated Waste Management Plant in Joint Venture with EDMC, utilizing Municipal Solid Waste (MSW), 2000 TPD in NCT, Delhi.
- MOUs have been signed on 30 June 2020 between IOCL & NTPC and amongst IOCL, NTPC & SDMC for development of Waste to Energy (WtE) facility at OKHLA Landfill site. Plasma Enhanced Gasification (PEGS) technology-based Waste to Energy pilot plant is to be installed utilising 50 TPD Refuse Derived Fuel (RDF) & generating one MW of Electricity.

Your Company is exploring new business opportunities in different areas as summarised below:

- In a first of its kind initiative, an EOI for inviting Energy Intensive industries to set up their manufacturing facilities at Industrial Parks to be developed at NTPC Power Stations was published in September 2020. Three NTPC Stations, Kudgi (Karnataka), Solapur (Maharashtra), and Gadarwara (Madhya Pradesh) are selected for the initiative on a pilot basis and interests have been received from several industries, which are willing to setup energy-intensive manufacturing facilities at NTPC Power Stations.
- An EOI has been invited for setting up CO_2 Capture, H_2 Generation & Conversion to Methanol (composite facility) in Aggregator Mode at NTPC power plants. Keeping focus on decarbonisation of the Indian energy sector and India's commitment to COP 21 for reducing GHG emissions and 'Methanol Economy' program initiated by NITI AAYOG, your Company intends to set-up commercial scale CO_2 Capture, H_2 Generation & Conversion to Methanol (composite facility) in aggregator mode on BOO basis at its various plants in India.
- Your Company is keen to develop new Hydro Projects and Pumped Storage Hydro Projects and is in discussion with various State Governments and Utilities in this regard.
- Distribution Business Opportunities: NTPC, through its wholly owned subsidiary company NESCL, is participating in the bid process for privatization of UT DISCOMs. NESCL has submitted its Bid for privatization of Chandigarh UT DISCOM.
- Initiatives to support Start-ups.

  i. Your Company is working towards developing a holistic Innovation and Start-Up Ecosystem in NTPC, to look for innovative and out of the box solutions

to existing problems, to create diversified avenues of business for NTPC for reaping commercial benefits and staying competitive. In this context, a policy to support Start-ups in the Power and related sector has been formulated.

ii. Further, a MOU has also been signed with i-Hub (Gujarat Student Start-up and Innovation Hub) to organize open innovation challenge focused on power sector and allied domains for the problems being faced by NTPC. I-Hub shall conduct the innovation challenge for the problem statements provided by NTPC among students, start-ups researchers, and other stakeholders in the ecosystem and both NTPC & i-Hub shall offer mentoring support to these shortlisted Innovators, Start-ups and facilitate them in implementing or piloting their products/solutions.

- Inviting EOI for Sale of Desalinated Distillate/ Mineral Water generated at NTECL Vallur - NETRA, R&D wing of NTPC, has set up a demonstration Plant of Water Treatment to convert sea water into distillate/ Mineral water, based on solar thermal technology. The Water Treatment Plant (WTP) has a capacity of producing 120 TPD of Desalinated Water and is now fully operational. In this regard, an EOI has been published on 8 March 2021 to invite companies for sale of Desalinated Distillate/ Mineral Water generated at NTECL Vallur.

Fuel Security

Your Company has achieved fuel security through its long-term coal supply agreements. The materialization of Annual Contracted Quantity was 87.4% in the financial year 2020-21. Your Company's reliance on imported coal is negligible, thereby contributing to reduction in cost of power.

Your Company is producing coal from three mines i.e., Pakri Barwadih, Dulanga & Talaipalli. Total coal production for the financial year 2020-21 stands at 11 MMT. Cumulative production till March 2021 stands at 32.37 MMT, of which 26.21 MMT is from Pakri-Barwadih, 5.16 MMT from Dulanga and 1 MMT from Talaipalli. Other mines i.e., Chatti-Bariatu, Kerandari & Badam are in various stages of development. Development activities are also going on in Banhardih mine, allocated to Patratu Vidyut Utapadan Nigam Ltd. (PVUNL), a JV company incorporated between your Company & Government of Jharkhand.

Two adjacent mining blocks namely Banai & Bhalumuda have been surrendered by your Company to Ministry of Coal (MOC) because of geo-mining constraints, likely less percentage of coal extraction and non-availability of OB dumping area. Mandakini-B coal block has also been surrendered to MOC due to continuous obstruction to work by local community.

With the start of production from the remaining coal mines, your Company aspires to become one of the largest captive coal mining company in the country.

Renewable Energy

Renewable energy is the central focus for the Company. To be in step with ambitious targets of the GOI, the Company is exploring all avenues for renewable capacity addition to look beyond conventional large scale solar and wind projects. NTPC Renewable Energy Limited (NTPC REL) has been constituted as a wholly owned subsidiary during the financial year 2020-21 to focus on renewable energy business. Company is also going ahead with floating solar at reservoirs of its projects which is a step towards conservation of land and water resources by reducing water surface evaporation. Company is also utilizing the roofs of power plant buildings for solar power generation. The outgoing discharge of cooling water from condenser of thermal station is being utilized by further passing through a turbine to make a small hydro plant run.

As on 31 March 2021, the company has a commissioned RE capacity of 1,350 MW and aspires to achieve 60 GW RE capacity by 2032. The projects developed under own capacity and through developer mode are described below.

Projects under Own Capacity Addition

a. **Commissioned Projects:** 1,350 MW (including 192 MW owned by the subsidiaries). It covers solar (ground and floating), wind and small hydro installations spread over the country.

b. **Projects Under Implementation:** 2,884 MW (Ground and Floating solar)

i. Ground Mounted Solar projects of 2,647 MW are spread across UP, Rajasthan, Tamil Nadu, Gujarat and Kerala out of which, 1,692 MW is being implemented under CPSU scheme. Under this scheme, it is envisaged to set up solar projects using domestically manufactured cells and modules with Viability Gap Funding (VGF) support from MNRE. The power is sold in WTO compliant manner only to government entities under a power usage agreement.

ii. Floating Solar projects of 237 MW are spread across Telangana, Andhra Pradesh, and Kerala. NTPC is promoting large-scale floating solar projects and towards this, a 100 MW project is being set up in Telangana. Incidentally when completed, this project will be the largest one in the country.

Developer Mode Projects

MNRE has accorded its approval to the Company to act as a designated agency for issue of tenders for setting up of renewable power projects covering wind and solar under developer mode. Under this, 4,385 MW of RE projects has been commissioned and 1,188 MW of RE projects are under implementation.

Your Company is pursuing its initiatives for hydrogen technologies through RE and it is envisaged that RE capacity of NTPC shall power the future hydrogen initiatives. The green hydrogen thus generated, shall be utilized for various applications ranging from mobility to green chemical to energy storage.

Realisation

Your Company has realised its dues and is confident of

maintaining its track record in future also. Further, with extension of Tri-partite Agreements by most of the States, your Company is assured of its realization to a great extent. Payment Security Mechanism through LC also helps in better and efficient revenue realization.

Leveraging on Strengths for Delivering Better Future Performance

Your Company derives its competitive edge from its strengths and is confident of meeting future challenges in the sector.

a. Project Management

Your Company has adopted an integrated system for planning, scheduling, monitoring and controlling of approved projects under implementation. To coordinate and synchronise all the support functions of project management it relies on a three-tiered project management system known as the Integrated Project Management Control System (IPMCS), which integrates its engineering management, contract management and construction management control centres. The IPMCS addresses all stages of project implementation, from concept to commissioning. The IPMCS system provides regular monitoring, analysis of variations identified both within the external and internal control parameters and taking managerial action based on "Management by Exception" philosophy.

Your Company has added 4,160 MW and 3,824 MW to its group installed and commercial capacity respectively in the financial year 2020-21.

b. Operational Efficiency

The operating performance of your Company has been consistently above the national average. During the financial year 2020-21, PLF of Company's coal stations was 66.00% against All India PLF of coal stations of 54.56%. Over the years, the Company has consistently operated at much higher operating efficiency as compared to All India operating performance, however for thermal power stations on pan India basis, PLF is decreasing because of large-scale integration of renewable power in the grid.

The total generation of the Company was 270.91 BUs during the financial year 2020-21 as against 259.62 BUs in the previous year, thereby registering a growth of 4.35% over previous year

To achieve cost-competitive, environment friendly, efficient & reliable power generation, your Company has adopted following strategies:

- ✓ To improve reliability of the units and to reduce the forced outages, close monitoring of start-ups & shutdowns and root cause analysis of all the outages is carried out and action plan generated to mitigate the outages.
- ✓ Continuous real time monitoring of critical parameter deviations (both reliability & efficiency related) and implementation of action plan to mitigate the deviations.
- ✓ Optimizing planned outage period through implementation of Overhaul Preparedness Index (OPI), ensuring all quality checks and time bound monitoring of each activity.
- ✓ Improvement in Heat Rate & Auxiliary Power Consumption achieved by parametric optimization, specially at part loads by operation of units in sliding pressure mode & optimizing excess air.
- ✓ To minimize efficiency losses in stations, Plant Information (PI) system-based applications for real time efficiency & loss calculations.
- ✓ Structured & regular energy audits to identify potential areas of improvement in APC reduction and Implementation of action plans.
- ✓ To reduce cost of generation steps have been taken to reduce Energy Charge Rate (ECR) by swapping of coal supplies and maximising use of domestic coal.
- ✓ Use of Comprehensive Performance Evaluation Matrix (PEM) for relative evaluation of the performance of various power plants to create an environment of in-house challenge and competition. The parameters are reviewed annually to include new parameters commensurate with market dynamics and developments in power sector.
- ✓ Adopting advanced technologies in new units e.g., commissioning of super critical units, which improves system efficiency & reduces carbon footprint and retrofits of deNOx & deSOx technologies in older units.
- ✓ Renovation & modernization for reduction of greenhouse gas emissions, effective modernized control systems for environment friendly economic generation and particulate emission control.
- ✓ Water conservation measures like increasing Cycle of Concentration (CoC) of circulating water, implementation of zero effluent discharge, increasing ash water recirculation, implementation of high concentration ash-slurry discharge, implementation of dry evacuation of ash etc.
- ✓ Strict compliance of Grid Code, Restricted Governor Mode Operation (RGMO) implementation, Automatic Generation Control and other system requirements.

c. Human Resources

Your Company has a highly talented team of committed professionals and has been able to induct, develop and retain the best talent. Your Company has a pool of ~18,000 employees creating value for the Company. Your Company has a very low executive attrition rate. The HR vision of your Company is "To enable its people to be a family of committed world class professionals, making NTPC a learning organisation." Your Company is deeply passionate about ensuring the holistic development of all its employees as distinct individuals and good citizens. Competence building, Commitment building, Culture building and Systems building are the four pillars on

which HR Systems of your Company are based.

Your Company has been conferred with various HR Awards over the years by reputed institutions and consistently features among the "Great Places to Work for". The commitment of the employees is also reflected in consistent improvement of financial parameters such as sales per employee, value added per employee etc.

d. Sound Corporate Governance

Your Company's corporate governance practices have been recognised and awarded at several forums. Your Company believes in following the highest standards of transparency, integrity and accountability. It enjoys the confidence of all stakeholders alike. Your Company not only believes in adopting best practices but also includes public interest in its corporate priorities and has developed extensive social outreach programmes.

e. Robust Financials and Systems

Your Company has strong financial systems in place. It believes in prudent management of its financial resources and strives to reduce the cost of capital. Your Company enjoys highest credit-rating assigned by CRISIL, ICRA, CARE and India Ratings. The foreign ratings by Fitch, S&P & Moody's are at par with sovereign ratings. It has robust financials leading to strong cash flows which are being progressively deployed in generating assets. Your Company has a strong balance-sheet coupled with low gearing and healthy coverage ratios. As a result, your Company has been able to raise resources for its capital expansion projects at very competitive interest rates in domestic as well international market.

RISK MANAGEMENT

Risk management scenario has become challenging with increasing regulatory compliance and emerging business risks. Cyber security risk and ongoing pandemic have made the business even more challenging. Therefore, to have a focused approach on risk management and to ensure decision-making is aligned with the organization's long-term objectives, your Company has an elaborate Enterprise Risk Management framework in place. Ensuring compliance with the Companies Act and SEBI (LODR) Regulations, a Functional Director level Sub-Committee of the Board, called Risk Management Committee (RMC) has been constituted. The committee has been restructured to include one Independent Director as per amended SEBI (LODR) Regulations.

The RMC is responsible for identifying & reviewing the risks and to formulate action plans and strategies to mitigate risks on short term as well as long term basis. The RMC has identified 25 risks, out of which 9 have been classified as the top risks for the company:

1. Threats to safety & security of people & property
2. Compliance of emission, ash utilization and regulatory norms
3. Legal risks
4. Delay in execution of projects
5. Difficulties in acquisition of land
6. Inadequate fuel supply
7. Risks pertaining to hydro projects
8. Risks related to coal mining
9. Sustaining efficient plant operations

The risks are regularly monitored through reporting of key risk indicators of identified risks. The risk assessment and the action required to be taken are reported regularly to the Board of Directors.

Your Company is also in the process of reviewing its Enterprise Risk Management to make it more robust in future.

Internal Control

To ensure regulatory and statutory compliances as well to provide highest level of corporate governance, your Company has robust internal systems and processes in place for smooth and efficient conduct of business and complies with relevant laws and regulations. A comprehensive delegation of power exists for smooth decision making which is periodically reviewed to align it with changing business environment and for speedier decision making. Elaborate guidelines for preparation of accounts are followed consistently for uniform compliance. To ensure that all checks and balances are in place and all internal control systems are in order, regular and exhaustive internal audits are conducted by experienced firms of Chartered Accountants in close co-ordination with the Company's own Internal Audit Department. Besides, the Company has two committees of the Board viz. Audit Committee and Committee on Management Controls to keep a close watch on compliance with Internal Control Systems.

A well-defined internal control framework has been developed identifying key controls. The supervision of operational efficiency of designed key controls is done by Internal Audit. The framework provides an elaborate system of checks and balances based on self-assessment as well as audit of controls conducted by Internal Audit at the process level. Gap tracking report for operating efficiency of controls is reviewed by the management regularly and action is taken to further strengthen the Internal Control System by further standardizing systems & procedures and implementing process changes, wherever required, keeping in view the dynamic environment in which the Company is operating. The Internal Control Framework system presents a written assessment of effectiveness of Company's internal control over financial reporting by the process owners to facilitate certification by CEO and CFO and enhances reliability of assertion.

FINANCIAL DISCUSSION AND ANALYSIS

A detailed discussion and analysis on financial statements is furnished below. Reference to Note(s) in the following paragraphs refers to the Notes to the standalone financial statements for the financial year 2020-21 placed elsewhere in this report.

A. Financial position

The items of the Balance Sheet are as discussed under:

1 Property, plant & equipment (PPE), Capital work-in-progress, Intangible assets and Intangible assets under development (Note-2 to Note-5)

The PPE, Capital work-in-progress, Intangible assets and Intangible assets under development of the Company are detailed as under:

(₹ Crore)

Particulars	As at March 31		% Change
	2021	2020	
Gross block of PPE (Note-2)	2,11,557.37	1,92,898.02	10%
Net block of PPE (Note-2)	1,63,892.12	1,56,273.02	5%
Capital work-in-progress (Note-3)	75,343.60	73,066.76	3%
Net block of Intangible assets (Note-4)	556.74	538.28	3%
Intangible assets under development (Note-5)	94.90	292.52	(68)%

During the year, total gross block of PPE increased by ₹18,659.35 crore over the previous year i.e., by 10%. This was mainly because of declaration of commercial operation of 2,490 MW capacities & Dulanga Coal Mine during the financial year 2020-21 and capitalisation of some other assets. Further, net block has increased by 5% and capital work-in-progress has increased by 3%. Intangible assets and intangible assets under development taken together have decreased by 22% over the last year.

2 Non-current financial assets (Note-6 to Note-9)

(a) Investments in subsidiary and joint venture companies (Note-6)

The break-up of investments in subsidiary and joint venture companies is as follows:

(₹ Crore)

Particulars	As at March 31	
	2021	2020
Investment in Subsidiaries	20,748.77	19,622.77
Investment in Joint ventures	7,279.80	6,727.84
Total	28,028.57	26,350.61

During the year, investments in subsidiary and joint venture companies increased by 6%. The increase/ (decrease) in the Company's investment in the subsidiary and joint venture companies is as under:

(₹ Crore)

Name of Company	Amount
NTPC Vidyut Vyapar Nigam Ltd.	10.00
Kanti Bijlee Utpadan Nigam Ltd.	50.00
Bhartiya Rail Bijlee Company Ltd.	32.28
Patratu Vidyut Utpadan Nigam Ltd.	504.50
Nabinagar Power Generating Company Ltd.	234.02
NTPC EDMC Waste Solutions Private Ltd.	0.15
NTPC Renewable Energy Ltd.	295.05
NTPC Tamil Nadu Energy Company Ltd.	8.29
Konkan LNG Ltd.	(139.75)
Meja Urja Nigam Private Ltd.	142.60
Hindustan Urvarak and Rasayan Ltd.	380.67
Bangladesh-India Friendship Power Company Private Ltd.	88.88
Total investment during the year	**1,606.69**
Less: Provision for impairment made/ (written back) during the year	
Ratnagiri Gas & Power Private Ltd.	18.06
Trincomalee Power Company Ltd.	14.14
Konkan LNG Ltd.	(103.47)
Net increase in Investment	**1,677.96**

During the year, the Company has entered into a tripartite framework agreement with RGPPL and its lenders on 31 December 2020 for settlement of RGPPL's outstanding debt liabilities as per the Composite Resolution Plan. As per the Resolution Plan, the Company has provided inter corporate loan of ₹ 885 crore to RGPPL for settlement of loan with the lenders and consequently 35.47% of Lenders' Equity in RGPPL has been transferred to NTPC at nominal value. Consequently, NTPC shareholding increased to 60.98% and RGPPL became a subsidiary company of NTPC Limited with effect from 31 December 2020.

Further, NTPC has executed Share Purchase Agreements with GAIL (India) Limited on 23 February 2021, for purchase of GAIL's share (25.51%) in Ratnagiri Gas and Power Pvt. Ltd. (RGPPL) and sale of NTPC's share (14.82%) in Konkan LNG Ltd. (KLL) to GAIL at a nominal value of ₹ 1/-, with this transaction, NTPC has fully exited from KLL and now NTPC shareholding in RGPPL is 86.49%.

(b) Other Non-current financial assets (Note-7 to Note-9)

Other Non-current financial assets mainly comprise of investment in equity instruments, loans to related parties, employees & others, share application money, claims recoverable, finance lease receivables and mine closure deposit.

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(₹ Crore)

Particulars	As at March 31		% Change
	2021	2020	
Other investments (Note-7)	97.08	50.28	93%
Loans (Note-8)	1,498.12	600.26	150%
Other financial assets (Note-9)	1,188.84	1,403.60	(15)%
Total	**2,784.04**	**2,054.14**	**36%**

Investments mainly comprise of investment in equity instruments of PTC India Ltd. The carrying value of equity instruments of PTC India Ltd. has increased from ₹ 46.50 crore as at 31 March 2020 to ₹ 93.30 crore as at 31 March 2021 due to increase in market value of shares of PTC India Ltd.

Loans have increased from ₹ 600.26 crore as at 31 March 2020 to ₹ 1,498.12 crore as at 31 March 2021. Increase in loans is mainly due to inter corporate loan of ₹ 885 crore to RGPPL during the year, of which ₹ 871.73 crore is outstanding as on 31 March 2021, out of which ₹ 818.63 crore being non-current portion is included in Note-8.

Other financial assets include share application money pending allotment in subsidiary companies, claims recoverable, finance lease receivables and mine closure deposit.

(₹ Crore)

Other financial assets (Note-9)	As at March 31		% Change
	2021	2020	
Share application money pending allotment in subsidiary companies	96.00	197.28	(51)%
Claims recoverable	702.27	771.36	(9)%
Finance lease receivables	366.88	409.14	(10)%
Mine closure deposit	23.69	25.82	(8)%
Total	**1,188.84**	**1,403.60**	**(15)%**

Claims recoverable includes ₹700.30 crore (31 March 2020: ₹749.01 crore) towards the cost incurred up to 31 March 2021 in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI which includes ₹449.88 crore (31 March 2020: ₹439.57 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court of Delhi. In the event the Hon'ble High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for others (Note 32). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilisation measures, other recurring site expenses and interest costs as well as claims of contractors/vendors for various packages for this project will be compensated in full by the GOI. Hence, no provision is considered necessary.

3 Other non-current assets (Note-10)

Total other non-current assets as at 31 March 2021 were ₹ 13,790.02 crore as against ₹ 11,464.50 crore as at 31 March 2020. The other non-current assets as at 31 March 2021 and 31 March 2020 and the changes therein are as follows:

(₹ Crore)

Other non-current assets (Note-10)	As at March 31		% Change
	2021	2020	
Capital advances	5,336.03	4,814.27	11%
Security deposits	362.04	428.35	(15)%
Advances to contractors and suppliers (other than capital advances)	2,137.08	2,082.05	3%
Advance tax (net of provisions)	3,936.04	1,601.24	146%
Deferred foreign currency fluctuation asset	1,889.55	2,404.42	(21)%
Others	129.28	134.17	(4)%
Total	**13,790.02**	**11,464.50**	**20%**

Other non-current assets consist of advances for capital expenditure, advances other than capital advances, security deposits, advance tax net of provision for tax, deferred foreign currency fluctuation asset, deferred payroll expenditure etc. Other non-current assets have increased by ₹ 2,325.52 crore. The increase is mainly due to increase in advance tax net of provision for tax from ₹ 1,601.24 crore to ₹ 3,936.04 crore. The increase is mainly on account of reversal of tax provision amounting to ₹ 1,889.05 crore created under Vivad Se Vishwas Scheme (VsVs) of GOI. During the previous year, the Company had created an additional tax provision amounting to ₹ 2,661.47 crore as it proposed to settle all its pending Income Tax disputes for fourteen years (from F.Y. 2003-04 to 2016-17) by opting for the VsVs. During the year, the Company decided to settle its pending disputes for three years only (i.e., FY 2003-04, 2004-05 and 2008-09), under the VsVs, for which the Company is in the process of completion of procedural formalities. Accordingly, excess tax provision created in the previous year pursuant to VsVs, amounting to ₹ 1,889.05 crore has been written back during the year. Further, Capital advances have also increased from ₹ 4,814.27 crore to ₹ 5,336.03 crore.

Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years. Accordingly, an amount of ₹ 1,889.55 crore has been accounted under this head up to 31 March 2021 (31 March 2020: ₹ 2,404.42 crore).

4 Current assets (Note-11 to Note-18)

The current assets as at 31 March 2021 and 31 March 2020 and the changes therein are as follows:

(₹ Crore)

Particulars	As at March 31		Y o Y	%
Current assets	2021	2020	Change	Change
Inventories (Note-11)	9,178.94	10,731.86	(1,552.92)	(14)%
Investments (Note-12)	499.99	-	499.99	-
Trade receivables (Note-13)	13,701.72	15,615.19	(1,913.47)	(12)%
Cash and cash equivalents (Note-14)	90.05	20.37	69.68	342%
Bank balances other than cash and cash equivalents (Note-15)	2,248.41	2,188.74	59.67	3%
Loans (Note-16)	416.82	308.56	108.26	35%
Other financial assets (Note-17)	12,921.88	11,579.16	1,342.72	12%
Other current assets (Note-18)	8,527.87	8,060.98	466.89	6%
Total current assets	**47,585.68**	**48,504.86**	**(919.18)**	**(2)%**

(a) Inventories (Note-11)

Inventories as at 31 March 2021 were ₹ 9,178.94 crore as against ₹ 10,731.86 crore as at 31 March 2020. Inventories mainly comprise of coal and stores & spares, which are maintained for operating plants. Value of coal inventory decreased from ₹ 5,505.67 crore as at 31 March 2020 to ₹ 3,539.68 crore as at 31 March 2021. However, stores and spares inventory has increased from ₹ 3,793.24 crore as at previous year end to ₹ 4,335.60 crore, mainly on account of newly declared commercially operative units.

(b) Investments (Note-12)

Investments as at 31 March 2021 were ₹ 499.99 crore as against Nil Investments as at 31 March 2020. Investments comprise of Liquid Mutual Fund holdings as at 31 March 2021.

(c) Trade receivables (Note-13)

Trade receivables as at 31 March 2021 are ₹ 13,701.72 crore as against ₹ 15,615.19 crore as at 31 March 2020. Trade receivables have decreased by 12% over the previous year. On number of day's sales basis, receivables have decreased from 58 days in the previous year to 50 days in the current year. The main reason for decrease is highest ever realization of more than one lakh crore rupees during the year ended 31 March 2021.

Based on arrangements between Company, banks and beneficiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net of bills discounted amounting to ₹ 16,295.05 crore (31 March 2020: ₹ 10,692.34 crore).

(d) Cash and cash equivalents (Note-14) & Bank balances other than cash and cash equivalents (Note-15)

Cash and cash equivalents & Bank balances other than cash and cash equivalents have increased from ₹2,209.11 crore as at 31 March 2020 to ₹ 2,338.46 crore as at 31 March 2021.

(e) Loans (Note-16)

Loans have increased from ₹ 308.56 crore as at 31 March 2020 to ₹ 416.82 crore as at 31 March 2021. The main reason for this is increase in loans to joint venture and subsidiary companies which have increased from ₹ 65.02 crore as at 31 March 2020 to ₹ 168.80 crore as at 31 March 2021.

(f) Other financial assets (Note-17)

Other financial assets excluding unbilled revenue are as under:

(₹ Crore)

Particulars	As at March 31	
	2021	2020
Other financial assets	12,921.88	11,579.16
Less: Unbilled revenue	12,304.88	11,025.15
Net Other current financial assets	617.00	554.01

Unbilled revenue consists of items viz. (i) sales for the month of March which is billed in April and (ii) other net amount recoverable which are to be billed to beneficiaries in subsequent periods. Unbilled revenue of ₹ 12,304.88 crore (31 March 2020: ₹ 11,025.15 crore) is net of credits to be passed to beneficiaries at the time of billing and includes ₹ 10,044.48 crore (31 March 2020: ₹ 8,064.11 crore) billed to the beneficiaries after 31 March 2021 for energy sales.

Other current financial assets mainly include advances to subsidiary and joint venture companies and other related parties, employees & others and current maturities of finance lease receivables.

(g) Other current assets (Note-18)

Other current assets comprise of security deposits, advances to related parties, contractors and suppliers, short term advances to employees, claims recoverable etc.

(₹ Crore)

Particulars	As at March 31		%
	2021	2020	Change
Security deposits (unsecured)	1,773.91	1,464.40	21%
Advances	2,981.55	1,584.49	88%
Claims recoverable	3,602.31	4,732.50	(24)%
Others	170.10	279.59	(39)%
Total	**8,527.87**	**8,060.98**	**6%**

Other current assets have increased from ₹ 8,060.98 crore as at 31 March 2020 to ₹ 8,527.87 crore as at 31 March 2021 mainly due to increase in advances against purchase of coal.

Claims recoverable includes claims amounting to ₹ 1,747.94 crore (₹ 2,565.90 crore as at 31 March 2020) made against coal companies in accordance with the fuel supply agreements mainly towards grade slippages. Claims recoverable also includes claims against Railways amounting to ₹ 1,752.74 crore (₹ 1,878.58 crore as at 31 March 2020) mainly towards diversion of coal rakes. These are regularly reviewed and reconciled with the Coal Companies and Indian Railways.

5 Regulatory deferral account debit balances (Note-19)

Expense/income recognized in the Statement of Profit & Loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'. Regulatory deferral account balances are adjusted from the year in which the same become recoverable from or payable to the beneficiaries.

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the provisions related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This has been taken up with CERC through truing up tariff petition. There is no change in the amount of ₹ 759.40 crore accounted for in this regard in the current year as well as in the previous year, since the asset has been created up to 31 March 2019.

Further, exchange differences arising from settlement/ translation of monetary items denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Movements in Regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of ₹ 874.92 crore as at 31 March 2021 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2020: ₹ 1,271.27 crore).

CERC Regulations provide that deferred tax liability up to 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹ 7,567.94 crore as at 31 March 2021 (31 March 2020: ₹ 6,265.24 crore) has been accounted for as 'Regulatory deferral account debit balance'.

The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash has been favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016, subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount of ₹ 1,830.65 crore as at 31 March 2021 (31 March 2020: ₹ 826.85 crore) has been accounted for as 'Regulatory deferral account debit balance'.

CERC Regulations provide that the capital expenditure in respect of existing generating station incurred /projected to be incurred, inter-alia, towards liabilities to meet award of arbitration (i) within the original scope of work after the COD up to the cut-off date; (ii) within the original scope of work and after the cut-off date; and (iii) beyond the original scope of work, will be admitted by CERC subject to prudence check. Keeping in view the above, regulatory deferral account debit balance has been accounted amounting to ₹ 110.81 crore as at 31 March 2021 (31 March 2020: Nil) corresponding to the amount debited in the Statement of profit and loss.

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

(₹ Crore)

Particulars	Regulatory deferral account debit balances
A. Opening balance as on 1 April 2020	9,122.76
B. Addition during the year	2,170.03
C. Adjustments during the year	(135.15)
D. Amount collected/refunded during the year	(13.92)
E. Regulatory deferral account balances recognized in the statement of profit and loss (B+D)	2,156.11
F. Closing balance as on 31 March 2021 (A+C+E)	**11,143.72**

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects.

6 Total equity (Note-20 & Note-21)

The total equity of the Company at the end of financial year 2020-21 increased to ₹ 1,18,985.49 crore from

₹ 1,13,569.44 crore in the previous year, an increase of 5%. Major reasons for the same are tabulated below:

(₹ Crore)

Particulars	Total Equity
Opening balance as on 1 April 2020	1,13,569.44
Profit for the year	13,769.52
Other comprehensive income and other adjustments to reserves	(58.59)
Dividend payments	(5,531.06)
Amount utilised for the Buyback of equity shares	(2,763.82)
Balance as on 31 March 2021	**1,18,985.49**

The President of India, acting through the Ministry of Power, holds 495,53,46,251 shares constituting 51.10% of total equity shares and balance 474,13,19,883 i.e., 48.90% equity shares are publicly held as at 31 March 2021.

Pursuant to the approval of Board of Directors of the Company for buyback of equity shares in its meeting held on 2 November 2020, the Company has bought back 19,78,91,146 equity shares of the Company for an aggregate amount of ₹ 2,275.75 crore being 2% of the total paid up equity share capital at ₹ 115.00 per equity share during the year. Accordingly, the paid-up equity share capital has been reduced by ₹ 197.89 crore and other equity is reduced by ₹ 2,565.93 crore ((including tax on buy back of shares of ₹ 484.06 crore and other buyback expenses of ₹ 4.01 crore (net of tax)).

The increase in total equity and decrease in number of outstanding shares due to Buyback of shares resulted in book value per share rising to ₹ 122.71 from ₹ 114.78 as at the end of previous year.

7 Non-current and current liabilities (Note-22 to Note-32)

Details of non-current and current liabilities are discussed below:

a. Non-current financial liabilities-Borrowings (Note-22):

Total borrowings as at 31 March 2021 were ₹ 1,61,628.87 crore in comparison to ₹ 1,52,693.62 crore as at 31 March 2020. Current maturities out of long-term borrowings have been shown under current liabilities. Details of the total borrowings are as under:

(₹ Crore)

Particulars	As at March 31	
	2021	2020
Non-current borrowings in Non-current financial liabilities-Borrowings (Note-22)	1,51,229.62	1,46,538.70
Current maturities of non-current borrowings included in current liabilities-Other financial liabilities (Note-30)	10,399.25	6,154.92
Total borrowings*	**1,61,628.87**	**1,52,693.62**

*Includes adjustments for transaction costs on borrowings as per Ind-AS.

A summary of the borrowings outstanding is given below:

(₹ Crore)

Particulars	Non-current financial liabilities (Note-22)		Other current financial liabilities (Note-30)		Total borrowings		% Change
	2021	2020	2021	2020	2021	2020	
Secured							
Domestic bonds	37,688.85	38,882.85	1,194.50	1,542.00	38,883.35	40,424.85	(4)%
Others	4.41	13.22	9.63	8.75	14.04	21.97	(36)%
Sub-total	**37,693.26**	**38,896.07**	**1,204.13**	**1,550.75**	**38,897.39**	**40,446.82**	**(4)%**
Unsecured							
Foreign currency borrowings	38,943.89	42,644.15	6,057.15	1,849.41	45,001.04	44,493.56	1%
Rupee term loans	62,002.72	64,288.44	2,995.80	2,657.10	64,998.52	66,945.54	(3)%
Domestic bonds	11,873.54	-	-	-	11,873.54	-	-
Others	716.21	710.04	142.17	97.66	858.38	807.70	6%
Sub-total	**1,13,536.36**	**1,07,642.63**	**9,195.12**	**4,604.17**	**1,22,731.48**	**1,12,246.80**	**9%**
Total	**1,51,229.62**	**1,46,538.70**	**10,399.25**	**6,154.92**	**1,61,628.87**	**1,52,693.62**	**6%**

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Total borrowings have increased by 6% over the last financial year. Debt amounting to ₹ 30,431.12 crore was raised during the financial year 2020-21. The amount raised through term loans, bonds and foreign currency borrowings is used for capital expenditure, refinancing, recoupment of capital expenditure and other general corporate purposes.

Details in respect of proceeds and repayment of borrowings for the financial year 2020-21 are as under:

(₹ Crore)

Source (Principal Amount)	Debt raised	Repayment	Net
Rupee term loans	13,981.40	15,928.40	(1,947.00)
Domestic bonds	11,874.10	1,542.00	10,332.10
Foreign borrowings	4,575.62	2,894.05	1,681.57
Total	**30,431.12**	**20,364.45**	**10,066.67**
FERV on foreign borrowings			(1,115.71)
Transaction costs			(58.46)
Others (Finance lease obligations)			42.75
Total			**8,935.25**

Rupee Term loans: Banks and domestic financial institutions continued to support the capex program of the Company by extending term loans for financing the on-going capacity expansion plans. During the financial year 2020-21, agreements for term loans of ₹ 14,100 crore were entered into with various banks. An amount of ₹ 13,981.40 crore was drawn from domestic banks & financial institutions during the year and an amount of ₹ 15,928.40 crore was repaid during the year. The undrawn balance available under various sanctioned loans from domestic banks and financial institutions was ₹ 3,533.60 crore as at 31 March 2021.

Domestic bonds: During the financial year 2020-21, Company raised ₹ 11,874.10 crore through private placement of domestic bonds. Bonds amounting to ₹ 1,542 crore were redeemed during the year.

Foreign borrowings:

During the financial year 2020-21, the Company has signed a loan agreement with Japan Bank for International Cooperation (JBIC) for a syndicated loan facility of JPY 50 billion. Proceeds of the loan will be utilized towards Capex on 16 FGD projects & 5 Renewable projects, as identified by JBIC & NTPC. This facility is having a moratorium of 3 years and repayment period of 12 years. The facility has been extended under JBIC's initiative entitled 'Global action for Reconciling Economic growth and Environmental preservation' ("GREEN") funding. This is the cheapest loan ever raised by NTPC from overseas market. Out of the JPY 50 billion, JPY 10 billon have been drawn.

Further, the Company has signed a syndicated term loan in Euro equivalent to US$260 million with a consortium of State Bank of India, Frankfurt Branch, Bank of Baroda, IFSC GIFT City Branch and Sumitomo Mitsui Banking Corporation, Singapore Branch. The loan proceeds shall be utilized by the Company for funding its capital expenditure for ongoing/new capacity addition program including, renewable energy projects, coal mining & washeries, refinancing of existing ECBs/Rupee loans availed domestically for CAPEX etc. to the extent, the same is in compliance with end-use or other requirements stipulated under the applicable laws. The facility has a door-to-door maturity of 7 years. Amount drawn under this facility till 31 March 2021 is NIL.

NTPC has conducted a liability management exercise through buyback / repurchase of Masala Bonds during the year. Notes amounting to ₹ 993 crore (Masala Bond 2021) and ₹ 92 crore (Masala Bond 2022) were tendered for repurchase by the eligible noteholders and the same were accepted for repurchase by the Company.

In all, the Company has drawn ₹ 4,575.62 crore during the year from foreign currency loans and repaid foreign currency debts amounting to ₹ 2,894.05 crore.

The Company continues to enjoy highest credit ratings for its bonds programme and borrowings from banks, while Company's International Ratings are at par with sovereign ratings as detailed hereunder:

Credit Rating Agency	Rating	Remarks
Domestic		
CRISIL	CRISIL AAA/Stable	Highest ratings
ICRA	[ICRA] AAA (Stable)	
CARE	CARE AAA; Stable	
INDIA Ratings	IND AAA/Stable	
International		
S&P	BBB-/Stable	Equivalent to sovereign ratings
Fitch	BBB-/Negative	
Moody's	baa3/Negative	

The debt-to-equity ratio at the end of financial year 2020-21 of the Company increased to 1.37 as against 1.35 of the previous financial year. The Debt Service Coverage Ratio (DSCR) and Interest Service Coverage Ratio (ISCR) for financial year 2020-21 are 2.37 and 4.44 respectively.

Formula used for computation of coverage ratios DSCR = Earnings before Interest, Depreciation & amortisation, Tax and Exceptional items/ (Interest net of transfer to expenditure during construction + Principal repayments of the long-term borrowings excluding prepayments made out of refinancing arrangements) and ISCR = Earnings before Interest, Depreciation & amortisation, Tax and Exceptional items/ (Interest net of transfer to expenditure during construction).

The maturity profile of the principal amount of borrowings by the Company is as under:

(₹ Crore)

Particulars	Domestic Borrowings	Foreign Borrowings	Total
Up to 1 year	4,190.30	6,057.15	10,247.45
Beyond 1 and within 3 years	25,086.28	7,433.41	32,519.69
Beyond 3 and within 5 years	22,587.03	12,481.30	35,068.33
Beyond 5 and within 10 years	44,855.41	18,636.51	63,491.92
Beyond 10 years	19,039.45	690.03	19,729.48
Total	**1,15,758.47**	**45,298.40**	**1,61,056.87**

*Excluding transaction costs

b. **Non-current financial liabilities- Trade payables (Note-23) & Other financial liabilities (Note-24)**

Non-current trade payables have increased from ₹ 68.01 crore as at 31 March 2020 to ₹ 80.01 crore as at 31 March 2021.

Other financial liabilities primarily consist of liabilities for capital expenditure and others. Other financial liabilities have increased from ₹ 652.24 crore as at 31 March 2020 to ₹ 1,390.67 crore as at 31 March 2021.

c. **Non-current liabilities- Provisions (Note-25):**

Non-current provisions consist of amounts provided towards employees' benefits as per actuarial valuation, which are expected to be settled beyond a period of 12 months from the Balance Sheet date. Non-current provisions as at 31 March 2021 were ₹ 826.25 crore as compared to ₹ 826.74 crore as at 31 March 2020.

d. **Non-current liabilities - Deferred tax liabilities (net) (Note-26)**

Deferred tax liabilities (net) have increased from ₹ 8,093.98 crore as at 31 March 2020 to ₹ 9,160.99 crore as at 31 March 2021. The increase in deferred tax liability during the year is mainly because of capitalisation of new units of 2,490 MW during the year 2020-21.

e. **Non-current liabilities - Other (Note-27)**

Other non-current liabilities have increased from ₹ 541.88 crore as at 31 March 2020 to ₹ 1,111.81 crore as at 31 March 2021. Other non-current liabilities comprise of government grants received in advance amounting to ₹ 592.20 crore (31 March 2020: Nil) for which attached conditions are to be fulfilled / works to be completed relating to various solar power plants. These amounts will be recognized as revenue corresponding to the depreciation charge in future years on completion of related projects. Other non-current liabilities also include unamortised portion of grants received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects amounting ₹ 493.43 crore (31 March 2020: ₹ 518.52 crore). These amounts will be recognized as revenue corresponding to the depreciation charge in future years.

f. **Current liabilities (Note-28 to Note-32)**

The current liabilities as at 31 March 2021 were ₹ 58,440.14 crore as against ₹ 54,704.16 crore as at the end of previous year. The break-up of current liabilities is as under:

(₹ Crore)

Particulars	As at March 31		Y-o-Y Change	% Change
	2021	2020		
Borrowings (Note-28)	12,859.74	14,049.36	(1,189.62)	(8)%
Trade payables (Note-29)	7,182.47	9,000.63	(1,818.16)	(20)%
Other financial liabilities (Note-30)	30,051.74	23,715.74	6,336.00	27%
Other current liabilities (Note-31)	1,070.14	1,299.26	(229.12)	(18)%
Provisions (Note-32)	7,276.05	6,639.17	636.88	10%
Total	**58,440.14**	**54,704.16**	**3,735.98**	**7%**

In order to finance the mismatches in the short-term fund requirement, short-term borrowings (Note-28) in the form of commercial papers and cash credit were resorted to by the Company. The commercial papers outstanding net of unamortised discount as on 31 March 2021 were ₹ 12,859.74 crore as against ₹ 12,819.15 crore as on 31 March 2020.

The trade payables (Note-29) mainly comprise amount payable towards supply of goods & services, deposits & retention money from contractors etc. Trade payables have decreased by ₹ 1,818.16 crore i.e., from ₹ 9,000.63 crore as at 31 March 2020 to ₹ 7,182.47 crore as at 31 March 2021.

Other current financial liabilities (Note-30) mainly comprise of current maturities of long-term borrowings, interest accrued but not due on borrowings and payables towards capital expenditure. The details of other current financial liabilities are as under:

(₹ Crore)

Particulars	As at March 31	
	2021	2020
Other current financial liabilities	30,051.74	23,715.74
Less: Current maturities of long-term borrowings and finance lease obligations	10,399.25	6,154.92
Less: Interest accrued but not due on borrowings	1,977.56	1,968.69
Other current financial liabilities (net)	17,674.93	15,592.13

Other current financial liabilities have increased mainly due to; increase in payable for capital expenditure which has increased from ₹ 13,421.46 crore as on 31 March 2020 to ₹ 14,748.47 crore as on 31 March 2021 and increase in payable to customers which has increased from ₹ 40.53 crore as on 31 March 2020 to ₹ 896.38 crore as on 31 March 2021.

Other current liabilities (Note-31) mainly consist of advances from customers & others and statutory dues. Other current liabilities have decreased by ₹ 229.12 crore i.e., from ₹ 1,299.26 crore as at 31 March 2020 to ₹ 1,070.14 crore as at 31 March 2021.

Current liabilities-provisions (Note-32) mainly consist of provisions for employee benefits, provision for obligations incidental to land acquisition, provision for tariff adjustments and other provisions. As at 31 March 2021, the Company had outstanding current liabilities-provisions of ₹ 7,276.05 crore as against ₹ 6,639.17 crore as at 31 March 2020. The provision for employee benefits has increased from ₹ 1,332.21 crore as on 31 March 2020 to ₹ 1,423.30 crore as on 31 March 2021.

Provision for tariff adjustment has become ₹ 360.28 crore as at 31 March 2021 as against ₹ 190.68 crore as at 31 March 2020 as detailed below:

(₹ Crore)

Opening Balance as at 1 April 2020	**190.68**
Add: Provision for interest, which could be payable on the differential amount considered for revenue recognition and billing	169.60
Closing Balance as at 31 March 2021	**360.28**

Provision for others has increased from ₹ 1,610.27 crore as on 31 March 2020 to ₹ 2,116.67 crore as on 31 March 2021.

Provision for others comprise ₹ 103.88 crore (31 March 2020: ₹ 101.05 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MOP&NG) including interest thereon in relation to Block AA-ONN-2003/2, ₹2,010.17 crore (31 March 2020: ₹ 1,506.83 crore) towards provision for cases under litigation and ₹ 2.62 crore (31 March 2020: ₹ 2.39 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation.

8 Deferred revenue (Note-33)

Deferred revenue consists of income from foreign currency fluctuation detailed as under:

(₹ Crore)

Deferred revenue on account of	As at March 31	
	2021	2020
Income from foreign currency fluctuation	1,994.41	2,672.30

Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years as per accounting policy. This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities.

B. Results from operations

1 Total Income (Note-34 & Note-35)

Sl.	Particulars	FY 2020-21	FY 2019-20	% Change
	Units of electricity sold (MUs)	**2,51,649**	**2,40,204**	**4.76%**
	Revenue			**₹ Crore**
1	Energy sales (Including electricity duty)	95,423.48	93,937.48	1.58%
2	Sale of energy through trading	3,112.51	2,903.59	7.20%
3	Consultancy & other services	247.37	245.17	0.90%
4	Lease rentals on assets on operating lease	156.18	156.18	0.00%
5	Sale of Captive coal to Subsidiary company	100.09	200.91	(50.18)%
6	Energy internally consumed	60.97	76.02	(19.80)%
7	Interest from beneficiaries	27.82	127.09	(78.11)%
8	Interest income on assets under finance lease	51.54	59.90	(13.96)%
9	Recognized from Government grants	26.71	(5.95)	(548.91)%
10	Income from E-mobility business	0.05	-	100.00%
	Revenue from operations	**99,206.72**	**97,700.39**	**1.54%**
11	Other income	4,345.99	2,778.02	56.44%
	Total income	**1,03,552.71**	**1,00,478.41**	**3.06%**

The income of the Company comprises of income from energy sales, sale of energy through trading, consultancy and other services, operating lease rentals on assets, sale of captive coal to subsidiary, interest and surcharge received from the beneficiaries, interest earned on investments such as term deposits with banks, interest on loan to employees & subsidiary and joint venture companies and dividend from long-term investment in subsidiary, joint venture and other companies. The total income for financial year 2020-21 is ₹ 1,03,552.71 crore as against ₹ 1,00,478.41 crore in the previous year registering an increase of 3.06%. The main reasons for increase in total income are increase in the energy sales, dividend from long-term investment in subsidiary, joint venture and other companies, increase in late payment surcharge from beneficiaries and provisions written back.

The major revenue comes from energy sales. The tariff for computing energy sales is determined in terms of CERC

Regulations as notified from time to time, which are briefly discussed below:

Tariff for computation of sale of energy (Note-34)

The CERC notified the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019) for determination of tariff for the tariff period 2019-2024. Pending issue of provisional/final tariff orders with effect from 1 April 2019, revenue recognition from sale of energy is being done in terms of the provisions enunciated under the Tariff Regulations 2019. Capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019. In case of projects declared commercial w.e.f. 1 April 2019 and projects where tariff applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in the tariff petitions. Energy charges are billed as per the operational norms specified in the Regulations 2019.

Capacity charges

Tariff regulations 2019 are applicable from 1 April 2019, the capacity charge shall be recovered under two segments of the year, i.e., High Demand Season (period of three months) and Low Demand Season (period of remaining nine months), and within each season in two parts viz., Capacity Charge for Peak Hours of the month and Capacity Charge for Off- Peak Hours of the month. Capacity charges for 2020-21, has been billed as per the provisions of Tariff Regulations 2019.

Energy charges

The energy charges cover the primary and secondary fuel cost and limestone consumption cost (where applicable). Energy charges for coal-based station are to be calculated based on normative heat rate, normative APC, weighted average landed price of primary fuel & secondary fuel and weighted average GCV of coal on 'as received' less 85 Kcal/kg on account of variation during storage & weighted average GCV of secondary fuel respectively as per the Tariff Regulations 2019.

Energy charges for gas-based station have been calculated based on normative heat rate, weighted average landed price of primary fuel and weighted average GCV of primary fuel.

Other charges

Besides the capacity and energy charges, the other elements of tariff are:

- Special Allowance: For the financial year 2020-21, special allowance has been considered for units which have completed 25 years as on 31 March 2020 in terms of Tariff Regulations 2019.
- Sharing of gains due to variation in norms: As per Regulation 60, financial gains on account of controllable parameters- station heat rate, auxiliary consumption and secondary fuel oil consumption, have been accounted for based on monthly operating parameters, to be shared with the beneficiaries on annual basis, in the ratio of 50:50.
- Sharing of Non-Tariff Income: As per Regulation 62, non-tariff income from rent of land or building, sale of scrap and advertisements has been accounted for, to be shared with beneficiaries on annual basis, in the ratio of 50:50.
- Compensation for degradation: Compensation for degradation of heat rate, APC and secondary fuel consumption due to part load operations and multiple start/stop of units are being accounted as per CERC order dated 5 May 2017 relating to operating procedures and the compensation mechanism in terms of Grid Code.
- Incentive: As per Regulation 49(B)(a), incentive to be accounted for ex-bus schedule energy corresponding to scheduled generation in excess of ex-bus energy corresponding to 85% PLF.

With effect from 1 April 2019, CERC issued directions for implementation of the pilot project on Security Constrained Economic Dispatch (SCED) for inter-state generating stations. This mechanism helps in optimization of total schedule of the Inter State Generating Stations based on the variable cost, resulting in savings in cost of procurement for the DISCOMs. CERC has extended the implementation of the SCED pilot till 30 September 2021 to gain more insights on different aspects related to optimal scheduling and dispatch across multiple market avenues.

Each element of total revenue is discussed below:

Energy sales (including electricity duty)

Your Company sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private DISCOMs operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Income from energy sales (including electricity duty) for the financial year 2020-21 was ₹ 95,423.48 crore constituting 92% of the total revenue. The income from energy sales (including electricity duty) has increased by 1.58% over the previous year's income of ₹ 93,937.48 crore.

During the year, there is an increase in the commercial capacity by 2,490 MW as detailed below:

Project/Unit	Capacity (MW)	Commercial Operation Date
Khargone	660	4 April 2020
Lara	800	7 November 2020
Gadarwara	800	1 March 2021
Auraiya Solar	20	10 November 2020, 4 December 2020 & 20 February 2021
Bilhaur Solar	210	18 January 2021 & 28 March 2021
Total	**2,490**	

Further, the commercial capacity of 3,970 MW comprising one unit of 800 MW at Gadarwara, one unit of 800 MW at Lara, one unit of 800 MW at Darlipalli, one unit of 660 MW at Tanda, one unit of 660 MW at Khargone and one unit of 250 MW at Barauni, which were declared under commercial operation during the financial year 2019-20, were available

for the entire financial year 2020-21 as compared to part of financial year in 2019-20.

Energy charges for the year are billed as per the operational norms specified in the Regulations 2019. The amount provisionally billed is ₹ 94,099.85 crore (31 March 2020: ₹ 91,339.38 crore).

Sales have been provisionally recognized at ₹ 94,464.04 crore (31 March 2020: ₹ 91,491.55 crore) on the said basis.

Sales include (-) ₹ 1,101.47 crore (31 March 2020: ₹ 1,768.88 crore) on account of income tax recoverable from / (refundable to) the beneficiaries as per Regulations, 2004 due to reversal of tax provisions created in the previous year pursuant to 'Vivad se Vishwas Scheme' (VsVs) introduced by the government vide 'The Direct Tax Vivad Se Vishwas Act, 2020 for settlement of pending income tax disputes. Sales also include ₹ 81.88 crore (31 March 2020: ₹ 79.97 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019.

Sales include ₹ 1,154.64 crore (31 March 2020: ₹ 31.59 crore) pertaining to earlier years on account of revision of energy charges due to grade slippages and other adjustments. Energy sales and sale of energy through trading are net of rebate to beneficiaries amounting to ₹ 391.53 crore (31 March 2020: ₹ 433.84 crore).

The average tariff for the financial year 2020-21 is ₹ 3.77/kWh as against ₹ 3.90/kWh in the previous year. The average tariff includes adjustments pertaining to previous years. If the impact of such adjustments were to be excluded, the average tariff would be ₹ 3.76/kWh in the financial year 2020-21 as against ₹ 3.82/kWh in the previous year.

Most of the beneficiaries have opened letters of credit of average monthly billing. In order to ensure prompt and early payment of bills for supply of energy to beneficiaries, your Company has formulated a rebate scheme by way of providing graded incentive for early payment based on the bill (s) raised on state utilities who are the members of NTPC's rebate scheme. The rebate is netted off from energy sales.

Sale of energy through trading

Your Company is purchasing power from the developers and selling it to the DISCOMs on principal-to-principal basis. During the financial year, your Company has accounted sales of energy purchased from solar power plants set up under National Solar Mission of ₹ 3,112.51 crore (31 March 2020: ₹ 2,903.59 crore).

Consultancy and other services

Accredited with an ISO 9001:2008 certification, the Consultancy division of your Company undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management, construction management, operation & maintenance of power plants, research & development, management consultancy etc.

During the financial year 2020-21, Consultancy division posted a revenue of ₹ 247.37 crore as against ₹ 245.17 crore achieved in the last financial year.

Lease rentals on assets on operating lease

The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which may be extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangements with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease. Accordingly, the lease rentals amounting to ₹ 156.18 crore has been recognised in the financial year 2020-21 (31 March 2020: ₹ 156.18 crore).

Sale of captive coal

Your Company has declared Dulanga coal mine commercial w.e.f. 1 October 2020. CERC vide notification dated 19 February 2021, notified the Second amendment to Tariff Regulations 2019, which inter alia includes mechanism for determination of transfer price of coal from integrated coal mines to generating stations and are effective for the period 2019-24. Coal extracted from Company's captive mines and supplied to generating stations have been accounted considering these Regulations. The supply of coal from such mines under operation to a subsidiary company are disclosed as 'Sale of captive coal to subsidiary company'. During the financial year, your Company has accounted sale of Captive coal to Subsidiary company of ₹ 100.09 crore (31 March 2020: ₹ 200.91 crore).

Energy internally consumed

Energy internally consumed relates to own consumption of power for construction works at station(s), township power consumption, etc. It is valued at variable cost of generation and is shown in 'Revenue from operations' with a debit to corresponding expense head under power charges. The value of energy internally consumed during the financial 2020-21 was ₹ 60.97 crore as compared to ₹ 76.02 crore in the last financial year. There is a 19.80% decrease in the value of energy internally consumed during the year over the previous year mainly due to decrease in fuel cost.

Interest from beneficiaries

CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover from /pay to the beneficiaries the under/over recovered amount along-with simple interest. Accordingly, the interest recoverable from the beneficiaries amounting to ₹ 27.82 crore (31 March 2020: ₹ 127.09 crore) has been recognised as 'Interest from beneficiaries'.

Interest income on assets on finance lease

The Company had ascertained that the PPA entered into for a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted

as Finance Lease Receivable (FLR) on transition date to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease'. Accordingly, an amount of ₹ 51.54 crore has been recognised in the financial year 2020-21 as compared to ₹ 59.90 crore in the last financial year.

Other income (Note 35)

'Other income' mainly comprises of income from interest on term deposits with banks, interest on loan to employees, dividend from investments in subsidiary & joint venture companies and 'Other non-operating income' comprising mainly surcharge received from beneficiaries, sale of scrap, miscellaneous income & provisions written back.

'Other income' in the financial year 2020-21 was ₹ 4,345.99 crore as compared to ₹ 2,778.02 crore in the previous year. Broadly, the break-up of other income is as under:

(₹ Crore)

Particulars	FY 2020-21	FY 2019-20
Income from deposits/loans, current investment in mutual funds, profit on redemption of current investments	47.56	29.04
Dividend from JVs and Subsidiary Companies/Interest from Subsidiary Company	1,323.83	229.78
Surcharge from beneficiaries	2,315.74	1,633.20
Provision written back	132.04	471.04
Income earned on other heads such as hire charges, profit on disposal of assets, etc.	569.21	460.38
Total	**4,388.38**	**2,823.44**
Less: Transfer to EDC/ development of coal mines	42.39	45.42
Net other income	**4,345.99**	**2,778.02**

The Company has earned income of ₹ 47.56 crore during the financial year 2020-21 on account of term deposits made in banks, investments in mutual funds and redemption of current investments as against ₹ 29.04 crore earned last year. The income from investment in bank term deposits, mutual funds etc. has registered an increase of ~64% from the last financial year.

The Company has earned ₹ 1,274.19 crore as dividend from its investments in subsidiaries and joint venture companies. Further, ₹ 49.64 crore has been earned as interest from loan to subsidiary companies. Also, an amount of ₹ 3,016.99 crore has been earned from various other sources mainly consisting of surcharge from beneficiaries ₹ 2,315.74 crore, miscellaneous income ₹ 191.53 crore, sale of scrap ₹ 149.67 crore, interest on loans to employees ₹ 64.04 crore, provision written back on impairment of investments in joint venture companies ₹ 103.47 crore, income tax refunds ₹ 24.33 crore and interest on advance to contractors ₹ 110.03 crore.

2. Expenses (Statement of Profit & Loss and Note-36, 37, 38, 39 & 40)

2.1 Expenses related to operations

Year	FY 2020-21		FY 2019-20	
Commercial generation (MUs)	269,955		257,829	
Expenses	**₹ Crore**	**₹ per kWh**	**₹ Crore**	**₹ per kWh**
Fuel	52,849.64	1.96	54,241.82	2.10
Employee benefits expense	4,942.19	0.18	4,925.60	0.19
Other expenses	9,580.28	0.35	8,663.81	0.34
Total	**67,372.11**	**2.49**	**67,831.23**	**2.63**

Expenses indicated above includes expenses of consultancy division and coal supplied to subsidiary company.

The expenditure incurred on fuel, employee benefits expense and other expenses for the financial year 2020-21 was ₹ 67,372.11 crore as against the expenditure of ₹ 67,831.23 crore incurred during the previous year. In terms of expenses per unit of power produced, it was ₹ 2.49 per unit in the financial year 2020-21 as against ₹ 2.63 per unit in the previous year. In absolute terms, component-wise, there has been decrease in the fuel cost, increase in employee benefits expenses and in the other expenses. The increase in commercial generation due to commercial operation of new units i.e., units declared under commercial operations during the year as well as units declared under commercial operation during financial year 2019-20 which were under operation for part of the previous year as against under operation for the full year during the current year has resulted in an additional operational expenditure of ₹ 4,481.03 crore.

A discussion on each of these components is given below:

2.1.1 Fuel

Expenditure on fuel constituted ~79% of the total expenditure relating to operations. Expenditure on fuel was ₹ 52,849.64 crore in the financial year 2020-21 in comparison to ₹ 54,241.82 crore in the financial year 2019-20 representing a decrease of 2.57%. The break-up of fuel cost in percentage terms is as under:

Particulars	FY 2020-21	FY 2019-20
Fuel cost (₹ Crore)	**52,849.64**	**54,241.82**
		% break-up
Coal	95.90%	95.15%
Gas	2.94%	3.67%
Oil	1.03%	1.18%
Naphtha	0.13%	0.00%

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For the financial year 2020-21, the expenditure towards fuel has decreased by ~6.76% mainly due to price variation mostly on account of less quantity of coal transported through Railways. However, this decrease is partly compensated by ~3.52% due to increase in fuel cost because of quantity variation as a result of increased commercial generation in coal & gas stations and also by ~0.67% due to increase in the previous year fuel cost.

The expenditure towards other component of fuel cost i.e., oil has also decreased. The decrease in the expenditure towards oil is due to lower average price during the financial year 2020-21 as compared to the previous year.

An increase of ₹ 3,969.88 crore in fuel cost is attributable to new commercial capacity added during the year as well as on commercial capacity added during previous year which was operational for part of the previous year as compared to full year operations during the current year.

Overall, fuel cost per unit generated decreased to ₹ 1.96 in the financial year 2020-21 from ₹ 2.10 in the financial year 2019-20.

The power plants of the Company use coal and natural gas as the primary fuels. Oil is used as a secondary fuel for coal-fired plants and naphtha as an alternate fuel in gas-fired plants. Under the tariff norms set by the CERC, your Company is allowed to pass on fuel charges through the tariff, provided the Company meets specified operating parameters.

2.1.2 Employee benefits expense (Note 37)

Employee benefits expense includes salaries & wages, bonus, allowances, benefits, contribution to provident & other funds and welfare expenses.

Employee benefits expense have increased to ₹4,942.19 crore in the financial year 2020-21 from ₹ 4,925.60 crore in the financial year 2019-20.

An amount of ₹ 264.81 crore is attributable to new commercial capacity added during the year as well as on commercial capacity added during previous year which was operational for part of the previous year as compared to full year operations during the current year.

In terms of expenses per unit of generation, it is ₹ 0.18 in the financial year 2020-21 as compared to ₹ 0.19 in the previous year. These expenses account for approximately 7% of operational expenditure in the financial year 2020-21.

2.1.3 Other expenses (Note 40)

Other expenses primarily consist of the expenses for repair and maintenance of plant & machinery, buildings, cost of captive coal produced, water charges, security expenses, corporate social responsibility, electricity duty, travelling, power charges, insurance, training and recruitment and provisions. These expenses are approximately 14% of operational expenditure in the financial year 2020-21. In absolute terms, these expenses increased to ₹ 9,580.28 crore in the financial year 2020-21 from ₹ 8,663.81 crore in the financial year 2019-20, registering an increase of approximately 11%.

During the financial year 2020-21, the increase in other expenses is mainly due to increase in Provisions by ₹ 648.92 crore, Repair and maintenance expenses (net of EDC) by ₹ 464.44 crore, Ash utilization and marketing expenses (after transfer to fly ash reserve) by ₹ 356.39 crore, Electricity duty by ₹ 208.94 crore, Loss on disposal of investments by ₹ 139.75 crore, CSR expenses by ₹ 115.08 crore & Security expenses (net of EDC) by ₹ 109.07 crore. The increase in the aforesaid mentioned expenses have been offset to some extent due to gain in foreign currency transactions and translations to the tune of ₹ 154.97 crore in comparison with loss of ₹ 953.52 crore in the previous year.

In terms of expenses per unit of generation, it is ₹ 0.35 in the financial year 2020-21 as compared to ₹ 0.34 in the previous year. An increase of ₹ 246.34 crore is on account of new commercial capacity added during the year as well as on commercial capacity added during previous year which was operational for part of the previous year as compared to full year operations during the current year.

Other expenses also include provisions amounting to ₹914.65 crore made during the year as against ₹ 265.73 crore in the previous year.

2.2 Energy purchased for trading

Company has incurred expenditure of ₹ 3,031.25 crore in the financial year 2020-21 as compared to ₹ 2,776.44 crore in the previous year on purchase of energy for trading from solar power plants set up under National Solar Mission.

2.3 Finance costs (Note 38)

The finance costs for the financial year 2020-21 are ₹7,459.03 crore in comparison to ₹ 6,781.97 crore in the financial year 2019-20. The details of interest and other borrowing costs are tabulated below:

(₹ Crore)

Particulars	FY 2020-21	FY 2019-20
Interest on:		
Borrowings	9,954.76	9,387.24
Finance cost of commercial papers and unwinding of discount on vendor liabilities	659.79	983.63
Others	5.24	21.33
Total interest	**10,619.79**	**10,392.20**
Other borrowing costs	32.16	35.67
Exchange differences regarded as adjustment to interest costs	(412.63)	764.38
Total	**10,239.32**	**11,192.25**
Less: Transfers to		
Expenditure during construction period	2,511.77	4,182.54
Development of coal mines	268.52	227.74
Total Finance costs	**7,459.03**	**6,781.97**

Total interest (including interest during construction) has increased by 2% over last financial year due to increase in both long-term and short-term borrowings. The increase over last financial year was due to increase in long-term borrowings. Total borrowings as at 31 March 2021 were ₹ 1,61,628.87 crore in comparison to ₹ 1,52,693.62 crore as at 31 March 2020. For the financial year 2020-21, the average cost of borrowing has decreased to 6.24% from 6.81% in the previous year. The decrease in the average cost of borrowing is because of lower rate of interest on new borrowings.

Finance costs due to commercial papers however have decreased from ₹ 865.54 crore to ₹ 556.95 crore. Exchange differences regarded as an adjustment to borrowing costs (net of amount transferred to EDC) has also decreased significantly from ₹ 271.30 crore to (-) ₹ 240.00 crore due to strengthening of INR against USD & JPY.

For the financial year 2020-21, an amount of ₹ 2,511.77 crore relating to finance costs of projects under construction was capitalized while the corresponding amount for the previous year was ₹ 4,182.54 crore. In addition, finance cost of ₹ 268.52 crore has been capitalized in respect of development of coal mines as against ₹ 227.74 crore in the previous year.

2.4 Depreciation and amortization expense (Note 39)

The depreciation and amortization expense charged to the Statement of Profit and Loss during the financial year 2020-21 was ₹ 10,411.80 crore as compared to ₹ 8,622.85 crore in the financial year 2019-20, registering an increase of ~21%. This is due to increase in the gross PPE by ₹ 18,659.35 crore in the financial year 2020-21 over the previous year.

The increase in gross block is largely on account of increase in commercial capacity by 2,490 MW resulting in additional capitalization on account of commercial declaration of new units. The depreciation on new units capitalized during the year is on pro-rata basis. Further, depreciation for units declared commercial during financial year 2019-20 aggregating to 3,970 MW has been charged for the entire financial year 2020-21 as against a pro-rata charge during the financial year 2019-20. The impact on depreciation on this account for the financial year 2020-21 is ₹ 1,344.13 crore.

As per the accounting policy of the Company, depreciation on the assets of the generation of electricity business, integrated coal mining and on the assets of Corporate & other offices of the Company except the assets of Solar / Wind Power plants which are not governed by CERC Regulations, is charged on straight line method following the rates and methodology notified by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013 and depreciation on the assets of the oil & gas exploration and consultancy business, is charged on straight line method following the useful life specified in Schedule II of the Companies Act, 2013. In respect of assets of Solar /Wind power plants which are not covered by CERC regulations, depreciation is charged on straight line method over the useful life of 25 year as technically assessed by the management.

In case of certain assets, the Company has continued to charge higher depreciation based on technical assessment of useful life of those assets.

2.5 Exceptional Items (Note 43)

The Company is in the business of generation and sale of electricity, which is an essential service as emphasized by MOP, GOI. During the outbreak of COVID-19, the Company has ensured the availability of its power plants to generate power and has continued to supply power during the period of lockdown. In line with the directions of MOP dated 15 & 16 May 2020, issued in accordance with the announcement of GOI under the ATMANIRBHAR Bharat Special Economic and Comprehensive package, Company had allowed a rebate of between 20%-25% on the capacity charges during the lock down period amounting to ₹ 1,363.00 crore. The entire amount has since been accounted for and disclosed as exceptional item.

2.6 Net movement in regulatory deferral account balance (Net of tax) (Note 64)

The Company is mainly engaged in generation and sale of electricity. The price to be charged by the Company for electricity sold to its beneficiaries is determined by the CERC, which provides extensive guidance on the principles and methodologies for determination of the tariff for the purpose of sale of electricity. The tariff is based on allowable costs like interest, depreciation, operation & maintenance expenses, etc. with a stipulated return. This form of rate regulation is known as cost-of-service regulations, which provide the Company to recover its costs of providing the goods or services plus a fair return.

Exchange differences arising from settlement/ translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Movements in regulatory deferral account balances' during construction period and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of (-) ₹ 382.42 crore for the year ended as at 31 March 2021 including amount refunded has been accounted for as 'Regulatory deferral account debit balance' (31 March 2020: ₹ 1,202.93 crore)

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the provisions related to the change in law of CERC Tariff

Regulations, 2014, a regulatory asset has been created (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This has been taken up with CERC through truing up tariff petition. No amount has been accounted for in this regard in the current year as well as in the previous year since the asset has been created up to 31 March 2019.

CERC Regulations provide that deferred tax liability up to 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹ 1,437.85 crore (31 March 2020: ₹ 4,000.77 crore) for the year ended 31 March 2021 has been accounted for as 'Regulatory deferral account debit balance'.

The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash has been favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016, subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount of ₹ 1,003.79 crore (31 March 2020: ₹ 647.57 crore) for the year ended 31 March 2021 has been accounted for as 'Regulatory deferral account debit balance'.

CERC Regulations provide that the capital expenditure in respect of existing generating station incurred /projected to be incurred, inter-alia, towards liabilities to meet award of arbitration (i) within the original scope of work after the COD up to the cut-off date (Regulations 24); (ii) within the original scope of work and after the cut-off date (Regulations 25); and (iii) beyond the original scope of work (Regulation 26), will be admitted by CERC subject to prudence check. Keeping in view the above, regulatory deferral account debit balance has been accounted corresponding to the amount debited to Statement of profit & loss in respect of arbitration cases amounting to ₹ 110.81 crore (31 March 2020: Nil) for the year ended 31 March 2021.

Accordingly, for the financial year 2020-21, net movement in regulatory deferral account balances (net of tax) is ₹ 1,779.39 crore whereas for the financial year 2019-20, ₹ 4,828.84 crore was recognized as net movement in regulatory deferral account balances (net of tax).

3. Profit before tax & Regulatory deferral account balances

The profit of the Company before tax is tabulated below:

(₹ Crore)

Particulars	FY 2020-21	FY 2019-20
Total Income	1,03,552.71	1,00,478.41
Less:		
Expenditure related to operations	67,372.11	67,831.23
Energy purchased for trading	3,031.25	2,776.44
Finance cost	7,459.03	6,781.97
Depreciation and amortization expenses	10,411.80	8,622.85
Profit before exceptional items, tax and regulatory deferral account balances	15,278.52	14,465.92
Exceptional items	1,363.00	-
Profit before tax and regulatory deferral account balances	**13,915.52**	**14,465.92**

4. Tax expense (Note 49)

The Company provides for current tax in accordance with provisions of Income Tax Act, 1961 and for deferred tax considering the accounting policy of the Company.

Provision for current tax

A provision of ₹ 723.23 crore has been made towards current tax for the financial year 2020-21 as against the provision of ₹ 5,153.46 crore made for the financial year 2019-20.

GOI introduced Vivad se Vishwas Scheme (VsVs) through 'The Direct Tax Vivad Se Vishwas Act, 2020'. During the previous year, the Company had created an additional tax provision amounting to ₹ 2,661.47 crore as it proposed to settle all its pending Income Tax disputes for fourteen years (from F.Y. 2003-04 to 2016-17) by opting for the VsVs. During the year, the Company decided to settle its pending disputes for three years only (i.e., FY 2003-04, 2004-05 and 2008-09), under the VsVs, for which the Company is in the process of completion of procedural formalities. Accordingly, excess tax provision created in the previous year pursuant to VsVs, amounting to ₹ 1,889.05 crores has been written back during the year. Further, contingent liabilities for the remaining eleven years have been reinstated, amounting to ₹ 5,322.64 crore along with possible reimbursement of ₹ 1,789.69 crore.

Provision for deferred tax

The net increase in deferred tax liability during the year amounting to ₹ 1,202.16 crore (31 March 2020: ₹ 4,028.49 crore) has been debited to the Statement of Profit and Loss.

The decrease in deferred tax liability debited to the Statement of Profit and Loss during the year as compared to the previous year is mainly on account of capitalisation of new units of 2,490 MW during the year 2020-21 as against 3,970 MW in the previous year.

Details of tax provision

(₹ Crore)

Particulars	FY 2020-21		
	Current tax	Deferred tax	Total
Provision for financial year 2020-21	2,597.35	4,267.50	6,864.85
Adjustments for earlier years	(1,874.12)	-	(1,874.12)
MAT credit entitlement	-	(3,065.34)	(3,065.34)
Net provision as per Statement of Profit and Loss	723.23	1,202.16	1,925.39

(₹ Crore)

Particulars	FY 2019-20		
	Current tax	Deferred tax	Total
Provision for financial year 2019-20	2,493.29	5,410.81	7,904.10
Adjustments for earlier years	2,660.17	-	2,660.17
MAT credit entitlement	-	(1,382.32)	(1,382.32)
Net provision as per Statement of Profit and Loss	5,153.46	4,028.49	9,181.95

Net provision of tax for the financial year 2020-21 was ₹ 1,925.39 crore in comparison to ₹ 9,181.95 crore for the financial year 2019-20.

5. Profit after tax

The profit of the Company after tax is tabulated below:

(₹ Crore)

Particulars	FY 2020-21	FY 2019-20
Profit before tax and regulatory deferral account balances	13,915.52	14,465.92
Less: Tax expense	1,925.39	9,181.95
Add: Net movement in regulatory deferral account balances (net of tax)	1,779.39	4,828.84
Profit after tax	**13,769.52**	**10,112.81**

6. Other comprehensive income

The other comprehensive income net of tax for the financial year 2020-21 is (-) ₹ 68.19 crore in comparison to (-) ₹ 327.22 crore for the financial year 2019-20. For the financial year 2020-21, net actuarial loss on defined benefit plans is (-) ₹ 114.99 crore, while net gain on fair value of equity instruments is ₹ 46.80 crore as against net actuarial loss on defined benefit plan and net loss on fair value of equity instrument amounting to (-) ₹ 285.58 crore and (-) ₹ 41.64 crore respectively in the previous year.

7. Segment-wise performance

The Company has two reportable segments, i.e., 'Generation of energy' and 'Others', which are the Company's strategic business units. The Company's principal business is generation and sale of bulk power to State Power Utilities. Other segment includes providing consultancy, project management and supervision, energy trading, oil and gas exploration and coal mining. The strategic business units offer different products and services and are managed separately because they require different technology and marketing strategies.

The profit before unallocated corporate interest and other income & unallocated corporate expenses, interest and finance charges, in the generation business for the financial year 2020-21 was ₹ 23,793.73 crore as against ₹ 26,310.57 crore for financial year 2019-20. The loss before unallocated corporate interest and other income & unallocated corporate expenses, interest and finance charges from other segment was (-) ₹ 34.34 crore for financial year 2020-21 as against a profit of ₹ 520.03 crore in the previous year.

C. Cash flows

Cash & cash equivalents and cash flows on various activities are given below:

(₹ Crore)

Particulars	FY 2020-21	FY 2019-20
Opening cash & cash equivalents	**20.37**	**24.38**
Net cash from/ (used in) operating activities	27,057.78	21,583.98
Net cash from/ (used in) in investing activities	(17,341.63)	(27,246.84)
Net cash flow from/ (used in) financing activities	(9,646.47)	5,658.88
Exchange difference on translation of foreign currency cash and cash equivalents	-	(0.03)
Net increase / (decrease) in cash and cash equivalents	69.68	(4.01)
Closing cash & cash equivalents	**90.05**	**20.37**

Statement of cash flows comprises of cash flows from operating activities, investing activities and financing activities.

Net cash generated from operating activities increased to ₹ 27,057.78 crore during the financial year 2020-21 as compared to ₹ 21,583.98 crore in the previous year primarily due to improved position of trade receivables in the current year in comparison with previous year.

Cash outflows on investing activities arise from expenditure on setting up power projects, investments in joint ventures & subsidiaries, loans and advances to subsidiaries and tax outflow on income from investing activities. Cash inflows arise from interest from banks and dividend income from subsidiaries and joint ventures. Cash invested on purchase of fixed assets increased from ₹ 14,523.88 crore in the financial year 2019-20 to ₹ 18,307.09 crore in the financial year 2020-21. Cash outflow on account of investment in subsidiaries and joint ventures has decreased from ₹ 13,317.48 crore in the previous year to ₹ 1,645.16 crore in the financial year 2020-21 majorly due to acquisition of GOI stake in THDC and NEEPCO in the previous year. Considering all the investing activities, the net cash used in investing activities was ₹ 17,341.63 crore in the financial year 2020-21 as compared to ₹ 27,246.84 crore in the previous year.

During the financial year 2020-21, the Company had an inflow of ₹ 30,431.12 crore from non-current borrowings as against ₹ 28,775.62 crore in the previous year and net outflow of ₹ 1,189.62 crore from current borrowings as against net outflow of ₹ 1,326.73 crore in the previous year. Cash used for repayment of non-current borrowings during the financial year 2020-21 was ₹ 20,364.45 crore as against ₹ 7,667.17 crore repaid in the previous year. Interest paid during the year was ₹ 10,186.07 crore as compared to ₹ 10,503.90 crore during the previous year. Cash used for paying dividend was ₹ 5,531.06 crore (31 March 2020: ₹ 2,968.37 crore) and the dividend tax thereon was Nil (31 March 2020: ₹ 607.80 crore). Cash used for buyback of equity share capital was ₹ 2,763.82 crore (31 March 2020: Nil). Thus, from financing activities during the year, the Company has an outflow of ₹ 9,646.47 crore as against an inflow of ₹ 5,658.88 crore in the previous year.

FINANCIAL SUMMARY OF SUBSIDIARY COMPANIES

The Company has 12 subsidiary companies as on 31 March 2021, out of which 7 (NESCL, NVVN, KBUNL, NPGCL, NML, NEEPCO & NREL) are wholly owned by the Company. Equity investments in subsidiaries are measured at cost less impairment.

A summary of the financial performance of the subsidiary companies during the financial year 2020-21 based on their audited results is given below:

(₹ Crore)

Sl.	Company	NTPC's investment in equity	Total Income	Profit/ (Loss) for the year
1	NTPC Electric Supply Company Ltd.	0.08	7.35	5.52
2	NTPC Vidyut Vyapar Nigam Ltd.	30.00	4,058.35	92.02
3	Kanti Bijlee Utpadan Nigam Ltd.	1,610.67	1,514.90	134.53
4	Bhartiya Rail Bijlee Company Ltd.	1,774.12	2,231.48	282.48
5	Patratu Vidyut Utpadan Nigam Ltd.	887.62	0.01	(0.21)
6	Nabinagar Power Generating Company Ltd.	4,651.03	2,126.79	182.57
7	NTPC Mining Limited	0.05	-	-
8	THDC India Limited	7,500.00	2,502.01	1,092.15
9	North Eastern Electric Power Corporation Ltd.	4,000.00	2,554.44	47.91
10	NTPC EDMC Waste Solutions Pvt. Limited	0.15	-	(0.91)
11	NTPC Renewable Energy Limited	295.05	-	(3.51)
12	Ratnagiri Gas Power Pvt. Ltd. (net of impairment)	-	1,138.96	(124.46)
	Total	**20,748.77**	**16,134.29**	**1,708.09**

FINANCIAL SUMMARY OF JOINT VENTURE COMPANIES

Your Company has interests in the following joint venture companies as at 31 March 2021. Proportion of ownership and financial performance of the companies for the financial year 2020-21 are given below:

(₹ Crore)

Sl	Company	NTPC's interest (Ex. Share application Money)(%)	NTPC's investment in equity (net of impairment)	Total Income	Profit/ (Loss) for the year
A.	**Joint venture companies incorporated in India**				
1	Utility Powertech Ltd.*	50.00	1.00	1,419.87	50.05
2	NTPC-GE Power Services Private Ltd.	50.00	3.00	124.18	(5.48)
3	NTPC-SAIL Power Company Ltd.*	50.00	490.25	2,758.15	348.68
4	NTPC-Tamil Nadu Energy Company Ltd.	50.00	1,436.40	3,080.66	326.04
5	Aravali Power Company Private Ltd.	50.00	1,433.01	3,082.77	726.78
6	Konkan LNG Ltd.**	-	-	531.48	(124.87)
7	Meja Urja Nigam Private Ltd.	50.00	1,724.24	2,134.43	44.40
8	NTPC BHEL Power Projects Private Ltd.	50.00	-	50.59	(24.51)
9	National High-Power Test Laboratory Private Ltd.	20.00	30.40	15.55	(19.23)
10	Transformers & Electricals Kerala Ltd.	44.60	31.34	160.50	(13.18)
11	Energy Efficiency Services Ltd.	47.15	463.61	1,530.28	32.87
12	CIL NTPC Urja Private Ltd.	50.00	0.08	-	(0.01)
13	Anushakti Vidhyut Nigam Ltd.	49.00	0.05	-	-
14	Hindustan Urvarak and Rasayan Ltd.*	29.67	1,131.76	4.06	(16.32)
B.	**Joint venture companies incorporated outside India**				
15	Trincomalee Power Company Ltd., Sri Lanka	50.00	1.06	0.02	(0.49)
16	Bangladesh-India Friendship Power Company Private Ltd., Bangladesh	50.00	533.60	-	-
	Total		**7,279.80**	**14,892.54**	**1,324.73**

*Financial statements are audited.
**Exit w.e.f. 23 February 2021.

Consolidated financial results of NTPC Ltd.

A brief summary of the results on a consolidated basis is given below:

Particulars	FY 2020-21	FY 2019-20
Total income	1,15,546.83	1,12,372.58
Profit before exceptional items, tax and regulatory deferral account balances	16,998.93	16,377.51
Exceptional items-(income) / expense	1,512.19	-
Tax Expense	2,420.53	9,347.54
Profit before regulatory deferral account balances	13,066.21	7,029.97
Net movement in regulatory deferral account balances (net of tax)	1,903.19	4,872.01
Profit for the year	14,969.40	11,901.98
Other comprehensive income (net of tax)	(99.09)	(307.72)
Total comprehensive income for the year	14,870.31	11,594.26

CAUTIONARY STATEMENT

Statements in the Management Discussion and Analysis and in the Directors' Report, describing the Company's objectives, projections and estimates, contain words or phrases such as "will", "aim", "believe", "expect", "intend", "estimate", "plan", "objective", "contemplate", "project" and similar expressions or variations of such expressions, are "forward-looking" and progressive within the meaning of applicable laws and regulations. Actual results may vary materially from those expressed or implied by the forward-looking statements due to risks or uncertainties associated therewith depending upon economic conditions, government policies and other incidental factors. Readers are cautioned not to place undue reliance on these forward-looking statements.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date : 26th August, 2021



A View of Vallur Thermal Power Project, Tamil Nadu

REPORT ON CORPORATE GOVERNANCE

Corporate Governance is the system of practices, processes, policies and rules by which a company is directed, administered or controlled. The basic purpose of Corporate Governance is to allocate resources of the Company in a manner that maximizes value for all stakeholders i.e. shareholders, investors, employees, customers, suppliers, environment and the community. Corporate Governance casts responsibility on the officials at the helm of affairs of the Company to be accountable to its stakeholders by evaluating their decisions on the parameters of transparency, conscience, fairness, accountability and professionalism.

1. CORPORATE GOVERNANCE PHILOSOPHY

Our Corporate Governance philosophy has been scripted as under:

"As a good corporate citizen, our Company is committed to sound corporate practices based on conscience, openness, fairness, professionalism and accountability besides building confidence in its various stakeholders, thereby paving the way for long term success."

The above philosophy of corporate governance is guiding us in managing the company in a transparent manner for maximizing long-term value of the company for its shareholders and all other stakeholders.

2. THE BOARD OF DIRECTORS

The Board of Directors is the apex body constituted by Shareholders, for overseeing the Company's overall functioning. The Board provides strategic direction, leadership and guidance to the Company's Management and also monitors the performance of the Company with the objective of creating long-term value for the Company's stakeholders. The Board of Directors function in accordance with the powers delegated under the Companies Act, 2013, SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 {hereinafter referred as SEBI (LODR)}, Memorandum & Articles of Association, Maharatna Guidelines issued by Department of Public Enterprise (DPE) and other guidelines issued by the Government of India from time to time, as may be applicable on the Company.

2.1 Size & Composition of the Board

NTPC is a Government Company within the meaning of Section 2(45) of the Companies Act, 2013. As per the provisions of the Articles of Association of the Company, the strength of Board shall not be less than four Directors or more than twenty Directors. The Articles of Association further provide that the power to appoint Directors vests with the President of India. Presently, the sanctioned strength of the Board of Directors is as under:

(i) Six Functional Directors including the Chairman & Managing Director,

(ii) Two Government Nominee Directors and

(iii) Eight Independent Directors including one woman Independent Director as per the requirement of the SEBI (LODR).

However, against the sanctioned strength, as on 31st March, 2021 the Board of Directors of the Company comprises six (6) Functional Directors, two (2) Government Nominee Directors and two (2) Independent Directors. The position of Woman Independent Director was vacant during 2020-21 and from 28th August 2020, the number of Independent Directors were less than 50% of total number of Directors.

As NTPC is a Government Company, the request for the appointment of requisite number of Independent directors (including the Woman Independent Director) has been made to the Administrative Ministry i.e. Ministry of Power from time to time.

The details of the Board of Directors viz. their names, designation, the number of Directorships and Committee Chairmanships / Memberships held by them in other public limited companies and names of other listed entities in which the Director is a director as on March 31, 2021 are given herein below:

S. No.	Names of Directors	Designation	No. of other Directorship in other Companies	Directorship in Listed entity & Category	No. of other Directorship in other Public Companies	
					As Chairman	As Member
1.	Shri Gurdeep Singh	Chairman & Managing Director	1	-	-	-
2.	Shri Anil Kumar Gautam	Director (Finance)	5	PTC India Limited – Non – Executive Director[5]	1	2
3.	Shri Dillip Kumar Patel[1]	Director (Human Resource)	4	-	-	-
4.	Shri Ramesh Babu V.[2]	Director (Operations)	4	-	-	-
5.	Shri Chandan Kumar Mondol[3]	Director (Commercial)	6	-	-	-
6.	Shri Ujjwal Kanti Bhattacharya[4]	Director (Projects)	4	-	-	-
7.	Shri Ashish Upadhyaya	Govt. Nominee Director	-	-	-	-
8.	Shri Vivek Kumar Dewangan	Govt. Nominee Director	-	-	-	-

S. No.	Names of Directors	Designation	No. of other Directorship in other Companies	Directorship in Listed entity & Category	No. of other Directorship in other Public Companies	
					As Chairman	As Member
9.	Dr. K. P. Kylasanatha Pillay[6]	Independent Director	-	-	-	-
10.	Dr. Bhim Singh[6]	Independent Director	-	-	-	-

1. Appointed as Director (HR) on 1st April 2020.
2. Appointed as Director (Operations) on 1st May 2020.
3. Appointed as Director (Commercial) on 1st August 2020.
4. Appointed as Director(Projects) on 28th August 2020.
5. Ceased to be Director of PTC India Ltd. w.e.f. 17th June 2021.
6. Ceased to be Director on 16th July,2021.

None of the directors on Board is a member of more than 10 Committees or Chairperson of more than 5 Committees across all the Public companies in which they are a Director as prescribed under Regulation 26 of SEBI (LODR).

None of Directors of the Company is inter-se related to other directors of the Company.

2.2 Tenure of Directors

The Chairman & Managing Director and other whole-time Directors are generally appointed for a period of five years from the date of taking over the charge or until the date of superannuation or until further orders from the Government of India, whichever event occurs earliest. The tenure of the whole-time director can be extended further by the Government of India till the age of superannuation i.e. 60 years. Independent Directors are generally appointed by the Government of India for tenure of three years. Government Nominee Directors are appointed on ex - officio basis during their tenure in Ministry of Power (MOP).

2.3 Resume of Directors

Brief resume of directors seeking appointment or re-appointment at the Annual General Meeting is appended to the Notice calling the Annual General Meeting.

2.4 Core competencies of Directors

The Board comprises of qualified members who bring in the required skills, competence and expertise to effectively contribute in deliberations at Board and Committee meetings.

The Board of Directors, in its 251st meeting held on 25th November 2003, had approved the job description, qualification and experience for Board level posts including that of the Chairman & Managing Director. The desirable qualification and experience of the incumbents are as per the requirements in the functional areas i.e. Finance, Operations, Projects, Human Resource and Commercial. At the time of recruitment of the Functional Directors, job description, desirable qualification & experience of candidates are sent to the Public Enterprise Selection Board through the Administrative Ministry for announcement of vacancy and recruitment of candidates.

Further, Board of Directors, in 288th meeting held on 26th June 2006, had deliberated on the areas of expertise of Independent Directors required on the Board of the Company. In the above Board meeting, the Board decided that the Independent Directors, to be nominated by the Government of India on the Board of NTPC should be having expertise in the diverse areas like Economics, Human Resources Management, Regulatory Framework, Management Consultant, Research and Development, academics , Energy & Power Sector, Finance & Banking etc.

The matrix given at Annexure-I summarizes a mix of skills, expertise and competencies possessed by Directors. It is pertinent to mention that being a Government Company, appointment of Director is made by the Government of India in accordance with the DPE Guidelines.

2.5 Board Meetings

The meetings of the Board of Directors are convened by giving appropriate advance notices. To address any urgent needs, sometimes Board meetings are also called at a shorter notice subject to observance of statutory provisions. In case of urgency, resolutions are also passed through circulation, if permitted under the statute.

Detailed agenda notes, management reports and other explanatory statements are normally circulated at least a week before the Board Meeting in a defined format amongst the Board Members for facilitating meaningful, informed and focused discussions in the meeting. The agenda papers for the Board are circulated electronically, by uploading relevant papers on a secured online application with password protection, thereby circulation of printed agenda papers had been eliminated. Video-conferencing facilities for participation in Board/ Committee meetings are also being provided to the Directors.

Fourteen (14) meetings of the Board of Directors were held during the year under review and gap between two meetings did not exceed one hundred and twenty days. The said meetings were held on 9th May 2020, 9th June 2020, 27th June 2020, 4th July 2020, 30th July 2020, 14th August 2020, 23rd October 2020, 2nd November 2020, 19th December 2020, 26th December 2020, 27th January 2021, 4th February 2021, 27th February 2021 and 27th March, 2021. The necessary quorum was present for all meetings.

The table below shows attendance of the Board members in Board meetings held during the FY 2020-21 and their attendance at the last Annual General Meeting:

Name of Directors	Meeting Date														Whether Attended Last AGM	Total Meetings held during the tenure	No. of Meetings Attended	% of Attendance
	09/05/2020	09/06/2020	27/06/2020	04/07/2020	30/07/2020	14/08/2020	23/10/2020	02/11/2020	19/12/2020	26/12/2020	27/01/2021	04/02/2021	27/02/2021	27/03/2021				
Shri Gurdeep Singh Chairman & Managing Director	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	x	Y	14	12	85.71%
Shri Anil Kumar Gautam Director (Finance)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	14	14	100%
Shri Dillip Kumar Patel [1] Director (HR)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	14	14	100%
Shri Ramesh Babu V.[2] Director (Operations)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	14	14	100%
Shri A.K.Gupta[3] Director (Commercial)	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	5	5	100%
Shri Chandan Kumar Mondol[4] Director (Commercial)	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	9	9	100%
Shri Ujjwal Kanti Bhattacharya[5] Director (Projects)	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	Y	8	8	100%
Shri Ashish Upadhyaya Govt. Nominee Director	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	14	14	100%
Shri Vivek Kumar Dewangan Govt. Nominee Director	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	x	✓	✓	✓	Y	14	12	85.71%
Dr. Bhim Singh[7] Independent Director	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	14	14	100%
Dr. K.P.K Pillay[7] Independent Director	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	14	14	100%
Shri M.P. Singh[6] Independent Director	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	NA	6	6	100%
Shri P.K.Deb[6] Independent Director	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	NA	6	6	100%
Shri Shashi Shekhar[6] Independent Director	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	NA	6	6	100%
Shri Subhash Joshi[6] Independent Director	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	NA	6	6	100%
Shri Vinod Kumar[6] Independent Director	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	NA	6	6	100%

1. Appointed as Director on 01/04/2020 | 2. Appointed as Director on 01/05/2020 | 3. Ceased to be Director on 31/07/2020 | 4. Appointed as Director on 01/08/2020 | 5. Appointed as Director on 28/08/2020 | 6. Ceased to be Director on 07/09/2020 | 7.Ceased to be Director on 16/07/2021

2.6 Board Independence:

All the Independent Directors have given the declaration that they meet the criteria of independence to the Board of Directors as per the provisions of the Companies Act, 2013 and SEBI (LODR). Terms and conditions of appointment of independent directors are hosted on the website of the Company at https://www.ntpc.co.in/en/investors/corporate-governance/letter-terms-and-conditions-appointment-independent-directors.

2.7 Performance Evaluation of Board Members:

Ministry of Corporate Affairs (MCA) vide General Circular dated 5th June, 2015 has exempted Government Companies from the provisions of Section 178(2) which provides about manner of performance evaluation of Board of Directors, Committee of Board of Directors and director by the Nomination & Remuneration Committee. The aforesaid circular of MCA further exempted listed Govt. Companies from provisions of Section 134(3)(p) which requires mentioning the manner of formal evaluation of its own performance by the Board and that of its Committees and Individual Director in Board's Report, if directors are evaluated by the Ministry or Department of the Central Government which is administratively in charge of the company, or, as the case may be, the State Government as per its own evaluation methodology. In this regard, Department of Public Enterprise (DPE) has already laid down a mechanism for performance appraisal of all functional directors. In case of Government Nominee Directors, their evaluation is done by the Ministry or Department of the Central Government which is administratively in charge of the company as per the procedure laid down by them. DPE has also initiated evaluation of Independent Directors. In view of above, as per requirement of Regulation 17(10) of the SEBI (LODR), evaluation of Independent Director were not made by the Board of Directors.

The Company enters Memorandum of Understanding (MoU) with Ministry of Power (MoP) every year wherein Company is evaluated on various financial and non-financial parameters. The performance of the Company & Board of Directors is evaluated by the Department of Public Enterprises in terms of MoU entered into with MoP.

2.8 Separate Meeting of Independent Directors:

Ministry of Corporate Affairs vide Notification dated 5th July, 2017 has exempted government Companies from applicability of clause (a) and (b) of sub-paragraph (3) of paragraph VII of Schedule IV of the Companies Act, 2013 which requires that the Independent Directors in their separate meeting shall review the performance of non-independent directors, performance of the Board as a whole, performance of the Chairperson of the company, taking into account the views of executive directors and non-executive directors. However, similar exemptions are not available under the provisions of the SEBI (LODR).

A separate meeting of Independent Directors was held on 23rd March, 2021. The meeting was attended by all Independent Directors through video conferencing. In this meeting, Independent Directors assessed the performance of the Board as a whole and also the quality, quantity and timeliness of flow of information between the Company management and the Board which is necessary for the Board to effectively and reasonably perform their duties. Independent Directors also reviewed the performance of the Chairman & Managing Director and Non-independent Directors.

2.9 Information placed before the Board of Directors:

The Board has complete access to any information within the Company to be able to take informed decisions, exercise control over the organisation as well as to review the progress of implementation of the strategic decisions and corporate plans formulated by the Board. Information provided to the Board normally includes:

- Annual operating plans and budgets and any updates.
- Capital Budgets and any updates.
- Quarterly financial results.
- Financial Statements and Board's Report (including the Annexures thereto).
- Major investments, formation of subsidiaries and Joint Ventures or collaboration agreement, Strategic Alliances, etc.
- Minutes of meetings of Audit Committee, Board meetings and other Committees of the Board.
- Minutes of meetings of Board of Directors of subsidiary companies.
- Fatal or serious accidents, dangerous occurrences, etc.
- Operational highlights and substantial non-payment for goods sold by the Company.
- Award of large value contracts.
- Disclosure of Interest by Directors about directorships and committee positions occupied by them in other companies.
- Declaration of independence by Independent Directors.
- Quarterly Report on foreign exchange exposures.
- Quarterly status of investors complaints.
- Quarterly Report on Foreign Travel of Chairman & Managing Director, Functional Directors and Employees.
- Quarterly Report on Short Term Deposits and Investments.
- Report on Contract awarded on nomination basis.
- Quarterly Report on Reconciliation of Share Capital Audit.
- Quarterly Report on Business Activities of various Joint Venture Companies and Subsidiaries of NTPC.

- Quarterly Report on Compliance of various laws including show cause demand, prosecution notices.
- Quarterly Report on Compliance with Corporate Governance norms.
- Non-compliance of any regulatory, statutory or listing requirements and shareholders services such as non-payment of dividend, delay in share transfer, etc.
- Appointment of Key Managerial Personnel and information on recruitment and promotion of senior officers to the level of Executive Director which is just below the Board level and Company Secretary.
- Any significant development in Human Resources/ Industrial Relations like signing of wage agreement, implementation of Voluntary Retirement Scheme, etc.
- Information relating to major legal disputes.
- Highlights of important events from last meeting to the current meeting.
- Any other information as may be required to be presented to the Board for information or approval.

The important decisions taken at the Board/Committee meetings are communicated to the concerned departments promptly.

3. COMMITTEES OF THE BOARD OF DIRECTORS

With a view to ensure effective decision making, the Board of Directors has constituted various Statutory and Non-Statutory Committees to have focused attention on crucial issues. The details of such committees are given herein below:

3.1 Audit Committee

The composition, quorum, scope, etc. of the Audit Committee are in line with the Companies Act, 2013, SEBI (LODR) and DPE Guidelines on Corporate Governance.

Composition

As on 31st March 2021, the Audit Committee comprised the following members:-

S.No.	Name of the Member	Designation
1.	Dr. Bhim Singh, Independent Director	Chairman of the Committee
2.	Dr. K.P.K Pillay, Independent Director	Member
3.	Shri Ashish Upadhyaya , Govt. Nominee Director	Member

Director (Finance) is the permanent invitee to the Audit Committee meetings. Head of Internal Audit Department and Senior Executives are invited to the Audit Committee Meetings for interacting with the members of the Committee, if required. The Joint Statutory Auditors and Cost Auditors of the Company are also invited to the meetings of the Audit Committee while discussing financial statements/ financial results and Cost Audit Reports respectively.

The Company Secretary acts as the Secretary to the Committee.

Scope of Audit Committee

The scope of Audit Committee is as follows:-

1. Before commencement of Audit, discussion with the auditors about the nature and scope of audit and after the completion of Audit, deliberation on area of concern.
2. Provide an open avenue of communication between the independent auditors, internal auditors and the Board of Directors.
3. Approval or any subsequent modification of transactions of the company with related parties.
4. Scrutiny of inter-corporate loans and investments.
5. Reviewing, with the management, the quarterly financial statements before submission to the Board for approval.
6. Reviewing, with the management, the annual financial statements and draft auditor's report thereon before submission to the board for approval, with particular reference to:
   a. Matters required to be included in the Director's Responsibility Statement to be included in the Board's report in terms of clause (c) of sub-section 3 of section 134 of the Companies Act, 2013;
   b. Changes, if any, in accounting policies and practices and reasons for the same;
   c. Major accounting entries involving estimates based on the exercise of judgment by management;
   d. Significant adjustments made in the financial statements arising out of audit findings;
   e. Compliance with listing and other legal requirements relating to financial statements;
   f. Disclosure of related party transactions;
   g. Qualifications in the draft audit report.
7. Noting the appointment and removal of independent auditors. Recommending audit fee of independent auditors and also approval for payment for any other service.

8. Recommending to the Board the appointment and remuneration of the cost auditors of the Company.

9. Review of observations of C&AG including status of Government Audit paras.

10. Reviewing with the management, statement of uses/ application of funds raised through an issue (public issue, rights issue, preferential issue etc.), statement of funds utilised for purposes other than those stated in the offer documents/prospectus/notice and the report submitted by the monitoring agency monitoring the utilisation of proceeds of a public or rights issue, and making appropriate recommendations to the board to take up steps in this matter.

11. Valuation of undertakings or assets of the company, wherever it is necessary.

12. Evaluation of internal financial controls and risk management systems.

13. To look into the reasons for substantial defaults in the payment to the depositors, debenture holders, shareholders (in case of non-payment of declared dividends) and creditors.

14. To review the functioning of the Whistle Blower mechanism.

15. Reviewing the findings of any internal investigations by the internal auditors into matters where there is suspected fraud or irregularity or a failure of internal control systems of a material nature and reporting the matter to the Board.

16. To review the follow up action taken on the recommendations of Committee on Public Undertakings (COPU) of the Parliament.

17. Review of:

a. Management discussion and analysis of financial condition and results of operations;

b. Management letters/ letters of internal control weaknesses; issued by the statutory auditors.

c. Internal Audit Reports relating to internal control weaknesses.

18. Oversight of the company's financial reporting process and the disclosure of its financial information to ensure that the financial statement is correct, sufficient and credible.

19. Review with the independent auditor the co-ordination of audit efforts to assure completeness of coverage, reduction of redundant efforts and the effective use of all audit resources.

20. Reviewing the adequacy of internal audit function, if any, including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure coverage and frequency of internal audit.

21. Consider and review the following with the independent auditor and the management:

a) The adequacy of internal controls including computerized information system controls and security, and

b) Related findings and recommendations of the independent auditors and internal auditors, together with the management responses.

22. Consider and review the following with the management, internal auditor and the independent auditor:

a) Significant findings during the year, including the status of previous audit recommendations.

b) Any difficulties encountered during audit work including any restrictions on the - scope of activities or access to required information.

23. Review of appointment and removal of the Chief Internal Auditor.

24. Reviewing, with the management, the performance of the internal auditors and of the independent auditors and effectiveness of the audit process.

25. Review of internal audit observations outstanding for more than two years.

26. Reviewing the utilization of loans and/ or advances from/ investment by the holding company in the subsidiary exceeding rupees 100 crore or 10% of the asset size of the subsidiary, whichever is lower including existing loans / advances / investments.

27. To review compliance with the provisions of SEBI Insider Trading Regulations at least once in a financial year.

28. To verify that the systems for internal control are adequate and are operating effectively.

29. {To consider and comment on rationale, cost-benefits and impact of schemes involving merger, demerger, amalgamation etc., on the listed entity and its shareholders.}$

30. Any matter referred to it by the Board or any other terms of reference as amended by the Companies Act, 2013 & rules made thereunder, SEBI (LODR) and DPE Guidelines .

$ inserted in line with Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) (Second Amendment) Regulations, 2021 vide Board resolution passed on 22/5/2021.

Meetings and Attendance

During the financial year 2020-21, nine (9) meetings of the Audit Committee were held and details including attendance of members of the Committee are as follows:

Name of the Members	Meeting Date									Total Meetings held during the tenure	No. of Meetings Attended	% of Attendance
	17/4/2020	27/6/2020	14/8/2020	29/8/2020	31/10/2020	24/12/2020	3/2/2021	5/3/2021	22/3/2021			
Dr. Bhim Singh[1]	-	-	-	-	✓	✓	✓	✓	✓	5	5	100%
Dr. K.P.K. Pillay[1]	-	-	-	-	✓	✓	✓	✓	✓	5	5	100%
Shri Ashish Upadhyaya	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	9	100%
Shri Vinod Kumar[2]	✓	✓	✓	✓	-	-	-	-	-	4	4	100%
Shri M.P. Singh[2]	✓	✓	✓	✓	-	-	-	-	-	4	4	100%
Shri P.K. Deb[2]	✓	✓	✓	✓	-	-	-	-	-	4	4	100%

1. Appointed as Members of Audit Committee on 21/9/2020 & ceased on 16/7/2021. | 2. Ceased to be Directors on 7/9/2020.

Dr. Bhim Singh, Chairman of the Audit Committee was present in the Annual General Meeting held on 24th September, 2020 to answer the queries of the shareholders.

3.2 Stakeholders' Relationship Committee

This Committee has been constituted in line with the provisions of SEBI (LODR) and Companies Act, 2013. It considers and resolves the grievances of security holders of the Company inter-alia including grievances related to transfer of shares, non-receipt of Annual Report, non-receipt of dividend etc. The Committee also reviews measures taken for effective exercise of voting rights by shareholders, adherence to the service standards adopted by the listed entity in respect of various services being rendered by the Registrar & Share Transfer Agent and measures and initiatives taken by the listed entity for reducing the quantum of unclaimed dividends and ensuring timely receipt of dividend warrants/annual reports/statutory notices by the shareholders of the Company.

Composition

As on 31st March 2021, this committee comprised the following Directors:

S.No.	Name of the Members	Designation
1.	Dr. K.P.K. Pillay, Independent Director	Chairman of the Committee
2.	Dr. Bhim Singh, Independent Director	Member
3.	Shri Anil Kumar Gautam, Director (Finance)	Member

Meeting and Attendance

During the year 2020-21, two (2) meetings of the Stakeholders' Relationship Committee were held and details including attendance of members of the Committee are as follows:

Name of the Members	27/6/2020	02/11/2020	Total Meetings held during the tenure	Meetings Attended	% of Attendance
Shri M.P. Singh[1]	✓	-	1	1	100%
Shri Shashi Shekhar[1]	✓	-	1	1	100%
Shri Subhash Joshi[1]	✓	-	1	1	100%
Shri Anil Kumar Gautam	✓	✓	2	2	100%
Dr. K.P.K. Pillay[2]	-	✓	1	1	100%
Dr. Bhim Singh[2]	-	✓	1	1	100%

1. Ceased to be Director on 7/9/2020
2. Appointed as Members of Stakeholders' Relationship Committee on 21/9/2020 & ceased on 16/7/2021

Name and designation of Compliance Officer

The Board of Directors has appointed Ms. Nandini Sarkar, Company Secretary as the Company Secretary & Compliance Officer of NTPC Limited in terms of Regulation 6 of SEBI (LODR).

Investor Grievances:

The Company has always valued its investors' relationship. During the financial year ended on 31st March 2021, Company has attended its investors grievances expeditiously except for the cases constrained by disputes or legal impediments. The details of the complaints received, resolved and disposed off during the year under review are as under:

Particulars	Opening Balance	Received	Resolved	Pending
Complaints relating to				
Equity Shares	0	678	678	0
Bonus Debentures	0	1127	1127	0
Private Placement of Bonds	0	0	0	0
Public Issue of Bonds	0	113	113	0

3.3 Nomination and Remuneration Committee including PRP

As per the requirements of Section 178 of the Companies Act, 2013, Regulation 19 of SEBI (LODR) and DPE Guidelines, a Nomination & Remuneration Committee (NRC) including Performance Related Pay (PRP) has been constituted. The scope of this Committee includes approval of annual bonus/ variable pay pool and policy for its distribution across the executives and non-unionized supervisors within the prescribed limit in addition to scope as defined under the Companies Act, 2013 and SEBI (LODR). The Committee also recommend to the Board, all remuneration, in whatever form, payable to the senior management.

Being a Government Company, as per the Articles of Association, all Directors including the Chairman & Managing Director are appointed by the Government of India. Their tenure and remuneration are also fixed by the Government of India.

As appointment of Directors are made by the Government of India, accordingly, evaluation of Directors are done by the Government of India. It may also be noted that Ministry of Corporate Affairs (MCA) vide notification dated 5th June, 2015, has exempted Government Companies from the provisions of section 178(2), (3) and (4) which requires formulation of criteria for determining qualifications, positive attributes, independence and annual evaluation of Directors & policy relating to remuneration of Directors. In view of above, Nomination & Remuneration Committee including PRP has not formulated criteria for evaluation of performance of independent directors and the board of directors as required under Regulation 19 read with Schedule II Part D of the SEBI (LODR).

As on 31st March 2021, the NRC including PRP comprised the following members:

S.No.	Name of the Members	Designation
1.	Dr.Bhim Singh, Independent Director	Chairman of the Committee
2.	Dr. K.P.K. Pillay, Independent Director	Member
3.	Shri Vivek Kumar Dewangan, Govt. Nominee Director	Member

Meeting and Attendance

During financial year 2020-21, eight (8) meetings of Nomination and Remuneration Committee including PRP were held. Details of the meeting including attendance of members of the Committee are as follows:

Name of the Members	Meeting Date								Total Meetings held during the tenure	Meetings Attended	% of attendance
	17/4/2020	9/6/2020	27/6/2020	16/7/2020	21/8/2020	23/10/2020	2/11/2020	28/11/2020			
Shri P.K. Deb[1]	✓	✓	✓	✓	✓	-	-	-	5	5	100%
Shri Vinod Kumar[1]	✓	✓	✓	✓	✓	-	-	-	5	5	100%
Dr.Bhim Singh[2]	✓	✓	✓	✓	✓	✓	✓	✓	8	8	100%
Dr. K.P.K Pillay[2]	-	-	-	-	-	✓	✓	✓	3	3	100%
Shri Vivek Kumar Dewangan[3]	-	-	-	-	-	✓	✓	✓	3	3	100%

1. Ceased to be Director on 7/9/2020 | 2. Appointed as member of Committee on 21/9/2020 & ceased on 16/7/2021

3. Appointed as member of Committee on 21/9/2020

3.4 Corporate Social Responsibility and Sustainability Committee-

This Committee has been constituted in line with the provisions of Section 135 of the Companies Act, 2013 and DPE guidelines on Sustainability (SD). This Committee is constituted to formulate and recommend to the Board, Corporate Social Responsibility Policy as per Schedule VII of the Companies Act, 2013 as amended from time to time; to recommend the amount of expenditure to be incurred on the activities specified in the CSR Policy; to monitor the Corporate Social Responsibility Policy of the company from time to time; and any other matter as the Board may delegate from time to time.

As on 31st March 2021, the Committee comprised the following members:

S. No.	Name of the Members	Designation
1.	Shri Dillip Kumar Patel, Director (HR)	Chairman of the Committee
2.	Shri Ramesh Babu V., Director (Operations)	Member
3.	Dr. Bhim Singh, Independent Director	Member

NTPC's Policy on CSR & Sustainability can be viewed at the weblink: https://www.ntpc.co.in/sites/default/files/downloads/ntpc-policy-csr-sustainability.pdf.

Meeting and Attendance

During 2020-21, five (5) meetings of the Committee for CSR & Sustainability were held and details including attendance of members of the Committee are as follows:

Name of the Members	Meetings Date					No. of Meetings held during tenure	Total Meetings attended	% Attendance
	9/6/2020	2/11/2020	19/12/2020	3/2/2021	27/3/2021			
Shri Vinod Kumar[1]	✓	-	-	-	-	1	1	100%
Shri P.K. Deb[1]	✓	-	-	-	-	1	1	100%
Shri Dillip Kumar Patel	✓	✓	✓	✓	✓	5	5	100%
Dr. Bhim Singh[2]	-	✓	✓	✓	✓	4	4	100%
Shri Ramesh Babu V. [3]	-	✓	✓	✓	✓	4	4	100%

1. Ceased to be Director on 7/9/2020. | 2. Appointed as member of the CSR Committee on 23/10/2020 & ceased on 16/7/2021.
3. Appointed as member of the CSR Committee on 23/10/2020

3.5 Risk Management Committee

Pursuant to Regulation 21 of the SEBI (LODR), Risk Management Committee has been constituted to finalise risk assessment including cyber security under the Risk Management Framework; monitor and review risk management plan/ framework as approved by the Board; informing the Board about the risk assessed and action required to be taken/ already taken for mitigating the risks and take up any other matter as directed by the Board from time to time.

Details on risk management mechanisms are given in the Management Discussion and Analysis report annexed with the Directors' Report.

As on 31st March, 2021, the Committee comprised the following Members:

S.No.	Name of the Members	Designation
1.	Shri Ujjwal Kanti Bhattacharya, Director (Projects)	Chairman of the Committee
2.	Shri Ramesh Babu. V, Director (Operations)	Member
3.	Head of Corporate Planning & CRO	Member

However, in line with the requirement of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) (Second Amendment) Regulations, 2021, the terms of reference of Risk Management Committee have been aligned with the Part D of Schedule II of SEBI (LODR). Further, as per the requirement of SEBI (LODR), the Board of Directors in its 498th meeting held on 22nd May, 2021 had revised the constitution of Risk Management Committee as under :

a. Director (Projects), Chairman of the Committee
b. Director (Operations)
c. Dr. Bhim Singh, Independent Director[1]
d. Head of Corporate Planning- CRO

1. Ceased to be Director on 16/7/2021.

Meeting and Attendance

During 2020-21, three (3) meetings of the Risk Management Committee were held and details including attendance of members of the Committee are as follows:

Name of the Members	Meeting Date			No. of Meetings held during tenure	Total Meetings attended	% Attendance
	29/9/2020	21/1/2021	19/3/2021			
Shri Ujjwal Kanti Bhattacharya	✓	✓	✓	3	3	100%
Shri Ramesh Babu V.	✓	✓	✓	3	3	100%
Shri S.P.S. Virk, GM (CP) & CRO[1]	-	-	✓	1	1	100%
Shri Naresh Anand ED (CP)[2]	✓	✓	-	2	2	100%

1. Appointed as member of Risk Management Committee on 3/3/2021. | 2. Ceased to be member of Risk Management Committee on 2/3/2021.

3.6 Other Committees of the Board of Directors:

Some of other major sub-committees of the Board of Directors including their constitution are as under:

S.No.	Name of the Committee	Role & Responsibility	Members (As on 31.3.2021)
1.	**Committee on Management Controls**	Review of significant deviations in project implementation and construction, operation and maintenance budgets etc.	1. Dr. Bhim Singh, Chairman of the Committee[1] 2. Shri Anil Kumar Gautam, Director (Finance) 3. Shri Ramesh Babu V., Director (Operations)
2.	**Projects Sub-Committee**	To examine and give recommendations to the Board on proposals for Investment in New/ Expansion Projects and approves Feasibility Reports of new projects.	1. Shri Ujjwal Kanti Bhattacharya, Director (Projects), Chairman of the Committee 2. Shri Anil Kumar Gautam, Director (Finance) 3. Shri Ramesh Babu V., Director (Operations) 4. Dr.Bhim Singh, Independent Director[1]
3.	**Committee of Functional Directors for Contracts**	Award of works or purchase contracts or incurring of commitments exceeding ₹ 300 crore but not exceeding ₹ 500 crore.	1. Shri Gurdeep Singh, Chairman & Managing Director 2. Shri Anil Kumar Gautam, Director (Finance) 3. Shri Dillip Kumar Patel, Director(HR) 4. Shri Ramesh Babu V., Director (Operations) 5. Shri Chandan Kumar Mondol, Director (Commercial) 6. Shri Ujjwal Kanti Bhattacharya, Director (Projects)
4.	**Contracts Sub-Committee**	Award of works or purchase contracts or incurring commitments of value exceeding ₹ 500 crore but not exceeding ₹ 1000 crore, Consultancy assignments including foreign consultancy assignments exceeding ₹ 10 crore each and Appointment of Sponsor/ Agents for Overseas Consultancy Assignments involving sponsorship/ agency commission exceeding ₹ 10 crore each.	1. Shri Gurdeep Singh, Chairman & Managing Director 2. Shri Anil Kumar Gautam, Director (Finance) 3. Shri Ujjwal Kanti Bhattacharya, Director (Projects) 4. Dr. Bhim Singh, Independent Director[1] 5. Dr. K.P.K Pillay, Independent Director[1]
5.	**Committee for Allotment and Post-Allotment Activities of NTPC's Securities**	To approve allotment, issue of Certificate(s)/ Letter of allotment(s), transfer, transmission, re-materialisation, issue of duplicate certificate(s), consolidation/ split of NTPC's domestic and foreign Securities.	1. Shri Dillip Kumar Patel, Director (HR) 2. Shri Chandan Kumar Mondol, Director (Commercial)/ Shri Ujjwal Kanti Bhattacharya, Director (Projects) 3. Shri Ramesh Babu V., Director (Operations)/ Shri Anil Kumar Gautam, Director (Finance)

6.	**Committee for Vigilance Matters**	To examine all the petitions which are submitted before the Board as appellate/ reviewing authority in terms of CDA rules. It also reviews other major complaints as referred to it from time to time other than complaints registered under whistle blower mechanism under purview of Chief Vigilance Officer.	1. Dr.K.P.K.Pillay, Independent Director[1] 2. Shri Dillip Kumar Patel, Director (HR)
7.	**Exchange Risk Management Committee**	To review the foreign currency loan portfolio, hedged and un-hedged exposures and effectiveness of hedging strategy, approve amendments in Exchange Risk Management Policy, new derivative instruments, etc.	1. Shri Anil Kumar Gautam, Director (Finance) & Chairman of the Committee 2. Dr. K.P.K. Pillay, Independent Director[1] 3. Dr. Bhim Singh, Independent Director[1]
8.	**Committee for Guiding Acquisition of Power Assets**	To guide the process of acquisition of power assets and to make recommendation to the Board	1. Dr. K.P.K. Pillay, Chairman of the Committee 2. Shri Vivek Kumar Dewangan (Govt. Nominee Director) 3. Shri Anil Kumar Gautam, Director (Finance) 4. Shri Chandan Kumar Mondol, Director (Commercial) 5. Shri Ujjwal Kanti Bhattacharya, Director (Projects)
9.	**Committee of Directors on Fuel Management and Development & Operation of Coal Blocks**	To examine proposals for appointment of MDO, review of availability of fuel at NTPC Stations and to recommend measures for improvement etc.	1. Shri Anil Kumar Gautam, Director (Finance) 2. Shri Chandan Kumar Mondol, Director (Commercial) 3. Shri Ramesh Babu V. Director (Operations)
10.	**Committee for Considering the Proposal Having Financial Implication Beyond Provisions of the Contract**	For considering the proposal having Financial Implication beyond provisions of the Contract	1. Dr. K.P.K.Pillay, Independent Director & Chairman of the Committee[1] 2. Shri Anil Kumar Gautam, Director (Finance) 3. Shri Ujjwal Kanti Bhattacharya, Director (Projects)
11.	**Committee for Supervising Legal Matters**	For supervising legal matters and giving guidance regarding handling of legal matters	1. Dr. K.P.K. Pillay, Independent Director & Chairman of the Committee[1] 2. Dr. Bhim Singh, Independent Director[1] 3. Shri Dillip Kumar Patel, Director (HR) 4. Shri Chandan Kumar Mondol, Director (Commercial)

1. Ceased to be Director on 16/7/2021.

4. REMUNERATION OF DIRECTORS

The remuneration of Functional Directors and employees of the Company is fixed as per extant guidelines issued by DPE, from time to time. The Part time Non- official Independent Directors are paid sitting fees for attending Board and Committee meetings. As per the norms of Government of India, the Government Nominee Directors are not entitled to get any remuneration/sitting fee from the Company.

Sitting fee of ₹ 40,000/- is payable to Independent Directors for attending each meeting of the Board and ₹ 30,000/- for attending each meeting of the Committee.

No stock option was given to any Director during the financial year 2020-21.

Details of remuneration of Functional Directors for the financial year 2020-21 are given below:-

(in ₹)

Name of Directors	Salary	Benefits	Performance Linked Incentives	Total
Shri Gurdeep Singh	67,68,109	24,52,689	42,65,578	1,34,86,376
Shri Anil Kumar Gautam	46,75,355	6,77,403	22,61,528	76,14,286
Shri Dillip Kumar Patel[1]	41,42,215	20,39,457	15,15,923	76,97,595
Shri Ramesh Babu V.[2]	39,68,062	12,75,123	18,44,461	70,87,646
Shri Chandan Kumar Mondol[3]	32,08,680	4,02,133	15,79,609	51,90,422
Shri Ujjwal Kanti Bhattacharya[4]	28,84,539	4,14,221	15,18,699	48,17,459
Shri Prakash Tiwari[5]	48,60,255	1,88,371	26,15,856	76,64,482
Shri Anand Kumar Gupta[6]	62,06,032	2,76,075	26,30,130	91,12,237

1. Appointed as Director on 1.4.2020 | 2. Appointed as Director on 1.5.2020
3. Appointed as Director on 1.8.2020 | 4. Appointed as Director on 28.8.2020
5. Ceased to be Director on 30.4.2020 | 6. Ceased to be Director on 31.7.2020

Note:-1. Performance linked incentives paid is based on the incentive scheme of the Company.

2. Besides above, Functional Directors are also entitled for medical benefit as per the applicable rules of the company.

Details of payments towards sitting fees, for attending Board/ Committee meetings, to Independent Directors during the financial year 2020-21 are given below:

Name of Independent Directors	Sitting Fees (Excluding GST) (in ₹)
Sh. P.K.Deb[1]	8,70,000
Sh. M.P. Singh[1]	5,10,000
Sh. Subhash Joshi[1]	4,20,000
Sh. Vinod Kumar[1]	5,70,000
Sh. Shashi Shekhar[1]	5,70,000
Dr. K.P. K. Pillay[2]	14,00,000
Dr. Bhim Singh[2]	13,70,000
Total	**57,10,000**

1. Ceased to be Directors on 7/9/2020
2. Ceased to be Director on 16/7/2021

5. MATERIAL SUBSIDIARY

In accordance with Regulation 16(1)(c) of SEBI (LODR), the Company has a Policy for determining 'Material Subsidiaries' which is available at the weblink: http://www.ntpc.co.in/download/policy-determining-material.

In the year 2020-21, the Company had no 'Material Subsidiary' as defined under Regulation 16(1)(c) of SEBI (LODR).

6. FAMILIARIZATION PROGRAMME FOR DIRECTORS

Directors are being imparted training organised from time to time by the Company and other agencies/ institutions with a view to augment leadership qualities, knowledge and skills. The training also enables them to get a better understanding of sector as well as the Company. Directors are also briefed from time to time about changes/ developments in Indian as well as international corporate and economic scenario including Legislative/ Regulatory changes.

At the time of induction, new Directors undergo a familiarization programme which highlights organisation structure, subsidiaries/ joint ventures, business model of the company, risk profile of the business etc. Web link of details of familiarization programme imparted to independent directors is as under: https://www.ntpc.co.in/en/Familiarisation%20Program%20to%20Directors.

7. GENERAL BODY MEETINGS

Annual General Meetings

Date, time and location where the last three Annual General Meetings along with details of Special Resolutions passed are as under:

Date & Time	20th September , 2018	21st August, 2019	24th September, 2020
Time	10.30 A.M.	10:30 A.M.	10:30 A.M.
Venue	Manekshaw Centre, Parade Road, New Delhi – 110010	Manekshaw Centre, Parade Road, New Delhi - 110010	NTPC Bhawan, SCOPE Complex, Lodhi Road, New Delhi 110003 through Video Conferencing/Other Audio Visual Means
Special Resolution	Authorization to Board to raise funds upto ₹ 12,000 Crore through issue of secured/ unsecured, redeemable, taxable/ tax-free, cumulative/ non-cumulative, non-convertible Bonds/ Debentures on Private Placement Basis in one or more tranches through Private Placement in domestic market and authorising the Board to decide the terms and conditions of the Issue.	i) Re-appointment of Dr. Gauri Trivedi, Independent Director ii) Enhancing borrowing limit from ₹1,50,000 Crore to ₹ 2,00,000 Crore. iii) Authorisation to the Board for creation of mortgage and /or charge over the movable and immovable properties of the Company. iv) Authorization to Board to raise funds upto ₹ 15,000 Crore through issue of secured/ unsecured, redeemable, taxable/ tax-free, cumulative/ non-cumulative, non-convertible Bonds/ Debentures on Private Placement Basis in one or more tranches through Private Placement in domestic market and authorising the Board to decide the terms and conditions of the Issue.	i) To alter the object clause of the Memorandum of Association of the Company. ii) To alter Articles of Association of the Company. iii) Authorization to Board to raise funds upto ₹ 15,000 Crore through issue of secured/unsecured, redeemable, taxable/tax-free, cumulative/ non-cumulative, non-convertible Bonds/ Debentures on Private Placement Basis in one or more tranches through Private Placement in domestic market and authorising the Board to decide the terms and conditions of the Issue.

44th Annual General Meeting of the Company was held on 24th September, 2020 through Video Conferencing/ Other Audio Visual Means in line with the Ministry of Corporate Affairs ("MCA") circular dated May 5, 2020 read together with circulars dated April 8, 2020 and April 13, 2020. Meeting was attended by the partner/authorised representative of seven statutory auditors firms. Meeting was also attended by the Scrutiniser appointed by the Board for Remote e-voting/ e-voting at AGM and Secretarial Auditor of the Company.

In accordance with Regulation 44 of the SEBI (LODR) and Section 108 of Companies Act 2013, remote e-voting facility was provided to the shareholders, in respect of resolutions passed at the AGM held on 24th September, 2020. In addition to above, facility of voting during the AGM was also provided to those shareholders who did not, cast their vote through remote e-voting through link appearing in their log-in.

Special Resolution passed through Postal Ballot

No special resolution was passed during last year through postal ballot. There is no immediate proposal for passing any special resolution through Postal Ballot.

8. DISCLOSURES

(a) Related Party Transaction: -

The Company has formulated a Related Party Transaction (RPT) Policy containing criterion of deciding Materiality of Related Party Transactions and dealing with Related Party Transactions.

The RPT Policy is available at the web link: https://www.ntpc.co.in/en/investors/policy

The details of Related Party Transactions are given in form AOC-2 forming part of Board's Report.

(b) The Company has broadly complied with all the requirements of SEBI (LODR) and the Companies Act, 2013 except as mentioned above in the Report. The Company has complied with the Guidelines on Corporate Governance for Central Public Sector Enterprises issued by DPE, Ministry of Heavy Industries and Public Enterprises, Government of India.

(c) The Company had received notices for payment of fine from the NSE and/or BSE for non-compliance with the provisions of Regulation 17(1), regarding appointment of Independent director and Woman Independent Director of the SEBI (LODR) in respect of Q2 and Q3 of 2018-19, Q4 of 2019-20 and Q1, Q2, Q3 & Q4 of

2020-21. As powers of appointment of independent directors are vested with the Government of India and compliance was not within the powers of the Board of Directors, request was made to the Stock Exchanges for waiver of fine. BSE has waived fines imposed for the Q2 and Q3 of 2018-19 and Q2 of 2020-21.

In addition to above, the Company had received notices for payment of fine from the NSE and BSE for non-compliance with the provisions of Regulation 29 of the SEBI (LODR) in respect of prior intimation of Board meeting for approval for raising funds up to ₹ 15,000 Crore through though private placement of Bonds. As the proposal was subject to approval of Shareholders in AGM held on 24th September, 2020, it was informed to the stock exchanges along with the notice of the AGM, request for waiver of penalty had been made to the Stock Exchanges.

Except mentioned above, there were no penalties or strictures imposed on the Company by any statutory authorities for non-compliance on any matter related to Indian capital markets, during the last three years.

(d) The Company has complied with corporate governance requirements specified in Regulations 17 to 27 and clauses (b) to (i) of sub-regulation (2) of Regulation 46 of SEBI (LODR), except to the extent specifically mentioned in this report. The discretionary requirements as specified in Part E of Schedule II adopted by the Company are at Annexure-II of the Report.

(e) Schedule of Compliances with Presidential Directive issued during the financial year 2020-21 and during last three years preceding the financial year 2020-21 is at Annexure-III.

(f) Credit Ratings:

Domestic Credit Instruments:

	CRISIL	ICRA	CARE	India Ratings
Long Term Loans	CRISIL AAA/ Stable	ICRA AAA/ Stable	CARE AAA/ Stable	IND AAA/ Stable
Domestic Bonds	CRISIL AAA/ Stable	ICRA AAA/ Stable	CARE AAA/ Stable	IND AAA/ Stable
Commercial Papers	CRISIL A1+	ICRA A1+	CARE A1+	IND A1+
Bank Guarantees	CRISIL A1+	ICRA A1+	CARE A1+	IND AAA/ Stable/ IND A1+
Letter of Credit	CRISIL A1+	ICRA A1+	CARE A1+	IND AAA/ Stable/ IND A1+
Cash credit/ STWCL/ WCDL/Bill Discounting	CRISIL AAA/ Stable	ICRA AAA/ Stable	CARE AAA/ Stable	IND AAA/ Stable/ IND A1+

There has not been any revision in credit rating of above mentioned domestic credit instruments during the relevant financial year.

International Credit Instruments:

	S&P	Moody's	Fitch
Company Rating/Outlook	BBB-/ Stable	Baa3/ Negative	BBB-/ Negative
Rating of USD 6 billion MTN Programme	BBB-	Baa3	BBB-

There has not been any revision in credit rating of above mentioned International credit instruments.

(g) Disclosure under the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013:

No. of cases under process/ investigation as on end of the 2019-20	No. of cases reported during the 2020-21	No. of cases disposed-off during the 2020-21	No. of cases under process/ investigation as on end of the 2020-21
0	2	2	0

(h) Dis-qualification of Directors:

M/s A.Kaushal & Associates, Company Secretaries certified that none of the Directors on the Board of the Company have been debarred or disqualified from being appointed or continuing as Directors of the Companies by the SEBI/ Ministry of Corporate Affairs/ any such authority as on 31st March, 2021. Copy of certificate is enclosed as Annexure-IV.

(i) During the year 2020-21, there was no Preferential Allotment / Qualified Institutional Placement of Shares which is required to be reported under Regulation 32(7A) of the SEBI (LODR).

(j) During the year 2020-21, there was no instance where the recommendation of the Committee of the Board was not accepted by the Board, which was mandatorily required.

(k) During the year 2020-21, total fee of ₹ 5.77 Crore was paid to the Statutory Auditors by the Company. Further, the statutory auditors of the company have not carried out any work of subsidiary companies.

9. CEO/CFO CERTIFICATION

As required under Regulation 17(8) of SEBI (LODR), the certificate duly signed by Chairman & Managing Director and Director (Finance) was placed before the Board of Directors at the meeting held on 15th June 2021 and the same is annexed to the Corporate Governance Report.

10. MEANS OF COMMUNICATION

The Company communicates with its shareholders through its Annual Report, General Meetings and disclosures through Stock Exchanges & its own Website. The Company also communicates with its institutional shareholders through a combination of analysts briefing and individual discussions

and also participation in investor conferences from time to time. Annual analysts and investors meet is held normally during the month of August where Board of the Company interacts with the investing community. Financial results are discussed by way of conference calls regularly after approval of financial results of each quarter.

In compliance with the provisions of Regulation 44(6) of the SEBI (LODR), the Company provides live webcast of proceedings of AGM on the website of the Company.

Information, latest updates and announcements regarding the Company can be accessed at company's website: www.ntpc.co.in including the following:-

- Quarterly/ Annual Financial Results
- Quarterly Shareholding Pattern
- Quarterly Corporate Governance Report
- Transcripts of conferences with analysts
- Corporate Disclosures made from time to time to the Stock Exchanges

The Company's official news releases, other press coverage, presentations made to institutional investors or to the analysts are also hosted on the Website.

During 2020-21, Quarterly Results have been published as per details given below:

Quarter	Date of Publication	Newspaper (s)
Q1	15/8/2020	Financial Express (English), Hindustan Times (English), Mint (English), Business Standard (English & Hindi), The Times of India (English), Economics Times (English), Hindu Business Line (English), The Telegraph, Free Press Journal (English), Pioneer (English), Millennium Post (English),Jansatta (Hindi), Hindustan (Hindi), Dainik Bhasker (Hindi).
Q2	3/11/2020 & 4/11/2020	Financial Express (English), Hindustan Times (English), Business Standard (English & Hindi), Mint (English), The Times of India (English), Economics Times (English), Business Line (English), Mid Day (English), Dainik Jagran (Hindi), Jansatta (Hindi), Hindustan (Hindi), Dainik Bhasker (Hindi).
Q3	5/2/2021, 6/2/2021 & 7/2/2021	Financial Express (English), Hindustan Times (English), Mint (English), Business Standard (English & Hindi), The Times of India (English), Economics Times (English), Business Line (English),The Pioneer (English), Millennium Post (English), Amar Ujala (Hindi), Dainik Bhaskar(Hindi), Virat Vaibhav(Hindi), Free Press Journal (English), Hindustan (Hindi).
Q4	20/6/2021 & 21/6/2021	Financial Express (English), Hindustan Times (English), Mint (English), Business Standard (English & Hindi), The Times of India (English), Economics Times (English), Hindustan (Hindi), Business Line (English), Jansatta (Hindi), The Pioneer (English), Millennium Post (English), Dainik Bhaskar(Hindi), Dainik Jagran (Hindi), Free Press Journal (English).

11. CODE OF CONDUCT:

The Company has in place Code of Conduct for Directors and Senior Management Personnel (Code) with a view to enhance ethical and transparent process in managing the affairs of the Company. This code is applicable to all the Board Members including Government Nominee(s) & the Independent Director(s) and the Senior Management Personnel of the Company. A copy of the Code of Conduct is available at the website of the Company at the web link: http://www.ntpc.co.in/en/investors/code-of-conduct

Declaration as required under Regulation 34(3) Schedule V of the SEBI (LODR) Regulations, 2015

The members of the Board and Senior Management Personnel have affirmed compliance of the Code of Conduct for Board Members & Senior Management Personnel for the financial year ended on 31st March, 2021.

Sd/-
(Gurdeep Singh)
Chairman & Managing Director

New Delhi
28th May, 2021

12. CODE OF INTERNAL PROCEDURES AND CONDUCT FOR PREVENTION OF INSIDER TRADING

Pursuant to Regulation 9(1) of SEBI (Prohibition of Insider Trading) Regulations, 2015 as amended by the SEBI (Prohibition of Insider Trading) (Amendment) Regulations, 2018, the Board has laid down Internal Code of Conduct for Prevention of Insider Trading in dealing with Securities of NTPC Limited (Insider Trading Code) . Copy of the Insider Trading Code is available on following web-link: https://www.ntpc.co.in/en/investors/insider-trading.

In order to strengthen the internal controls for monitoring & enforcing compliance with the Insider Trading Code, an IT enabled system has been installed, which help in mapping of designated employees, monitors compliance with the provisions of the Insider Trading Code by the designated employees, disseminate information etc.

13. WHISTLE BLOWER POLICY

The Company has a Board approved 'Whistle Blower Policy' for directors and employees to report to the management, concerns about unethical behaviour, actual or suspected fraud or violation of the company's code of conduct or ethics policy. It also provides safeguard against victimization of employees, who avail the mechanism and for direct access to the Chairman of the Audit Committee.

No personnel of the Company had been denied access to the Chairman of audit committee. The Whistle Blower Policy is available at the web link: http://www.ntpc.co.in/sites/default/files/downloads/WhistleBlowerPolicy.pdf.

14. DIRECTORS AND OFFICERS INSURANCE

As per approval accorded by the Board of Directors in its 263rd meeting, NTPC is taking Directors and Officers Insurance Policy (D&O Policy) every year. Present D&O Policy is for ₹ 250 Crore and it also covers Independent Directors. The Board had delegated power to decide extent of coverage, settle terms and conditions etc. to the Chairman & Managing Director or Director (Finance).

15. SECRETARIAL AUDIT

Secretarial Audit Report, given by a Company Secretary in Practice for the FY 2020-21 is enclosed with the Directors' Report.

16. SECURITY HOLDERS' INFORMATION

i) Annual General Meeting

Date : 28th September, 2021

Time : 10.30 a.m.

Venue : In view of current COVID-19 pandemic situation, the Company is conducting its meeting through Video Conferencing / Other Audio Visual Means pursuant to the MCA Circular dated May 5, 2020 and as such there is no requirement to have a venue for the AGM. For details, please refer to the Notice of this AGM.

Financial Calendar for FY 2021-22

Particulars	Date
Accounting Period	1st April, 2021 to 31st March, 2022
Unaudited Financial Results for the first three quarters	Announcement within stipulated period under SEBI (LODR)
Fourth Quarter Results	Announcement within stipulated period under SEBI (LODR)
AGM (Next year)	August, 2022 (Tentative)

ii) Book Closure

The Register of Members and Share Transfer Books of the Company will remain closed from 22nd September, 2021 to 28th September, 2021 (both days inclusive) for AGM.

iii) Payment of Dividend & Record date

The Board of Directors of the Company has recommended payment of final Dividend of ₹ 3.15 per share (31.5%) on the paid-up share capital, for the financial year ended 31st March, 2021 in addition to the Interim Dividend of ₹ 3.00 per share (30%) on the paid-up share capital. The date of payment/dispatch of interim dividend was February 26, 2021.

The Company has fixed 10th September, 2021 as record date for payment of final dividend. The final dividend on equity shares, if declared at the Annual General Meeting, will be paid on 8th October, 2021 to the Members whose names appear on the Company's Register of Members on record date.

Copy of Dividend Distribution Policy is available on weblink: https://www.ntpc.co.in/en/investors/policy

iv) Dividend History

Year	Total paid-up capital (₹ in crore)	Total amount of dividend paid (₹ in crore) and amount per share	Date of AGM in which dividend was declared	Date of payment of Dividend (Interim and Final)
2015-16	8,245.46	2,762.23 (₹ 3.35)	29/1/2016* 20/9/2016	15/2/2016 30/9/2016
2016-17	8,245.46	3,941.33 (₹ 4.78)	08/2/2017* 20/9/2017	22/2/2017 29/9/2017
2017-18	8,245.46	4,221.68 (₹ 5.12)	31/1/2018* 20/9/2018	15/2/2018 1/10/2018
2018-19	9,894.56$	5,425.52 (₹ 6.08)	30/1/2019* 21/8/2019	14/2/2019 03/9/2019
2019-20	9,894.56	3,116.79 (₹ 3.15)	19/3/2020* 24/9/2020	31/3/2020 3/10/2020
2020-21	9,696.67**	2,909.00# (₹ 3.00)	4/2/2021*	26/2/2021

$ Paid up Share Capital was increased due to bonus issue.
* Date of Board Meeting in which interim dividend was declared.
amount represents the interim dividend paid for the year 2020-21.
**paid up share capital was reduced consequent upon Buy back of shares

v) Listing on Stock Exchanges

NTPC equity shares are listed on the following Stock Exchanges:

National Stock Exchange of India Limited (NSE) Address: Exchange Plaza, Plot No. C/1, G Block, Bandra (E), Mumbai - 400051 **Scrip Code of NTPC: NTPC EQ**	**BSE Limited** Address: Phiroze Jeejeebhoy Towers, Dalal Street, Mumbai - 400001 **Scrip Code of NTPC: 532555**

Stock Code : ISIN – INE733E01010

The Annual Listing Fee for the financial year 2021-22 have been paid to NSE & BSE.

Details of Listing of Domestic Bonds:

Series of Bonds	Listed on
32, 34 to 36, 38 to 49, 53	National Stock Exchange of India Limited
37,73	BSE Limited
50 to 52, 54 to 72	National Stock Exchange of India Limited and BSE Limited

vi) Details of Listing of Bonds issued under the MTN Programme:

S. No.	Series	ISIN No.	Name of Bond	Listed on Stock Exchanges
1	Euro Bond-II	XS0648477593	USD 500 million 5.625% Notes due 2021	SGX, India INX & NSE IFSC
2	Euro Bond-III	XS0835676353	USD 500 million 4.75% Notes due 2022	SGX, India INX & NSE IFSC
3	Euro Bond-IV	XS1143390679	USD 500 million 4.375% Notes due 2024	SGX, India INX & NSE IFSC
4	Euro Bond-V	XS1372846003	USD 500 million 4.25% Notes due 2026	SGX, India INX & NSE IFSC
5	Euro Bond-VI	XS1467374473	INR 10070 million 7.375% Notes due 2021*	SGX, LSE, India INX & NSE IFSC
6	Euro Bond-VII	XS1551677260	EUR 500 million 2.75% Notes due 2027	SGX, FSE, India INX & NSE IFSC
7	Euro Bond-VIII	XS1604199114	INR 19080 million 7.25% Notes due 2022*	SGX, LSE, India INX & NSE IFSC
8	Euro Bond-IX	XS1792122266	USD 400 million 4.50% Notes due 2028	SGX, LSE, India INX & NSE IFSC
9	Euro Bond-X	XS1967614469	USD 450 million 3.75% Notes due 2024	SGX, India INX & NSE IFSC

* Amount outstanding after buyback/repurchase.

SGX	Singapore Exchange Ltd., SGX Centre Office, 2 Shenton Way, #02-02, SGX Centre 1, Singapore 068804
India INX	INDIA INTERNATIONAL EXCHANGE (IFSC) LTD. 1st Floor, Unit No. 101, The Signature, Building no. 13B, Road 1C, Zone 1, GIFT SEZ, GIFT City, Gandhinagar, Gujarat – 382355
NSE IFSC	NSE IFSC Limited, Unit No.1201, Brigade International Financial Centre, 12th floor, Block-14, Road 1C, Zone -1, GIFT SEZ, Gandhinagar, Gujarat – 382355
LSE	London Stock Exchange 10 Paternoster Square, London EC4M 7LS, United Kingdom
FSE	Deutsche Börse AG, 60485 Frankfurt/Main

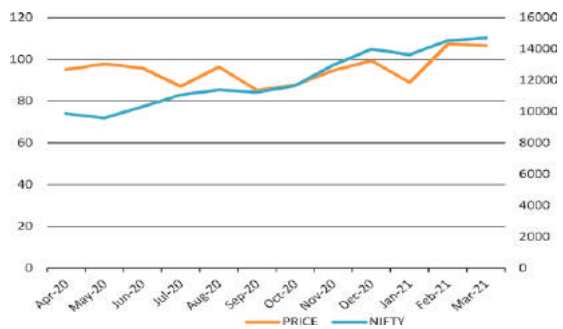
Listing fees to the above exchanges in respect of the securities was paid (where ever applicable) at the time of the listing of the securities.

vii) **Market Price Data :**

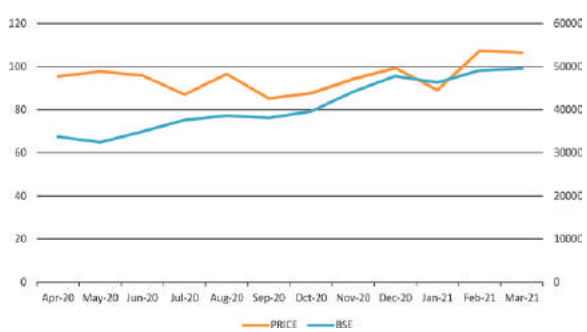
Month	NTPC on BSE				NTPC on NSE				INDEX	
	High Price (in ₹)	Low Price (in ₹)	Close Price (in ₹)	Volume (No.)	High Price (in ₹)	Low Price (in ₹)	Close Price (in ₹)	Volume (Nos.)	BSE SENSEX	NSE NIFTY 50
Apr-20	101.00	78.85	95.35	7622754	101.00	78.85	95.05	369489845	33717.62	9859.90
May-20	98.85	85.55	97.75	13539099	98.85	85.65	97.85	292621657	32424.10	9580.30
Jun-20	103.70	90.00	95.85	15578984	103.80	89.90	95.80	389662338	34915.80	10302.10
Jul-20	96.40	85.90	87	19818615	96.40	85.85	87.00	337556067	37606.89	11073.45
Aug-20	108.00	85.05	96.50	34534987	108.00	85.00	96.40	764289343	38628.29	11387.50
Sep-20	101.10	82.10	85.20	17936033	101.15	82.15	85.10	544929042	38067.93	11247.55
Oct-20	90.65	78.10	87.60	26727092	90.65	78.10	87.60	615794361	39614.07	11642.40
Nov-20	97.00	83.25	94.20	37093960	97.05	83.05	94.70	1058905562	44149.72	12968.95
Dec-20	107.25	93.50	99.30	29922082	107.25	93.45	99.35	710015862	47751.33	13981.75
Jan-21	104.35	88.20	89.10	27254963	104.35	88.15	88.95	529873561	46285.77	13634.60
Feb-21	110.95	88.40	107.20	40242712	110.95	88.40	107.30	724611494	49099.99	14529.15
Mar-21	114.75	102.05	106.45	22407772	114.70	102.00	106.55	556348819	49509.15	14690.70

viii) **Performance in comparison to indices**

NSE NIFTY 50 and NTPC Share Price



BSE Sensex and NTPC Share Price



ix) **(a) Registrar and Transfer Agent for Equity Shares**

Beetal Financial & Computer Services Pvt. Ltd.
99, Madangir, Near Dada Harsukh Das Mandir
New Delhi-110062.
Phone No: 011-29961281, 011-29961282
Fax: 011-29961284
Email: beetalrta@gmail.com

(b) Registrar and Transfer Agent for Tax Free Bonds (Series 50) and Bonus Debentures (Series 54) and Tax Free Bonds 2015 (Series 56)

KFin Technologies Private Limited
Selenium Tower B, Plot No. 31 & 32,
Gachibowli Financial District,
Nanakramguda, Serilingampally
Hyderabad-500008
Phone No: 040-67161518; Fax: (+91 40) 2343 1551
Email: einward.ris@kfintech.com
Website: www.kfintech.com

(c) Registrar and Transfer Agent for Bonds (Series 19 to 26)

MAS Services Limited
T-34, 2nd Floor, Okhla Industrial Area, Phase-II
New Delhi-110020.
Phone No: 011-26387281 / 82 / 83; Fax: 011-26387384
Email: sm@masserv.com; info@masserv.com
Website: www.masserv.com

(d) Registrar and Transfer Agent for Bonds (Series 13A, 13B, 16, 17, 27 to 49, 51 to 53, 55 and 57 to 73)

Beetal Financial & Computer Services Pvt. Ltd.
99, Madangir, Near Dada Harsukh Das Mandir
New Delhi-110062.
Phone No: 011-29961281, 011-29961282
Fax: 011-29961284
Email: beetalrta@gmail.com

x) Share Transfer System

In terms of Regulation 40(1) of SEBI Listing Regulations, as amended, securities can be transferred only in dematerialized form w.e.f. April 1, 2019, except in case of request received for transmission or transposition of securities. Members holding shares in physical form are requested to consider converting their holdings to dematerialized form. Transfers of equity shares in electronic form are effected through the depositories with no involvement of the Company.

xi) Transfer of Unclaimed Amount of Dividend to Investor Education and Protection Fund (IEPF)

In accordance with Section 125 of the Companies Act, 2013, during the financial year 2020-21, an amount of ₹189.62 lakh pertaining to unclaimed interim dividend and ₹ 105.06 lakh pertaining to unclaimed final dividend for 2012-13 have been transferred to Investor Education and Protection Fund.

The Company has uploaded the details of shareholders/ depositors of the Company containing information like name, address, amount due to be transferred to IEPF and due date of transfer of amount to IEPF on its website. The Company has been issuing notices in the newspapers from time to time in order to invite attention of the shareholders who have not preferred their claims, to submit their claims towards the unpaid and unclaimed dividend.

xii) Transfer of Shares to IEPF :

In terms of Section 124(6) of the Companies Act, 2013 and IEPF Authority (Accounting, Audit, Transfer and Refund) Rules, 2016 as amended from time to time (IEPF Rules), the shares in respect of which the dividend has not been paid or claimed for a period of seven years or more, is required to be transferred to Investor Education and Protection Fund (IEPF) Authority account.

In line with the provisions Section 124(6) and rules made thereunder as well as in accordance with the circulars/ notifications issued by the MCA from time to time, for the financial year 2020-21, 89723 shares of 843 shareholders were transferred to the DEMAT Account of the IEPF Authority opened with CDSL. Details of the shareholders whose shares were transferred to the IEPF Account is available on the website at the following link: https://www.ntpc.co.in/en/Investors/miscellaneous-download. Members may check their details on the aforesaid web-link.

xiii) Claim from IEPF Account:

Any person, whose shares, unclaimed dividend, matured deposits, matured debentures, application money due for refund, or interest thereon, sale proceeds of fractional share, redemption proceeds of preference shares etc. has been transferred to the IEPF , may claim the shares under provision to sub-section (6) of section 124 or apply for refund under clause (a) of sub-section (3) of section 125 or under proviso to sub-section (3) of section 125, as the case may be, to the Authority making an online application in Form IEPF-5. Detailed procedure regarding claiming shares from IEPF account is available on NTPC website at the following link: https://www.ntpc.co.in/en/investors/procedure-claiming-dividend-shares-iepf-authority-0.

xiv) Buyback of equity Shares:

During the financial year 2020-21, NTPC had completed buyback of 19,78,91,146 fully paid-up equity shares of face value of ₹ 10 each (representing 2% 'of the total number of fully paid-up equity shares in the paid-up share capital of the Company) at a price of ₹ 115 per equity share for an aggregate consideration of ₹ 2275,74,81,790. Post buyback, the shareholding of the Government of India was increased from 51.02% to 51.10%. The paid-up share capital of the Company also reduced from ₹ 9894.55 Crore to ₹ 9696.67 Crore.

xv) Debenture Trustees for various Series

For Series 17, 44 to 50 (TFB-2013), 53 to 55, 57 to 66	For Series 20 to 43, 51, 52, 56 (TFB-2015) and 70 to 73
Vistra ITCL (India) Ltd. (Formerly known as IL&FS Trust Company Limited) The IL&FS Financial Centre, Plot No. C-22, G-Block, Bandra – Kurla Complex, Bandra (East), Mumbai – 400051 Tel: (+91 22) 26533908 Fax: (+91 22) 26533297 E-mail: itclcomplianceofficer@ilfsindia.com Website: www.itclindia.com	**IDBI Trusteeship Services Limited** Asian Building, Ground Floor, 17, R. Kamani Marg, Ballard Estate, Mumbai – 400 001 Tel : +91 22 4080 7000 Fax : +91 22 6631 1776 E-mail : itsl@idbitrustee.com Website: www.idbitrustee.com **For Series 67 to 69** AXIS TRUSTEE SERVICES LTD. GDA House, Plot No. 85, Axis House, Bombay Dyeing Mills Compound, Pandurang Budhkar Marg, Worli, Mumbai- 400 025 Email: debenturetrustee@axistrustee.com Website: www.axistrustee.com

xvi) Distribution of Shareholding

Shares held by different categories of shareholders and according to the size of holdings as on 31st March 2021 are given below:

According to Size

a. Distribution of shareholding according to size, % of holding as on 31st March, 2021:

	Total			
Category	**Cases**	**%**	**Shares**	**%**
1-5000	7,74,472	99.3411	178711327	1.8430
5001-10000	2,914	0.3738	20011899	0.2064
10001-20000	989	0.1269	13867312	0.1430
20001-30000	288	0.0369	7116646	0.0734
30001-40000	125	0.0160	4311065	0.0445
40001-50000	80	0.0103	3710222	0.0383
50001-100000	206	0.0264	14773813	0.1524
100001-above	535	0.0686	9454163850	97.4990
Total	**7,79,609**	**100**	**9696666134**	**100**

b. Shareholding pattern on the basis of ownership:

Category	As on 31/3/2020			As on 31/3/2021			
	No. of shareholders	Total Shares	%	No. of shareholders	Total Shares	%	Change
Government of India	1	5048097508	51.02	1	4955346251	51.10	0.08
Indian Financial Institutions/ Bank*	28	1129080697	11.41	21	82313325	0.85	-10.56
Mutual Funds	36	1965942572	19.87	35	1867142872	19.26	-0.61
Foreign Portfolio Investors/ Fii	527	1250976561	12.64	467	1158205558	11.94	-0.70
Resident Individuals	593432	179695537	1.81	760537	224860239	2.32	0.51
Bodies Corporates	1902	22431972	0.23	2081	19287767	0.2	-0.03
Insurance Companies*	34	213509977	2.16	37	1265275374	13.05	10.89
Trusts	52	50300499	0.51	57	488347	0.01	-0.50
H U F	4	120	0	4	120	0	0.00
Others	9228	34521837	0.35	16369	123746281	1.27	0.92
	605244	9894557280	100	779609	9696666134	100	0

* (Shareholding of LIC has been regrouped)

xvii) Major Shareholders

Details of Shareholders holding more than 1% of the paid-up capital of the Company as on 31st March, 2021 are given below:

Name of the Shareholder	No. of Shares	%	Category
President of India	4955346251	51.10	Indian Promoter
Life Insurance Corporation of India P & GS Fund	1062420836	10.96	Insurance Co.
ICICI Prudential Equity & Debt Fund	647568645	6.68	Mutual Fund
HDFC Trustee Company Ltd. A/C HDFC Balanced Advantage Fund	429968266	4.43	Mutual Fund
CPSE Exchange Traded Scheme (CPSE ETF)	366146477	3.78	Mutual Fund
SBI-ETF Nifty 50	111385420	1.15	Mutual Fund
T. Rowe Price International Stock Fund	100810341	1.04	Foreign Portfolio Investor

xviii) Dematerialisation of Shares and Liquidity

The shares of the Company are in compulsory dematerialised segment and are admitted with both the Depositories i.e. National Securities Depository Ltd. (NSDL) and Central Depository Services (India) Limited (CDSL).

In pursuance of Article 7 of the Articles of Association of the Company and as per Rule 6 of the Companies (Share Capital and Debentures) Rules, 2014, the Company has prescribed a fee of ₹ 50/- per share/ bond certificate on issue of certificates on splitting/ consolidation/ rematerialisation/ duplicate on loss of shares/ bonds.

Secretarial Audit Report for Reconciliation of the Share Capital of the Company obtained from Practising Company Secretary has been submitted to Stock Exchanges within stipulated time.

Details of shareholding in dematerialized and physical mode as on 31st March, 2021 are as under:

Holding Type	Share %	Holder %
Demat		
CDSL	3.5878	43.4523
NSDL	96.4114	55.8384
Physical	0.0008	0.7093

xix) Names and addresses of the Depositories:

1. National Securities Depository Ltd.
   Trade World, 4th Floor
   Kamala Mills Compound
   Senapathi Bapat Marg,
   Lower Parel, Mumbai-400 013
2. Central Depository Services (India) Limited
   Phiroze Jeejeebhoy Towers
   28th Floor, Dalal Street, Mumbai-400 023

xx) Demat Suspense Account:

Details of shares/ debentures in the suspense accounts opened and maintained after Initial Public Offering, Further Public Offering of Equity Shares of NTPC and Bonus Debentures as on 31st March, 2021 is furnished below:

Details of "NTPC LIMITED – IPO – Unclaimed Shares Demat Suspense Account" (account opened and maintained after IPO):

Opening Balance (as on 1/4/2020)		Requests Disposed off during 2020-21		Closing Balance (as on 31/3/2021)	
Cases	Shares	Cases	Shares	Cases	Shares
5	1184	1	134*	4	1050

*Transferred to IEPF authority.

Details of "NTPC LIMITED – FPO Unclaimed Shares Demat Suspense Account" (account opened and maintained after FPO):

Opening Balance (as on 1/4/2020)		Disposed off during 2020-21		Closing Balance (as on 31/3/2021)	
Cases	Shares	Cases	Shares	Cases	Shares
6	1139	0	0	6	1139

Details of "NTPC LIMITED – Bonus Debentures – Unclaimed Debentures Demat Suspense Account" (account opened and maintained after Issue of Bonus Debentures):

Opening Balance (as on 1/4/2020)		Requests received and Disposed off during 2020-21		Closing Balance (as on 31/3/2021)	
Cases	Shares	Cases	Shares	Cases	Shares
29	5474	-	-	29	5474

xxi) Outstanding GDRs/ ADRs/ Warrants or any Convertible instruments, conversion date and likely impact on equity

No GDRs/ ADRs/Warrants or any Convertible instruments has been issued by the Company.

xxii) Commodity price risk or foreign exchange risk and hedging activities:

The Company does not deal in commodities and hence the disclosure pursuant to SEBI Circular dated November 15, 2018 is not required to be given. For a detailed discussion on foreign exchange risk and hedging activities, please refer to Directors' Report and Management Discussion and Analysis Report.

xxiii) Number of Shares held by the Directors :

Directors (as on 31/3/2021)	No. of shares
Shri Gurdeep Singh	5828
Shri Anil Kumar Gautam	12370
Shri D.K.Patel	NIL
Shri Ramesh Babu V.	3240
Shri C.K.Mondol	NIL
Shri U.K.Bhattacharya	6508
Shri Ashish Upadhyaya	NIL
Shri Vivek Kumar Dewangan	NIL
Dr. Bhim Singh	NIL
Dr. K. P. K. Pillay	NIL

xxiv) Locations of NTPC plants

Dadri, Badarpur & Faridabad (DBF) Region:

Thermal Power Stations

i) National Capital Thermal Power Station - Distt. Gautam Budh Nagar, Uttar Pradesh

Gas Power Stations

i) Faridabad Gas Power Project – Distt. Faridabad, Haryana

ii) National Capital Gas Power Project- Distt. Gautam Budh Nagar, Uttar Pradesh

Solar Power Stations

i) 5 MWp, Dadri Solar Power Plant, Dadri, Distt. Gautam Budh Nagar, Uttar Pradesh

ii) 5 MWp, Faridabad Solar Power Plant, Distt. Faridabad, Haryana

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Eastern Region - I

Thermal Power Stations

i) Barh Super Thermal Power Project- Patna, Bihar
ii) Farakka Super Thermal Power Station – Distt. Murshidabad, West Bengal
iii) Kahalgaon Super Thermal Power Project- Distt. Bhagalpur, Bihar
iv) North Karanpura Super Thermal Power Project – Distt. Hazaribagh, Jharkhand
v) Barauni Thermal Power Project, Distt. Begusarai, Bihar

Eastern Region - II

Thermal Power Stations

i) Talcher Super Thermal Power Station- Distt. Angul, Odisha
ii) Talcher Thermal Power Station- Distt. Angul, Odisha
iii) Bongaigaon Thermal Power Project, Distt. Kokrajhar, Assam.
iv) Darlipalli Super Thermal Power Project, Distt. Sundergarh, Jharsuguda, Odisha

Solar Power Station

10 MWp Talcher Kaniha Solar Power Station, Distt. Angul, Odisha

Northern Region

Thermal Power Stations

i) Feroze Gandhi Unchahar Thermal Power Station – Distt. Raebareli, Uttar Pradesh
ii) Rihand Super Thermal Power Project – Distt. Sonebhadra, Uttar Pradesh
iii) Singrauli Super Thermal Power Station - Distt. Sonebhadra, Uttar Pradesh
iv) Tanda Thermal Power Station- Distt. Ambedkar Nagar, Uttar Pradesh
v) Vindhyachal Super Thermal Power Station - Distt. Singrauli, Madhya Pradesh

Gas Power Stations

Auraiya Gas Power Project – Distt. Auraiya, Uttar Pradesh

Solar Power Station

i) 10 MWp Unchahar PV Solar Power Station, Distt. Raebareli, Uttar Pradesh
ii) 15 MWp Singrauli Solar PV Power Stations, Distt. Sonebhadra, Uttar Pradesh
iii) 140 MWp Bilhaur-I and 85 MW Bilhaur-II Solar Power Project, Dist. Kanpur, Uttar Pradesh
iv) 20 MWp Auraiya Solar Power Project – Distt. Auraiya, Uttar Pradesh

Southern Region

Thermal Power Stations

i) Ramagundam Super Thermal Power Station- Distt. Karimnagar, Telangana
ii) Simhadri Super Thermal Power Project- Distt. Vishakapatnam, Andhra Pradesh
iii) Telangana Super Thermal Power Project, Distt. Karimnagar, Telangana
iv) Kudgi Thermal Power Project, Distt. Bijapur, Karnataka

Gas Power Stations

i) Rajiv Gandhi Combined Cycle Power Project – Distt. Alappuzha, Kerala

Solar Power Station

i) 5 MWp Solar PV Power Plant, Port Blair, A&N Islands
ii) 10 MWp Ramagundam Solar Power Station, Distt. Karimnagar, Andhra Pradesh
iii) 250 MWp Anantapur Solar PV Project, Distt. Anantapur, Andhra Pradesh
iv) 10 MWp Simhadri Solar Power Station, Distt. Vishakapatnam, Andhra Pradesh
v) 92 MWp Kayamkulam Floating Solar Station, Distt. Alappuzha, Kerala

Western Region -I

Thermal Power Stations

i) Solapur Super Thermal Power Project – Distt. Solapur, Maharashtra
ii) Mouda Super Thermal Power Project – Distt. Nagpur, Maharashtra

Gas Power Stations

i) Jhanor Gandhar Gas Power Project - Distt. Bharuch, Gujarat
ii) Kawas Gas Power Project - Distt. Surat, Gujarat
iii) Anta Gas Power Project – Distt. Baran, Rajasthan

Solar Power Project

260 MWp Bhadla Solar Power Project, Distt. Jodhpur, Rajasthan

Wind Power Project:

Rojmal Wind (50 MW) Project, Gujarat

Western Region -II

Thermal Power Stations

i) Korba Super Thermal Power Station- Distt. Korba, Chhattisgarh
ii) Sipat Super Thermal Power Project-Distt. Bilaspur, Chattisgarh
iii) Gadarwara Super Thermal Power Project, Distt. Narsinghpur, Madhya Pradesh
iv) Lara Super Thermal Power Project, Distt. Raigarh, Chattisgarh
v) Khargone Super Thermal Power Project, Distt. Khargone, Madhya Pradesh
vi) Barethi Super Thermal Power, Distt. Chhatarpur, Madhya Pradesh

Solar Power Station

i) 50 MWp Solar PV Power Plant, Rajgarh, Madhya Pradesh
ii) 250 MWp Mandsaur Solar Power Project, Distt. Mandsaur, Madhya Pradesh

HYDRO POWER PROJECTS

i) Koldam Hydro Power Project – Distt. Bilaspur, Himachal Pradesh

ii) Tapovan – Vishnugad Hydro Power Project – Distt. Chamoli, Uttarakhand

iii) Lata Tapovan Hydro Power Projects – Distt. Chamoli, Uttarakhand

iv) Rammam – III Hydro Electric Power Project Distt. Darjeeling, West Bengal.

v) Singrauli Small Hydro Power Projects, Distt. Sonebhadra, Uttar Pradesh

POWER PROJECTS UNDER SUBSIDIARY COMPANIES

Thermal Power Projects

i) Kanti Bijlee Utpadan Nigam Limited : Muzaffarpur Thermal Power Station, Muzaffarpur, Bihar

ii) Bhartiya Rail Bijlee Co. Ltd. : Nabinagar Thermal Power Project, Distt. Aurangabad, Nabinagar, Bihar (in JV with Railways)

iii) Patratu Vidyut Utpadan Nigam Limited: Patratu Thermal Power Project, Patratu, Jharkhand

iv) Nabinagar Power Generating Company Limited : Nabinagar Super Thermal Power Project – Distt. Aurangabad, Nabinagar, Bihar

v) Ratnagiri Gas & Power Pvt. Ltd. : Ratnagiri Power Project - Maharashtra

vi) THDC India Ltd, Ganga Bhawan, Pragatipuram, By-Pass Road Rishikesh-249201.

vii) North Eastern Electric Power Corporation Limited, Brookland Compound, Lower New Colony, Shillong

JOINT VENTURE POWER PROJECTS

Thermal Power Stations

a. **NTPC -SAIL Power Company Ltd.** : 4th Floor, NBCC Tower, 15th Bhikaji Kama Place, New Delhi.

b. **NTPC Tamil Nadu Energy Co. Ltd:** Vallur Thermal Power Project – Chennai, Tamil Nadu

c. **Aravali Power Co. Pvt. Ltd.:** Indira Gandhi Super Thermal Power Project - Distt. Jhajjar, Haryana

d. **Meja Urja Nigam Pvt. Ltd.:** Meja Super Thermal Power Project – Tehsil Meja, Allahabad

Overseas Joint Venture Projects

i) **Trincomalee Power Co. Ltd.** : Trincomalee Power Project, Trincomalee, Srilanka

ii) **Bangladesh- India Friendship Power Company (Pvt) Ltd.:** Maitree Power Project at Khulna, Bangladesh

COAL MINING SITES

i) Pakri Barwadih Coal Mining Project, Hazaribagh, Jharkhand

ii) Chatti-Bariatu Coal Mining Project, Hazaribag, Jharkhand

iii) Kerandari Coal Mining Project, Hazaribagh, Jharkhand

iv) Talaipalli Coal Mining Project, Raigarh, Chattisgarh

v) Dulanga Coal Mining Project, Sundargarh, Odisha

JOINT VENTURE COAL MINES

vi) Banhardih Coal Mining Project, Latehar, Jharkhand (in JV with JVBNL)

xxv) Address for correspondence:

NTPC Bhawan, SCOPE Complex

7, Institutional Area, Lodhi Road,

New Delhi – 110003

The phone numbers and e-mail reference for communication are given below:

	Telephone No.	Fax No.
Registered Office NTPC Limited NTPC Bhawan, Core-7, Institutional Area, Lodhi Road, SCOPE Complex, New Delhi -110003	011-24387333	011- 2436 1018
Company Secretary & Compliance Officer Ms. Nandini Sarkar	011-24360959	011-2436 0241
E-mail id	nsarkar@ntpc.co.in	
Chief Investor Relations Officer Mr. Aditya Dar, Executive Director (Finance)	011-2436 7072	011-2436 1724
E-mail id	adityadar@ntpc.co.in	
Nodal officer for IEPF Mr. Anil Kumar Gautam Director (Finance)	011-24365552	011-24361018
E-mail id	isd@ntpc.co.in	
Dy. Nodal officer for IEPF Mr. Aditya Dar Executive Director (Finance)	011-24367072	011-24361724
E-mail id	isd@ntpc.co.in	
E-mail ID (exclusive) for redressal of investors complaints	isd@ntpc.co.in; csntpc@ntpc.co.in	

For and on behalf of Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date : 26th August, 2021

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Annex-I

Skill/Competence matrix of Directors:

S. No.	Names of Directors	Designation	Technical/ Engineering	Energy & Power Sector	Finance & Banking	Economics	Human Resources Management	Regulatory Framework	Management	Environment	Academics	Research and Development
I.	Shri Gurdeep Singh	Chairman & Managing Director	✓	✓					✓			
II.	Shri Anil Kumar Gautam	Director (Finance)		✓	✓			✓				
III.	Shri Dillip Kumar Patel	Director (HR)	✓	✓			✓		✓			
IV.	Shri Ramesh Babu V.	Director (Operations)	✓	✓								
V.	Shri Chandan Kumar Mondol	Director (Commercial)	✓	✓				✓				
VI.	Shri Ujjwal Kanti Bhattarcharya	Director (Project)	✓						✓	✓		
VII.	Shri Ashish Upadhyaya	Govt. Nominee Director		✓	✓	✓		✓				
VIII.	Shri Vivek Kumar Dewangan	Govt. Nominee Director	✓	✓	✓			✓				
IX.	Dr. K. P. Kylasanatha Pillay	Independent Director						✓				
X.	Dr. Bhim Singh	Independent Director	✓	✓							✓	✓

ANNEX-II

DISCRETIONARY REQUIREMENTS

Besides the mandatory requirements, as mentioned in preceding pages, the status of compliance with discretionary requirements under Regulation 27(1) of SEBI (LODR) are as under:

1. **The Board:** The Company is headed by an Executive Chairman.

2. **Shareholder Rights:** The quarterly financial results of the Company are published in leading newspapers as mentioned under heading 'Means of Communication' and also hosted on the website of the Company. These results are not separately circulated.

3. **Modified opinion(s) in audit report:** The Auditors' report is unmodified.

4. **Reporting of the Internal Auditor:** The Internal Auditor reports to the Audit Committee of the Board.

Annex-III

Schedule of Compliances with Presidential Directives issued during the financial year 2020-21 and during last three years preceding the financial year 2020-21:

Year	Content of Presidential Directives	Compliance
2020-21	NIL	NIL
2019-20	NIL	NIL
2018-19	Presidential Directive for wage revision	Complied
2017-18	NIL	NIL



Women Empowerment, Improve gender diversity

Annex-IV

CERTIFICATE OF NON-DISQUALIFICATION OF DIRECTORS

(Pursuant to Regulation 34(3) and Schedule V Para C clause (10)(i) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015)

To,

The Member of

NTPC LIMITED

NTPC Bhawan, SCOPE Complex,

7, Institutional Area, Lodhi Road,

New Delhi-110 003

We have examined the relevant registers, records, returns and disclosures received from the Directors of NTPC Limited having CIN: L40101DL1975GOI007966 and having registered office at NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi- 110 003 (hereinafter referred to as 'the Company') produced before us by the Company for the purpose of issuing this Certificate, in accordance with Regulation 34(3) read with Schedule V Para-C Sub clause 10(i) of the Securities Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, for the Financial Year ending on 31st March, 2021 (hereinafter referred to as 'financial year under review')

In our opinion and to the best of our information and according to the verifications [including Directors Identification Number (DIN) status at the portal www.mca.gov.in] as considered necessary and explanations furnished to us by the Company & its officers, we hereby certifiy that none of the Directors on the Board of the Company, as on the closure of the financial year under review have been debarred or disqualified from being appointed or countinuing as Directors of companies by the Securities and Exchange Board of India. Ministry of Corporate Affairs or any such other Statutory Authority.

Ensuring the eligibility for the appointment/continuity of every Director on the Board is the responsibility of the management of the Company. Our responsibility is to express an opinion on these based on our verification. This certificate is neither an assurance as to the future viability of the Company nor of the efficiency or effectiveness with which the management has conducted the affairs of the Company.

For A. Kaushal & Associates
Company Secretaries

CS Amit Kaushal
Mem. No.: F6230
C.P. No.:6663
UDIN: F006230C000491220

Place: New Delhi
Date: 21/6/2021

Chief Executive Officer (CEO) & Chief Financial Officer (CFO) Certification

We, Gurdeep Singh, Chairman & Managing Director and A.K.Gautam, Director (Finance) of NTPC Limited, certify that:

(a) We have reviewed financial statements and the cash flow statement for the year ended March 31, 2021 (stand alone and consolidated) and to the best of our knowledge and belief:

(i) these statements do not contain any materially untrue statement or omit any material fact or contain statements that might be misleading;

(ii) these statements together present a true and fair view of the Company's affairs and are in compliance with existing accounting standards, applicable laws and regulations.

(b) To the best of our knowledge and belief, no transactions has been entered into by the Company during the year, which is fraudulent, illegal or violative of the company's various code(s) of conduct.

(c) We are responsible for establishing and maintaining internal controls for financial reporting and we have evaluated the effectiveness of the internal control systems of the Company pertaining to financial reporting and have disclosed to the auditors and the Audit Committee, deficiencies in the design or operation of internal controls, if any, of which we are aware and the steps we have taken or propose to take to rectify these deficiencies.

(d) We have indicated to the Company's auditors and the Audit Committee of NTPC's Board of Directors:

(i) significant changes, if any, in internal control over financial reporting during the year;

(ii) significant changes, if any, in accounting policies during the year and the same have been disclosed in the notes to the financial statements; and

(iii) instances of significant fraud of which we have become aware and the involvement therein, if any, of the management or an employee having a significant role in the company's internal control system over financial reporting.

Place: New Delhi
Date : June 15, 2021

(A.K. Gautam)
Director (Finance)

(Gurdeep Singh)
Chairman & Managing Director



A View of NTPC Sipat Control Room

Independent Auditors' Certificate on Compliance of Conditions of Corporate Governance

To
The Members of
NTPC Limited

1. This certificate is issued in accordance with the terms of our engagement letter dated 4th February, 2021.

2. We have examined the compliance of conditions of Corporate Governance by NTPC Limited ('the Company') for the year ended 31st March, 2021 as stipulated in regulations 17 to 27, clause (b) to (i) of regulation 46(2) and paragraphs C and D of Schedule V of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("the Listing Regulations") and as stipulated in the Guidelines on Corporate Governance for Central Public Sector Enterprises issued by Department of Public Enterprises (DPE), Government of India ("the DPE Guidelines").

Management's Responsibility for compliance with the conditions of Listing Regulations

3. The compliance with the terms and conditions contained in the corporate governance is the responsibility of the Management of the Company including the preparation and maintenance of all relevant supporting records and documents. This responsibility includes the design, implementation and maintenance of internal control and procedures to ensure the compliance with the conditions of Corporate Guideline stipulated in the Listing Regulations and DPE Guidelines.

Auditor's Responsibility

4. Our examination is limited to procedures and implementation thereof adopted by the Company for ensuring the compliance of the conditions of Corporate Governance. It is neither an audit nor an expression of opinion on the financial statements of the Company.

5. Pursuant to the requirements of the Listing Regulations and DPE Guidelines, it is our responsibility to provide a reasonable assurance whether the Company has complied with the conditions of Corporate Governance as stipulated in the Listing Regulations and DPE Guidelines for the year ended 31st March, 2021.

6. We conducted our examination in accordance with the Guidance Note on Reports or Certificates for Special Purposes (Revised 2016) (the 'Guidance Note') issued by the Institute of Chartered Accountants of India ('ICAI'). The Guidance Note requires that we comply with the ethical requirements of the Code of Ethics issued by ICAI.

7. We have complied with the relevant applicable requirements of the Standard on Quality Control (SQC) 1, Quality Control for Firms that Perform Audits and Reviews of Historical Financial Information, and Other Assurance and Related Services Engagements.

Opinion

8. In our opinion, and to the best of our information and according to explanations given to us, we certify that the Company has complied with the conditions of Corporate Governance as stipulated in the above-mentioned Listing Regulations and DPE Guidelines except for following:
   i) As stated in Point No. 2.1 of the Corporate Governance Report, the Company has not complied with the Listing Regulations, with regard to the appointment of minimum number of Independent Directors and Women Independent Director in the composition of the Board of Directors as per details given below,
      a) There was no Woman Independent Director during the FY 2020-21.
      b) from 28th August 2020, the number of Independent Directors were less than 50% of total number of Directors.
   ii) As stated in Point No.2.7 and 3.3 of Corporate Governance Report, regarding compliance with the Board Members and Independent Directors Evaluation Policy.

9. We state that such compliance is neither an assurance as to the future viability of the Company nor the efficiency or effectiveness with which the management has conducted the affairs of the Company.

For S.K.Mehta & Co.
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 21091382AAAAMF1654
Place: New Delhi

For S.N.Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Surinder Kr. Khattar)
Partner
M. No.084993
UDIN:21084993AAAADG8836
Place: New Delhi

For Varma & Varma
Chartered Accountants
FRN 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN:21025854AAAADG6588
Place: Chennai

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN:21079236AAAAAJ2712
Place: Jaipur

For C.K.Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN:21057318AAAADX5880
Place: Bhubaneshwar

For B.C.Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN:21073488AAAABT1126
Place: Kanpur

For V.K.Jindal & Co.
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN:21072534AAAAJB3610
Place: Hazaribagh

Dated: 23 August 2021
Digitally signed by signatories

Annexure -III to Directors' Report

ENERGY CONSERVATION, TECHNOLOGY ABSORPTION AND FOREIGN EXCHANGE EARNINGS & OUTGO

{PURSUANT TO SECTION 134(3)(m) OF THE COMPANIES ACT, 2013 READ WITH RULE 8(3) OF THE COMPANIES (ACCOUNTS) RULES, 2014}

A. CONSERVATION OF ENERGY:

a) Energy conservation measures taken:

Some of the important energy conservation measures taken during the year 2020-21 in different areas are as under:

ENERGY AUDITS:

During 2020-21, under PAT scheme (3rd cycle) Measurement & Verification audit of 2 stations was carried out. Seven stations of your Company had got mandatory Energy Audit conducted as per Bureau of Energy Efficiency (BEE) regulation. All stations of your Company had conducted Auxiliary Power Consumption Energy Audits.

AUXILIARY POWER CONSUMPTION:

Some of the actions undertaken to reduce auxiliary power consumption at various stations of your Company are:

Retrofitting HT VFD in CEPs of three unit of 500 MW, Replacement of inefficient BFP cartridges based on high SEC, Installing grid-connected roof top Solar PV systems, Energy Efficient Coating on pump internals of Cooling Water / other large water pumps, Installation of VFD's in various LT drives, Retrofitting FRP hollow blades in CT fans, Application of diamond faced seal for TDBFP, Replacing existing motors with Energy Efficient motors, ESP duct modification using CFD, Optimizing nos. of running BFP's, CEP's, mills and CW pumps and fans during prolonged partial loading.

LIGHTING:

Large scale replacement of existing lighting (FTL's, HPSV's, CFL's, Halogen) in main plant, off sites, office buildings, area and street lighting of the station and township, common facilities and residential units of township were continued at all stations of your Company during the year.

HEAT ENERGY:

HP / IP cylinder efficiency improvement during capital overhaul, Boiler modifications to improve steam parameters & to reduce RH spray, TDBFP cartridge replacement were taken up at few stations of your Company.

b) Additional investments and proposals for reduction in consumption of energy:

Provision of ₹ 61.68 crore has been kept in BE 2021-22 for different energy conservation schemes like:

- Retrofitting VFD's in CEP's & LT drives;
- LED lighting & energy efficient ceiling fans;
- Grid-connected roof top Solar PV systems;
- Energy efficient LT motors;
- Carbon Fiber Shaft for cooling tower fans; and
- Water flow meters

c) Impact of measures taken for energy conservation:

Savings achieved during 2020-21 on account of specific efforts for energy conservation:-

S.No.	Area/Activities	Energy Unit	Savings Qty.	₹ (Crore)
1	Electrical	MU	132.95	29.53
2	Heat Energy (equivalent MT of coal)	MT	22,995	8.78
3	Heat Energy (equivalent MCM of Gas)	MCM	0.087	0.20
	Grand Total			**38.51**

Savings achieved during FY 2019-20 ₹ 37.41 crore.

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B. TECHNOLOGY ABSORPTION:

Efforts made towards technology absorption are contained in enclosed Form – B.

C. FOREIGN EXCHANGE EARNINGS AND OUTGO

The Foreign Exchange earned in terms of actual inflow during the year and the Foreign Exchange Outgo during the year in terms of actual outflow as under:

Total Foreign Exchange Used/ Earned (2020-21)	(₹ Crore)
1. Actual foreign exchange outgo on account of	
-Procurement of capital goods, coal and spare parts	1,144.69
-Interest & Foreign currency loan/bond issue expenses	1,698.21
-Professional & consultancy fee	20.89
-Others	16.54
Total	**2,880.33**
2. Actual foreign exchange earnings	NIL

FORM B

Form for disclosure of particulars with respect to Absorption of Technology

1. Specific areas in which NETRA activities have been carried out during 2020-21

Major Projects:

Carbon capture and Utilization Technology

1. 10 TPD CO_2 to Methanol' Demo Plant at Vindhyachal project of your Company.
2. Indigenous development of Catalyst & Reactor for conversion of CO_2 to Methanol in parallel.

Hydrogen Technology

1. Development of Sea Water Electrolyser for H_2 Production.
2. Development of Lab scale Reactor for production of Hydrogen through Photo-Electro-chemical process.
3. Development of High Temperature Steam Electrolyser.
4. Metal Hydride (MH) Based Static H_2 Compression (30-300 bar).
5. NETRA Green H_2 Grid based 25 kWe AC net X 18 hrs (off solar period) power generation system at NETRA.

Water Technology

1. 240 TPD Non-Thermal Forward Osmosis based high recovery system.
2. Activated Filter Media Plant for treating STP water.

Ash Technology

1. Geo-polymeric concrete Road and Paver Blocks at various stations of your Company.
2. Development of Angular Shaped Coarse Aggregates from Fly Ash.
3. Development of Pond ash based Controlled Low Strength Setting Material (CLSM).

NETRA Green campus

1. RDF gasification-based net 400 kWeX24 hrs power generation plant.
2. 4 MW Ground Mounted Solar Photo Voltaic System with Battery Storage.

Other areas:

1. Low-Cost Housing demo project.
2. Multi Utility Heat Pump for solarization projects (International Solar Alliance).
3. Solar Thermal Space heating solution for colder region.

4. Flexibilization project for Reducing Technical Minimum to 40% for Unit Dadri Station (2nd Phase) of your Company.

5. Development of technology for Detection & Quantification of Exfoliation of Boiler Tube using Magnetic Coercive Force (MCF) and Ultrasonic Method.

Apart from various projects, NETRA had also provided advanced scientific support to your Company Stations and outside power utilities in various areas such as Non-Destructive Evaluation and Imaging, Metallurgy & Failure Analysis, CFD Services for process improvement Transformer, Generator Health, Creep & fatigue analysis, Corrosion & Water Chemistry, Coal & Combustion and Environment, etc.

Various institutional building activities such as training programs, workshops on various topics such as Advanced NDE & Metallurgy etc. were conducted. NETRA journal, compendium of Metallurgy focused case studies, compendium on advance NDE methods and numerous research papers were published.

Scientific Support to your Company Stations (Continuous basis) :

NETRA also provides advanced scientific support to your Company Stations and outside power utilities mainly in the following areas:

I. Health assessment and residual life assessments of power plant components for improving the reliability and availability of boiler, steam turbine, Gas turbines components by using different advanced NDE tools and techniques.

II. Remote Inspection of boiler header using in-house developed robotic system, Evaluation of Post Weld Heat Treatment Quality of Ferromagnetic Steel Weld etc. using Magnetic Coercive Force Measurement.

III. Implementation of Advance NDE Techniques such as Phased Array Ultrasonic Testing (PAUT) for inspection of weld joints on Boiler Tubes, in-situ detection of hydrogen damage in water wall, in-situ detection of crack in root region of LP turbine blades, Time of Flight Diffraction (TOFD).

IV. Microstructural characterization of various alloys, stainless steels, super alloys and other advanced materials:

- Identification of damage mechanisms in pressure part components to reduce forced outages and thereby improve availability & reliability of components; and, suitable measures recommended to OS, QA and O&M departments.
- Root cause analysis of boiler, turbine, generator and auxiliaries of power plant

V. Substitution of OEM on high end & costly health assessment of GT components.

VI. Development of Chemical Formulations for Cooling Water Treatment for high COC, to reduce the specific water consumption of plant.

VII. Quantitative and Qualitative analysis of deposit, solvent selection and post operational chemical cleaning recommendations for boilers and Condenser.

VIII. Corrosion analysis, monitoring & its control in Power plants for Fire Fighting System and CW System.

IX. Specialized analytical support for characterizing the turbine, boiler, condenser, CT and De aerator deposits, corrosion products, heavy metals in effluents using state of art equipment's such as SEM, XRD, IC, TOC, particle count analyzer, AAS & ICPMS etc.

X. Improvement in STP water quality by enhancing the performance of sewage treatment and by carrying out testing of organic matter, COD, BOD and TKN. Trace level Mercury testing's in Coal and Effluent.

XI. Residual life assessment of ACF, Cation Exchange Resin, Anion Exchange Resin, MB-SAC resin, MB-SBA resin, CPU resin through analysis such as TEC, SSC, WRC, density.

XII. Particle size distribution and bead integrity of Cation Exchange, Anion Exchange, MB & CPU resin.

XIII. Condition Monitoring of:

- High voltage transformers through tools such as Dissolve gas Analysis (DGA), FDS, SFR and Interfacial Tension (IFT).
- Super heater / re-heater tubes of ageing boilers through accelerated creep testing.
- Lubricating oils of rotating components using wear debris analysis.
- Ion exchange resins & activated carbon for capacity enhancement and its kinetics.

XIV. Advanced coal & ash characterization of samples of station to determine ash fusibility characteristics, slagging & fouling behavior of coal, elemental composition of coal & biomass, particle size analysis of fly ash, reactivity, abrasion behavior & grade determination of coal. Compositional analysis of fly ash using EDXRF. Estimation of mercury in coal in ppm/ppb level.

XV. CFD services in power plant domain and other relevant areas.

2. Benefits derived as a result of above Research & Technology Development:

NETRA activities are aligned for solving some of the major concerns of your Company and the power sector in today's scenario. In this regard, NETRA has taken up major projects for addressing concerns such as environment and climate change, reliability and efficiency improvement, new and renewable energy etc.

NETRA has taken projects for reducing carbon footprints by means of carbon capture and utilization. 10 TPD CO_2 to Methanol project is aimed at capturing CO_2 from existing thermal plant and its utilization for production of valuable product such as Methanol. Work is going on for the indigenization of catalyst and reactor for conversion of CO_2 to Methanol.

R&D, lab-scale and pilot-scale demonstration projects such as development of Sea water Electrolyser, High Temperature steam electrolysers etc. have been taken up for hydrogen technology.

Continuous work is going on for the development of new products and processes for bulk Ash utilization and as a result novel technologies & products such as Geo Polymeric (GPC) Road, Geo polymeric Pavers & Tetrapod etc. have been successfully developed and implemented.

Low-cost housing demo units constructed at NETRA for demonstrating optimized design for low-cost house. Work is in progress for development of multi utility heat pump an innovative energy efficient technology that can simultaneously generate multiple variants of cold and hot utilities. Upon successful development, this can be offered for implementation of solarization projects in member countries of International Solar Alliance. Project on Flexibilization of units for reducing technical minimum implemented at your Company–Dadri Station.

Through advance scientific services like Non-Destructive Evaluation, CFD analysis and Metallurgy & Failure Analysis, etc., NETRA is working constantly for improvement in reliability, efficiency and as well as for reduction in O&M cost by the diagnosis of faults. NETRA is also working on cutting-edge technologies such as development of robotics solutions for inspection of CW Duct & water pipeline and visual inspection of boiler headers. Asset Digitization & Monitoring through Drones, development of novel sensors to increase reliability, safety and to reduce inspection & monitoring time as well as manpower requirements.

NETRA activities have helped the stations in the analysis of failures and their prevention. Techniques developed by NETRA are implemented at stations wherever required. Regeneration treatments of resins, chemical cleaning/treatment and corrosion control measures supported the stations in improving the efficiency and availability of boilers and various heat exchangers/ cooling towers, etc.

3. R&D Expenditure:

S.No.	Description	Expenditure in (₹ in Crore) FY 2020-21
a)	Capital	24.44
b)	Revenue	161.34
	Total	**185.78**

4. **Technology Absorption, Adaptation and Innovation:**

Particulars of some of the important technology imported during last five (5) years are as follows:

S.No.	Technology	Year	Stations
1	Air cooled condenser for super critical units	2013-21	Under implementation at (3x660) MW units at North Karanpura and (3x800) MW units at Patratu (Subsidiary Company)
2	Ultra- supercritical Power plants with steam parameters 270 kg/cm^2 steam pressure and 600/600 deg C at turbine end.	2014-21	Implemented in Khargone (2X660) MW. Both units been commissioned. Under implementation at (2x800) MW units of Telangana –I, 3x800 MW units of Patratu (Subsidiary Company).
3	Cooling Tower of FRP construction	2016-19	Installed in BRBCL Nabinagar (Subsidiary Company) (4x250 MW) and under execution in CTs of Simhadri-I (2X500 MW)
4	Environmental norms compliance (SO_2 emission control by FGD)	2017-21	For SO_2 emission compliance FGDs are under implementation in 58,940 MW and FGD/DSI in 1,340 MW is already under operation. 2,850 MW capacity Wet limestone based FGD has been awarded during 2020-21.
5	Online Coal analyzers	2018-20	Implemented in nine number coal based non pit head stations and in upcoming coal based thermal power plants.
6	AMS (Advanced Monitoring of Stockyard)	2018-19	Successfully implemented at Simhadri station as a pilot project.
7	APC (Advanced Process control)	2018-19	Technology demonstration completed at Simhadri station.

For and on behalf of the Board of Directors

Place: New Delhi
Date : 26th August, 2021

(Gurdeep Singh)
Chairman & Managing Director



A View of NTPC RLI Talcher Kaniha

Annexure-IV to Directors' Report

STASTICAL INFORMATION ON RESERVATION OF SCs/STs

Representation of SCs/STs as on 1.1.2021:

Group	Employees on Roll	SCs	%age	STs	%age
A	11,910	1,739	14.60	707	5.94
B	3,307	532	16.09	296	8.95
C	2,641	390	14.77	196	7.42
D	484	123	25.41	58	11.98
Total*	**18,342**	**2,784**	**15.18**	**1,257**	**6.85**

*The above data is inclusive of manpower posted at JVs and Subsidiaries and manpower of taken over projects and Fixed Tenure Employees (FTE).

Recruitment of SCs/STs during the calendar year 2020:

Group	Total Recruitment	SCs	%age	STs	%age
A	296	46	15.54	14	4.73
B	0	0	0.0	0	0.0
C	43	4	9.30	4	9.30
D	13	1	7.69	0	0.0
Total	**352**	**51**	**14.49**	**18**	**5.11**

Promotions of SCs/STs during the calendar year 2020:

Group	Total Promotion	SCs	%age	STs	%age
A	2,458	379	15.42	179	7.28
B	863	146	16.92	76	8.81
C	506	81	16.01	27	5.34
D	1	0	0.00	0	0.00
Total	**3,828**	**606**	**15.83**	**282**	**7.37**

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date : 26th August, 2021



Resettlement & Rehabitation Colony in NTPC Darlipali

Annexure-V to Directors' Report

INFORMATION ON PERSONS WITH BENCHMARK DISABILITIES (PwBD)

With a view to focus on its role as a socially responsible and socially conscious organization, your Company has endeavored to take responsibility for adequate representation of physically challenged persons in its workforce. With this in view, total of 10 PwBD (Persons with Benchmark Disabilities) were recruited during the year 2020. As on 1.1.2021, 500 (2.7%) PwBD (96 with Blindness and low vision, 109 with Deaf and Hard of Hearing and 295 with Locomotor Disabilities) are on the rolls of your Company. Reservation has been provided as per rules/policy. Some of the other initiatives taken for the welfare of PwBD over the years by your Company are as under:

- In compliance to RPwD Act 2016, your Company has in place Equal Opportunity Policy.
- Additional benefit of 4 days in the form of Special Casual leave in a calendar year for specific requirements relating to the disability of the employee has been provided to PwBD.
- Travelling Allowance in respect of Attendant/Escort for accompanying an Employee with Disabilities on travel during Tour/ Training.
- Liaison Officer (PwBD) and Grievance Redressal Officer has been nominated at all Projects/stations/Regions of your Company.
- For individual needs of the VH employees, screen reading software and Braille shorthand machines are made available by the Projects. A website has been made DAP friendly, particularly for Low Vision Employees.
- Changes in the existing building have been/are being made to provide barrier free access to differently abled. Ramps have also been provided for unhampered movement of wheel chairs.
- At most of your Company Projects, wherever houses are located in multi-storied structures, allotments to PwBD has been made on the ground floor. Wherever required, gates/ door of the quarter has been widened.
- Your Company's Medial Attendance and Treatment (MAT) rules provide reimbursement towards expenses incurred by the employees towards purchase/replacement/repair/adjustment of artificial limbs/appliances for self and/or dependent family members and reimbursement towards Low Vision Aids for visually challenged employees and/or their dependents and Hearing Aid for hearing impaired employees and/or their dependents.
- Medical camps have been organized in various projects of your Company for treatment and distribution of aids like artificial limbs, tricycles, wheelchairs, calipers etc.
- Shops have been allotted in your Company township to DAP (Differently abled Persons) so that they may earn their livelihood.
- Regular interactive meetings are being organized with PwBD.
- 20 number of Scholarships @ ₹ 4,000 per month/ per student are given to differently abled students pursuing MBA/PGDBM/ Degree in Engineering Courses/MBBS.
- In order to encourage and motivate children and youth from neighborhood villages of your Company Projects/Stations for higher studies, your Company has in place 'NTPC Utkarsh'-Merit Scholarship under "NTPC Foundation" for students(including Physically Challenged) from the neighborhood of its projects / stations . The scheme benefits students from neighborhood communities pursuing X, XII, ITI, BE/ B.Tech and MBBS studies.
- DIVYANG (Orthopedically Handicapped) employees have been allowed to purchase a three wheeler vehicle with a hand fitted engine against their normal entitlement (advance for scooter/ motorcycle/ moped) under Your Company conveyance Advance Rules.
- Relaxation in qualifying marks: Pass marks in lateral recruitment and 10% relaxation in Executive Trainees recruitment. 10% relaxation in written test and interview.
- The minimum performance level marks for promotions (in workman categories) within the cluster is relaxed by 3 marks in case of employees belonging to SC/ ST/ Physically Challenged category.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date : 26th August, 2021

Annexure –VI to Directors' Report

FORM NO. MGT 9
EXTRACT OF ANNUAL RETURN

As on financial year ended on March 31, 2021

Pursuant to Section 92(3) of the Companies Act, 2013 and rule 12(1) of the Company (Management & Administration) Rules, 2014

I. REGISTRATION & OTHER DETAILS:

1.	CIN	L40101DL1975GOI007966
2.	Registration Date	7th November 1975
3.	Name of the Company	NTPC Limited
4.	Category/Sub-category of the Company	Public Company / Government Company
5.	Address of the Registered office & contact details	NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003 Telephone No: 011 24360100 /7072 Fax No: 011 24361018 /1724 E-mail : csntpc@ntpc.co.in
6.	Whether listed company	Yes
7.	Name, Address & contact details of the Registrar & Transfer Agent, if any.	**(a) Registrar and Transfer Agent for Equity Shares** M/s Beetal Financial & Computer Services Private Limited, 99, Madangir, Behind Local Shopping Centre, Near Dada Harsukhdas Mandir New Delhi - 110 062 Contact person: Shri Punit Mittal or Shri Ratan Kumar Karna Phone: 011-29961281 – 83, 26051061 & 26051064 Email: ntpc@beetalfinancial.com **(b) Registrar and Transfer Agent for Tax Free Bonds (Series 50) and Bonus Debentures (Series 54) and Tax Free Bonds 2015 (Series 56)** KFin Technologies Private Limited Karvy Selenium Tower B, Plot No. 31 & 32, Gachibowli Financial District, Nanakramguda, Serilingampally, Hyderabad-500008 Phone No: 040-67161518 E-mail: einward.ris@karvy.com

II. PRINCIPAL BUSINESS ACTIVITIES OF THE COMPANY :

(All the business activities contributing 10% or more of the total turnover of the company shall be stated)

S. No.	Name and Description of main products / services	NIC Code of the Product/Service	% to total turnover of the company
1	Electric power generation by coal based thermal power plant	35,102	89.64%

III. PARTICULARS OF HOLDING, SUBSIDIARY AND ASSOCIATE COMPANIES:

Sl. No.	Name and address of the Company	CIN/GLN	% of shares held
Subsidiary Company {Section 2(87)(ii)}			
1	NTPC Vidyut Vyapar Nigam Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40108DL2002GOI117584	100.00
2	NTPC Electric Supply Company Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40108DL2002GOI116635	100.00
3	Kanti Bijlee Utpadan Nigam Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40102DL2006GOI153167	100.00
4	Nabinagar Power Generating Company Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40104DL2008PLC183024	100.00
5	Bhartiya Rail Bijlee Company Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40102DL2007GOI170661	74.00
6	Patratu Vidyut Utpadan Nigam Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40300DL2015GOI286533	74.00
7	NTPC Mining Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U10300DL2019GOI354454	100.00
8	North Eastern Electric Power Corporation Limited, Brookland Compound, Lower New Colony, Dist. East Khasi Hills Shillong Meghalaya - 793003	U40101ML1976GOI001658	100.00
9	THDC India Limited, Bhagirath Bhawan, Top Terrace Bhagirathipuram, Tehri Garhwal Uttarakhand - 249001	U45203UR1988GOI009822	74.496
10	NTPC EDMC Waste Solutions Private Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40300DL2020GOI364186	74.00
11	NTPC Renewable Energy Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40107DL2020GOI371032	100.00
12	Ratnagiri Gas and Power Private Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40105DL2005PTC138458	86.49
Associate Company {Section 2(6)}			
1	Utility Powertech Limited, Reliance Centre, Ground Floor 19, Walchand Hirachand Marg, Ballard Estate, Mumbai, Mumbai City, MH 400001	U45207MH1995PLC094719	50.00
2	NTPC SAIL Power Company Limited, 4th Floor NBCC Tower, 15th Bhikaji Kama Place, New Delhi-110066	U74899DL1999PLC098274	50.00
3	NTPC GE Power Services Private Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U74899DL1999PTC101702	50.00
4	NTPC Tamil Nadu Energy Company Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40108DL2003PLC120487	50.00
5	Aravali Power Company Private Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40105DL2006PTC156884	50.00
6	Meja Urja Nigam Private Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U74900DL2008PTC176247	50.00
7	NTPC BHEL Power Projects Private Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40102DL2008PTC177307	50.00
8	BF-NTPC Energy Systems Limited, 14th Floor, Antariksh Bhawan, 22 KG Marg, New Delhi-110003 @	U40106DL2008PLC179793	49.00

Sl. No.	Name and address of the Company	CIN/GLN	% of shares held
9	Transformers and Electricals Kerala Limited, AP VII/336, Angamali South PO Ernakulam, Dist. Cochin, Kerala- 683573 #	U31102KL1963SGC002043	44.60
10	National High Power Test Laboratory Private Limited, NHPTL, POWERGRID Complex, 765/400 k.v. Substation, Khimlasa Road, Bina, Sagar, M.P. 470113	U73100MP2009PTC047744	20.00
11	Energy Efficiency Services Limited, NFL Building, 5th & 6th Floor, Core-III, SCOPE Complex, Lodhi Road, New Delhi-110003	U40200DL2009PLC196789	47.15
12	CIL NTPC Urja Private Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U14105DL2010PTC202053	50.00
13	International Coal Ventures Private Limited, 20th Floor, Scope Minar, (Core-2), North Tower, Laxmi Nagar District Centre, Delhi-110092*	U10100DL2009PTC190448	0.09
14	Anushakti Vidhyut Nigam Limited, 16th Floor, Centre 1 , World Trade Centre, Cuffe Parade, Mumbai-400021	U40300MH2011GOI212727	49.00
15	Hindustan Urvarak & Rasayan Limited, Core-4, 9th Floor Scope Minar, Laxmi Nagar, District Centre New Delhi, East Delhi - 110092	U24100DL2016PLC358399	29.67
16	Trincomalee Power Company Limited, 3rd Floor, No. 240, High Level Road, Kirulapone, Colombo – 00600, Sri Lanka	Not Applicable / Foreign Company	50.00
17	Bangladesh - India Friendship Power Company (Private) Limited, 14th Floor, Bidyut Bhawan, 1 Abdul Gani Road, Dhaka, Bangla Desh	Not Applicable / Foreign Company	50.00

@BF-NTPC Energy Systems Limited is after getting approval from Ministry of Power is under the Process of Winding Up and Liquidator was appointed for voluntary Liquidation of JV Company.

Your Company has decided to exit from Transformers and Electricals Kerala Limited (TELK) and Ministry of Power, Government of India also accorded its approval for the same but Government of Kerala through Additional Chief Secretary to Government vide letter dated May 2,2017, requested your Company to review and cancel decision to quit TELK. The matter is still under examination.

* NTPC has decided to exit from International Coal Ventures Private Limited and NTPC BHEL Power Projects Private Limited (NBPPL), approval from Government of India is awaited.



NTPC Ramagundam 10 MW Solar PV-1



IV. (A) SHARE HOLDING PATTERN (Equity Share Capital Breakup as percentage of Total Equity)

Category- wise Share Holding

CATEGORY OF SHAREHOLDER		NO. OF SHARES HELD AT THE BEGINNING OF THE YEAR i.e. 1/4/2020				NO. OF SHARES HELD AT THE END OF THE YEAR i.e. 31/3/2021				% CHANGE DURING THE YEAR
		DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	
(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)	(X)	(XI)
(A)	**PROMOTER / AND PROMOTER GROUP**									
(1)	INDIAN									
(a)	Individual /HUF	0	0	0	0.00	0	0	0	0.00	0.00
(b)	Central Government/ State Government(s)	5048097508	0	5048097508	51.02	4955346251	0	4955346251	51.10	0.08
(c)	Bodies Corporate	0	0	0	0.00	0	0	0	0.00	0.00
(d)	Financial Institutions / Banks	0	0	0	0.00	0	0	0	0.00	0.00
(e)	Others	0	0	0	0.00	0	0	0	0.00	0.00
	Sub-Total A(1):	**5048097508**	**0**	**5048097508**	**51.02**	**4955346251**	**0**	**4955346251**	**51.10**	**0.08**
(2)	FOREIGN									
(a)	Individuals (NRIs/Foreign Individuals)	0	0	0	0.00	0	0	0	0.00	0.00
(b)	Bodies Corporate	0	0	0	0.00	0	0	0	0.00	0.00
(c)	Institutions	0	0	0	0.00	0	0	0	0.00	0.00
(d)	Qualified Foreign Investor	0	0	0	0.00	0	0	0	0.00	0.00
(e)	Others	0	0	0	0.00	0	0	0	0.00	0.00
	Sub-Total A(2):	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0.00**	**0.00**
	Total A=A(1)+A(2)	**5048097508**	**0**	**5048097508**	**51.02**	**4955346251**	**0**	**4955346251**	**51.10**	**0.08**
(B)	**PUBLIC SHARE-HOLDING**									
(1)	**INSTITUTIONS**									
(a)	Mutual Funds /UTI	1965942572	0	1965942572	19.87	1867142872	0	1867142872	19.26	(0.61)
(b)	Financial Institutions /Banks	1129080697	0	1129080697	11.41	82313325	0	82313325	0.85	(10.56)
(c)	Central Government / State Govt(s)	9600994	0	9600994	0.10	13143103	0	13143103	0.14	0.04
(d)	Venture Capital Funds	0	0	0	0	0	0	0	0	0
(e)	Insurance Companies	213509977	0	213509977	2.16	1265275374	0	1265275374	13.05	10.89
(f)	Foreign Institutional Investors	1253083529	0	1253083529	12.65	1160641340		1160641340	11.97	(0.68)
(g)	Foreign Venture Capital Investors	0	0	0	0	0	0	0	0	0
(h)	Qualified Foreign Investor	0	0	0	0.00	0	0	0	0.00	0.00
(i)	Others (Provident Funds/ Pension Funds)	0	0	0	0.00	72726245	0	72726245	0.74	0.74
	Sub-Total B (1):	**4571217769**	**0**	**4571217769**	**46.19**	**4461242259**	**0**	**4461242259**	**46.01**	**(0.18)**
(2)	**NON-INSTITUTIONS**									
(a)	Bodies Corporate	24071184	0	24071184	0.25	20421456	0	20421456	0.21	(0.04)
	Individuals									
	(i) Individuals holding nominal share capital upto ₹2 lakh	150737774	0	150737774	1.52	192331493	0	192331493	1.98	0.42

CATEGORY OF SHAREHOLDER		NO. OF SHARES HELD AT THE BEGINNING OF THE YEAR i.e. 1/4/2020				NO. OF SHARES HELD AT THE END OF THE YEAR i.e. 31/3/2021				% CHANGE DURING THE YEAR
		DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	
(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)	(X)	(XI)
	(ii) Individuals holding nominal share capital in excess of ₹ 2 lakh	20649951	0	20649951	0.21	32528746	0	32528746	0.34	0.13
(3)	**Others**									
	Clearing Members	13815845	0	13815845	0.14	16169454	0	16169454	0.16	0.02
	Directors/Employees	8307812	0	8307812	0.08	8262288	0	8262288	0.09	0.01
	Foreign Bodies	3000	0	3000	0.00	3000	0	3000	0.00	0.00
	Foreign Nationals	0	0	0		0	0	0	0	0.00
	Non Resident Indians	6467237	0	6467237	0.07	8829751	0	8829751	0.09	0.02
	Trusts/HUF	50300619	0	50300619	0.51	488467	0	488467	0.01	0.50
	IEPF	888581	0	888581	0.01	1042969	0	1042969	0.01	0.01
	Unclaimed or Suspense or Escrow Account	0	0	0	0.00	0	0	0	0	0
(4)	**Qualified Foreign Investor**	0	0	0	0.00	0	0	0	0.00	0.00
	Sub-Total B(2) :	**275242003**	**0**	**275242003**	**2.79**	**280077624**	**0**	**280077624**	**2.89**	**0.11**
	Total B=B(1)+B(2) :	**4846459772**	**0**	**4846459772**	**48.98**	**4741319883**	**0**	**4741319883**	**48.90**	**(0.08)**
	Total (A+B) :	**9894557280**	**0**	**9894557280**	**100**	**9696666134**	**0**	**9696666134**	**100.00**	
(C)	**Shares held by custodians, for GDRs/ADRs**									
(1)	Promoter and Promoter Group	0	0	0	0.00	0	0	0	0.00	0.00
(2)	Public	0	0	0	0.00	0	0	0	0.00	0.00
	Total C	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0.00**	**0.00**
	GRAND TOTAL (A+B+C) :	**9894557280**	**0**	**9894557280**	**100.00**	**9696666134**	**0**	**9696666134**	**100.00**	

(B) Shareholding of Promoter-

S. No.	Shareholder's Name	Shareholding at the beginning of the year i.e 1/4/2020			Shareholding at the end of the year i.e 31/3/2021			% change in shareholding during the year
		No. of Shares	% of total Shares of the Company	% of Shares Pledged / encumbered to total shares	No. of Shares	% of total Shares of the Company	% of Shares Pledged / encumbered to total shares	
1	PRESIDENT OF INDIA	5,04,80,97,508	51.02	0	4,95,53,46,251	51.10	0	0.08

(C) Change in Promoters' Shareholding (please specify, if there is no change)

S. No.	Particulars	Shareholding as on 1.4.2020		Transaction during the year			Cumulative Shareholding during the year	
		No. of shares	% of total shares of the of the Company	Date	Increase/ Decrease in share holding	Reason	No. of shares	% of total shares of the Company
1	At the beginning of the year (i.e 1.4.2020)	5,04,80,97,508	51.02	-	-	-	5,04,80,97,508	51.02
2	Buyback of Shares	-	-	December, 2020	(9,27,51,257)	Buyback of Shares	4,95,53,46,251	51.10
3	At the end of the year (i.e 31.3.2021)	5,04,80,97,508	51.10	-	-	-	4,95,53,46,251	51.10

(D) Shareholding Pattern of top ten Shareholders (Closing Balance)
(Other than Directors, Promoters and Holders of GDRs and ADRs)

S. No.	For Each of the Top 10 Shareholders*	Shareholding as on 1.4.2020		Cumulative Shareholding during the year	
		No. of shares	% of total shares of the Company**	No. of shares	% of total shares of the Company**
1.	**LIC OF INDIA JEEVAN PLUS BALANCED FUND**				
	At the beginning of the year	1032664560	10.65	1032664560	10.65
	Bought during the year	37144607	0.38	1069809167	11.03
	Sold during the year	7388331	0.07	1062420836	10.96
	At the end of the year	1062420836	10.96	1062420836	10.96
2.	**ICICI PRUDENTIAL VALUE FUND - SERIES 14**				
	At the beginning of the year	735585649	7.59	735585649	7.59
	Bought during the year	64541243	0.66	800126892	8.25
	Sold during the year	152558247	1.57	647568645	6.68
	At the end of the year	647568645	6.68	647568645	6.68
3.	**HDFC TRUSTEE COMPANY LIMITED - HDFC TAX SAVERFUND**				
	At the beginning of the year	421546989	4.35	421546989	4.35
	Bought during the year	56662503	0.58	478209492	4.93
	Sold during the year	48241226	0.50	429968266	4.43
	At the end of the year	429968266	4.43	429968266	4.43
4.	**NIPPON LIFE INDIA TRUSTEE LTD-A/C NIPPON INDIA RETIREMENT FUND - INCOME GENERATION SCHEME**				
	At the beginning of the year	260053226	2.68	260053226	2.68
	Bought during the year	147550965	1.52	407604191	4.20
	Sold during the year	41457714	0.43	366146477	3.77
	At the end of the year	366146477	3.77	366146477	3.77
5.	**SBI NIFTY INDEX FUND**				
	At the beginning of the year	124853527	1.28	124853527	1.28
	Bought during the year	27256726	0.28	152110253	1.56
	Sold during the year	40724833	0.42	111385420	1.15
	At the end of the year	111385420	1.15	111385420	1.15
6.	**T. ROWE PRICE INTERNATIONAL STOCK FUND**				
	At the beginning of the year	108456571	1.12	108456571	1.12
	Bought during the year	-	-	108456571	1.12
	Sold during the year	7646230	0.08	100810341	1.04
	At the end of the year	100810341	1.04	100810341	1.04
7.	**TEMPLETON INDIA EQUITY INCOME FUND**				
	At the beginning of the year	90556394	0.93	90556394	0.93
	Bought during the year	14313405	0.15	104869799	1.08

	Sold during the year	10374287	0.11	94495512	0.97
	At the end of the year	94495512	0.97	94495512	0.97
8.	**NPS TRUST- A/C UTI RETIREMENT SOLUTIONS PENSION FUND SCHEME - CENTRAL GOVT.**				
	At the beginning of the year	49545972	0.51	49545972	0.51
	Bought during the year	24054815	0.25	73600787	0.76
	Sold during the year	874542	0.01	72726245	0.75
	At the end of the year	72726245	0.75	72726245	0.75
9.	**ADITYA BIRLA SUN LIFE TRUSTEE PRIVATE LIMITED A/C ADITYA BIRLA SUN LIFE FOCUSED EQUITY FUND**				
	At the beginning of the year	105668928	1.09	105668928	1.09
	Bought during the year	29804516	0.31	135473444	1.40
	Sold during the year	67839562	0.70	67633882	0.70
	At the end of the year	67633882	0.70	67633882	0.70
10	**T. ROWE PRICE INTERNATIONAL GROWTH EQUITY TRUST**				
	At the beginning of the year	53719936	0.55	53719936	0.55
	Bought during the year	3016433	0.03	56736369	0.58
	Sold during the year	1013573	0.01	55722796	0.57
	At the end of the year	55722796	0.57	55722796	0.57

*The shares of the Company are traded on a daily basis and hence the date wise increase / decrease in shareholding is not indicated. Shareholding is consolidated based on permanent account number (PAN) of the shareholder.

**Percentage has been calculated as on 31st March, 2021 of total shares capital of the Company.

(E) Shareholding of Directors and Key Managerial Personnel

S. No	Shareholding of Directors and Key Managerial Personnel	Shareholding at the beginning of the year		Transaction during the year			Cumulative Shareholding during the year	
		No. of shares	% of total shares of the Company	Date/Period	Increase/ Decrease in share holding	Reason	No. of shares	% of total shares of the Company
1	Shri Gurdeep Singh	5828	0.00	1/4/2020	-	-	5828	0.00
				-	-	-	-	-
				31/3/2021	-	-	5828	0.00
2	Shri Anand Kumar Gupta[1]	7224	0.00	1/4/2020			7224	0.00
				During the Year	(224)	Sale	7000	0.00
				31/7/2020			7000	0.00
3	Shri Shashi Shekhar [2]	829	0.00	1/4/2020			829	0.00
				-			-	-
				7/9/2020			829	0.00
4	Shri Vinod Kumar [3]	5555	0.00	1/4/2020			5555	0.00
				During the year	1945	Purchase	7500	0.00
				7/9/2020			7500	0.00

S. No	Shareholding of Directors and Key Managerial Personnel	Shareholding at the beginning of the year		Transaction during the year			Cumulative Shareholding during the year	
		No. of shares	% of total shares of the Company	Date/Period	Increase/ Decrease in share holding	Reason	No. of shares	% of total shares of the Company
5	Shri Prakash Tiwari[4]	700	0.00	1/4/2020			700	0.00
				-			-	-
				30/4/2020			700	0.00
6	Shri Anil Kumar Gautam	12370	0.00	1/4/2020			12370	0.00
				-	-	-	-	-
				31/3/2021			12370	0.00
7	Shri Ramesh Babu V [5]	3240	0.00	1/5/2020			3240	0.00
				-			-	-
				31/3/2021			3240	0.00
8	Shri Ujjwal Kanti Bhattacharya[6]	6508	0.00	28/8/2020			6508	0.00
				-			-	-
				31/3/2021			6508	0.00
9	Ms. Nandini Sarkar	3034	0.00	1/4/2020			3034	0.00
				-			-	-
				31/3/2021			3034	0.00

1. Ceased to be Director w.e.f. 31st July 2020 on attaining the age of his superannuation.
2. Ceased to be Independent Director w.e.f 7th September 2020 on completion of his three year tenure period.
3. Ceased to be Independent Director w.e.f 7th September 2020 on completion of his three year tenure period.
4. Ceased to be Director w.e.f. 30th April 2020 on attaining the age of his superannuation.
5. Appointed as Director (Operations) w.e.f 1.5.2020.
6. Appointed as Director (Projects) w.e.f 28.8.2020.

V INDEBTEDNESS - Indebtedness of the Company including interest outstanding/accrued but not due for payment.

Amount in ₹ Crore

Particulars	Secured Loans excluding deposits	Unsecured Loans	Deposits	Total Indebtedness
Indebtedness at the beginning of the financial year (as at 1.4.2020)				
i) Principal Amount	40,459.68	1,26,283.30	-	1,66,742.98
ii) Interest due but not paid	-	-	-	-
iii) Interest accrued but not due	1,194.33	774.36	-	1,968.69
Total (i+ii+iii)	**41,654.01**	**1,27,057.66**	-	**1,68,711.67**
Change in Indebtedness during the financial year (2020-21)				
i) Addition in principal amount	2.36	43,373.82	-	43,376.18
ii) Reduction in principal amount	(1,565.13)	(32,891.25)	-	(34,456.38)
iii) Change in principal amount due to ERV	-	(1,115.71)	-	(1,115.71)
iv) Change due to unamortised borrowing cost	0.48	(58.94)	-	(58.46)

Amount in ₹ Crore

Particulars	Secured Loans excluding deposits	Unsecured Loans	Deposits	Total Indebtedness
v) Change in interest accrued but not due	(40.61)	49.48	-	8.87
Net Change (i-ii+iii+iv+v)	**(1,602.90)**	**9,357.40**	-	**7,754.50**
Indebtedness at the end of the financial year (as on 31.3.2021)				
i) Principal Amount	38,897.39	1,35,591.22	-	1,74,488.61
ii) Interest due but not paid	-	-	-	-
iii)Interest accrued but not due	1,153.72	823.84	-	1,977.56
Total (i+ii)	**40,051.11**	**1,36,415.06**	-	**1,76,466.17**

VI. REMUNERATION OF DIRECTORS AND KEY MANAGERIAL PERSONNEL-

A. Remuneration to Managing Director, Whole-time Directors and/or Manager

S No	Particulars of Remuneration	Name of MD /WTD /Manager								Total Amount (In ₹)
		CMD/CEO	WTD/CFO	WTD	WTD	WTD	WTD	WTD	WTD	
		Sh. Gurdeep Singh	Sh. Anil Kumar Gautam	Sh A K Gupta[1]	Sh. Prakash Tiwari[2]	Sh D K Patel[3]	Sh. Ramesh Babu V[4]	Sh. C K Mondol[5]	Sh. U K Bhattacharya[6]	
1	Gross salary									
	(a) Salary as per provisions contained in section 17(1) of Income tax Act, 1961	1,08,43,367	69,57,785	87,28,748	74,37,458	56,26,632	60,64,304	66,18,935	64,53,215	**5,87,30,444**
	(b) Value of perquisites u/s 17(2) of Income tax Act, 1961	16,67,228	1,08,944	17,16,744	23,05,312	5,99,658	9,07,134	83,985	41,977	**74,30,982**
	(c) Profits in lieu of salary under section 17(3) of Income tax Act, 1961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
2	Stock Option	-	-	-	-	-	-	-	-	-
3	Sweat Equity	-	-	-	-	-	-	-	-	-
4	Commission - as % of Profit - Others, specify	-	-	-	-	-	-	-	-	-
5	Others, please specify	-	-	-	-	-	-	-	-	-
	Total (A)	**1,25,10,595**	**70,66,729**	**1,04,45,492**	**97,42,770**	**62,26,290**	**69,71,438**	**67,02,920**	**64,95,192**	**6,61,61,426**

Ceiling as per the Act : Not Applicable *

1.Ceased to be Director w.e.f. 31st July 2020.
2. Ceased to be Director w.e.f 30th April 2020.
3. Appointed as Director (HR) w.e.f 1.4.2020.
4. Appointed as Director (Operations) w.e.f 1.5.2020, however Salary for entire period (i.e for FY 2020-21 was considered)
5. Appointed as Director (Commercial) w.e.f 1.8.2020, however Salary for entire period (i.e for FY 2020-21 was considered)
6. Appointed as Director (Projects) w.e.f 28.8.2020, however Salary for entire period (i.e for FY 2020-21 was considered)
* Section 197 of Companies Act, 2013 shall not apply vide MCA notification dated 5.6.2015.

B. Remuneration to other directors: (Refer Corporate Governance Report for details)

Sl. No.	Particulars of Remuneration	Fee for attending board / committee meetings	Commission	Others, please specify-Honorarium	Total Amount (In ₹)
1.	**Independent Directors**				
	Shri P K Deb	8,70,000	-	-	8,70,000
	Shri M P Singh	5,10,000	-	-	5,10,000
	Shri Shashi Shekhar	5,70,000	-	-	5,70,000
	Shri Vinod Kumar	5,70,000	-	-	5,70,000
	Shri Subhash Joshi	4,20,000	-	-	4,20,000
	Dr K P Kylasanatha Pillay	14,00,000	-	-	14,00,000
	Dr Bhim Singh	13,70,000	-	-	13,70,000
	Total (1)	**57,10,000**	-	-	**57,10,000**
2.	**Other Non-Executive Directors**	-	-	-	-
	Total (2)	-	-	-	-
	Total (B)=(1+2)	**57,10,000**	-	-	**57,10,000**
	Total Managerial Remuneration (A+B)	-	-	-	**7,18,71,426**
	Ceiling as per the Act (@ 1% of profits calculated under Section 198 of the Companies Act, 2013)*	Not Applicable			

* Section 197 of Companies Act, 2013 shall not be applicable as pe the notification issued by MCA dated 5.6.2015

C. REMUNERATION TO KEY MANAGERIAL PERSONNEL OTHER THAN MD/MANAGER/WTD

S. No.	Particulars of Remuneration	Key Managerial Personnel	
		Company Secretary	Total Amount (In ₹)
		Ms. Nandini Sarkar	
1	Gross salary		
	(a) Salary as per provisions contained in section 17(1) of Income tax Act, 1961	60,69,526	60,69,526
	(b) Value of perquisites u/s 17(2) of Income tax Act, 1961	84,474	84,474
	(c) Profits in lieu of salary under section 17(3) of Income tax Act, 1961	-	-
2	Stock Option	-	-
3	Sweat Equity	-	-
4	Commission	-	-
	- as % of profit	-	-
5	Others, please specify	-	-
	Total	**61,54,000**	**61,54,000**

VII. PENALTIES / PUNISHMENT/ COMPOUNDING OF OFFENCES:

Type	Section of the Companies Act	Brief Description	Details of Penalty / Punishment/ Compounding fees imposed	Authority [RD / NCLT/ COURT]	Appeal made, if any (give Details)
There were no penalties/ punishment / compounding of offences for breach of any section of Companies Act against the Company or its Directors or other officers in default, if any, during the year.					

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date : 26th August, 2021

CSR Initiaties of NTPC



ANNUAL REPORT ON CSR ACTIVITIES

1. **A brief outline of your Company's CSR policy, including overview of projects or programs proposed to be undertaken and a reference to the web-link to the CSR policy and projects or programs.**

CSR has been synonymous with Company's core business of power generation. Since inception your Company has been very sensitive to the needs of the neighbouring community and persons whose livelihood has been affected due to establishment of a power plant. The Company's spirit of caring and sharing is embedded in its mission statement. The Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and thereafter-extensive community / peripheral area development activities are taken up along with the project development.

Your Company CSR Policy was formulated in July 2004 and revised in 2010, 2016 and 2019 respectively covers a wide range of activities including provision for implementation of a few key Programmes taken through NTPC Foundation- a charitable Trust set up by your Company to mainly serve and empower the Physically Challenged and under privileged sections of the Society & women.

CSR programs undertaken by your Company include activities specified in Schedule VII of the Companies Act 2013 & Rules made thereunder for the benefit of community at large. Focus areas of your Company's CSR activities are Health, Sanitation, Safe Drinking Water and Education. However, your Company also takes up activities in the areas of Capacity Building of the youth, Women Empowerment, Social Infrastructure Development, livelihood creation through support for implementation of innovative agriculture & livestock development, support to Physically Challenged Person (PCPs), and for the activities contributing towards Environment Sustainability. Your Company CSR efforts are focussed in the immediate vicinity of its stations where Company's operations are situated, ensuring that majority CSR funds are spent on activities addressing the needs of the local community. However, considering inclusive growth & environment sustainability, some of the activities are also taken up in different parts of the country to supplement governmental efforts. During the year, about 450 villages and more than 400 schools have been benefitted by your Company's various CSR initiatives at different locations. Your Company's CSR initiatives have touched the lives of around 14 lakhs people generally residing at remote locations in various parts of the country in one or the other way.

Apart from the regular CSR activities undertaken around company's operations, support has also been provided by your Company for some of the major CSR initiatives undertaken all across the country:

<u>Health & Sanitation</u>

- Contribution of ₹ 250 Crore to PM CARES Fund to support Government of India in its efforts to fight COVID-19.
- Support for procurement of items for COVID-19 Vaccination Program.
- Proactive relief measures like regular sanitization of villages, distribution of PPE kits to health professionals, distribution of face masks to villagers and supply of groceries to the community.
- Setting up Burn Units at AIIMS Patna, AIIMS Bhubaneswar & King George Medical University Lucknow.
- Your Company operates Mobile Health Clinics at various locations providing healthcare to unreserved areas.
- Revival and continuous operation of Mechanized Solid Waste Management plant at Karsada, Uttar Pradesh.
- Support for developmental & beautification works at Charminar, Hyderabad, under 'Swachh Iconic places Project' of Govt. of India.
- Support for construction, medical equipment's & diagnostic lab at National Cancer Institute Nagpur, Maharashtra for cancer treatment.
- Support to L V Prasad Eye Institute for the construction of operation room complex at MTC Campus.
- Support provided for establishing Integrated Muscular Dystrophy Rehabilitation Centre "Manav Mandir" at Solan Himachal Pradesh
- Support for Ultraviolet based sanitization technology for PPE kits being developed by IIT Delhi & Chakr Innovation under your Company CSR activities.

Education

- Construction of school & hostel for tribal children near Your Company Rihand project, in Uttar Pradesh and Construction of school buildings at Varanasi Uttar Pradesh, Hoshangabad MP, Kannur, Kerala, Kalahandi, Odisha & Sambalpur Odisha.
- Quality education provided primarily to rural community children through 34 schools located in your Company townships.
- Setting up Library (Pustakalaya Project) in selected 10 Govt. Primary Schools of Arunachal Pradesh.
- Distribution of 2,500 benches/desks in 50 Govt. schools in Supaul District of Bihar.
- Education of around 180 girl students admitted to different Township Schools of your Company. These students were selected at Four weeks residential workshop under Girl Empowerment Mission (GEM) flagship programme of your Company held during summer vacation of 2019 at 23 projects/ stations of your Company wherein more than 1800 girl students participated.

Livelihood Generation & Vocational Training

- To enhance income generation opportunities within the villages your Company has provided vocational training to the village youth and had undertaken livestock development and crop management projects.
- Adopted 18 Industrial Training Institutes (ITIs) and is setting up 8 new ones to enhance employability through vocational training, skill upgradation and income generation programs.
- Memorandum of Understanding (MoU) with National Skill Development Corporation (NSDC) & National Skill Development Fund (NSDF) to develop the skills of 30000 youth over a period of 5 years spread in 12 states including 8,000 youth of Ladakh & J&K UT in order to make all of them self-employable.

Disaster Relief

- Substantial support in the relief activities during Amphan Cyclone.

Women Empowerment

- Setting up 50 Sanitary Napkin Mini Manufacturing units (MMU) in the state of Odisha under "Stree Swabhiman" program.

Promotion of Sports

- Support to Archery Association of India for promotion of 'Archery' Sports for conducting National Archery Championships (NACs), National Ranking Archery Tournaments (NRATs) & to provide kits/apparels to Indian Archery teams for international participation.

Others

- Installation of Energy Efficient Pump System in the fields of farmers residing near your Company stations located in identified five districts of Uttar Pradesh.

NTPC Foundation

With an objective to serve and empower the physically challenged and economically weaker section of the society including women, NTPC Foundation has been set up by your Company to take up projects & programs addressing niche domains of socio-economic concerns. Major activities of the foundation include:

- Directly Observed Treatment cum Designated Microscopy Centre (DOTs cum DMC) with Mobile ambulance facilities being operated at 11 hospitals of your Company under Revised National Tuberculosis Control Programme (RNCTP) that cater to villages upto 25-30 Km from your Company stations and has benefited around about 4,000 cases during the year through Screening for TB/HIV and treatment provided to patients diagnosed with TB/HIV.
- Disability Rehabilitation Centre (DRC) at your Company Tanda, Rihand, Korba, Dadri, Bongaigaon and Farakka station established in collaboration with National Institute of Locomotor Disabilities(NILD) erstwhile National Institute for the Orthopedically Handicapped (NIOH), under the Ministry of Social Justice and Empowerment, Government of India has benefitted about 2,900 physically challenged people with approximately 9,300 Surgical corrections, serving aids & appliances during the year.
- Providing IT education to physically & visually challenged students through ICT Centre established at Devi Ahilya Vishwavidyalaya, Indore.
- 'NTPC Utkarsh Scholarship' A flagship program of NTPC Foundation in education which provides scholarship to encourage and motivate the students who are pursuing secondary, high school, ITIs, Diploma/Degree in Engineering & also medical science studies. During the years 700 Nos. students have received the scholarships under the program.

2. **The Composition of the CSR Committee.**

As on date, the Board Level Corporate Social Responsibility & Sustainability Committee comprises

Two functional Directors : Shri Dillip Kumar Patel, Director (HR), Chairman of the Committee

: Shri. Ramesh Babu V., Director (Operations), Member

One Independent Director : Dr. Bhim Singh, Independent Director, Member

Sl. No.	Name of Director	Designation / Nature of Directorship	Number of meetings of CSR Committee held during the year	Number of meetings of CSR Committee attended during the year
1.	Shri Vinod Kumar[1]	Independent Director, Chairman of the Committee	1	1
2.	Shri P K Deb[2]	Independent Director, Member	1	1
3.	Shri D K Patel[3]	Director (HR) & Chairman of the Committee	5	5
4.	Dr. Bhim Singh[4]	Independent Director, Member	4	4
5.	Shri Ramesh Babu V.[5]	Director (Operations), Member	4	4

1. Ceased to be Director w.e.f.7th September, 2020.
2. Ceased to be Director w.e.f. 7th September, 2020.
3. Appointed as Chairman of the Committee w.e.f 23rd October, 2020.
4. Appointed as Member of the Committee w.e.f 23rd October, 2020 and ceased to be Director w.e.f. 16th July, 2021
5. Appointed as Member of the Committee w.e.f 23rd October, 2020.

The committee recommends to the Board for approval, the amount of expenditure anticipated on the CSR activities and monitors from time to time the Policy for CSR and the proposals approved by the Board.

3. **Provide the web-link where Composition of CSR committee, CSR Policy and CSR projects approved by the board are disclosed on the website of the company.**

Web Link to the CSR Policy & Projects or programs

http://www.ntpc.co.in/en/corporate-citizenship/corporate-social-responsibility

4. **Provide the details of impact assessment of CSR projects carried out in pursuance of sub-rule (3) of rule 8 of the Companies (Corporate Social responsibility Policy) Rules, 2014, if applicable (attach the report):** Nil

5. **Details of the amount available for set off in pursuance of sub-rule (3) of rule 7 of the Companies (Corporate Social responsibility Policy) Rules, 2014 and amount required for set off for the financial year, if any-**

₹ Crore

Sl. No.	Financial Year	Amount available for set-off from preceding financial years	Amount required to be set-off for the financial year, if any
1	2020-21	NIL	140.30
	Total	-	**140.30**

6. **(Average net profit of the company for the last three financial years as per section 135 (5) of companies Act, 2013) :** ₹ 13,928.41 crore

7.

(a)	Two percent of average net profit of the company as per section 135(5)	₹ 278.57 crore
(b)	Surplus arising out of the CSR projects or programmes or activities of the previous financial years.	Nil
(c)	Amount required to be set off for the financial year, if any	Nil
(d)	Total CSR obligation for the financial year (7a+7b-7c)	₹ 278.57 crore
(e)	CSR amount spent for the financial year	₹ 418.87 crore

8. (a) Details of CSR spent or unspent during the financial year. ₹ Crore

Total Amount Spent for the Financial Year	Amount Unspent				
	Total Amount Transferred to Unspent CSR Account as per section 135(6)		Amount transferred to any fund specified under Schedule VII as per second proviso to section 135(5).		
	Amount	Date of Transfer	Name of the Fund	Amount	Date of Transfer
418.87	NIL	NA	NA	NA	NA

8. (b) Details of CSR amount spent against ongoing projects for the financial year: ₹ in Crore

Sl. No.	Name of the Project	Item from the list of activities in Schedule VII to the Act	Local area/ Location of the project		Project duration (in yrs)	Amount allocated for the project	Amount spent in the current financial Year	Amount transferred to Unspent CSR Account for the project as per Section 135(6)	Mode of Implementation - Direct (Yes/No)	Mode of Implementation - Through Implementing Agency (Name & CSR Registration number)
			State	District						
1	Install of Energy Efficient Pump in various districts of UP	Sch (x)	Uttar Pradesh	Multiple Location	4	17.00	17.00	-	Yes	-
2	Revival of MSW Plant at Karsada, Varanasi	Sch (i)	Uttar Pradesh	Lucknow	7	9.21	9.21	-	Yes	-
3	Setup of Burn Unit at AIIMS Bhubaneshwar	Sch (i)	Odisha	Bhubaneshwar	5	3.78	3.78	-	Yes	-
4	Setting up Burn Unit at KGMU Lucknow	Sch (i)	Uttar Pradesh	Lucknow	5	1.19	1.19	-	Yes	-
5	Support to AAI for Archery Sports	Sch (vii)	Uttar Pradesh	Gautam Budha Nagar	6	1.05	1.05	-	Yes	-
6	Assistance for New Block KGH, Vizag	Sch (i)	Andhra Pradesh	Vishakhapatnam	9	1.00	1.00	-	Yes	-
7	Support to LVPEI for construction of operation room	Sch (i)	Odisha	Bubaneshwar	3	0.55	0.55	-	No	LVPEI, Trust
8	Support for MMU for Hamirpur	Sch (i)	Himachal Pradesh	Hamirpur	3	0.35	0.35	-	No	Paryas Society
9	Support to BBSLN for Dev. of school	Sch (ii)	Madhya Pradesh	Hoshangabad	4	0.30	0.30	-	No	BBSLN Trust
10	Installation of Solar Lights in Mathura	Sch (x)	Uttar Pradesh	Mathura	3	0.28	0.28	-	Yes	-
11	Swachta Abhiyan- Support for developmental & beautification works at Charminar Hyderabad	Sch (i)	Andhra Pradesh	Hyderabad	4	0.04	0.04	-	Yes	-
12	Carrying out Skill Development Projects in the vicinity of your Company Projects/ Stations through NSDC	Sch (ii)	Multiple Location	Multiple Location	7	-	-	-	No	NSDC
13	Support for construction and equipment's of 3rd Floor & diagnostic labs at National Cancer Institute Nagpur, Maharashtra	Sch (i)	Maharashtra	Nagpur	6	-	-	-	Yes	-
14	Setting up of special burn unit at AIIMS Patna	Sch (i)	Bihar	Patna	6	-	-	-	Yes	-

₹ in Crore

Sl. No.	Name of the Project	Item from the list of activities in Schedule VII to the Act	Local area/ Location of the project		Project duration (in yrs)	Amount allocated for the project	Amount spent in the current financial Year	Amount transferred to Unspent CSR Account for the project as per Section 135(6)	Mode of Implementation - Direct (Yes/No)	Mode of Implementation - Through Implementing Agency (Name & CSR Registration number)
			State	District						
15	Installation of Solar High Mast Lights in Siddharth Nagar District of Uttar Pradesh	Sch (x)	Uttar Pradesh	SiddharthNagar	3	-	-	-	Yes	-
16	Providing 2 (two) nos. Buses to Aizawl Football Club, Aizawl, Mizoram	Sch (vii)	Mizoram	Aizwal	3	-	-	-	Yes	-
17	Support for Development, Renovation and Advancement project of GHSS Munderi, District Kannur, Kerala	Sch (ii)	Kerela	Kannur	3	-	-	-	Yes	-
18	Support for establishing Integrated Muscular Dystrophy Rehabilitation Centre "Manav Mandir" at Solan Himachal Pradesh	Sch (i)	Himachal Pradesh	Solan	3	-	-	-	Yes	-
19	Setting up of open gymnasium at various locations in Basti Parliamentary Constituency of Uttar Pradesh	Sch (i)	Uttar Pradesh	Basti	3	-	-	-	Yes	-
	TOTAL					**34.75**	**34.75**			

(c) Details of CSR amount spent against other than ongoing projects for the financial year:

₹ in Crore

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sl. No.	Name of the Project	Item from the list of activities in Schedule VII to the Act	Local area (Yes/No)	Location of the Project (State & District)	Amount spent for the project	Mode of implementation – Direct / Implementing Agency	
1	Eradicating Hunger and Poverty, Health Care and Sanitation	(i)	CSR initiatives during the Financial Year 2020-21 have been taken up on PAN India basis around NTPC operations primarily in 20 states/ UTs mentioned below: Andhra Pradesh, Arunachal Pradesh, Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, J&K, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Telangana, Uttar Pradesh, Uttarakhand, West Bengal and Contribution of ₹ 250 Crore to PM CARES Fund to support Government of India in its efforts to fight COVID-19.		271.88	Through Implementing / Contracting Agency/ NTPC Foundation/ Trusts/ societies	
2	Education and Skill Development	(ii)			62.66		
3	Empowerment of Women and other Economically Backward Sections	(iii)			0.79		
4	Environmental Sustainability	(iv)			33.41		
5	Art & Culture	(v)			0.03		
6	Sports	(vii)			0.69		
7	Rural Development	(x)			14.55		
8	Disaster management, including relief, rehabilitation and reconstruction activities	(xii)			0.11		
	Total				**384.12**		

Generating Power & Smiles 24x7 for the Nation

(d) Amount spent in Administrative Overheads : Nil

(e) Amount spent on Impact Assessment, if applicable : NA

(f) Total amount spent for the Financial Year (8b+8c+8d+8e) : ₹ 418.87 crore

(g) Excess amount for set off, if any : ₹ 140.30 crore

Sr. No.	Particular	Amount (₹ Crore)
(i)	Two percent of average net profit of the company as per Section 135 (5)	278.57
(ii)	Total amount spent for the Financial Year	418.87
(iii)	Excess amount spent for the financial year (ii)-(i)	140.30
(iv)	Surplus arising out of the CSR projects or programmes or activities of the previous financial years, if any	NIL
(v)	Amount available for set off in succeeding financial years [(iii)- (iv)]	140.30

9. (a) Details of Unspent CSR amount for the preceding three financial years: NIL

(b) Details of CSR amount spent in the financial year for ongoing projects of the preceding financial year(s) : As tabulated in Table 8b

10. In case of creation or acquisition of capital asset, furnish the details relating to the asset so created or acquired through CSR spent in the financial year (asset-wise details).

(a) Date of creation or acquisition of the capital asset(s) : Nil

(b) Amount of CSR spent for creation or acquisition of capital asset : Nil

(c) Details of the entity or public authority or beneficiary under whose name such capital asset is registered, their address etc. : Not Applicable

(d) Provide details of the capital asset(s) created or acquired (including complete address and location of the capital asset) Not Applicable

11. Specify the reason(s), if the company has failed to spend the two percent of the average net profit as per section 135(5) : Not Applicable

By spending ₹ 418.87 crore during the financial year, your company has surpassed the prescribed two percent amount of ₹ 278.57 crore thus achieving a CSR spent of 3%.

sd/- (Chief Executive Officer or Managing Director or Director) **Shri Gurdeep Singh**	sd/- (Chairman CSR Committee) **Shri D K Patel**	**Not Applicable** (Person specified under clause (d) of sub-section (1) of section 380 of the Act)

Place: New Delhi
Date : 26th August, 2021

PROJECT-WISE ASH PRODUCED AND UTILISED

The quantity of ash produced, ash utilized and percentage of such utilization during 2020-21 from your Company Stations is as under:

Sl. No.	Projects	Ash Produced	Ash Utilization	% Utilization
		Lakh MTs	Lakh MTs	%
1	Barauni	3.30	1.99	60.30
2	Barh Super	20.40	22.04*	108.04
3	Bongaigaon	5.24	3.29	62.79
4	Dadri	9.41	9.41*	100.00
5	Gadarwara	9.44	0.78	8.26
6	Khargone	8.13	4.15	51.05
7	Kudgi	9.82	4.47	45.52
8	Mouda	17.06	21.97*	128.78
9	Simhadri	24.50	30.33*	123.80
10	Solapur	7.58	7.43	98.02
11	Tanda	16.74	28.10*	167.86
12	Unchachar	19.77	32.90*	166.41
13	Darlipalli	15.48	0.54	3.49
14	Farakka	28.49	36.15*	126.89
15	Kahalgaon	40.17	41.55*	103.44
16	Korba	47.93	34.63	72.25
17	Lara	13.52	10.06	74.41
18	Ramagundam	38.57	42.85*	111.10
19	Rihand	39.22	20.40	52.01
20	Singrauli	29.84	9.97	33.41
21	Sipat	52.47	30.26	57.67
22	Talcher-Kaniha	68.44	48.09	70.27
23	Talcher-Thermal	11.89	11.89*	100.00
24	Vindhyachal	87.14	32.83	37.68
	TOTAL	**624.56**	**486.07**	**77.83**

*** Figure includes Ash utilized from ash produced during previous years**

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date : 26th August, 2021



Koldam Hydro Power Station

Annexure-IX to Directors' Report

Form No. AOC-2

(Pursuant to clause (h) of sub-section (3) of section 134 of the Act and Rule 8(2) of the Companies (Accounts) Rules, 2014)

Form for disclosure of particulars of contracts/arrangements entered into by the company with related parties referred to in sub-section (1) of section 188 of the Companies Act, 2013 including certain arm's length transactions under third proviso thereto

1. Details of contracts or arrangements or transactions not at Arm's length basis.

SL. No.	Particulars	Details
a)	Name (s) of the related party & nature of relationship	Utility Powertech Limited (UPL) (a 50:50 Joint Venture between NTPC and Reliance Infrastructure Limited)
b)	Nature of contracts /arrangements /transaction	Your Company is assigning Jobs on contract basis, for sundry works in Plants/Station/office of your Company.
c)	Duration of the contracts /arrangements / transaction	Five years
d)	Salient terms of the contracts or arrangements or transaction including the value, if any	UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations.
e)	Justification for entering into such contracts or arrangements or transactions	Your Company has entered into Power station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.
f)	Date of approval by the Board	27.3.2021
g)	Amount paid as advances, if any	NA
h)	Date on which the special resolution was passed in General meeting as required under first proviso to section 188	NA

2. Details of contracts or arrangements or transactions at Arm's length basis

There was no material contract or arrangement or transaction at arm's length basis during the period under review

Sl. No.	Particulars	Details
a)	Name (s) of the related party & nature of relationship	NA
b)	Nature of contracts/arrangements/transaction	NA
c)	Duration of the contracts/arrangements/transaction	NA
d)	Salient terms of the contracts or arrangements or transaction including the value, if any	NA
e)	Date of approval by the Board	NA
f)	Amount paid as advances, if any	NA

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date : 26th August, 2021

Annexure-X to Directors' Report

NTPC BUSINESS RESPONSIBILITY REPORT (2020-21)

Section A : General information about the Company

1. **CIN (Corporate identity number)** L40101DL1975GOI007966
2. **Name of the company** NTPC LIMITED
3. **Registered address** NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003
4. **Website** www.ntpc.co.in
5. **Email id** csntpc@ntpc.co.in
6. **FY reported** 2020-21
7. **Sector that company is engaged in:** Power
8. **Product/services that the company manufacturers /provides (as in balance sheet):**

i. Generation of Electricity
ii. Consultancy
iii. Coal Mining
iv. Energy Trading

9. **Total number of location where business activity is undertaken by the company:**

Sl. No.	Location	Nos. of Project	Remarks
1.	National	69	26 Thermal, 7 combined cycle gas/liquid fuel, 5 Hydro, 8 Coal site,1 Wind, and 13 Solar Power Projects. Further, it has 11 Thermal, 1 Coal site and 1 gas station, owned by joint ventures or subsidiaries of your company.
2.	International	2	i. Trincomalee Power Project, Srilanka ii. Bangladesh- India Friendship Power Company (Pvt) Ltd. : Maitree Super Thermal Power Plant, Rampal, Bangladesh

10. **Markets served by the company: National & International**

Section B : Financial details of the company

1.	Paid up capital (₹ crore)	₹ 9,696.67
2.	Total Turnover (Gross) (₹ crore)	₹ 99,039.63
3.	Total profit after taxes (₹ Crore)	₹ 13,769.52
4.	Total spending on CSR and Sustainable Development (SD) as % of PAT	3.04% (₹ 418.87 crore) of PAT of 2020-21
5.	List of activities in which expenditure in 4 above has been incurred	Broad areas of the activities: - Eradicating Hunger and Poverty - Education & skill development - Health care & Sanitation - Rural Development - Women Empowerment and other Economically backward sections - Art, Culture and Sports - Environmental Sustainability - Disaster management including relief rehabilitation and reconstruction activities

Section C: Other Details

Subsidiaries: The Company has the following 12 Subsidiary Companies as on 31.3.2021:

i. NTPC Electric Supply Company Limited (NESCL)
ii. NTPC Vidyut Vyapar Nigam Limited (NVVN)
iii. Kanti Bijlee Utpadan Nigam Limited (KANTI)
iv. Bharatiya Rail Bijlee Company Limited (BRBCL)
v. Patratu Vidyut Utpadan Nigam Limited (PVUNL)
vi. Nabinagar Power Generating Company Limited (NPGCL)
vii. THDC India Limited (THDCL)
viii. North Eastern Eletric Power Corporaton Limited (NEEPCO)
ix. NTPC Mining Limited (NML)
x. NTPC EDMC Waste Solutions Private Limited (NEWS)
xi. NTPC Renewable Energy Limited (NREL)
xii. Ratnagiri Gas and Power Private Limited (RGPPL)

The Business Responsibility Initiatives of the parent company are applicable to the subsidiary companies also. However, none of the entities that the Company does business with, participate in the BR initiatives of the Company.

Section D: BR information

1. Individual Directors responsible for implementation of the BR policy / policies:

Principle No	Description	Policy / Policies	Director(s) Responsible
Principle 1 (P1)	Businesses should conduct and govern themselves with Ethics, Transparency and Accountability.	1. Code of Conduct* 2. Core Values 3. Fraud Prevention Policy 4. CDA Rules 5. Whistle Blower Policy 6. Internal code of conduct for prevention of insider trading 7. Code of Corporate Fair Disclosure Practices for revention of insider trading 8. Related Party Transaction Policy 9. Policy for determination of materiality of events or information for disclosure 10.Policy on maintenance & preservation of documents 11.Policy for Determining Material Subsidiaries 12.Training Policy for Directors of your Company	All Directors & Chief Vigilance Officer
Principle 2 (P2)	Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle	1. Safety Policy 2. Your Company Policy for CSR and Sustainability 3. Ash Policy 4. Sustainable Supply Chain Policy	Shri Ramesh Babu V. DIN: 08736805 Designation: Director (Operations) Shri D K Patel DIN: 08695490 Designation: Director (HR)
Principle 3 (P3)	Businesses should promote the well-being of all employees.	1. Human Resource (HR) Policies 2. Placement and Transfer Policy 3. Human Rights Policy	Shri D K Patel DIN: 08695490 Designation: Director (HR)
Principle 4 (P4)	Businesses should respect the interests of and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.	1. R&R Policy 2. Your Company Policy for CSR and Sustainability 3. Initial Community Development (ICD) Policy 4. Human Rights Policy	Shri D K Patel DIN: 08695490 Designation: Director (HR)
Principle 5 (P5)	Businesses should respect and promote human rights.	1. Human Rights Policy	Shri D K Patel DIN: 08695490 Designation: Director (HR)

Principle 6 (P6)	Businesses should respect, protect, and make efforts to restore the environment.	1. Environment Policy 2. Your Company Policy for CSR and Sustainability 3. Biodiversity Policy 4. E-waste Policy 5. Water Policy 6. Rainwater Harvesting Policy 7. Integrated Plastic Management Policy	Shri Ramesh Babu V. DIN: 08736805 Designation: Director (Operations) Shri D K Patel DIN: 08695490 Designation: Director (HR)
Principle 7 (P7)	Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner.	1. Code of Conduct* 2. Core Values 3. Commercial – Systems & Procedures	All Directors
Principle 8 (P8)	Businesses should support inclusive growth and equitable development.	1. R&R Policy 2. Your Company Policy for CSR and Sustainability 3. Initial Community Development (ICD) Policy	Shri D K Patel DIN: 08695490 Designation: Director (HR)
Principle 9 (P9)	Businesses should engage with and provide value to their customers and consumers in a responsible manner.	Commercial systems & Procedures	Shri C K Mondol DIN: 08535016 Designation: Director (Commercial)

* Code of Conduct for Board Members & Senior Management Personnel.

2. Details of Director/Directors responsible for BR as a whole

a. Details of the Director/Directors responsible for implementation of the BR policy/policies:

S.No.	Particulars	Details
1.	DIN Number	00307037
2.	Name	Gurdeep Singh
3.	Designation	Chairman & Managing Director
4.	Telephone number	011-24360044
5.	E-mail ID	cmd@ntpc.co.in

b. Details of BR head: Same as above

3. Principle wise reply to each question on BR Policy / Policies:

Sl. No.	Question	P1	P2	P3	P4	P5	P6	P7	P8	P9
1.	Do you have a policy/ policies for the Principle?	Y	Y	Y	Y	Y	Y	Y	Y	N
2.	Has the policy being formulated in consultation with the relevant stakeholders?	Y	Y	Y	Y	Y	Y	Y	Y	-
3.	Does the policy confirm to any national /international standards?	Y	Y	Y	Y	Y	Y	Y	Y	-
4.	Has the policy being approved by the Board? If yes, has it been signed by MD/owner/CEO/appropriate Board Director?	Y	Y	Y	Y	Y	Y	Y	Y	-
5.	Does the company have a specified committee of the Board/ Director/ Official to oversee the implementation of the policy?	Y	Y	Y	Y	Y	Y	Y	Y	-
6.	Indicate the link for the policy to be viewed online?	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	-
7.	Has the policy been formally communicated to all relevant internal and external stakeholders?	Y	Y	Y	Y	Y	Y	Y	Y	-
8.	Does the company have in-house structure to implement the policy/ policies?	Y	Y	Y	Y	Y	Y	Y	Y	-
9.	Does the Company have a grievance redressal mechanism related to the policy / policies to address stakeholders' grievances related to the policy / policies?	Y	Y	Y	Y	Y	Y	Y	Y	-
10.	Has the company carried out independent audit / evaluation of the working of this policy by an internal or external agency?	Y	Y	Y	Y	Y	Y	Y	Y	-

(i) **Web links for the Policies :**

Sl. No.	Policies/Systems	Web link
Finance		
a.	Code of Conduct	http://www.ntpc.co.in/investors/code-of-conduct
b.	Fraud Prevention Policy	http://www.ntpctender.com/about/FraudPolicy.asp
c.	Whistle Blower Policy	https://www.ntpc.co.in/sites/default/files/downloads/WhistleBlowerPolicy2014.pdf
d.	Internal Code of Conduct for prevention of insider trading	http://www.ntpc.co.in/download/internal-code-conduct-prevention-insider-trading-dealing-securities-ntpc-limited
e.	Code of Corporate fair discloser practices for prevention of insider trading	http://www.ntpc.co.in/download/code-corporate-fair-disclosure-practicces-prevention-insider-trading
f.	Related Party Transaction Policy	http://www.ntpc.co.in/download/related-party-transaction-policy-ntpc
g.	Policy for determination of materiality of events or information for disclosure	http://www.ntpc.co.in/sites/default/files/downloads/NTPC%20%20Policy%20For%20Determination%20of%20Materiality%20of%20events.pdf
h.	Policy on maintenance & preservation of documents	http://www.ntpc.co.in/sites/default/files/downloads/Document%20Preservation%20Policy.pdf
i.	Policy for Determining Material Subsidiaries	http://www.ntpc.co.in/download/policy-determining-material
j.	Dividend Distribution Policy	https://www.ntpc.co.in/sites/default/files/downloads/DividendDistributionPolicyofNTPCLimited.pdf
Human Resource		
k.	CDA Rules	Policy Manual available on NTPC Intranet
l.	Training Policy for Directors of Your company	https://www.ntpc.co.in/sites/default/files/downloads/training-policy-directors-ntpc.pdf
m.	Human Rights Policy	https://www.ntpc.co.in/sites/default/files/downloads/NTPCHuman%20RightsPolicy_0.pdf
n.	Placement and Transfer Policy	Policy Manual available on NTPC Intranet
o.	R&R Policy	https://www.ntpc.co.in/sites/default/files/downloads/R%26RPolicy2017.pdf
p.	Initial Community Development Policy	http://www.ntpc.co.in/download/initialcommunity-development-policy-2009
q.	Policy for CSR & Sustainability	https://www.ntpc.co.in/sites/default/files/downloads/CSR%26Sustainability2016.pdf
r.	Career development Policy	https://www.ntpc.co.in/en/careers/career-growth-opportunities
Operations		
s.	Safety Policy	https://www.ntpc.co.in/sites/default/files/downloads/SafetyPolicy2016.pdf
t.	Environment Policy	https://www.ntpc.co.in/sites/default/files/downloads/EnvironmentPolicy2017.pdf
u.	Water Policy	https://www.ntpc.co.in/sites/default/files/downloads/WaterPolicy2017.pdf
v.	Ash Policy	https://www.ntpc.co.in/sites/default/files/downloads/AshPolicy2015.pdf
w.	E-waste Policy	https://www.ntpc.co.in/sites/default/files/downloads/e-wastePolicy2014.pdf
x.	Integrated Plastic Management Policy	https://www.ntpc.co.in/sites/default/files/downloads/Integrated-Plastic-Managment-Policy-2019.pdf

Technical		
y.	Biodiversity Policy	https://www.ntpc.co.in/sites/default/files/downloads/BiodiversityPolicy2018.pdf
z.	Rain Water Harvesting Policy	https://www.ntpc.co.in/sites/default/files/downloads/NTPC%20Rain%20Water%20Harvesting%20Policy%202018.pdf
Commercial		
za.	Commercial Systems & Procedures	https://www.ntpc.co.in/sites/default/files/downloads/procurementandworkspolicy.pdf
zb.	Sustainable Supply Chain Policy	https://www.ntpc.co.in/sites/default/files/downloads/Sustainale-Supply-Chain-Policy.pdf

4. If answer against any principle is 'No', please explain why:

Principle 9: All the sub-principles identified under principle -9 are duly followed by your Company through its commercial systems and procedures. However, your Company feels that a separate Policy on Principle -9 is not required because:

- Your Company supplies power to the Bulk Customers (State Electricity Distribution companies) majority of which are owned by the respective State Govt.
- The CERC, while finalizing Tariff and other Regulations engages all Stakeholders and takes views of them. CERC Tariff Regulations and relevant orders are being displayed on CERC Website www.cercind.gov.in.
- Your Company & our bulk customers i.e. Discoms work under regulated Environment. Your Company strives for supplying cheapest power deploying all resources optimally in best possible ways resulting in wellbeing of customers & society.
- Your Company being a Government company is also subject to the various checks and balances mechanism such as audits etc.
- CERC while determining the tariff of your Company stations does prudence check on the costs of your Company.
- Your Company never restricts the freedom of choice and free competition in any manner while supplying bulk Power.
- Needs of the customers is taken into account and accordingly PPA are signed and Allocation of Power is made by Ministry of Power as per existing guidelines & Policy. Unallocated quota of power is allocated by MoP as per demand and requirement of different States hence customers are always kept first.
- Central Electricity Regulatory Commission governs power supply rules and regulations, performance and all other commercial parameters related to power generation. Your Company always excels in satisfying customers by adhering to these norms and disclosing all relevant information.
- Issues, if any, regarding operational issues etc. are being discussed and resolved in common forums such as Regional Power Committees.
- Your Company has developed a Customer Satisfaction Index (CSI), which is administered through a questionnaire and based on the feedbacks received, actions are taken.

Your Company regularly engages with the customers and provides value to them in a responsible manner.

5. Governance related to BR

i.	Indicate the frequency with which the Board of Directors, Committee of the Board or CEO to assess the BR performance of the Company.	Within 3-6 months
ii.	Does the Company publish a BR or a Sustainability Report? What is the hyperlink for viewing this report? How frequently it is published?	The company publishes both business Responsibility Report (as a part of annual report) and Sustainability Report annually and can be accessed from the below link. https://www.ntpc.co.in/en/sustainability/compliances-and-reports

Section E: Principle – wise performance

Principle 1: Businesses should conduct and govern themselves with Ethics, Transparency and Accountability

1. **Does the policy relating to ethics, bribery and corruption cover only the company? Does it extend to the Group/ Joint Ventures/ Suppliers/ Contractors/ NGOs / Others?**

   i Code of Conduct for Board Members & Senior Management Personnel covers all the Directors and Senior Management Personnel of the Company.

   ii Fraud Prevention Policy applies to any fraud, or suspected fraud involving employees of your Company as well as representatives of vendors, suppliers, contractors, consultants, service providers or any outside agency (ies) doing any type of business with your Company.

   iii However, in line with your Company, RGPPL and NTECL, JVs of your Company have also adopted Fraud Prevention Policy and Central Dearness Allowance (CDA) rules.

   iv CDA Rules are applicable to all employees of your Company and employees posted in JVs/Subsidiaries.

   v Insider Trading Code is applicable to designated employee of your Company.

   vi Related Party Transaction Policy is framed intended to ensure the proper approval and reporting of transactions between the Company and its Related Parties.

   vii The objective of Whistle Blower Policy is to build and strengthen a culture of transparency and trust in the organization and to provide employees with a framework / procedure for responsible and secure reporting of improper activities (whistle blowing) within the Company and to protect employees wishing to raise a concern about improper activity/ serious irregularities within the Company.

   viii The Policy for determination of materiality of events or information for disclosure was framed in terms of Regulation 30(1) of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 SEBI(LODR).

   ix The Policy on maintenance & preservation of documents was framed in pursuance to Regulation 9 of the SEBI (LODR).

   x The Policy for Determining Material Subsidiaries was framed in accordance with the requirement stated under the Listing Agreement.

   xi The Training Policy aims at providing Orientation & Training programs to be offered to the Board of Directors of your Company.

   To ensure transparency, objectivity and quality of decision making in various operations, the Company has a Vigilance Department headed by Chief Vigilance Officer. The Vigilance set up in your Company consists of Vigilance Executives in Corporate Centre as well as in sites. In sites, the Vigilance Executives report to the Project Head in administrative matters and they report to the Chief Vigilance Officer in functional matters.

   Corporate Vigilance Department consists of four Cells as under:

   - Vigilance Investigation and Processing Cell
   - Departmental Proceedings Cell
   - Technical Examination Cell
   - MIS Cell

   These cells deal with various facets of vigilance mechanism. The vigilance works have been assigned region wise to Vigilance officers at Corporate Centre (Regional Vigilance Executives) for speedier disposal. Senior officials of Vigilance Department comprising GM (Vigilance), Regional Vigilance Executives and Head of DPC/MIS Cell meet regularly to discuss common issues in order to ensure uniform working in all Regions. This facilitates transparency, efficiency and effectiveness of Vigilance functionaries by making use of collective knowledge, experience and wisdom of Vigilance Executives as well as breaking of compartmentalization and abridging of strengths & weaknesses.

Fraud Prevention Policy has been implemented in your Company and suspected fraud cases, referred by the Nodal Officers to Vigilance Department are investigated immediately to avoid/ stop fraudulent behaviours as defined in "Fraud Prevention Policy". Whistle Blower Policy has also been in place at your Company as per SEBI guideline to strengthen a culture of transparency and trust in the organization, providing employees with a framework/ procedure for responsible and secure reporting of improper activities (whistle blowing) within the Company and to protect employees wishing to raise a concern about improper activity/ serious irregularities within the Company. A complaint handling policy is also in place which is designed to provide guidance on the manner in which your Company receives and handles complaints against its employees, suppliers / contractors etc. Integrity Pact has been implemented in your Company since 2009. Presently tenders having estimated value of ₹ 10 Crore (excluding taxes and duties) and above are covered under the Integrity Pact. As on 31.3.2021, your Company is having 3 Nos. of Independent External Monitor- Shri Devendra Kumar Pathak, IPS (Retired), Shri T M Bhasin, Ex. Vig. Commissioner and Shri Venu Gopal Nair, IPS (Retired) to oversee the implementation of Integrity Pact Programme.

2. **How many stakeholder complaints have been received in the past financial year and what percentage was satisfactorily resolved by the management? If so, provide details thereof, in about 50 words or so.**

Regarding Investigation of Complaints, during the year 2020-21, a total 84 complaints were investigated & out of these 64 complaints have been finalized while the remaining 20 are under various stages of investigation as on 31.3.2021. Appropriate disciplinary action has also been initiated against the involved employees along with system improvements, wherever found necessary. 187 Surprise Checks were conducted during the period and recovery of ₹ 46,32,242 was effected against various discrepancies detected during investigation. During the last year a total of 34 Preventive Vigilance Workshops were conducted at various projects/ places.

Principle 2: Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle

1. **List up to 3 of your products or services whose design has incorporated social or environmental concerns, risks and/or opportunities**

i. **Generation of Electricity:** Your Company has been conventionally producing Electricity through Coal and Gas. Many design upgradations such as supercritical and ultra-supercritical based new capacity additions and process innovation such as High Concentration slurry disposal (HCSD), Real time monitoring of Pollutants and Zero Liquid discharge has been done to reduce the environment footprint. With the focus on curbing release of SOx and other undesirable emission into the environment, your Company is undergoing of commissioning of Flue Gas Desulphurisation (FGD) system at various stations. Your Company has also increased its solar, wind and hydro based capacities which has negligible emissions.

ii. **Coal Mining:** Your Company has started coal production from its three coal blocks i.e. Pakri-Barwadih in Jharkhand, Dulanga in Odisha and Talaipalli in Chhattisgarh. Your Company has declared commercial operation of its two mines, Pakri Barwadih and Dulanga. Amidst COVID-19 pandemic, and stoppage of work in Pakri-Barwadih mine by the villagers for about 94 days during Jul-Nov'20, your Company has produced 11 MMT of coal during FY 20-21 from the three operating mines. With this, your Company has produced a cumulative coal production of 32.36 MMT from these three mines till 31.3.2021.

iii. **E-Mobility:** Your Company is trying to promote adoption of EVs through developing charging infrastructure. This will curb the rising air pollution.

2. **For each such product, provide the following details in respect of resource use (energy, water, raw material etc.) per unit of product(optional):**

a. Reduction during sourcing/production/distribution achieved since the previous year throughout the value chain.

b. Reduction during usage by consumers (energy, water) has been achieved since the previous year.

Raw Material (Energy) Consumption per year:

Energy Source	2018-19		2019-20		2020-21	
	Quantity	PUC	Quantity	PUC	Quantity	PUC
Coal	172.22 MMT	0.66 kg/kWh	169.38 MMT	0.63 kg/kWh	174.96 MMT	0.67 kg/kWh
Natural Gas	4.65 MMSCMD	0.23 scm/kWh	3.16 MMSCMD	0.233 scm/kWh	3.49 MMSCMD	0.224 scm/kWh
LDO	42,626 KL	0.38 ml/kWh (LDO & HFO combined)	79,646.20 KL	0.51 ml/kWh (LDO & HFO combined)	84,075 KL	0.49 ml/kWh (LDO & HFO combined)
HFO	56,254.26 KL		48,895 KL		45,077 KL	
Naphtha	5,887 MT	-	97.90 MT	-	18,280 MT	-
HSD	9,561 KL	-	86.566 KL	-	284.685 KL	-

Water Withdrawal per year (in million KL): (* Water calculated on closed loop systems in your Company only)

S. No.	Type of water	Quantity Consumed		
		2018-19	2019-20	2020-21
1	Total Water withdrawal	593.24*	559.5*	590.89*
2	Per unit withdrawal	3.04* lt/kWh	3.15* lt/kWh	3.03 lt/kWh

Energy saving per year:

Total Energy saved by the initiatives taken in your Company power plants for energy conservation / efficiency improvement	2018-19	2019-20	2020-21
	1,615 TJ	1,622.50 TJ	1,643.30 TJ

3. Does the company have procedures in place for sustainable sourcing (including transportation)? If yes, what percentage of your inputs was sourced sustainably? Also, provide details thereof,

The following procedures are in place for the sustainable sourcing of coal by your Company for its different power station:

i) **Coal Linkage:** Coal linkage for a new project is accorded by Standing Linkage Committee - Long Term (SLC-LT) under the aegis of Ministry of Coal, GoI. Accordingly, your Company applies for coal linkage to the Ministry of Power for their recommendations before SLC (LT). On the direction of SLC-LT, Coal companies issue Letter of Assurance (LoA) to your Company valid for 24 months. On receipt of LoA, your Company completes all the formalities enabling for signing of FSA.

ii) **Fuel Supply Agreement (FSA):** FSA is signed between the your Company and Coal Companies for a period of 20 years with a provision of review after every 5 years. Based on the terms & conditions of FSA, coal companies supply coal to the power stations. ACQ quantities allocated under the LOA is 85% as per the CEA table corresponding to GCV/ Heat rate / as per the station i.e. Critical/Super Critical.

iii) **Bilateral MoUs:** Short-term coal procurements are done as per requirement through Bilateral MoUs with coal companies for the quantity, price & period mutually agreed by buyer & Coal Company.

iv) **Bridge Linkage MoUs :** Bridge linkage MoUs are signed for the plants linked with the Captive Mines to bridge the gap of coal requirement of the station between the production from the mine. Quantity allocated (Agreed Quantity) under the bridge linkage is 90% of normative quantity and CIL/SCCL endeavour to supply 75% of the above-mentioned quantity. However, coal supplied under the bridge linkage is on best effort basis.

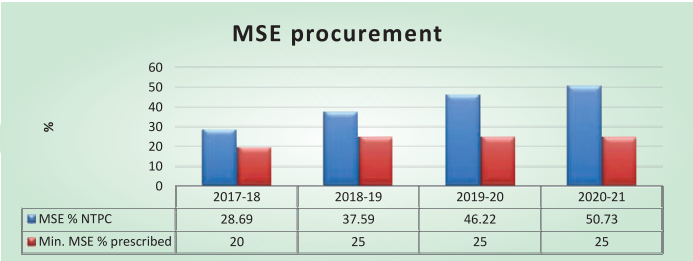
v) **E-Auctions:** Coal is also procured for critical stations by participating in E-Auctions conducted by Coal companies as approved by your Company Board of Director.

vi) **Import:** Your Company imports coal with the approval of your Company Board. Your Company procures the coal on short-term basis and in multi-packages to enable cost benefit to your Company.

Total Coal Receipt (COD Stations) in FY 2020-21 was 173.09 MMT.

4. **Has the company taken any steps to procure goods and services from local & small producers, including communities surrounding their place of work? If yes, what steps have been taken to improve their capacity and capability of local and small vendors?**

The Company adopts fair, equitable and transparent tendering procedures. To encourage Indian bidders and suppliers, provisions regarding price preference and deemed export benefits are stipulated in the bidding documents as per the extant policy of Government of India. Your Company has taken various initiatives to encourage participation in tender for local & small manufacturer including SMEs. Your Company is a fully compliant CPSU on MSME SAMBANDH portal.



	2017-18	2018-19	2019-20	2020-21
MSE % NTPC	28.69	37.59	46.22	50.73
Min. MSE % prescribed	20	25	25	25

Your Company exceeded the target of 25% procurement from MSEs in FY 2020-21 as per Public Procurement Policy (PPP) 2012. Actual % procurement from MSEs in FY 2020-21 was 50.73%. Your Company achieved the highest MSE procurement in FY 2020-21 amongst Maharatna PSUs.

- The MSE vendor count configured in SAP is 5,682 till March 2021 end.
- In FY 20-21, your Company Units organised 20 MSE Vendor Development Programs (VDPs), including 10 Special VDPs for SC/ST MSEs. Your Company also participated in various VDPs for MSEs organized by other CPSUs, Ministry (MSME), NSIC, FICCI, DICCI etc.
- Your Company's MSE vendor registration portal is rolled out for collating vendor database for items reserved exclusively for procurements from MSEs. The portal mitigates the long pending requirement of your Company units for a validated vendor base for reserved items.
- Dedicated cell to monitor and expedite MSME SAMADHAN portal complaints.
- Your Company is on-board to all 3 Trade Receivable electronic Discounting System (TReDS) i.e. M1Xchange, INVOICEMART and RXIL. Trade Receivables worth ₹ 4.43 crore Discounted/paid through TReDS till March'2021 end.

5. **Does the company have a mechanism to recycle products and waste? If yes what is the percentage of recycling of products and waste (separately as <5%, 5-10%, >10%). Also, provide details thereof, in about 50 words or so.**

Our Product viz. Electricity gets completely consumed and hence there is no scope of its recycling. Guidelines have been issued in line with National Environment Policy for disposal of hazardous wastes from your Company power stations. The hazardous wastes generated at your Company power stations such as used transformer oil, used lubricants, lead acid batteries etc. are sold only to government approved recyclers or given back to the sellers for recycling under buy back arrangements, which takes care of 100% recycling of such wastes.

During FY 2020-21, approximately 62.46 million tonnes of ash was generated by your Company stations and 77.81 % i.e. 48.60 million tonnes of ash had been gainfully utilized in various areas such as issue to industries for cement, concrete, asbestos products, bricks/ blocks making, road embankment construction, ash dyke raising, mine filling, land development works etc. Fifteen stations have achieved 100% ash utilization.

Principle 3: Businesses should promote the wellbeing of all employees

1. **Number of Employees (your Company): (Inclues employees posted in JVs & Subsidiary Companies)**

Category	2018-19	2019-20	2020-21
Executives	10,859	10,743	10,286
Non- Executives	8,154	6,683	6,512

2. **Number of Employees hired on Temporary / Contractual / Casual basis:**

Your Company does not hire employees on temporary / casual basis. The no. of workers with Contractors are dynamic in nature and vary from time to time. Your Company also hires employees on FTEs.

3. **Number of permanent Women Employees (your Company): 1,138**

4. **Number of permanent Employees with Disabilities (your Company): 484**

5. **Do you have an employee association that is recognized by management:**

Your Company is a multi-unit organization Association(s) comprising of executives of your Company need not be recognized in the absence of any statutory mandate. Workmen of various your Company Units have formed unions. The same are accorded recognition by your Company as per applicable law / practice.

6. **What percentage of your permanent employees is members of this recognized employee association?**

About 70 % of the permanent employees in workmen category are members of the recognized union of workmen.

7. **Please indicate the Number of complaints relating to child labour, forced labour, involuntary labour, sexual harassment in the last financial year and pending, as on the end of the financial year.**

No.	Category	No. of previous year pending complaints	No. of complaints filed during the FY 20-21	No. of complaints pending as on 31-03-2021
1	Child labour / forced labour / involuntary labour	NIL	NIL	NIL
2	Sexual harassment	0	2	0
3	Discriminatory employment	NIL	NIL	NIL

8. **What percentage of your under mentioned employees were given safety & skill up-gradation training in the last year? (Excluding joint venture companies)**

Category of employee	Training for safety (% covered)	Training for skill up-gradation (% covered)
Permanent Employees	28.95	79.18
Permanent Women Employees	29.08	70.38
Employees with Disabilities	16.90	51.89

Principle 4: Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.

1. **Has the company mapped its internal and external stakeholders?** Yes

2. **Out of the above, has the company identified the disadvantaged, vulnerable & marginalized stakeholders**

Your Company has a well structure R&R and CSR Policy to take care of the disadvantaged, vulnerable and marginalized people in and around the plants.

Vulnerable category of persons has been detailed in your Company 's CSR and R&R Policies. These include old-aged, women, PCPs, SC/ST/OBC etc. They are identified through Socio Economic Survey (SES), Need Assessment Survey (NAS) and other consultations with the stakeholders etc. at the time of formulation of CSR/ R&R Plans.

3 **Are there any special initiatives taken by the company to engage with the disadvantaged, vulnerable and marginalized stakeholders? If so, provide details thereof, in about 50 words or so.**

Yes,

Your Company has always been sensitive to the needs of disadvantaged, vulnerable and marginalized stakeholders. As part of R&R, in addition to the entitlements and packages as envisaged for PAP's, your Company makes special efforts for the welfare measures for this section of the society in the neighborhood community of your Company locations. The measures include special vocational training programmes for making them self-employable, priority in engagement for suitable jobs, pension under Widow Pension Scheme, old age pension scheme etc as per provisions outlined in extant policies or as decided in Village Development Advisory Committee VDAC/ R&R plan. Furthering these efforts under CSR, your Company regularly undertakes Skill up gradation programs for improving employability of youth/ women in the neighborhood of its operations, some of which also fall in the Aspirational Districts identified by 'NITI Aayog. Your Company has also taken up the activities for women empowerment, construction of SC/ST multipurpose halls & hostels, relief through distribution of various articles & support to orphanages & old age homes in the vicinity of its stations. Some of the initiatives to address the needs of differently abled include Information and Communication Technology (ICT) Centres and Disability Rehabilitation Centres by NTPC Foundation and inclusive education, distribution of equipments like tricycles, wheelchairs, hearing aids, vocational training, schlorships etc.

Principle 5: Businesses should respect and promote human rights

1. **Does the policy of the company on human rights cover only the company or extend to the Group / Joint Ventures / Suppliers / Contractors / NGOs / Others?**

   The Human Rights policy of your Company is applicable to all its employees posted in various stations, projects, offices, JVs and Subsidiaries. Human Rights provisions are also built in our bidding documents for supply cum erection and civil packages invited on competitive bidding basis covering our suppliers and contractors.

2. **How many stakeholder complaints have been received in the past financial year and what percent was satisfactorily resolved by the management?**

   No complaint on human rights, such as child labour, forced labour, involuntary labour, sexual harassment, discrimination, rights of the disabled etc. was pending as on 31.3 2021. (Refer principle 3)

Principle 6: Business should respect, protect, and make efforts to restore the environment

1. **Does the policy relate to Principle 6 cover only the company or extends to the Group / Joint Ventures / Suppliers / Contractors / NGOs /Others?**

   All the policies of your Company as mentioned under principle 6 and their implementation thereof covers all your Company business units as well as its JVs and subsidiaries. However, the Suppliers / Contractors / Other stake holders are free to adopt the same voluntarily.

2. **Does the company have strategies/ initiatives to address global environmental issues such as climate change, global warming, etc? If yes, please give hyperlink for webpage etc.**

   Yes,

   Your Company is one of the premier PSU under Ministry of Power and has been doing its bit in tackling the issue of global warming & climate change. Your Company, as a responsible global citizen, has taken various steps i.e readjustment of your Company 's fuel / power generation mix by adopting more renewables, introduction of clean coal technologies etc. in line with various GoI missions under National Action Plan on Climate Change (NAPCC).

   Your Company low carbon initiatives can be categorized into following broad categories:

   i) Re-adjustment of your Company 's fuel/ power generation mix

   ii) Introduction of Thermodynamically Efficient Technologies

   iii) Renovation & Modernization of old power stations

   iv) Induction of advanced clean coal technologies for power generation

   v) Establishment of NETRA for addressing climate change concerns

3. **Does the company identify and assess potential environmental risks?**

   Your Company has an established system to identify & assess the potential environmental risk at stations by MRM (Management Review Meeting) at Station, Region, Corporate Centre by RMC (Risk management committee) and Management Committee Meeting (MCM). RMC consist member of Director's level, and review meeting is organised on quarterly basis to discuss, elaborate and mitigate the issues, which may cause potential environmental risks. Further an apex meeting (Management committee) is chaired by CMD for solving the critical issues and ensure compliance without deviation. Your Company risks are mainly 100% ash utilisation, implementation of new norms within time bound manner and Court cases related to Environment in NGT and higher courts. All Environmental related risks are regularly identified , assessed, deliberated at appropriate level and action plans are prepared and implemented in time to mitigate such risks, if any.

4. **Does the company have any project related to Clean Development Mechanism? If so, provide details thereof, in about 50 words or so. Also, if yes, whether any environmental compliance report is filed?**

   Your Company is pioneer in undertaking climate change issues proactively. The company has taken several initiatives in CDM Projects in Power Sector.

   Five of its renewable energy projects viz. 5 MW Solar PV Power Project at Dadri, 5 MW Solar PV Power Project at Port Blair (A&N), 5 MW Solar PV Power Project at Faridabad and 8 MW small hydro power project at Singrauli and 50 MW Solar PV Plant at Rajgarh (MP) have already been registered with United Nations Frame Work Convention on Climate Change (UNFCCC) CDM Executive Board.

   15 MW Solar PV Power project at Singrauli, 10 MW Solar PV project at Talcher and 10 MW Solar PV Power Project at Unchahar is registered in UNFCCC CDM Programme of Activities (PoA).

6173 nos of Certified Emission Reductions (CERs) for 5 MW Solar PV Power Project at Port Blair (A&N) has been issued by UNFCCC CDM Executive Board. Another 5842 nos. of CERs have also been issued by UNFCCC CDM Executive Board for 5 MW Solar PV Power Project at Dadri and 21011 nos. of Certified Emission Reductions (CERs) has been issued for 5 MW Solar PV Power Project at Faridabad. Further, 80278 nos. of CERs are expected shortly, after completion of verification exercise of 50 MW Rajgarh Solar project.

Further Registration of 50 MW Solar PV power project at Anantpur, 260 MW Solar PV power project at Bhadla, 250 MW Solar PV power project at Mandsaur and 50 MW Wind power project at Rojmal has been done in Verified Carbon Standard (VCS) program. A total of 1085005 Voluntary Emission Reduction (VERs) has been issued for these projects registered with VCS Board. Further, 2117005 VERs are expected shortly, after completion of verification exercise of these projects.

Prior consideration forms have been sent to UNFCCC and MOEF for our upcoming following Solar Projects: 140 MW and 85 MW at Bilhaur, 20 MW at Auraiya,100 MW floating solar at Ramagundam, 25 MW floating solar at Simhadri, 70 MW & 22 MW floating solar at Kayamkulam, 160 MW at Jetsar, 20 MW floating solar at Auraiya, 20 MW at Rihand, 400 MW CPSU Scheme Trench-I projects and 1292 MW CPSU Tranche-II projects.

5. **Has the company undertaken any other initiatives on – clean technology, energy efficiency, renewable energy, etc? Y/N. If yes, please give hyperlink for web page or write up.**

Yes, the company has taken up several initiatives for clean technology, energy efficiency and renewable energy. Details are as follows:

R&D Activities:

Your Company, fully recognize R&D as the cornerstone of technological advancement. Therefore, R&D has been incorporated in the long-term vision and strategy for the benefit of the company and society. Your Company has been assigning more than 1% of PAT consistently for R&D related activities.

With new challenges, comes new opportunities and the same holds true for the energy sector also. Your Company has always taken upon itself to incorporate innovative technologies to enhance the safety, reliability, and efficiency of power plants through a prudent mix of development, adoption, and adaption of frontier technologies. Through our R&D center, NETRA (NTPC Energy Technology Research Alliance), we are constantly making efforts to address the major concerns of the power sector - as well as exploring and tapping the potential opportunities available.

The focus areas of NETRA are - Efficiency Improvement & Cost Reduction; New & Renewable Energy; Climate Change & Environmental protection which includes water conservation, Ash utilization, carbon capture, and utilization & Waste Management. NETRA also provides Advanced Scientific Services to its stations and other utilities in the area Non-Destructive Examination (NDE), Metallurgy & Failure analysis, Oil/water chemistry, Environment, Electrical, Computational Fluid Dynamics (CFD), etc. for efficient and reliable performances. NETRA laboratories are ISO 17025 accredited.

R&D activities at your Company are constantly guided and steered by the Research Advisory Council (RAC) comprising of eminent scientists and experts from India and abroad. Padma Bhushan Dr. V.K. Saraswat, former Secretary, DRDO, and member of NITI Aayog is the Chairman of RAC. In addition, the Scientific Advisory Council (SAC) having Functional Director, Director (Operations) and other senior officials of your Company as members gives direction for improving plant performance & reducing cost of generation.

Renewable Energy:

Your Company is taking various steps to make its energy portfolio greener by adding significant capacities of Renewable Energy (RE) Sources. By 2032, your Company plans to have a minimum of 32000 MW capacity through RE sources constituting nearly 25% of its overall power generation capacity.

Description	NTPC Group EPC Mode's Own Projects (8982 MW)			Developer Mode Projects (6743 MW)
	NTPC	NTPC REL	THDC & NEEPCO	NTPC
Commissioned	1173	--	192	4462
Under Implementation	2199	670	--	1111
Under Tendering	3998	150*	--	1170
LoA pending from Implementing agency		600**		
Total	**7370**	**1420**	**192**	**6743**

* LoA received from GUVNL, PPA signed on 23.4.2021

** 600 MW won in APGECL tender, LoA awaited,

6. **Are the Emissions / Waste generated by the company within the permissible limits given by CPCB/SPCB for the financial year being reported?**

   Your Company is committed for compliance emission, effluent parameters and waste management and upgradation of technology is in regular practice as per directions received from regulatory agencies. All emission and effluent parameters are being monitored through online system by regulatory agency. These parameters are being maintained well within the permissible limits during the FY 2020-21.

7. **Number of show cause/ legal notices received from CPCB/ SPCB which are pending (i.e. not resolved to satisfaction) as on end of Financial Year.**

   There is no pendency of any case of show cause /notices & complaints received from CPCB/SPCB at the end of the financial year 2020-21.

Principle 7: Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner

1. Is your Company a member of any trade and chamber or association? If Yes, Name only those major ones that your business deals with.

   Yes.

   The detail of major corporate membership with which Company had a business dealing are as under:

   SCOPE, FICCI, CII, TERI, WEC, CBIP, IERE, POWER SECTOR SKILL COUNCIL, EPRI, ICSI, POWER HR FORUM, ICC, IFC etc.

2. Have you advocated / lobbied through above associations for the advancement or improvement of public good? if yes specify the broad areas (drop box: Governance and Administration, Economic Reforms, Inclusive Development Policies, Energy security, Water, Food Security, Sustainable Business Principles, Others).

   Your company is a member of World Energy Council. Chairman and Managing Director of your company is also an ex-officio Member Secretary WEC India and its international counterpart WEC work towards sustainable use and supply of energy. Their work enables promoting policies which balance Energy Security, Energy Equity (Energy access/inclusive growth) and Environmental Sustainability.

Principle 8: Businesses should support inclusive growth and equitable development

1. Does the company have specified programmes / initiatives / projects in pursuit of the policy related to Principle 8? If yes details thereof. Yes,

   To achieve the aim of inclusive growth and equitable development, your Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and thereafter extensive community / peripheral development activities are taken up along with the project development. Separate CSR & Community Development Policy, formulated in July 2004 and Sustainability Policy formulated in Nov 2012 have been combined in 2015 and revised in 2016 as "NTPC Policy for CSR & Sustainability" in line with Companies Act 2013 and DPE Guidelines for CSR . It covers a wide range of activities for inclusive growth including implementation of key programmes through NTPC Foundation. Focus areas of your company CSR & Sustainability activities are Health, Sanitation, Drinking Water, Education, Capacity Building, Women Empowerment, Social Infrastructure Development, support to Physically Challenged Person (PCPs), and activities contributing towards Environment Sustainability.

2. Are the programmes/projects undertaken through in-house team/own foundation/external NGO/government structures/ any other organization?

   Programmes are undertaken by well-defined in – house team through specialized agencies, NGO's, government agencies/ bodies etc. Some of the activities are carried by NTPC Foundation.

3. Have you done any impact assessment of your initiative? Yes

   Effectiveness of CSR and Sustainability programme assessed through both internal and external evaluations. Internal audits carried out to verify effectiveness of implementation. Social Impact Evaluation (SIE) done through credible external agencies for gauging impact of CSR & Sustainability initiatives. Findings of SIE form the basis for initiating corrective actions and formulating future schemes/plans. Every two years, your Company conducts a third-party Social Impact assessment for all its major CSR activities at various operating stations.

   During the year 2020-21, Impact Evaluation/Assessment of Sustainable Development (SD) projects, executed by your

Company at 8 stations for three years (FY-17, FY-18 and FY-19). The SD projects implemented by 8 power plants are tree plantation, installation of LED lights, municipal solid waste management, Rain Water Harvesting and implementation of solar street lights and solar PV projects. It is evident that the SD projects implemented by 8 TPP of your company have positive impact on environment.

During the Year 2020-21, your company has taken up Impact Evaluation of CSR projects at 5 stations. Your Company's flexible and open approach in this regard coupled with community participation along with local administration & village Panchayats leads to successful adoption and acceptability of initiatives by community.

4. What is your company's direct contribution to community development projects- Amount in INR and the details of the projects undertaken?

Yes

Company has specified programmes for inclusive growth & equitable development not only at station level but also at National level. Details of the programmes and spending are listed below:

Total spending on CSR –₹ 418.87 crore for FY 2020-21

S. No.	Activity	CSR spend 2020-21 (Rs Cr.)	CSR spend 2019-20 (Rs Cr.)
1	Eradicating Hunger and Poverty, Health Care and Sanitation	288.00	47.83
2	Education and Skill Development	62.96	124.57
3	Empowerment of Women and other Economically Backward Sections	0.79	1.53
4	Environmental Sustainability	33.41	73.20
5	Art & Culture	0.03	2.36
6	Sports	1.74	2.51
7	Rural Development	31.83	40.02
8	Disaster management, including relief, rehabilitation and reconstruction activities	0.11	12.90
	Grand Total	**418.87**	**304.92**

CSR has been synonymous with your Company's core business of power generation. Since inception your company has been very sensitive to the needs of the neighbouring community and persons whose livelihood has been affected due to establishment of a power plant. The Company's spirit of caring and sharing is embedded in its mission statement. The Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and thereafter-extensive community / peripheral area development activities are taken up along with the project development.

Your Company CSR Policy formulated in July 2004 and revised in 2010, 2016 and 2019 covers a wide range of activities including provision for implementation of a few key Programmes taken through NTPC Foundation- a charitable Trust set up by your Company to mainly serve and empower the Physically Challenged and Under Privileged Sections of the Society & women.

CSR programs undertaken by company include activities specified in Schedule VII of the Companies Act 2013 & Rules made thereunder for the benefit of community at large. Focus areas of your company's CSR activities are Health, Sanitation, Safe Drinking Water and Education. However, company also takes up activities in the areas of Capacity Building of the youth, Women Empowerment, Social Infrastructure Development, livelihood creation through support for implementation of innovative agriculture & livestock development, support to Physically Challenged Person (PCPs), and for the activities contributing towards Environment Sustainability. Your company CSR efforts are focussed in the immediate vicinity of its stations where Company's operations are situated, ensuring that majority CSR funds are spent on activities addressing the needs of the local community. However, considering inclusive growth & environment sustainability, some of the activities are also taken up in different parts of the country to supplement governmental efforts. During the year, about 450 villages and more than 400 schools have been benefitted by your company's various CSR initiatives at different locations. Your company's CSR initiatives have touched the lives of around 14 lakhs people generally residing at remote locations in various parts of the country in one or the other way.

Apart from the regular CSR activities undertaken around company's operations, support has also been provided for some of the major CSR initiatives all across the country:

- Contribution of ₹ 250 Crore to PM CARES Fund to support Government of India in its efforts to fight COVID-19.
- Support for procurement of items for COVID-19 Vaccination Program.
- Proactive relief measures like regular sanitization of villages, distribution of PPE kits to health professionals, distribution of face masks to villagers and supply of groceries to the community
- Setting up Burn Units at AIIMS Patna, AIIMS Bhubaneswar & King George Medical University Lucknow.
- Construction of Eye Hospital at Dadri, UP and of operating room complex at Eye hospital in Bhubaneswar.
- The Company operates Mobile Health Clinics at various locations providing healthcare to underserved areas benefitting about 80,000 persons per year.
- Revival and continuous operation of Mechanized Solid Waste Management plant at Karsada, UP.
- Installation of sanitary napkin vending machine and incinerators in more than 40 Govt. schools and colleges benefitting substantial no. of girl children.
- Creating infrastructure & support for equipment at National Cancer Institute Nagpur for cancer treatment.
- Support for establishing Integrated Muscular Dystrophy Rehabilitation Centre "Manav Mandir" at Solan, Himachal Pradesh.
- Support for Ultraviolet based sanitization technology for PPE kits being developed by IIT Delhi & Chakr Innovation under your Company CSR.
- Education of around 180 girl students admitted to different your company Township Schools. These students were selected at Four weeks residential workshop under Girl Empowerment Mission (GEM) flagship programme of your company held during summer vacation 23 projects/ stations of your company wherein more than 1800 girls participated.
- Adopted 18 Industrial Training Institutes (ITIs) and is setting up 8 new ones to enhance employability through vocational training, skill upgradation and income generation programs.
- Memorandum of Understanding (MoU) with National Skill Development Corporation (NSDC) & NSDF to develop the skills of 30000 youth over a period of 5 years spread in 12 states including 8,000 youth of Ladakh & J&K UT in order to make all of them self-employable.
- Capacity building of farmers at Jhanor, Rihand, Kahalgaon & Ramagundam improving incomes by 30% to 300%.
- Support committed for Redevelopment of Kedarnath town, Uttrakhand and its surrounding areas devastated during natural calamity of 2013.
- Substantial support in the relief activities during FANI Cyclone in Odisha.
- Setting up 50 Sanitary Napkin Mini Manufacturing units (MMU) in the state of Odisha under "Stree Swabhiman" program.
- Support to Archery Association of India for promotion of 'Archery' Sports for conducting National Archery Championships (NACs), National Ranking Archery Tournaments (NRATs) & to provide kits/apparels to Indian Archery teams for international participation.
- Installation of Energy Efficient Pump System in the fields of farmers residing near the Company stations located in identified five districts of Uttar Pradesh.
- Support for Preservation and conservation of 3 monuments (Group of Monuments, Mandu (Madhya Pradesh), Excavated site at Vikramshila (Bihar), and Archaeological site, Lalitgiri / Dhauli (Odisha) through Archaeological Survey of India (ASI) and National Culture Fund (NCF).

5. Have you taken steps to ensure that this community development initiative is successfully adopted by the community? Please explain in 50 words or so.

Community Development initiatives in your Company are taken in a planned way. The community is engaged in all steps of activities from planning to completion.

Bottom up approach is adopted for taking up these activities. CSR activities/ CD plans are identified after consultations with relevant stakeholders like community, village panchayats, local/ district administration & Village Development Advisory Committee based on Need Assessment Surveys.

Stakeholders participate at each stage of the activity and also execution of some of the activities is supervised by the local authorities. People's involvement is also ensured during implementation and monitoring.

Your Company's flexible & open approach in this regard coupled with community participation along with local administration & village Panchayats leads to successful adoption & acceptability of initiatives by community. Assets are handed over to local authorities and gram panchayats for maintenance.

Social Impact Evaluation (SIE) study/ survey are conducted through external agencies on completion of developmental initiatives. Social audit is done from time to time to evaluate whether all activities have been completed satisfactorily that gives recommendation for necessary modification/ corrective measures, if any, for the future projects.

Principle 9: Businesses should engage with and provide value to their customers and consumers in a responsible manner

1 **Customer complaints / consumer cases are pending as on the end of financial year:** There are no complaints as such from customers. However, as part of the tariff determination process under the overall regulatory system, different cases have been filed by your company against CERC/ Customers or filed at the Appellate Tribunal/ Courts by different Beneficiaries against your company / CERC.

APTEL: 57 Cases
Supreme Court: 28 Cases
Other courts: 19 Cases

2 **Does the company display product information on the product label, over and above what is mandated as per local laws?**

Not Applicable

3 **Is there any case filed by any stakeholder against the company regarding unfair trade practices, irresponsible advertising and / or anti-competitive behaviour during the last five years and pending as on end of financial year? If so, provide details thereof, in about 50 words or so.**

Nil

4 **Did your company carry out any consumer survey/ consumer satisfaction trends?**

Yes.

As part of the Customer Relationship Management programme, your company conducts a Customer Satisfaction Survey to assess the satisfaction level of the customers, captured through an Index and to get feedback from the customers.

Customer satisfaction surveys conducted in the past five years and targets for next 4 years are tabulated below:

Particulars	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
% of satisfied customers	94	94.9	95.2	96.1	95.5	97	100	100	100	100
Coverage %	100	100	100	100	100	100	100	100	100	100

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date : 26th August, 2021


Fighting with COVID-19 Pandemic
NTPC LIMITED
Tele-ICU 1
टेली आई.सी.यू. 1
NTPC - DADRI, UTTAR PRADESH

Annexure- XI to Directors' Report

SECRETARIAL AUDIT REPORT
FOR THE FINANCIAL YEAR ENDED MARCH 31, 2021

To

The Members,

NTPC LIMITED
NTPC Bhawan, Scope Complex,
7, Institutional Area Lodhi Road,
New Delhi-110003

We have conducted the secretarial audit of the compliance of applicable statutory provisions and the adherence to good corporate practices by NTPC Limited (hereinafter called the "company"). Secretarial Audit was conducted in a manner that provided us a reasonable basis for evaluating the corporate conducts/statutory compliances and expressing our option thereon.

Based on our verification of the Company's books, papers, minute books, forms and returns filed and other records maintained by the company and also the information provided by the Company, its officers, agents and authorized representatives during the conduct of secretarial audit, We hereby report that in our opinion, the company has, during the audit period covering the financial year ended on March 31, 2021 complied with the statutory provisions listed hereunder and also that the Company has proper Board-processes and compliance-mechanism in place to the extent, in the manner and subject to the reporting made hereinafter:

We have examined the books, papers, minute books, forms and returns filed and other records maintained by NTPC Limited ("the Company") for the financial year ended on March 31, 2021 ("period under review") according the provisions of:

(i) The Companies Act, 2013 ("the Act") and the rules made thereunder;

(ii) The Securities Contracts (Regulation) Act, 1956 ('SCRA') and the rules made thereunder;

(iii) The Depositories Act, 1996 and the Regulations and Bye-laws framed thereunder to the extent of Regulation 76 of Securities and Exchange Board of India (Depositories and Participants) Regulations, 2018;

(iv) Foreign Exchange Management Act, 1999 and the rules and regulations made thereunder to the extent of Foreign Direct Investment, Overseas Direct Investment and External Commercial Brrowings;

(v) The following Regulations and Guidelines prescribed under the Securities and Exchange Board of India Act, 1992 ('SEBI'):-

  (a) The Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011

  (b) The Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015;

  (c) The Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2018;

  (d) The Securities and Exchange Board of India (Share Based employee Benefits) Regulations, 2014;

  (e) The Securities and Exchange Board of India (Issue and Listing of Debt Securities) Regulations, 2008;

  (f) The Securities and Exchange Board of India (Registrars to an Issue and Share Transfer Agents) Regulations, 1993 regarding the Companies Act and dealing with client to the extent of securities issued;

  (g) The Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009; Not Applicable during the period under review.

  (h) The Securities and Exhange Board of India (Buyback of Securities) Regulations, 2018;

(vi) The other laws, as informed and certified by the Management of the Company which are specifically applicable to the Company based on their Sectors/Business are:

  1. Electricity Act, 2003
  2. The Mines and Minerals (Development and Regulation) Act, 1957
  3. Explosive Act, 1884
  4. Mines Act, 1952

  We have also examined compliance with the applicable clauses / Regulations of the following:

  (i) Secretaial Standards issued by The Institute of Company Secretaries of India and notified by Minister of Corporate Affairs.

  (ii) SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("Listing Regulations").

(iii) DPE Guidelines on Corporate Governance for Central Public Sector Enterprises issued by the Department of Public Enterprise:

During the period under review, the Company has generally complied with the provisions of the Act, Rules, Regulations, Guidelines, Standards, etc. mentioned above except delayed /incomplete details reported to Stock exchanges in few cases, certain non-compliances of Secretarial Standard on Meetings of the Board of Directors ("SS-1") and further as mentioned hereinafter:

1. The Company was not in compliance with the provisions of section 149 of the Act read with Regulation 17 of listing regulations with regard to the requirements of having at least one half of the Board of Directors comprising of Independent Directors, the Company falls short by five Indepedent Directors (including one woman Independent Director).
2. The company was not in compliance with the provisions of the regulation 17(10) of listing regulations with respect to the performance evaluation of Independent Directors by the Board of Directors of the Company.
3. The company was not in compliance with the provisions of the Regulation 19 read with Schedule II Part D of listing regulation and with respect to the formulation of policy for remuneration and appointment of Directors.

We further report that:

The Board of Directors of the Company is duly constituted with proper balance of Executive Directors, Non-Executive Directors and Independent Directors except as mentioned above. The Changes in the compolition of the Board of Directors that took place during the period under review were carried out in compliance with the provisions of the Act.

Adequate notice is given to all directors to schedule the Board Meettings, agenda and detailed notes on agenda were sent in advance (and at a Shorter Notice for which necessary approvals were obtained), and a system exists for seeking and obtaining further information and clarifications on the agenda items before the meeting and for meaningful participation at the meeting.

All decisions at Board Meetings and Committee Meetings are carried out unanimously as recorded in the minutes of the meetings of the Board of Directors or Committee of the Board, as the case may be.

We further report that there are adequate systems and processes in the company commensurate with the size and operations of the company to monitor and ensure compliance with applicable laws, rules regulations and guidelines.

We further report that during the audit period, the following specific events / actions took place in the company having a major bearing on the company's affairs in pursuance of the above referred laws, rules, requlations, guidelines, standards, etc.:

1. The Company has issued 1,18,741 unsecured non-convertible bonds of ₹ 10,00,000 each through private placment basis.
2. The Company has bought back 1,97,891,146 fully paid up equity shares of ₹ 10 each in the paid-up share capital of the Company at a price of ₹ 115/- per equity share fully paid.

For Chandrasekaran Associates

Company Secretaries

Dr. S. Chandrasekaran

Senior Partner

Membership No. FCS 1644

Certificate of Practice No. 715

UDIN: F001644C000735014

Date: 4.8.2021

Place: Delhi

Notes:

(i) This report is to be read with our letter of even date which is annexed as Annexure-A and forms an integral part of this report.

(ii) Due to restricted movement amid COVID-19 pandemic, we conducted the secretarial audit by examining the Secretarial Records including Minutes, Documents, Registers and other records etc., and some of them received by way of electronic mode from the Company and could not be verified from the original records. The management has confirmed that the records submitted to us are true and correct. This Report is limited to the Statutory Compliances on laws / regulations / guidelines listed in our report of which, the due date has been ended/expired on or before March 31, 2021 pertaining to Financial Year 2020-21.

Annexure- A to the Secretarial Audit Report

To
The Members,
NTPC LIMITED
NTPC Bhawan, Scope Complex,
7, Institutional Area Lodhi Road,
New Delhi-110003

1. Maintenance of secretarial record is the responsibility of the management of the Company. Our responsibility is to express an opinion on these secretarial records based on our audit.
2. We have followed the audit practices and processes as were appropriate to obtain reasonable assurance about the correctness of the contents of the secretarial records.

   The verification was done on the random test basis to ensure that correct facts are reflected in secretarial records. We believe that the processes and practices, we followed provide a reasonable basis for our opinion.
3. We have not verified the correctness and appropriateness of financial records and Books of Accounts of the Company.
4. Where ever required, we have obtained the Management representation about the compliance of laws, rules and regulations and happening of events etc.
5. The compliance of the provisions of Corporate and other applicable laws, rules, regulations, standards is the responsibility of management. Our examination was limited to the verification of procedures on the random test basis.
6. The Secretarial Audit report is neither an assurance as to the future viability of the company nor of the efficacy or effectiveness with which the managment has conducted the affairs of the Company.

For Chandrasekaran Associates
Company Secretaries

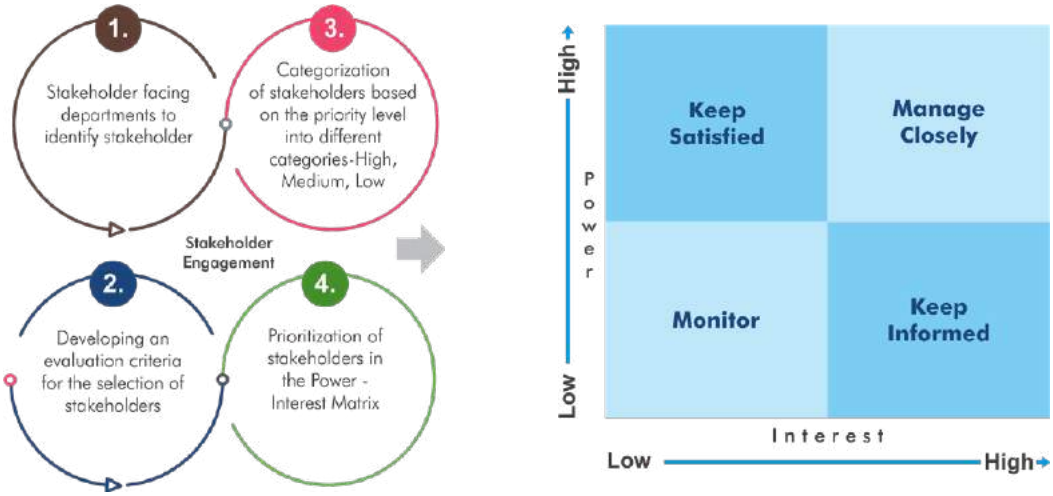
Dr. S. Chandrasekaran
Senior Partner
Membership No. FCS 1644
Certificate of Practice No. 715
UDIN: F001644C000735014

Date: 4.8.2021
Place: Delhi



Hybrid Solar at NTPC Kudgi

Stakeholder Engagement and Materiality Assessment



Identification, Categorisation and Prioritization of Stakeholders

Creating value for all our stakeholders is at the core of our value chain. We align our operations and business processes to cater to the expectations of our stakeholders, and design our strategy to respond to the priorities of our people – including employees, communities, contractors, customers and vendors. It is our endeavour to engage with them in a continuous, consultative, and constructive manner to be able to seek insights for designing our sustainable business strategy.

Stakeholder Engagement

Stakeholder engagement at NTPC is an ongoing journey where the company interacts with its various stakeholders at different management levels through multiple interaction platforms. In about 46 years of existence, NTPC has built a constructive relationship with its stakeholders on mutual trust, transparency, ethics and accountability. Our continual dialogue process with stakeholders and their feedback on issues concerning the company's operations has enabled much of our growth and achievements.

NTPC has instituted a well-integrated and structured stakeholder management mechanism across different verticals, functions and establishments. Stepwise guideline has been adopted for identifying the important stakeholders, analysing their perspectives and interests, and further mapping and prioritizing them. The details can be accessed from NTPC website. The structured mechanism of engagement enable us to understand and address stakeholder expectations and collaborates with them to create shared value. We capture the stakeholder issues and feed forward the input to inform our decision making as well as to devise our business strategy through materiality analysis. Critical and frequent stakeholder issues have been included in materiality analysis as tabulated. Our response and actions taken on same has been described in materiality chapter.



Girl Students of NTPC Flagship CSR Program "GEM"

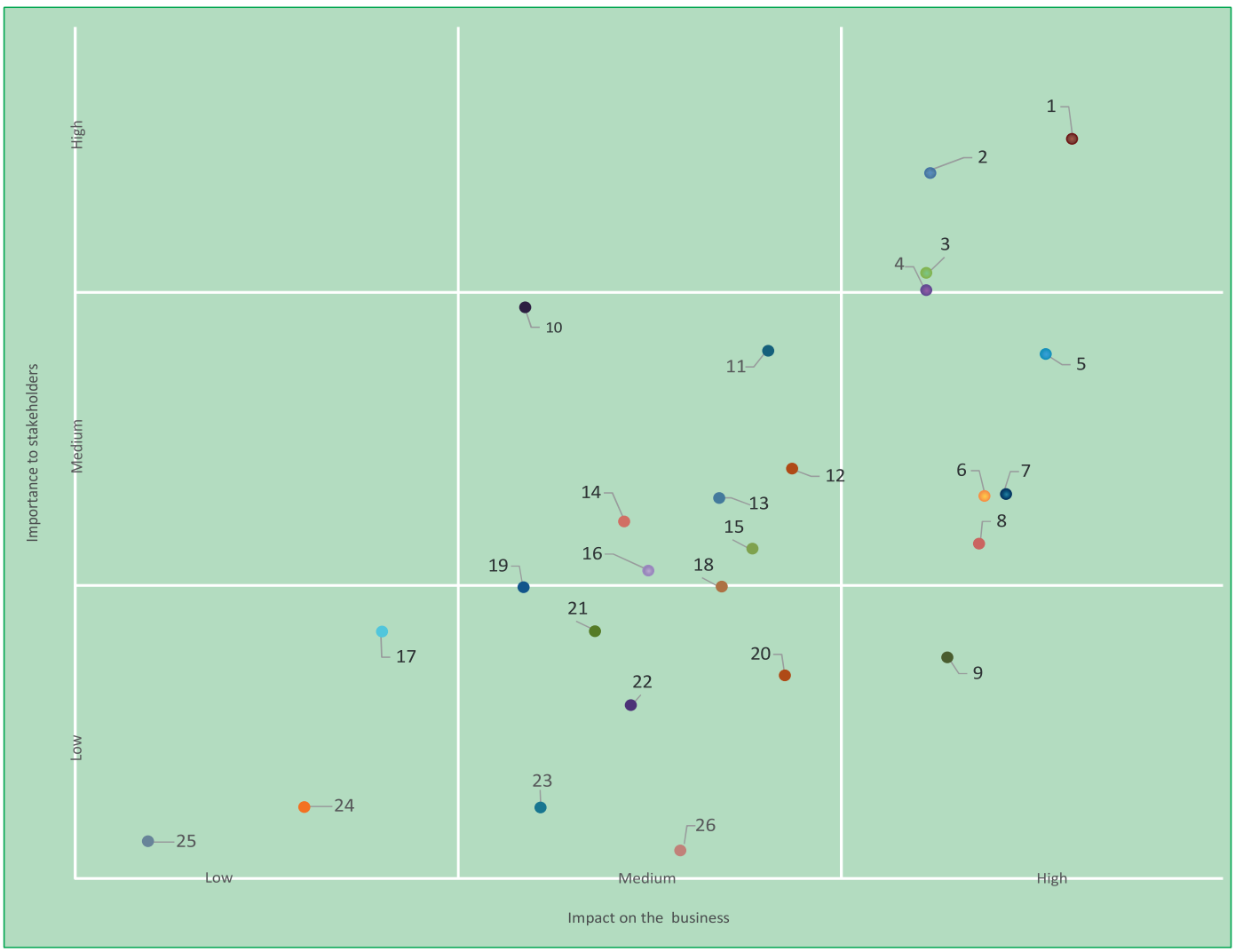
Stakeholder Group	Modes of Engagement	Frequency of Engagement	Key Concerns	Materiality Topics Linkage
Government of India	• Secretary level review • Meeting with MoP, MoEFCC, MoC, DPE, Parliamentary committees, CEA, NITI AAYOG, etc.	• Quarterly • Need based	• 24x7 affordable power to all • Maximizing infrastructure utilization • Social development • Climate Change & Environment conservation • Promote Govt. schemes (viz. Make in India, Skill India, Swachh Bharat Mission, etc.)	All
Regulators	• Public hearing • Statutory audits & inspection, Meeting for clearances, consents and compliances	• Need based • As per statutory provisions	• Optimum electricity tariff • Compliance with changing business environment	
Communities & NGO	• Public hearings • Village Development Advisory Committee (VDAC) • Public information centers • Project-based stakeholder meets	• Need based • Annually	• Infrastructure development • Quality of life • Employment opportunities • Land acquisition and R&R issues • Increased community involvement	10, 16, 2, 3, 4, 5, 16, 17, 23
Investors & Lenders	• Analyst and investors meeting • Annual general meeting • Review meets with bankers (Domestic and Foreign)	• Quarterly • Annual • Regular	• Improving RoI • Climate change & Business sustainability • Risk and governance compliance • Increased disclosure on Environment, Social and Governance (ESG) aspects	18, 21, 14, 15, 12
Employees	• Participative forums • Communication meetings • Employee surveys • Intranet and website • Trainings and workshops • Internal magazines	• Defined frequency of concerned Fora • Need based	• Professional growth • Work life balance • Health, safety and security • Timely resolution of grievances • Transparent appraisal and promotion cycle	1, 5, 3, 6, 7, 8, 18, 19, 20, 24
Customers	• Regional customer meets • Regional power committees (RPCs) • Commercial meetings/interactions • Technical coordination committee • Operation coordination committee • Business partner meet • Customer support services	• Quarterly • Monthly • Yearly • Need Based	• Resolving commercial issues • Resolving technical issues	2, 3, 5, 6, 13
Suppliers	• Pre-bid conference • Suppliers meet, Vendor enlisting • NTPC website	• Before tendering • Need based	• Transparent dealings • Timely payments • Fair opportunities • Sustainable Supply Chain	6, 15, 22
Media	• Press releases • Press conferences	• Need based • Event based	• Information sharing • Increased transparency	6
Indian Citizens	• Right to information (RTI) Act queries • NTPC website	• Continuous	• Community development • Environmental issues • Progessive organization	6, 7, 26

Our Materiality Assessment

Materiality assessment is a foundational and integral aspect of our Integrated Report, enabling us to gather insights on the relative importance of specific Environmental, Social and Economic issues and their impact on value creation. We conduct this exercise on regular time intervals (gap of 3-4 years) owing to significant change in business processes, external environment, geographical expansion, Global Mega Trends etc. A structured methodology has been adopted for materiality assessment on engagement with both internal and external stakeholders. The details about methodology and engagements undertaken can be accessed from NTPC's website.

We undertook a materiality assessment methodology in FY 2018-19 in accordance with the IIRC Framework and GRI Standards through a credible third party. This exercise was helpful in prioritising inputs from relevant stakeholders, as mentioned in earlier (Stakeholder) section, through continuous interactions, into NTPC's decision making process. Our material topics also provide further insights into the challenges, risks and opportunities our Company might face as described in the subsequent chapter (Risk Management) of this report. Effective management of material issues is critical to our business sustainability as it directs our strategic planning and management priorities towards achieving the ultimate goal of long-term sustainable value creation for our stakeholders.

1 Health and safety
2 Fly-Ash utilization
3 Water management
4 Effluent management
5 Air emissions
6 Ethics and integrity
7 Compliance management
8 Operational efficiency and plant reliability
9 Fuel availability
10 Community engagement
11 Disaster management
12 Quality management
13 Customer satisfaction and loyalty
14 Climate Change impacts
15 New technologies and digitalization
16 Waste
17 Biodiversity
18 Profitability
19 Labour practices
20 Employee development and engagement
21 Energy source diversification/De-carbonisation of power-mix
22 Sustainable supply chain
23 Land acquisitions
24 Employee diversity
25 Plant decommissioning
26 Indigenous peoples' rights



Generating Power & Smiles 24x7 for the Nation

Our approach to materiality topics

Sr. No.	Topics with Boundary	Key Actions	SDGs Linkage	Capital Linkage
1.	**Health and safety** (I)	• Safety is inculcated in the core values of NTPC • Target of zero incidents by establishment of robust safety culture and policy • Upgradation of operating procedures to make the work environment safer • Addressal of potential safety hazards owing to diversification into new technologies and business areas • NTPC Unchahar Safety Academy has been established to provide hands-on training on specific safety and emergency requirement • Mandatory Periodic Occupational health check-ups for all employees and contract labourers • Record Keeping of medical history of employees and their family through online centralized HMS framework "Jeevan Rekha"		
2.	**Fly-Ash utilization** (I, E)	• Implementation of Ash Policy for ash utilization in an integrated way from Ash generation to end product • Dry fly ash is issued to cement industries, ash brick manufacturers, National Highway, State Highway authorities and other user industries • Pond ash is given for road-construction in considerable quantity • For development of ash based value products such as geopolymer roads, light weight aggregate, ash based aggregate, sand and building material etc		
3. & 4	**Water and effluent management** (I, E)	• Optimisation of water consumption through advanced technologies and process reengineering • NTPC became signatory of CEO water mandate • Implementation of "Water Policy" and "Rain Water Harvesting Policy" • Implementation of "Zero Liquid Discharge (ZLD)" at all stations • Ensuring good quality fresh water availability in and around plant locations through community investments and capacity building • Installation of Air Cooled Condensers having potential to save 75% of water in water stressed regions • Cycles of Concentration (CoC) is being increased at all stations for reducing fresh water intake		
5.	**Air emissions** (I, E)	• Installation of Flue gas desulphurisation (FGD) system for SOx control at 60+ GW capacity • Combustion modifications for De-NOx completed for 7 GW and is in progress for 14+ GW capacity • Retrofitting of ESP to curb particulate emissions at all stations • Continuous Emission Monitoring System (CEMS) of all stacks • Ambient air quality monitoring through an online Ambient Air Quality Monitoring System (AAQMS)		

Sr. No.	Topics with Boundary	Key Actions	SDGs Linkage	Capital Linkage
6.	**Ethics and integrity** 	• Ethics being part of core values, all business processes are aligned to principles of ethics and integrity • Policies of code of conduct, whistle blower, complaint handling and banning of business dealings in place • 100% compliance with laws and regulations ensuring a transparent and corruption free work environment • Display Boards at all offices exhorting any visitor not to succumb to pressure and report any case of corrupt practices directly to Chief Vigilance Officer		
7.	**Compliance management and contractual disputes** 	• Robust internal systems and processes in place for smooth and efficient conduct of business • Our systems are designed to ensure regulatory compliances and maintain highest level of corporate governance • Internal environmental audits of the stations are conducted by expert teams comprising internal and external members • 26 NTPC stations are ISO14001:2015 certified and therefore periodical external audit of the environmental systems are done by the certification agencies		
8.	**Operational efficiency and plant reliability** 	• Improvement of operational efficiency through process innovations and adoption of advanced technologies • Adopting best operation and maintenance (O&M) practices and conducting periodic review • Ensuring fuel availability, secure and consistent access of information to all enables us to increase our productivity. • Increasing plant reliability through improved scheduling & maintenance, data analytics technique • Improvement of current systems and providing job specific trainings to our workforce • Unique voluntary program of GHG emission reduction by establishing 'Center for Power Efficiency and Environmental Protection (CenPEEP)' for CO_2 reductions through sustained efficiency improvements		
9.	**Fuel availability** 	• Long term fuel supply agreement with major domestic fuel suppliers • Supplementary agreement has also been signed at subsidiary level under rationalisation of coal linkages • Importing coal to fulfil the short term fuel requirements • Strategically ventured into coal mining to ensure long term fuel security		
10.	**Community engagement** 	• Dedicated CSR policy in line with Companies Act, 2013 and Department of Public Enterprises (DPE) Guidelines for CSR • Key community based programmes through NTPC Foundation • Our focus areas include Health, Sanitation, Water and Education • One of the top CSR spending conglomerate in country through expenditure of ₹ 461.96 Cr. in FY 2020-21		

Sr. No.	Topics with Boundary	Key Actions	SDGs Linkage	Capital Linkage
11.	**Disaster Management** (I, E)	• Periodic review and monitoring of safety and security system to identify and address new kind of possible disasters and emergencies • Design upgradation of the plant structure to ensure resistance to natural calamities • Location wise specific Disaster Management Plan (DMP) in place • Appropriate mock drills periodically to build awareness and capabilities of our workforce		
12.	**Quality Management** (I)	• Quality Assurance in place to ensure strong performance and quality on all the operational parameters • Ensure quality starting from sourcing of raw materials to the erection and commissioning till the generation of electricity • Each item tfor construction is subject to rigorous tests and inspection at the appropriate stages to ensure conformity • Committed adequate resources to maintain effective Quality Management System in our business operations • Dedicated Corporate level Quality Assurance team and Inspection Engineers at various demanding locations and projects		
13.	**Customer satisfaction and loyalty** (E)	• Ensuring timely response to customers' changing energy needs and grievances • Periodic meets of senior management with beneficiaries such as state discoms and other utilities to understand their concerns and resolve issues		
14. & 21.	**Climate Change impacts & De-carbonisation of power-mix** (E)	• Enhanced geographical and technology diversification, inherently reduces our risks to any location specific natural catastrophe • Power plants and associated infrastructures are designed to withstand cyclones, heatwaves and increase in ambient temperatures • Decommissioning of old thermal plants and revised target of 60 GW of RE capacity by 2032 • Substantial progress towards decarbonised energy transition through 5 + GW of installed non-fossil based generation capacity		
15.	**New technologies and digitalization** (I)	• Delivering sustainable technology solutions through applied research and providing advanced scientific services through dedicated R&D centre (NETRA) • Independently developing patented technology • Launched notable digital platforms for business approvals and Suppliers/Labours bill payments • CPM & BI tool for data monitoring and reporting		
16.	**Waste Management** (I, E)	• Waste (Hazardous & Non-hazardous) generated are properly handled and disposed with approved agencies • Specific guidelines and systems instituted for handling domestic waste and bio-medical waste • The scrap and recyclable waste is managed through auction on MSTC e-platform • Other solid waste is managed according to our waste policy & applicable govt. regulations		

Sr. No.	Topics with Boundary	Key Actions	SDGs Linkage	Capital Linkage
17.	**Biodiversity** (E)	• Implementation of Dedicated Biodiversity Conservation Policy • 36+ Million trees have been planted • Currently implementing 14 Wildlife and habitat restoration projects	13, 14, 15	Natural
18.	**Profitability** (I)	• Strong Financial Management system in place to ensure consistent increase in profit over the years • Business Diversification into coal mining, EV ecosystem, consultancy to ensure future cashflow	8, 9	Financial
19.	**Labour practice** (I, E)	• Uphold the best Global and Indian labour standards pertaining to wage determination, allocation of tasks, shifts & working hours, provision of training, incentive & reward schemes and occupational health & safety standards • Dedicated Human Rights Policy in place to promote and safeguard all kind of organizational rights • Operating bipartite collective bargaining forum (NTPC Bipartite Council) since 1982 • Implemented CLIMS for online labour payments, skill training and building health Information profile	3, 8, 10, 16	Social
20. & 24.	**Employee development, & Engagement and Employee diversity** (I)	• Continuously reengineering HR systems to strengthen the relationship between business growth and systematic employee development • Continuous engagement activities and training programmes • Systematic job rotation and career development scheme to aid Employees in their horizontal and vertical growth	3, 8	Human
22.	**Sustainable Supply Chain** (E)	• Implementation of sustainable supply chain guidelines • Capacity building programmes for suppliers on Environment Social and Economic fronts to create shared value • Capturing ESC data of suppliers on voluntarily basis	8, 11	Social
23. & 26.	**Land acquisitions & Indigenous peoples' rights** (E)	• Taking measures to improve the Socio-economic status of the Project Affected Families (PAFs) • R&R (Rehabilitation and Resettlement) policy in place in line with 'The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013' (RFCT LARR Act)	11	Social
25	**Plant decommissioning** (I)	• Decommissioning of plants are governed by the norms of Ministry of Power (MoP) • Ensuring safety and security of people and environmental impact during decommissioning	9, 11	Manufacturing

Capitals

Financial | Manufacturing | Intellectual | Human | Natural | Social

Boundary

Internal | External

Risk Management at NTPC

NTPC has been assessing business risks and opportunities to ensure that its business strategy is aligned with the envisaged vision, mission and long term targets. To effectively manage the risks associated with the business, NTPC has taken adequate measures to institutionalize risk management process by implementing a companywide elaborate Enterprise Risk Management (ERM) framework.

As part of the ERM framework, a Functional Director level Sub-committee of the Board, called Risk Management Committee (RMC) has been constituted. RMC has been entrusted with the responsibility to identify and review the risks and formulate strategies and action plans for risk mitigation on short-term as well as long-term basis. The objective of the process is to improve risk awareness and manage the Company's risk exposure. The details about members of Risk Management Committee can be found at page no. 114.

NTPC's risk assessment method is based on a sustainable business model analysing risks in a broader framework and incorporating social and environmental issues with economic considerations. The identified risks are then prioritised and action plans are developed at enterprise level by RMC.

The company endeavours to mitigate these risks in a timely manner. Further, NTPC attempts to leverage risks and convert them into opportunities, thereby enhancing Company's competitive advantage.

The process of risk identification is guided by the Company's objectives, external environment, industry reports, internal stakeholders etc. The risk identification process covers the whole gamut of risks, including strategic, tactical and operational.

Roles and responsibilities of the Risk Management Committee

- Assessment of risks and formulation of action plan and strategies to mitigate them
- Implementation of risk management plan
- Monitoring and review of risk management plan
- Informing the Board about assessed risks and required actions on quarterly basis
- Take up any other matter as directed by the Board from time to time



NTPC Bongaigaon

Risks	NTPC's Initiatives
Operational Risks	
Regulatory and compliance risks	
Revised GoI environmental norms for thermal power plants require substantial investment in power plants to contain SPM, SOx, NOx emissions. Also, stricter water consumption limits and 100% ash utilisation by thermal plants are other risk areas.	NTPC is spearheading the adoption of Flue Gas Desulphurisation at a massive scale for SOx control and combustion modification for NOx control. ESPs have been modified for SPM control. Many new avenues of ash utilisation such as roads and building construction, mine filling and long term off taking agreements have been signed. Various water consumption intiatives have been undertaken.
Succession Planning	
Rapid expansion of the company geographically and its business diversification into other streams has created the need for new business leaders across various verticals. The development of right talent andtheir timely appointment is an important aspect.	NTPC has instituted various systems and interventions in place for the talent mapping and overall development of all the categories of employees. For junior and middle management levels, 10X programme has been set up. For senior management level Harvard Manage Mentor (HMM), Design Thinking program, etc. have been initiated.
Contractual disputes	
With changing legal and regulatory landscape in the country many legal issues are emerging with the growth in the business. As disputes take longer time to settle, there are risks of contracts not being closed in a time bound manner.	Various committees have been formed at Plant, Region and Corporate level for speedy settlement of pending and new contractual cases. A dedicated Arbitration cell has also been formulated to work in close coordination with best legal advisors and industry partnership to clear the cases on priority. Capability enhancement programs for employees to minimize the disputes leading to arbitration have been initiated. Emphasis is being given for closing of contracts after completion of work on time.
Tactical Risks	
Fuel Security	
It has become an area of concern owing to reduction in coal supplies and gradual increase in our fleet size.	NTPC is ensuring fuel security through long-term coal supply agreements. The company has been allocated 7 coal blocks for captive mining. Also, we are increasing use of bio-fuels to proportionally off-set coal requirement. Our strategic plan to increase renewable capacity would reduce our dependence on fossil fuels proportionally.
Commercial and financial risk	
Availability of cost-effective capital is a critical issue. Availability of debt at cheaper rate has become difficult in terms of current level of exposure of the banking sector to stressed asset.	NTPC has diversified the lenders base by reaching out to lenders who have not breached exposure limit and has also done diversification to overseas borrowing, ECBs etc. NTPC has adopted dynamic debt strategy for raising long term debt at optimal cost for meeting its capital requirements.
Market driven energy pricing	
The power sector is slowly shifting from a regulatory regime to a market driven regime. The tariffs of new projects are being explored through competitive bidding. Being an asset heavy business model, shifting from a fixed RoI to market-based earning leads to uncertainties and risks.	NTPC is well poised to perform in this new era of energy sector - with talented pool of workforce, more than four decades of leadership experience, rich industry association and public advocacy mechanisms. NTPC contributes 23% of India's power requirement with 17% of installed capacity. In terms of variable cost, NTPC has been consistently maintaining competitive edge over its peers. NTPC has set a record low tariff of Rs 1.99/kWh in GUVNL Gujarat tender of Solar PV which has set a new benchmark and also reflected the market readiness of NTPC.

Strategic Risks	
Climate Change: Physical and Transition Risks	
Climate change is posing both physical and transition risks to all business entities including NTPC. The risks associated with the increase in sea levels, water stress situations, increased heat waves, erratic rainfall and frequent natural disasters may impact the business. Rising climate change concerns and threats may bring future policy and regulatory risks in terms of carbon tax and cess.	NTPC has an enhanced geographical and technology diversification. NTPC operate across more than 73 locations in India and abroad, inherently reducing our risks to any individual location specific natural catastrophe. As part of our preparedness against such situations, our power plants and infrastructure is designed to withstand cyclones, cooling systems to withstand the increase in water temperatures brought forth by climate change. To de-risk our business from transition risk, we are making substantial progress towards decarbonised energy transition through increase penetration of renewables in our portfolio. We have installed 5 GW of non-fossil based generation capacity till date and strive to achieve 60 GW of same by 2032.
Water Availability	
Water has become a significant risk area due to increasing pressure on the already stressed available water resources. Reducing water availability, its increasing costs and stricter regulatory regime is posing risks to our operations.	Various water conservation initiatives with process improvements and technology adoption have been taken up by NTPC. Some of the key steps are; Optimisation of cycles of concentration (COC) and implementation of ZLD at all stations to reduce fresh water consumption, Adoption of Air Cooled Condenser (ACC) based cooling in projects located in water stressed locations etc. Dry bottom ash system is being adopted at new plants to save water. Dry Ash Evacuation System (DAES) & High Concentration Slurry Discharge (HCSD) technology are also used to minimize use of water in Ash handling.
Business growth and diversification	
With the rising economic growth attributed to rapid urbanisation and increased industry production, the electricity demand is poised to keep growing. Power generating units needs to ramp up their production to meet the increasing demand. Also, to ensure the profitability and future cash flows, power companies need to diversify their business and increase global footprint.	NTPC group has added commercial capacity of 3,824 MW in FY-21 (commercial capacity as on 31.03.21 is 64,490 MW as against 61,126 MW as on 31.03.20). As a part of its growth plan, NTPC has been looking for opportunities for acquisition of power plants including efficient, low carbon based thermal and renewable plants which makes business prudence for the Company. The Company has already diversified into renewables, consultancy services, EV ecosystem and waste to energy management. In this regard, NTPC has bagged the tender for supply of Electric Buses to BMTC Bengaluru and Andaman. Business opportunities of fuel cell electric vehicles (FCEV) in Delhi and Leh for inter and intra city travel are being explored. To develop & operate integrated waste management & energy generation facility, NTPC has incorporated a JV Company with East Delhi Municipal Corporation (EDMC). In addition, a tri-partite MoU amongst NTPC, IOCL and South Delhi Municipal Corporation (SDMC) for developing Waste to Energy (WtE) facility at Okhla Landfill site has also been signed.



NTPC Kayamkulam

Opportunities	NTPC's Initiatives
Climate Change	
Increased renewable penetration into grid owing to rising climate change concerns has opened many avenues for energy sector players. Influx of more variable renewable energy sources in the grid would require greater support of flexible operation of coal stations, energy storage and ancillary services.	In alignment with climate change objective of GoI, NTPC has made an aggressive growth plan in RE space, with an envisaged target of achieving 60 GW by 2032. NTPC has also initiated development of its internal systems and practices to deal with issues of flexible operation enabling its coal plants to operate at minimum technical PLF. Battery storage, green hydrogen and Methanol are other areas, where NTPC is pursuing to venture into. Integrated waste management & energy generation facilities are being developed in partnership with municipal bodies. NTPC is supporting Ministry of Power in formulating a plan for the requirement of Ancillary services which will be used for grid security and grid balancing in view of the large-scale integration of Renewable Energy in future.
Digitalisation	
The dynamic business landscape is being driven through AI and Digitalisation. In this highly competitive era, digitalisation is enabling faster decision making, reducing costs through automation and rendering long term competitive advantage.	NTPC is taking all measures for faster adoption of digitalisation across functions and company verticals. Key digitalisation initiatives by NTPC • PRADIP for paperless business processes, and suppliers bill payment. • CLIMS for online labour payments. • Water Dashboard which provides real-time snapshot of water consumption across NTPC plants. • 'RE Assets Monitoring System', a centralised system for real-time monitoring of all RE generating Assets (Solar & Wind) of NTPC. • Project being undertaken for adoption of Robotic Process Automation (RPA), Artificial Intelligence (AI) and Machines Learning (ML) in business processes. • SIMS (Strategic Information Management System), an analytics platform solely for the Top Management. With respect to cyber threats, NTPC is playing major role in Ministry of Power initiative for drafting a 'Regulation on Cyber Security in Power Sector'.
Increased Geo-strategic presence	
Electricity demand is rising in neighbouring countries and also in few parts of world having low energy consumption per capita. Lots of opportunities in terms of project construction, consultancy etc. are coming on NTPC's way.	NTPC, by virtue of its experience in project management and O&M, has ventured into overseas opportunities such as; • Joint venture with Bangladesh Power Development Board (BPDB) for developing of 2X660MW plant at Rampal Bangladesh. • Project management consultancy contract for development of 500 MW solar park in the Republic of Mali. • Development of 285 MW solar park in Togo. • A 50:50 joint venture with Ceylon Electricity Board to undertake construction, establishment and O&M of an electricity generating station at Trincomalee in Sri Lanka. • NTPC Vidyut Vyapar Nigam Limited (NVVN) has signed Agreement with Nepal Electricity Authority (NEA) for sale/ purchase of electricity. Further, NTPC plans to anchor 10,000 MW of solar parks in ISA member countries in the next two years. NTPC is also exploring business opportunities for development of power projects and other related services in Myanmar, Nepal, Mozambique and Malawi.

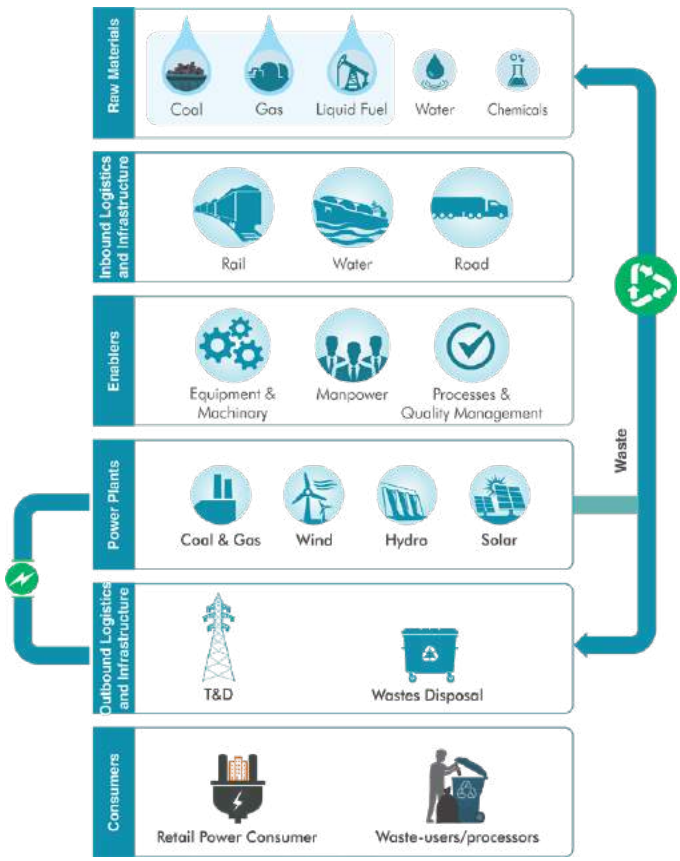


EV Charging Facility at NTPC NETRA

Our value chain

Our business model consists of procuring raw materials and services, building physical assets for the production of electricity and subsequent evacuation of power through our intermediate consumer to the end-user. The wastes generated from our processes are either recycled into useful materials, used as raw material for another industry or are disposed / processed as per regulations. We are in the process of forward and backward integration of our core business of power generation through development of coal mines for captive use, and acquisition of companies involved in power generation business. No disruptive changes took place in our supply chain during the reporting year. Incremental changes in our overall business processes are reported in the relevant sections. We are continuously evolving our business model to broaden value creation for our various stakeholders. Integrated planning and execution is at the core of this evolution from business model to a 'value creation' model. We base our 'value creation' model on six 'capitals' which serve as a stock for our inputs.

For each of the inputs withdrawn, we add elements of value for our stakeholders through our business processes & functions in tandem with the external environment and our mission, vision and core values. This is enabled through strategy formulation, risk identification, resource allocation and periodic performance monitoring.



FINANCIAL CAPITAL

This capital refers to the pool of funds available for use by us for asset creation, production processes, and conducting our related operations. This also covers funds generated through operations. Financial Capital covers KPIs like Turnover, Revenue, Profit After Tax amongst others.

MANUFACTURING CAPITAL

This capital is an aggregation of all our physical assets including our power generation stations, coal mines, equipments & machineries, raw materials and logistical infrastructure.

INTELLECTUAL CAPITAL

This capital represents our intangible knowledge base manifested through our R&D efforts (including our processes, patents, trademarks, copyrights etc), consultancy services, our learning centers and our process innovation efforts.

HUMAN CAPITAL

This capital refers to our human resources and their compensation, benefits, capabilities, diversity, career progression, safety and well- being.

SOCIAL CAPITAL

This covers our efforts towards establishing, nurturing and maintaining our relationship with our stakeholders such as vendors & suppliers, customers and communities etc.

NATURAL CAPITAL

This refers to our interactions with the nature and environmental resources during our operations including management of water, energy and wastes; and the impact of our operations on water, air, soil and biodiversity.

Our Value Creation Model

Our contribution towards the nation is being pursued in response to continuing economic growth in India combined with increasing decarbonisation efforts, speedier diffusion of digitization and decentralization. NTPC's integrated framework is designed to steer action in pursuit of its core values, vision and mission in the face of changing external and internal operating environment. For this, NTPC has adopted the six capitals approach proposed as part of the International Integrated Reporting Council's <IR> Framework. This integrated framework is designed to determine and pursue action by each function and business to contribute to our transformation and value creation and thereby represent our commitment towards a sustainable future. NTPC conducts continuous monitoring and analysis of its external environment to identify threats and opportunities that may pose any risk to the organization, its strategy and its business model. There are several steps being taken to mitigate or manage key risks or to create value from key opportunities, including identification of the associated strategic objectives, strategies, policies, targets and KPI. Based on the regular review of our business activities and outcome with a focus on the organization's outlook we strategize our approach in terms of MOU with Government, internal management agenda to mitigate or manage our risks and maximize our opportunities.



NTPC Rojmal (Wind)

Value Creation Model

Capitals	Inputs	Activities
	Components of value creation	Value adding elements
 Financial	• Net worth of ₹ 1,25,119 Cr. • Debt of ₹ 1,94,243 Cr. • Capital Expenditure ₹ 33,982 Cr.	• 12 Subsidiaries & 16 Joint Ventures • Acquisition of RGPPL as Subsidiary from current JV structure • Business lines - Consultancy Services, Power Trading, Distribution, Mining, RE and EV
 Manufacturing	• 32 coal-based, 11 gas-based, 15 solar, 11 Hydro, 3 wind based power plants • 3 operating captive coal mines • 65,810 MW of installed capacity	• Power generation • R&M of existing generation assets • Acquisition of assets having good potential • Forward/ backward integration in energy value chain • Taking efforts to increase geo-strategic reach
 Intellectual	• Spent ₹185.77 Cr. towards NETRA (more than 1% PAT) • 46 R&D personnel at NETRA • 10 NABL & ISO 17025 accredited Labs • Apex learning and development (L&D) centre, PMI • Dedicated consultancy wing • Digitalization strategy	• MoUs with National and International Institutions • R&D in Advanced Scientific Services, Availability & Reliability, Efficiency Improvement, Renewables, Climate Change, Water, Ash Utilization etc. • Training Programs of technology, business acumen and leadership • Consultancy and turnkey project contracts for Engineering, Project Management, R&M, O&M and due diligence of stressed assets • Projects launched to increase digitalization across functions and improved data security
 Human	• 21,941 permanent employees • 97,442 Contractual employees • ₹ 5,953.93 Cr. spent on Employee Benefits • 6 Regional Learning Institutes & PMI dedicated to train power professionals • ₹ 18 Cr. spent on Training & development • 1.29 Cr. man-hours of safety training	• Training Need Analysis, Employee engagement & Training, Performance appraisals, rewards and recognition • Collaboration with world class Universities • Focus on employee satisfaction, physical and mental well being • Hazard Identification and Risk Analysis • Strategic Leadership Development Program
 Natural	• 195.39 MMT of coal consumption • 24.6 Kilo MT of Biomass consumption • 9102 lakh kL of freshwater consumption • ISO 14001 certification in 26 stations	• Energy Efficiency Management System • R&D on Water optimisation, Ash Utilization, emission control • Collaboration with state governments, Forest Department for green cover and biodiversity conservation • Implementation of FGD for SOx, combustion modification for NOx, ESP modifications for SPM Control
 Social	• 16,373 no. of suppliers across diff SBUs, 1060 new vendors enlisted • 20 vendor development programmes for MSEs • 51 Discoms / beneficiaries purchasing bulk power • ₹ 461.96 Cr. spent on group CSR activities • ₹ 1782 Cr. of cumulative expenditure on R&R Community Development (CD) of 17+ projects	• Mitigating supply chain risks through Sustainable Supply Chain integration • Indigenous focus : Preferential procurement mechanism for local suppliers • Extensive Customer engagement and feedback mechanism • CSR focus: Education, Water, Health & Sanitation • Community Need Assessment & Social Impact Evaluation • Resettlement & Rehabilitation (R&R): Community Development initiatives

Capitals	Outputs	Outcomes
	Key impacts	Impact on stakeholders
Financial	• ₹ 1,15,546.83 Cr. revenue • ₹ 14,969 Cr. PAT • ₹ 103,318 Cr. of Market Capitalisation • 11.94% of Foreign shareholding • ₹ 14.87 of earnings per share	• Sustainable cash flows and Strong earning per share • Excellent MOU rating by Government of India for the FY 2020-21 • Best industry credit ratings e.g. CRISIL AAA/ Stable, ICRA AAA/Stable, IND AAA/Stable and CARE AAA/ Stable • Cash contribution of ₹ 6,678.82 Cr. to Government of India's exchequer through dividend and income tax
Manufacturing	• 314.07 Billion Units of Power Generation • 11 MMT of coal production from the captive mines • 66% PLF at coal stations* • 3824 MW of commercial capacity addition • 142 EV charging stations across India	• De-linking business risks with Diversified generation Portfolio • Enhanced fuel security with negligible reliance on imported coal, reduced costs • 7.7% of non-fossil generation capacity • Strong technical capability able to operate thermal stations as balancing load to support grid • Presence in 2 foreign countries • Development of around 1.8 GW of global solar projects
Intellectual	• 22 patents granted, 33 patents under process • 9 copyrights granted, 2 under process • e-library of 25,000 e-books, 1,000,000 articles, reports and journals • ₹ 266.66 Cr. business done by Consultancy • ₹ 241 Cr. of expenditure on IT	• Increased availability and improved efficiency of generating units • Improved Water Conservation and better ash utilisation by R&D efforts • State-of-the-art physical and digital infrastructure to impart learning • Increasing share of revenue from consultancy and foreign presence • Increased digitalization saving tons of paper, enabling faster decision making, improved efficiency, transparency and security
Human	• 0.33 Man-MW ratio • 14.31 MU generation per employee • 0.37% attrition rate • 17 hrs of Learning opportunities per employee per year • Reduction in safety hazards and incidents	• Improved productivity of employees • Improved employee retention and lowest attrition rate • Direct and indirect employment generated • Among best workplaces in India 2020 by the great place to work Institute • Healthier and safer working environment
Natural	• 3.4% (Y-O-Y) reduction in specific CO_2 emission • 79.37% Ash utilised • 2.90 l/kWh of specific water consumption • 1643.30 TJ of energy saved • 36+ million trees/sapling planted since inception • 121.82 lakh kL of rain water harvested	• Ensuring resource efficiency and circular economy • Less emission through energy efficiency • ZLD at 16 stations • Improved fresh water availability through water usage optimization and sustainable measures • Mitigating climate change impacts • Reduction in specific quantity of majority of air emissions including mercury and ODS
Social	• ₹ 34,378 Cr. worth of order placed from indigenous suppliers • 51% of total procurement from MSEs • 9.7 customer satisfaction index • 1 Million lives touched • 450+ villages benefitted • 400+ schools benefitted	• Strong & Sustainable Supply chain • Effective Stakeholder engagement • Increased number of satisfied customers • More than 100% realization of current bills • Enhanced inclusive growth and sustainable livelihoods through increased community engagement • Reduction in socio-economic vulnerability of communities

*Standalone basis

FINANCIAL CAPITAL



Major Highlights of FY 2020-21

- ₹ 115546.83 Cr. of revenues (consolidated) generated
- ₹ 22,351.74 Cr. worth of Economic value retained
- ₹ 473.56 Cr. of community investments including donations
- 13 % revenue from Zero-carbon emission based businesses

> Continuing with our growth momentum, we have been allocating significant proportion of our financial resources to Capex and also maintaining the diversity of deployment. Our focus on high capital productivity is unwavering and for that efficient operation and maintenance through intense deployment of digitalization, has been an important element of our strategy

Material Topic(s)
[14] [18] [21]

NVGSEE Principles
[1] [8]





Electric Bus deployed by NTPC

Related Sustainability Topics

- Profitability
- Sustaining Market Share
- Climate Change
- Economic value generated

Risks mapping:

- Revenue generation from carbon free sources
- Delay in execution of projects
- New business avenues
- Shift from regulatory to market driven business models

Relevant GRI Indicators:

- 201-1
- 201-2
- 201-3
- 201-4
- 201-5
- 201-6
- 201-7

Reference to Other Frameworks:

- IPIECA: SE11, SE12, SE13, E2, E1
- UNGC Principle: 10
- TCFD
- WBCSD



NTPC is committed to the highest standards of Corporate governance along with increasing growth and performance excellence. NTPC's strong financial footing and the robust Corporate image is attributed to the strong ethical and fair Corporate governance system and policies in place.

FY 2020-21 has been yet another year of achievements for us recording with a net profit (PAT) of ₹ 14969.4 Cr. and ₹ 13,769.52 Cr. on consolidated and standalone basis respectively. A robust payment security mechanism led to realization of more than 100 % of the billed amount crossing rupees one lakh Cr. during the year which is the highest ever realisation from customers.

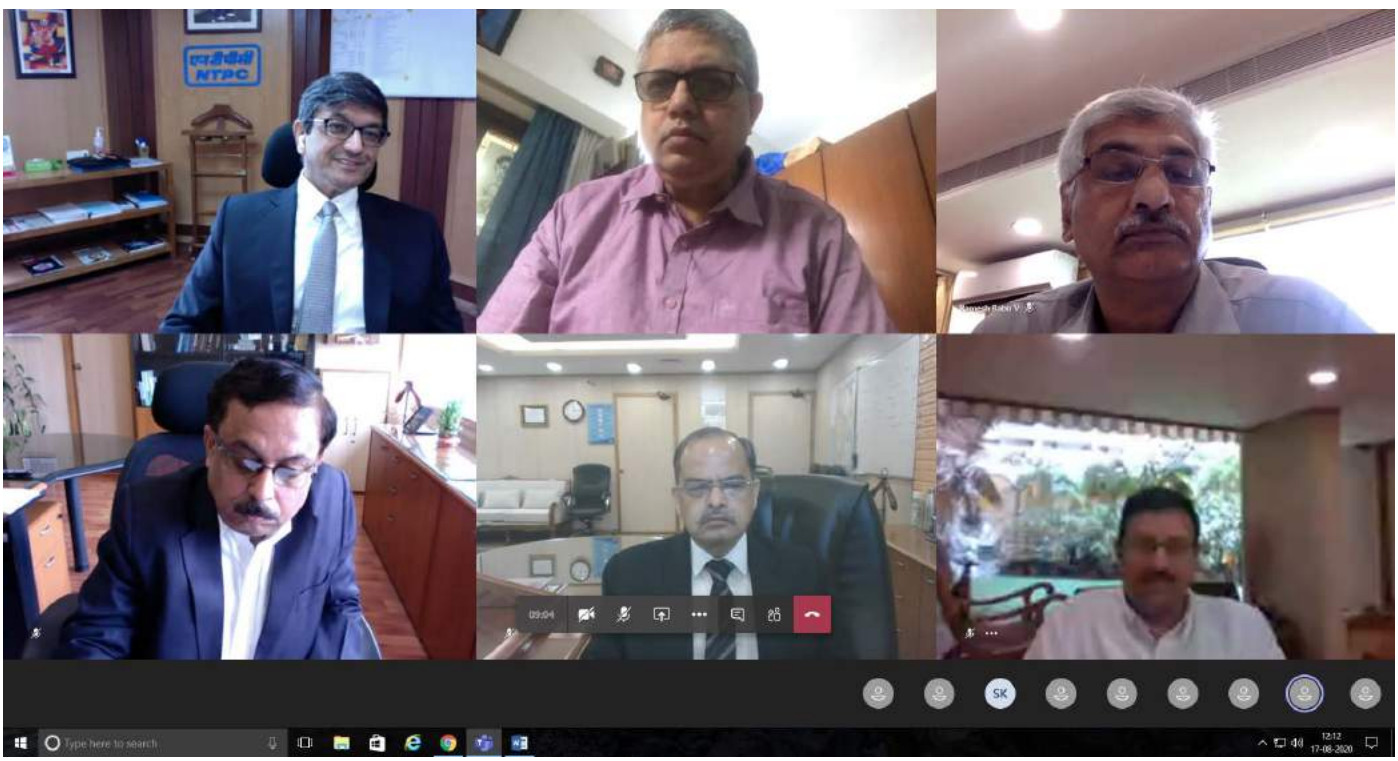
NTPC has a strong financial systems in place. We believe in prudent management of our financial resources and strive to reduce the cost of capital. Our weighted average cost of borrowing has reduced to 6.24% in current year from 6.81% of the previous year. NTPC enjoys highest credit - rating assigned by CRISIL, ICRA and CARE. The foreign rating by Fitch, S&P and Moody's are at par with sovereign ratings. We are exploring domestic as well as international borrowing Options. In line with our business diversification Philosophy, we are envisaging to provide complete e-mobility solutions. Our Consultancy Wing is executing assignments for various clients and has received orders of ₹ 266.66 Cr.. NTPC is investing both in backward and forward integration across energy value chain.

While ensuring strong financial growth we are also committed to inclusive growth. An amount of ₹ 418.87 Cr. (on standalone basis) was spent towards CSR initiatives, achieving a CSR spend of 3 %, more than the prescribed 2% limit. For group CSR projects (consolidated basis) expenditure of ₹ 461.96 Cr. was incurred. Along with enriching the lives of people under CSR, we also undertake many activities for ensuring environment sustainability. Major activities carried out includes massive plantation of trees and its maintenance, installation of rooftop Solar PV around power stations on public utilities buildings and on schools, vermicomposting/ Bio-Methanation plant/ Paper re-cycling machines. An expenditure of ₹ 33.41 Cr. was incurred on these SD projects during FY 2020-21. Around 15% of NTPC's project cost comprised of environment pollution control system.

Sustainability at NTPC is driven by two motives – Firstly, to make fundamental changes in the way we operate our businesses to transform ourselves as the most sustainable power producer and secondly to become more transparent in timely disclosure of our social, environmental and economic performances. To achieve these objectives, we have identified Decarbonization, Water & Biodiversity, Circular Economy, Health & Safety, Sustainable Supply chain and Business Ethics & strong finance as high priority strategic areas and strategizing on them to ensure our business sustainability. We are developing short-term and long-term measurable goals and objectives pertaining to these areas which is also aligned to our Corporate Plan 2032.

Direct Economic Value Generated and Distributed

NTPC group's extraordinary economic performance during the FY 2020-21 has resulted in a direct economic value generated of ₹ 1,15,482.64 Cr.



NTPC Board members virtually attending 16th Analysts & Investors Meet

S.No.	Particluars	FY 2019-20	FY 2020-21
A	**Direct Economic Value Generated**	(₹ Cr.)	(₹ Cr.)
1	Revenue*	1,11,888.5	1,15,482.6
	Sum Total (A)	**1,11,888.5**	**1,15,482.6**
B	**Direct Economic Value Distributed**		
2	Operating cost	71,203.04	70,099.12
3	Employee wages and benefit	5,830.48	5,953.93
4	Payment to providers of capital	11,250.22	15,002.56
5	Payment to government	7,324.02	1,601.73
6	Community investment	349.12	473.56
7	**Sum Total (B)**	**95,956.88**	**93,130.90**
A-B	Economic Value Retained	15,931.64	22,351.74

*Except provisions and certain items

Policy and practices adopted for Suppliers and Local Sourcing

Under the Procurement and Works Policy of NTPC, transparent tendering procedures are adopted for all procurements. In order to encourage Indian suppliers, provisions regarding price preference and deemed export benefits (Customs & Excise Duty benefits) are stipulated in the bidding documents as per the extant policy of Government of India. The mandatory provision in respect of labour, welfare, safety, etc. are being incorporated in the bidding documents for supply cum erection packages, invited on international competitive bidding and domestic competitive bidding basis.

There are economic opportunities for the local suppliers arising out of the need for goods and services by NTPC projects. Many indirect benefits are available to project affected families as additional facilities, over and above the stipulated entitlements as per government policies.

The company has reported total income of ₹ 1,15,546.83 Cr.s during FY 2020-21 as compared to ₹ 112372.58 Cr. during the FY 2019-20. The company's Board also recommended a final dividend of ₹ 3.15 per share for the FY 2020-21. This is in addition to Interim dividend of ₹ 3.00. The Total Dividend for the FY 2020-21 is ₹ 6.15 per share.

Financial Assistance from Government

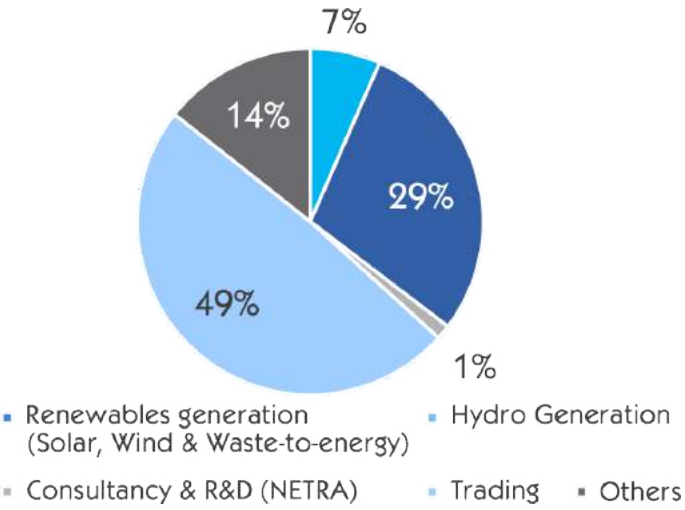
NTPC is running on self-sustained basis and is giving regular dividend to the Government of India on its equity. No capital has been invested by the Government of India in NTPC since the year Financial Year 1999-2000. The Company did not receive any direct government benefit by way of subsidies, grants or royalties.

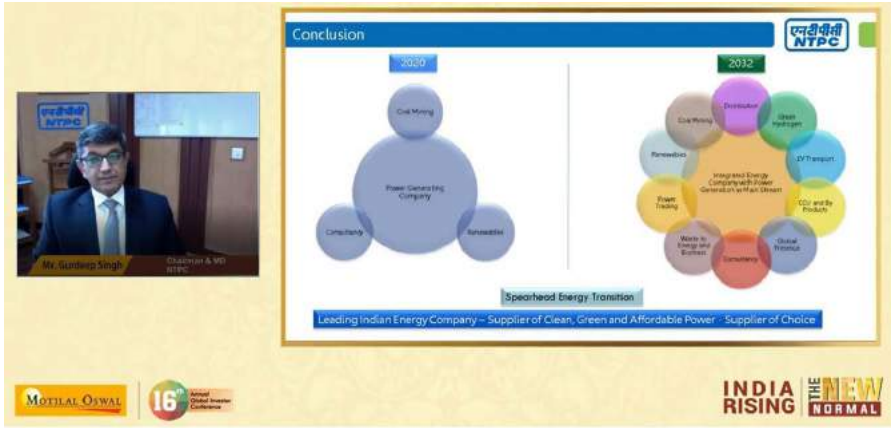
Financial implications due to climate change

Climate change concerns have been the key drivers for the new stringent norms and the aggressive push for renewables. As an environmentally responsible company, NTPC has not only initiated actions to mitigate climate change risks but also have taken a lead in converting these into opportunities.

In FY 2020-21, the NTPC group generated 13% (₹14,746.84 Cr.) of revenue from non- fossil based business. The break-up among various sources has been shown below.

Breakup of revenue from non-fossil sources





CMD, NTPC speaking at Annual Global Investor Conference through virtual mode



MANUFACTURING CAPITAL

Major Highlights of FY 2020-21

- Consistently maintained 12% higher PLF compared to the National average
- 25% y-o-y increase in Non-Fossil Generation
- 3824 MW of generation feet added to commercial capacity
- 28,500 MT (Cumulative) of biomass pellets co-fired at NTPC plants

Material Topic(s)

[3] [4] [8] [9] [15] [21]

'Our commitment towards performance excellence drives efforts towards our triple objectives of producing electricity with Low Cost, Low Emission and Highest Safety. Our efforts for innovation in reducing costs, enhancing operational flexibility and in addressing changing customer needs are driven by our organizational priorities.'



NTPC Bhadla (Solar)

Related Sustainability Topics

- Operational Efficiency and Plant Reliability
- Business Diversification & New technologies
- Bio-mass Use
- Ash Management

Risks mapping:

- Acquisition of land for new projects
- Sustaining efficient plant operations
- Natural / Manmade disasters
- Fuel Security

Relevant GRI Indicators:

- 102-4
- 102-5
- 203-1
- EU1
- EU2
- EU3
- EU4
- EU10
- EU11
- EU12
- EU18
- EU29
- EU30
- G4-DMA



Reference to Other Frameworks:

- IPIECA: EII

Power Generation

Power generation is our core business activity, and we look to expand our manufacturing assets with a view to creating sustained value for our shareholders. We have shown all-round performance and strengthened our fundamentals further during the reporting period. Along with our JVs and subsidiaries, we have, at present, 73 power stations located in various states of India.

In FY 2020-21, NTPC has recorded the commercial capacity addition of 3824 MW. This includes following units:

S.N	Station & Unit no.	Capacity (MW)	COD*
1	Khargone # 2	660	4-Apr-20
2	Lara # 2	800	7-Nov-20
3	Gadarwara#2	800	1-Mar-21
4	Auraiya Solar	7	8-Nov-20
5	Auraiya Solar	8	4-Dec-20
6	Auraiya Solar	5	20-Feb-21
7	Bilhaur Solar	140	18-Jan-21
8	Bilhaur Solar	70	28-Mar-21
	Total NTPC	**2490**	
1	Meja #2	660	31-Jan-21
2	Kameng HEP#1	150	17-Jun-20
3	Kameng HEP#2	150	1-Jul-20
4	Kameng HEP#3	150	22-Jan-21
5	Kameng HEP#4	150	12-Feb-21
6	Dhukwan SHP	24	5-May-20
7	Kasaragod Solar	50	31-Dec-20
	TOATAL JVs	**1334**	
	Total NTPC GROUP	**3824**	

*Commercial Operational Declaration

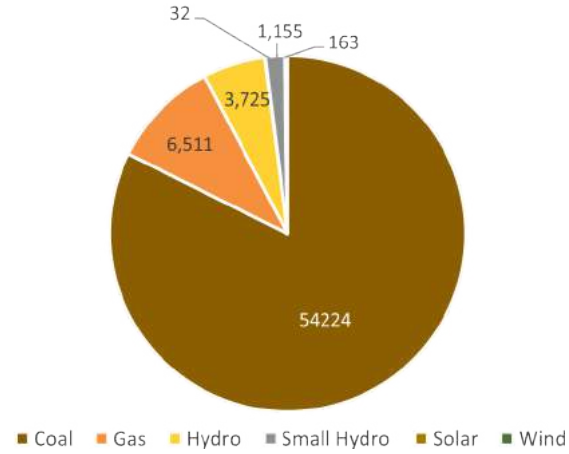
After running for 54 years, operations of 460 MW Talcher Thermal Power Station have been discontinued w.e.f. 01 April 2021.

Trend of Capacity & Generation**

Type	FY 2019-20		FY 2020-21	
	Capacity (MW)	Gross Gen (BU)	Capacity (MW)	Gross Gen (BU)
Coal	51,104	276.019	54224	289.59
Gas/ Liquid	6,511	9.237	6511	11.257
Hydro	3425	3.45	3725	11.37
Renewable Energy	1070	1.49	1350	1.86
Total	**62,110**	**290.19**	**65810**	**314.07**

**For more details on capacity, please refer NTPC's website www.ntpc.co.in

NTPC Group Installed Capacity Break-up



With this, our installed capacity (including subsidiaries and Joint Ventures) touched 65,810 MW as on 31st March 2021, which is around 17 % of the total installed capacity of India.

The gross generation of NTPC Group for FY 2020-21 was 314.07 Billion units as against 290.19 Billion units during the previous year.

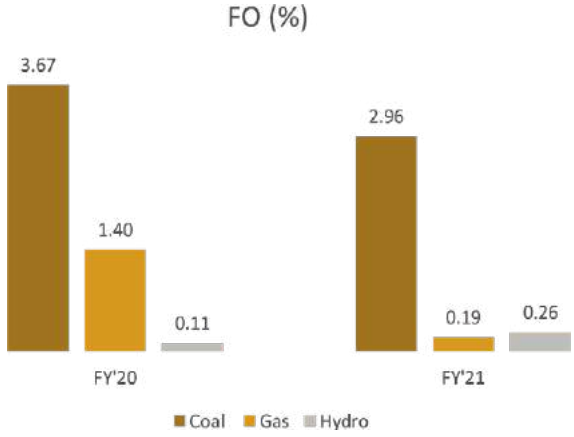
On Standalone basis, the gross generation of NTPC for FY 2020-21 was 270.91 Billion units as against 259.62 Billion units in the previous year. Coal stations with an availability factor of 91.43% achieved a Plant Load Factor (PLF) of 66.00% as against National Average of 54.56%

Our total power generated including group companies was around 23 % of the total electricity generated in the country during FY 2020-21.

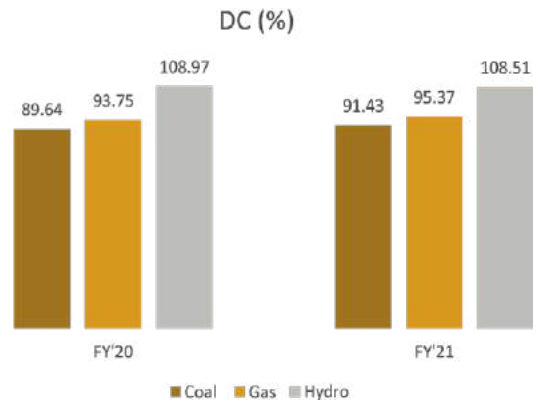
Performance of NTPC Stations (Standalone Basis)

Further, forced outages for all three coal, gas and hydro generation sources have reduced over the previous year due to better maintenance and increased digitalisation of infrastructure. The Declared Capacity (DC) of coal, gas and hydro stations has improved over previous year.

Forced Outage (%)



Declared Capacity (%)



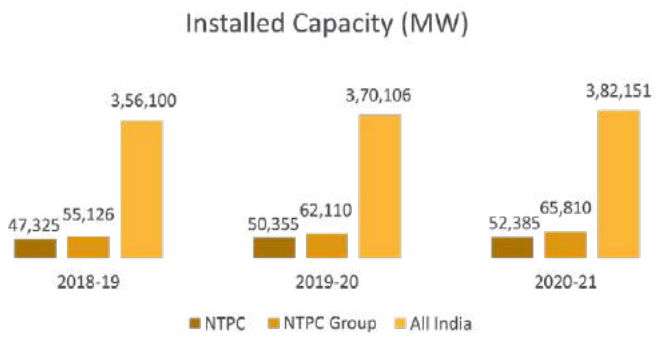
For FY 2020-21, 4 coal stations of NTPC were among the top 10 performing stations in the country in terms of PLF and four of our coal-based stations achieved PLF of more than 88% as listed below

PLF greater than 85%

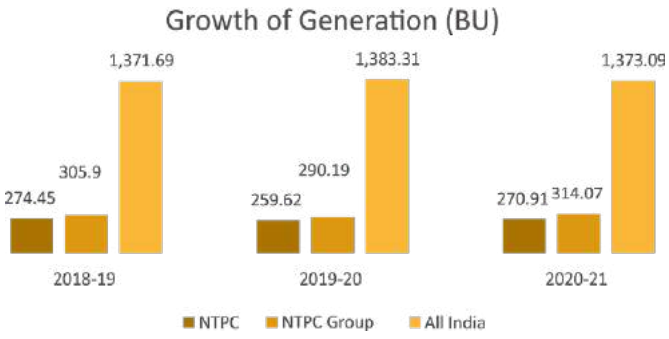
Station/ Year	FY 2020-21
Rihand	89.04%
Korba	93.66%,
Sipat	90.12%
Vindhyachal	88.73%

Stellar Performance in FY 2020-21

1. **Growth in installed capacity vs India (3 years)**



2. **Growth in generation (BU) vs India (3 years)**





Control Room at NTPC Bongaigaon

Renewable Energy

Renewable energy is one of our central focus areas. With 1350 MW of installed renewable capacity, NTPC has ventured into large-scale deployment of RE assets and is looking forward to achieve 60 GW of renewable power capacity by 2032. We have hived off our RE business and have incorporated a new company "NTPC Renewable Energy Limited" (NREL) to bring focus and speed in timely implementation of renewable projects.

We are working on tenders for more than 4 GW, taking the total renewable capacity under construction to 2884 MW. During the reporting year, our non-fossil electricity generation (including solar, hydro, wind & small hydropower) was 13.22 BU, which is an increase of 168% over previous year. Along with its own projects, NTPC has been facilitating solar projects in Developer Mode and acts as an intermediary procurer where it procures power from the Developers and sells to DISCOMs with a trading margin. Break-up of NTPC solar projects as on date under various stages has been provided below:

Description	NTPC Group EPC Mode's Own Projects (8382 MW)			Developer Mode Projects (6743 MW)
	NTPC	NTPC REL	THDC & NEEPCO	NTPC
Commissioned	1158	--	192	4462
Under Implementation	2214	670	--	1111
Under Tendering	3998	150	--	1170
Total	7370	820	192	6743

To be in step with ambitious targets, we are attempting all avenues for renewable capacity addition to look beyond conventional large-scale solar and wind parks. We have signed a Memorandum of Understanding (MoU) with Oil and Natural Gas Corporation Limited (ONGC) to set up a Joint Venture Company for setting up of offshore wind and other Renewable Energy Projects in India and overseas. We have formed another JV with National Investment and Infrastructure Fund (NIIF) for accelerating our efforts for the acquisition of Renewable Energy assets.

We are utilizing roofs of power plant buildings for solar power generation and integrating into the existing plant infrastructure. We are also going ahead with floating solar at reservoirs of our projects which is a step towards saving of land and water conservation by reducing water surface evaporation. Till date 9.215 MW of such solar projects have been developed. Besides this, NVVN a subsidiary of the NTPC group is under various stages of implementation of ground mounted/roof-top solar projects along with charging infrastructure development at various airports and public buildings.

We have associated with International Solar Alliance (ISA) as its corporate partner. By partnering with ISA, we are helping other nations such as Togo, Mali, Malawi, Cuba and Niger through development of around 1.8 GW solar projects as tabulated below.

Republic of Mali	500 MW
Republic of Malawi	100 MW
Cuba	900 MW
Republic of Togo	285 MW
Niger	50 MW

In coming years, we intend to help develop around 10000 MW Solar portfolio under the aegis of ISA in ISA member countries. We are also working on providing community centred solarisation solutions to 47 SIDS and LDC member countries of ISA. These solutions, which are environment friendly and sustainable, are also helping countries meet various SDG goals. Some worth mentioning solutions being developed are Solar pumps for Irrigation and potable water, solar powered cold storages and Primary Health Centres.



NTPC Solar Trees at Leh

STATION & REGION WISE NTPC GROSS CAPACITY & GENERATION 2020-21

Stations	Fuel Type	Gross Capacity (MW)	Gross Generation (MU)
NR			
Singrauli	Coal	2000	14960
Rihand	Coal	3000	23399
Unchahar	Coal	1550	7157
Tanda	Coal	1760	5816
Vindhyachal	Coal	4760	36998
Auraiya Gas	Gas	663	687
Unchahar	Solar	10	14.20
Singrauli	Solar	15	21.18
Auraiya	Solar	20	7.52
Bilhaur	Solar	210	61.93
Singrauli Small Hydro	Water	8	19.32
Total NR		**13996**	**89140**
DBF			
Dadri Coal	Coal	1820	3958
Dadri	Gas	830	1783
Faridabad	Gas	432	902
Dadri	Solar	5	6.65
Faridabad	Solar	5	6.75
Total DBF		**3091**	**6656**
WR-1			
Mouda Station	Coal	2320	6698
Solapur	Coal	1320	3586
Anta	Gas	419	364
Kawas	Gas	656	1029
Jhanor Gandhar	Gas	657	829
Bhadla	Solar	260	440.42
Rojmal	Wind	50	83.9
WR-1 Total		**5683**	**13031**

Stations	Fuel Type	Gross Capacity (MW)	Gross Generation (MU)
WR-2			
Korba	Coal	2600	21333
Sipat	Coal	2980	23525
Gadarwara	Coal	1600	4674
Lara	Coal	1600	6430
Khargone	Coal	1320	4340
Rajgarh	Solar	50	78.57
Mandsaur	Solar	250	401.62
Total WR -2		**10400**	**60782**
ER-1			
Farakka	Coal	2100	11929
Kahalgaon	Coal	2340	13231
Barh	Coal	1320	7833
Barauni	Coal	470	1402
Total ER-1		**6230**	**34395**
ER-2			
Talcher Kaniha	Coal	3000	21897
Talcher Thermal	Coal	460	3405
Bongaigaon	Coal	750	2977
Darlipali	Coal	800	4782
Talcher Solar	Solar	10	13.81
Total ER 2		**4560**	**33076**
SR			
Ramagundam	Coal	2600	16712
Simhadri Stage	Coal	2000	8680
Kudgi	Coal	2400	4711
RGCCPP	Gas	360	101
Ramagundam Solar	Solar	10	14.14
Andaman solar	Solar	5	5.27
Ananthpuram solar	Solar	250	381.54
SR Total		**7625**	**30605**
HYDRO REGION			
Koldam	Water	800	3221
NTPC Total		**52385**	**270906**

Generating Power & Smiles 24x7 for the Nation

Stations	Fuel Type	Gross Capacity (MW)	Gross Generation (MU)
JV's & Subsidiaries			
NSPCL Durgapur	Coal	120	863
NSPCL Rourkela	Coal	120	1040
NSPCL Bhilai PP II	Coal	74	407
NSPCL Bhilai PP III	Coal	500	3210
KBUNL Kanti	Coal	610	2469
APCPL Jhajjar	Coal	1500	3655
NTECL Vallur	Coal	1500	4369
BRBCL Nabinagar	Coal	750	4264
NPGCL Nabinagar	Coal	1320	4735
MUNPL Meja	Coal	1320	4146
RGPPL Ratnagiri	Gas	1967	2574
Total		9781	31732
NEEPCO			
Assam GBP	Gas	291	1570
Agartala GBP	Gas	135	880
Tripura GBP	Gas	101	533
Ranganadi HEP	Hydro	405	1399
Doyang HEP	Hydro	75	204
Pare HEP	Hydro	110	522
Turial HEP	Hydro	60	159
Kopili HEP	Hydro	200	0
Kopili Stage-II	Hydro	25	0
Khandong	Hydro	50	68
Kameng HEP	Hydro	600	1530
Solar TGBPP	Solar	5	5
Total (NEEPCO)		2057	6870
THDC			
Tehri HEP	Hydro	1000	3042
Koteshwar HEP	Hydro	400	1221
Dhukwan HEP	Hydro	24	72
Dewbhumi Wind Plant	Wind	63	136
Patan Wind Plant	Wind	50	76
Kasargod Solar	Solar	50	17
Total (THDC)		1587	4565
Total (NTPC JV & Sub)		13425	43167

As on 31.03.21, various projects of NTPC having an aggregate capacity of 18,059 MW, including 8,354 MW being executed by Joint Venture and Subsidiary companies are under implementation at 35 locations in India and abroad. Total capacity under construction comprises of 12,850 MW of coal, 2255 MW of Hydro and 2954 MW of Renewable Projects.

We are working towards broadening of our generation mix base to ensure long-term competitiveness, mitigation of fuel risks and promotion of sustainable power development.

We supply electricity from our stations located across India to various bulk customers located throughout the country. Our customers are mainly State Electricity Utilities like State Electricity Boards, State Electricity Distribution Companies, SEB Holding Companies, State Power Departments - who account for around 90% of our electricity sales. Besides NTPC also sells electricity to private distribution companies in Delhi and some bulk consumers like Railways.

Coal Mining

NTPC was allocated ten coal blocks, namely, Pakri-Barwadih, Chatti-Bariatu & Chatti-Bariatu (South), Kerandari, Dulanga, Talaipalli, Banai, Bhalumuda, Mandakini-B, Badam and Banhardih by Government of India. Banhardih coal block was allocated to M/s. Patratu Vidyut Utapadan Nigam Ltd. (PVUNL), a JV company incorporated between NTPC & Government of Jharkhand.

Three coal mines, Mandakini-B, Banai & Bhalumuda, have recently been surrendered to Ministry of Coal because of the difficult geo-mining conditions & likely low extraction of coal in Banai & Bhalumuda, and other local issues.

With this, NTPC has been allocated 7 coal blocks with estimated geological reserves of ~4 billion tonnes with an estimated mining capacity of 71 million tonnes per annum. With these coal blocks, NTPC aspires to become one of the largest captive coal mining companies in the country. Director General of Mines Safety (DGMS), a statutory authority of govt of India, has selected Pakri-Barwadih as one of the two model mines in the country. Coal mine at Talaipalli became operational along with Pakri-Barwadih and Dulanga. NTPC achieved 11.00 MMT of coal production from the captive mines in FY 2020-21.

Projects	Coal Production (Million Tonnes)	
	FY 2019-20	FY 2020-21
Pakri Barwadih	9.42	7.07
Dulanga	1.54	3.12
Talaipalli	0.19	0.81
Total	11.15	11.00

Waste Management & Waste to Energy

Waste to Compost

NTPC has successfully revamped the "waste to compost" plant at Karsada, Varanasi and currently managing operation & Maintenance (O&M) of this 600 Tons per Day (TPD) capacity plant. The plant generates about 60-80 TPD of compost. Sanitary land fill facility and leachate treatment facility have also been created at Varanasi to ensure scientific disposal of waste.



Waste to Energy Plant, Varanasi

Waste to Energy

NVVN has plans to develop Waste to Energy Plants, supporting the Government effort in improving the people's health & welfare. These are envisaged to be developed in association with Municipal Corporations across India.

We have commissioned a 24 TPD thermal gasification based demonstration scale Waste to Energy (WtE) plant at Varanasi. The plant generates approximately 200 kW of electric power. NVVN has signed MOU with Municipal corporations of Varanasi, Indore, Bhopal and Hubli-Dharwad for Municipal Solid Waste to charcoal plant. Our upcoming WTE plants have been tabulated below:

Projects	Capacity	Location
NEWS WTE	600 TPD/12 MW	Delhi
NEWS-Bio methane including segregation	2000 TPD	Delhi
Kawas WTE	700 TPD/14.9MW	Surat
Varanasi WTE	600 TPD	Varanasi
Indore WTE	500 TPD	Indore
Bhopal WTE	400 TPD	Bhopal
Hubli Dharwad (Waste to Charcol)	200 TPD	Hubli Dharwad

To fast-track the technology development of converting agro residue to charcoals, NVVN has organised a technology challenge Green Charcoal Hackathon. This will leverage the innovative Indian mind to bridge the technology gap, with the prime objective to clean the air by eliminating farm fire, producing renewable energy out of the agro residue, to promote local entrepreneurship, and to increase the income of the farmers.

Energy Trading

NTPC is also in the energy trading business through following modes:

- Purchasing power from the developers and selling it to the Discoms on principal to principal basis
- Acting as an agent and has realized revenue on the difference between sales price charged to procurer and purchase price given to supplier.
- Energy trading through operations on commission basis. NVVN is a "Trader Member" of India Energy Exchange Ltd. (IEX) & Power Exchange India Ltd (PXIL) and undertakes trading of Power and REC on Power Exchange Platform of IEX and PXIL.
- During FY 2020-21, NVVN has achieved highest trading volume of 18.40 BU registering growth of 27 % w.r.t previous year. NVVN has also started trading in RTM from 01.06.2020. Automated Program interface has been developed in house by NVVN and about 1050 MU of energy traded in RTM platform of Power Exchange.
- NVVN has also traded 290 MU of RECs in Power Exchange.
- NVVN is appointed by MOP (GOI) as Settlement Nodal Agency (SNA) for Bangladesh, Bhutan Nepal and Myanmar.
- NVVN is also going ahead for participation in Gas Trading in Indian Gas Exchange.

Snapshot of cross border power trading

Country	Supply from	Qty (MW)	Remarks
Bangladesh	NTPC	250	G2G
Bangladesh	Tripura	160	G2G
Bangladesh	DVC	300	Won under International bidding
Nepal	Indian Market	Upto 350	G2G

E-Mobility and ancillary services

We envisage enhancing our current presence in the ancillary services. NTPC targets a market share of 25% in ancillary services and storage and aims to achieve 10% of the estimated market share for supply of electricity in E-mobility business.

We have already ventured into the e-mobility space and have taken up various initiatives in line with national priorities, including - creation of charging infrastructure ecosystem (fast-charging stations, battery-swapping infrastructure, etc. at several locations in major cities and across highways; and implement e-bus projects (State Governments, State Transport Undertakings and City administrators).

Towards this end, the Company has established 142 EV charging stations across India. Other salient highlights for FY 2020-21 are as follows:

- Agreement signed with Department of Transport A&N for supply of total 40 Nos. E-Buses. Operation of E-Buses commenced
- NVVN wins Bangalore Metropolitan Transport Corporation (BMTC) tender for 90 E-Buses. Commercial operation to be commenced by January 2022
- NVVN is exploring possibilities for providing and operating Fuel Cell Electric Buses at Leh and Delhi
- Through FAME-II, NVVN has been allotted 204 Nos. charging Infrastructure, (approx. 1000 Nos. chargers) in 8 cities to be executed by NVVN
- NVVN has signed MOU with MSRDC for charging infrastructure on Mumbai- Pune highway and Mumbai-Nagpur highway
- We are planning to make a foray into battery storage, supported by research & development and collaboration with OEM/OES, research institutes, etc.



NTPC Electric Bus



Signing of Memorandum of Understanding with UT Ladakh for Development of Green Hydrogen Technologies

Alternate Fuel/Chemical Manufacturing

As part of our business diversification plan, NTPC has ventured into alternate fuels and chemicals based on green hydrogen technologies that includes chemicals like methanol and ammonia etc. Also green hydrogen technologies like mobility, energy storage etc are also being taken up. This would be through integration of existing thermal assets and new investment in clean technologies such as CCU, hydrogen production etc. Towards that, NTPC has planned to take up various pilots projects few of which are listed below:

1. Green Hydrogen Mobility

a. Leh Solar PV Farm (1.25 MWAC)

b. Delhi/UP Solar PV Farm (3MWAC)

c. Hydrogen Filling Station at Leh and Delhi for 5 Buses each

d. 10 Nos. Hydrogen Bus procurement by NVVN

2. Green Methanol Pilot (10 TPD) and 2TPD Hydrogen, 14 TPD CO2 capture

a. Ramagundam, Telengana

b. Vindhyachal, Madhya Pradesh

3. Energy storage Pilots

a. 50 kW Microgrid at Simhadri (AP)

b. 500 kW Back-up power, EOC, NOIDA

4. Green Ammonia Pilot (20 TPD & 50 TPD Pilot)

5. PNG hydrogen blending (5% vol) pilot (under discussion with Gujarat Gas)

a. At Kawas and few CGD networks in Gujarat

NTPC is expecting hydrogen to play a key part in the energy transition plan towards cleaner energy. NTPC has formed a dedicated hydrogen energy group under it's renewable energy vertical for taking up different projects in the hydrogen domain. NTPC envisions to be the leading supplier of green hydrogen in the country by concentrating on sustainability (only green hydrogen) & cost competitiveness.

Ash Management

Ash is another resource material which NTPC coal stations produces along with electricity. We are generating revenues through the sale of fly ash and promoting its further utilization through industry partnerships and R&D. NTPC has introduced Ash Policy, which is a vision document dealing with the ash utilization issue in an integral way from generation to end product. This policy aims at maximizing utilization of ash for productive usage along with fulfilling social and environmental obligations, as a green initiative in protecting the nature and giving a better environment to future generations.

During FY 2020-21, approximately 70.41 million tonnes of ash was generated by NTPC Group stations and 79.38 % i.e. 55.89 million tonnes of ash had been gainfully utilized in various areas such as issue to industries for cement, concrete, asbestos products, bricks/ blocks making, road embankment construction, ash dyke raising, mine filling, land development works etc.

Fly Ash produced at Coal based Thermal Power Plant, is a resource material for Cement industry and building products manufacturing units. It is also being used as one of construction material in Road and Fly over embankment construction and thus helping to save earth and degradation of good agricultural land.

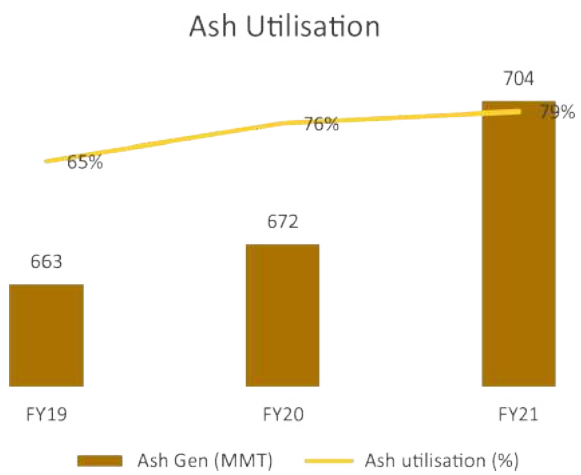


Ash Transportation through BTAP wagons

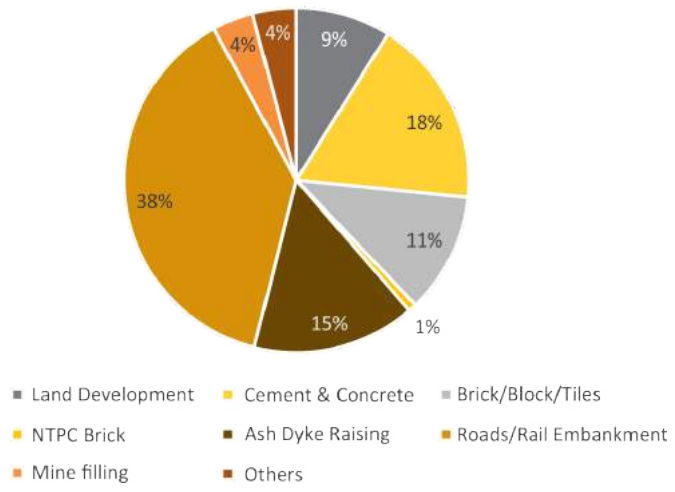
Ash utilization

In FY 2020-21, 15 of our stations achieved 100% ash utilization. We plan to achieve group-wide 100% ash utilization by FY 2021-22.

Ash utilization is low at some stations either due to limited ash utilization industries in the near-by areas, or abundance of fly-ash in the area due to multiple thermal power stations in the vicinity, or due to non-compliance of notification by users



(building construction industries, mining & brick manufacturers). To resolve the issues due to supply and demand gap, we are in the process of developing fly-ash depots at high consumption centres.





Ash based Geo Polymer Aggregrate developed by NTPC

To resolve the issues due to supply and demand gap, we are in the process of developing fly-ash depots at high consumption centers.

Fuel Procurement

Coal, Gas, Biomass and water are our key raw materials. We continuously strive to reduce our specific consumption of raw materials in line with our philosophy of sustainable production and consumption.

Optimization of raw material consumption translates into value for our shareholders, as well as for our communities. This enables us to also reduce the tariff of electricity making it affordable for all and also reduce the burden on local resources by minimizing extraction and waste generation.

Coal Procurement

NTPC has both long term and short term coal supply agreements with domestic companies as well as foreign suppliers. Long-term Coal Supply Agreements (CSAs) are in place with the subsidiary coal companies of Coal India Ltd. (CIL) for an Annual Contracted Quantity (ACQ) of 166.69 Million Metric Tonnes (MMT) for the existing thermal stations. In addition, CSA is in place with Singareni Colliery Company Ltd. (SCCL) for Ramagundam for an ACQ of 11.20 MMT. FSAs are valid for a period of 20 years with a provision of review after every 5 years.

Break up of Coal Sourcing (FY 2020-21)

	Domestic	Imported
NTPC (MMT)	173.28	1.05
JVs & Subs. (MMT)	17.86	0.01
Total (MMT)	191.14	1.06

Gas Procurement

NTPC has long-term Gas Supply Agreements (GSAs) with GAIL for supply of Administered Price Mechanism (APM) gas and Non-APM gas. These agreements may be extended based on GoI directions. NTPC also has a long-term agreement with GAIL for supply of 1.1 MMSCMD RLNG on firm basis, valid upto December 2023. To meet the shortfall in supply of long-term domestic gas/RLNG, NTPC procures Spot RLNG on limited tender basis from domestic suppliers and on 'Single Offer' basis from Public Sector gas marketing companies

	FY 2020-21
NTPC (MMSCM)	1273.07
JVs & Subs. (MMSCM)	1325.97
Total (MMSCM)	2599

Bio-Mass Co-firing

NTPC has become the first energy player in the country to commercialise biomass co-firing with up to 10 per cent of agro-residue-based biofuel, co-firing along with coal. This is intended to cut down carbon emissions and also to discourage crop residue burning by farmers after harvesting by adding economic value to the crop residue and providing extra income to farmers and employment in rural sector. Biomass co-firing is a unique method to utilize coal based power plant infrastructure to produce renewable energy by simply replacing some of the coal with biomass based fuel. Being carbon neutral fuel, biomass co-firing is a technology recognized by UNFCCC as a measure of reducing greenhouse gas emission.

After successfully demonstrating biomass co-firing at Dadri plant, NTPC has started commercial scale biomass co-firing at other NTPC stations also. NTPC has forayed into large scale procurement of biomass for Co-firing by issuing a Long Term (LT) tender for procurement of ~20 MMT biomass for 17 projects of NTPC over the period of four years (i.e. 5 MMTPA).

Besides LT tender, NTPC has awarded contracts for procurement of 4.56 LMT of biomass pellet under short term contracts (9 months). Supply has already started at 7 NTPC stations under short term contracts and also under orders placed for 280 TPD for four years (approx. 4 lakh tonnes) at Dadri plant. NTPC has already fired ~24,600 metric tonnes of biomass pellets at its various plants by March'21 in FY 2020-21 vs 3900 MT used in FY 2019-20.

The company is using these pellets, made out of stubble and husk, in its almost all coal-fired power plants across the country. The purpose behind usage of agro-based pellets is two fold - one it turns off stubble burning in farms and brings down pollution and two, it reduces coal usage in power production.



Biomass Pellets at NTPC Dadri

Generating Power & Smiles 24x7 for the Nation

NATURAL CAPITAL

Major Highlights of FY 2020-21

- 3.4% (Y-O-Y) reduction in specific CO_2 emission
- 2.9 l/kWh of specific water consumption in FY 2020-21
- 121.82 Lakh kL of Rain Water Harvested
- 10.47 Lakh trees planted in FY 2020-21

"For NTPC, environmental sustainability is not just a performance matrix, but is intrinsically inter-woven into its long-term growth strategy. In line with our value of sustainable production and consumption of natural resources, we are continuously upgrading our systems to set new global benchmarks in environmental compliance, practices and stewardship."

Material Topic(s)
[1] [2] [16] [17]
[3] [4] [5] [7]

NVGSEE Principle
[2] [6] [9]



NTPC Kayamkulam

Related Sustainability Topics

- Compliance Management
- Climate Change
- Water Management
- Air emissions
- De-carbonization of generation mix
- Biodiversity
- Effluent management
- Waste management

Risks mapping:

- Compliance of emission, ash utilization and other regulatory norms
- Climate Change impacts
- Water footprint reduction
- Biodiversity Impacts
- Ash Utilisation

Relevant GRI Indicators

- 301-1
- 301-2
- 301-3
- 302-1
- 302-2
- 302-3
- 302-4
- 302-5
- 303-1
- 303-2
- 303-3
- 303-4
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- 304-4
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- 305-2
- 305-3
- 305-4
- 305-5
- 305-6
- 305-7
- 306-1
- 306-2
- 306-3
- 306-4
- 306-5
- 307-1

Reference to other frameworks

- EU5
- EU13
- IPIECA: E1 , E2
- TCFD



At NTPC, we practice a precautionary approach to address all environmental risks. We have undertaken EIA studies based on which Environmental Management Plans for all stations are prepared and implemented. Our environmental policy focusses on optimum utilization of natural resources, minimization of waste by reduce, reuse & recycle, adoption of latest technologies and augmentation of older units for higher efficiency. We are in a continuous process of environment performance improvement with the techno-economically feasible engineering solutions to ensure compliance. Accordingly, we are regularly upgrading our technologies and operational practices for maintaining the environmental parameters as per the norms of regulatory agencies. 26 of our stations are ISO:14001 certified. Rest newly commercialized plants are in the process of getting ISO certification. We have also established an environmental grievance mechanism for recording all grievances.

NTPC has become signatory of CEO Water Mandate to further its water Stewardship Programmes

Water & Effluent Management

For electricity production, water is a prime resource, and we use water in a judicious and sustainable manner. Fresh water is drawn by our stations from various sources of water bodies such as rivers, reservoirs, canals. Sea water is used by our coastal plants. The water consumption is being monitored continuously through online water metering systems. Water consumption of the stations is continually optimized by practicing 3R principle (Reduce, Recycle & Reuse), which is the core of our Water Policy.

In almost all of our Thermal Power Plants, water is used in a closed cycle cooling system with cooling towers, so that there is no pollution of water bodies. In this system, very little loss is incurred through various processes except in the cooling water system where significant amount is lost as evaporation, drift and blow down. We are increasing Cycles of Concentration (COC) to efficiently use water and reduce amount of blow down. The high TDS blow down water is reused in other processes. We are in the process of implementing ZLD (Zero Liquid Discharge) at all of our stations. Till date 16 of our generating stations have implemented ZLD. We are using sea water desalination systems at our costal plants to meet our fresh water requirements. The implementation at rest of stations is in advanced stage and current discharge is in conformity with stipulated norms and conditions. Hence, there is no significant impact on the water bodies and related habitats by the organization's discharges of water (treated effluents) and runoff.

Increasing reuse and recycling of effluents has also led to a decrease in fresh water withdrawal requirements over the years. However, increasing penetration of renewables into the grid and reducing power demand in the country is slowly forcing the thermal units to operate at very low PLF, which reduces overall water requirement, but increases per unit water consumption. Further, implementation of wet FGD system at all stations is going to make the water consumption reduction process challenging.

Water Consumption

Fresh Water	Units	FY 2019-20	FY 2020-21
Fresh water Consumption	Lakh kL	8,493.92	9,102.20
Specific Water Consumption	l/kWh	2.93	2.90

Sea Water	Units	FY 2020-21
Sea water Withdrawal	Lakh kL	881.12
Sea Water Discharged	Lakh kL	610.15
Sea Water Used	Lakh kL	270.96

Rain Water Harvested	Units	FY 2020-21
Surface Storage	Lakh kL	101.28
Ground Water Recharged	Lakh kL	20.54

Reduce

Through various water efficiency measures we have been able to reduce our specific water consumption in recent times.

We are implementing rainwater harvesting systems as part of our dedicated Rainwater Harvesting policy in all our plants to bring down the withdrawal level of fresh water from various

Our Water Conservation Strategy





Reservoir at NTPC Simhadri

sources. At all locations, rooftop rainwater harvesting is being deployed to either recharge groundwater or surface storage and use or combination of both. We are collecting and utilizing rainwater at our plants for plant operation in reporting year.

Reuse

We are doing various R&D projects to increase the reuse of waste water in our plants. Additionally, we have put in place an Ash water recirculation system (AWRS) to reuse the decanted ash slurry water & toe drain water from ash pond for meeting the requirement of ash handling and service water.

Further, we are in the process of implementing the Zero Liquid Discharge (ZLD) at all our stations. Through ZLD, cascaded use of water for suitable use as per the quality is being adopted.

Recycling

Effluent Management		
Parameter	Units	FY 2020-21
Total Plant (ETP) Effluent Generated	Lakh kL	1773.11
Total Plant (ETP) effluent Treated	Lakh kL	1773.11
Total Plant (ETP) effluent Recycled	Lakh kL	1658.00
Total Plant (ETP) effluent Discharged	Lakh kL	115.38
pH	Range	6.5-8.5
TSS	mg/lt	27.50
O&G	ppm	2.20

The effluent generated from various sources in the plant are collected in central monitoring basin after treatment in Liquid Waste Treatment Plant (LWTP). The collected effluent conforming to stipulated standards is re-used for various purposes in operation of plants such as ash handling, service water, etc.

Treated effluent over and above re-use, if any (Non-ZLD Plants), is discharged outside after ensuring with the discharge standards.

Sewage treatment Plants have been provided for treatment and reuse of sewage effluent from plant as well as townships. The effluent quality is monitored regularly and treated effluent is used further in horticulture purposes in the NTPC premises. In the reporting year, 1756 Lakh kL of treated water was recycled.

Sewage Management		
Parameter	Units	FY 2020-21
STP Effluent Generated	Lakh kL	104.12
STP Effluent Treated	Lakh kL	100.12
Total Plant (STP) effluent Recycled	Lakh kL	97.91
STP Effluent discharged	Lakh kL	2.21
pH	Range	6.5-8.9
COD	mg/lt	40.6
BOD	mg/lt	11
TSS	mg/lt	19.2
O&G	ppm	1.3

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SOIL BIOTECHNOLOGY SEWAGE TREATMENT PLANT (SBT-STP) COMMISSIONED AT NTPC KAHALGAON





Water Discharge

Except few plants, all our stations are designed in the closed cycle system and therefore, the plant effluent discharges into water bodies are very minimal. This ensures there is no adverse impact on the related biodiversity and eco-system. In case of non- ZLD plants, where treated effluents are discharged into the natural watercourse, are in conformity with the regulatory standards. In FY 2020-21, 117.59 lakh kL of treated water was discharged.

Waste Management

We are also committed to environmentally friendly, socially responsible and techno-commercially viable handling and disposal of all waste generated in our premises. Our integrated approach for waste management comprises of collection, segregation, transportation, processing, recycling, and disposal of various types of wastes. While the focus is towards optimal utilization of resources requiring only minimum quantities to be disposed of, wherever disposal is required, all rules and regulatory requirements are complied with. The utilization and disposal of hazardous and non-hazardous wastes generated by power plants are governed by regulations and NTPC Waste management Guideline.

Hazardous Waste

Hazardous wastes such as used lubricating and transformer oil, spent resins etc. are generated at our operating facilities. These are disposed through authorized agencies in accordance with the Hazardous and other Wastes (Management and Transboundary Movement) Amendment Rules, 2019 for transportation of Hazardous wastes. Non-Recyclable waste are sent to Treatment, Storage & Disposal Facility (TSDF) for proper treatment & disposal as per the HWM Rules 2016.

Hazardous Waste				
Parameter	Units	Waste Generated	Waste diverted from disposal	Waste directed to disposal
Spent resin	MT	41.52	0.00	37.51
Used lube oil	kL	994.62	621.18	0.28
Used Transformer oil	kL	216.30	130.88	0.49
Containers of hazardous waste	MT	316.65	342.62	0.00
Insulation Waste	MT	694.67	41.58	731.86

We have already phased-out Polychlorinated Biphenyl (PCBs) from our operations. We do not engage in import or export of any hazardous waste or materials under the Basel Convention. There is no radioactive waste generated and disposed from our power plants.

Waste type	Disposal Methods
Used Lube oil	Sold to registered recyclers
Used Tranformer oil	
Containers of hazard wastes	
Spent resin	CPCB/SPCB authorised treatment,storage and disposal facilities or through nearby co-processors.
Used Batteries	Sold to manufacturers under buy back policy
Bio-Medical Waste	Through authorised agencies approved by SPCB.
E-Waste	Through registered & approved recyclers/dismantlers of CPCB/SPCB

Non-Hazardous Waste

Our efforts towards waste minimization have led to a reduction of over 75% in generation of Municipal wastes during FY 2020-21 as compared to the previous year at standalone basis. We have banned single-use plastic at our locations.

Non-Hazardous Waste				
Parameter	Units	Waste Generated	Waste diverted from disposal	Waste directed to disposal
Misc. Ferrous Scrap	MT	62336.57	16394.35	0.00
Non-Ferrous Scrap	MT	4609.79	1500.74	0.00
Municipal Waste-Biodegradable	MT	6919.51	6438.01	0.00
Municipal Waste-Non-Biodegradable	MT	1010.89	477.67	153.73

Waste type	Disposal Methods
Misc Ferrous Scrap	Disposed through E-Auction
Non-Ferrous Scrap	
Municipal Waste	Bio-Degradable waste is converted into manure through composting /vermi-composting Bio-gas/ Bio- Methanation process. Non-Biodegradable waste is disposed at identified landfills. Plastic waste is disposed through local traders /collectors.



MSW Garbage Truck at Simhadri

Parameter	Units	Waste Generated	Waste diverted from disposal	Waste directed to disposal
Biomedical waste	MT	27.69	0.00	26.89
E-waste	MT	140.72	85.45	0.00
Used batteries	MT	80.99	106.00	0.00

Our efforts towards waste minimization have led to a reduction of over 7.3 % in generation of non-hazardous wastes during FY 2020-21 as compared to the previous year.

Resource Efficiency and Material Management

Material Consumed

NTPC follows a comprehensive approach for improving resource efficiency with due focus on the regular evaluation of resource consumption intensity. There has been emphasis on its further improvement through measurement, monitoring and implementation of conservation plans.

The basic input materials in power generation are fuel (coal/gas as primary fuel and oil as secondary fuel) which are as such totally consumed in boiler and hence there is no scope for recyclability of input materials for thermal power generation. Similarly, the chemicals during water treatment are totally consumed and not recycled.

Several steps for improvement in cycle efficiency have been taken resulting in increase in efficiency and significant improvement in fuel saving (Coal and Oil) per unit of energy generated. As far as coal is concerned, adoption of higher size units (higher steam parameters) for power generation and replacement of coal with Biomass is leading to improvement of design/operational efficiency which in turn is reducing the specific coal consumption. NTPC has already fired ~24,600 metric tonnes of biomass pellets at its various plants in FY 2020-21 vs 3900 MT used in FY 2019-20.

The trends for improvement in performance parameters of specific coal consumption and specific oil consumption are shown in table below:

Type	Units	FY 2019-20	FY 2020-21
Coal	MMT	187.53	195.39
	kCal/kg	3,495.00	3,487.57
Natural Gas	MMSCMD	5.36	7.13
	kCal/SCM	9500	9,329.26
Naptha	MT	97.90	18,279.54
	kCal/kg	11,368.00	11,278.11
LDO	kL	1,10,322.84	1,03,297.55
	kCal/kL	9,521.00	9,588.00
HFO	kL	50,726.27	47,561.65
	kCal/kL	9,891.00	9,893.18
HSD	kL	86.57	284.69
	kCal/kL	9,024.00	8,754.50

Apart from coal, Biomass and water, there are other associated input material, which form a major part of our operations. At NTPC, we take continuous measures for effective and efficient use of our input materials. The snapshot of these input materials for NTPC group has been presented below.



Coal Yard at our Thermal Power Plant

Input Material	Chlorine	Ammonia	Alum	HCL	H_2SO_4	Lube Oil	Transformer Oil
Consumption	5462.95 MT	1031.13 MT	14104.28 MT	19910.88 MT	23915.97 MT	848.99 kL	175.27 kL
Sp. Consumption	0.017 g/ kWh	0.003 g/ kWh	0.045 g/ kWh	0.063 g/ kWh	0.076 g/ kWh	0.003 ml/ kWh	0.001 ml/ kWh

Paperless office

Successful implementation of "Project PRADIP" for digitization of documents and paperless processes has not only helped us in saving tons of paper but also resulted in faster decision making, transparency and improved efficiency. As part of extending the benefits of digitalization, a comprehensive vendor portal has been launched for submission of e invoices and its tracking status.



Energy & Efficiency Management

For us, energy conservation is not only intended to reduce our costs, but it is also a part of our sustainable consumption strategy with a view to conserve national energy reserves. In this regard particularly, adoption of higher size units has led to efficiency improvement, leading to a reduction in per unit coal consumption. We are supplementing these efforts with cofiring of agro-residues, implementation of Energy and Efficiency Management System, reduction in Auxiliary Power Consumption to further reduce our overall energy consumption.

Energy Intensity

The Net Energy Intensity of the Group, which provides a measure of its operational efficiency and reducing share of fossil based generation, amounted to 10.11 MJ/kWh in FY 2020-21. The table below shows the trend of total primary energy consumption (as listed in above section) and energy intensity at NTPC group level.

Type	Units	FY 2019-20	FY 2020-21
Total primary energy consumption	TJ	28,20,455.01	29,53,663.88
Energy Intensity	MJ/kWh	9.72	9.40
Net Energy Intensity	MJ/kWh	10.52	10.11

The decrease in group's Net Energy Intensity reflects the change in the production mix in the year having increase in generation from renewable sources alongwith improvement in energy efficiency. We have been taking a lot of initiatives to conserve energy through various energy and operational efficiency measures. APC of coal plants has decreased as compared to previous years due to efficient operations owing to high power demand in the country.



NTPC Bhadla (Solar)

Auxiliary Power Consumption			
Generating Sources	**Units**	**FY 2019-20**	**FY 2020-21**
Coal Stations	MU	19,355.20	20,090.00
	%	7.55%	6.94%
Gas Stations	MU	281.15	375.96
	%	3.04%	3.34%
Hydro	MU	20.5	66.5
	%	0.59%	0.58%

Our Energy Efficiency Initiatives

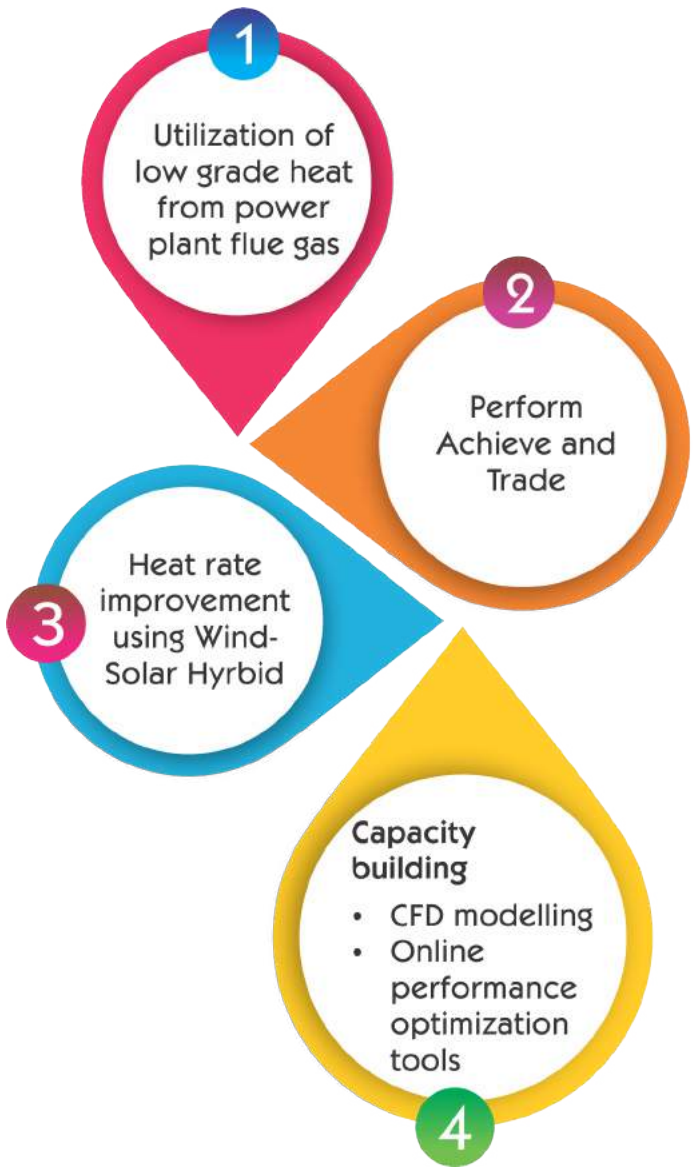
Name of Indicator	Unit	FY 2019-20	FY 2020-21
Electrical Energy	MU	130.1	132.95
Heat Energy (Eq. MT of coal)	MT	21222	22995
Heat Energy (Eq. MCM of Gas)	MCM	0.246	0.09
Total Energy Saved	**TJ**	**1,622.5**	**1,643.30**

Thermal Energy

- HP and IP cylinder efficiency improvement during capital overhaul
- Boiler modifications to improve steam parameters & efficiency
- TDBFP cartridge replacements
- Cooling Tower water distribution & nozzle modification

Energy Audit

- Measurement & Verification audits under PAT scheme (3rd cycle) of 02 stations
- Mandatory energy audits in 7 stations as per Bureau of Energy Efficiency (BEE) regulations
- Auxiliary Power Consumption Energy Audits at all stations



Lighting

- Large scale replacement of existing lighting (FTL's, HPSVs, CR's Halogen)
- 12.2 lacs LED fittings have been replaced till March 2021

Auxiliary Power Consumption

- Retrofitting HT VFD in CEPs of three unit of 500MW
- Retrofitting HT VFD in ID Fans of one unit of 210 MW
- Installing grid-connected roof top / CW channel top Solar PV systems
- Replacement of inefficient BFP cartridge based on high SEC
- Energy Efficient Coating on pump internal of Cooing Water/ Other large water pumps.
- Retrofitting FRP hollow blades in CT fans
- Installation of VFD's in various LT drives
- ESP duct modification using CFD
- Replacing existing motors with Energy Efficient motors.
- Optimizing nos. of running mills and CW pumps and fans during prolonged partial loading on the units.

Performance on PAT

(Perform, Achieve and Trade)

PAT (Perform, Achieve and Trade) is one of the schemes of National Mission on Enhanced Energy Efficiency (NMEEE). It is a market based mechanism to enhance cost effectiveness of improvements in energy efficiency, in energy intensive large industries, through certification of energy savings achieved by improvement in Net Heat Rate. Achieved improvement in NHR can be traded in terms of Energy Savings Certificates (ESCerts). One ESCerts is equivalent to 1 Mtoe(Metric Tonne Oil Equivalent).

Under PAT cycle-I, NTPC stations had exceeded Net Heat Rate improvement targets and earned net 170653 EScerts. Currently NTPC has a stock of 161759 EScerts (balance from PAT cycle-I) that will be used for PAT cycle-II. PAT cycle II & III have been completed in March 2019 & 2020 respectively and notification of ESCerts earned is awaited.

Air (Non-GHG) Emissions Management

We have made consistent efforts to reduce our air emissions through state-of-the-art technologies and monitoring systems. As per the new notifications of Ministry of Environment, Forests and Climate Change (MoEFCC) and NTPC's Brighter Plan targets for reducing the limits for specific water consumption and stack emissions from thermal power plants for SOx, NOx, PM and mercury emissions, NTPC is leading the power sector in country by implementing the requisite measures.

We have installed Continuous Emission Monitoring System (CEMS) in all running units to monitor emissions of Particulate Matter (PM), Sulfur Dioxide (SO2) and Nitrogen Oxides (NOx) in flue gases. The emissions are monitored on a real-time basis. These results are directly linked with the servers of regulatory agencies namely CPCB/SPCB. Additionally, we regularly conduct off-line monitoring of our stacks. Ambient air quality monitoring is also monitored through an online Ambient Air Quality Monitoring System (AAQMS).

For controlling PM emissions majority of NTPC stations are equipped with more than 99.8% efficient ESPs. Further, ESP augmentation through Renovation & Modernisation (R&M) has been taken up wherever necessary and work is in progress for 16 units having total cumulative capacity of 5 GW. and we are optimistic to achieve it before the deadline as set in TBP 2032.

For controlling the SOx emission, NTPC has installed the Lime based wet FGD (Flue Gas Desulphurisation) system in stage-V (500 MW) of Vindhyachal station. Dry sorbent injection (DSI) based FGD has been commissioned and operational for SOx emission control in units (840 MW) of Dadri (Stage-I).

FGD systems are under advance stage of erection at Dadri (Stage-II) and Jhajjar plants. With these, the commissioning of FGD in NTPC Units with a capacity of 58,940 MW is in various stages of progress. Award of FGD in balance NTPC units with a capacity of 2,890 MW is in tendering stage.

For controlling the NOx, various De-NOx technique are being implemented at NTPC stations based on the prescribed regulatory limits and our goals as per Brighter Plan 2032. Combustion Modification in 15 units of around 7 GW including units located in NCR i.e. 2 units of Dadri, 3 units of Jhajjar have already been completed. Further, award is already placed for Combustion modification for 34 units of around 14GW.

To meet NOx emission limit of 100 mg/Nm^3, we are exploring the feasibility of Selective Catalytic Reduction (SCR) system for units, installed after 01.01.2017. SCR is a proven technology for low ash coal, however it is yet to be proven for abrasive & high ash content Indian coal. In view of this, Pilot tests have been conducted at seven (7) NTPC stations by various SCR system suppliers to assess the suitability of SCR technology for Indian coal. Results of the tests are submitted to Hon'ble Supreme Court. Hon'ble Supreme Court has constituted a committee to review the NOx norm. Based on decision on NOx Norm, plan & strategy for future will be prepared.

We are monitoring Mercury emissions from our plants. At many stations, mercury emissions are below minimum detectable limit (MDL). In all such cases, for FY 2020-21, 50% of MDL is considered while calculating mercury load. We are also upgrading our technologies and systems to ensure a reduction in consumption of Ozone Depleting Substances (ODS).

We have already phased out the use of PCBs from all our operations.



NTPC Koldam (Hydro)

Name of Indicator	FY 2019-20	FY 2020-21
SOx (MT)	12,79,366.2	15,52,253.67
Specitic SOx (gm/kWh)	4.41	4.94
NOx (MT)	6,12,983.06	6,05,812.20
Specific NOx (gm/kWh)	2.11	1.93
Particular Matter PM (MT)	89,246.82	88,431.33
Specific PM (gm/kWh)	0.31	0.28
Mercury (MT)	10.18	4.66
Specific Mercury (gm/kWh)	0.04	0.00
ODS (CFC-11 equivalent (kg))	1194	23,499.86

GHG Emission & Climate Change Mitigation

As India's leading power generator, we consider it our ethical responsibility to contribute to the country's efforts towards GHG emission reduction and climate change mitigation. We are committed to reduce the Greenhouse Gas (GHG) emission intensity of our power generation. Our decarbonization strategy is four-pronged.

Our climate change strategy

Fuel Diversification

As on date, NTPC group has 1155 MW, 163 MW and 3757 MW of Solar, Wind and Hydro capacity respectively, total amounting to 5.075 GW. With 2884 MW of renewables and 2255 MW of Hydro in pipeline , the same would reach to 10+ GW in short term. By 2032, NTPC will have 60 GW of renewable capacity. We have decommissioned 1165 MW of thermal capacity till date.

Technology Upgradation & Efficiency Improvement

We have adopted comparatively cleaner and energy-efficient technologies that reduce GHG emissions per unit of electricity generated. We are continuously moving from sub-critical to supercritical and onto ultra-supercritical technology. NTPC is among early adopters of supercritical and ultrasupercritical boilers in India, which save ~2% of fuel per unit of power generated resulting in 8% reduction of emission intensity with respect to conventional subcritical power plants. It also increase efficiency by around 8%. As on 31.03.2021, NTPC had already commissioned 23 units based on super critical technology with a total capacity of 16,300 MW. Also, 8 units with a capacity of 5,420 MW were under commissioning. Further, as on 31.03.2021, NTPC had already commissioned two units based on ultra super critical technology with capacity of 1,320 MW while 7 units with a capacity of 5,320 MW were under commissioning.

Also, as mentioned in the earlier section, we did energy saving of around 1643.3 TJ in the reporting year. In the Perform, Achieve and Trade (PAT) scheme of GoI, NTPC has exceeded the targets and have earned 170653 ESCerts.

Research & Development

CO_2 is the largest gaseous pollutant in several major industry viz fossil fuel power plants, cement, sugar, textile etc. We are working on to capture CO_2 from waste flue gases & convert it to hydrocarbon viz Methanol. This will ensure that we generate a clean fuel as well sequester carbon from the environment further adding great economic value. We are working on the following two projects:

a) Project-1: Design & Setup of 10 TPD CO_2 to Methanol Plant at NTPC Vindhyachal.

b) Project-2: Development of Indigenous Catalyst & Reactor for Methanol Synthesis

We are also utilizing agro-residue for power generation, which will help us further reduce CO2 emissions

Carbon Sink Development

NTPC in collaboration with ONGC is developing Carbon Capture and Usage (CCU) at its Jhanor-Gandhar plant. Our R&D efforts as mentioned above will also enable carbon capturing and utilization.

Our afforestation efforts not only add to India's green cover and oxygen bank but also perform the role of 'sinks' for the polluting emissions from the stations etc. We have set a target to plant 10 million trees up to 2026 with 1 million trees each year on an average. Till date, we have planted more than 36 million trees.

GHG Emissions- Scope 1

Type	Absolute Emissions (Mn t CO_2)		Emission Factor (gm CO_2/ kWh)	
	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21
Coal	248.58	258.82	995.47	894.74
Gas	3.86	5.08	775.8	451.43
Total	252.44	263.90	869.89	840.26

As India's leading power sector oranisation, we recognize our responsibility towards using clean fuels and technologies to provide low-carbon power at affordable prices and remain committed to supporting India's Nationally Determined Contribution (NDCs) to climate change.

As compared to previous years, Group's GHG intensity has decreased by 3.4% due to increased generation from non-fossil sources and efficient operation of thermal plants.

GHG emissions – Scope 2

	FY 2019-20	FY 2020-21
SCOPE 2 Emission (Ton CO2)	15,845.34	21,872.22

Our Scope 2 GHG emissions happen due to electricity consumption at offices, training centers and research centers outside plant premises PMI, Netra, Corporate Office, Engineering Office etc. It has increased due to inclusion of electricity consumption by recently acquired companies i.e. NEEPCO & THDC.

GHG emissions – Scope 3

Our scope 3 GHG emission for reporting year has been 561135 MT. The breakup of emission are as follows:

SCOPE 3	FY 2019-20	FY 2020-21
Employee Commuting (Ton CO_2)	62.00	40.36
Business Travels (Ton CO_2)	28,000.00	26,918.79
Fuel Transportation (Ton CO_2)	9,52,691.13	5,34,176.43
Total (Ton CO_2)	9,80,753.13	5,61,135.58

We have developed a strategic and long-term approach to reduce our environmental impact. Our strategy is based on a view to convert climate challenges into opportunities.



Inauguration of first solar installations at Leh- Solar Trees and Carport

Generating Power & Smiles 24x7 for the Nation

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

TCFD was established by the Financial Stability Board with the aim of improving the reporting of climate-related risks and opportunities. We have recognised the TCFD recommendations with a commitment to enhance its climate-related disclosures, and improve the management and reporting of climate-related risks.

Strategy

1. Analysis and description of climate change impacts on NTPC's all business segments covering strategic advantages tand competitive strengths has been done.
2. Structured materiality assessment process conducted in accordance with the GRI Standards in consultation with third party,

For more details please refer:

Materiality assessment chapter at Page no. 182

Financial capital at Page no. 198

Governance

NTPC has instituted governance systems and structures including the oversight of responsibilities with respect to climate change risks at multiple levels ranging from operations to Board of Directors:

1. **Oversight & Committees:**
   a. Board of Directors
   b. Board level CSR & Sustainability Committee
   c. Corporate level Sustainability Steering Committee
2. **Dedicated Departments:**
   a. Sustainability Department
   b. CenPEEP - Centre for Power Efficiency & Environmental Protection

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Risk Management

Climate change and its associated physical and transitional risks have been considered as strategic risks. The same has been included in company's overall risk management framework.

For more details please refer:

Risk Management Chapter at Page no. 184

Metrics & Targets

1. NTPC has been reporting annually its absolute and specific carbon emissions through Annual and Sustainability Reports.
2. NTPC plants have been allocated energy efficiency targets under the Perform, Achieve and Trade schemes. We have initiated the 'Comprehensive Performance Optimisation Programme' thereby successfully balancing the dual objectives of reducing carbon-di-oxide emissions that contribute to climate change and facilitating higher efficiency of power generation.
3. NTPC is committed to diversify its fuel capacity mix to have 60 GW of renewable capacity by 2032.
4. **For more details please refer:**

Manufacturing Capital Chapter from Page no. 203-205

Natural Capital Chapter from Page no. 221-222

Biodiversity Conservation

At NTPC, we believe that we cannot achieve sustainable growth until we take care of our nature and other species. Our goal of building the economy could only be achieved by respecting the ecology. Thus, we put in our most sincere efforts to try to give back to nature more than we take. Envisioning a clear and comprehensive goal to preserve our nature, we have developed a dedicated NTPC Biodiversity Policy in 2018 which clearly states our vision and guidelines for conservation, restoration and enhancement of biodiversity. Also, NTPC is a proud member of Indian Business and Biodiversity initiative.

NTPC does not construct and maintain transmission and distribution corridors. For power project areas, these aspects are covered in Environmental Impact Assessment Studies, undertaken according to Terms of Reference prescribed by MOEF&CC. If any specifically important ecosystem exists within the study area, additional studies are undertaken and their recommendations are adopted.

In case of involvement of forest land, statutory permission for diversion of forest land for non-forest activities is obtained from MOEF&CC in accordance with Forest (Conservation) Act, 1980; which includes enhancement of forests with the amounts deposited for Compensatory Afforestation and Net Present Value of forest land involved.

Similarly, in case of involvement of coastal marine areas, clearance under Coastal Regulation Zone Notification is obtained and the provisions therein are implemented.

We also have a flagship Biodiversity programme towards conservation of Olive Ridley Turtles. The coast of Andhra Pradesh is known for the nesting and foraging of Olive Ridley Turtles – which is a Vulnerable Category species on IUCN's Redlist. Thus efforts are underway by the Andhra Pradesh

One three-fold conservation plan

Conservation of Olive Ridley Turtles

- Identification of nesting beaches
- Development of hatcheries along nesting beaches and ensuring security during hatching
- Capacity building of communities to strengthen the conservation efforts

Our Biodiversity Strategy

Mapping	of biodiversity interface, including assessment of its risks & opportunities
Implementation	of biodiversity conservation and management plant
Enrichment	of greenbelt for Biodiversity
Engagement	including advocacy, capacity-building and dialogue with local communities, academies, NGOs and international fora
Decision-Making	on the basis of applicable biodiversity aspects in the environment management systems
Target	setting of biodiversity management
Monitoring	and reporting on progress towards targets
Accountability	by designating a bio-diversity champion within the organization



Avifauna Near NTPC Simhadri

Forest Department since 2010 to minimize the impact of human interventions on the critical habitat. We are now a proud partner in the efforts of the forest department to conserve the habitat of Olive Ridley Turtles by way of a five-year agreement between our Simhadri Station and the forest department for conservation efforts in 9 coastal districts of Andhra Pradesh covering 732 km of coastal area. Under this initiative, we have spent ₹ 4.6 Cr. in a phased manner till date. As a result our efforts, resulted in increasing trend in the hatchlings released in the sea-water.

We understand the importance of our operations for the society and nation's economy, but we are also cognizant enough to ensure that none of our station location and operation have a significant and irreversible negative impact on protected areas and wildlife sanctuaries.

None of the project sites for thermal power plants established by NTPC were located within 10 km. or respective eco-sensitive zones of the protected areas or the areas of high biodiversity outside the protected areas. We have various ongoing biodiversity conservation projects as per below table.

Species	IUCN Red List	Location
Wildlife		
Sloth bear (Melursusursinus)	Vulnerable	Raigarh
Black Buck (Antilope cervicapra)	Near Threatened	Meja
Gangetic Dolphin (Platanista gangetica)	Endangered	Kahalgaon
Cheer Pheasant (Catereus wallichii)	Threatened	Koldam
Elephant (Elephas maximus)	Endangered	North Karanpura
Great Indian Bustard (Ardeotis nigriceps)	Critically endangered	Solapur
Olive Ridley Turtle (Lepidochelys olivacea)	Vulnerable	Simhadri
Snow Trout Fishes (Schizothorax richardsonii)	Threatened	Vishnugad Pipalkoti
Plant		
Logerstroemia minuticarpa	Rare	Pare, Arunachal Pradesh

Project	Type	Location
Ecopark	Urban Environment	Dadri
Ecopark	Urban environment	Badarpur
Biodiversity conservation	Terrestrial & Riverine ecosystem	Khargone
Biodiversity conservation	Terrestrial ecosystems	Talaipalli
Marsh lands and Bird Sanctuary	Wet zones	Unchahar

Apart from above, we have established various Botanical Gardens around our stations/ projects namely at Kamenng, Kopili, Koti, Tehri etc.

However, in case of following thermal power projects wildlife sanctuaries were declared after the project was accorded Environmental Clearance (EC) or constructed:

- In case of Kahalgaon Station, the stretch of Ganga river adjacent to the project site was declared as a Dolphin Sanctuary by State Government after the project was accorded Environmental Clearance by MoEF&CC and the construction of the project was nearing completion. Also, A special scientific study has confirmed that the impact of treated effluents from Kahalgaon STPP, soon to be declared ZLD, on the sanctuary are insignificant.
- In case of Feroz Gandhi Unchahar Thermal Power Station, Samaspur Bird Sanctuary was established by State Government in 1987 much after the project construction was started by UP State Electricity Board in 1981. NTPC took over the project in 1992.

Our vision of having a healthy ecology around begins from inside of our plants. Not only do we put in our best efforts to avoid disturbance to ecology of the surrounding area by minimizing discharge/disposal of waste/effluents, but we also give a special thrust to afforestation and green belt development at all our projects covering vast tracts of land in and around projects. At some of the projects (like Rihand and National Capital Power Project), we have converted barren stretches of land into lush green environments.

Habitats protected or restored

Asian Waterbird at Dadri

NTPC with help of UNDP India has conducted the first ever Asian Waterbird Census (AWC) at the NTPC Dadri complex in collaboration with Wetlands International South Asia (WISA) and Global Tiger Forum (GTF) on 15-16 January 2021. A total of 45 species were recorded from the NTPC Dadri wetlands (including Wetland 1 and Wetland 2). Out of these, 42 species are classified as 'wetland dependent' as per the Asian Waterbird Census data sheets.

The results of the Census/Assessment point out to the presence of many species, that too in good numbers. The wetland complex at NTPC Dadri was indeed a stopover site for migratory avifauna, where they gather in relatively large numbers to feed on their way to other larger wetlands throughout the Indian subcontinent. The wetland represents a high species richness when compared with the total area/size of the waterbodies and therefore is also of high conservation significance.

Cheer Pheasant at Koldam

At our Koldam Hyroelectric Power Plant (HEPP), where habitat of Cheer Pheasant (Catreus wallichii), which is included in IUCN Red List species (under vulnerable category) existed in some area of Majathal Wild Life Sanctuary, which falls under submergence area of Koldam HEPP. In order to restore the area of Majthal Wildlife Sanctuary involved in Koldam Project, NTPC has identified jointly with wildlife Wing of GoHP 500 ha of land in and around Majthal Wildlife Sanctuary for Cheer Pheasant habitat, acquired the land and handed over to State Government to get it notified as a sanctuary. In addition, another 10 km^2 wildlife habitat has been identified in consultation with State Forest Department of HP to get it notified as a Sanctuary. Various schemes such as compensatory afforestation, CAT plan, RIM plantation, development of fisheries etc. towards environmental and bio-diversity conservation are already being implemented through the concerned authorities. We have also made financial contributions towards various schemes being implemented by the state government at Koldam HEPP to restore/ enhance the wildlife habitats.

Further, we have taken various voluntary initiatives towards conservation of aquatic and terrestrial wildlife around our operations. Our Simhadri Station in Andhra Pradesh is supporting the Central Marine Fisheries Research Institute (CMFRI) to deploy artificial reefs near the coast. These reefs simulate coral beds, and function as a comfortable habitat



Asian Waterbird at Dadri



Cheer Pheasant at Koldam



Conservation Activities under CAT

for fish and diverse marine organisms. The first deployment of artificial reefs in Andhra Pradesh was successfully done off the Muthalampalem coast.

Biodiversity of Offset Habitats

As none of the thermal project sites established by NTPC are located within protected areas, no offset habitats were created and the comparison is not applicable. In case of hydro power project at Koldam, offset habitat has been created with the help of State Forest Department. The comparative study is yet to be undertaken.

Badarpur Biodiversity Park

We have taken up the development of Mega Eco Park at Badarpur spread over 884 acres, one of the largest man-made parks in not only India but will be bigger than New York Central Park spread over 842 acres. Eco Park is being developed over already closed Badarpur station's Ash dyke.

Narmada Landscape Restoration Project

NTPC in collaboration with US-AID is supporting a unique Biodiversity Project titled "Narmada Landscape Restoration Project" along River Narmada between Maheshwar and Omkareshwar dams. With an investment of about Rs 25 Cr.s, this project will be benefitting the local population, Indore City,and Madhya Pradesh at large as the project is aimed to enhance green cover, improve water retention, the crop diversity including to promote organic farming and marketing. The project is being taken up involving Global Green Growth Institute (GGGI) Headquartered at Seoul and Indian Institute of Forest Management Bhopal. This project is also one of its kind in India and implementation is likely to become a role model for replication across the country

Afforestation

NTPC since its inception has been carrying out massive plantation to mitigate the effects of greenhouse gases. NTPC's afforestation efforts not only add to India's green cover and oxygen bank but also perform the role of 'sinks' for the polluting emissions from the stations etc.

NTPC has developed nurseries in plants and townships to develop seed and seedlings, plants for in-house plantation and horticulture activities. Plantation activities in NTPC is done through State Forest Departments through MOUs. The MOUs specify the plantation year, maintenance years of the plantation, fund flow details and survival percentages of the plantation. NTPC has made Guidelines of Afforestation based on which the afforestation is done in NTPC projects.

The plantation activities undertaken by NTPC can be classified into five broad categories.

1. Development of green belt around the plant: The green belt helps in reducing pollution by trapping particulate due to plant operations, reduce the noise level originating from running machines in the plant, acts as a carbon sink thereby reducing the temperature in the surrounding and improves the oxygen content of the atmosphere. Till date



NLRP Project near Narmada River



Greenbelt developed around NTPC project

all the running stations of NTPC have green belts and for new stations green belts are being developed.

2. Plantation by individual stations: In order to create additional carbon sinks in line with India's NDC-2030, NTPC has decided to plant 10 million trees from 2016 to 2026 with 1 million trees per year across India through different NTPC stations. Till date NTPC has done the plantation of more than 36 million since inception.
3. Distribution of fruit bearing trees to farmers and township residents by NTPC projects:
4. NTPC distributes small saplings of fruit bearing trees, flower trees and vegetable bearing plants to the local farmers and township residents. The aim is to encourage plantation by township residents and farmers in their individual land holdings. These trees are supplied free of cost to the farmers and the residents.
5. NTPC also encourages plantation of trees by its employees and their dependants during several occasions like World Environment day, birthday, marriage anniversary, superannuation day, etc.

Environment Training

We regularly conduct capacity building programs on Environment for our various stakeholders including employees, contract workforce, communities etc . The topic includes Waste management, water conservation, biodiversity protection etc. Total no. of trainings conducted in FY 2020-21 has been tabulated below:

Indicator	Units	FY 2020-21
Employees	Nos	3,053
Contractual Workers	Nos	3,912
Family of Employees	Nos	3,075

All NTPC stations have environmental cells and 26 NTPC stations are certified for ISO: 14001. The Environment Management Systems are regularly inspected/ audited internally as well as externally by Regulatory agencies such as SPCBs & CPCB, NGO and ISO certification agencies.

Our group companies NEEPCO & THDC undertook expenditure worth more than ₹ 60 lacs in FY 2020-21 for various Biodiversity initiatives.

Contact details of the persons for lodging grievance are displayed at the main entrance of the plant. The grievances are also maintained in the grievance book. Total 08 nos. grievances were received in reporting year. No significant fines and non-monetary sanctions were imposed during the FY 2020-21'.

NTPC is legally bound to comply the environmental laws and regulations formulated by the statutory agencies. Hence, the company is in a continuous process of 100% compliance with the techno-economically feasible engineering solutions to ensure compliances of any directives issued by regulators in a time bound manner.

Due to stringent environment norms, day-by-day company requires renovation & modernization (R&M) of pollution control technologies /devices of our old running units. Accordingly, NTPC is able to comply all the directives of legal authorities with the R&M activities.

HUMAN CAPITAL

Major Highlights of FY 2020-21

- 0.33 Man-MW Ratio achieved
- 17 hrs/ emp of Learning opportunities
- 1.3 Million man-hours of Safety Training
- ₹ 5953.93 Cr. spent on Employee Benefits
- 'Great Place to Work' for the 15th straight year by GPTW
- ₹ 18 Cr. spent on Training & development

> Continuing with our growth momentum, we have been allocating significant proportion of our financial resources to capex and also maintaining the diversity of deployment. Our focus on high capital productivity is unwavering and for that efficient operation and maintenance through intense deployment of digitalization, has been an important element of our strategy

Material Topic (s)
[1] [7] [19] [24]

NVGSEE Principles
[3] [5]



New Recruits at NTPC PMI

Related Sustainability Topics

- Attracting and retaining skilled and experienced employees
- Succession planning

Risks mapping:

- Attracting and retaining skilled and experienced employees
- Succession planning

Relevant GRI Indicators:

- 102-8
- 102-(18 to 34)
- 102-(35 to 39)
- 202-1
- 202-2
- 401-1
- 401-2
- 401-3
- 402-1
- 403-1
- 403-2
- 403-3
- 403-4
- 404-1
- 404-2
- 404-3
- 405-1
- 405-2
- 406-1
- 408-1
- 409-1
- 410-1
- 411-1
- 412-1
- 412-2
- 412-3
- G4-DMA
- EU15
- EU17
- EU18

Reference to Other Frameworks:

- IPIECA: HS1, HS2, HS3, HS5, SE8, SE10, SE15, SE16, SE17, SE18
- UNGC: 1, 2, 3, 4, 5, 6



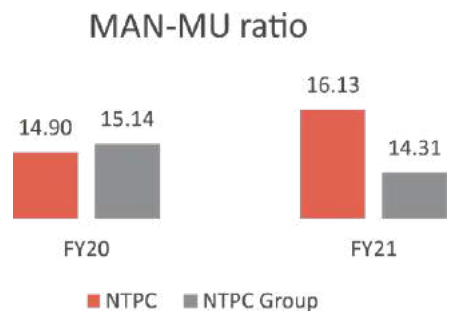
We take pride on our extremely talented team of committed professionals that has contributed their best to bring the Company to its present heights. NTPC has been able to induct, develop and retain the best talent and has ensured a very low attrition rate as compared to others in the sector. The HR vision of NTPC is "To enable its people to be a family of committed world class professionals, making NTPC a learning organisation." Our HR Systems is based on four pillars as depicted below.

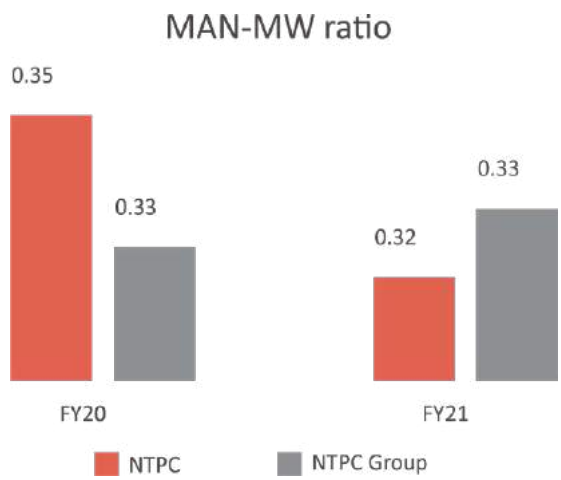


Over the years our strong values, commitment and focused systems have led us to receive various HR Awards by reputed institutions and consistently enabled us to feature among the "Great Places to Work For". Centre of excellence related to HR practices has been established at Simhadri and Unchahar stations.

About Workforce

Our highly qualified employees and motivated pool of employee are our core assets. Their effective management with high personnel engagement and employee productivity serves as competitive advantage to us contributing to the organisational growth. The commitment of our employees is reflected in terms of financial parameters such as sales per employee, value added per employee etc. We measure the productivity of our employees and man power planning and optimisation through Man-MW ratio, which is the ratio of employee strength and installed capacity and Man-MU ratio which is the ratio of employee strength and energy generated.







NTPC Workforce at Rammam



Smart Township at NTPC Solapur

We believe in workforce that represents a fusion of both experienced and young employees. From young professionals to proficient employees, members of different generations are aiding us further to grow and expand our business. There is representation of almost every state of India in NTPC's employee pool. The breakup of current workforce across NTPC by age group, gender and Community is provided below:

Permanent Employees

Employee Categories	Gender		Age			Community		
	Female	Male	Aged <30 years	Aged 30-50 years	Aged >50 years	Specially Abled	Reserved Category	Total
Top/ Senior management	13	507	0	2	518	0	51	520
Middle management	185	3,695	0	1,985	1,895	23	1,214	3,880
Lower/Junior management	703	8,411	877	5,448	2,789	173	4,365	9,114
Workmen	762	7,665	785	2,845	4,797	384	4,088	8,427
Total Permanent Employees	1,663	20,278	1,662	10,280	9,999	580	9,718	21,941

Contractual Employees

65	Fixed Term Employees (FTEs)
97442	Contractual Workers

Our turnover rate is very low and most employees chose a lifetime career with us. During FY 2020-21, our employee turnover rate was 0.37%.



Distribution of utensils to Contract Workers



Celebration of International Yoga Day

Employee Hired and Separated during FY 2020-21

Employee Categories	Joined		Separated	
	Gender		Gender	
	Female	Male	Female	Male
Top/ Senior management	0	0	0	0
Middle management	0	0	0	3
Lower/Junior management	35	217	9	38
Workmen	3	11	2	30
Total	**38**	**228**	**11**	**71**

Performance Management System

To incentivize our workforce for their contribution in the organizational growth, we have developed a dynamic PMS to assess the performance of our employees and reward them annually. As a part of performance management system, all executives receive performance feedback during mid-year review and final appraisal. The procedure for Promotion of executives to positions in next higher grades is on the basis of merit, efficiency, grade service and suitability.

Renumeration

The remuneration policies for all the executives are governed by the DPE,GoI Guidelines and there is no discrimination basis any criteria. NTPC complies with the Minimum Wages Act. The lowest wage of employee in NTPC is same across all locations of the company irrespective of the gender. The ratio of the annual total compensation for the organization's highest-paid individual to the median annual total compensation for all employees (excluding the highest-paid individual) is around 3.5.

Employee Categories	Unit	Ratio of basic salary of women to men	Ratio of total remuneration of women to men
Top/ Senior management	No.	1	1
Middle management	No.	1	1
Lower/Junior management	No.	1	1
Workmen	No.	1	1
Total Permanent Employees	No.	1	1

The minimum wage payment to the contractor workers bank account is also ensured by NTPC through proper verification of documents like payment sheets, PF deposit receipt etc. The remuneration policies for the highest governance body, executives and supervisors are in line with DPE guidelines.

The management approach on compensation and benefits is guided by beyond the government guidelines issued from time to time and complies statutory conditions.

Equal Opportunity, Diversity and Inclusion

At NTPC, we believe in employee diversity and have a strong and dedicated workforce having diverse talents, perspectives and

Special Recruitment Drive for Women

In FY 2020-21, NTPC launched special recruitment drive only for women executives across its areas of operations. We have started with 50 no. of vacancies. Additional incentives including waiving the application fee for women, paid parental leaves, maternity leave, sabbatical leave, NTPC special parental leave for surrogacy child adoption/childbirth are being given and adhered to, so that more number of women candidates apply for jobs and women representation increases in the workforce.

backgrounds. We recognise and respect the different cultures, national origins, races, religions and sexual orientations in the world, and among our people and do not discriminate any individual based on their religion, gender, caste or disabilities. Besides equal employment, the workforce is also entitled to the same benefits, training and skill enhancement programs. Men and women are treated at par in all respects.

Employee Benefits

At NTPC, for our full time employees we extend an entire gamut of benefits from paid childcare leave, comprehensive medical care, education, housing, social security to post-retirement medical benefits are extended to employees to meet any exigency that may arise in a person's life. The provision of sabbatical periods of maximum 5 years with assured return to employment have also been introduced.

Major Employee Benefits

1. Medical Treatment
2. Facilities of Higher Studies
3. Contribution Scheme for Post-Retirement Medical Facilities
4. Separation / Insurance Benefits
5. Loans and Advances

Paternity leaves are provided to both female and male employees. However, as per regulation, some additional benefits such as maternity leave, and special childcare leave of 2 years are provided to women employees.

In FY 2020-21, 664 male and 164 female candidates took parental leave. The return to work rate and retention rate both were 100%.

In reporting year, ₹ 5,953.93 Cr. were incurred on our employee benefits.

Benefit Plan Obligations

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. We pay fixed contribution to the provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The contributions to the fund for the year are recognized as expense and are charged to the profit or loss. Our obligation is to make such fixed contributions and to ensure a minimum rate of return to the members as specified by the Government of India.

The gratuity is funded by the Company and is managed by separate trust. Pension scheme at one of the taken over projects is also funded by NTPC and is managed by separate



trust. The Company has PRMS, under which retired employee and the spouse are provided medical facilities in the Company hospitals/empanelled hospitals.

As per the DPE guidelines, the company contributes upto 30% of Basic Pay plus DA as superannuation benefits towards Provident Fund (PF), Gratuity, Post-Retirement Medical Benefits and Pension of the employees. The employees contribute 12% of Basic Pay plus DA towards Provident Fund (PF) as per the EPF Act, 1% of Basic Pay plus DA towards the Pension Scheme of the company and PRMS Membership Fee Amount as per the PRMS Scheme of the company.

Employee - Management Relationship

At NTPC, respect for human rights, individual dignity and professional conduct is crucial for our operations. NTPC is committed to operate in a manner consistent with the United Nations (UN) Universal Declaration of Human Rights, the 10 UN Global Compact (UNGC) principles and the applicable International Labour Organisation (ILO) Core Conventions on Labour Standards. We conduct our business in an ethical manner where its workforce is appreciated and valued.

We respect the rights of our employees to freedom of association in accordance with applicable laws. All NTPC employees in the workman (non- executive) category have freedom to associate themselves with various unions to facilitate collective bargaining agreement.

The minimum notice period for significant operational changes like location transfer or termination/resignation from service varies between one to three months.

We also ensure safety of our employees at the workplace and strive to maintain a safe and secure culture for our women workforce. To this end, we have formed the Internal Complaints Committees at our operational locations where complaints against sexual harassment can be registered. This is supported by the Anti-Sexual Harassment Policy which ensures a free and fair enquiry process. During FY 2020-21, 2 cases of sexual harassment were reported, out of which all cases were resolved and the other no cases are under pending as on date.

For addressing the grievances of employees, NTPC has a time bound Grievance Redressal Mechanism for all employees at each project. The employee grievances are also captured through different forums like participative forums, communication meetings, employee organizational climate survey etc.



Mock drill for Emergency by our Security Personnel

NTPC adheres to statutory and regulatory requirements related to payment of wages and benefits. We ensure that there is no violation of the rights of employees and provides statutory benefits like Provident Fund and medical facilities.

Human Rights training

All employees and contractors are sensitised on Human Right related topics through structured training programmes.

NTPC Group	Man Hours
Employee Categories	FY 2020-21
Top/ Senior Management	474
Middle Management	4806
Lower/Junior Management	4232
Workmen	1266
Total Permanent Employees	10778

NTPC Group	% of Employee Trained
Employee Categories	FY 2020-21
Top/ Senior management	6%
Middle management	9.2%
Lower/Junior management	4.8%
Workmen	2.1%
Total Permanent Employees	4.5%

Adequate transparency is maintained with a focused approach on consultation and participation of external stakeholders especially with respect to Project Affected Families (PAF). Special provisions for vulnerable communities also find a mention in the relevant policies. In addition to individual benefits, a comprehensive community development plan is undertaken and implemented progressively. Institutional mechanisms are also in place for Grievance redressal. Human rights issues are adequately addressed to minimize any possibility of violation. Human rights clauses are included in all significant investment agreements and contracts.

NTPC regularly conducts monitoring of compliance with regulations as well as internal policies. During the reporting year, no complaints on Human Right related issues like child labour and forced labour at workplace were reported.

Security Practices

At NTPC, ensuring security for the workforce is our prime concern. We understand our responsibility for establishing and maintaining a secured working environment for all our installations, workforce, data and operations. This is being taken care of by deploying CISF at all units of NTPC as per norms of Ministry of Home Affairs. Similarly, ex-servicemen security agencies are deployed in the non-core areas in our sites like project townships, HQs, Offices etc. duly sponsored by the Directorate General of Resettlement, under Ministry of Defence, as per norms set by the DPE. GoI imparts training and refresher courses to these personnel in security systems and human rights aspects before their formal induction to the service.



Concrete steps are being taken for upgrading surveillance systems at all projects/ stations by installing state-of-the-art security systems.

At NTPC, we have introduced CLIMS (Contract Labour Information Management System), a biometric labour attendance system for contract labours. Besides improving security, this has helped in monitoring and execution of labour payments and benefits.

People before PLF

People before PLF (Plant Load Factor) has been the guiding philosophy behind the entire gamut of HR policies at NTPC. We value our employees and believe that the quality of benefits for our employees is one of the motivation factor in improving employee retention and enhancing their productivity.

At NTPC, regular feedback is taken from employees by conducting annual employee satisfaction surveys through external agencies. The satisfaction index for FY 2020-21 was 83%. The purpose is to seek employee feedback on various systems such as satisfaction w.r.t safety and security, grievance-handling mechanism, organization commitment, monetary benefits, job satisfaction, welfare facilities, recognition and appreciation among others. Through surveys, employee contribute towards improvement of various systems within organization by providing their valuable feedback.

With this perspective, we have introduced the work-from-home policy for our employees on pilot basis to increase employee motivation, convenience to work and better management of work-life balance.

Talent Management

At NTPC, we believe in holistic development of not just our product but also of our employees to give them an edge over others for their personal and professional growth. Given the global trend of increase in technology and innovation, it has always been important to us to nurture our employees for the global competence. We have been able to sustain emerging leadership through comprehensive learning and development programs. Our quest to keep the organization in tune with the emerging business is reflected in our new tag line for learning **"Learning at speed of business"**. During FY 2020-21, ₹ 18 Cr. were incurred as Training & development Expenditure on standalone basis.

Our commitment towards a dedicated and comprehensive learning approach is driven through:

- NTPC Power Management Institute (PMI), Apex L & D Centre at the corporate level
- 6 Regional Learning Institutes
- Employee Development Centers at each operating station

The effective chain of PMI, RLI and EDC's provided an effective learning grid to the employees.

Our collaborations for holistic development:

- ISHA Foundation
- Art of Living
- Swami Sukhbodhan
- Brahma Kumaris

The objective of this initiative is to create an environment where employees and their families are motivated to deliver excellence not just as a professional but also as a personal.

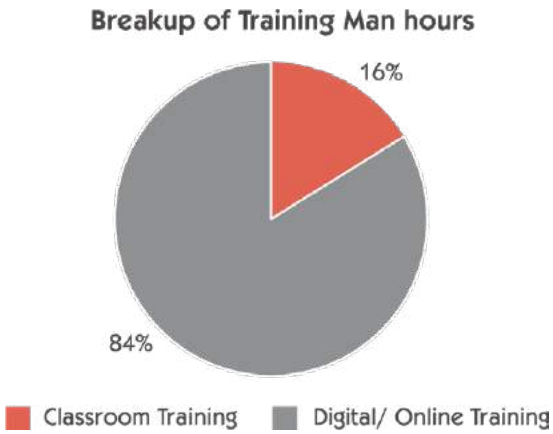
Employee Training

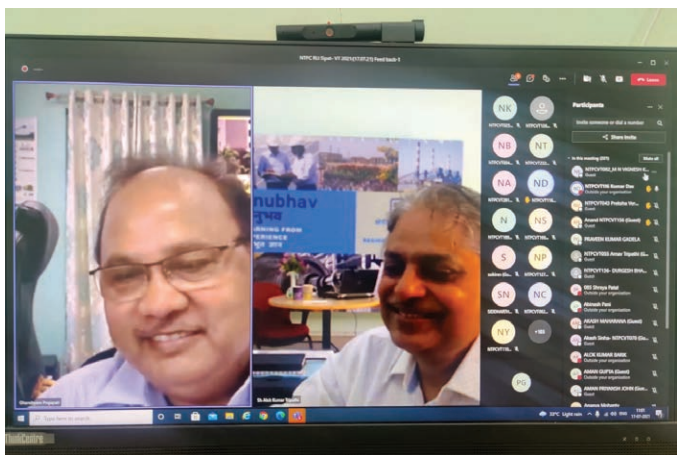
We also promote international training and development opportunities for our employees. We have partnered with several eminent international institutions like Harvard Business School, Wharton Business School etc. on various subjects matters.

	No. of employee trained		Man hours	
Employee Categories	Male	Female	Male	Female
Top/ Senior Management	502	12	15276	228
Middle Management	3038	73	110424	2664
Lower/Junior Management	6469	624	188964	18672
Workmen	2936	312	29868	3756
Total Permanent Employees	12945	1021	344532	25320

Training Modes

Due to the ongoing pandemic, maximum trainings were done through digital platforms.





Online Training for VTs by RLI Sipat

Training on different aspect

Type	% of employees attended training	
	FY 2019-20	FY 2020-21
Code of conduct/ethics	6.51%	4.48%
Environmental	2.57%	4.22%
Supply Chain	1.76%	7.59%

Programs for Skill Development

NTPC provides skill development trainings to its empoyees on regular basis. Programs for upgrading employee skills allow us to plan skills acquisition that equips our employees to meet strategic targets in a changing work environment. More skilled employees enhance our human capital and contribute to employee satisfaction, which correlates strongly with improved performance. For those facing retirement, confidence and quality of work relations is improved by the knowledge that they are supported in their transition from work to retirement. In FY 2020-21, 16680 employees attended 1312567 man-hours of skill development training.

Followings program were undertaken in FY 2020-21

- Skills Management and lifelong learning
- Advance Management Program
- Enhancing Managerial competence
- Foundation Course in General Management
- Health Care and Ergonomics
- Planning for superannuation
- Healthy Mind in a Healthy Body

New Initiatives in FY 2020-21

- GPi Learn platform is introduced to all O&M executives - video modules of basic engineering, technology, Operation and Maintenance practices and safety.
- Training system upgraded for capturing Level-3 feedback of Kirk-Patrik Learning Model
- Emerging Technologies courses were introduced through FutureSkills platform with the support of NASSCOM
- Virtual Reality(VR) modules developed and "Train the Trainer" programmes conducted.
- Training in progress for 3 Executive Trainees Batches.
- Online Holistic well being programs conducted for 7600 participants through Art of Living, Isha Foundation, Brahma kumaris and other external experts.
- Outsourced Operators training is introduced, at various RLIs. VR Welding simulator is commissioned at Sipat and trainings are being conducted
- Courses specifically designed and conducted for college students and certificates were issued after successful completion – RLI Sipat.
- New System of Assessment For Scheme tracing modules were incorporated in e-Guru platform for assessing Lateral Inductees
- Samarth Modules created and Training provided to all Non-O&M employees who were transferred into O&M
- 5 weeks tailor made Training Program provided for Lateral Entry Batch and Field Engineers. Coaching started for 8 BUH & 16 middle level executives.
- 6 months Professional Diploma in Public Procurement by World Bank in association with Indian Institute of Materials Management for C&M executives – 28 out of 31 participants certified.
- 2nd edition of "NTPC Women Leaders Annual Conclave" held.



Employees performing safety skit to promote safety at NTPC Unchahar

Health & Safety

We at NTPC are committed to provide a safe, healthy and hygienic work environment to all our employees and contract workers. Organizational safety is a part of our core values and we precisely inculcate safety awareness among our workforce. Striving for zero-incidence at our workplace, we have put in place a set of procedures and safety rules which is applicable to all plants and other locations which has to be mandatorily followed. 23 NTPC operating stations are ISO 45001 certified and 5 stations having OHSAS 18001 will migrate to ISO 45001 in due course. Also, baseline Audit for international level NOSA accreditation in Safety and Environment have been done at four NTPC stations.

Our robust occupational health and safety management system covers all of our operating stations and projects and 100% of the total workforce. Every year, internal safety audits by Safety Officers and external safety audits by reputed organizations are carried out as per statutory requirement for each Project/ Station.



NTPC Safety Policy

NTPC has made a policy commitment to comply with applicable legal and other safety and occupational health requirements that relate to its activities. This Element provides guidance on achieving and maintaining compliance to all legal, regulatory or other voluntary requirements for NTPC as a company or, the Project may need to or want to subscribe to.

Our safety manual is our major and comprehensive health and safety guide. It is a collection of information, instructions, policies, participative fora, safety checklist, statutory documents and procedures intended to ensure the safe operation of any tools, machinery, chemicals, as well as safe conduct in the workplace.



Mega Pep Talk and on the spot prize distribution to contract workers

Hazard Identification, Risk Assessment and Incident Investigation

All projects apply the process of safety risk management and deploy the controls that are necessary to reduce the risks of incidents. Both proactive and reactive processes are deployed in safety risk management. Proactive processes are put into practice for hazard identification and safety risk management. Reactive Process for hazard identification and safety risk management includes both formal and informal incident investigation results and using Incident Recall. The interlinked Safety Risk Management comprising of hazard identification, risks assessments, incidents analysis and incident recall is depicted below:



In accordance to our safety principals, we have developed a comprehensive and centralized Hazard Identification, Risk Assessment and Control (HIRAC) document for our Coal, Gas, and Hydro stations. Station-specific HIRAC documents are prepared to identify site-specific risks and control procedures. Strategy for safety implementation is made in the form of Operation Guidance Notes (OGNs), Local Management Instructions (LMIs), Job Safety Analysis (JSAs) and Disaster Management Plan (DMP).

An effort has been made to identify postulated hazards associated with the activities related to the power generation. To make a comprehensive hazard identification, input was taken from historical accident and incident data from different (Coal, gas and Hydro) stations. To enrich this exercise further data of other power utilities were also referred. The hierarchy of controls of hazards followed in preparing this document is elimination of hazard, substitution of hazard, engineering controls, administrative controls and PPEs in respective order. This document serves as overall input to the stations while preparing station specific HIRAC document. Also this is useful for capacity building of line executive or new entrants.

Incident Investigation

Our aim is to reach the target of zero injuries and incidents across all our operating stations. We have a formal process for investigation of all accidents to examine each case in details and depth to find out the causes of accidents, the extent of losses caused, the circumstances/individuals responsible and to obtain considered recommendations for prevention of recurrences in similar or related nature of accidents. Incident investigation is done as per 'Guidelines for Constitution of Enquiry Committees & Conduct of Enquiries' as per NTPC Safety Manual 2015.

NTPC Safety Framework

NTPC is implementing NTPC safety framework system as per its safety policy. This Framework is purposed to be the guidance document to the various functions and roles. It contains a set of expectations that ensure that all efforts are aligned with the overall policy and objectives of NTPC. The expectations are expressed broadly in the form of components – Safety Policy, Safety Risk Management, Safety Assurance and Safety Promotion. This Framework also covers functional implementation expectations:

- What the different functions & roles must do to implement a robust system and provides essential guidance?
- How it will be accomplished?

To facilitate such guidance, where required, components are divided into smaller elements and processes.

COMPONENT 1. SAFETY POLICY AND OBJECTIVES

The Chairman & Managing Director is responsible to issue and review the Safety Policy periodically with the objective to





Awareness Session During Electrical Safety Week

clearly state the Management's and the Company's policy on occupational health & safety. The Policy thus laid out, serves as the foundation for the NTPC Safety Framework, its Components and Elements. The Business unit, functional and individual employee goals and objectives are typically aligned to those of the overall organization.

COMPONENT 2. SAFETY RISK MANAGEMENT

The objective is to ensure that a formal system of hazard identification is in place so that the activity or, situation posing the risk may be avoided, accepted, reduced, shared or transferred, depending on the facts and circumstances.

COMPONENT 3. SAFETY ASSURANCE

The objective is to ensure that all projects comply with safety policy, rules, procedures, legal requirements in achieving safety targets and objectives, ensure continual improvement and effectiveness of implementation of the safety framework; through regular inspections, audits and reviews, in order to provide assurance that procedures are followed and appropriate controls are in place. Safety Assurance also includes Contractors and Contract Control to ensure Safety Policy objectives are achieved effectively.

COMPONENT 4. SAFETY PROMOTION

The objective is to promote Safety as a core value with practices that facilitate & support a sound safety culture. Elements of such promotion include communication, training & promotional activities.

Development of safety culture: Training and Information

We promote collaborative and participative approach by fostering employee participation, consultation, and communication on health and safety aspects. To be able to effectively carry forward and institutionalize such participatory approach across all levels and functions, training programs for our employees and contract workers are conducted on a regular basis.

Participative fora:

1. **Safety circle:**

   Safety circle is a small group of employees who regularly meet to identify, analyze and solve problems related to safety and health of work area, to which they belong. The basic idea behind safety circle is to fully develop the human capabilities of the employees in identification of hazards and to improve safety and health in the organization.

2. **Safety steward scheme:**

   This scheme involve shop floor Executives up to E5 level in safety promotional activities

3. **Safety Task force:**

   To involve Executives of various Departments of the Projects under construction stage, in implementation of safety standards, compliance of statutory requirements, promoting safety awareness, conducting safety audits, inspections etc. in order to make the construction activities free from hazards.

   Safety Task Force is to be constituted on weekly rotation basis for O & M area at each station. This safety task force should be given specific terms of reference along with powers to stop work in case of any unsafe item is detected. The members of the task force should be released from their regular duties and fully devoted to Safety for a week.



4. **Safety Committees:**

A safety committee has been set up consisting of equal numbers of representatives of workers and management to promote cooperation in maintaining proper health and safety at workplace. This is the apex safety committe in the plant and includes periodical review of safety measures taken.

Safety Trainings

Every year, concerted efforts are made to ensure that 80-90% of our workforce undergo such trainings. The training programs covers topics such as electrical safety, material handling, working at height, road safety, and chemical handling, etc. These topics relate to the key work-related hazards and risks for our business, apart from topics pertaining to general operations and best practices on occupational health and safety.

To imbibe emergency response procedures into our routine systems, we have successfully established NTPC Safety Academy at Unchahar, where our employees and stakeholders are provided hands-on training on safety and emergencies. A safety committee at each of our operating stations has been constituted as per the Factories Act.

Safety Training Topics	
Post Accident Management & Legal Implications	OHSAS / ISO 18001 Risk Assessment and Safety Audit
Safety in Construction and erection including electrical safety, scaffolding and working at heights.	Safety in storage, handling and use of Chlorine and other hazardous chemicals
Fire Safety	Disaster Management plan & Emergency Response Functions
Hazards identification in Power Station	First Aid
Working at height and falling objects	Safety in Elevators, lifts, hoists etc.
Transportation and Road Safety	Confined Space Entry Procedure
Electrical Safety	Work Permit Procedure



Rewards to safety conscious workers at NTPC Korba

Safety Trainings

Type	No. of Programmes		Man-Hours		No. of persons trained	
	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21
NTPC Employees	1,420	674	1,13,670	1,02,223	17,192	12,288
Contract Workers	5,865	7316	9,19,529	11,96,415	1,10,685	1,75,270
Total	7,285	7,990	10,33,199	12,98,638	1,27,877	1,87,558

Contractor Safety Programs

Safety is integrated in tender processes and the performance of companies is monitored both on a preliminary level, by means of the qualification system, and during contract execution through a large number of control processes and tools such as the Supplier/contractor Safety Performance evaluation criteria. Our Supplier/contractor Safety Performance evaluation contains following controls:

- Contractor safety assessment
- Contractor risk control
- Worker role competence

NTPC's CLIMS (Contract Labor Information Management System) through gate pass system is the criterion for entering at NTPC site.

- The contractor shall ensure that all personnel working at site must have a photo Identity card before they are engaged for any work and it should have properly mentioned details like validity, Category/designation and work area etc. This ID card should be issued only after ensuring their screening test, medical fitness and safety induction training. Id card gate pass shall be indicated with 3 nos. of offence marks. With each offence the gate pass of concerned workmen/ supervisor will be punched giving on the spot indication of persons indulging in unsafe actions.
- Drinking of Alcoholic beverages is strictly prohibited. Employees under the influence of any intoxicants, even to the slightest degree, shall not be permitted to remain at workplace. Each contractor should maintain 'breath analyzer' to determine the intoxicated workers at site.

In order to strengthen the existing Safety Rules for O&M/ Construction and Erection works and to create a safe environment during execution of works at various projects of NTPC, the following safety rules have been incorporated in Bidding Documents.

- Concerned site and the Contractor shall establish Site regulations setting out the rules to be observed in the execution of the Contract at the Site and shall comply therewith. The Contractor shall prepare and submit to the Employer, with a copy to the Project Manager, proposed Site regulations for the Employer's approval, which approval shall not be unreasonably withheld. Such Site regulations shall include, but shall not be limited to, rules in respect of security, safety of the Facilities including gate control, sanitation, medical care, and fire prevention.



Safety Officers Briefing to security (CISF) Personnel

- NTPC has formulated Safety Rules for Construction & Erection of Power Plants and is available in public domain. These Safety Rules lay down the safety requirements for safe execution of project activities, responsibilities of the Contractor, and all concerned involved in Construction and Erection. The Contractor, including his sub-contractors, while executing the Works, shall strictly comply with these Safety rules and statutory requirements (including amendments thereof), as applicable, in respect of safety of personnel, equipment and materials at site area under execution of the Contractor.
- The provisions pertaining to Penalty/Reward for Safety are specified in bidding document. A BOQ item namely '**Amount linked to Safety Aspects/ compliance to Safety Rules**' are specified in the Price Schedules wherein Contractor will be required to quote an amount subject to minimum percentage (as specified in the Bidding documents) of Service portion of Contract (i.e. Civil plus Installation/ Erection plus Structural Works). The aforesaid minimum percentage shall be specified by the Package Coordinator (C&M executive handling the Contract Package) based on the estimated value (without taxes and duties) of package as under:

Ensuring Safety in Supply cum Erection cum Civil Packages

Packages having estimated value (excluding taxes & duties)	Minimum percentage to be specified for Safety Aspects/ Compliance to Safety Rules
Supply cum Erection Packages	
More than ₹ 3,000 Cr.	1%
More than ₹1000 Cr. but less than or equal to ₹ 3,000 Cr.	1.5%
More than ₹ 500 Cr. but less than or equal to ₹ 1,000 Cr.	2 %
More than ₹ 100 Cr. but less than or equal to ₹ 500 Cr.	2.5%
Less than or equal to ₹ 100 Cr.	5%
Civil Packages/Services Contracts	
More than ₹100 Cr.	1%
Less than or equal to ₹ 100 Cr.	2%

Any violation of the contractual conditions in question will produce specific penalties up to termination of the contract and/or suspension of qualification. Dedicated guideline has been hosted at NTPC's tender website http://www.ntpctender.com.

Training for Contractors

Training programmes for contract employees are being conducted at all sites on regular basis covering all relevant topics on Occupational Health and Safety. The percentage of employees undergoing such trainings is 100% (approx.) in the reporting year. Recently corporate safety has developed standard safety induction training module for uniform implementation across NTPC. Safety induction training is must before issuing gate pass for plant entry. 16 Job specific training modules have been identified and being developed. Corporate safety is developing trainers on these modules from each project, so that further job specific training can be arranged at projects with a uniformity across NTPC. Safety pep-talk and tool box talks are provided to workers before start of the job by supervisor/engineer so that workers are made aware about the hazards involved in the job and preventions.

Workers Related Injuries

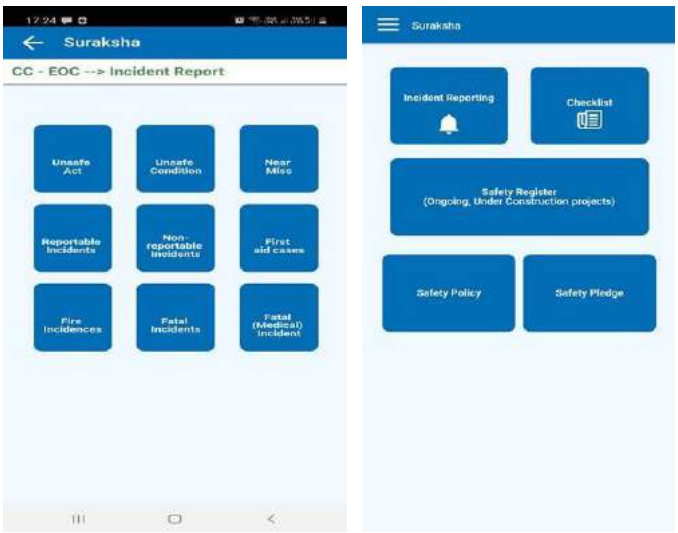
All work related injuries are reported as per the established system of accident reporting in the NTPC Safety manual. All incidents resulting into injury are investigated as per the established procedure in NTPC Safety manual. The gist of fatal accidents and reportable accidents are uploaded at Safety intranet. Details of the accident after investigation is shared through meetings (virtually/ physically) with all projects so that cause and recommendations can be communicated for timely action.

All work related injuries are also shared with senior persons in each project through mobile application for immediate corrective action if required. Our Safety MIS includes monitoring of following indicators:

Lead Indicators	Lag Indicators
Deviations	Fatal
SOV+CFTV+ZLSV	Fire Incidents
Near Miss	First-Aid
Training	Non-Reportable
Pep Talk	Reportable
Reward & Recognition	

NTPC Safety App: Suraksha

Corporate safety in association with Corporate IT has launched mobile app "Suraksha" which has a facility of reporting of work related injuries and incidents. Data of the app is fetched in SAP in real time basis. Capturing of latest data helps analysis of work related injuries and in taking corrective action to prevent their recurrence in NTPC. Till date more than 10000 employees have downloaded this app and using it for safety reporting and references.



Mobile Interface of NTPC Safety App

All work related injuries are analyzed through a software CPM-BI which helps in better understanding and presentation to employees at different levels.

The major hazards are fall from height, fall of material, road accident, hit by object and electrocution. Recommendations of accident enquiry committee are implemented at site to avoid recurrence of accident.

Health

Our NTPC hospitals provide round the clock service to our employees and their dependents across locations. We also have empaneled 250+ specialty and super specialty hospitals across approx. 25 cities/towns for providing specialist treatment to our employees. Ambulances equipped with Advanced Life Support systems are available at power plants to cater to medical emergencies. 100% preventive medical checkup is mandatory for all employees. Also, various lectures & camps are organized through specialists on medical & lifestyle regularly for greater awareness. The organization works for holistic welfare across physical, mental, and spiritual/purposeful wellbeing through conduction of several programs like Snehal, Kshitiz, Sparsh, etc. In this, we heal our people spiritually, Mentally and physically by organizing various programs involving yoga and meditation, therapies, and counseling. We organize different awareness programs to teach them work-life balance to generate healthy habits, ergonomics, etc. and we also ensure the involvement of our employees in such activities.

Occupational Health Services

Adequate medical facilities have been established at site as required under statutory provision like First aid centre, Ambulance room, OHC, qualified medical doctor etc. Medical examination of all the employees is conducted at regular intervals (1-3 years) and annually for those placed in hazardous areas. To minimize the risks, regular monitoring of the workplace for hazards like dust/coal dust, gas or vapor, illumination, noise- level is carried out and trend analysis is done. We also regularly hold awareness sessions for our employees and contract workers on industrial hazards, occupational diseases, lifestyle modifications etc.

Workers Related ill Health

No incident of work-related ill health or occupational disease case were recorded during the reporting year. Further, no legal cases or potential risks related to health and safety including diseases and judgments affecting members of the public were recorded.

Work place monitoring for work related ill health hazards like Dust/Coal dust , Gas or vapour, noise level etc. is done and record is maintained. Actions to mitigate these hazards are taken accordingly.

Emergencies Management

In line with our long-term goals, we have established effective engineering controls at all our stations to indicate and monitor emergency situations at our sites. Detailed emergency plans have been developed at all stations as per statutory provisions.

Responsibilities are assigned to all concerned to handle emergency situations. We conduct regular mock-drills at our



NTPC employees performing mock drill with NDRF Team (1/2)

stations to check the healthiness of the System and procedures. Observations/suggestions, pursuant to such drills are complied with. We regularly conduct awareness programs on disaster management plan through in-house and external expert faculties.

Safety Indicators: 2021 Performance

There is a robust incident reporting system across NTPC which is closely monitored in terms of Lead and Lag indicators. Since activities representing Lead indicators are proactive in nature, NTPC gives due importance in promoting such activities. They help in identifying potential hazard in terms of unsafe condition, unsafe act and further eliminating them. This gives the right input and direction to us in improving safety culture towards progressing to incident free work place.

Type	No. of Persons employed		Man hours		Reportable Incidents*				Total Man Days Lost	
					Fatal		Non-Fatal			
	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21
NTPC Employees	16,450	18,255	4,10,59,200	4,53,07,908	1	1	0	4	6,000	6,120
Contract Workers	90,847	97,442	22,67,54,112	24,28,15,807	17	6	63	20	1,03,421	37,335
Total	1,07,297	1,15,697	26,78,13,312	28,81,23,715	18	7	63	24	1,09,421	43,455

*Excludes under construction projects

Type	Freqency Rate (FR)*		Incident Rate (IR)		Injury Rate*	
	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21
NTPC Employees	0.024	0.110	0.061	0.274	0.005	0.022
Contract Workers	0.353	0.107	0.881	0.267	0.071	0.021
Total	0.302	0.108	0.755	0.268	0.060	0.022

*Rates calculated on 1,000,000 hours worked

Type	No. of Deviations		No. of Near Misses	
	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21
NTPC Employees + contact workers	1,02,835	90,303	731	1,397

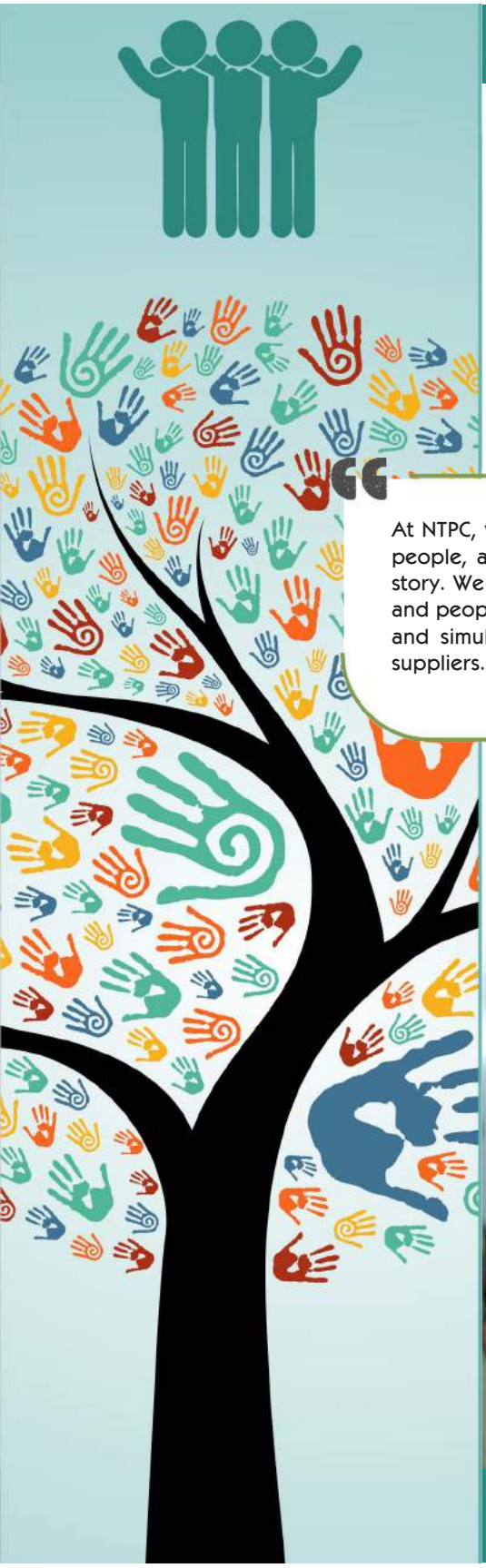
Type	No. of High Consequences Injuries*		Rate of High Consequences Injuries	
	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21
NTPC Employees	0	0	0	0
Contract Workers	0	0	0	0

*excluding fatalities



NTPC employees performing mock drill with NDRF Team (2/2)

Generating Power & Smiles 24x7 for the Nation



SOCIAL CAPITAL

Major Highlights of FY 2020-21

- Highest MSE procurement by NTPC amongst Maharatna PSUs
- 99% indigenous purchase in value
- 97% Customer Satisfaction Score
- 102% realization of current bills
- ₹ 461.96 Cr. spent during FY 2020-21 towards CSR activities
- 14 Lakh lives touched through CSR works

> At NTPC, we put our partnerships ahead of profits. We consider people, and not production as the corner-stone of our growth story. We work to ensure our progression remains people-driven and people-centric. We strive for equitable, inclusive, sustainable and simultaneous growth for our communities, customers and suppliers.

Material Topic(s)
[1] [4] [10] [14] [18] [19] [25]

NVGSEE Principles
[2] [4] [7] [8]



Social Capital

Related Sustainability Topics

- Ethics and Integrity
- Customer satisfaction and loyalty
- Indigenous people's rights
- Sustainable supply chain
- Disaster management
- Land acquisition
- Community engagement

Risks mapping:

- Regulatory & legal
- Safety, security of people and property
- Natural/ manmade disaster
- Sustaining realisation

Relevant GRI Indicators:

- 102-9
- 102-13
- 102-21
- 102-40,41,42, 43,44
- 203-2
- 204-1
- 205-1
- 205-2
- 205-3
- 206-1
- 308-1
- 308-2
- 407-1
- 413-1
- 413-2
- 414-1
- 414-2
- 415-1
- 416-1
- 416-2
- 417-2
- 417-3
- 418-1
- 419-1
- G4-DMA
- EU22
- EU25

Reference to Other Frameworks:

- IPIECA: HS4, SE1, SE2, SE3, SE4, SE5, SE6, SE7, SE9, SE13, SE14
- NVG Principle: 2,4,7,8
- WBCSD



At NTPC, we aim to create shared value and maximize it for all stakeholders*– shareholders, employees, customers, suppliers, regulators and the community. Our core values and transparent Corporate Governance practices help us in our endeavor to meet the expectations of our stakeholders.

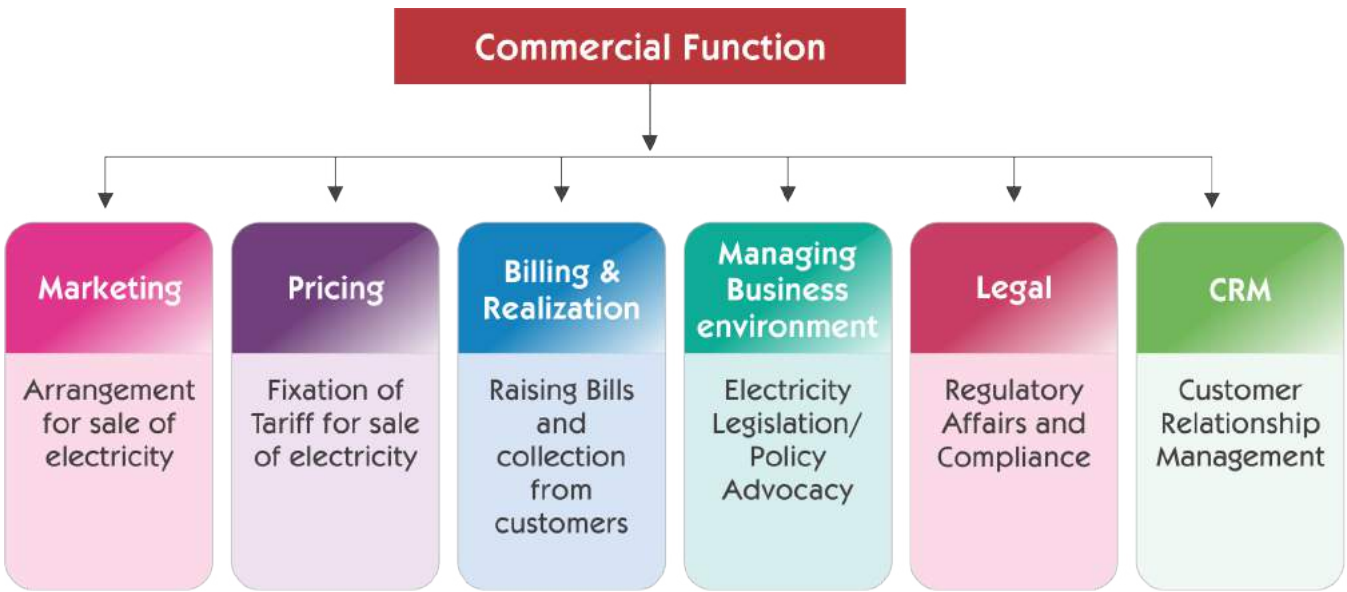
Our Finance, HR, Commercial, CSR, R&R, and C&M functions are at the forefront of our interactions with most stakeholders*. As a responsible corporate citizen, we incessantly endeavour towards creating synergistic and symbiotic value across our value chain to enhance our social, environmental and economic performance.

Our Customers

Customer engagement

Customer-centricity is one of the keystones of our business value chain. We value our relationship with the customers and recognize Customer Focus as one of our core values. We have an elaborate system of Customer Relationship Management (CRM), through which we reach out to our customers to collect their valuable feedback/experiences/expectations using regular structured interactions including support services and trainings. Our commercial department through the two tier structure is the interfacing department with our customers.

We have also put in place a Customer Satisfaction Index (CSI) survey system, to gather customer's feedback through a survey and respond to their requirements. As per the CSI survey conducted in FY 2020-21, 97% of our customers were satisfied and there were no such complaints from the customers. However, as part of the tariff determination process under the overall Regulatory System, different cases have been filed by NTPC against CERC/Customers or filed at the Appellate Tribunal/ Courts by different beneficiaries against NTPC/CERC. Total number of complaints against NTPC by SEBs in APTEL or court is 55 as on date. We are working diligently to meet the expectations of all the customers and aim to improve the score further.



Pillars of our Customer Relationship Management



Customer-centricity is one of the keystones of our business value chain. We value our relationship with the customers and recognize Customer Focus as one of our core values. We have an elaborate system of Customer Relationship Management (CRM), through which we reach out to our customers to collect their valuable feedback/ experiences/ expectations using regular structured interactions including support services and training. During FY 2020-21, we passed out COVID Rebate (₹1363 Cr.) & deferment of Fixed Charges (₹ 2147 Cr.) to the Discoms to mitigate hardship during lockdown. To help our customers, we have developed a portal for monitoring of the Merit Order violation and daily report launched in the digital mode, available in mobile also.

*Refer to pages 16-17 of this Report for specific details on stakeholder engagement.



Senior NTPC management at Customer meet of Western Region, Puri

Customer Data Privacy

NTPC maintains data pertaining to billing energy to Discoms / Customers which is the Energy supplied available from Monthly Regional Energy Accounts issued by RPC (available on website of RPC), tariff details of NTPC stations as determined by CERC and communication addresses of Discom Officials, which are already available on the websites of the Discoms and are in public domain. So there is no issue relating to privacy of data. Moreover, the energy bills are generated through ERP-SAP software by NTPC and delivered to the authorized person of Discom as per the Power Purchase PPA.

No complaints have been received concerning breaches of customer privacy, neither have any leaks, thefts, or losses of customer data been identified during FY 2020-21.

Health and safety impacts of our product

As a responsible power producer, we offer technical and managerial support services to our clients to the best of our capabilities, as required, even though we are not directly involved in the businesses of transmission and distribution. We offer various customer support activities in different areas, including health and safety aspects to the customers in the form of workshops and seminars.

We take due care in displaying safety instructions in the local languages. Electricity, our sole product cannot be labelled due to its intrinsic nature. However, NTPC has been complying with the Grid Code and Grid standard - national and international - wherever applicable.

No incidence of non-compliance with regulations and voluntary codes concerning the health and safety impacts of our product and services during their lifecycles was reported.

Marketing Strategy

Our marketing strategy is largely managed by our commercial function for power generation business and by consultancy and Business Development wing for other avenues. The Commercial department analyses the demand and supply situation in the region and markets the power from the new proposed projects.

We approach all state power distribution utilities of the region, for getting requisition of power from the new proposed station, based on which viability of the project is studied further. Based on the consent received, Power Purchase Agreements are signed with the state power utilities. Allocation of power from the new generating station to the respective willing customers (state utilities) is done by the Ministry of Power, Government of India.

Witnessing the rising demand for clean and sustainable energy, we have been investing and redirecting our strategy to provide renewable energy to interested customers. We are significantly reducing the dependency on coal and gas through renewable power infusion.

However, due to the recent thrust on renewable energy generation in the country, there is a probability of a reduction in scheduled generation from coal/gas plants due to renewable power infusion as a result of addition of renewable capacity, Renewable Power obligation and subdued demand of electricity. Our commercial function makes the un-requisitioned surplus power thereof available to interested consumers through Power Exchange or bilateral agreement. We have created an online portal with direct connectivity to customers/ beneficiaries and RLDC for ease of transactions.

During FY 2020-21, no non-compliance concerning marketing communications was reported.

Our Suppliers

NTPC business model consists of procuring physical assets, raw materials and services for our production processes and subsequent evacuation of power through our intermediate customer to the end-user. We are committed towards augmenting the supply chain sustainability and reducing negative externalities of business operations. We seek to institute triple bottom line approach in our value chain and encourage our supply chain partners to follow best environment, social and governance (ESG) practices in their business operations.

No. of suppliers (Total company wide)

Supplier Category	No.
Domestic	12,516
Foreign	3,857
Total	16,373

Vendor enlistment statistics

We have a process of on boarding for all the vendors through pre-qualification, which ensures vendor credentials and capability to execute assignments; adherence to health, safety and environment norms; and compliance with statutory requirements, including human rights. We measure the performance of the vendors and provide regular and transparent feedback for their improvement and development. The enlistment of vendors are done for a period of three years and the list of vendors is updated periodically to reflect the market scenario with regard to presence of vendors for material and services.

Vendors Enlistment Status

Groups	Total Applications Received	Total Vendors Enlisted
Material Enlistment Groups (MEG)	779	279
Contract Enlistment Groups (CEG)	3,296	781
Total	4,075	1,060

We believe in maintaining transparency in our procurement process. We have a dedicated Shared Services Centre (SSC) for procurement that provides a uniform platform for collating goods and services requirements of all plants and coordination with the suppliers/ contractors, resulting in benefits of economies of scales, more favourable conditions, and long term commitments. The platform provides better control and compliance with various policies and guidelines. Currently, there are 9 shared service centres catering to the procurements of over 30 of our sites. SSC has resulted in benefits of economies of scales, more favourable conditions, and long-term commitments.

As a result of the SSC, we are able to screen all our vendors on a continuous basis for any negative impacts on the environment, society or any potential human rights violations. Assessments are carried out through physical inspections as well. Only those suppliers that clear our screening process are pursued for any procurement opportunity. We maintain a policy of not engaging with/terminating business relationships with the suppliers who are unable to clear our screening process.

Human Rights provisions are built in our bidding documents for supply cum erection and civil packages invited on competitive bidding basis covering our suppliers and contractors. All our supply chain partners are committed to ensure that no instances of child labour or any form of forced or compulsory labour take place at any of our vendors' site locations. We have a defined set of policies and frameworks to ensure that no human rights of indigenous local communities are violated throughout our supply chain.

We practice a fair, equitable and transparent tendering procedure. We are also actively soliciting feedback from our vendors to continuously improve our vendor management systems for improved vendor relationships.

Following actions have been taken to adjust payment policies and procedures

1. NTPC has launched vendor payment portal for all the suppliers/contractors for bill tracking for the supply of goods and services rendered.
2. NTPC has now on-boarded all the three TReDS platforms approved by Reserve Bank of India. TReDS aims to provide liquidity to the MSME seller by the financiers present on the TReDS platform at very attractive interest rates, without a recourse, much before the due date of payment.
3. In line with Government of India's Digital India initiative, guidelines have been issued regarding implementation of 100 % digital invoice submission in NTPC

Indigenous focus

To encourage Indian bidders and suppliers, provisions regarding price preference and deemed export benefits are stipulated in the bidding documents as per the extant policy of Government of India. Our procurement process promotes indigenous goods, by giving preference based on domestic content in the procured goods*. We have been consistently able to maintain the value of our indigenous purchase at more than 96 % of the total purchase FY18 onwards.

NTPC is giving purchase preference to local suppliers / procurement from local suppliers in line with provisions of 'Public Procurement (Preference to Make in India), Order 2017' (PPP-MII Order) dated 15.06.2017 and its subsequent revisions issued by Department of Industrial Policy and Promotion (DIPP).

*We comply with the 'Public Procurement (Preference to Make in India), Order 2017'.



Vendor Meet organised during Vigilance Awareness Week at Meja

All operations based in India has been considered local and domestic vendors operating out of India as local vendors. Breakup of purchase orders placed in FY 2020-21 has been tabulated below:

FY	Indigenous (₹ Cr.)	Imported (₹ Cr.)
2020-21	34,378	434

We also give a preference to Project Affected Persons (PAPs) for award of petty contracts etc., for supplying goods and services

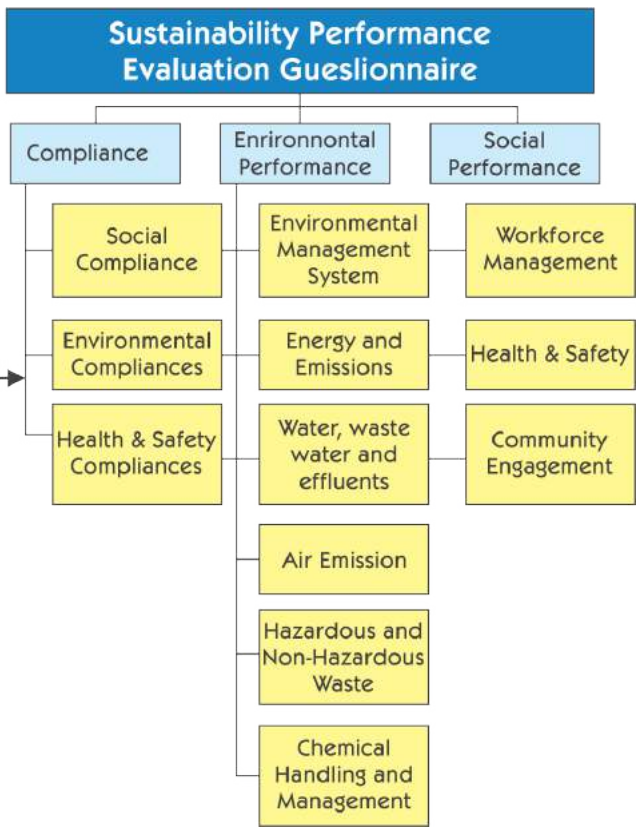
Sustainable Supply Chain

We are implementing Sustainable Supply Chain Management System through instituting Suppliers' Sustainability Performance assessment and Sustainable Supply Chain guidelines at NTPC with structured well-defined objective of assessing and mitigating supply chain risks.

For the assessment of suppliers w.r.t to various sustainability parameters a 'Sustainability Performance Evaluation framework'

Key features of Questionnaire

- Objective in nature
- Simplified language easy to understand
- Covers compliances, environmental performance and social performance
- Guidance notes provided to vendors
- Results into dashboard: provides snapshot of performance



(questionnaire) was developed in consultation with a third party. For the baseline assessment NTPC engaged with one of the big four consultants to assess the current Sustainability/ EHS practices of our suppliers. 30 critical suppliers in terms of volume of business, Criticality of Material Supplied, Diversity of Sectors etc. were selected and assessed for their sustainability performance in FY 2020-21. Key features and parameters of the Sustainability Performance Evaluation framework has been described as below:

As per our assessment, we found that our small category suppliers need maximum improvement in their social, environmental and compliance performance. Following this assessment, we organised two capacity building workshops covering more than 100 suppliers on Sustainable Supply Chain.

Salient Features of NTPC SSCM

1) Ensuring highest level of compliance to all applicable statutory and legal requirements across the supply chain and procurement practices;
2) Strengthening and maintaining robust health and safety management system in own and supplier managed operations;
3) Embedding transparent, ethical and fair procurement practices and providing equitable opportunity to our vendors;
4) Engaging positively with our suppliers to promote cost effective, resource efficient and environmentally and socially responsible business operations;
5) Fostering partnerships and collaborations with value chain partners to enhance quality and efficiency;
6) Nurturing and reinforcing a conducive work environment; adopting highest standards of human rights and labour practices;
7) Promoting diversity, inclusiveness and equality in workplace across supply chain;

MSME Statistics

We continue to promote procurement from MSEs, and our Public Procurement Policy defines an annual target for procurement from MSEs. To encourage participation in tender for local & small manufacturers including SMEs. The benefits include EMD exemption, tender document fee exemption, purchase preference of 15% and reservation of 385 items.

Procurement from MSEs

Period	Total Procurement (₹ Cr.)*	MSE%	SC/ ST%	Women%
FY 2018-19	4,072.58	37.59	0.62	0.10
FY 2019-20	3,608.21	46.22	0.42	0.18
FY 2020-21	6,975.38	51	0.22	0.39

*excluding OEM procurements



Online Vendor Development Program for Women & SC/ST Entrepreneurs (MSEs)

Over the years, we have witnessed a steady increase in our MSE procurement and as on date, there is no vendor complaint pending action at our end.

Vendor Development Programs (VDPs) for MSEs including Special vendor development Programs for Women and ST/SC MSE vendors are conducted every year. In FY 2020-21, NTPC Units organised 20 MSE Vendor Development Programs (VDPs), including 10 Special VDPs for SC/ST MSEs. NTPC also participated in various VDPs for MSEs organized by other CPSUs, Ministry (MSME), NSIC, FICCI, DICCI etc.

In addition to above, Pre-bid meetings and Pre NIT meetings with the prospective bidders are also held in case of procurements exceeding certain specified value or are critical in nature. These meeting provides prospective bidders a forum to raise queries in respect of bidding documents. Necessary clarifications are issued by NTPC to all the prospective bidders.

NTPC is committed towards providing necessary governance support and allocating required resources for organization wide implementation of Supply Chain Sustainability Policy.

Our Regulators & Compliance

Regulator engagement

Being a centralized institution, our policy framework is developed by the Government of India. We are governed and regulated by the Central Electricity Regulatory Commission (CERC). The CERC also determines the electricity tariffs for our stations. We discuss issues, opportunities, and policies for the simultaneous growth of our organization as well as the national economy through periodic regulators meets.

We are committed to comply with all regulatory compliances. In FY 2020-21 we have had no cases of fines, penalties and warning against us for non-compliance with government regulations.

Our management bodies ensure that our power distribution partners and clients follow and stand at par with our commitment toward sustainability.

Socio-Economic Compliance

No non-compliance with laws and/or regulations in the social and economic area were identified during FY 2020-21. There were no legal actions for anti-competitive behaviour, anti-trust, and monopoly practices in the reporting year.

Public Policy

We do not support, in cash or in-kind, any political party or their members and related institutions.

Our Communities

At NTPC, our operations also extend in the direction of creating societal value. Our spirit of caring and sharing is embedded in our vision and mission statement. As an organisation, NTPC owes its success to the people of India and strives to work for their sustainable development.

Our core organizational belief of changing lives and adding value to our communities is manifested through constant engagements with our communities across our geographic locations. Corporate Social Responsibility (CSR) has been synonymous with our core business. Our Resettlement & Rehabilitation (R&R) policy covers community development (CD) activities – which are initiated as soon as a project is conceived and thereafter, extensive community / peripheral development activities are taken up along with the project development.

Corporate Social Responsibility (CSR)

Our policy for CSR is in line with Companies Act 2013 and DPE Guidelines for CSR. It covers a wide range of activities including implementation of key programmes through NTPC Foundation.

CSR programs undertaken by Company include activities specified in Schedule VII of the Companies Act 2013 & rules made there under and any other activity for benefit of community at large. Focus areas of NTPC's CSR activities are Health, Sanitation, Safe Drinking Water and Education. However, company also takes up activities in the areas of Capacity Building of the youth, Women Empowerment, Social Infrastructure livelihood creation and support through innovative agriculture & livestock development, support to Physically Challenged Person (PCPs), and activities contributing towards Environment Sustainability.

Preference for CSR activities is being given to local areas around Company's operations, ensuring that majority CSR funds are spent for activities in local areas. However, considering Inclusive Growth & Environment Sustainability and to supplement Government effort, activities are also taken up anywhere in the country. During the year, our CSR initiatives were spread in 19 states Pan-India. Also, about 450 villages and more than 400 schools have been benefitted by NTPC's various CSR initiatives at different locations. NTPC's CSR initiatives have touched, in one way or the other, the lives of around 14 lakhs people, residing at remote locations.

We design and shortlist our CSR portfolio based on a participative, bottom-up and consultative process which includes consultations with various stakeholders – including Panchayat officials, District Administration, civil society, community members - including women representatives and representatives of backward communities, public representatives (elected/ nominated), Village Development Advisory Committee (VDAC) etc. We also conduct Need Assessment Surveys (NAS) every five years through reputed external agencies in consultation with local communities and institutions to design customized community development solutions through our CSR activities.

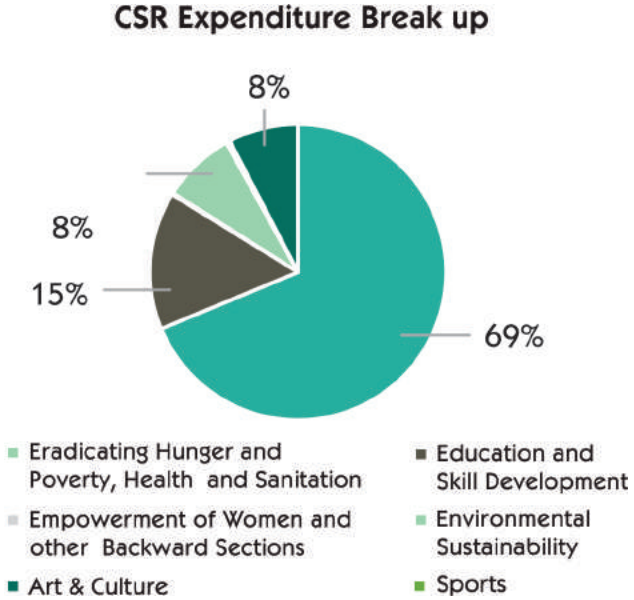
The effectiveness of CSR & Sustainable Development programme is assessed through both internal & external evaluations. NTPC conducts a third-party Social Impact assessment at every two-year for all its major CSR activities at various operating stations. During the Year 2020-21, NTPC has taken up Impact Evaluation at 05 stations. These studies which take Human Development Indicators as reference for measuring the impact have statistically demonstrated that the CSR interventions of the company are improving the lives of people. We have also established a formal local community grievance process.

We have a board level Corporate Social Responsibility and Sustainability Committee –to oversee the CSR activities. In FY 2020-21, we exceeded our minimal prescribed expenditure on CSR works and spent around ₹ 418.87 Cr. towards CSR initiatives on standalone basis. For group CSR activities amount spent was ₹ 461.96 Cr. Of the total CSR expenditure in FY 2020-21, over 84% was spent towards education and skill development; hunger & poverty, healthcare and sanitation.

This was in line with the priorities defined by the government. For detailed break-up of CSR Expenditure in various Thematic Areas please refer to below chart.

Expenditure in Thematic Areas of our CSR

One of our most prominent initiative is our Flagship Program Girl Empowerment Mission (GEM) targeted for the empowerment of the girl child wherein interventions were taken to make the girls self-reliant and confident in all walks of life. In FY 2020-21,



180 girl students were admitted to different NTPC Township Schools. These girls were selected from 1800 girl children who participated in 04 weeks residential summer workshops (FY 2019-20) in the age group of 10-12 years studying in Govt. schools in the vicinity of 23 NTPC Locations.

NTPC foundation

NTPC has also set up a Charitable Trust "NTPC Foundation" to take up projects & programs addressing niche domains of socio-economic concerns. The foundation is engaged in serving & empowering physically challenged and economically weaker section of the society. Its flagship programme i.e 'NTPC Utkarsh' - provides merit Scholarship for students to encourage and motivate students who are pursuing secondary, high school, engineering & medical science studies.. During the year 700 students have received the scholarships. Other activities taken up in FY 2020-21 are :

- Directly Observed Treatment cum Designated Microscopy Centre (DOTs cum DMC) with Mobile ambulance facilities being operated at 11 NTPC hospitals under Revised National Tuberculosis Control Programme (RNCTP) that cater to villages upto 25-30Km from NTPC stations and has benefited around about 4000 cases during the year through Screening for TB/HIV and treatment provided to patients diagnosed with TB/HIV.
- Disability Rehabilitation Centre (DRC) has been set up at NTPC Tanda, Rihand, Korba, Dadri, Bongaigaon and Farakka in collaboration with National Institute of Locomotor Disabilities(NILD) erstwhile National Institute for the Orthopedically Handicapped (NIOH), under the Ministry of Social Justice and Empowerment, Government of India. It has benefitted about 2900 physically challenged people with approximately 9300 Surgical corrections, serving aids & appliances during the year.
- Continued providing IT education to physically & visually challenged students through ICT Centre established at Devi Ahilyabai Vishwa Vidhyalaya, Indore.

SIGNIFICANT INDIRECT ECONOMIC IMPACTS

NTPC's efforts have contributed towards poverty alleviation and increase of per capita income in neighbourhood communities/ villages of NTPC projects. The Economic Development Index is much higher in these areas as compared to district and state level development. Most of the NTPC operations are located in very remote areas. Initially, these areas had very insignificant economic development. NTPC's intervention has improved the various facets of lives of the neighbourhood communities including village infrastructure, Education, Healthcare, Drinking water facilities, Roads, etc. All the facilities and assets provided/



Benficiary of NTPC Foundation Charity Program

created by NTPC are available to local community irrespective of their caste, creed, and income group. NTPC takes up special interventions for those who fall in low-income group category. Scholarships and support for vocational training are provided for education and skill upgradation. Healthcare facilities are provided by organizing free medical camps and village infrastructure are strengthened.

Mechanism to minimize and address grievances during the implementation of CSR activities

A consultative mechanism is constituted for participation of Stakeholders during the formulation and implementation of CSR activities in the periphery of the Project site in a defined geographic area. Participation of Panchayat, local community & local authorities is encouraged during planning, implementation & monitoring of CSR & Sustainability projects and their feedbacks are taken regarding acceptance, support & recognition of CSR initiatives. The key issues are addressed during consultations, periodic meetings and in implementation phase of CSR Projects wherein community feedback are received and addressed. The 3- tier institutional set up at Unit Level, Region Level & Corporate level is also available for facilitation of the process. This set up is further strengthened by hiring of Sociologists & other professionals, as per need and requirement of respective Projects, from time to time.

NTPC addresses grievance of Project Affected Villages/persons as per Policy provisions at the Station/Unit level. The Grievances received at Corporate Centre through MOP/ Individuals/ RTI etc. are responded appropriately by concerned Groups at NTPC.

The mechanism followed to minimize and address grievances during the implementation of CSR activities is as under:

Monitoring

- Ensures timely completion of activities to achieve deliverables.
- Regular reviews are done at Unit Level, wherein bottlenecks are identified and remedial measures are taken.
- Periodic MIS on status and issues of CSR & Sustainability activities is put up to appropriate level and intervention is sought wherever required. Regional level reviews facilitate senior management support.
- Review of companywide CSR & Sustainability activities and Budget utilization is done at Corporate level.

Evaluation

- Effectiveness of CSR & Sustainability Programme is assessed through both internal & external evaluations.
- Internal Audits are carried out to verify effectiveness of implementation.
- Social Impact Evaluation (SIEI) is done through credible External Agencies for gauging impact of CSR & Sustainability initiatives
- Finding of SIE form the basis for initiating corrective actions and formulating future schemes/ plans.

Reporting

- Our CSR & Sustainability activities are disseminated to the stakeholders through Company's Annual Report, Sustainability/ Business Responsibility Repots.
- Communication on progress of Global Compact by uploading on UNGC Website etc.
- These reports are uploaded on our website and are available to the public.

Our CSR repertoire for FY 2019-20 is presented on the table alongside.

Our CSR Repertoire, FY 2020-21

Education

- Construction of school & hostel for tribal children near NTPC Rihand, UP.
- Construction of school buildings at Varanasi UP, Hoshangabad, MP & Sambalpur, Odisha.
- Smart Tab labs in Government schools in vicinity of 03 NTPC Stations.
- Quality education primarily to rural community children through 34 schools located in NTPC townships.
- Setting up Library (Pustakalaya Project) in 10 Govt. Primary Schools of Arunachal Pradesh
- Development, Renovation and Advancement project of GHSS Munderi, District Kannur, Kerala
- Distribution of 2500 benches/desks in 50 Govt. schools in Supaul District of Bihar.
- Support to Shree Ramakrishna Ashrama, M. Rampur, Kalahandi for construction of an English Medium School and other assets.
- Supply of solar power, dual desk benches, play equipments in govt schools & distribution of uniforms, books, stationery, bags etc in about 400 schools benefitting about 1 lakh students around NTPC stations



Health

- Contribution of ₹ 250 Cr. to PM Cares Fund to support Government of India in its efforts to fight COVID-19.
- Support for procurement of items for COVID-19 Vaccination Program.
- Proactive relief measures like regular sanitization of villages, distribution of PPE kits to health professionals, distribution of face masks to villagers and supply of groceries to the community
- Setting up Burn Units at AIIMS Patna, AIIMS Bhubaneswar & King George Medical University Lucknow.
- Construction of Eye Hospital at Dadri, UP and of operating room complex at Eye hospital in Bhubaneswar.
- Mobile Health Clinics at various locations providing healthcare to underserved areas benefitting about 23,000 persons during the year.
- Creating infrastructure & support for equipment at National Cancer Institute Nagpur for cancer treatment.
- Support for construction and equipment's of 3rd Floor & diagnostic labs at National Cancer Institute Nagpur, Maharashtra.
- Support to L V Prasad Eye Institute for the construction of operating room complex at MTC Campus.
- Support for establishing Integrated Muscular Dystrophy Rehabilitation Centre "Manav Mandir" at Solan Himachal Pradesh
- Support for Ultraviolet based sanitization technology for PPE kits being developed by IIT Delhi & Chakr Innovation under NTPC CSR
- About 108 Medical Health check-up camps organized at various locations in vicinity of NTPC stations. More than 4700 surgeries for eye cataract, family planning and minor surgeries performed during these camps.



- Fogging, spraying, anti-larva spray were taken up for preventive health measures.
- Support for health related infrastructure to PHCs, CHCs and District Hospitals.
- Regular health related initiatives in the communities around NTPC stations benefitting about 340 villages and more than 4,00,000 individuals during the year.

Sanitation

- Revival and continuous operation of Mechanized Solid Waste Management plant at Karsada, UP.
- Construction of about 42 individual household toilets and community toilets taken up towards creation of an open defecation free society.
- In order to promote menstrual hygiene among girls, sanitary napkin vending machines and incinerators have been installed in a number of government schools and colleges and is benefiting a large number of female students.
- Developmental & beautification works at Charminar Hyderabad, under 'Swachh Iconic places Project' of Govt. of India.

Infrastructure strengthening

- Installation of about 230 Solar Street Lights in various districts of Madhya Pradesh, Uttar Pradesh & neighbourhood of NTPC stations in order to promote use of renewable energy.



- Regular infrastructure related CSR activities during 2020-21 in the villages around NTPC stations like construction of 06 Community Centres, installation of 23 High Mast Lights Street Lights, Construction & repair of roads in the villages and other infrastructural developmental activities at various locations.

Drinking water

- Installation of about 70 handpumps/ borewells and 15 RO plants/ Water ATMs at various locations near NTPC operations.



- Water supply through water tankers to inhabitants of nearby community during extreme summers
- Piped drinking water scheme
- Regular water related CSR activities around NTPC stations also covered close to 75 villages benefitting more than 11 lakh people
- Installation of 06 nos. e-Pios (RO systems) at various hospitals in Balasore, Odisha

Livelihood Generation & Vocational Training

- Adopted 18 Industrial Training Institutes (ITIs) and is setting up another 8 new ITIs to enhance employability



through vocational training, skill upgradation and income generation programs.

- Memorandum of Understanding (MoU) with National Skill Development Corporation (NSDC) & NSDF to develop the skills of 30000 youth over a period of 05 years spread in 12 states including 8,000 youth of Ladakh & J&K UT in order to make all of them self-employable.
- Capacity building of Farmers through livelihood support & imparting knowledge of innovative agriculture practices. Also setting up centres for Integrated Livestock Development benefitting more than 9000 persons in and around locations of NTPC Sipat & Ramagundam.



Women Empowerment

- Setting up 50 Sanitary Napkin Mini Manufacturing units (MMU) in the state of Odisha under "Stree Swabhiman" program.
- Sanitary napkin manufacturing units are set up at NTPC Sipat, Ramagundam, Tanda, Vindhyachal & Farakka. The product is distributed free of cost to the adolescent girls of Govt. schools
- More than 200 women have been imparted training in various vocational courses like sewing, beautician, food processing etc during the year for self-employability. Tool kits & sewing machines provided to the successful trainees.



Art and Culture & Sports

- Support to Archery Association of India for promotion of 'Archery' Sports for conducting National Archery Championships (NACs), National Ranking Archery Tournaments (NRATs) & to provide kits/apparels to Indian Archery teams for international participation.



- Creating additional facilities such as swimming pool etc. in "Multipurpose Sports Complex" (under construction) at Dharwad, Karnataka

Environmental Sustainability

- Installation of about 3700 Energy Efficient Pump Systems for borewells in various Districts of Uttar Pradesh and near NTPC stations in the field of farmers during last two years to swipe out the inefficiency in the agricultural pumping system and save electricity.
- Rejuvenation of village ponds & Creation of Rain Water Harvesting infrastructures
- 1.4 million trees planted
- ₹70 lacs spent for Narmada Landscape Restoration Project

Disaster Relief

- Support committed for Redevelopment of Kedarnath town, Uttrakhand and its surrounding areas devastated during natural calamity of year 2013
- Support in the relief activities during Amphan Cyclone

Heritage Conservation and Restoration

- Support for Preservation and conservation of 3 monuments (Group of Monuments, Mandu (Madhya Pradesh), Excavated site at Vikramshila (Bihar), and Archaeological site, Lalitgiri / Dhauli (Odisha) through Archaeological Survey of India (ASI) and National Culture Fund (NCF).



Resettlement & Rehabilitation (R&R)

We strive to avoid disagreements with our communities and address social issues at the exploratory stage of the projects itself. As a part of our decision-making process, we have developed an R&R policy. Our Resettlement & Rehabilitation (R&R) policy covers community development (CD) activities-which are initiated as soon as a project is conceived. The CD activities are also initiated under ICD (Initial Community Development) Policy. We are sensitive towards the needs and aspirations of the Project affected Persons (PAPs) and have always tried for the best possible R&R package. We have established Public Information Centres/ R&R Offices to disseminate useful information sought by the villagers. Other useful information is also communicated through notices, pamphlets, letters etc. In last 7 years upto FY 2020-21, ₹ 1782 Cr. worth of expenditure were incurred towards Community Development (CD) work for R&R. Land compensation and R&R grants disbursement were in active mode mainly in Darlipali, Lara, Tanda-II, North Karanpura Thermal Power Projects and Pakri-Barwadih, Kerandari, Dulanga and Talaipalli Coal mining projects in FY 2020-21.

Salient Features of our R&R efforts

Minimize R&R issues

Minimize R&R issues proactively at the time of projects exploration itself & other adequate relocation. Redesigning layout to avoid acquisition of homesteads to the extent possible as also minimizing the acquisition of agricultural land, optimization of plant layout and reduction in land requirement, etc. However, in case the physical displacement is absolutely necessary, we remain committed to their adequate relocation and minimization of the transition period & consequent impacts.

Grievance Redressal System

We have a Grievance Redressal System for grievance of PAPs at our projects. We have also set up dedicated R&R groups which operate at Projects, Regional Headquarters and the Corporate Centre. Further grievances are also received through RTI which are answered in time-bound manner. As a result of our efforts, no significant actual and potential negative impacts on local communities were identified/ reported, and no grievances about impacts on society were filed during the reporting period. Further no incidents of violations involving rights of indigenous peoples.

For more details on R&R system, polices and frameworks, NTPC website can be accessed.

R&R Policy 2017

Our new R&R Policy guides our actions. The Policy is in line with 'The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013', and mandates minimum R&R entitlements and compensation to be fulfilled. The Act provides for mandatorily studying the impacts of proposed land acquisition and subsequently formulating a Social Impact Mitigation Plan so as to make an assessment if the Project serves the public purpose, prior to initial notification for land acquisition by Appropriate Authority.

Packages for Projects Affected Persons

We have always tried for the best possible R&R Package for Project Affected Families (PAFs). All PAFs, as per categorization, eligibility and policy provisions are compensated for the loss of their assets and livelihood with the aim to help them regain at least their previous standard of living.

Initial Community Development (ICD) Policy

We initiate actions in line with our 'Initial Community Development (ICD) Policy, soon after land and water commitments are received from the respective State Governments for setting up a project. We also conduct Social Impact Evaluation (SIE) through professional agencies on the basis of which R&R implementation plans are assessed.

Comprehensive Community Development Plan

We formulate a comprehensive Community Development Plan in consultation with the relevant stakeholders and District administration that encompasses key development activities, welfare etc in the periphery of the project site. To facilitate effective participation, consultation and transparency with the stakeholders, we have set up Public Information Centres (PICs) and Village Development Advisory Committees (VDACs), or other similar participative mechanisms. We have a Stakeholder Engagement Policy for the continuous interaction with the neighboring communities.





Resettlement Colony of Darlipalli

Generating Power & Smiles 24x7 for the Nation

Our response to COVID-19

During the midst of the second wave of COVID-19 in the country, NTPC has been taking various steps, such as expansion of the existing capacity of its hospitals, and is also prepared to meet any such challenges in the future. In light of the recent increase in COVID-19 infections in India, NTPC has also adopted a number of initiatives to combat the spread of the virus

Care for People

Considering the grim situation of COVID-19 pandemic, we have taken extra care of our employees and also collaborated with the hospitals in big cities for the treatment of those in critical condition.

NTPC Medical Cell is constantly in touch with super-specialty hospitals across India and is doing its best to enable admission and ensure that appropriate care is delivered to critical patients amid the current crisis.



Airlift of Covid Patient

Ensured Business continuity

- SOPs for various functions/Areas such as Operation, Maintenance, Overhauling, and township and public places developed and adhered to in true spirit.
- Strict gate control for people coming from outside and mandatory isolation/quarantine.
- Awareness campaign and talks by experts such as doctors and public health experts for employees, family members, retired employees etc.
- Arrangement of shelter and food for essential contract labour.

Along with this we have also collaborated with the Apollo hospital and developed ten COVID hospitals of L3 level in our NTPC projects to cater the needs of the people during the pandemic. We also launched the **Kawach** scheme in collaboration with Apollo hospital wherein people with mild COVID symptoms are put under home isolation and are provided with consultation by Apollo hospitals and regular patient-doctor interaction via video conferencing is also available.

Creation of PAN NTPC Infrastructure for COVID:

- More than 1000 isolation beds created at all power stations and offices.
- 7 COVID Care centers in collaboration with Apollo were made operational and 3 new centers were also added in April.
- Total beds for COVID treatment increased from 192 to more than 1000 with 543 oxygen supported beds and 10 ICU beds

Besides, we also provided home isolation facilities for patients with mild symptoms in the NTPC township itself. Almost all hospitals of NTPC have developed inhouse COVID testing facilities. Most of the hospitals have developed oxygen beds and are successfully treating the employees and the community.

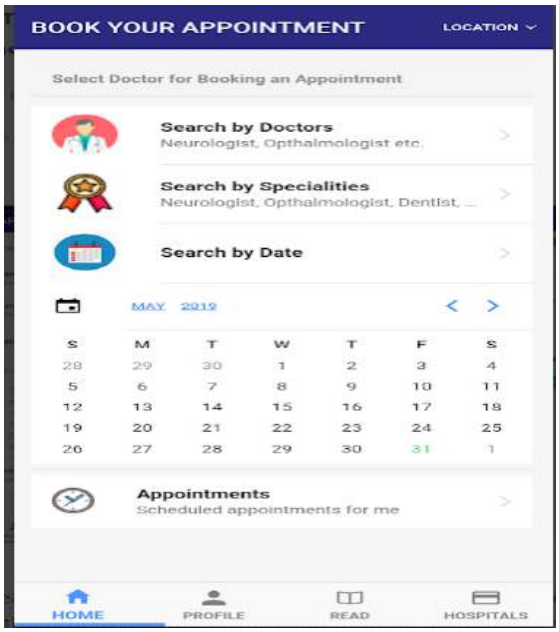
NTPC stations and project sites are extending support on a case-to-case basis by providing airlift on priority for critical cases.

A dedicated COVID-19 helpline number has been issued for both present and retired employees and also for their families, to provide them with necessary information on testing centres and probable treatment centres in government and NTPC-empanelled hospitals. All NTPC employees can seek assistance and support from the control room which is now operational 24X7.

Virtual consultations

NTPC has introduced its employees to use the e-Paramarsh application for telemedicine so that they can avoid going to hospitals and from getting exposed to the virus. Patients can register for online doctor consultations and get medicine prescriptions through e-Paramarsh.

NTPC has recently rolled out an initiative called "Telemedicine", under which the patients could consult with the specialists of reputed super-specialty hospitals through tele-video conferencing.



Interface of e-Paramarsh application for telemedicine

Care for Community

Being a responsible Corporate, NTPC took care of Indian citizens and community residing nearby our plants along with our employees amid the crisis. We extended all possible support and facilities to them.

A 500 bedded hospital, with state-of-the-art facility constructed by NTPC in Sundragarh, Odisha in a record time has been converted into a COVID hospital during the pandemic which is catering to lakhs of people in that area. Apart from providing various medical equipment, NTPC has augmented the facility by providing ventilators which helped in the treatment of many critical patients.

NTPC Darlipali is also providing assistance for setting up ICU beds in Jharsuguda.

The organization has also created oxygen supported beds, HDUs and ICUs in District hospital of Khargone, Madhya Pradesh. This facility at remote locations has come to the rescue of the public at large, saving many lives during the unprecedented crisis.

At Jharkhand, NTPC, Northkaranpura has provided financial assistance to set up ICU beds along with oxygen supply system at Community Health Centre, Tandwa, Dist.Chatra, Jharkhand. Apart from that, Pakri Barwadih, a mining project of NTPC at Hazaribagh, Jharkhand has made centralised medical gas pipeline system at RIMS, Ranchi and ITKETI, Ranchi and Hazaribagh Medical college which is supplying oxygen to more than 1000 beds. Many projects of NTPC are located in remote parts of the country and they have contributed in big way in developing and augmenting medical infrastructure in their vicinity.

Welfare

In addition, all NTPC stations have lend their hands in mass distribution of PPE Kits, masks, sanitisers, dry ration and other necessary items for community welfare. Also, NTPC projects in association with its CISF Fire wing are taking up mass sanitization programme in more than hundreds of villages and towns. The ladies' clubs of NTPC and NTPC employees NGO has also come forward and extended a helping hand to the society during the crisis.



Distribution of dry ration to the local people

Managing Oxygen Crisis

NTPC came forward and developed good number of Oxygen beds and isolation beds in its different projects and surroundings on war footing basis in a span of one week which proved to be life saviour for many including the general public. NTPC has been working in close coordination with the state and district administration and has augmented medical infrastructure even in remote locations.

Amidst the surge in COVID-19 cases specially in Delhi and NCR, NTPC stepped up its efforts and created oxygen supported



Oxygen Generation Plant installed by NTPC

beds and isolation beds in NCR alone which came as a big relief to Covid patients. This infrastructure in NCR which has been set up at Dadri, Noida and Badarpur has the facility of Oxygen support, COVID testing, invasive and non-invasive ventilators besides 24X7 nursing and medical care. NTPC has engaged sufficient numbers of doctors, paramedical and supporting staff and round the clock Oxygen supported Ambulances to manage this facility.

AVAILABILITY OF OXYGEN:

1. Industrial Cylinders from various plants were arranged on war footing basis and were filled up to cater to 96 oxygen supported beds as on date. Oxygen concentrators are being purchased on emergency basis.
2. 9 Oxygen pants are being set up in NCR for meeting oxygen requirement of NTPC COVID hospitals. (Each 5 NM3)
3. 2X50 NM3 Oxygen facility is being set-up at NETRA (Greater Noida)
4. 1X50 NM3 Oxygen facility being set-up at Vindhyachal.

Hospital Beds

Status of oxygen support beds and isolation beds at NCR:

Location	No. Of Beds
Oxygen Supported Beds	
Dadri	40
Badarpur	76
PMI	30
Isolation Beds	
NCR	140

During the ongoing crisis, various NTPC projects have provided more than 2000 Industrial cylinders to district administrations which are being converted and used as Medical Oxygen cylinders. Sensing the expected rise in demand for oxygen, which is the only life saver for the COVID patients, NTPC is playing a major role in creating infrastructure of oxygen generation across the country by setting up oxygen generation plants with some of them having the facility of bottling and refilling oxygen cylinders. Various locations where such plants are being set up include: Delhi NCR, Rihand, Unchahar in UP, Vinchyachal,

Gadarwara, Khargone in MP and Darlipali in Odisha. A PSA type Oxygen plant is being set up at CHC, Chhabra, Dist. Baran, Rajasthan too.

Doctors, Paramedics and Ambulances in NCR:

S.No	Classification	As on 01.03.2021	As on 12.05.2021
1	Doctors	04	39
2	Staff Nurse	16	74
3	Lab Technician	04	16
4	Ambulance	01	07

Vaccination Drives

OTHER MEASURES IN NCR:

1. 24X7 control room was also set up to facilitate employees and their family members infected with COVID to facilitate admission in various hospitals including Badarpur and Dadri COVID care centers.
2. Data base of eligible and willing plasma donors created to support the needy.
3. ePARAMARSH - Teleconsultation facilities on all days for employees and family members infected with COVID.
4. Teleconsultation facilities with specialist doctors for employees and family members of MOPs and power CPSUs.
5. 24 X 7 online Counselling program me for employees and their family members started w.e.f. 07.05.2021.

Vaccination drives are being arranged by respective project sites so that all the eligible employees and their family members get vaccinated. NTPC has started vaccinating people across its operations which include employees, their dependents and community people as well. Further, NTPC is not only targeting to vaccinate 100% of its employees, family members and associates but also has the plan to vaccinate people living in the surrounding. NTPC has collaborated with Apollo for providing vaccination at different locations.

VACCINATION

1. Mass Vaccination camps organized at various projects to ensure 100% vaccination of more than 45 years' employees.
2. 92% of 45 years and above employees (8354 out of 9122) have been vaccinated except those who are under infection and have recently recovered.
3. 100% front line workers have been vaccinated.
4. Vaccination camps for age group between 18-45 are being arranged pan NTPC.
5. Vaccination camps (18 to 45 years) for employees of MOP and power CPSUs of NCR organized on 05.05.2021/ 07.05.2021/ 08.05.2021/ 11.05.2021 in collaboration with Apollo.

Awareness Creation

NTPC has also collaborated with senior doctors from AIIMS, for the purpose of imparting education to its staff about various facts of COVID-19. Experienced medical professionals from AIIMS have communicated the important facts with all the employees and their family members through webinars which addressed coronavirus symptoms, along with the necessary proactive and reactive measures that can be taken to fight the menace.

Besides augmenting and strengthening the medical infrastructure across its operations, NTPC has also undertaken massive awareness drive to raise awareness among the communities about the second wave of COVID-19.

An initiative of mass campaign for COVID in Collaboration with SP, Singrauli has been undertaken with two dedicated Ambulances with the facility of Audio Visuals by NTPC Vindhyachal which has touched more than 5 lakhs beneficiaries in 300 villages.



Our frontline workers spreading community awareness about COVID

Intellectual Capital

Major Highlights of FY 2020-21

- 55 Patents filed by NTPC
- 10 NABL ISO 17025 accredited Labs under NETRA
- ₹ 199.34 Crore revenue from consultancy division
- ₹ 185.78 Crore expenditure towards R&D activities

Material Topics
[2] [14] [15] [18] [21]

UNGC Principle
[9]

"At NTPC, our research and development (R&D) initiatives are in sync with our overall business portfolio. As a leading player in the world energy sector, we recognize the need of adapting to emerging technologies and upgrading the technologies through R&D."



Related Sustainability Topics

- Quality Management
- Diversifications into other business avenues
- New technologies and digitization

Risks mapping:

- Develop technological solutions for efficient and low carbon intensive operation
- Breach of information security and Patent Infringements
- Transition risk of climate change for non-diversification

Relevant GRI Indicators:

- GRI 201-1
- G4 DMA

Reference to Other Frameworks:

- UNGC: 9



Research and Development

NTPC, fully recognizes R&D as the cornerstone of technological advancement. Therefore, R&D has been incorporated in the long-term vision and strategy for the benefit of the company and society. NTPC has been assigning more than 1% of PAT consistently for R&D related activities.

NTPC has always taken upon itself to incorporate innovative technologies to enhance the safety, reliability, and efficiency of power plants through a prudent mix of development, adoption, and adaption of frontier technologies. we are constantly making efforts to address the major concerns of the power sector - as well as exploring and tapping the potential opportunities available. Towards this direction, we established NTPC Energy Technology Research Alliance (NETRA) in 2009 as state-of-the-art center for research, technology development and scientific services. NETRA collaborates with leading institutes, technology players and service providers both at national and international level. A Research Advisory Council (RAC) comprising of eminent scientists and experts from India and abroad has been constituted to steer NETRA for high end research. In-house Scientific Advisory Council (SAC) has also been constituted to provide directions for improving plant performance & reducing cost of generation.

NETRA laboratories are ISO 17025 accredited and provide high end scientific services to all NTPC stations as well as many other utilities. NETRA NDT laboratory is also recognized as Remnant Life Assessment Organization under the Boiler Board Regulations, 1950. Total number of full time employees posted at NETRA as on date is 46.

R&D Expenditure

S.No	Description	Expenditure in (₹ in Cr.)	
		2019-20	2020-21
a)	Capital	48.97	24.44
b)	Revenue	134.36	161.34
c)	Total	183.33	185.78

Collaborations

1. Academia

IIT-Delhi, IIT –Bombay, IIT Madras, IIT –Kanpur, IIT – Kharagpur, IIT Dhanbad , IISc-Bangalore, TERI, RGIPT-Amethi

2. Research Institutions

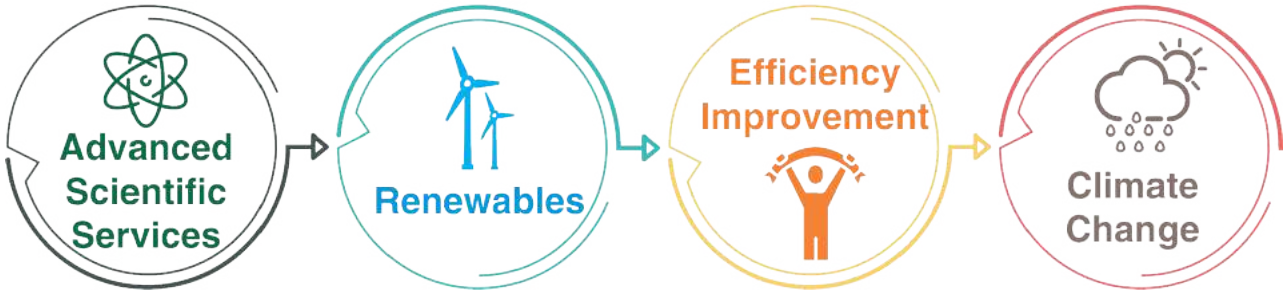
NETL-USA, Curtin University-Australia; Newcastle University-Australia, VGB-Germany, DLR / ISE-Germany, NML, CSIR lab's such as IIP- Dehradun, CMERI- Durgapur, CGCRI- Kolkata, CBRI-Roorkee

3. Industry Association

ONGC, IOCL, BHEL, IGCAR



NTPC NETRA at Greater Noida



Focus Areas

Patents and Copyrights

1. **Total number of Patents filed by NTPC: 55**

   Number of Granted Patents: 22

   Patents under process of Grant: 33

2. **Total Number of Copyrights filed: 11**

   Number of Granted Copyrights: 09

   Copyrights under process of Grant: 02

Specific projects under implementation:

Carbon capture and Utilization Technology

1. 10 TPD 'CO_2 to Methanol' Demo Plant at NTPC-Vindhyachal
2. Indigenous development of Catalyst & Reactor for conversion of CO_2 to Methanol in parallel

Hydrogen Technology

1. Development of Sea Water Electrolyzer for H2 Production
2. Development of Lab scale Reactor for production of Hydrogen through Photo-Electro-chemical process
3. Development of High Temperature Steam Electrolyze
4. Metal Hydride(MH) Based Static H_2 Compression (30-300 bar)
5. Green H_2 Grid based 25 kWe AC net X 18 hrs (off solar period) power generation system at NTPC NETRA

Water Technology

1. 240 TPD Non Thermal FO based high recovery system
2. Activated Filter Media Plant for STP treated water

Ash-Technology

1. Geo-polymeric concrete Road and Paver Blocks at various stations
2. Development of Angular Shaped Course Aggregates from Fly Ash
3. Development of Pond ash based Controlled Low Strength Setting Material (CLSM)

NETRA Green campus

1. RDF gasification-based net 400 kWe × 24 hrs power generation plant
2. 4MW Ground Mounted Solar Photo Voltaic System with Battery Storage

Other areas:

1. Low-Cost Housing demo project
2. Multi Utility Heat Pump for solarization projects (International Solar Alliance)
3. Solar Thermal Space heating solution for colder region
4. Flexibilization project for Reducing Technical Minimum to 40% for U#6 Dadri (2nd Phase)
5. Development of technology for Detection & Quantification of Exfoliation of Boiler Tube using Magnetic Coercive Force (MCF) and Ultrasonic Method

Apart from various projects NETRA also provided advanced scientific support to NTPC Stations and outside power utilities in various areas such as Non-Destructive Evaluation and Imaging, Metallurgy & Failure Analysis, CFD Services for process improvement Transformer, Generator Health, Creep & fatigue analysis, Corrosion & Water Chemistry, Coal & Combustion and Environment, etc.

Various institutional building activities such as training programs, workshops on various topics such as Advanced NDE & Metallurgy etc were conducted. NETRA journal, compendium of Metallurgy focused case studies, compendium on advance NDE methods and numerous research papers were published.

Benefits

NETRA has taken up major projects for addressing concerns such as environment and climate change, reliability and efficiency improvement, new and renewable energy etc.

NETRA has taken projects for reducing carbon footprints by means of carbon capture and utilization. 10 TPD CO2 to Methanol project is aimed at capturing CO2 from existing thermal plant and its utilization for production of valuable product such as Methanol. Work is going on for the indigenization of catalyst and reactor for conversion of CO2 to Methanol plant.

R&D, lab-scale and pilot-scale demonstration projects such as development of Sea water Electrolyser ,High Temperature steam electrolysers etc have been taken up for hydrogen technology. Continuous work is going on for the development of new products and processes for bulk Ash utilization and as a result novel technologies & products such as Geo Polymeric (GPC) Road, Geo polymeric Pavers & Tetrapod etc have been successfully developed and implemented.

Low cost housing demo units constructed at NETRA for demonstrating optimized design for low cost house. Work is in progress for development of multi utility heat pump an innovative energy efficient technology that can simultaneously generate multiple variants of cold and hot utilities. Upon successful development, this can be offered for implementation of solarization projects in member countries of ISA.

Project on Flexibilization of units for reducing technical minimum implemented at NTPC-Dadri. Majority of projects of NETRA involves development, implementation and demonstration of new technologies, so almost all projects mentioned in above section (Work carried out by NETRA in FY 2020-21) have technological trial component in it.

New Products Developed

Some of products developed in the last financial year are Solar Thermal Space heating solution for colder regions, Multi Utility Heat Pump, Low cost housing demo, Geo polymeric Paver blocks and underwater robotic system for inspection of CT basin, CW channel, etc.

Our Learning & Development Centre

NTPC runs a state-of-the-art Power Management Institute (PMI), an apex learning and development (L&D) centre, at NOIDA. The L&D centre of NTPC, is actively engaged in making our people future ready in terms of technology, business acumen and leadership. PMI also delivers programmes to Power Sector companies in the Gulf Counties at their locations and participants from South Asia, Gulf and African countries come to PMI for attending programmes.

PMI has the state-of-the-art physical and digital infrastructure to impart learning in world class ambience. The classrooms are equipped with modern facilities including smart boards, video conferencing and session-recording which supports contemporary pedagogy. PMI has covered 4,000 executives in management learning through HMM and 1000 in the power plant technical skills domain by licenses from General Physics (GPiLearn).

Various in-house e-platforms have been launched to provide access to diverse e-Learning resources to complement the learning to meet the unique learning needs across demographic spectrum of generations engaged at work place. An e-library of 25,000 e-books, 1,000,000 articles, reports and journals supports employees' knowledge up-gradation.

The L&D interventions are designed after a multidimensional 'Training Need Analysis' (TNA) for enhancing technical, functional, strategic and leadership skills with focus on business objectives of the Organization.



NTPC PMI, Apex L&D Institute

At NTPC, we are aware of pivotal role of effective leadership and to ensure continuity in leadership pipeline, 379 middle level executives were given rigorous inputs under 2 weeks strategic leadership development program (10X). The program is designed to equip the participants with ten strategic competencies to enable them to take leadership roles and strategic positions in the days to come.

We have aspiration of global growth and are conscious of the fact that the emerging business complexities would need global mindset and competence to lead across.

Further, NTPC promotes NTPC Education and Research society (NEARS) under which NTPC School of Business (NSB) provided two AICTE approved programmes namely, "Post Graduate Diploma in Management' (Executive) and 'Post Graduate Diploma in Management' (Energy Management) with academic support from IIM, Ahmedabad. The courses are designed to focus on energy management consolidates to deliver knowledge centered and value added academic and research enrichment services for sustainable development of Indian economy.

Our Consultancy Services

NTPC Consultancy offers services "From Concept to Commissioning and beyond" and undertakes consultancy and turnkey project contracts for domestic and international clients in different verticals of power sector. It is accredited with an ISO 9001:2008 certification and projects are related to engineering, project management, construction management, operation & maintenance of power plants, research & development, management consultancy, Contracts & Procurement, Renovation & Modernization, Quality & Inspection, Training & Development, Human Resource, IT, Solar & renewable power projects, compliance to Environmental norms for power stations etc.

Consultancy services are being provided in India and abroad viz. Gulf countries, Bangladesh, Myanmar, Mali, Togo, Malawi & other ISA Member countries. Around 130 assignments are currently under execution. Some of the major ongoing assignments are as follows:

- Project Management Consultancy (PMC) for implementation of (2X660MW) Khurja STPP of THDC and (2X660MW) Buxar TPP of SJVN.
- Post Award Review Engg. & Project Monitoring services at (1X660MW) Panki Extn.TPP, (2X660MW) Obra Extn. TPS & (2X660MW) Jawaharpur TPS of UPRVUNL.
- Commissioning support to UPRVUNL Harduaganj Extn -II (1x 660 MW).
- Engineering review of (2x20 MW) AFBC Unit of NSPCL Durgapur.
- Solar Projects:

International

- PMC of Dalwak in Dapaong (33 MWp) and in Mango (250 MW) in Savanes Region, Govt. of Togo.
- PMC of 500MW in The Republic of Mali
- PMC of 100MW in Malawi.

Domestic

- PMC of 50MW Solar project of NCL (Northern Coalfields Ltd)
- DPR of 1200MW Solar projects of THDC
- 24 Consultancy Assignments pertaining to compliance of new environment norms through implementation of FGD, Combustion modification, ESP R&M etc. are under various stages of implementation.

NTPC- Consultancy clientele includes Govt. organizations such as UPRVUNL, APGENCO, CSPGCL, HPGCL, DVC, PSPCL, OCPL, JPVL, NALCO, Haldia Energy, NLC, PFC, CCL, SCCL, Pollution control Boards, WBPDCL, KPCL, Joint Venture companies of NTPC and member countries of International Solar Alliance (ISA).

Highlights of FY 2020-21

- NTPC- Consultancy received orders worth ₹ 266.66 Cr. during FY 2020-21, which includes orders worth ₹ 200 Cr. for implementation of solar projects.
- In first of its kind consultancy project, NTPC-Consultancy prepared Feasibility report for utilizing waste flue gas heat for air-conditioning at BPCL's Cochin refinery.
- NTPC is working as Project Management consultant (PMC) for implementation of solarization projects in 47 Least Developed Countries (LDC) and Small Island Developing States (SIDS) member countries of ISA.
- NTPC- Consultancy is looking ahead for future business opportunities in areas such as Complete O&M of thermal power plants, Solar & Renewable power projects, Owner's Engineer for major power projects, PMC for implementation of new environmental norms e.g FGD, ZLD, DNOx & ESP R&M, IT services e.g. ERP implementation, PRADIP, Dreams 2.0, PI systems, etc.

Business Development

To maximize our geostrategic reach, we are actively looking at business opportunities overseas. Our recent joint venture with Bangladesh Power Development Board (BPDB), called Bangladesh India Friendship Power Company Limited (BIFPCL) and opening of an International office in Myanmar are some of the notable steps in the same direction.



Maitree Super Thermal Power Project, Rampal, Bangladesh

NTPC has been awarded the project management consultancy contract for the development of 500 megawatt (MW) solar park in the Republic of Mali. Also, Republic of Togo had engaged NTPC for development of 285-MW solar park. NTPC plans to anchor 10,000 MW of solar parks in ISA member countries in the next two years. Besides, we are also actively looking at other Middle-East and the African continent for business opportunities.

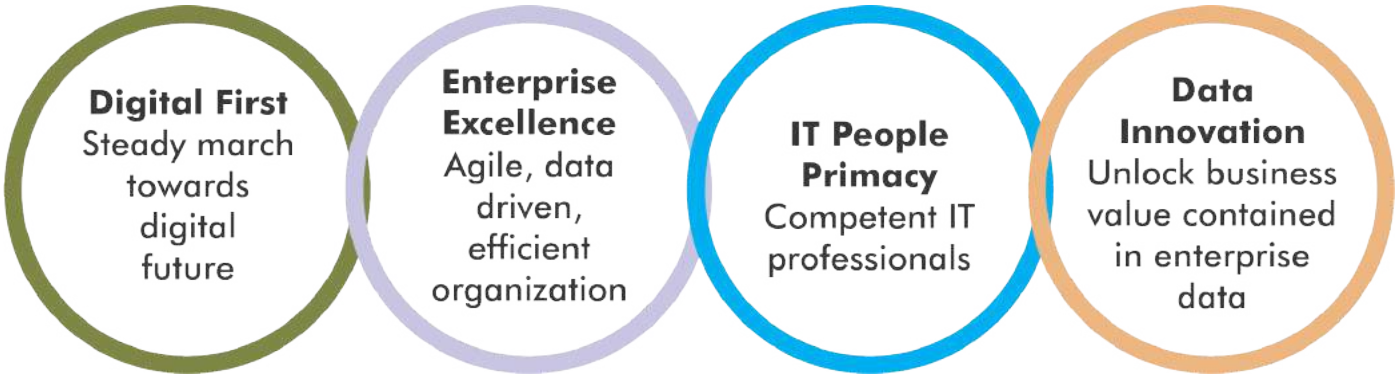
We are actively looking for suitable opportunities for acquisition of stressed power projects subject to techno-commercial viability. NTPC has submitted Resolution Plan for possible acquisition of Jhabua Power Limited (under NCLT) having 600 MW Coal based thermal power plant in the Seoni district of Madhya Pradesh.

In line with the growth strategy, we are planning to make a foray into Hydrogen Economy & Battery storage supported by R&D and collaboration with technology partners and research institutes, exploring business opportunities for setting up Industrial Park at NTPC Power Stations, setting up of CO2 to Methanol production in NTPC plants etc.

Digitalisation at NTPC

NTPC recognizes the fact that digitalization and AI is pivotal to its business model for strengtheing its current system and provide new revenue and value-producing opportunities given the uncertainties and dynamisms in power sector. NTPC has developed its IT strategy focused on four strategic theme in line with its Corporate Plan-2032. This has been done to align NTPC IT with the emerging IT trends amid increasing influence of digitalization in power sector. With the new digital initiatives underway, NTPC will be a fully digitalized organization for its core and non-core functions and will also act as a role model for others in the industry.

Information security strategy and policies approved by the management have been implemented at all locations along with a well-documented BCP (Business continuity Plan) in place. Data Centre (DC) is operational at NOIDA and Disaster Recovery Centre (DRC) is operational at Hyderabad. NTPC's data centers at Noida and Hyderabad are ISO 27001 certified for security compliance. Asynch data replication is being carried out between the both data centers with a permissible RPO of 15 Mins. DR, Hyderabad is 100% replica of DC, Noida with full redundancy. Switch over/ switch back of SAP operations from DC to DRC carried out periodically as a preparedness to ensure business continuity in case of contingency. Once in a year the drill of switch over / switch back drill is carried out. The company has not experienced breaches of information security or other cybersecurity incidents over the past three years.



Strategic Themes

Expenditure on IT/ Digitalization

Our IT Strategy aims to achieve 100% Paperless Office, Data Analytics for decision making, induction of new technology such as IIOT, AI, Machine learning etc. over next 2 years.

	FY 2019-20	FY 2020-21
Expenditure	₹ 200 Cr.	₹ 241 Cr.

In addition Corporate IT also had ₹90 cr revenue budget for IT communication related services. Further, in line with the "Digital India" initiative of GoI, NTPC has taken measures towards digitization by implementation of various initiatives like:

- Successful implementation of "Project PRADIP" for digitization of documents and paperless processes. This initiative has not only helped us in saving tons of paper but also resulted in faster decision making, transparency and improved efficiency.
- We have implemented Enterprise Resource Planning (ERP) application to integrate all our business functions. SAP R/3 ERP system has been implemented for all business areas of NTPC encompassing . This is the life line of NTPC business system. Efforts are underway to upgrade SAP ERP system to the latest version and to move to cloud platform to host non-critical applications. Parallely, the possibility for hosting an own public cloud as a commercial venture at one or two plant locations is also being explored.
- Non-ERP web based applications have been developed for areas such as Engineering Drawings approval, Quality Control Management, Hospital Management, Labour Management, Transit Camp Management, RTI, Security Control etc.
- Security –A 24x7 Security Operation Centre (SOC) is in operation to monitor all external and internal data traffic using latest tools through SOC and latest threat management tools to prevent any cyber-attack or data theft.
- As part of virtual office, employees are increasingly enabled to work from anywhere
- IT & OT integration – OSI PI System (Data Historian) has been implemented as a bridge between the IT and OT systems to enable generation & process data analysis for business decisions.
- Various web and mobile based applications have been launched by us such as Coal Monitoring Portal, Ash Management Portal, CPSE Conclave action points monitoring portal etc. to take care of requirements of various internal departments and Ministry of Power.
- The entire office work in NTPC is carried out in virtual mode. All reviews, meetings, interviews, seminars, trainings etc are conducted through MS Teams. Further features of M 365 such as one drive, MS exchange mail, power BI etc are being rolled out to give a seamless connectivity with office desktop and home laptop. Mobile apps are made available for all important applications.
- Safety being an important area, a dedicated safety app was launched wherein any one can report a safety incident with photograph. It automatically creates notification in the ERP system so that the concerned section gets alert to take appropriate corrective/preventive actions.
- Hospital Management System and HR shared service system was web enabled. This enabled employees to interact with doctors from remote and also avail HR services from home.
- All internal communications are done through digital mode. Samvaad and Sampark are two mobile apps - employees cannot afford to skip even for a day. All employees' related processes including claims, travel booking, appraisals, and asset buyback are done online with tracking facility.
- Further to facilitate WFH on critical applications not hosted on intranet VPN access has been provided to all required executives. Notifications and alerts are made to employees on all important official events/transactions so that delay is avoided.
- All the emerging new digital technologies such as AI/ ML, RPA, AR/VR, RFID etc. have made their foot print in

NTPC. Multiple AI/ML based projects are being undertaken in the core O&M areas with the aim of improving reliability and availability of units. Repetitive and labor intensive works in areas such as commercial billing process has been automated though Robotic Process Automation. A dedicated team has been recently trained in AI/ML by IIT Kanpur to take up identified projects internally. An internal team has made significant process in demand prediction using past data and suitable algorithm. A pilot project of RFID based store management is nearing completion at Simhadri.

- NTPC is one of the few utilities using a real time historian to capture real time process parameters across the board for its monitoring, analysis and alerts at multiple levels and at different locations. A centralized control room displays real time process parameters of all units and its analysis to help experts take timely technical decision, especially during unit startups. A Centralized Water Dashboard has been recently developed to monitor in real time the Water consumption across all power stations in NTPC.
- Drone based video analytics for monitoring and decision making is another area where IT is now concentrating. 9 use cases have been identified and discussion with vendors completed. A pilot for the selected cases is being finalized with vendors.
- Renewable Energy is an important portfolio of NTPC. Far flung and distributed, its performance monitoring is a difficult task. Using the real time historian facility as mentioned above, we have developed a centralized dashboard for monitoring real time performance of our solar and wind projects.
- Telemedicine has been enabled in remote projects so that patients at these projects can consult Specialist Doctors at other NTPC / Private Hospitals.

Cyber security is given utmost importance to ensure data security. Periodic audits of the network are conducted through CERTIN certified agencies to identify vulnerabilities and they are plugged immediately. We also interact with IB on cyber security related matters and their advice and recommendations are complied with.

Case Study: Strong IT infra backed NTPC's efforts in ensuring 24X 7 power amidst COVID

The sudden strike of the COVID pandemic in Mar'20 posed a major challenge to NTPC, the largest power producer of India to continue its power generation. The lockdown was imposed in Mar'20 and movement of work force, consumables and spares became highly restricted. Electricity being the essential item – NTPC had onus of 24x7 generation in a seamless way. While our operation and maintenance staff were able to attend the plants in normal way as most of NTPC plants are located in remote areas but supporting them with fuel, spares and timely coordination became a challenge. Fortunately, NTPC had implemented a number of digital initiatives to work in digital mode. Some of the remaining steps were completed on war footing to allow employees and vendors to work in 100% online mode. The employees in service departments were enabled to work from home. All the meetings were carried out in virtual mode.

NTPC Ltd managed to carry out its normal business activities during the COVID-19 imposed lock down with the help of digital intervention in all areas. The entire purchase requisition to payment processes have been digitalized with no paper movement in between. All internal approvals are made through e-office. With the help of these digitalization initiatives, NTPC could move to Shared Service Model for all our procurements. NTPC is now moving towards Unified Shared Service model .IT and automation is the basic pillar on which this is based upon.

Vendors have been on-boarded on our PRADIP (PRoActive Digital Initiative for Paperless office) portal to submit their digital invoice and then to track it till payment is made. Also details of payment / deduction is shared automatically on vendor's registered email, thus increasing transparency and accountability. To further help Vendors, a Chatbot (NISHA) has been implemented within the Portal. Procurements are done through GEPNIC and GEM portals and these are integrated with our ERP system for data flow in either direction. To help our other customers such as ash & scraps buyers who use our machinery on rent basis etc, a payment portal is available so that they can make payments due digitally. Further sundry payments for accommodation, hospital charges etc can also be made by vendors through mobile apps such as PayTM. To help MSME vendors to avail advance payment from banks against delivery of items, NTPC has integrated RXIL, Invoice mart with our ERP system. A separate portal along with mobile app was launched to help customers get information about ash availability and other related details in power plants and to book their consignments accordingly.

Awards and Achievements



Gold Award for Enviroment Impact Award Initiatives

NTPC has been conferred "Gold award in Environment Impact Initiative" in 5th CSR Health Impact Award 2021 for " Revival of Municipal Solid Waste Plant, Karsada, Varanasi" by Integrated Health And Wellbeing (IHW) Council. The Award function was conducted online on 15.07.2021.



NTPC wins CII-ITC Sustainability Awards 2020

NTPC won the prestigious CII-ITC Sustainability Award 2020 and was honoured with Commendation for Significant Achievement in the Corporate Excellence Category, wherein assessment is done at company level. Also, the company received "Excellence" in the Domain Excellence category of Corporate Social Responsibility. The recognition has been bestowed on NTPC by CII-ITC Centre of Excellence for Sustainable Development at the 15th CII-ITC Sustainability Awards 2020.



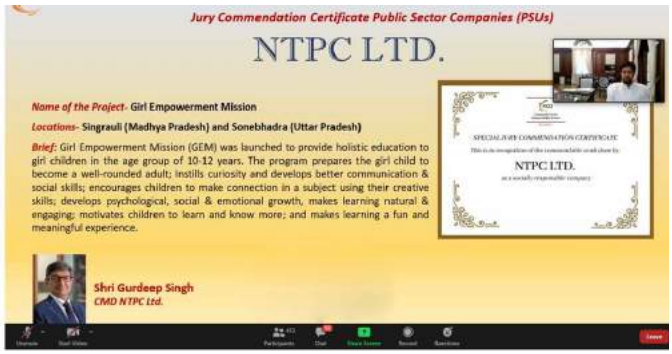
NTPC Recognised as the Nation Builder 2021 by Great Place to Work

NTPC has been recognised as a Great Place to Work for the 15th year in a row by the Great Place to Work Institute. NTPC is the only PSU to consistently feature in India's Top 50 Best Workplaces. This year NTPC ranked 38th up from 47th position last year. It also won its first-ever recognition of India's Best Employers among Nation-Builders 2021. Featuring consistently in GPTW's Best Workplaces List year on year is testimony of its people's practices and approach.



NTPC Bags ATD Award, 4th Time for HRD Practices

NTPC has been selected as a 2020 ATD BEST award winner by The Association for Talent Development (ATD), USA. The award recognizes employee talent development practices that affect enterprise-wide success. NTPC has bagged this award for the 4th time in succession.



FICCI "Jury Commendation Certificate" for Women Empowerment

NTPC has been conferred with the prestigious FICCI "Jury Commendation Certificate" under the Category "Women Empowerment" . The award has been received for NTPC's flagship "Girl Empowerment Mission" Project. NTPC is the only PSU to receive the FICCI Award this year.



PRSI National Awards for NTPC

NTPC Corporate Communication bagged four awards at the Public Relations Society of India (PRSI) National Awards 2020 in a virtual award ceremony on 21st February 2021.



Safety Award to NTPC Ananthapuram

NTPC Ananthapuramu Solar Project received Best Safety Culture Award from National Safety Council. Sri. M. Balaji received the award from Ananthapuramu Joint Collerctor Sri. S. Dilli Rao at the function organised by Factories Department, Govt of AP.



RLI Sipat wins prestigious Global Brandon Hall HCM Excellence Award 2020

NTPC (Regional Learning Institute, Sipat) has bagged the Global Brandon Hall HCM Excellence Award 2020 - Gold Category for Learning and Development. USA based Brandon Hall HCM Excellence Award, a coveted global award, recognises the best organisations from across the world that have successfully developed learning strategies for the organisation and for their extended enterprise partners.

Independent Assurance Statement to NTPC Limited on selected non – financial disclosures reported in its Integrated Report for Financial Year 2020-21

To,

The Management of NTPC Limited,

NTPC Bhawan, Scope Complex 7,

Institutional Area, Lodhi Road,

New Delhi – 110003, India.

Introduction

We ('KPMG Assurance and Consulting Services LLP', or 'KPMG') have been engaged by NTPC Limited ('NTPC' or 'the Company') for the purpose of providing an independent reasonable assurance on selected non-financial disclosures presented in the Integrated Report ('the Report') for the reporting period from 1st April 2020 to 31st March 2021. Our responsibility was to provide reasonable assurance on selected non-financial disclosures in the Report as described in the scope, boundary, and limitations.

Reporting Criteria

NTPC has developed its report based on the applicable accounting standards and has incorporated the principles of the International Integrated Reporting Framework published by the International Integrated Reporting Council (IIRC), into the Integrated Report. In addition to the Framework, non-financial reporting criteria has been derived by the management of NTPC from the GRI Standards of the Global Reporting Initiative.

Assurance Standard

We conducted our assurance in accordance with

- Reasonable Assurance requirements of International Federation of Accountants' (IFAC) International Standard on Assurance Engagement (ISAE) 3000 (Revised) Assurance Engagements Other than Audits or Reviews of Historical Financial Information.
    - Under this standard, we have reviewed the information presented in this Report against the characteristics of relevance, completeness, reliability, neutrality, and understandability.
    - Reasonable assurance is a high level of assurance but, it is not a guarantee that it will always detect a material misstatement when it exists.

Scope, Boundary and Limitations

- The scope of assurance covers the general disclosures and specific disclosures of NTPC as mentioned in the table below, for the period 01 April 2020 to 31 March 2021.
- The boundary of assurance covers the non-financial performance of all NTPC stations and 5 Joint Ventures and 6 Subsidiary Companies in India.

The Disclosures subject to assurance based on GRI Standards are as follows:

Universal Standards
• **General Disclosures**   ○ Values, principles, standards, and norms of behavior (102-16)   ○ Mechanisms for advice and concerns about ethics (102-17)   ○ List of stakeholder groups (102-40)   ○ Collective bargaining agreements (102-41)   ○ Identifying and selecting stakeholders (102-42)   ○ Approach to stakeholder engagement (102-43)   ○ Key topics and concerns raised (102-44)
Topic Specific Standards
• **Environment**   ○ Materials (301-1)   ○ Energy (302-1 to 302-5)   ○ Water and effluents (303-1 to 303-5)   ○ Biodiversity (304-1)   ○ Emissions (305-1,305-2, 305-4, 305-6, 305-7)   ○ Waste (306-1 to 306-5) • **Social**   ○ Employment (401-1, 401-2, 401-3)   ○ Labour Management Relations (402-1)   ○ Occupational Health and Safety (403-1 to 403-10)   ○ Training and Education (404-1 to 404-3)   ○ Diversity and Equal Opportunity (405-1 to 405-2)   ○ Non- Discrimination (406-1)   ○ Freedom of Association and Collective Bargaining (407-1)   ○ Child Labour (408-1)   ○ Forced of Compulsory Labour (409-1)   ○ Security Practices (410-1)   ○ Human Rights Assessment (412-1 to 412-3)   ○ Local Communities (413-1 to 413-2)

The assurance scope excludes the following:

- Data related to Company's financial performance.
- Data and information outside the defined reporting period.
- The Company's statements that describe expression of opinion, belief, aspiration, expectation, aim to future intention provided by the Company and assertions related to Intellectual Property Rights and other competitive issues.
- Data review outside the operational sites as mentioned in the boundary above.
- Strategy and other related linkages expressed in the Report.
- Mapping of the Report with other reporting frameworks.
- Aspects of the Report other than those mentioned under the scope above.

The above non-financial disclosures may have inherent limitations owing to the nature of disclosures as well as the methodologies used for measuring, calculating and/or estimating these disclosures. The accuracy of measurement methods, changes in criteria for measurement and individual judgment may impact the comparability of data.

Assurance Procedure

Our assurance processes involve performing procedures to obtain evidence about the reliability of specified disclosures. The nature, timing and extent of procedures selected depend on our judgement, including the assessment of the risks of material misstatement of the selected sustainability disclosures whether due to fraud or error. In making those risk assessments, we have considered internal controls relevant to the preparation of the Report in order to design assurance procedures that are appropriate in the circumstances.

Our assurance procedure also included:

- Assessment of NTPC's reporting procedures, as defined by NTPC's management in reference to the reporting criteria.
- Review of systems, processes, as well as internal and external controls.
- Review of records and testing, including re-calculation of sample data to establish an assurance trail with increased sample size.
- Evaluating the appropriateness of the quantification methods used to arrive at the non-financial disclosures presented in the Report.
- Review of systems and procedures used for quantification, collation, and analysis of nonfinancial disclosures included in the Report.
- Understanding the appropriateness of various assumptions, estimations and materiality thresholds used by NTPC for data analysis.
- Discussions with the personnel responsible for the evaluation of competence required to ensure reliability of data and information presented in the Report.
- Assessment of data reliability and accuracy

The data was reviewed through virtual interactions through screen sharing tools with the corporate office, Noida and selected sample locations. The sample locations included:

- Sipat, Chhattisgarh
- Tanda, Uttar Pradesh
- Kawas, Gujarat

Conclusions

We have reviewed the selected disclosures in the Integrated Report of NTPC Limited for the FY 2020-21. Based on our review and procedures performed and in line with the boundary, scope and limitations as described above, we conclude that:

- Selected non-financial disclosures which have been subjected to reasonable assurance procedures as defined under scope of assurance, are fairly stated, in all material aspects, and are in alignment with the reporting criteria.
- Data representation and calculation related errors were detected but the same were resolved during the assurance process. We have provided our observations to the Company in a separate management letter. These, do not, however, affect our conclusions regarding the Report.

Independence

The assurance was conducted by a multidisciplinary team including professionals with

suitable skills and experience in auditing environmental, social, and economic information in line with the requirements of ISAE 3000 (Revised) standard. Our work was performed in compliance with the requirements of the IFAC Code of Ethics for Professional Accountants, which requires, among other requirements, that the members of the assurance team (practitioners) be independent of the assurance client, in relation to the scope of this assurance engagement, including not being involved in writing the Report. The Code also includes detailed requirements for practitioners regarding integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. KPMG has systems and processes in place to monitor compliance with the Code and to prevent conflicts regarding independence. The firm applies International Standard of Quality Control (ISQC1) and the practitioner complies with the applicable independence and other ethical requirements of the IESBA code.

Responsibilities

NTPC is responsible for developing the Report contents. NTPC is also responsible for identification of material sustainability topics, establishing and maintaining appropriate performance management and internal control systems and derivation of performance data reported. This statement is made solely to the Management of NTPC in accordance with the terms of our engagement and as per scope of assurance. Our work has been undertaken so that we might state to NTPC those matters for which we have been engaged to state in this statement and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than NTPC for our work, for this report, or for the conclusions expressed in this independent assurance statement. The assurance engagement is based on the assumption that the data and information provided to us is complete and true. We expressly disclaim any liability or co-responsibility for any decision a person or entity would make based on this assurance statement. Our report is released to NTPC on the basis that it shall not be copied, referred to or disclosed, in whole or in part, without our prior written consent. By reading this assurance statement, stakeholders acknowledge and agree to the limitations and disclaimers mentioned above.

Manpreet Singh

Partner
KPMG Assurance and Consulting Services LLP
July 30, 2021
Digitally Signed

Annexure-1: Policies and systems

No.	Policies/ System	Web Link
Director (Finance)		
1.	Code of Conduct	https://www.ntpc.co.in/investors/code-of-conduct
2.	Fraud Prevention Policy	http://www.ntpctender.com/about/FraudPolicy.asp
3.	Whistle Blower Policy	https://www.ntpc.co.in/sites/default/files/downloads/WhistleBlowerPolicy.pdf
4.	Internal Code of Conduct for prevention of insider trading	https://www.ntpc.co.in/download/internal-code-conduct-prevention-insider-trading-dealing-securities-ntpc-limited
5.	Code of Corporate Fair Disclosure Practices for prevention of insider trading	https://www.ntpc.co.in/download/code-corporate-fair-disclosure-practicces-prevention-insider-trading
6.	Related Party Transaction Policy	https://www.ntpc.co.in/download/related-party-transaction-policy-ntpc
7.	Policy for determination of materiality of events or information for disclosure	https://www.ntpc.co.in/sites/default/files/downloads/NTPCPolicyForDeterminationofMaterialityofevents.pdf
8.	Policy on maintenance & preservation of documents	https://www.ntpc.co.in/sites/default/files/DocumentPreservationPolicy.pdf
9.	Policy for determining Material Subsidiaries	https://www.ntpc.co.in/download/policy-determining-material
10	Dividend Distribution Policy	https://www.ntpc.co.in/sites/default/files/downloads/DividentDistributionPolicyofNTPCLimited.pdf
Director (HR)		
11.	CDA Rules	Policy manual available on NTPC Intranet
12.	Training Policy for Directors of NTPC	https://www.ntpc.co.in/download/training-policy-director-ntpc
13.	Human Right Policy	https://www.ntpc.co.in/sites/default/files/downloads/NTPCHuman%20RightsPolicy_0.pdf
14.	Placement and Transfer Policy	Policy manual available on NTPC Intranet
15.	R&R Policy	https://www.ntpc.co.in/en/corporate-citizenship/r-and-r-policies
16.	Initial Community Development Policy	https://www.ntpc.co.in/edownload/initial-community development policy-2009
17.	Policy for CSR and Sustainability	https://www.ntpc.co.in/download/ntpc-policy-csr-sustainability
18.	Career Development Policy	https://www.ntpc.co.in/en/careers/career-growth-opportunities
Director (Operations)		
19.	Safety Policy	https://www.ntpc.co.in/en/sustainability/health-and-safety
20.	Environment Policy	https://www.ntpc.co.in/en/environment/environment-policy-andmanagement
21.	Water Policy	https://www.ntpc.co.in/sustainability.report-policies/7312/ntpc-water-policy-2017
22.	Ash Policy 2015	https://www.ntpc.co.in/sites/default/files/downloads/AshPolicy2015.pdf
Director (Projects)		
23.	Biodiversity Policy	https://www.ntpc.co.in/sites/downloads/biodiversitypolicy 2018.pdf
24.	Rain Water Harvesting Policy	https://www.ntpc.co.in/sites/default/files/downloads/NTPCRainWaterHarvestingPolicy2018-pdf
Director (Comml.)		
25.	Commercial systems & Procedures	https://www.ntpc.co.in/sites/default/files/downloads/procurementandworkpolicy.pdf

Annexure-2: Corporate Membership with National & International Organisations

Aspects	Organisation Name
Safety	1. British Safety Council
	2. Institute of Fire Engineers
	3. National Safety Council
	4. National Safety Council, USA
Industry Association	5. Confederation of India Industry (CII)
	6. Delhi Productivity Council (DPC)
	7. Federation of Indian Chambers of Commerce & Industry (FICCI)
	8. Foundation of Restoration of National Values
	9. Institute of Company Secretary of India (ICSI)
	10. Institute of Internal Auditors
Human Resource	11. Power HR Forum
	12. Power Sector Skill Council
	13. The Foreign Correspondent's Club of South Asia
	14. Strategic Human Resource Management (SHRM), USA
Infrastructure	15.India Infrastructure Forum
	16. South Asia Forum for Infrastructure Regulation (SAFIR)
Society & Environment	17. United Nation Global Compact (UNGC)
	18. TERI Council for Business Sustainability (CBS)
	19. India Business and Biodiversity Initiatives (IBBI)
Energy	20. Central Board of Irrigation & Power (CBIP)
	21. Electric Power Research Institute (EPRI), USA
	22. Energy Transit on Commission India (ETC), India
	23. Indian Federation of Green Energy
	24. International Conference on Large High Voltage Electric System (CIGRE)
	25. The Energy and Resources Institute (TERI)
	26. World Energy Council (WEC)
	27. Central Mechanical Engineering Research Institute (CSIR)
	28. Council of Power Utilities
	29. Excellence Enhancement Centre, EEC
	30. National Accreditation Board for T&C Laboratories
	31. The American Society for Non destructive Testing
Mining	32. The Mining, Geological & Metallurgical Institute of India



STANDALONE BALANCE SHEET AS AT 31 MARCH 2021

₹ Crore

Particulars	Note No.	As at 31 March 2021	As at 31 March 2020
ASSETS			
Non-current assets			
Property, plant and equipment	2	**1,63,892.12**	1,56,273.02
Capital work-in-progress	3	**75,343.60**	73,066.76
Intangible assets	4	**556.74**	538.28
Intangible assets under development	5	**94.90**	292.52
Financial assets			
Investments in subsidiary and joint venture companies	6	**28,028.57**	26,350.61
Other investments	7	**97.08**	50.28
Loans	8	**1,498.12**	600.26
Other financial assets	9	**1,188.84**	1,403.60
Other non-current assets	10	**13,790.02**	11,464.50
Total non-current assets		**2,84,489.99**	2,70,039.83
Current assets			
Inventories	11	**9,178.94**	10,731.86
Financial assets			
Investments	12	**499.99**	-
Trade receivables	13	**13,701.72**	15,615.19
Cash and cash equivalents	14	**90.05**	20.37
Bank balances other than cash and cash equivalents	15	**2,248.41**	2,188.74
Loans	16	**416.82**	308.56
Other financial assets	17	**12,921.88**	11,579.16
Other current assets	18	**8,527.87**	8,060.98
Total current assets		**47,585.68**	48,504.86
Regulatory deferral account debit balances	19	**11,143.72**	9,122.76
TOTAL ASSETS		**3,43,219.39**	3,27,667.45
EQUITY AND LIABILITIES			
Equity			
Equity share capital	20	**9,696.67**	9,894.56
Other equity	21	**1,09,288.82**	1,03,674.88
Total equity		**1,18,985.49**	1,13,569.44
Liabilities			
Non-current liabilities			
Financial liabilities			
Borrowings	22	**1,51,229.62**	1,46,538.70
Trade payables	23		
Total outstanding dues of micro and small enterprises		**13.78**	10.35
Total outstanding dues of creditors other than micro and small enterprises		**66.23**	57.66
Other financial liabilities	24	**1,390.67**	652.24
Provisions	25	**826.25**	826.74
Deferred tax liabilities (net)	26	**9,160.99**	8,093.98
Other non-current liabilities	27	**1,111.81**	541.88
Total non-current liabilities		**1,63,799.35**	1,56,721.55

STANDALONE BALANCE SHEET AS AT 31 MARCH 2021

₹ Crore

Particulars	Note No.	As at 31 March 2021	As at 31 March 2020
Current liabilities			
Financial liabilities			
Borrowings	28	**12,859.74**	14,049.36
Trade payables	29		
Total outstanding dues of micro and small enterprises		**378.31**	495.70
Total outstanding dues of creditors other than micro and small enterprises		**6,804.16**	8,504.93
Other financial liabilities	30	**30,051.74**	23,715.74
Other current liabilities	31	**1,070.14**	1,299.26
Provisions	32	**7,276.05**	6,639.17
Total current liabilities		**58,440.14**	54,704.16
Deferred revenue	33	**1,994.41**	2,672.30
TOTAL EQUITY AND LIABILITIES		**3,43,219.39**	3,27,667.45

Significant accounting policies 1

The accompanying notes 1 to 70 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar)	(A.K. Gautam)	(Gurdeep Singh)
Company Secretary	Director (Finance)	Chairman & Managing Director
	DIN: 08293632	DIN: 00307037

This is the Balance Sheet referred to in our report of even date

For S.K. Mehta & Co.	For S.N. Dhawan & Co LLP	For Varma & Varma
Chartered Accountants	Chartered Accountants	Chartered Accountants
Firm Reg. No.000478N	Firm Reg. No. 000050N/N500045	Firm Reg. No. 004532S
(Rohit Mehta)	(Surinder Kr. Khattar)	(P.R. Prasanna Varma)
Partner	Partner	Partner
M No. 091382	M No.084993	M No.025854
		Place : Chennai

For Parakh & Co.	For C.K. Prusty & Associates	For B.C. Jain & Co.	For V.K. Jindal & Co
Chartered Accountants	Chartered Accountants	Chartered Accountants	Chartered Accountants
Firm Reg. No. 001475C	Firm Reg. No. 323220E	Firm Reg. No. 001099C	Firm Reg. No. 001468C
(Thalendra Sharma)	(C.K. Prusty)	(Ranjeet Singh)	(Suresh Agarwal)
Partner	Partner	Partner	Partner
M No. 079236	M No. 057318	M No. 073488	M No.072534
Place: Jaipur	Place: Bhubaneshwar	Place: Kanpur	Place: Hazaribagh

Place : New Delhi
Dated : 19 June 2021
Digitally signed by signatories



STANDALONE STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2021

₹ Crore

Particulars	Note No.	For the year ended 31 March 2021	For the year ended 31 March 2020
Income			
Revenue from operations	34	**99,206.72**	97,700.39
Other income	35	**4,345.99**	2,778.02
Total income		**1,03,552.71**	1,00,478.41
Expenses			
Fuel cost	36	**52,849.64**	54,241.82
Electricity purchased for trading		**3,031.25**	2,776.44
Employee benefits expense	37	**4,942.19**	4,925.60
Finance costs	38	**7,459.03**	6,781.97
Depreciation and amortization expenses	39	**10,411.80**	8,622.85
Other expenses	40	**9,580.28**	8,663.81
Total expenses		**88,274.19**	86,012.49
Profit before exceptional items, tax and regulatory deferral account balances		**15,278.52**	14,465.92
Exceptional items	43	**1,363.00**	-
Profit before tax and regulatory deferral account balances		**13,915.52**	14,465.92
Tax expense	49		
Current tax			
Current year		**2,597.35**	2,493.29
Earlier years		**(1,874.12)**	2,660.17
Deferred tax		**1,202.16**	4,028.49
Total tax expense		**1,925.39**	9,181.95
Profit before regulatory deferral account balances		**11,990.13**	5,283.97
Net movement in regulatory deferral account balances (net of tax)	64	**1,779.39**	4,828.84
Profit for the year		**13,769.52**	10,112.81
Other comprehensive income			
Items that will not be reclassified to profit or loss			
Net actuarial gains/(losses) on defined benefit plans		**(139.33)**	(346.04)
Net gains/(losses) on fair value of equity instruments		**46.80**	(41.64)
		(92.53)	(387.68)
Income tax on items that will not be reclassified to profit or loss	49		
Net actuarial gains/(losses) on defined benefit plans		**24.34**	60.46
Other comprehensive income for the year, net of income tax		**(68.19)**	(327.22)
Total comprehensive income for the year		**13,701.33**	9,785.59

₹ Crore

Particulars	Note No.	For the year ended 31 March 2021	For the year ended 31 March 2020
Earnings per equity share (Par value ₹ 10/- each)	55		
Basic & Diluted (₹) (including net movement in regulatory deferral account balances)		**13.99**	10.22
Basic & Diluted (₹) (excluding net movement in regulatory deferral account balances)		**12.18**	5.34
Significant accounting policies	1		

The accompanying notes 1 to 70 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar)	(A.K. Gautam)	(Gurdeep Singh)
Company Secretary	Director (Finance)	Chairman & Managing Director
	DIN: 08293632	DIN: 00307037

This is the Statement of Profit and Loss referred to in our report of even date

For S.K. Mehta & Co.	For S.N. Dhawan & Co LLP	For Varma & Varma
Chartered Accountants	Chartered Accountants	Chartered Accountants
Firm Reg. No.000478N	Firm Reg. No. 000050N/N500045	Firm Reg. No. 004532S
(Rohit Mehta)	(Surinder Kr. Khattar)	(P.R. Prasanna Varma)
Partner	Partner	Partner
M No. 091382	M No.084993	M No.025854
		Place : Chennai

For Parakh & Co.	For C.K. Prusty & Associates	For B.C. Jain & Co.	For V.K. Jindal & Co
Chartered Accountants	Chartered Accountants	Chartered Accountants	Chartered Accountants
Firm Reg. No. 001475C	Firm Reg. No. 323220E	Firm Reg. No. 001099C	Firm Reg. No. 001468C
(Thalendra Sharma)	(C.K. Prusty)	(Ranjeet Singh)	(Suresh Agarwal)
Partner	Partner	Partner	Partner
M No. 079236	M No. 057318	M No. 073488	M No.072534
Place: Jaipur	Place: Bhubaneshwar	Place: Kanpur	Place: Hazaribagh

Place : New Delhi
Dated : 19 June 2021
Digitally signed by signatories

STANDALONE STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 MARCH 2021

(A) Equity share capital

For the year ended 31 March 2021

₹ Crore

Particulars	Amount
Balance as at 1 April 2020	9,894.56
Changes in equity share capital due to buyback of shares during the year (Refer Note-20)	(197.89)
Balance as at 31 March 2021	9,696.67

For the year ended 31 March 2020

₹ Crore

Particulars	Amount
Balance as at 1 April 2019	9,894.56
Changes in equity share capital during the year	-
Balance as at 31 March 2020	9,894.56

(B) Other equity

For the year ended 31 March 2021

₹ Crore

Particulars	Reserves & surplus							Equity instruments through OCI	Total
	Capital reserve	Securities premium	Capital redemption reserve	Bonds/ Debentures redemption reserve	Fly ash utilisation reserve fund	General reserve	Retained earnings		
Balance as at 1 April 2020	50.08	2,228.46	-	7,011.43	588.48	90,182.53	3,664.48	(50.58)	1,03,674.88
Profit for the year	-	-	-	-	-	-	13,769.52	-	13,769.52
Other comprehensive income	-	-	-	-	-	-	(114.99)	46.80	(68.19)
Total comprehensive income	-	-	-	-	-	-	13,654.53	46.80	13,701.33
Transfer to retained earnings	-	-	-	(771.00)	-	-	771.00		-
Adjustments from retained earnings	-	-	-	-	-	-	(85.08)	85.08	-
Accretion / (utilisation) in fly ash utilisation fund (net) (Note 21)	-	-	-	-	9.60	-	-	-	9.60
Transfer from retained earnings	-	-	-	-	-	6,500.00	(6,500.00)	-	-
Utilised for buyback of equity shares (Note 21)	-	(2,228.46)	-	-	-	(337.47)	-	-	(2,565.93)
Transfer to capital redemption reserve (Note 21)	-	-	197.89	-	-	(197.89)	-	-	-
Final dividend paid for FY 2019-20 (Note 21)	-	-	-	-	-	-	(2,622.06)	-	(2,622.06)
Interim dividend paid for FY 2020-21 (Note 21)	-	-	-	-	-	-	(2,909.00)	-	(2,909.00)
Balance as at 31 March 2021	50.08	-	197.89	6,240.43	598.08	96,147.17	5,973.87	81.30	1,09,288.82

For the year ended 31 March 2020

₹ Crore

Particulars	Reserves & surplus							Equity instruments through OCI	Total
	Capital reserve	Securities premium	Capital redemption reserve	Bonds/ Debentures redemption reserve	Fly ash utilisation reserve fund	General reserve	Retained earnings		
Balance as at 1 April 2019	50.08	2,228.46	-	7,902.43	636.63	83,682.53	3,022.42	(8.94)	97,513.61
Profit for the year	-	-	-	-	-	-	10,112.81	-	10,112.81
Other comprehensive income	-	-	-	-	-	-	(285.58)	(41.64)	(327.22)
Total comprehensive income	-	-	-	-	-	-	9,827.23	(41.64)	9,785.59
Transfer to retained earnings	-	-	-	(891.00)	-	-	891.00	-	-
Transfer from retained earnings	-	-	-	-	-	6,500.00	(6,500.00)	-	-
Accretion / (utilisation) in fly ash utilisation fund (net) (Note 21)	-	-	-	-	(48.15)	-	-	-	(48.15)
Final dividend paid for FY 2018-19 (Note 21)	-	-	-	-	-	-	(2,473.64)	-	(2,473.64)
Tax on final dividend	-	-	-	-	-	-	(506.62)	-	(506.62)
Interim dividend paid for FY 2019-20 (Note 21)	-	-	-	-	-	-	(494.73)	-	(494.73)
Tax on interim dividend	-	-	-	-	-	-	(101.18)	-	(101.18)
Balance as at 31 March 2020	50.08	2,228.46	-	7,011.43	588.48	90,182.53	3,664.48	(50.58)	1,03,674.88

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Statement of Changes in Equity referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Surinder Kr. Khattar)
Partner
M No.084993

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R. Prasanna Varma)
Partner
M No.025854
Place : Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No. 079236
Place: Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K. Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M No. 073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 19 June 2021
Digitally signed by signatories

STANDALONE STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2021

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
A. CASH FLOW FROM OPERATING ACTIVITIES			
Profit before tax		**15,278.52**	14,465.92
Add: Net movement in regulatory deferral account balances (net of tax)		**1,779.39**	4,828.84
Add: Tax on net movement in regulatory deferral account balances		**376.72**	1,022.31
Profit before tax including movement in regulatory deferral account balances		**17,434.63**	20,317.07
Adjustment for:			
Depreciation and amortisation expense	**10,411.80**		8,622.85
Provisions	**914.65**		265.73
Special rebate to beneficiaries - exceptional item	**(1,363.00)**		-
On account of government grants	**568.49**		33.07
Deferred foreign currency fluctuation asset	**514.87**		(1,033.89)
Deferred income from foreign currency fluctuation	**(416.71)**		1,289.12
Regulatory deferral account debit balances	**(2,156.11)**		(5,851.15)
Fly ash utilisation reserve fund	**9.60**		(48.15)
Exchange differences on translation of foreign currency cash and cash equivalents	-		0.03
Finance costs	**7,402.24**		6,730.26
Unwinding of discount on vendor liabilities	**56.79**		51.71
Interest income/Late payment Surcharge/Income on investments	**(2,412.94)**		(1,686.42)
Dividend income	**(1,283.19)**		(210.40)
Provisions written back	**(132.04)**		(471.04)
Loss on disposal of non-current investments	**139.75**		-
Profit on de-recognition of property, plant and equipment	**(3.34)**		(12.25)
Loss on de-recognition of property, plant and equipment	**133.47**		59.96
		12,384.33	7,739.43
Operating profit before working capital changes		**29,818.96**	28,056.50
Adjustment for:			
Trade receivables	**964.98**		(6,253.92)
Inventories	**2,213.39**		(2,206.69)
Trade payables, provisions, other financial liabilities and other liabilities	**(900.12)**		1,523.80
Loans, other financial assets and other assets	**(2,303.35)**		3,367.43
		(25.10)	(3,569.38)
Cash generated from operations		**29,793.86**	24,487.12
Income taxes (paid) / refunded		**(2,736.08)**	(2,903.14)
Net cash from/(used in) operating activities - A		**27,057.78**	21,583.98
B. CASH FLOW FROM INVESTING ACTIVITIES			
Purchase of property, plant and equipment & intangible assets	**(18,307.09)**		(14,523.88)
Disposal of property, plant and equipment & intangible assets	**26.18**		63.62
Investment in mutual funds	**(499.99)**		-
Investment in subsidiaries and joint venture companies	**(1,645.16)**		(13,317.48)

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
	Loans and advances to subsidiaries	(866.19)	(46.32)
	Interest income/Late payment Surcharge/Income on investments received	3,366.11	768.97
	Dividend received	1,283.19	210.40
	Income tax paid on income from investing activities	(634.33)	(323.41)
	Bank balances other than cash and cash equivalents	(64.35)	(78.74)
	Net cash from/(used in) investing activities - B	(17,341.63)	(27,246.84)
C.	**CASH FLOW FROM FINANCING ACTIVITIES**		
	Proceeds from non-current borrowings	30,431.12	28,775.62
	Repayment of non-current borrowings	(20,364.45)	(7,667.17)
	Proceeds from current borrowings	(1,189.62)	(1,326.73)
	Payment of lease obligations	(42.57)	(42.77)
	Interest paid	(10,186.07)	(10,503.90)
	Buy back of Equity Share Capital	(2,763.82)	-
	Dividend paid	(5,531.06)	(2,968.37)
	Tax on dividend	-	(607.80)
	Net cash from/(used in) financing activities - C	(9,646.47)	5,658.88
D.	Exchange differences on translation of foreign currency cash and cash equivalents	-	(0.03)
	Net increase/(decrease) in cash and cash equivalents (A+B+C+D)	69.68	(4.01)
	Cash and cash equivalents at the beginning of the year (see Note 1 and 2 below)	20.37	24.38
	Cash and cash equivalents at the end of the year (see Note 1 and 2 below)	90.05	20.37

Notes:

1. Cash and cash equivalents consist of cheques, drafts, stamps in hand, balances with banks and deposits with original maturity of upto three months.
2. Reconciliation of cash and cash equivalents:

Cash and cash equivalents as per Note 14	90.05	20.37

3. Refer Note 61 for details of undrawn borrowing facilities that may be available for future operating activities and to settle capital commitments.
4. Refer Note 70 w.r.t. amount spent on CSR activities.
5. Reconciliation between the opening and closing balances in the balance sheet for liabilities arising from financing activities:

For the year ended 31 March 2021

₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2020	1,53,832.64	829.67	14,049.36
Cash flows during the year	(119.40)	(42.57)	(1,189.62)
Non-cash changes due to:			
- Acquisitions under finance lease	-	85.32	-
- Interest on borrowings	10,194.94	-	-
- Variation in exchange rates	(1,115.71)	-	-
- Transaction costs on borrowings	(58.46)	-	-
Closing balance as at 31 March 2021	1,62,734.01	872.42	12,859.74

For the year ended 31 March 2020

₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2019	1,28,621.46	186.41	15,376.09
Cash flows during the year	10,604.55	(42.77)	(1,326.73)
Non-cash changes due to:			
- Acquisitions under finance lease	-	686.03	-
- Interest on borrowings	11,095.20	-	-
- Variation in exchange rates	3,532.47	-	-
- Transaction costs on borrowings	(21.04)	-	-
Closing balance as at 31 March 2020	1,53,832.64	829.67	14,049.36

* Includes current maturities of non-current borrowings and interest accrued thereon, refer Note 22 and Note 30.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Standalone statement of cash flows referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Surinder Kr. Khattar)
Partner
M No.084993

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R. Prasanna Varma)
Partner
M No.025854
Place : Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No. 079236
Place: Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K. Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M No. 073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 19 June 2021
Digitally signed by signatories

Notes forming part of Standalone Financial Statements

Note 1. Company Information and Significant Accounting Policies

A. Reporting entity

NTPC Limited (the "Company") is a Company domiciled in India and limited by shares (CIN: L40101DL1975GOI007966). The shares of the Company are listed and traded on the National Stock Exchange of India Limited (NSE) and BSE Limited in India. The address of the Company's registered office is NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi - 110003. The Company is primarily involved in the generation and sale of bulk power to State Power Utilities. Other business of the Company includes providing consultancy, project management & supervision, energy trading, oil & gas exploration and coal mining.

B. Basis of preparation

1. Statement of Compliance

These standalone financial statements are prepared on going concern basis following accrual system of accounting and comply with the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Companies Act, 2013 read with the Companies (Indian Accounting Standards) Rules, 2015 as amended, and other relevant provisions of the Companies Act, 2013 and the provisions of the Electricity Act, 2003 to the extent applicable.

These financial statements were approved for issue by the Board of Directors in its meeting held on 19 June 2021.

2. Basis of measurement

The financial statements have been prepared on the historical cost basis except for:

- Certain financial assets and liabilities (including derivative instruments) that are measured at fair value (refer serial no. 27of accounting policy regarding financial instruments); and
- Plan assets in the case of employees defined benefit plans that are measured at fair value.

The methods used to measure fair values are discussed in notes to the financial statements.

Historical cost is the amount of cash or cash equivalents paid or the fair value of the consideration given to acquire assets at the time of their acquisition or the amount of proceeds received in exchange for the obligation, or at the amounts of cash or cash equivalents expected to be paid to satisfy the liability in the normal course of business.Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

3. Functional and presentation currency

These financial statements are presented in Indian Rupees (₹) which is the Company's functional currency. All financial information presented in (₹) has been rounded to the nearest crore (up to two decimals), except when indicated otherwise.

4. Current and non-current classification

The Company presents assets and liabilities in the balance sheet based on current/non-current classification.

An asset is classified as current when it is:

- Expected to be realized or intended to be sold or consumed in normal operating cycle;
- Held primarily for the purpose of trading;
- Expected to be realized within twelve months after the reporting period; or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is classified as current when:

- It is expected to be settled in normal operating cycle;
- It is held primarily for the purpose of trading;

- It is due to be settled within twelve months after the reporting period; or
- There is no unconditional right to defer settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets/liabilities are classified as non-current.

Assets and liabilities are classified between current and non-current considering 12 months period as normal operating cycle.

C. Significant accounting policies

A summary of the significant accounting policies applied in the preparation of the financial statements are as given below. These accounting policies have been applied consistently to all periods presented in the financial statements.

The Company has elected to utilize the option under Ind AS 101-'First time adoption of Indian Accounting Standards' by not applying the provisions of Ind AS 16-'Property, plant and equipment'& Ind AS 38- 'Intangible assets' retrospectively and continue to use the previous GAAP carrying amount as a deemed cost under Ind AS at the date of transition to Ind AS i.e. 1 April 2015. Therefore, the carrying amount of property, plant and equipment and intangible assets as per the previous GAAP as at 1 April 2015, i.e. the Company's date of transition to Ind AS, were maintained on transition to Ind AS.

1. Property, plant and equipment

1.1. Initial recognition and measurement

An item of property, plant and equipment is recognized as an asset if and only if it is probable that future economic benefits associated with the item will flow to the Company and the cost of the item can be measured reliably.

Items of property, plant and equipment are initially recognized at cost. Cost comprises purchase price including import duties and non-refundable purchase taxes after deducting trade discounts and rebates, any cost directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the present value of initial estimate of cost of dismantling, removal and restoration.

Subsequent measurement is done at cost less accumulated depreciation/amortization and accumulated impairment losses.

When parts of an item of property, plant and equipment that are significant in value and have different useful lives as compared to the main asset, they are recognized separately.

Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relatable to land in possession are treated as cost of land.

In the case of assets put to use, where final settlement of bills with contractors is yet to be effected, capitalization is done on provisional basis subject to necessary adjustment in the year of final settlement.

Assets and systems common to more than one generating unit are capitalized on the basis of engineering estimates/ assessments.

Items of spare parts, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized. Other spare parts are carried as inventory and recognized in the statement of profit and loss on consumption.

The acquisition or construction of some items of property, plant and equipment although not directly increasing the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for the Company to obtain future economic benefits from its other assets. Such items are recognized as property, plant and equipment.

1.2. Subsequent costs

Subsequent expenditure is recognized in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

Expenditure on major inspection and overhauls of generating unit is capitalized, when it meets the asset recognition criteria. Any remaining carrying amount of the cost of the previous inspection and overhaul is derecognized.

The cost of replacing major part of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its cost can be measured reliably. The carrying amount of the replaced part is derecognized regardless of whether the replaced part has been depreciated separately. If it is not practicable to determine the carrying amount of the

replaced part, the Company uses the cost of the replacement as an indication of what the cost of replaced part was at the time it was acquired or constructed. The costs of the day-to-day servicing of property, plant and equipment are recognized in the statement of profit and loss as and when incurred.

1.3. Decommissioning costs

The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

1.4. De-recognition

Property, plant and equipment is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on de-recognition of an item of property, plant and equipment are determined as the difference between sale proceeds from disposal, if any, and the carrying amount of property, plant and equipment and are recognized in the statement of profit and loss.

In circumstance, where an item of property, plant and equipment is abandoned, the net carrying cost relating to the property, plant and equipment is written off in the same period.

1.5. Depreciation/amortization

Depreciation is recognized in statement of profit and loss on a straight-line basis over the estimated useful life of each part of an item of property, plant and equipment.

Depreciation on the assets of the generation of electricity business, integrated coal mining and on the assets of Corporate & other offices of the Company, covered under Part B of Schedule II of the Companies Act, 2013, is charged on straight-line method following the rates and methodology notified by the Central Electricity Regulatory Commission (CERC) Tariff Regulations.

Depreciation on the assets of the, oil & gas exploration and consultancy business is charged on straight-line method following the useful life specified in Schedule II of the Companies Act, 2013 except for the assets referred below.

Depreciation on the following assets is provided on their estimated useful lives, which are different from the useful lives as prescribed under Schedule II to the Companies Act, 2013, ascertained on the basis of technical evaluation/ assessment:

a) Kutcha roads	2 years
b) Enabling works	
- residential buildings	15 years
- internal electrification of residential buildings	10 years
- non-residential buildings including their internal electrification, water supply, sewerage & drainage works, railway sidings, aerodromes, helipads and airstrips	5 years
c) Personal computers & laptops including peripherals	3 years
d) Photocopiers, fax machines, water coolers and refrigerators	5 years
e) Temporary erections including wooden structures	1 year
f) Telephone exchange	15 years
g) Wireless systems, VSAT equipment, display devices viz. projectors, screens, CCTV, audio video conferencing systems and other communication equipment	6 years
h) Energy saving electrical appliances and fittings	2-7 years
i) Solar/wind power plants which are not governed by CERC Tariff Regulations	25 years

Major overhaul and inspection costs which have been capitalized are depreciated over the period until the next scheduled outage or actual major inspection/overhaul, whichever is earlier.

Capital spares are depreciated considering the useful life ranging between 2 to 40 years based on technical assessment.

Right-of-use land and buildings relating to generation of electricity business governed by CERC Tariff Regulations are fully amortized over the lease period or life of the related plant whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Right-of-use land and buildings relating to generation of electricity business which are not governed by CERC tariff Regulations are fully amortized over the lease period or life of the related plant whichever is lower.

Right-of-use land and buildings relating to corporate, and other offices are fully amortized over lease period or twenty-five years whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Land acquired under Coal Bearing Areas (Acquisition & Development) Act, 1957 and Other right-of-use land acquired for mining business are amortized over the right of use period or balance life of the project whichever is lower.

In respect of integrated coal mines, the mines closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine on commercial declaration.

Depreciation on additions to/deductions from property, plant and equipment during the year is charged on pro-rata basis from/up to the month in which the asset is available for use/sale, disposal or earmarked for disposal.

Where the cost of depreciable assets has undergone a change during the year due to increase/decrease in long-term liabilities (recognized up to 31 March 2016) on account of exchange fluctuation and price adjustment change in duties or similar factors, the unamortized balance of such asset is charged off prospectively over the remaining useful life determined following the applicable accounting policies relating to depreciation/amortization.

Where it is probable that future economic benefits deriving from the expenditure incurred will flow to the Company and the cost of the item can be measured reliably, subsequent expenditure on a property, plant and equipment along-with its unamortized depreciable amount is charged off prospectively over the revised useful life determined by technical assessment.

The residual values, useful lives and method of depreciation of assets other than the assets of generation of electricity business and integrated coal mines governed by CERC Tariff Regulations, are reviewed at each financial year end and adjusted prospectively, wherever required.

Depreciation of an asset ceases at the earlier of the date that the asset is classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with Ind AS 105 and the date that the asset is derecognised.

Refer policy no. C.19 in respect of depreciation/amortization of right-of-use assets.

2. Capital work-in-progress

Cost incurred for property, plant and equipment that are not ready for their intended use as on the reporting date, is classified under capital work- in-progress.

The cost of self-constructed assets includes the cost of materials & direct labour, any other costs directly attributable to bringing the assets to the location and condition necessary for it to be capable of operating in the manner intended by management and the borrowing costs attributable to the acquisition or construction of qualifying asset.

Expenses directly attributable to construction of property, plant and equipment incurred till they are ready for their intended use are identified and allocated on a systematic basis on the cost of related assets.

Deposit works/cost plus contracts are accounted for on the basis of statements of account received from the contractors.

Unsettled liabilities for price variation/exchange rate variation in case of contracts are accounted for on estimated basis as per terms of the contracts.

3. Intangible assets and intangible assets under development

3.1. Initial recognition and measurement

An intangible asset is recognized if and only if it is probable that the expected future economic benefits that are attributable to the asset will flow to the Company and the cost of the asset can be measured reliably.

Intangible assets that are acquired by the Company, which have finite useful lives, are recognized at cost. Subsequent measurement is done at cost less accumulated amortization and accumulated impairment losses. Cost comprises purchase price including import duties, non -refundable taxes after deducting trade discounts and rebates and any directly attributable expenses of preparing the asset for its intended use.

Expenditure on development activities is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Company intends to & has sufficient resources to complete development and to use or sell the asset.

Expenditure incurred which are eligible for capitalizations under intangible assets are carried as intangible assets under development till they are ready for their intended use.

3.2. Subsequent costs

Subsequent expenditure is recognized as an increase in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

3.3. De-recognition

An intangible asset is derecognized when no future economic benefits are expected from their use or upon their disposal. Gain or loss on de-recognition of an intangible asset is determined as the difference between the net disposal proceeds, if any, and the carrying amount of intangible assets and are recognized in the statement of profit and loss.

3.4. Amortization

Cost of software recognized as intangible asset, is amortized on straight-line method over a period of legal right to use or 3 years, whichever is less. Other intangible assets are amortized on straight-line method over the period of legal right to use or life of the related plant, whichever is less.

The amortization period and the amortization method of intangible assets with a finite useful life is reviewed at each financial year end and adjusted prospectively, wherever required.

4. Regulatory deferral account balances

Expense/income recognized in the statement of profit and loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'.

Regulatory deferral account balances are adjusted in the year in which the same become recoverable from or payable to the beneficiaries.

Regulatory deferral account balances are evaluated at each balance sheet date to ensure that the underlying activities meet the recognition criteria and it is probable that future economic benefits associated with such balances will flow to the entity. If these criteria are not met, the regulatory deferral account balances are derecognized.

5. Exploration for and evaluation of mineral resources

5.1. Oil and gas exploration activities

All exploration costs incurred in drilling and equipping exploratory and appraisal wells, cost of drilling exploratory type stratigraphic test wells are initially capitalized as 'Exploratory wells-in-progress' under 'Intangible assets under development' till the time these are either transferred to oil and gas assets when a well is ready for commercial production or expensed as exploration cost (including allocated depreciation) as and when determined to be dry or of no further use, as the case may be.

Costs of exploratory wells are not carried over unless it could be reasonably demonstrated that there are indications of sufficient quantity of reserves and sufficient progress is being made in assessing the reserves and the economic & operating viability of the project. All such carried over costs are subject to review for impairment.

Cost of surveys and prospecting activities conducted in the search of oil and gas are expensed in the year in which these are incurred.

5.2. Coal mining exploration activities

Exploration and evaluation assets comprise capitalized costs which is generally the expenditure incurred associated with finding the mineral by carrying out topographical, geological, geochemical and geophysical studies, exploratory drilling, trenching, sampling, expenditure for activities in relation to evaluation of technical feasibility and commercial viability, acquisition of rights to explore etc.

Exploration and evaluation expenditure incurred after obtaining the mining right or the legal right to explore are capitalized as exploration and evaluation assets under 'Intangible assets under development'and stated at cost less impairment if any. Exploration and evaluation assets are assessed for impairment indicators at least annually.

Once the proved reserves are determined and development of mine/project is sanctioned.

Exploration and evaluation assets are transferred to 'Development of Coal Mines' under 'Capital Work in Progress'. However, if proved reserves are not determined, exploration and evaluation asset is derecognized.

Exploration and evaluation expenditure incurred prior to obtaining the mining right or the legal right to explore are expensed as incurred.

6. Development expenditure on coal mines

When proved reserves are determined and development of mines/project is sanctioned, exploration and evaluation assets are transferred to 'Development of coal mines' under 'Capital work-in-progress'.

Subsequent expenditure is capitalized only where it either enhances the economic benefits of the development/ producing asset or replaces part of the existing development/producing asset. Any remaining costs associated with the part replaced are expensed.

The development expenditure capitalized is net of value of coal extracted during development phase.

Date of commercial operation of integrated coal mines shall be determined on the occurring of earliest of following milestones as provided in CERC tariff regulations:

1) The first date of the year succeeding the year in which 25 % of the peak rated capacity as per the mining plan is achieved; or
2) The first date of the year succeeding the year in which the value of production exceeds the total expenditure in that year; or
3) The date of two years from the date of commencement of production;

On the date of commercial operation, the assets under capital work-in-progress are classified as a component of property, plant and equipment under 'Mining property'.

Gains and losses on de-recognition of assets referred above, are determined as the difference between the net disposal proceeds, if any, and the carrying amount of respective assets and are recognized in the statement of profit and loss.

6.1. Stripping activity expense/adjustment

Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Company has to incur such expenses over the life of the mine as technically estimated.

Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue.

Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be, and adjusted as provided in the CERC Tariff Regulations

6.2. Mines closure, site restoration and decommissioning obligations

The Company's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Company estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. The estimate of expenses is escalated for inflation and then discounted at a pre-tax discount rate that reflects current market assessment of the time value of money and risk, such that the amount of provision reflects the present value of expenditure required to settle the obligation. The Company recognizes a corresponding asset under property, plant and equipment as a separate item for the cost associated with such obligation.

The value of the obligation is progressively increased over time as the effect of discounting unwinds and the same is recognized as finance costs.

Further, a specific escrow account is maintained for this purpose as per approved mine closure plan. The progressive mine closure expenses incurred on year to year basis, forming part of the total mine closure obligation, are initially recognized as receivable from escrow account and thereafter adjusted with the obligation in the year in which the amount is withdrawn from escrow account after concurrence of the certifying agency.

7. Joint operations

The Company has joint arrangements with others for operations in the nature of joint operations. The Company recognizes, on a line-by-line basis its share of the assets, liabilities and expenses of these joint operations as per the arrangement which are accounted based on the respective accounting policies of the Company.

8. Borrowing costs

Borrowing costs consist of (a) interest expense calculated using the effective interest method as described in Ind AS 109 – 'Financial Instruments' (b) interest expense on lease liabilities recognized in accordance with Ind AS 116– 'Leases' and(c) exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

Borrowing costs that are directly attributable to the acquisition, construction/exploration/ development or erection of qualifying assets are capitalized as part of cost of such asset until such time the assets are substantially ready for their intended use. Qualifying assets are assets which necessarily take substantial period of time to get ready for their intended use or sale.

When the Company borrows funds specifically for the purpose of obtaining a qualifying asset, the borrowing costs incurred are capitalized. When Company borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the capitalization of the borrowing costs is computed based on the weighted average cost of all borrowings that are outstanding during the period and used for the acquisition, construction/exploration or erection of the qualifying asset. However, borrowing costs applicable to borrowings made specifically for the purpose of obtaining a qualifying asset, are excluded from this calculation, until substantially all the activities necessary to prepare that asset for its intended use or sale are complete.

Income earned on temporary investment made out of the borrowings pending utilization for expenditure on the qualifying assets is deducted from the borrowing costs eligible for capitalization.

Capitalization of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying assets for their intended use are complete.

Other borrowing costs are recognized as an expense in the year in which they are incurred.

9. Inventories

Inventories are valued at the lower of cost and net realizable value. Cost includes cost of purchase, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Cost is determined on weighted average basis. Costs of purchased inventory are determined after deducting rebates, trade discounts and other similar items . Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

The diminution in the value of obsolete, unserviceable, surplus and non-moving items of stores and spares is ascertained on review and provided for.

Steel scrap is valued at estimated realizable value.

10. Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks, cash on hand and short-term deposits with an original maturity of three months or less, that are readily convertible to known amount of cash and which are subject to an insignificant risk of changes in value.

11. Government grants

Government grants are recognized when there is reasonable assurance that they will be received and the Company will comply with the conditions associated with the grant. Grants that compensate the Company for the cost of depreciable asset are recognized as income in statement of profit and loss on a systematic basis over the period and in the proportion in which depreciation is charged. Grants that compensate the Company for expenses incurred are recognized over the period in which the related costs are incurred and the same is deducted from the related expenses.

12. Fly ash utilization reserve fund

Proceeds from sale of ash/ash products along-with income on investment of surplus fund are transferred to 'Fly ash utilization reserve fund' in terms of provisions of gazette notification dated 3 November 2009 issued by Ministry of Environment and Forests, Government of India. The fund is utilized towards expenditure on development of infrastructure/ facilities, promotion & facilitation activities for use of fly ash.

13. Provisions, contingent liabilities and contingent assets

A provision is recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at reporting date, taking into account the risks and uncertainties surrounding the obligation.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably. The expense relating to a provision is presented in the statement of profit and loss net of reimbursement, if any.

Contingent liabilities are possible obligations that arise from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events not wholly within the control of the Company. Where it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Contingent liabilities are disclosed on the basis of judgment of the management/independent experts. These are reviewed at each balance sheet date and are adjusted to reflect the current management estimate.

Contingent assets are possible assets that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Company. Contingent assets are disclosed in the financial statements when inflow of economic benefits is probable on the basis of judgment of management. These are assessed continually to ensure that developments are appropriately reflected in the financial statements.

14. Foreign currency transactions and translation

Transactions in foreign currencies are initially recorded at the functional currency spot exchange rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date. Exchange differences arising on settlement or translation of monetary items are recognized in the statement of profit and loss in the year in which it arises with the exception that exchange differences on long term monetary items related to acquisition of property, plant and equipment recognized up to 31 March 2016 are adjusted to the carrying cost of property, plant and equipment.

Non-monetary items denominated in foreign currency which are measured in terms of historical cost are recorded using the exchange rate at the date of the transaction. In case of advance consideration received or paid in a foreign currency, the date of transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it), is when the Company initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration.

15. Revenue

Company's revenues arise from sale and trading of energy, consultancy, project management & supervision services, income on assets under lease, supply of coal from integrated coal mines and other income. Revenue from other income comprises interest from banks, employees, contractors etc., dividend from investments in joint venture & subsidiary companies, dividend from mutual fund investments, surcharge received from beneficiaries for delayed payments, sale of scrap, other miscellaneous income, etc.

15.1. Revenue from sale of energy

The majority of the Company's operations in India are regulated under the Electricity Act, 2003. Accordingly, the CERC determines the tariff for the Company's power plants based on the norms prescribed in the tariff regulations as applicable from time to time. Tariff is based on the capital cost incurred for a specific power plant and primarily comprises two components: capacity charge i.e. a fixed charge that includes depreciation, return on equity, interest on working capital, operating & maintenance expenses, interest on loan and energy charge i.e. a variable charge primarily based on fuel costs. Tariff for Company's integrated coal mines are also determined by CERC based on the norms prescribed in the CERC Tariff Regulations.

Revenue is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the products or services and excludes amounts collected on behalf of third parties. The Company recognizes revenue when (or as) the performance obligation is satisfied, which typically occurs when (or as) control over the products or services is transferred to a customer.

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. As at each reporting date, revenue from sale of energy includes an accrual for sales delivered to beneficiaries but not yet billed i.e. contract assets/ unbilled revenue.

The incentives/disincentives are accounted for based on the norms notified/approved by the CERC as per principles enunciated in Ind AS 115 – 'Revenue from contracts with customers'. In cases of power stations where the same have not been notified/approved, incentives/disincentives are accounted for on provisional basis.

Part of revenue from energy sale where CERC tariff Regulations are not applicable is recognized based on the rates,

terms & conditions mutually agreed with the beneficiaries and trading of power through power exchanges.

Exchange differences arising from settlement/translation of monetary items denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Regulatory deferred account balances' and such balances are adjusted in the year in which the same becomes recoverable/payable to the beneficiaries.

Exchange differences on account of translation of foreign currency borrowings recognized up to 31 March 2016, to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Deferred foreign currency fluctuation asset' with corresponding credit to 'Deferred income from foreign currency fluctuation'. Deferred income from foreign currency fluctuation account is amortized in the proportion in which depreciation is charged on such exchange differences and same is adjusted against depreciation expense. Fair value changes in respect of forward exchange contracts for derivatives recoverable from/payable to the beneficiaries as per the CERC Tariff Regulations, are recognized in sales.

Revenue from sale of energy through trading is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries as per the guidelines issued by Ministry of New and Renewable Energy, Government of India.

Rebates allowed to beneficiaries as early payment incentives are deducted from the amount of revenue.

15.2. Revenue from services

Revenue from consultancy, project management and supervision services rendered is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the services, which is determined on output method and excludes amounts collected on behalf of third parties. The Company recognizes revenue when the performance obligation is satisfied, which typically occurs when control over the services is transferred to a customer.

Reimbursement of expenses is recognized as other income, as per the terms of the service contracts.

Contract modifications are accounted for when additions, deletions or changes are approved either to the contract scope or contract price. The accounting for modifications of contracts involves assessing whether the services added to an existing contract are distinct and whether the pricing is at the standalone selling price. Services added that are not distinct are accounted for on a cumulative catch up basis, while those that are distinct are accounted for prospectively, either as a separate contract, if the additional services are priced at the standalone selling price, or as a termination of the existing contract and creation of a new contract if not priced at the standalone selling price.

15.3. Other income

Interest income is recognized, when no significant uncertainty as to measurability or collectability exist, on a time proportion basis taking into account the amount outstanding and the applicable interest rate, using the effective interest rate method (EIR). For credit impaired financial assets the EIR is applied to the net carrying amount of the financial asset (after deduction of the loss allowance). EIR is the rate that discounts the estimated future cash receipts through the expected life of the financial asset to the net carrying amount of the financial asset. For purchased or originated credit-impaired (POCI) financial assets interest income is recognized by calculating the credit-adjusted EIR and applying that rate to the amortized cost of the asset. The credit-adjusted EIR is the interest rate that, at original recognition, discounts the estimated future cash flows (including credit losses) to the amortized cost of the POCI assets.

Scrap other than steel scrap is accounted for as and when sold.

Insurance claims for loss of profit are accounted for in the year of acceptance. Other insurance claims are accounted for based on certainty of realization.

Revenue from rentals and operating leases is recognized on an accrual basis in accordance with the substance of the relevant agreement.

For debt instruments measured either at amortized cost or at fair value through other comprehensive income (OCI), interest income is recorded using the EIR. EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortized cost of a financial liability. When calculating the EIR, the Company estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in other income in the statement of profit and loss.

The interest/surcharge on late payment/overdue trade receivables for sale of energy is recognized when no significant uncertainty as to measurability or collectability exists.

Interest/surcharge recoverable on advances to contractors and suppliers as well as warranty claims wherever there is uncertainty of realization/acceptance are not treated as accrued and are therefore, accounted for on receipt/acceptance.

Dividend income is recognized in profit or loss only when the right to receive is established, it is probable that the economic benefits associated with the dividend will flow to the Company, and the amount of the dividend can be measured reliably.

16. Employee benefits

16.1. Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions to separate entities and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution plans are recognized as an employee benefits expense in statement of profit and loss in the period during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available. Contributions to a defined contribution plan that are due after more than 12 months after the end of the period in which the employees render the service are discounted to their present value.

The Company has a defined contribution pension scheme which is administered through a separate trust. The obligation of the Company is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post-retirement medical facility (PRMF) or any other retirement benefits. The Company's contribution towards pension is made to National Pension Trust (NPS) for the employees opted for the scheme. The contributions to the defined contribution pension scheme of the Company/NPS for the year are recognized as an expense and charged to the statement of profit and loss.

16.2. Defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Company's liability towards gratuity, pension scheme at two of the stations in respect of taken over employees from the erstwhile state government power utility, post-retirement medical facility (PRMF), baggage allowance for settlement at home town after retirement, farewell gift on retirement and provident fund scheme to the extent of interest liability on provident fund contribution are in the nature of defined benefit plans.

The Company pays fixed contribution to the provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The contributions to the fund for the year are recognized as expense and are charged to the statement of profit and loss. The obligation of the Company is to make such fixed contributions and to ensure a minimum rate of return to the members as specified by the Government of India.

The gratuity is funded by the Company and is managed by separate trust. The Company has PRMF, under which retired employee and the spouse are provided medical facilities in the Company hospitals/empaneled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Company.

The Company's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of any plan assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Company's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a benefit to the Company, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. An economic benefit is available to the Company if it is realizable during the life of the plan, or on settlement of the plan liabilities. Remeasurement comprising of actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in the Other Comprehensive Income (OCI) in the period in which they arise.

Past service costs are recognized in statement of profit and loss on the earlier of the date of the plan amendment or curtailment, and the date that the Company recognizes related restructuring costs. If a plan amendment, curtailment or settlement occurs,the current service cost and the net interest for the period after the re-measurement are determined using the assumptions used for the re-measurement.

16.3. Other long-term employee benefits

Benefits under the Company's leave encashment, long-service award and economic rehabilitation scheme constitute

other long term employee benefits.

The Company's net obligation in respect of these long-term employee benefits is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value and the fair value of any related assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Company's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. Remeasurement comprising of actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in statement of profit and loss account in the period in which they arise.

The obligations are presented as current liabilities in the balance sheet if the entity does not have an unconditional right to defer settlement for at least twelve months after the reporting period, regardless of when the actual settlement is expected to occur.

16.4. Short-term benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid under performance related pay if the Company has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

17. Other expenses

Expenses on ex-gratia payments under voluntary retirement scheme, training & recruitment and voluntary community development are charged to statement of profit and loss in the year incurred.

Expenditure on research is charged to revenue as and when incurred. Expenditure on development is charged to revenue as and when incurred unless it meets the recognition criteria for intangible asset as per Ind AS 38- 'Intangible assets'.

Preliminary expenses on account of new projects incurred prior to approval of feasibility report/techno economic clearance are charged to statement of profit and loss.

Net pre-commissioning income/expenditure is adjusted directly in the cost of related assets and systems.

Transit and handling losses of coal as per Company's norms are included in cost of coal.

18. Income tax

Income tax expense comprises current and deferred tax. Current tax expense is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

Current tax is the expected tax payable on the taxable income for the year computed as per the provisions of Income Tax Act, 1961, using tax rates enacted or substantively enacted by the end of the reporting period, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method, on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the tax bases of assets and liabilities. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they materialize, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax assets against the current tax liabilities, and they relate to income taxes levied by the same tax authority.

Deferred tax is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that future taxable profits will be available against which the deductible temporary difference can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the sufficient taxable profits will be available in future to allow all or part of deferred tax assets to be utilized.

Additional income taxes that arise from the distribution of dividends are recognized at the same time that the liability to

pay the related dividend is recognized. The income tax consequences of dividends are recognized in profit or loss, other comprehensive income or equity according to where the Company originally recognized those past transactions or events.

Deferred tax assets include Minimum Alternative Tax (MAT) paid in accordance with the tax laws in India, which is likely to give future economic benefits in the form of availability of set off against future income tax liability. MAT credit is recognized as deferred tax asset in the balance sheet when the asset can be measured reliably and it is probable that the future taxable profit will be available against which MAT credit can be utilized.

When there is uncertainty regarding income tax treatments, the Company assesses whether a tax authority is likely to accept an uncertain tax treatment. If it concludes that the tax authority is unlikely to accept an uncertain tax treatment, the effect of the uncertainty on taxable income, tax bases and unused tax losses and unused tax credits is recognized. The effect of the uncertainty is recognized using the method that, in each case, best reflects the outcome of the uncertainty: the most likely outcome or the expected value. For each case, the Company evaluates whether to consider each uncertain tax treatment separately, or in conjunction with another or several other uncertain tax treatments, based on the approach that best prefixes the resolution of uncertainty.

19. Leases

19.1. As lessee

The Company assesses whether a contract contains a lease, at inception of a contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Company assesses whether: (1) the contact involves the use of an identified asset (2) the Company has substantially all of the economic benefits from use of the asset through the period of the lease and (3) the Company has the right to direct the use of the asset.

The Company recognizes a right-of-use asset and a corresponding lease liability for all lease arrangements in which it is a lessee, except for leases with a term of twelve months or less (short-term leases) and leases for low value underlying assets. For these short-term and leases for low value underlying assets, the Company recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease.

Certain lease arrangements include the options to extend or terminate the lease before the end of the lease term. Right-of use assets and lease liabilities include these options when it is reasonably certain that the option to extend the lease will be exercised/option to terminate the lease will not be exercised.

The right-of-use assets are initially recognized at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or prior to the commencement date of the lease plus any initial direct costs less any lease incentives. They are subsequently measured at cost less accumulated depreciation/amortization and impairment losses and adjusted for any reassessment of lease liabilities.

Right-of-use assets are depreciated/amortized from the commencement date to the end of the useful life of the underlying asset, if the lease transfers ownership of the underlying asset by the end of lease term or if the cost of right-of-use assets reflects that the purchase option will be exercised. Otherwise, Right-of-use assets are depreciated/amortized from the commencement date on a straight-line basis over the shorter of the lease term and useful life of the underlying asset.

Right-of-use assets are evaluated for recoverability whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. For the purpose of impairment testing, the recoverable amount (i.e. the higher of the fair value less cost to sell and the value-in-use) is determined on an individual asset basis unless the asset does not generate cash flows that are largely independent of those from other assets. In such cases, the recoverable amount is determined for the Cash Generating Unit (CGU) to which the asset belongs.

The lease liability is initially measured at amortized cost at the present value of the future lease payments. In calculating the present value, lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, using the incremental borrowing rate. Lease liabilities are re-measured with a corresponding adjustment to the related right-of-use asset if the Company changes its assessment whether it will exercise an extension or a termination option.

19.2. As lessor

At the inception of an arrangement, the Company determines whether such an arrangement is or contains a lease. A specific asset is subject of a lease if fulfillment of the arrangement is dependent on the use of that specified asset. An arrangement conveys the right to use the asset if the arrangement conveys to the customer the right to control the use of the underlying asset. Arrangements that do not take the legal form of a lease but convey rights to customers/suppliers to use an asset in return for a payment or a series of payments are identified as either finance leases or operating leases.

Accounting for finance leases

Where the Company determines a long term Power Purchase Agreement (PPA) to be or to contain a lease and where the off taker has the principal risk and rewards of ownership of the power plant through its contractual arrangements with the Company, the arrangement is considered a finance lease. Capacity payments are apportioned between capital repayments relating to the provision of the plant, finance income and service income. The finance income element of the capacity payment is recognized as revenue, using a rate of return specific to the plant to give a constant periodic rate of return on the net investment in each period. The service income element of the capacity payment is the difference between the total capacity payment and the amount recognized as finance income and capital repayments and recognized as revenue as it is earned.

The amounts due from lessees under finance leases are recorded in the balance sheet as financial assets, classified as 'Finance lease receivables', at the amount equal to the net investment in the lease.

Accounting for operating leases

Where the Company determines a long term PPA to be or to contain a lease and where the Company retains the principal risks and rewards of ownership of the power plant, the arrangement is considered an operating lease.

For operating leases, the power plant is capitalized as property, plant and equipment and depreciated over its economic life. Rental income from operating leases is recognized on a straight line basis over the term of the arrangement.

20. Impairment of non-financial assets

The carrying amounts of the Company's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment considering the provisions of Ind AS 36 - 'Impairment of Assets'. If any such indication exists, then the asset's recoverable amount is estimated.

The recoverable amount of an asset or cash-generating unit is the higher of its fair value less costs to disposal and its value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the 'cash-generating unit', or "CGU").

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in the statement of profit and loss. Impairment losses recognized in respect of CGUs are reduced from the carrying amounts of the assets of the CGU.

Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of accumulated depreciation or amortization, if no impairment loss had been recognized.

21. Operating segments

In accordance with Ind AS 108-'Operating segments', the operating segments used to present segment information are identified on the basis of internal reports used by the Company's management to allocate resources to the segments and assess their performance. The Board of Directors is collectively the Company's 'Chief Operating Decision Maker' or 'CODM' within the meaning of Ind AS 108. The indicators used for internal reporting purposes may evolve in connection with performance assessment measures put in place.

Segment results that are reported to the CODM include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly corporate expenses, finance costs, income tax expenses and corporate income that are not directly attributable to segments.

Revenue directly attributable to the segments is considered as segment revenue. Expenses directly attributable to the segments and common expenses allocated on a reasonable basis are considered as segment expenses.

Segment capital expenditure is the total cost incurred during the period to acquire property, plant and equipment, Capital Wok in Progress, intangible assets other than goodwill and intangible assets under development.

Segment assets comprise property, plant and equipment, intangible assets, capital work in progress, intangible assets under development, advances for capital expenditures, trade and other receivables, inventories and other assets that can be directly or reasonably allocated to segments. For the purpose of segment reporting, property, plant and equipment have been allocated to segments based on the extent of usage of assets for operations attributable to the respective

segments. Unallocated assets comprise investments, income tax assets, corporate assets and other assets that cannot reasonably be allocated to segments.

Segment liabilities include all operating liabilities in respect of a segment and consist principally of trade payable, payable for capital expenditure and other payables, provision for employee benefits and other provisions. Unallocated liabilities comprise equity, income tax liabilities, loans and borrowings and other liabilities and provisions that cannot reasonably be allocated to segments.

22. Business Combinations

Business combinations are accounted for using the acquisition accounting method as at the date of the acquisition, which is the date at which control is transferred to the Company. The consideration transferred in the acquisition and the identifiable assets acquired and liabilities assumed are recognized at fair values on their acquisition date. Goodwill is initially measured at cost, being the excess of the consideration transferred over the net identifiable assets acquired and liabilities assumed. Where the fair value of net identifiable assets acquired and liabilities assumed exceed the consideration transferred, after reassessing the fair values of the net assets and contingent liabilities, the excess is recognized as capital reserve. Acquisition related costs are expensed as incurred.

23. Dividends

Dividends and interim dividends payable to the Company's shareholders are recognized as changes in equity in the period in which they are approved by the shareholders and the Board of Directors respectively.

24. Material prior period errors

Material prior period errors are corrected retrospectively by restating the comparative amounts for the prior periods presented in which the error occurred. If the error occurred before the earliest period presented, the opening balances of assets, liabilities and equity for the earliest period presented, are restated.

25. Earnings per share

Basic earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Company by the weighted average number of equity shares outstanding during the financial year.

Diluted earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Company by the weighted average number of equity shares considered for deriving basic earnings per equity share and also the weighted average number of equity shares that could have been issued upon conversion of all dilutive potential equity shares.

The number of equity shares and potentially dilutive equity shares are adjusted retrospectively for all periods presented for any bonus shares issued during the financial year.

Basic and diluted earnings per equity share are also computed using the earnings amounts excluding the movements in regulatory deferral account balances.

26. Statement of cash flows

Statement of cash flows is prepared in accordance with the indirect method prescribed in Ind AS 7-'Statement of cash flows'.

27. Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. The Company recognizes a financial asset or a financial liability only when it becomes party to the contractual provisions of the instrument.

27.1. Financial assets

Initial recognition and measurement

All financial assets are recognized at fair value on initial recognition, except for trade receivables which are initially measured at transaction price. Transaction costs that are directly attributable to the acquisition of financial assets, which are not valued at fair value through profit or loss, are added to the fair value on initial recognition.

Subsequent measurement

Debt instruments at amortized cost

A 'debt instrument' is measured at the amortized cost if both the following conditions are met:

(a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and

(b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortized cost using the effective interest rate (EIR) method. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of profit and loss. The losses arising from impairment are recognized in the statement of profit and loss. This category generally applies to trade and other receivables.

Debt instrument at FVTOCI (Fair value through OCI)

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:

(a) The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and

(b) The asset's contractual cash flows represent SPPI

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the OCI. However, the Company recognizes interest income, impairment losses & reversals and foreign exchange gain or loss in the statement of profit and loss. On de-recognition of the asset, cumulative gain or loss previously recognized in OCI is reclassified from the equity to the statement of profit and loss. Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL (Fair value through profit or loss)

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as FVTOCI, is classified as at FVTPL.

In addition, the Company may elect to classify a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Interest income on such investments is presented under 'Other income'.

Investment in Equity instruments

All equity investments in entities other than subsidiaries and joint venture companies are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Company decides to classify the same either as at FVTOCI or FVTPL. The Company makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable.

If the Company decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to statement of profit and loss, even on sale/ disposal of investments. However, the Company may transfer the cumulative gain or loss within equity on sale / disposal of the investments.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Dividend on such investments is presented under 'Other income'.

Equity investments in subsidiaries and joint ventures companies are accounted at cost less impairment, if any.

The Company reviews the carrying value of investments at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the recoverable amount of the investment is estimated. If the recoverable amount is less than the carrying amount, the impairment loss is recognized in the statement of profit and loss.

De-recognition

A financial asset (or, where applicable, a part of a financial asset or part of a Group of similar financial assets) is primarily de-recognized (i.e. removed from the Company's balance sheet) when:

- The rights to receive cash flows from the asset have expired, or
- The Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

The difference between the carrying amount and the amount of consideration received/receivable is recognized in the statement of profit and loss except for equity instruments classified as at FVTOCI, where such differences are recorded in OCI.

Impairment of financial assets

In accordance with Ind AS 109-'Financial instruments', the Company applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

(a) Financial assets that are debt instruments, and are measured at amortized cost e.g., loans, debt securities, deposits and bank balance.

(b) Financial assets that are debt instruments and are measured as at FVTOCI.

(c) Lease receivables under Ind AS 116.

(d) Trade receivables, unbilled revenue and contract assets under Ind AS 115.

(e) Loan commitments which are not measured as at FVTPL.

(f) Financial guarantee contracts which are not measured as at FVTPL.

For trade receivables and contract assets/unbilled revenue, the Company applies the simplified approach required by Ind AS 109 Financial Instruments, which requires lifetime expected losses to be recognized from initial recognition.

For recognition of impairment loss on other financial assets and risk exposure (other than purchased or originated credit impaired financial assets), the Company determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognizing impairment loss allowance based on 12month ECL.

For purchased or originated credit impaired financial assets, a loss allowance is recognized for the cumulative changes in lifetime expected credited losses since initial recognition.

27.2. Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss and financial liabilities at amortized cost, as appropriate. All financial liabilities are recognized initially at fair value and, in the case of liabilities subsequently measured at amortized cost net of directly attributable transaction cost. The Company's financial liabilities include trade and other payables, borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at amortized cost

After initial measurement, such financial liabilities are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in statement of profit and loss when the liabilities are derecognized as well as through the EIR amortization process Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance costs in the statement of profit and loss. This category generally applies to borrowings, trade payables and other contractual liabilities.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Company that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the statement of profit and loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in Ind AS 109 are satisfied. For liabilities designated as FVTPL, fair value gains/losses attributable to changes in own credit risk is recognized in OCI. These gains/losses are not subsequently transferred to profit and loss. However, the Company may transfer the cumulative gain or loss within equity on disposal. All other changes in fair value of such liability are recognized in the statement of profit and loss. The Company has not designated any financial liability as at fair value through profit and loss.

De-recognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit and loss.

27.3. Financial guarantee contracts

Financial guarantee contracts issued by the Company are those contracts that require a payment to be made to reimburse the holder for a loss it incurs because the specified debtor fails to make a payment when due in accordance with the terms of a debt instrument. Financial guarantee contracts are recognized initially as a liability at fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantee. Subsequently, the liability is measured at the higher of the amount of loss allowance determined as per impairment requirements of Ind AS 109 - 'Financial Instruments' and the amount recognized less the cumulative amount of income recognized in accordance with the principles of Ind AS 115 'Revenue from Contracts with Customers'.

27.4. Derivative financial instruments

Initial recognition and subsequent measurement

The Company uses derivative financial instruments, such as forward currency contracts and interest rate swaps to hedge its foreign currency risks and interest rate risks of foreign currency loans. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative. Any gains or losses arising from changes in the fair value of derivatives are taken to statement of profit and loss.

27.5. Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the balance sheet if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

28. Non -Current Assets Held for Sale

The Company classifies non-current assets and disposal groups as held for sale if their carrying amounts will be recovered principally through a sale rather than through continuing use and a sale is considered highly probable.

Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification as held for sale, and actions required to complete the plan of sale should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

Non-Current Assets held for sale and disposal groups are measured at the lower of their carrying amount and the fair value less cost to sell.

Non-current assets classified as held for sale are not depreciated or amortized.

D. Use of estimates and management judgements

The preparation of financial statements requires management to make judgments, estimates and assumptions that may impact the application of accounting policies and the reported value of assets, liabilities, revenue expenses and related disclosures concerning the items involved as well as contingent assets and liabilities at the balance sheet date. The estimates and management's judgments are based on previous experience & other factors considered reasonable and prudent in the circumstances. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

In order to enhance understanding of the financial statements, information about significant areas of estimation, uncertainty and critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements is as under:

1. Formulation of accounting policies

The accounting policies are formulated in a manner that results in financial statements containing relevant and reliable information about the transactions, other events and conditions to which they apply. Those policies need not be applied when the effect of applying them is immaterial.

2. **Useful life of property, plant and equipment and intangible assets**

   The estimated useful life of property, plant and equipment and intangible assets is based on a number of factors including the effects of obsolescence, demand, competition and other economic factors (such as the stability of the industry and known technological advances) and the level of maintenance expenditures required to obtain the expected future cash flows from the asset.

   Useful life of the assets of the generation of electricity business and integrated coal mines (where tariff is regulated) is determined by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

3. **Recoverable amount of property, plant and equipment and intangible assets**

   The recoverable amount of property, plant and equipment and intangible assets is based on estimates and assumptions regarding in particular the expected market outlook and future cash flows associated with the power plants. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

4. **Defined benefit plans and long-term employee benefits**

   Employee benefit obligations are measured on the basis of actuarial assumptions which include mortality and withdrawal rates as well as assumptions concerning future developments in discount rates, the rate of salary increases and the inflation rate. The Company considers that the assumptions used to measure its obligations are appropriate and documented. However, any changes in these assumptions may have a material impact on the resulting calculations.

5. **Revenues**

   The Company records revenue from sale of energy based on tariff rates approved by the CERC as modified by the orders of Appellate Tribunal for Electricity, as per principles enunciated under Ind AS 115. However, in cases where tariff rates are yet to be approved, provisional rates are adopted considering the applicable CERC Tariff Regulations.

6. **Leases not in legal form of lease**

   Significant judgment is required to apply lease accounting rules as per Ind AS 116 in determining whether an arrangement contains a lease. In assessing arrangements entered into by the Company, management has exercised judgment to evaluate the right to use the underlying asset, substance of the transactions including legally enforceable agreements and other significant terms and conditions of the arrangements to conclude whether the arrangement meets the criteria as per Ind AS 116.

7. **Assets held for sale**

   Significant judgment is required to apply the accounting of non-current assets held for sale under Ind AS 105 - 'Non-current assets held for sale and discontinued operations'. In assessing the applicability, management has exercised judgment to evaluate the availability of the asset for immediate sale, management's commitment for the sale and probability of sale within one year to conclude if their carrying amount will be recovered principally through a sale transaction rather than through continuing use.

8. **Regulatory deferral account balances**

   Recognition of regulatory deferral account balances involves significant judgments including about future tariff regulations since these are based on estimation of the amounts expected to be recoverable/payable through tariff in future.

9. **Provisions and contingencies**

   The assessments undertaken in recognizing provisions and contingencies have been made in accordance with Ind AS 37-'Provisions, contingent liabilities and contingent assets'. The evaluation of the likelihood of the contingent events require best judgment by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, this likelihood could alter.

10. **Impairment test of investments in Subsidiaries and Joint Venture Companies**

    The recoverable amount of investment in subsidiaries and joint venture companies is based on estimates and assumptions regarding in particular the future cash flows associated with the operations of the investee Company. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

11. **Income taxes**

    Significant estimates are involved in determining the provision for current and deferred tax, including amount expected to be paid/recovered for uncertain tax positions.

2. Non-current assets - Property, plant and equipment

As at 31 March 2021 ₹ Crore

Particulars	Gross block				Depreciation and amortization				Net block
	As at 1 April 2020	Additions	Deductions/ adjustments	As at 31 March 2021	Upto 1 April 2020	For the year	Deductions/ adjustments	Upto 31 March 2021	As at 31 March 2021
Land (including development expenses)									
Freehold	6,201.09	233.15	(3.82)	**6,430.42**	-	-	-	-	**6,430.42**
Right of use	2,788.74	151.99	(6.13)	**2,934.60**	403.94	113.61	3.43	**520.98**	**2,413.62**
Under submergence (refer footnote (f) below)	737.45	-	14.47	**751.92**	134.04	26.90	-	**160.94**	**590.98**
Right of use - Coal Bearing Area Land	3,214.33	139.03	313.58	**3,666.94**	151.48	78.44	-	**229.92**	**3,437.02**
Roads, bridges, culverts and helipads	1,524.33	56.63	62.27	**1,643.23**	202.70	67.17	-	**269.87**	**1,373.36**
Building									
Freehold									
Main plant	7,334.37	200.13	69.55	**7,604.05**	968.53	285.08	-	**1,253.61**	**6,350.44**
Others	4,961.43	362.62	38.33	**5,362.38**	699.11	224.24	(0.47)	**922.88**	**4,439.50**
Right of use	29.62	9.46	(2.48)	**36.60**	11.95	6.07	(0.62)	**17.40**	**19.20**
Temporary erections	24.92	0.20	1.30	**26.42**	22.82	3.52	-	**26.34**	**0.08**
Water supply, drainage and sewerage system	772.81	37.37	23.08	**833.26**	147.80	39.76	-	**187.56**	**645.70**
Hydraulic works, barrages, dams, tunnels and power channel	4,357.14	-	(3.26)	**4,353.88**	1,065.56	231.65	(0.04)	**1,297.17**	**3,056.71**
MGR track and signalling system	2,158.16	1,121.01	93.88	**3,373.05**	349.30	177.55	-	**526.85**	**2,846.20**
Railway siding	3,190.92	-	103.99	**3,294.91**	344.98	174.60	-	**519.58**	**2,775.33**
Earth dam reservoir	460.02	60.77	7.99	**528.78**	82.18	29.57	-	**111.75**	**417.03**
Plant and equipment									
Owned	1,50,544.55	14,620.71	199.33	**1,65,364.59**	31,073.36	9,588.95	(352.81)	**40,309.50**	**1,25,055.09**
Right of use	85.77	-	-	**85.77**	23.62	4.75	-	**28.37**	**57.40**
Mining Properties	707.03	304.54	-	**1,011.57**	35.35	42.97	-	**78.32**	**933.25**
Site restoration cost	182.43	71.03	-	**253.46**	3.72	5.27	-	**8.99**	**244.47**
Furniture and fixtures	690.54	50.28	(0.14)	**740.68**	162.07	59.95	(2.38)	**219.64**	**521.04**
Vehicles including speedboats / helicopter									
Owned	12.84	1.75	(0.53)	**14.06**	5.06	1.14	(0.16)	**6.04**	**8.02**
Right of use	25.73	1.06	(0.76)	**26.03**	4.38	9.27	(0.55)	**13.10**	**12.93**
Office equipment	318.21	59.19	(8.48)	**368.92**	123.48	40.39	(4.12)	**159.75**	**209.17**
EDP, WP machines and satcom equipment	397.79	90.83	(29.44)	**459.18**	265.34	75.21	(26.39)	**314.16**	**145.02**
Construction equipment	220.33	11.98	1.55	**233.86**	62.07	19.09	-	**81.16**	**152.70**
Electrical installations	1,624.76	390.61	(223.64)	**1,791.73**	192.14	102.50	(5.23)	**289.41**	**1,502.32**
Communication equipment	101.71	9.95	(0.22)	**111.44**	48.02	9.05	(0.44)	**56.63**	**54.81**
Hospital equipment	34.88	8.37	(0.28)	**42.97**	8.35	2.21	(0.08)	**10.48**	**32.49**
Laboratory and workshop equipment	196.12	12.06	4.49	**212.67**	33.65	11.25	(0.05)	**44.85**	**167.82**
Assets for ash utilisation	45.52	11.95	-	**57.47**	-	-	-	-	**57.47**
Less: Adjusted from fly ash utilisation reserve fund	45.52	11.95	-	**57.47**	-	-	-	-	**57.47**
Total	**1,92,898.02**	**18,004.72**	**654.63**	**2,11,557.37**	**36,625.00**	**11,430.16**	**(389.91)**	**47,665.25**	**1,63,892.12**

As at 31 March 2020 ₹ Crore

Particulars	Gross block				Depreciation and amortization				Net block
	As at 1 April 2019	Additions	Deductions/ adjustments	As at 31 March 2020	Upto 1 April 2019	For the year	Deductions/ adjustments	Upto 31 March 2020	As at 31 March 2020
Land (including development expenses)									
Freehold	6,160.24	9.45	31.40	6,201.09	-	-	-	-	6,201.09
Right of use	5,277.30	588.35	(3,076.91)	2,788.74	410.69	198.30	(205.05)	403.94	2,384.80
Under submergence (refer footnote (f) below)	776.77	0.29	(39.61)	737.45	110.89	26.74	(3.59)	134.04	603.41
Right of use - Coal Bearing Area Land	-	50.24	3,164.09	3,214.33	-	57.42	94.06	151.48	3,062.85
Roads, bridges, culverts and helipads	1,088.91	239.52	195.90	1,524.33	153.78	54.24	(5.32)	202.70	1,321.63
Building									
Freehold									
Main plant	5,793.45	1,490.67	50.25	7,334.37	721.09	247.45	(0.01)	968.53	6,365.84
Others	3,982.16	978.09	1.18	4,961.43	586.72	198.94	(86.55)	699.11	4,262.32
Right of use	18.91	10.76	(0.05)	29.62	7.42	4.57	(0.04)	11.95	17.67
Temporary erections	21.49	3.14	0.29	24.92	19.49	4.37	(1.04)	22.82	2.10
Water supply, drainage and sewerage system	665.19	89.33	18.29	772.81	112.37	35.44	(0.01)	147.80	625.01
Hydraulic works, barrages, dams, tunnels and power channel	4,259.88	-	97.26	4,357.14	830.84	231.13	3.59	1,065.56	3,291.58
MGR track and signalling system	1,082.50	1,078.32	(2.66)	2,158.16	263.38	85.92	-	349.30	1,808.86
Railway siding	1,651.55	1,413.72	125.65	3,190.92	237.02	107.96	-	344.98	2,845.94
Earth dam reservoir	318.89	141.85	(0.72)	460.02	58.19	23.99	-	82.18	377.84
Plant and equipment									
Owned	1,19,455.70	29,228.82	1,860.03	1,50,544.55	23,489.60	7,971.58	(387.82)	31,073.36	1,19,471.19
Right of use	85.77	-	-	85.77	18.87	4.75	-	23.62	62.15
Mining Properties	-	707.03	-	707.03	-	35.35	-	35.35	671.68
Site restoration cost	-	182.43	-	182.43	-	3.72	-	3.72	178.71
Furniture and fixtures	521.96	160.61	7.97	690.54	113.05	53.08	(4.06)	162.07	528.47
Vehicles including speedboats / helicopter									
Owned	12.64	1.00	(0.80)	12.84	4.04	1.20	(0.18)	5.06	7.78
Right of use	3.25	24.51	(2.03)	25.73	1.98	4.26	(1.86)	4.38	21.35
Office equipment	247.24	71.74	(0.77)	318.21	87.92	35.38	0.18	123.48	194.73
EDP, WP machines and satcom equipment	396.62	48.26	(47.09)	397.79	216.37	92.44	(43.47)	265.34	132.45
Construction equipment	201.10	28.25	(9.02)	220.33	51.22	18.62	(7.77)	62.07	158.26
Electrical installations	695.86	915.25	13.65	1,624.76	122.03	71.20	(1.09)	192.14	1,432.62
Communication equipment	88.47	12.89	0.35	101.71	39.25	9.00	(0.23)	48.02	53.69
Hospital equipment	31.96	3.03	(0.11)	34.88	6.43	1.94	(0.02)	8.35	26.53
Laboratory and workshop equipment	138.24	57.78	0.10	196.12	22.73	10.89	0.03	33.65	162.47
Assets for ash utilisation	40.71	4.81	-	45.52	-	-	-	-	45.52
Less: Adjusted from fly ash utilisation reserve fund	40.71	4.81	-	45.52	-	-	-	-	45.52
Total	1,52,976.05	37,535.33	2,386.64	1,92,898.02	27,685.37	9,589.88	(650.25)	36,625.00	1,56,273.02

Generating Power & Smiles 24x7 for the Nation

a) The conveyancing of the title to **10,190.47 acres** of freehold land of value ₹ **1,562.01 crore** (31 March 2020: 10,142.09 acres of value ₹ 1,508.27 crore), buildings and structures of value ₹ **4.97 crore** (31 March 2020: ₹ 4.97 crore) and also execution of lease agreements for **9,756 acres** of right of use land of value ₹ **1,383.22 crore** (31 March 2020: 10,011 acres of value ₹ 1,392.74 crore) in favour of the Company are awaiting completion of legal formalities.

b) Land includes **284.35 acres** of freehold land of value ₹ **0.52 crore** (31 March 2020: 284.35 acres of value ₹ 0.52 crore), and **1,939.55 acres** of right of use land of value ₹ **3.81 crore** (31 March 2020: 1939.55 acres of value ₹ 3.81 crore), the value thereof including periodical lease rent accruing thereon is subject to revision on final settlement with the State Government Authorities with demand of late payment charges, if any.

c) Land right of use does not include value of **33 acres** (31 March 2020: 33 acres) of land in possession of the Company. This will be accounted for on settlement of the price thereof by the State Government Authorities.

d) Land includes **1,281.32 acres** of freehold land of value ₹ **118.32 crore** (31 March 2020: 1,284 acres of value ₹ 128.15 crore) and **395 acres** of right of use land of value ₹ **3.10 crore** (31 March 2020: 395 acres of value ₹ 3.10 crore) not in possession of the Company. The Company is taking appropriate steps for repossession of the same.

e) Land-freehold includes an amount of ₹ **263.92 crore** (31 March 2020: ₹ 282.92 crore) deposited with various authorities in respect of land in possession which is subject to adjustment on final determination of price.

f) Gross block of land under submergence represents ₹ **573.09 crore** (31 March 2020: ₹ 558.62 crore) of freehold land and ₹ **178.83 crore** (31 March 2020: ₹ 178.83 crore) of right of use land. The land has been amortized considering the rate of depreciation provided by the CERC in the tariff regulations and the fact that it will not have any economic value due to deposit of silt and other foreign materials.

g) Possession of land measuring **98 acres** (31 March 2020: 98 acres) consisting of **79 acres** of freehold land (31 March 2020: 79 acres) and **19 acres** of right of use land (31 March 2020: 19 acres) of value ₹ **0.21 crore** (31 March 2020: ₹ 0.21 crore) was transferred to Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (erstwhile UPSEB) for a consideration of ₹ **0.21 crore.** Pending approval for transfer of the said land, the area and value of this land has been included in the total land of the Company. The consideration received from erstwhile UPSEB is disclosed under Note 30 - Current liabilities - Other financial liabilities.

h) Refer Note 66 regarding property, plant and equipment under leases.

i) Spare parts of ₹ 5 lakh and above, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized.

j) Property, plant and equipment costing ₹ 5,000/- or less, are depreciated fully in the year of acquisition.

k) Refer Note 22 for information on property, plant and equipment pledged as security by the Company.

l) Refer Note 69 (C) (a) for disclosure of contractual commitments for the acquisition of property, plant and equipment.

m) Deduction/adjustments from gross block and depreciation and amortization for the year includes:

₹ Crore

Particulars	Gross block		Depreciation and amortisation	
	For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020
Disposal of assets	**(38.90)**	(58.40)	**(29.44)**	(45.01)
Retirement of assets	**(510.59)**	(449.02)	**(363.74)**	(351.08)
Cost adjustments including exchange differences	**1,211.53**	3,262.41	**-**	-
Assets capitalised with retrospective effect/Write back of excess capitalisation	**0.51**	(124.71)	**-**	-
Others	**(7.92)**	(243.64)	**3.27**	(254.16)
Total	**654.63**	2,386.64	**(389.91)**	(650.25)

n) Exchange differences capitalized in Capital work-in-progress (CWIP) are allocated to various heads of CWIP in the year of capitalisation. Exchange differences in respect of assets already capitalised are disclosed in the 'Deductions/Adjustments' column of Property, plant and equipment. Asset-wise details of exchange differences and borrowing costs included in the

cost of major heads of CWIP and property, plant and equipment through 'Addition' or 'Deductions/Adjustments' column are given below:

₹ Crore

Particulars	For the year ended 31 March 2021		For the year ended 31 March 2020	
	Exchange differences included in PPE/CWIP	Borrowing costs included in PPE/ CWIP	Exchange differences included in PPE/CWIP	Borrowing costs included in PPE/ CWIP
Building - Freehold				
Main plant	(8.89)	62.64	51.75	89.34
Others	(1.86)	61.17	6.54	104.36
Hydraulic works, barrages, dams, tunnels and power channel	(8.88)	186.97	27.91	200.56
MGR track and signalling system	(2.36)	38.59	31.82	52.64
Railway siding	-	2.60	0.60	124.08
Plant and equipment	(472.68)	2,153.24	1,904.68	3,271.83
Others including pending allocation	(77.71)	275.08	49.06	567.47
Total	(572.38)	2,780.29	2,072.36	4,410.28

o) Gross carrying amount of the fully depreciated/amortised property, plant and equipment that are still in use:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Land-Right of use	11.40	12.66
Roads, bridges ,culverts and helipads	33.77	30.68
Main plant building	117.91	98.83
Other building	168.48	141.55
Water supply, drainage and sewerage system	39.59	26.84
MGR track and signalling system	50.94	45.85
Plant and equipment - Owned	3,548.90	2,467.58
Furniture and fixtures	32.35	27.82
Other office equipment	58.71	48.46
EDP, WP machines and satcom equipment	162.02	143.16
Communication equipment	30.52	24.24
Others	126.49	98.07
Total	4,381.08	3,165.74

Others include temporary erections, railway sidings, earth dam reservoirs, construction equipment and electrical installations etc.

p) **Property, plant and equipment subject to operating lease**

The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which are extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Ind AS 116. The net carrying value of such leased assets included above are as under:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Land- Free hold	75.10	74.85
Land- Right of use	0.54	0.61
Roads, bridges, culverts and helipads	12.08	13.99
Main plant building-Freehold	13.93	16.38
Other building-Freehold	38.99	42.01
Water supply, drainage and sewerage system	10.44	11.41
Plant and equipment - Owned	404.53	475.40
Railway siding	2.40	2.65
Electrical installation	4.83	6.05
Others	13.40	14.75
Total	576.24	658.10

3. Non-current assets - Capital work-in-progress

As at 31 March 2021 ₹ Crore

Particulars	As at 1 April 2020	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2021
Development of land	491.84	208.90	(326.68)	-	**374.06**
Roads, bridges, culverts and helipads	477.79	135.96	(38.96)	56.63	**518.16**
Piling and foundation	712.60	33.93	-	-	**746.53**
Buildings					
Freehold					
Main plant	1,563.21	343.82	(281.51)	200.13	**1,425.39**
Others	1,657.53	677.64	(411.86)	362.62	**1,560.69**
Temporary erections	21.08	7.34	(4.11)	-	**24.31**
Water supply, drainage and sewerage system	92.39	34.84	12.82	35.04	**105.01**
Hydraulic works, barrages, dams, tunnels and power channel	3,894.99	434.53	(8.82)	-	**4,320.70**
MGR track and signalling system	806.02	403.13	(2.07)	1,121.01	**86.07**
Railway siding	1,445.24	530.91	(238.63)	-	**1,737.52**
Earth dam reservoir	309.76	67.89	54.28	60.77	**371.16**
Plant and equipment - owned	54,949.68	15,380.38	(142.78)	13,132.32	**57,054.96**
Furniture and fixtures	39.03	15.59	9.07	17.68	**46.01**
Vehicles	-	0.17	-	-	**0.17**
Office equipment	4.64	28.76	1.96	13.66	**21.70**
EDP/WP machines and satcom equipment	6.42	5.56	(0.50)	9.05	**2.43**
Construction equipment	0.13	0.09	(0.04)	0.12	**0.06**
Electrical installations	456.29	156.07	183.53	385.33	**410.56**
Communication equipment	2.17	21.11	(0.49)	2.23	**20.56**
Hospital equipment	0.11	0.43	-	0.11	**0.43**
Laboratory and workshop equipment	5.16	0.54	(0.01)	3.49	**2.20**
Development of coal mines	1,441.15	344.94	(295.46)	223.81	**1,266.82**
	68,377.23	18,832.53	(1,490.26)	15,624.00	**70,095.50**
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	82.27	3.55	(1.08)	-	**84.74**
Difference in exchange on foreign currency loans	1,401.54	0.94	(207.54)	-	**1,194.94**
Pre-commissioning expenses (net)	191.11	460.63	(371.40)	-	**280.34**
Expenditure during construction period (net)*	418.44	3,504.52	(11.84)	-	**3,911.12**
Other expenditure directly attributable to project construction	1,077.90	27.76	(231.72)	-	**873.94**
Less: Allocated to related works	-	3,418.71	-	-	**3,418.71**
	3,171.26	578.69	(823.58)	-	**2,926.37**
Sub-total	71,548.49	19,411.22	(2,313.84)	15,624.00	**73,021.87**
Less: Provision for unserviceable works	533.76	91.56			**625.32**
Construction stores (net of provisions)	2,052.03	1,335.90	(440.88)		**2,947.05**
Total	**73,066.76**	**20,655.56**	**(2,754.72)**	**15,624.00**	**75,343.60**

As at 31 March 2020

₹ Crore

Particulars	As at 1 April 2019	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2020
Development of land	835.89	80.45	(424.50)	-	491.84
Roads, bridges, culverts and helipads	266.99	377.96	72.36	239.52	477.79
Piling and foundation	676.81	35.79	-	-	712.60
Buildings					
Freehold					
Main plant	2,778.26	445.23	(169.61)	1,490.67	1,563.21
Others	2,376.01	850.65	(591.04)	978.09	1,657.53
Temporary erections	21.66	9.84	(7.59)	2.83	21.08
Water supply, drainage and sewerage system	105.96	48.60	27.14	89.31	92.39
Hydraulic works, barrages, dams, tunnels and power channel	3,257.00	643.89	(5.90)	-	3,894.99
MGR track and signalling system	891.75	258.19	734.40	1,078.32	806.02
Railway siding	2,568.00	871.02	(580.06)	1,413.72	1,445.24
Earth dam reservoir	258.58	126.07	66.96	141.85	309.76
Plant and equipment - owned	66,367.85	15,054.74	1,146.33	27,619.24	54,949.68
Furniture and fixtures	47.82	23.07	40.35	72.21	39.03
Office equipment	8.80	2.24	0.62	7.02	4.64
EDP/WP machines and satcom equipment	4.19	7.11	(0.40)	4.48	6.42
Construction equipment	-	0.97	(0.84)	-	0.13
Electrical installations	398.40	272.65	634.16	848.92	456.29
Communication equipment	2.35	2.73	(0.13)	2.78	2.17
Hospital equipment	0.04	0.11	-	0.04	0.11
Laboratory and workshop equipment	0.30	5.18	(0.02)	0.30	5.16
Development of coal mines	2,185.52	256.71	(129.50)	871.58	1,441.15
	83,052.18	19,373.20	812.73	34,860.88	68,377.23
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	95.10	0.08	(12.91)	-	82.27
Difference in exchange on foreign currency loans	1,569.72	447.21	(615.39)	-	1,401.54
Pre-commissioning expenses (net)	464.87	1,097.17	(1,370.93)	-	191.11
Expenditure during construction period (net)*	598.20	5,717.05	(18.76)	-	6,296.49
Other expenditure directly attributable to project construction	2,085.73	29.67	(1,037.50)	-	1,077.90
Less: Allocated to related works	-	5,878.05	-	-	5,878.05
	4,813.62	1,413.13	(3,055.49)	-	3,171.26
Sub-total	87,865.80	20,786.33	(2,242.76)	34,860.88	71,548.49
Less: Provision for unserviceable works	504.94	39.21	(10.39)	-	533.76
Construction stores (net of provisions)	3,448.03	1,390.97	(2,786.97)	-	2,052.03
Total	90,808.89	22,138.09	(5,019.34)	34,860.88	73,066.76

* Brought from expenditure during construction period (net) - Note 41

a) Construction stores includes material lying with contractors for construction works and are net of provision for shortages pending investigation amounting to ₹ **27.77 crore** (31 March 2020: ₹ 24.94 crore).

b) Pre-commissioning expenses for the year amount to ₹ **549.94 crore** (31 March 2020: ₹ 1,260.02 crore) and after adjustment of pre-commissioning sales of ₹ **89.31 crore** (31 March 2020: ₹ 162.85 crore) resulted in net pre-commissioning expenditure of ₹ **460.63 crore** (31 March 2020: ₹ 1,097.17 crore).

c) Additions to the development of coal mines include expenditure during construction period (net) of ₹ **623.70 crore** (31 March 2020: ₹ 410.85 crore) - [Ref. Note 42] and after netting off the receipts from coal extracted during the development phase amounting to ₹ **278.76 crore** (31 March 2020: ₹ 154.14 crore).

d) Details of exchange differences and borrowing costs capitalised are disclosed in Note 2 (n).

e) Amount capitalised under development of coal mines is included in assets capitalised under 'Mining properties' and 'Site restoration cost' under Property, plant and equipment.

4. Non-current assets - Intangible assets

As at 31 March 2021

₹ Crore

Particulars	Gross block				Amortisation				Net block
	As at 1 April 2020	Additions	Deductions/ adjustments	As at 31 March 2021	Upto 1 April 2020	For the year	Deductions/ adjustments	Upto 31 March 2021	As at 31 March 2021
Software	87.68	27.05	0.10	**114.83**	58.88	21.54	0.01	**80.43**	**34.40**
Right of use - Land	204.72	-	7.95	**212.67**	24.52	8.89	0.46	**33.87**	**178.80**
- Others	384.87	-	34.72	**419.59**	55.59	20.46	-	**76.05**	**343.54**
Total	**677.27**	**27.05**	**42.77**	**747.09**	**138.99**	**50.89**	**0.47**	**190.35**	**556.74**

As at 31 March 2020

₹ Crore

Particulars	Gross block				Amortisation				Net block
	As at 1 April 2019	Additions	Deductions/ adjustments	As at 31 March 2020	Upto 1 April 2019	For the year	Deductions/ adjustments	Upto 31 March 2020	As at 31 March 2020
Software	53.28	31.14	3.26	87.68	31.16	27.75	(0.03)	58.88	28.80
Right of use - Land	165.90	7.76	31.06	204.72	20.77	8.71	(4.96)	24.52	180.20
- Others	203.97	180.90	-	384.87	41.28	14.31	-	55.59	329.28
Total	423.15	219.80	34.32	677.27	93.21	50.77	(4.99)	138.99	538.28

a) The right to use of land and others are amortized over the period of legal right to use or life of the related plant, whichever is less.

b) Cost of acquisition of the right for drawl of water amounting to ₹ **419.59 crore** (31 March 2020: ₹ 384.87 crore) is included under intangible assets – Right to use - Others.

c) Deductions/adjustments from gross block and amortization for the year includes:

₹ Crore

	Gross block		Amortisation	
	For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020
Cost adjustments	**35.49**	39.30	**-**	(4.97)
Others	**7.28**	(4.98)	**0.47**	(0.02)
Total	**42.77**	34.32	**0.47**	(4.99)

d) Gross carrying amount of the fully amortised intangible assets that are still in use :

₹ Crore

	As at 31 March 2021	As at 31 March 2020
Software	**39.74**	26.95
Right of use - land	**0.14**	0.14
	39.88	27.09

e) Refer Note 69 (C) (a) for disclosure of contractual commitments for the acquisition of intangible assets.

5. Non-current assets - Intangible assets under development

As at 31 March 2021

₹ Crore

Particulars	As at 1 April 2020	Additions	Deductions/ Adjustments	Capitalised	As at 31 March 2021
Exploration and evaluation assets - coal mines	292.46	22.65	(175.50)	-	**139.61**
Exploratory wells-in-progress	7.64	-	-	-	**7.64**
Software	0.06	0.08	(0.01)	0.05	**0.08**
	300.16	22.73	(175.51)	0.05	**147.33**
Less: Provision for unserviceable works	7.64	44.79	-	-	**52.43**
Total	**292.52**	**(22.06)**	**(175.51)**	**0.05**	**94.90**

As at 31 March 2020

₹ Crore

Particulars	As at 1 April 2019	Additions	Deductions/ Adjustments	Capitalised	As at 31 March 2020
Right to use - others	147.52	-	-	147.52	-
Exploration and evaluation assets - coal mines	238.96	20.27	33.23	-	292.46
Exploratory wells-in-progress	7.65	-	(0.01)	-	7.64
Software	11.31	0.04	-	11.29	0.06
	405.44	20.31	33.22	158.81	300.16
Less: Provision for unserviceable works	7.64	-	-	-	7.64
Total	397.80	20.31	33.22	158.81	292.52

a) Refer Note 59 d)(ii) w.r.t. exploration and evaluation of assets-coal mines.

6. Non-current financial assets - Investments in subsidiary and joint venture companies

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2021	As at 31 March 2020
Equity instruments - Unquoted (fully paid up - unless otherwise stated, at cost)				
Subsidiary companies				
NTPC Electric Supply Company Ltd.	80,910 (80,910)	10 (10)	**0.08**	0.08
NTPC Vidyut Vyapar Nigam Ltd.	3,00,00,000 (2,00,00,000)	10 (10)	**30.00**	20.00
Kanti Bijlee Utpadan Nigam Ltd.	1,61,06,73,705 (1,56,06,73,705)	10 (10)	**1,610.67**	1,560.67

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)		As at 31 March 2021	As at 31 March 2020
Bhartiya Rail Bijlee Company Ltd.	1,77,41,21,538 (1,74,18,44,615)	10 (10)		**1,774.12**	1,741.84
Patratu Vidyut Utpadan Nigam Ltd.	88,76,24,000 (38,31,24,000)	10 (10)		**887.62**	383.12
Nabinagar Power Generating Company Ltd.	4,65,10,31,750 (4,41,70,05,500)	10 (10)		**4,651.03**	4,417.01
NTPC Mining Ltd.	50,000 (50,000)	10 (10)		**0.05**	0.05
NTPC EDMC Waste Solutions Private Ltd.	1,48,000 (-)	10 (-)		**0.15**	-
NTPC Renewable Energy Ltd.	29,50,50,000 (-)	10 (-)		**295.05**	-
Ratnagiri Gas & Power Private Ltd.	2,83,00,76,305 (-)	10 (-)	**834.55**		-
Less: Provision for impairment			**834.55**		-
				-	-
THDC India Limited	2,73,09,412 (2,73,09,412)	1,000 (1,000)		**7,500.00**	7,500.00
North Eastern Electric Power Corporation Limited	3,60,98,10,400 (3,60,98,10,400)	10 (10)		**4,000.00**	4,000.00
				20,748.77	19,622.77
Joint venture companies					
Utility Powertech Ltd. (includes 10,00,000 bonus shares)	20,00,000 (20,00,000)	10 (10)		**1.00**	1.00
NTPC-GE Power Services Private Ltd.	30,00,000 (30,00,000)	10 (10)		**3.00**	3.00
NTPC-SAIL Power Company Ltd.	49,02,50,050 (49,02,50,050)	10 (10)		**490.25**	490.25
NTPC Tamil Nadu Energy Company Ltd.	1,43,63,96,112 (1,42,81,06,112)	10 (10)		**1,436.40**	1,428.11
Ratnagiri Gas & Power Private Ltd.	- (83,45,56,046)	- (10)	-		834.55
Less: Provision for impairment			-		816.49
				-	18.06
Konkan LNG Limited	- (13,97,52,264)	- (10)	-		139.75
Less: Provision for impairment			-		103.47
				-	36.28
Aravali Power Company Private Ltd.	1,43,30,08,200 (1,43,30,08,200)	10 (10)		**1,433.01**	1,433.01
NTPC BHEL Power Projects Private Ltd.	5,00,00,000 (5,00,00,000)	10 (10)	**50.00**		50.00
Less: Provision for impairment			**50.00**		50.00
				-	-
Meja Urja Nigam Private Ltd.	1,72,42,39,800 (1,58,16,39,800)	10 (10)		**1,724.24**	1,581.64

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)		As at 31 March 2021	As at 31 March 2020
Transformers and Electricals Kerala Ltd.	1,91,63,438 (1,91,63,438)	10 (10)		**31.34**	31.34
National High Power Test Laboratory Private Ltd.	3,04,00,000 (3,04,00,000)	10 (10)		**30.40**	30.40
Energy Efficiency Services Ltd.	46,36,10,000 (46,36,10,000)	10 (10)		**463.61**	463.61
CIL NTPC Urja Private Ltd.	76,900 (76,900)	10 (10)		**0.08**	0.08
Anushakti Vidhyut Nigam Ltd.	49,000 (49,000)	10 (10)		**0.05**	0.05
Hindustan Urvarak and Rasayan Ltd.	1,13,17,65,000 (75,10,85,000)	10 (10)		**1,131.76**	751.09
Trincomalee Power Company Ltd. (* Srilankan rupees)	32,86,061 (32,86,061)	100* (100)*	**15.20**		15.20
Less: Provision for impairment			**14.14**		-
				1.06	15.20
Bangladesh-India Friendship Power Company Private Ltd. (** Bangladeshi Taka)	6,42,50,000 (5,42,50,000)	100** (100)**		**533.60**	444.72
				7,279.80	6,727.84
Total				**28,028.57**	26,350.61
Aggregate amount of unquoted investments (net of provision for impairment)				**28,028.57**	26,350.61
Aggregate amount of impairment in the value of investments				**898.69**	969.96

a) Investments have been valued as per accounting policy no. C.27.1 (Note 1).

b) The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from NTPC BHEL Power Projects Private Ltd. (NTPC-BHEL), a joint venture of the Company. As NTPC-BHEL was formed by a directive from the GOI, approval of exit from GOI is awaited. Pending withdrawal, provision for impairment loss on the entire investment in NTPC-BHEL of ₹ 50.00 crore (upto 31 March 2020: ₹ 50.00 crore) has been made based on the un-audited accounts of NTPC-BHEL as at 31 March 2021.

c) The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from Transformers and Electricals Kerala Ltd. (TELK), a joint venture of the Company. GOI has accorded its approval for exit of NTPC from the joint venture. The decision of the Board of Directors of NTPC Limited and approval of GOI has been conveyed to the Government of Kerala (JV Partner) & TELK. The government of Kerala has requested NTPC to review the decision. The matter is under examination.

d) The Company had an investment of ₹834.55 crore as at 1 April 2020 in the equity shares of Ratnagiri Gas and Power Private Ltd. (RGPPL), an erstwhile joint venture of the Company. During the year, the Company has entered into a tripartite framework agreement with RGPPL and its lenders on 31 December 2020 for settlement of RGPPL's outstanding debt liabilities as per the Composite Resolution Plan. As per the Resolution Plan, the Company has provided inter corporate loan of ₹ 885 crore to RGPPL for settlement of loan with the lenders. Further, 35.47% of equity held by lenders in RGPPL have been transferred to the Company as a part of the Resolution Plan at nominal value. Consequently, the Company's equity shareholding in RGPPL has increased from 25.51% to 60.98% and RGPPL has become a subsidiary company of the Company with effect from 31 December 2020.

The Company had an investment of ₹ 139.75 crore as at 1 April 2020 in the equity shares of Konkan LNG Ltd. (KLL), an erstwhile joint venture of the Company. The Company has executed Share Purchase Agreements with GAIL(India) Ltd. on 23 February 2021, for purchase of GAIL's share (25.51%) in RGPPL and Sale of Company's share (14.82%) (on fully dilutive basis) in KLL, at a nominal value of ₹ 1/-. Consequently, the Company has exited from KLL after transfer of shares as per the Share Purchase Agreements and the Company's shareholding in RGPPL has become 86.49% with effect from 23 February 2021.

Further, an assessment of impairment of the investment in RGPPL was carried out by an independent expert and the provision for impairment loss on the investment in RGPPL has been updated to ₹ **834.55 crore** (31 March 2020: ₹ 816.49 crore). Also refer Note 56.

e) The Company has incorporated a subsidiary company 'NTPC EDMC Waste Solutions Pvt. Ltd.',in joint venture with East Delhi Municipal Corporation (EDMC) on 1 June 2020, with equity participation of 74:26 respectively to develop and operate state of the art / modern integrated waste management & energy generation facility.

The Board of Directors of the Company in its 494th meeting held on 4 February 2021 had accorded approval for transfer of its shareholding in the subsidiary to M/s NVVN Ltd., a wholly owned subsidiary of the Company which is yet to take place.

f) The Company has incorporated a wholly owned subsidiary company, in the name of 'NTPC Renewable Energy Ltd.' on 7 October 2020, to undertake Renewable Energy Business.

g) The Board of Directors of the Company in its 479th Board meeting held on 9 November 2019 had accorded approval of Scheme of Amalgamation of Nabinagar Power Generating Co. Limited and Kanti Bijlee Utpadan Nigam Limited (wholly owned subsidiaries of the Company) with the Company under provisions of Section 230-232 of the Companies Act, 2013. The Company has filed application to the Ministry of Corporate Affairs on 5 February, 2021 for approval of Scheme of Amalgamation. The amalgamation is yet to take place.

h) Restrictions for the disposal of investments held by the Company and commitments towards certain subsidiary & joint venture companies are disclosed in Note 69 (C) (b) and (c).

7. Non-current financial assets - Other investments

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2021	As at 31 March 2020
Equity instruments (fully paid up - unless otherwise stated)				
Quoted (designated at fair value through other comprehensive income)				
PTC India Ltd.	1,20,00,000 (1,20,00,000)	10 (10)	**93.30**	46.50
			93.30	46.50
Unquoted (measured at fair value through profit or loss)				
International Coal Ventures Private Ltd.	14,00,000 (14,00,000)	10 (10)	**1.40**	1.40
BF-NTPC Energy Systems Ltd.	68,48,681 (68,48,681)	10 (10)	**2.38**	2.38
			3.78	3.78
Co-operative societies			**#**	**#**
Total			**97.08**	**50.28**
Aggregate amount of quoted investments at cost			**12.00**	**12.00**
Aggregate market value of the quoted investments			**93.30**	**46.50**
Aggregate amount of unquoted investments			**3.78**	**3.78**

Equity shares of ₹ **30,200**/- (31 March 2020: ₹ 30,200/-) held in various employee co-operative societies.

a) Investments have been valued as per accounting policy no. C.27.1 (Note 1).

b) The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from PTC India Ltd. (PTC). As the Company was formed by a directive from the GOI, approval of the GOI is awaited for exit by NTPC Limited.

c) The Board of Directors of NTPC Limited in its meeting held on 27 January 2012 accorded in principle approval for withdrawal from International Coal Ventures Private Ltd. (ICVPL). As the Company was formed by a directive from the GOI, approval of the Ministry of Steel, GOI is awaited for exit by NTPC Limited. Pending withdrawal, the Company had lost the joint control over the entity and accordingly, has classified the investment in ICVPL as 'Investment in unquoted equity instruments'.

d) The Board of Directors of NTPC Limited in its meeting held on 19 June 2014 accorded in principle approval for withdrawal from BF-NTPC Energy Systems Ltd. (BF-NTPC), a joint venture of the Company. As BF-NTPC was formed by a directive from the GOI, approval of the GOI was sought for exit by the Company. Ministry of Power, GoI conveyed its approval for winding up of BF-NTPC on 8 January 2018. Consequently, liquidator was appointed in the extra-ordinary general meeting of BF-NTPC held on 9 October 2018. The winding up is under process. Pursuant to winding up proceedings, the Company

had lost the joint control over the entity and accordingly, has classified the investment in BF NTPC as 'Investment in unquoted equity instruments'. The difference between the cost of investment and the fair value has been provided for in the earlier years.

e) The Company is of the view that provisions of Ind AS 24 'Related Party Disclosures' and Ind AS 111 'Joint Arrangements' are not applicable to the investments made in PTC India Ltd., International Coal Ventures Private Ltd. and BF-NTPC Energy systems Ltd., and the same has been accounted for as per the provisions of Ind AS 109 'Financial Instruments'.

f) No strategic investments in equity instruments measured at FVTOCI were disposed during the financial year 2020-21, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

8. Non-current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Loans (Considered good, unless otherwise stated)		
Related parties		
Secured	**818.63**	-
Unsecured	**183.41**	147.68
Employees (including accrued interest)		
Secured	**285.18**	261.93
Unsecured	**188.51**	167.37
Others		
Unsecured	**22.39**	23.28
Total	**1,498.12**	600.26
a) Due from directors and officers of the Company		
Directors	**0.08**	0.01
Officers	-	-
b) Loans to related parties include:		
Key management personnel	**0.08**	0.01
Kanti Bijli Utapadan Nigam Ltd. (Subsidiary company)	**164.33**	128.67
National High Power Test Laboratory Private Ltd. (Joint venture company)	**18.40**	18.40
Ratnagiri Gas & Power Private Ltd. (Subsidiary company)	**818.63**	-
NTPC Education and Research Society	**0.60**	0.60

c) During the year, the Company has provided inter corporate loan of ₹ 885.00 crore to RGPPL, a subsidiary of the Company pursuant to a Composite Resolution Plan for settlements of its debt liabilities with its lenders. [Refer Note 6d)]. Secured loans-Related parties represent the non-current portion of the inter-corporate loan of ₹ **818.63 crore** (31 March 2020: ₹ Nil) and the current portion is disclosed in Note 16, after adjustment of repayment received. The loan is secured by first ranking pari passu charge/ mortgage on the assets (moveable and immoveable, tangible and intangible and current assets) of RGPPL, both present and future.

d) Other loans represent loan of ₹ **22.39 crore** (31 March 2020: ₹ 23.28 crore) given to Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

e) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company.

9. Non-current assets - Other financial assets

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Share application money pending allotment in Subsidiary companies		
Kanti Bijlee Utpadan Nigam Limited	**60.00**	50.00
Bhartiya Rail Bijlee Company Ltd.	-	32.28
Patratu Vidyut Utpadan Nigam Ltd.	-	115.00
Nabinagar Power Generating Company Ltd.	**36.00**	-
	96.00	197.28

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Claims recoverable	702.27	771.36
Finance lease receivables (Refer Note 66)	366.88	409.14
Mine closure deposit	23.69	25.82
Total	1,188.84	1,403.60

a) The shares against the share application money pending allotment are expected to be allotted in due course.

b) Claims recoverable includes ₹ **700.30 crore** (31 March 2020: ₹ 749.01 crore) towards the cost incurred upto 31 March 2021 in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI which includes ₹ **449.88 crore** (31 March 2020: ₹ 439.57 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court of Delhi. In the event the Hon'ble High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for others (Note 32). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilisation measures, other recurring site expenses and interest costs as well as claims of contractors/vendors for various packages for this project will be compensated in full by the GOI. Hence, no provision is considered necessary.

c) The Company had ascertained that the Power Purchase Agreement (PPA) entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease' under 'Revenue from operations' (Note 34).

d) As per the guidelines from Ministry of Coal, Government of India for preparation of Mine Closure Plan, Escrow Accounts have been opened for each captive mine and the balances held in these escrow accounts are presented as 'Mine closure deposit'. Up to 80% of the total deposited amount including interest accrued in the escrow account shall be released after every five years in line with the periodic examination of the closure plan as per the Guidelines. Interest earned on the escrow account is added to mine closure deposit account.

10. Other non-current assets

₹ Crore

Particulars		As at 31 March 2021	As at 31 March 2020
Capital advances			
(Considered good unless otherwise stated)			
Secured		17.75	17.83
Unsecured			
Covered by bank guarantee		1,899.37	1,796.85
Others		3,418.91	2,999.59
Considered doubtful		44.67	44.70
Less: Allowance for bad and doubtful advances		44.67	44.70
		5,336.03	4,814.27
Advances other than capital advances			
(Considered good unless otherwise stated)			
Security deposits		362.04	428.35
Advances to contractors and suppliers			
Unsecured	2,137.08		2,082.05
Considered doubtful	112.57		112.57
Less: Allowance for bad and doubtful advances	112.57		112.57
		2,137.08	2,082.05
Advance tax and tax deducted at source	15,104.60		14,385.69
Less: Provision for tax	11,168.56		12,784.45
		3,936.04	1,601.24

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Deferred foreign currency fluctuation asset	**1,889.55**	2,404.42
Deferred payroll expenditure	**121.76**	129.28
Adjustable from Escrow Account towards mine closure expenses	**7.52**	4.89
Total	**13,790.02**	11,464.50

a) In line with accounting policy no. 15 (Note 1), deferred foreign currency fluctuation asset has been accounted and ₹ **98.16 crore** (31 March 2020: ₹ 255.22 crore) being the exchange fluctuations on account of foreign currency loans have been adjusted in 'Energy sales' under 'Revenue from operations' (Note 34).

b) Capital advances include amounts given as advance against works to the following private companies (related parties) in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**0.07**	15.81
NTPC BHEL Power Projects Private Ltd.	**216.64**	128.11

c) Capital advances include ₹ **224.29 crore** (31 March 2020: ₹ 224.29 crore), paid to a contractor pending settlement of certain claims which are under arbitration. The amount will be adjusted with the cost of related work or recovered from the party, depending upon the outcome of the arbitration proceedings.

d) Advances to contractors and suppliers include payments to Railways amounting to ₹ **1,963.25 crore** (31 March 2020: ₹ 2,063.56 crore) under customer funding model as per policy on 'Participative model for rail-connectivity and capacity augmentation projects' issued by the Ministry of Railways, GOI. As per this policy, an agreement has been signed between the Company and the Ministry of Railways, GOI on 6 June 2016. As per the agreement, railway projects agreed between the Company and Railways will be constructed, maintained and operated by Railways and ownership of the line and its operations and maintenance will always remain with them. Railways will pay upto 7% of the amount invested through freight rebate on freight volumes every year till the funds provided by the Company are fully recovered along-with interest (equal to the prevailing rate of dividend payable by Railways at the time of signing of respective agreements), subject to the rebate not exceeding the freight amount in the accounting year, after commercial operation date (COD) of the railway projects. The advance is adjusted at projects which have achieved COD based on confirmation from Railways towards freight rebate in consonance with the agreement terms and the interest portion is recognised in Note-35-'Other income'.

e) Secured capital advances are secured against the hypothecation of the construction equipment/material supplied by the contractors/suppliers.

f) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

11. Current assets - Inventories

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Coal	**3,539.68**	5,505.67
Fuel oil	**413.30**	508.62
Naphtha	**66.30**	128.38
Stores and spares	**4,335.60**	3,793.24
Chemicals and consumables	**165.78**	151.40
Loose tools	**12.94**	11.12
Steel scrap	**18.29**	18.68
Others	**817.00**	785.23
	9,368.89	10,902.34
Less: Provision for shortages	**46.70**	23.87
Provision for obsolete/unserviceable items/ diminution in value of surplus inventory	**143.25**	146.61
Total	**9,178.94**	10,731.86

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Inventories include material-in-transit		
Coal	**342.00**	324.13
Stores and spares	**37.47**	44.28
Chemicals and consumables	**3.24**	1.58
Loose tools	**0.03**	0.03
Others	**0.98**	2.77

a) Inventory items have been valued as per accounting policy no. C.9 (Note 1).
b) Inventories - Others includes steel, cement, ash bricks etc.
c) Refer Note 48 (b) for information on inventories pledged as security by the Company.
d) Refer Note 48 (a) for information on inventories consumed and recognised as expense during the year.
e) Paragraph 32 of Ind AS 2 'Inventories' provides that materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. The Company is operating in the regulatory environment and as per CERC Tariff Regulations, cost of fuel and other inventory items are recovered as per extant tariff regulations. Accordingly, the realizable value of the inventories is not lower than the cost.

12. Current financial assets - Investments

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Unquoted		
Investment in mutual funds (measured at fair value through profit or loss)		
Baroda Liquid Fund - Plan B-Growth	**499.99**	-
Total	**499.99**	-

a) Investments have been valued as per accounting policy no. C.27 (Note 1)

13. Current financial assets - Trade receivables

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Trade receivables		
Unsecured, considered good	**13,701.72**	15,615.19
Credit impaired	**0.20**	0.20
	13,701.92	15,615.39
Less: Allowance for credit impaired trade receivables	**0.20**	0.20
Total	**13,701.72**	15,615.19

a) Based on arrangements between Company, banks and beneficiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net of bills discounted amounting to ₹ **16,295.05 crore** (31 March 2020: ₹ 10,692.34 crore). Also refer Note 69 A(c).
b) Amounts receivable from related parties are disclosed in Note 53.

14. Current financial assets - Cash and cash equivalents

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Balances with banks in current accounts	**89.86**	19.63
Cheques and drafts on hand	**0.14**	0.67
Others (stamps on hand)	**0.05**	0.07
Total	**90.05**	20.37

15. Current financial assets - Bank balances other than cash and cash equivalents

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Deposits with original maturity of more than three months and maturing within one year (including interest accrued)	**993.99**	629.86
Earmarked balances with banks #	**1,254.42**	1,558.88
Total	**2,248.41**	2,188.74
# Earmarked balances with banks towards:		
Redemption of bonds due for repayment within one year	-	111.00
Fly ash utilization reserve fund*	**598.08**	588.48
DDUGJY Scheme of the GOI**	**598.01**	802.49
Unpaid dividend account balance	**19.84**	19.35
Amount deposited as per court orders	**5.00**	5.00
Unpaid interest/refund account balance - Bonds	**6.15**	5.22
Payment Security Fund - MNRE	**27.30**	27.30
Unpaid interest on public deposit	**0.03**	0.03
Security with government authorities	**0.01**	0.01
Total	**1,254.42**	1,558.88

* Refer Note 21 (e) regarding fly ash utilization reserve fund.

** Out of advance for DDUGJY Scheme of the GOI. Refer Note 30(c) and 31(a).

a) In line with the guidelines issued by Ministry of New and Renewable Energy (MNRE), GOI under National Solar Mission-II, a Payment Security Fund/Working Capital Fund will be set up/created by the MNRE. Upon creation of the said fund, amounts accrued from encashment of bank guarantee, penalties/liquidated damages on developers deducted by the Company from the Solar Power Developers (SPDs) as per the guidelines of MNRE shall be transferred to this fund. The said fund is yet to be created by MNRE. Pending creation of the fund, amount deducted by the Company on account of liquidated damages/penalties from the SPDs is earmarked for the said fund and is not available for use by the Company.

16. Current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Loans (including interest accrued)		
(Considered good unless otherwise stated)		
Related parties		
Secured	**53.10**	-
Unsecured	**115.77**	65.04
Employees		
Secured	**74.50**	73.18
Unsecured	**172.56**	169.45
Others		
Unsecured	**0.89**	0.89
Total	**416.82**	308.56
a) Due from Directors and Officers of the Company		
Directors	**0.07**	0.02
Officers	-	-
b) Loans to related parties include:		
Key management personnel	**0.07**	0.02
Ratnagiri Gas & Power Private Ltd. (Subsidiary company) [Refer Note 8 c)]	**53.10**	-
Kanti Bijlee Utpadan Nigam Ltd. (Subsidiary company)	**114.33**	64.33
National High Power Test Laboratory Private Ltd. (Joint venture company)	**1.37**	0.69

c) Other loans represent loans of ₹ **0.89 crore** (31 March 2020: ₹ 0.89 crore) given to APIIC which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company.

17. Current assets - Other financial assets

₹ Crore

Particulars		As at 31 March 2021	As at 31 March 2020
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**392.82**	344.78
Employees			
Unsecured	**11.44**		10.45
Considered doubtful	**0.03**		0.06
Less: Allowance for bad and doubtful advances	**0.03**		0.06
		11.44	10.45
Others			
Unsecured		**3.66**	16.93
		407.92	372.16
Claims recoverable			
Unsecured, considered good	**45.38**		50.19
Considered doubtful	**343.62**		0.12
Less: Allowance for doubtful claims	**343.62**		0.12
		45.38	50.19
Unbilled revenue		**12,304.88**	11,025.15
Finance lease receivables		**70.89**	55.23
Mine closure deposit		**39.59**	21.56
Others		**53.22**	54.87
Total		**12,921.88**	11,579.16

a) Unbilled revenue is net of credits to be passed to beneficiaries at the time of billing and includes ₹ **10,044.48 crore** (31 March 2020: ₹ 8,064.11 crore) billed to the beneficiaries after 31 March for energy sales.

b) Advances to related parties include:

Subsidiary companies	**152.38**	243.58
Joint venture companies	**39.29**	81.55

c) Advances include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**1.76**	1.10
Aravali Power Company Private Ltd.	**1.22**	4.83
NTPC BHEL Power Projects Private Ltd.	**-**	7.02
Meja Urja Nigam Private Ltd.	**13.78**	7.97

d) Other financial assets - Others include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.

18. Current assets - Other current assets

₹ Crore

Particulars		As at 31 March 2021	As at 31 March 2020
Security deposits (unsecured)		**1,773.91**	1,464.40
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**2,157.92**	729.65
Employees			
Unsecured		**0.86**	2.67
Contractors and suppliers			
Secured	**1.16**		-
Unsecured	**760.64**		807.33
Considered doubtful	**3.45**		3.23
Less: Allowance for bad and doubtful advances	**3.45**		3.23
		761.80	807.33
Others			
Unsecured		**60.97**	44.84
		2,981.55	1,584.49
Interest accrued on			
Advance to contractors		**29.55**	35.26
Claims recoverable			
Unsecured, considered good	**3,602.31**		4,732.50
Considered doubtful	**125.80**		125.00
Less: Allowance for doubtful claims	**125.80**		125.00
		3,602.31	4,732.50
Assets held for disposal		**16.19**	90.84
Deferred payroll expenditure		**23.41**	23.78
Adjustable from Escrow Account for mine closure expenses		**30.08**	19.56
Others		**70.87**	110.15
Total		**8,527.87**	8,060.98

a) Security deposits (unsecured) include ₹ **21.89 crore** (31 March 2020: ₹ 21.37 crore) towards sales tax deposited with sales/commercial tax authorities, ₹ **902.14 crore** (31 March 2020: ₹ 494.47 crore) deposited with Courts, ₹ **209.56 crore** (31 March 2020: ₹ 199.74 crore) deposited with LIC for making annuity payments to the land oustees and ₹ **500.00 crore** (31 March 2020: ₹ 500.00 crore) deposited against bank guarantee with one of the party as per the direction of the Hon'ble Supreme Court of India, refer Note 57 (iii).

b) Advances - Others include prepaid expenses amounting to ₹ **59.89 crore** (31 March 2020: ₹ 40.65 crore).

c) Advances - Related parties include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**0.01**	0.01
NTPC BHEL Power Projects Private Ltd.	**3.91**	1.33
Aravali Power Company Private Ltd.	-	19.05

e) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

f) Asset held for disposal includes an amount of ₹ **14.55 crore** (31 March 2020: ₹ 89.31 crore) in respect of one of the power stations which has since been shut down in compliance to order of Delhi Pollution Control Committee (DPCC) dated 25 July 2018. The operations of the station was permanently discontinued w.e.f. 15 October 2018 and the assets of the power station are in the process of disposal and/or being utilised at other locations of the Company.

19. Regulatory deferral account debit balances

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
On account of		
Exchange differences	**874.92**	1,271.27
Employee benefits expense	**759.40**	759.40
Deferred tax	**7,567.94**	6,265.24
Ash transportation cost	**1,830.65**	826.85
Arbitration cases	**110.81**	-
Total	**11,143.72**	9,122.76

a) Regulatory deferral account balances have been accounted in line with Accounting policy no. C.4 (Note 1). Refer Note 64 for detailed disclosures.

b) CERC Tariff Regulations, 2019 provide for recovery of deferred tax liability (DTL) as at 31 March 2009 from the beneficiaries. Accordingly, DTL as at 31 March 2009 is recoverable on materialisation from the beneficiaries. Regulations, 2014 and Regulations, 2019 provide for grossing-up the rate of return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. Accordingly, deferred tax liability for the period from 1 April 2014 will be reversed in future years when the related DTL forms part of current tax. Keeping in view the above, the Company has recognized such deferred tax as regulatory deferral account debit balances, since the amounts are recoverable in future years.

20. Equity share capital

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Equity share capital		
Authorised		
10,00,00,00,000 shares of par value ₹10/- each (10,00,00,00,000 shares of par value ₹10/- each as at 31 March 2020)	**10,000.00**	10,000.00
Issued, subscribed and fully paid up		
9,69,66,66,134 shares of par value ₹ 10/- each (9,89,45,57,280 shares of par value ₹10/- each as at 31 March 2020)	**9,696.67**	9,894.56

a) Reconciliation of the shares outstanding at the beginning and at the end of the year:

₹ Crore

Particulars	Number of shares	
	31 March 2021	31 March 2020
At the beginning of the year	**9,89,45,57,280**	9,89,45,57,280
Less: Buyback of shares during the year	**19,78,91,146**	-
Outstanding at the end of the year	**9,69,66,66,134**	9,89,45,57,280

b) Terms and rights attached to equity shares:

The Company has only one class of equity shares having a par value ₹10/- per share. The holders of the equity shares are entitled to receive dividends as declared from time to time and are entitled to voting rights proportionate to their share holding at the meetings of shareholders.

c) **Dividends:**

₹ Crore

Particulars	Paid during the year ended	
	31 March 2021	31 March 2020
(i) Dividends paid and recognised during the year		
Final dividend for the year ended 31 March 2020 of ₹ **2.65** (31 March 2019: ₹ 2.50) per equity share	**2,622.06**	2,473.64
Interim dividend for the year ended 31 March 2021 of ₹ **3.00** (31 March 2020: ₹ 0.50) per equity share	**2,909.00**	494.73

(ii) Dividends not recognised at the end of the reporting period	31 March 2021	31 March 2020
In addition to the above dividends, since year end the directors have recommended the payment of a final dividend of ₹ **3.15** (31 March 2020: ₹ 2.65) per equity share. This proposed dividend is subject to the approval of shareholders in the ensuing Annual General Meeting.	**3,054.45**	2622.06

d) **Details of shareholders holding more than 5% shares in the Company:**

Particulars	As at 31 March 2021		As at 31 March 2020	
	No. of shares	%age holding	No. of shares	%age holding
- President of India	**4,95,53,46,251**	**51.10**	5,04,80,97,508	51.02
- Life Insurance Corporation of India (including shares held in various Funds/Schemes)	**1,06,24,20,836**	**10.96**	1,03,26,64,560	10.44
- ICICI Prudential Mutual Fund	**64,75,68,645**	**6.68**	73,55,85,649	7.43

e) **For the period of preceeding five years as on the Balance sheet date:**

(i) **Shares bought back:**
Pursuant to the approval of Board of Directors of the Company for buyback of equity shares in its meeting held on 2 November 2020, the Company has bought back 19,78,91,146 equity shares of the Company for an aggregate amount of ₹ 2,275.75 crore being 2% of the total paid up equity share capital at ₹ 115.00 per equity share. The settlement of all valid bids was completed on 30 December 2020 and the equity shares bought back were extinguished on 1 January 2021. Accordingly, the paid up equity share capital has been reduced by ₹ 197.89 crore and other equity is reduced by ₹ 2,565.93 crore (including tax on buy back of shares of ₹ 484.06 crore and other buyback expenses of ₹ 4.01 crore (net of tax)). Further, earnings per share has been adjusted on account of buy back of shares.

(ii) **Shares allotted as fully paid up by way of bonus shares:**
The Company had issued 164,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares in the financial year 2018-19 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

21. Other equity

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Capital reserve	**50.08**	50.08
Securities premium	**-**	2,228.46
Capital redemption reserve	**197.89**	-
Bonds/debentures redemption reserve	**6,240.43**	7,011.43
Fly ash utilization reserve fund	**598.08**	588.48
General reserve	**96,147.17**	90,182.53
Retained earnings	**5,973.87**	3,664.48
Reserve for equity instruments through OCI	**81.30**	(50.58)
Total	**1,09,288.82**	1,03,674.88

(a) Capital reserve

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance and closing balance	**50.08**	50.08

Capital reserve represents amount received by the Company during 2001-02 as consideration under settlement for withdrawal from an erstwhile JV project. There is no movement in the capital reserve balance during the year. This amount will be utilised as per the provisions of the Companies Act, 2013.

(b) Securities premium

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**2,228.46**	2,228.46
Less: Utilised for buyback of equity shares	**2,228.46**	-
Closing balance	**-**	2,228.46

Securities premium is used to record the premium on issue of shares/securities. The amount has been utilised for buyback of equity shares during the year in accordance with the provisions of the Companies Act, 2013.

(c) Capital redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**-**	-
Add: Transfer from General Reserve	**197.89**	-
Closing balance	**197.89**	-

Capital redemption reserve is created when company purchases its own shares out of free reserves or securities premium, as required by Companies Act, 2013. A sum equal to the nominal value of the shares so purchased is transferred to capital redemption reserve. This reserve will be utilised in accordance with the provisions of the Companies Act, 2013.

(d) Bonds/Debentures redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**7,011.43**	7,902.43
Add: Transfer from General Reserve	**771.00**	891.00
Closing balance	**6,240.43**	7,011.43

Ministry of Corporate Affairs notified Companies (Share Capital and Debentures) Amendment Rules, 2019 on 16 August 2019. As per the amendment, Debenture Redemption Reserve (DRR) is not required to be created in case of Companies whose securities are listed. Accordingly, the Company has not created any further Bonds/Debenture Redemption Reserve from the financial year 2019-20 onwards. Further, the outstanding balance of Bonds / Debenture Redemption Reserve created up to 31 March 2019 shall be written back as and when the respective bonds / debentures are redeemed.

(e) Fly ash utilization reserve fund

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**588.48**	636.63
Add: Transferred during the year:		
Revenue from operations	**173.08**	165.45
Other income	**20.63**	35.50
Less: Utilised during the year:		
Capital expenditure	**11.95**	4.81
Other expenses	**167.58**	210.97
Tax Expense	**4.58**	33.32
Closing balance	**598.08**	588.48

Pursuant to Gazette Notification dated 3 November 2009, issued by the Ministry of Environment and Forest (MOEF), Government of India (GOI), the amount collected from sale of fly ash and fly ash based products should be kept in a separate account head and shall be utilized only for the development of infrastructure or facility, promotion & facilitation activities for use of fly ash until 100 percent fly ash utilization level is achieved.

The fund balance has been kept in 'Bank balances other than cash & cash equivalents' (Note 15). Also refer Note 19 & 64 for ash transportation cost.

(f) General reserve

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**90,182.53**	83,682.53
Add : Transfer from retained earnings	**6,500.00**	6,500.00
Less : Utilised for buyback of equity shares	**337.47**	-
Less : Transferred to capital redemption reserve	**197.89**	-
Closing balance	**96,147.17**	90,182.53

General reserve is used from time to time to transfer profits from retained earnings for appropriation purposes. The same will be utilised as per the provisions of the Companies Act, 2013. During the year, an amount of ₹ **337.47 crore** has been utilised for buyback of equity shares in accordance with the provisions of the Companies Act, 2013 and an amount equivalent to face value of shares bought back amounting to ₹ 197.89 crore has been transferred to capital redemption reserve.

(g) Retained earnings

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**3,664.48**	3,022.42
Add: Profit for the year as per statement of profit and loss	**13,769.52**	10,112.81
Transfer from bonds/debentures redemption reserve	**771.00**	891.00
Less: Transfer to bonds/debentures redemption reserve		-
Transfer to general reserve	**6,500.00**	6,500.00
Adjustment with reserve for equity instruments through OCI	**85.08**	-
Final dividend paid	**2,622.06**	2,473.64
Tax on final dividend paid	**-**	506.62
Interim dividend paid	**2,909.00**	494.73
Tax on interim dividend paid	**-**	101.18
	6,088.86	3,950.06
Items of other comprehensive income recognized directly in retained earnings:		
- Net actuarial gains/(losses) on defined benefit plans (net of tax)	**(114.99)**	(285.58)
Closing balance	**5,973.87**	3,664.48

Retained Earnings are the profits of the Company earned till date net of appropriations. The same will be utilised for the purposes as per the provisions of the Companies Act, 2013.

(h) Reserve for equity instruments through OCI

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**(50.58)**	(8.94)
Add: Fair value gains/(losses) on equity instruments for the year	**46.80**	(41.64)
Add: Adjustment from retained earnings	**85.08**	-
Closing balance	**81.30**	(50.58)

The Company has elected to recognize changes in the fair value of certain investments in equity instruments in other comprehensive income. These changes are accumulated in reserve for equity instruments through OCI within equity. The Company transfers amounts from this reserve to retained earnings when the relevant equity instruments are derecognized. The adjustment during the year is on account of reconciliation of cost of the equity instruments and its fair value.

22. Non-current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Bonds/debentures		
Secured		
7.37% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3A)[IX]	**188.97**	188.98
7.62% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3B)[IX]	**171.73**	171.74
8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2034 (Fifty First Issue C - Private Placement) [III]	**322.11**	322.11
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3A)[VI]	**319.87**	319.93
8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3B)[VI]	**410.32**	410.39
7.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 14 December 2031 (Sixty Sixth Issue - Private Placement)[II]	**4,010.39**	4,009.35
7.49% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 November 2031 (Sixty Fourth Issue - Private Placement)[X]	**720.62**	720.70
7.28% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2A)[IX]	**133.48**	133.48
7.53% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2B)[IX]	**49.92**	49.91
7.32% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)[X]	**4,522.27**	4,522.50
8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2029 (Fifty First Issue B - Private Placement) [III]	**105.70**	105.70
8.30% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement) [V]	**4,068.92**	4,069.62
8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2A)[VI]	**256.10**	256.14
8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2B)[VI]	**93.71**	93.73
7.47% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 16 September 2026 (Sixty Third Issue - Private Placement)[X]	**696.85**	696.89

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
7.58% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 23 August 2026 (Sixty Second Issue - Private Placement)[X]	**836.39**	836.60
8.05% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 5 May 2026 (Sixtieth Issue - Private Placement)[X]	**1,072.85**	1,072.62
8.19% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 December 2025 (Fifty Seventh Issue - Private Placement)[X]	**511.86**	511.80
7.11% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1A)[IX]	**112.03**	112.02
7.36% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1B)[IX]	**68.23**	68.21
7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 10,00,000/- each redeemable at par in full on 21 August 2025 (Fifty Fifth Issue - Private Placement)[VII]	**313.10**	313.13
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22 September 2024 (Fifty Third Issue - Private Placement)[VII]	**1,047.99**	1,047.85
9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 March 2024 (Fifty Second Issue - Private Placement)[III]	**751.54**	751.54
8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at par in full on 4 March 2024 (Fifty First Issue A - Private Placement)[III]	**75.47**	75.47
8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1A)[VI]	**499.95**	500.03
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1B)[VI]	**213.89**	213.92
9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 04 May 2023 and ending on 04 May 2027 (Forty Fourth Issue - Private Placement)[VI]	**542.07**	542.08
8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 1 May 2023 (Seventeenth Issue - Private Placement)[I]	**50.01**	50.01
8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 April 2023 (Forty Ninth Issue - Private Placement)[VI]	**217.46**	217.46
8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of ₹ 12.50 each redeemable at par in three annual installments of ₹ 2.50, ₹ 5.00 and ₹ 5.00 at the end of 8th year, 9th year and 10th year on 25 March 2023, 25 March 2024 and 25 March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)[VIII]	**10,323.61**	10,323.61
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 March 2023 (Forty Eighth Issue - Private Placement)[VI]	**301.86**	301.79
9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25 January 2023 and ending on 25 January 2027 (Forty Second Issue - Private Placement)[III]	**508.14**	508.36
8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 October 2022 (Forty Seventh Issue - Private Placement)[VI]	**407.00**	406.96

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 3 May 2022 (Sixty Eighth Issue - Private Placement)[X]	**3,277.53**	3,277.51
6.72% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 November 2021 (Sixty Fifth Issue - Private Placement)[X]	**716.46**	716.36
8.10% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27 May 2021, 27 May 2026 and 27 May 2031 respectively (Sixty first issue - Private Placement)[IX]	**1,145.99**	1,146.01
8.33% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 February 2021 (Fifty Ninth Issue - Private Placement)[X]	-	660.46
8.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 19 January 2021 (Thirty Seventh Issue - Private placement)[III]	-	317.20
8.18% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 31 December 2020 (Fifty Eight Issue - Private Placement)[X]	-	306.12
11.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in five equal annual installments commencing from 6 November 2019 and ending on 6 November 2023 (Twenty Seventh Issue - Private Placement)[III]	**220.87**	294.50
9.3473% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20 July 2018 and ending on 20 July 2032 (Forty Sixth Issue - Private Placement)[VI]	**64.07**	69.42
9.4376% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16 May 2018 and ending on 16 May 2032 (Forty Fifth Issue - Private Placement)[VI]	**64.11**	69.46
9.2573% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2 March 2018 and ending on 2 March 2032 (Forty Third Issue - Private Placement)[III]	**58.70**	64.04
9.6713% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23 December 2017 and ending on 23 December 2031 (Forty First Issue - Private Placement)[III]	**58.86**	64.22
9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29 July 2017 and ending on 29 July 2031 (Fortieth Issue - Private Placement)[III]	**58.82**	64.17
9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9 June 2017 and ending on 9 June 2031 (Thirty Ninth Issue - Private Placement)[III]	**82.25**	89.73

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22 March 2017 and ending on 22 March 2031 (Thirty Eighth Issue - Private Placement)[III]	**53.33**	58.66
8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 December 2016 and ending on 15 December 2030 (Thirty Sixth Issue - Private Placement)[III]	**53.20**	58.52
8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 September 2016 and ending on 15 September 2030 (Thirty Fifth Issue - Private Placement)[III]	**85.10**	93.61
8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10 June 2016 and ending on 10 June 2030 (Thirty Fourth Issue - Private Placement)[III]	**106.32**	116.96
8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25 March 2016 and ending on 25 March 2030 (Thirty Second Issue - Private Placement)[III]	**67.05**	74.50
8.6077% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 9 September 2011 and ending on 9 March 2021 (Twenty Fourth Issue - Private Placement)[IV]	-	51.06
8.3796% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 5 August 2011 and ending on 5 February 2021 (Twenty Third Issue - Private Placement)[IV]	-	51.03
8.1771% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2 July 2011 and ending on 2 January 2021 (Twenty Second Issue - Private Placement)[IV]	-	51.01
	40,037.07	41,619.18
Bonds/debentures		
Unsecured		
6.29% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 11 April 2031 (Seventy First Issue - Private Placement)	**1,041.99**	-
6.43% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 27 January 2031 (Seventy Third Issue - Private Placement)	**2,528.05**	-
5.45% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 October 2025 (Seventy Second Issue - Private Placement)	**4,100.15**	-
6.55% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 April 2023 (Seventy Issue - Private Placement)	**4,648.65**	-
	52,355.91	41,619.18



₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Foreign currency notes		
Unsecured		
4.500 % Fixed rate notes due for repayment on 19 March 2028	**2,948.68**	3,026.26
2.750 % Fixed rate notes due for repayment on 1 February 2027	**4,367.53**	4,220.99
4.250 % Fixed rate notes due for repayment on 26 February 2026	**3,703.35**	3,800.85
4.375 % Fixed rate notes due for repayment on 26 November 2024	**3,759.25**	3,860.77
3.750 % Fixed rate notes due for repayment on 3 April 2024	**3,327.46**	3,415.75
4.750 % Fixed rate notes due for repayment on 3 October 2022	**3,703.00**	3,803.00
7.250 % Fixed global INR denominated bonds due for repayment on 3 May 2022	**2,032.42**	2,128.81
7.375 % Fixed green global INR denominated bonds due for repayment on 10 August 2021	**1,054.12**	2,090.59
5.625 % Fixed rate notes due for repayment on 14 July 2021	**3,747.55**	3,848.76
	28,643.36	30,195.78
Term loans		
From Banks		
Unsecured		
Foreign currency loans	**12,198.00**	9,923.06
Rupee term loans	**64,937.57**	62,632.60
From Others		
Unsecured		
Foreign currency loans (guaranteed by GOI)	**1,613.45**	1,902.42
Other foreign currency loans	**2,901.11**	2,890.91
Rupee term loans	**84.61**	4,668.69
Lease obligations		
Secured	**14.04**	21.97
Unsecured	**858.38**	807.70
	1,63,606.43	1,54,662.31
Less: Current maturities of		
Bonds-secured	**1,194.50**	1,542.00
Foreign currency notes - Unsecured	**4,710.00**	-
Foreign currency loans from banks - unsecured	**756.63**	1,252.86
Rupee term loans from banks - unsecured	**2,962.46**	1,966.91
Foreign currency loans from others - unsecured (guaranteed by GOI)	**197.30**	207.24
Other foreign currency loans from others - unsecured	**393.22**	389.31
Rupee term loans from others - unsecured	**33.34**	690.19
Lease obligations - secured	**9.63**	8.75
Lease obligations - unsecured	**142.17**	97.66
Interest accrued but not due on secured borrowings	**1,153.72**	1,194.33
Interest accrued but not due on unsecured borrowings	**823.84**	774.36
Total	**1,51,229.62**	1,46,538.70

a) Details of terms of repayment and rate of interest

i) Unsecured foreign currency loans (guaranteed by GOI) - Others carry fixed rate of interest ranging from 1.80% p.a. to 2.30% p.a. and are repayable in 11 to 20 semi annual installments as of 31 March 2021.

ii) Unsecured foreign currency loans – Banks include loans of ₹ **108.20 crore** (31 March 2020: ₹ 132.59 crore) which carry fixed rate of interest of 1.88% p.a. and loans of ₹ **12,089.80 crore** (31 March 2020: ₹ 9,790.47 crore) which carry floating rate of interest linked to 6M USD LIBOR/6M JPY LIBOR. These loans are repayable in 1 to 25 semi-annual/annual installments as of 31 March 2021, commencing after moratorium period if any, as per the terms of the respective loan agreements.

iii) Unsecured foreign currency loans – Others include loans of ₹ **2,261.33 crore** (31 March 2020: ₹ 2,641.92 crore) which carry fixed rate of interest ranging from 1.88% p.a. to 4.13% p.a and loans of ₹ **639.78 crore** (31 March 2020: ₹ 248.99 crore) which carry floating rate of interest linked to 6M JPY LIBOR. These loans are repayable in 3 to 25 semi annual installments as of 31 March 2021, commencing after moratorium period if any, as per the terms of the respective loan agreements.

iv) Unsecured rupee term loans from banks and others carry interest rate ranging from 5.88% p.a. to 6.65% p.a. with monthly/ half-yearly rests. These loans are repayable in half-yearly/yearly installments as per the terms of the respective loan agreements. The repayment period extends from a period of 8 to 15 years after a moratorium period of 3 to 6 years.

b) The lease obligations are repayable in installments as per the terms of the respective lease agreements generally over a period of more than 1 year and upto 99 years.

c) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

d) Pursuant to the invitation by the Company to eligible holders of the 7.375 % Fixed green global INR denominated bonds due for repayment on 10 August 2021 and 7.250 % Fixed global INR denominated bonds due for repayment on 3 May 2022, for cash settlement as per the Tender Offer Memorandum, the Company has settled on 22 December 2020, part of its borrowings amounting to ₹ 993.00 crore and ₹ 92.00 crore respectively, along with interest, against the valid offers received.

Details of securities

I Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of title deeds of the immovable properties pertaining to National Capital Power Station.

II Secured by Equitable mortgage of the immovable properties pertaining to Vindhyachal Super Thermal Power Station on first charge basis.

III Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Sipat Super Thermal Power Project by extension of charge already created.

IV Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of the title deeds of the immovable properties pertaining to Sipat Super Thermal Power Project.

V Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Vindhyachal Super Thermal Power Station.

VI Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to National Capital Power Station by extension of charge already created.

VII Secured by English mortgage of the immovable properties pertaining to Solapur Super Thermal Power Project on first charge basis.

VIII Secured by Equitable mortgage of the immovable properties pertaining to Barh Super Thermal Power Project on first charge basis.

IX Secured by English mortgage, on pari-passu charge basis, of the immovable properties pertaining to Solapur Super Thermal Power Project.

X Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Barh Super Thermal Power Project.

XI The secured lease obligations are secured against assets taken on lease.

XII Security cover mentioned at Sl. No. I to X is above 100% of the debt securities outstanding.

23. Non-current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Trade payable for goods and services		
Total outstanding dues of		
- micro and small enterprises	**13.78**	10.35
- creditors other than micro and small enterprises	**66.23**	57.66
Total	**80.01**	68.01

a) Disclosures as required under Companies Act, 2013 / Micro, Small and Medium Enterprises Development Act, 2006 (MSMED) are provided in Note 67.
b) Amounts payable to related parties are disclosed in Note 53.

24. Non-current liabilities - Other financial liabilities

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Payable for capital expenditure		
- micro and small enterprises	**13.49**	13.14
- other than micro and small enterprises	**1,375.42**	636.10
Deposits from contractors and others	**1.64**	1.64
Others	**0.12**	1.36
Total	**1,390.67**	652.24

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 67.
b) Amounts payable to related parties are disclosed in Note 53.

25. Non-current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Provision for employee benefits	**826.25**	826.74

Disclosures as per Ind AS 19 'Employee benefits' are provided in Note 50.

26. Non-current liabilities - Deferred tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Deferred tax liability		
Difference in book depreciation and tax depreciation	**23,474.90**	19,505.52
Less: Deferred tax assets		
Provisions	**826.15**	1,022.88
Statutory dues	**330.50**	325.21
Leave encashment	**438.62**	403.55
MAT credit entitlement	**12,705.04**	9,639.70
Others	**13.60**	20.20
Total	**9,160.99**	8,093.98

a) Deferred tax assets and deferred tax liabilities have been offset as they relate to the same governing laws.

b) The Company has been recognising MAT credit entitlement available to the Company as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability.

c) Disclosures as per Ind AS 12 - 'Income Taxes' are provided in Note 49.

d) Others mainly include deferred tax assets on account of payments related to voluntary retirement schemes.

Movement in deferred tax balances

As at 31 March 2021

₹ Crore

Particulars	As at 1 April 2020	Recognised in statement of profit and loss	Recognised in OCI	Others	As at 31 March 2021
Deferred tax liability					
Difference in book depreciation and tax depreciation	**19,505.52**	**4,105.87**	-	**(136.49)**	**23,474.90**
Less: Deferred tax assets					
Provisions	**1,022.88**	**(195.39)**	-	**(1.34)**	**826.15**
Statutory dues	**325.21**	**5.29**	-	-	**330.50**
Leave encashment	**403.55**	**35.07**	-	-	**438.62**
MAT credit entitlement		**3,065.34**	-	-	**12,705.04**
Others	**20.20**	**(6.60)**	-	-	**13.60**
Net tax (assets)/liabilities	**8,093.98**	**1,202.16**	-	**(135.15)**	**9,160.99**

As at 31 March 2020

₹ Crore

Particulars	As at 1 April 2019	Recognised in statement of profit and loss	Recognised in OCI	Others	As at 31 March 2020
Deferred tax liability					
Difference in book depreciation and tax depreciation	14,536.74	5,104.14	-	(135.36)	19,505.52
Less: Deferred tax assets					
Provisions	1,455.48	(431.89)	-	(0.71)	1,022.88
Statutory dues	277.25	47.96	-	-	325.21
Leave encashment	321.28	82.27	-	-	403.55
MAT credit entitlement	8,257.38	1,382.32		-	9,639.70
Others	25.21	(5.01)	-	-	20.20
Net tax (assets)/liabilities	4,200.14	4,028.49	-	(134.65)	8,093.98

27. Other non-current liabilities

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Government grants	**1,111.81**	541.88

a) Government grants include grant received in advance amounting to ₹ **592.20 crore** (31 March 2020: Nil) for which attached conditions are to be fulfilled / works to be completed relating to various solar power plants. This amount will be recognized as revenue corresponding to the depreciation charge in future years on completion of related projects.

b) Balance Government grants represent unamortised portion of grant received. This includes ₹ **493.43 crore** (31 March 2020: ₹ 518.52 crore) received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects. This amount will be recognized as revenue corresponding to the depreciation charge in future years. Refer Note 31 w.r.t. current portion of Government grants.

28. Current financial liabilities - Borrowings

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Loans repayable on demand		
From banks		
Secured		
Cash credit	-	**12.86**
Unsecured		
Cash credit	-	**1,217.35**
Other loans		
Unsecured		
Commercial paper	**12,859.74**	**12,819.15**
Total	**12,859.74**	**14,049.36**

a) Secured loans from banks repayable on demand are secured by first (hypothecation) charge on stock / stores / spares and other current assets (excluding receivables) paripassu with other consortium banks and trustees for bond holders and first (hypothecation) charge on receivables ranking pari passu with consortium banks.

b) Borrowings under Commercial paper are net of unamortised discount as at 31 March 2021 amounting to ₹ **140.26 crore** (31 March 2020: ₹ 130.85 crore)

c) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

29 Current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Trade payables for goods and services		
Total outstanding dues of		
- micro and small enterprises	**378.31**	495.70
- creditors other than micro and small enterprises	**6,804.16**	8,504.93
Total	**7,182.47**	9,000.63

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 67.
b) Amounts payable to related parties are disclosed in Note 53.

30. Current liabilities - Other financial liabilities

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Current maturities of non-current borrowings		
Bonds - Secured	**1,194.50**	1,542.00
Foreign currency notes - Unsecured	**4,710.00**	-
From Banks		
Unsecured		
Foreign currency loans	**756.63**	1,252.86
Rupee term loans	**2,962.46**	1,966.91
From Others		
Unsecured		
Foreign currency loans (guaranteed by GOI)	**197.30**	207.24
Other foreign currency loans	**393.22**	389.31
Rupee term loans	**33.34**	690.19
	10,247.45	6,048.51
Current maturities of lease obligations - Secured	**9.63**	8.75
Current maturities of lease obligations - Unsecured	**142.17**	97.66
Interest accrued but not due on secured borrowings	**1,153.72**	1,194.33
Interest accrued but not due on unsecured borrowings	**823.84**	774.36
Unpaid dividends	**19.84**	19.35
Unpaid matured deposits and interest accrued thereon	**0.19**	0.19
Unpaid matured bonds and interest accrued thereon	**6.54**	5.55
Unpaid bond refund money-Tax free bonds	**0.19**	0.24
Book overdraft	**0.48**	-
Payable to customers	**896.38**	40.53

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Payable for capital expenditure		
- micro and small enterprises	**212.05**	209.82
- other than micro and small enterprises	**14,536.42**	13,211.64
Other payables		
Deposits from contractors and others	**173.42**	171.05
Payable to employees	**664.18**	954.73
Payable to solar Payment Security Fund	**27.30**	27.30
Others	**1,137.94**	951.73
Total	**30,051.74**	23,715.74

a) Details in respect of rate of interest and terms of repayment of current maturities of secured and unsecured non-current borrowings indicated above are disclosed in Note 22.

b) Unpaid dividends, matured deposits, bonds and interest include the amounts which have either not been claimed by the investors/holders of the equity shares/bonds/fixed deposits or are on hold pending legal formalities etc. Out of the above, the amount required to be transferred to Investor Education and Protection Fund has been transferred.

c) 'Other payables - Others' mainly includes ₹ **286.16 crore** (31 March 2020: ₹ 410.27 crore) towards the implementation of Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) Scheme of the GOI being carried out by the Company. The funds for the implementation of these schemes are provided by the agencies nominated by the GOI in this regard. Further, 'Other payables - Others' also include ₹**380.48 crore** (31 March 2020: ₹ 380.48 crore) payable to the Department of Water Resource, Government of Odisha and amount payable to hospitals, etc.

d) The Company had obtained exemption from the Ministry of Corporate Affairs (MCA), GOI in respect of applicability of Section 58A from the erstwhile Companies Act, 1956 in respect of deposits held from the dependants of employees who die or suffer permanent total disability under the 'Employees Rehabilitation Scheme' (said amount is included in "Other payables - Others"). Consequent upon enactment of the Companies Act, 2013, the Company has written to the MCA for clarification on continuation of above exemption granted earlier, which is still awaited. Based on an expert opinion, the amount accepted under the Scheme is not considered as a deposit under the Companies Act, 2013.

e) Disclosures as required under the Companies Act, 2013 / MSMED Act, 2006 are provided in Note 67.

f) Amounts payable to related parties are disclosed in Note 53.

31. Current liabilities - Other current liabilities

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Advances from customers and others	**536.29**	611.81
Government grants	**26.92**	28.36
Other payables		
Statutory dues	**506.93**	659.09
Total	**1,070.14**	1,299.26

a) Advance received for the DDUGJY (including interest thereon) of ₹ **377.31 crore** (31 March 2020: ₹ 460.98 crore) is included in 'Advance from customers and others'. Refer Note 30 (c). Tax deducted at source on the interest is included in 'Advance tax and tax deducted at source' - Note 10.

b) Refer Note 27 w.r.t. accounting of Government grants.

32. Current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Provision for		
Employee benefits	**1,423.30**	1,332.21
Obligations incidental to land acquisition	**3,375.80**	3,506.01
Tariff adjustment	**360.28**	190.68
Others	**2,116.67**	1,610.27
Total	**7,276.05**	6,639.17

a) Disclosures required by Ind AS 19 'Employee Benefits' are provided in Note 50.

b) Disclosures required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' are provided in Note 57.

c) Provision for others comprise ₹ **103.88 crore** (31 March 2020: ₹ 101.05 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2 (Refer Note 59), ₹ **2,010.17 crore** (31 March 2020: ₹ 1,506.83 crore) towards provision for cases under litigation and ₹ **2.62 crore** (31 March 2020: ₹ 2.39 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation.

33. Deferred revenue

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
On account of		
Income from foreign currency fluctuation	**1,994.41**	2,672.30

a) Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years as provided in accounting policy no. C.15 (Note 1). This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities.

34. Revenue from operations

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
Energy sales (including electricity duty)		**95,423.48**	93,937.48
Sale of energy through trading		**3,112.51**	2,903.59
Consultancy, project management and supervision fee		**247.37**	245.17
Lease rentals on assets on operating lease		**156.18**	156.18
Sale of Captive coal to Subsidiary company		**100.09**	200.91
		99,039.63	97,443.33
Sale of fly ash/ash products	**173.08**		165.45
Less: Transferred to fly ash utilization reserve fund	**173.08**		165.45
		-	-

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Other operating revenues		
Interest from beneficiaries	**27.82**	127.09
Energy internally consumed	**60.97**	76.02
Interest income on assets under finance lease	**51.54**	59.90
Recognized from Government grants	**26.71**	(5.95)
Income from E-mobility business	**0.05**	-
	167.09	257.06
Total	**99,206.72**	97,700.39

a) (i) The Central Electricity Regulatory Commission (CERC) notified the CERC (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019) for determination of tariff for the tariff period 2019-2024. Pending issue of provisional/final tariff orders with effect from 1 April 2019, capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019. In case of new projects, which got commercialised from 1 April 2019 and projects where tariff approved and applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in tariff petitions. Energy charges are billed as per the operational norms specified in the Regulations 2019. The amount provisionally billed is ₹ **94,099.85 crore** (31 March 2020: ₹ 91,339.38 crore).

(ii) Sales have been provisionally recognized at ₹ **94,464.04 crore** (31 March 2020: ₹ 91,491.55 crore) on the said basis.

b) Sales include ₹ **(-) 1101.47 crore** (31 March 2020: ₹ 1,768.88 crore) on account of income tax recoverable from / (refundable to) the beneficiaries as per Regulations, 2004 due to reversal of tax provisions created in the previous year pursuant to 'Vivad se Vishwas Scheme' (VsVS) introduced by the government vide 'The Direct Tax Vivad Se Vishwas Act, 2020 for settlement of pending income tax disputes. Sales also include ₹ **81.88 crore** (31 March 2020: ₹ 79.97 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019. Also refer Note 49(II)(b).

c) Sales include ₹ **1154.64 crore** (31 March 2020: ₹ 31.59 crore) pertaining to earlier years on account of revision of energy charges due to grade slippages and other adjustments.

d) Energy sales include electricity duty amounting to ₹ **1,212.88 crore** (31 March 2020: ₹ 989.29 crore).

e) Energy sales and sale of energy through trading are net of rebate to beneficiaries amounting to ₹ **391.53 crore** (31 March 2020: ₹ 433.84 crore).

f) Other operating revenue includes ₹ **60.97 crore** (31 March 2020: ₹ 76.02 crore) towards energy internally consumed, valued at variable cost of generation and the corresponding amount is included in power charges in Note 40.

g) CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover from /pay to the beneficiaries the under/over recovered amount along-with simple interest. Accordingly, the interest recoverable from the beneficiaries amounting to ₹ **27.82 crore** (31 March 2020: ₹ 127.09 crore) has been accounted as 'Interest from beneficiaries'. Further, the amount payable to the beneficiaries has been accounted as 'Interest to beneficiaries' in Note 40.

h) The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which may be extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease.

i) The Company had ascertained that the PPA entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition date to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease'.

j) CERC vide notification dated 19 February 2021, notified the Second amendment to Tariff Regulations 2019, which inter alia includes mechanism for determination of transfer price of coal from integrated coal mines to generating stations and are effective for the period 2019-24. Coal extracted from Company's captive mines and supplied to generating stations have been accounted considering these Regulations. The supply of coal from the such mines under operation to a subsidiary company are disclosed as 'Sale of captive coal to subsidiary company'.

35. Other income

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
Interest from			
Financial assets at amortized cost			
Loan to subsidiary companies		**49.64**	24.18
Loan to employees		**64.04**	64.47
Deposits with banks		**47.54**	26.24
Deposits with banks out of fly ash utilization reserve fund	**20.63**		35.50
Less : Transferred to fly ash utilization reserve fund	**20.63**		35.50
		-	-
Deposits with banks - DDUGJY funds	**28.41**		24.24
Less : Transferred to DDUGJY advance from customers	**28.41**		24.24
		-	-
Advance to contractors and suppliers		**110.03**	46.46
Income tax refunds		**24.33**	55.58
Others		**15.08**	25.20
Dividend from			
Non-current investments in			
Subsidiary companies		**772.53**	-
Joint venture companies		**501.66**	205.60
Equity instruments designated at fair value through OCI		**9.00**	4.80
Other non-operating income			
Late payment surcharge from beneficiaries		**2,315.74**	1,633.20
Hire charges for equipment		**2.19**	1.90
Sale of scrap		**149.67**	66.28
Gain on sale of current investments measured at fair value through profit or loss		**0.02**	2.80
Miscellaneous income		**191.53**	183.44
Profit on de-recognition of property, plant and equipment		**3.34**	12.25
Provisions written back			
Impairment of investments in joint venture companies		**103.47**	36.28
Doubtful loans, advances and claims		**0.11**	24.91
Shortage in inventories		**11.81**	20.81
Obsolescence in inventories		**7.23**	6.73
Arbitration cases		**7.60**	374.18
Others		**1.82**	8.13
		4,388.38	2,823.44
Less: Transferred to expenditure during construction period (net) - Note 41		**40.42**	44.18
Transferred to expenditure during development of coal mines (net) - Note 42		**1.97**	1.24
Total		**4,345.99**	2,778.02

a) 'Interest from others' includes interest on advance to APIIC for drawal of water and deposits with LIC towards annuity to the land oustees.

b) Miscellaneous income includes income from township recoveries and receipts towards insurance claims.

c) 'Provisions written back - Arbitration cases' include an amount of ₹ **Nil** (31 March 2020: ₹ 356.31 crore) pertaining to dispute relating to movement of coal by the operator. Refer Note 57(iii)(b).

d) 'Provisions written back - Others' include provision for shortage in construction stores and shortage in property, plant and equipment.

36. Fuel cost

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Coal	**50,684.40**	51,609.68
Gas	**1,552.56**	1,988.36
Naptha	**68.44**	0.57
Oil	**544.24**	643.21
Total	**52,849.64**	54,241.82

37. Employee benefits expense

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Salaries and wages	**4,601.07**	4,951.96
Contribution to provident and other funds	**701.09**	578.68
Staff welfare expenses	**539.12**	568.66
	5,841.28	6,099.30
Less: Allocated to fuel inventory	**260.64**	284.93
Transferred to expenditure during construction period (net)- Note 41	**458.17**	705.85
Transferred to expenditure during development of coal mines (net) - Note 42	**60.51**	66.17
Reimbursements for employees on deputation	**119.77**	116.75
Total	**4,942.19**	4,925.60

a) Disclosures as per Ind AS 19 - 'Employee Benefits' in respect of provision made towards various employee benefits are provided in Note 50.

38. Finance costs

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Finance costs on financial liabilities measured at amortized cost		
Bonds	**3,695.10**	3,215.53
Foreign currency term loans	**272.74**	369.11
Rupee term loans	**4,433.80**	4,340.87
Foreign currency bonds/notes	**1,507.54**	1,426.43
Cash credit	**45.58**	35.30
Unwinding of discount on vendor liabilities	**102.84**	118.09
Commercial papers	**556.95**	865.54
	10,614.55	10,370.87

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Interest on non financial items	5.24	21.33
Exchange differences regarded as an adjustment to borrowing costs	(412.63)	764.38
Other borrowing costs		
Guarantee fee	22.79	22.68
Others	9.37	12.99
	32.16	35.67
Sub-total	10,239.32	11,192.25
Less: Transferred to expenditure during construction period (net) - Note 41	2,511.77	4,182.54
Transferred to expenditure during development of coal mines (net) - Note 42	268.52	227.74
Total	7,459.03	6,781.97

a) 'Other borrowing costs - Others' include bond issue and service expenses, commitment charges, exposure premium and insurance premium & other expenses on foreign currency loans / bonds/ notes.

b) Refer Note 66 w.r.t. Interest expense relating to lease obligations.

39. Depreciation and amortization expense

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
On property, plant and equipment - Note 2	11,430.16	9,589.88
On intangible assets - Note 4	50.89	50.77
	11,481.05	9,640.65
Less:		
Allocated to fuel inventory	691.82	562.90
Transferred to expenditure during construction period (net) - Note 41	83.82	201.13
Transferred to expenditure during development of coal mines (net) - Note 42	32.43	34.75
Adjustment with deferred revenue from deferred foreign currency fluctuation	261.18	219.02
Total	10,411.80	8,622.85

a) Refer Note 66 w.r.t. Depreciation expense of right of use assets.

40. Other expenses

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
Power charges	383.24		440.33
Less: Recovered from contractors and employees	40.38		35.77
		342.86	404.56
Water charges		674.58	708.57
Cost of captive coal produced		1,412.21	1,349.68
Stores consumed		90.90	78.86
Rent		5.58	7.83
Repairs and maintenance			
Buildings	295.87		291.72
Plant and equipment	3,037.47		2,638.88
Others	355.46		374.55
		3,688.80	3,305.15



₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
Load dispatch centre charges		28.07	47.20
Insurance		226.11	142.91
Interest to beneficiaries		0.07	17.07
Rates and taxes		131.02	127.20
Water cess and environment protection cess		1.53	17.37
Training and recruitment expenses	21.39		48.19
Less: Receipts	0.62		0.36
		20.77	47.83
Communication expenses		71.32	74.69
Travelling expenses		178.78	249.55
Tender expenses	18.15		7.93
Less: Receipt from sale of tenders	3.62		1.04
		14.53	6.89
Payment to auditors		5.77	4.88
Advertisement and publicity		7.43	18.75
Electricity duty		1,147.18	938.24
Security expenses		1,019.76	908.18
Entertainment expenses		59.11	69.12
Expenses for guest house	56.23		53.93
Less: Recoveries	0.73		0.95
		55.50	52.98
Education expenses		66.62	59.42
Donation/Grants		11.60	8.00
Ash utilization and marketing expenses		1,171.73	858.73
Directors sitting fee		0.57	0.73
Professional charges and consultancy fee		83.60	99.28
Legal expenses		41.42	49.41
EDP hire and other charges		44.77	36.71
Printing and stationery		4.74	6.14
Oil and gas exploration expenses		0.09	0.14
Hiring of vehicles		87.01	100.22
Net loss/(gain) in foreign currency transactions and translations		(154.97)	953.52
Cost of hedging		0.34	(0.99)
Derivatives MTM loss/(gain) (net)		-	1.28
Horticulture expenses		59.12	60.09
Hire charges of helicopter/aircraft		8.40	0.90
Hire charges of construction equipment		8.29	14.34
Transport vehicle running expenses		5.17	6.70
Loss on de-recognition of property, plant and equipment		133.47	59.96
Loss on disposal of investments		139.75	-
Miscellaneous expenses		151.18	128.30
		11,044.78	11,020.39

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Less: Allocated to fuel inventory	1,825.72	1,923.25
Transferred to expenditure during construction period (net) - Note 41	486.65	660.26
Transferred to expenditure during development of coal mines (net) - Note 42	263.71	82.37
Transferred to derivative MTM loss/(gain) recoverable/(payable) from/to beneficiaries	-	1.28
Transferred to fly ash utilization reserve fund	167.58	210.97
Transferred to corporate social responsibility expenses	54.36	47.97
	8,246.76	8,094.29
Corporate Social Responsibility (CSR) expenses (Refer Note 70)	418.87	303.79
Provisions for		
Tariff adjustments	169.60	91.91
Impairment of investments	32.20	41.48
Obsolescence in inventories	4.39	12.24
Shortages in inventories	34.19	20.24
Unserviceable capital works	136.35	39.21
Unfinished minimum work programme for oil and gas exploration	2.83	15.91
Arbitration cases	181.92	39.23
Shortages in construction stores	4.47	1.12
Doubtful loans, advances and claims	344.58	2.44
Others	4.12	1.95
	914.65	265.73
Total	9,580.28	8,663.81

a) During the development stage of mine, transfer price of coal extracted from Company's captive mine has been determined considering the CERC Regulations. The same has been netted from the cost of captive coal and carried to 'Development of coal mines' (Note 3) through 'Transferred to expenditure during development of coal mines' (Note 42).

b) Details in respect of payment to auditors:

As auditor		
Audit fee	2.29	1.91
Tax audit fee	0.80	0.65
Limited review	1.37	1.14
In other capacity		
Other services (certification fee)	1.10	0.51
Reimbursement of expenses	0.21	0.67
Total	5.77	4.88

Payment to the auditors includes ₹ **0.81 crore** (31 March 2020: ₹ 0.33 crore) relating to earlier year.

c) CERC Regulations provides that where after the truing-up, the tariff recovered is more than the tariff approved by the Commission, the generating Company shall pay to the beneficiaries the over recovered amount along-with simple interest. Accordingly, the interest payable to the beneficiaries amounting to ₹ **0.07 crore** (31 March 2020: ₹ 17.07 crore) has been accounted and disclosed as 'Interest to beneficiaries'.

d) Miscellaneous expenses include expenditure on books & periodicals, workshops, operating expenses of DG sets, brokerage and commission, bank charges, furnishing expenses, etc.

e) Provisions - Others include provision for doubtful debts and shortages in property, plant and equipment.

41. Expenditure during construction period (net) *

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
A. Employee benefits expense			
Salaries and wages		**373.08**	575.35
Contribution to provident and other funds		**51.75**	56.92
Staff welfare expenses		**33.34**	73.58
Total (A)		**458.17**	705.85
B. Finance costs			
Finance costs on financial liabilities measured at amortized cost			
Bonds		**963.13**	1,122.28
Foreign currency term loans		**54.66**	129.13
Rupee term loans		**1,256.46**	1,827.64
Foreign currency bonds/notes		**354.35**	531.84
Unwinding of discount on vendor liabilities		**37.80**	57.46
Exchange differences regarded as an adjustment to borrowing costs		**(172.63)**	493.08
Other borrowing costs		**18.00**	21.11
Total (B)		**2,511.77**	4,182.54
C. Depreciation and amortization expense		**83.82**	201.13
D. Other expenses			
Power charges	**257.46**		286.61
Less: Recovered from contractors and employees	**8.60**		7.31
		248.86	279.30
Water charges		**10.81**	31.72
Rent		**0.91**	1.39
Repairs and maintenance			
Buildings	**1.52**		6.18
Plant and equipment	**0.07**		0.37
Others	**19.60**		94.15
		21.19	100.70
Insurance		**0.42**	1.64
Rates and taxes		**13.36**	33.87
Communication expenses		**6.16**	8.67
Travelling expenses		**19.26**	36.43
Tender expenses		**16.15**	7.17
Advertisement and publicity		**0.08**	0.35
Security expenses		**82.44**	88.93
Entertainment expenses		**2.63**	5.69
Expenses for guest house		**4.21**	6.86
Professional charges and consultancy fee		**5.32**	7.27
Legal expenses		**3.83**	7.49
EDP hire and other charges		**0.93**	2.00
Printing and stationery		**0.28**	0.47
Miscellaneous expenses		**49.81**	40.31
Total (D)		**486.65**	660.26
E. Less: Other income			
Interest from advances to contractors and suppliers		**23.89**	25.77
Interest others		**12.03**	14.39

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Hire charges for equipment	0.31	0.29
Sale of scrap	-	0.23
Miscellaneous income	4.19	3.50
Total (E)	40.42	44.18
F. Net actuarial losses on defined benefit plans	4.53	11.45
Grand total (A+B+C+D-E+F) **	3,504.52	5,717.05

* Other than for expenditure during development of coal mines- (Note 42)
** Carried to capital work-in-progress - (Note 3)

42. Expenditure during development of coal mines (net)

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
A. Employee benefits expense			
Salaries and wages		48.37	52.90
Contribution to provident and other funds		5.28	4.89
Staff welfare expenses		6.86	8.38
Total (A)		60.51	66.17
B. Finance costs			
Finance costs on financial liabilities measured at amortized cost			
Bonds		86.57	64.07
Rupee term loans		173.65	154.67
Unwinding of discount on vendor liabilities		8.25	8.92
Other borrowing costs		0.05	0.08
Total (B)		268.52	227.74
C. Depreciation and amortization expense		32.43	34.75
D. Other expenses			
Power charges		1.03	1.40
Rent		0.72	0.44
Repairs and maintenance			
Buildings	0.16		0.65
Others	3.66		4.45
		3.82	5.10
Cost of captive coal produced		218.17	46.23
Insurance		0.01	0.09
Rates and taxes		1.38	0.95
Communication expenses		0.95	1.30
Travelling expenses		2.28	3.68
Advertisement and publicity		0.04	0.46
Security expenses		15.65	6.65

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Entertainment expenses	0.65	0.77
Expenses for guest house	0.12	0.74
Professional charges and consultancy fee	7.54	5.81
Legal expenses	1.11	0.11
EDP hire and other charges	0.16	0.38
Printing and stationery	0.19	0.15
Miscellaneous expenses	9.89	8.11
Total (D)	**263.71**	82.37
E. Less: Other income		
Interest from advances to contractors and suppliers	1.43	0.69
Interest others	-	0.33
Miscellaneous income	0.54	0.22
Total (E)	**1.97**	1.24
F. Net actuarial losses on defined benefit plans	**0.50**	1.06
Grand total (A+B+C+D-E+F) *	**623.70**	410.85

* Carried to capital work-in-progress - (Note 3)

43. Exceptional items

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Special rebate to beneficiaries-Covid-19	1,363.00	-

a) The Company is in the business of generation and sale of electricity which is an essential service as emphasized by MOP, GOI. During the outbreak of COVID-19, including recent surge in the number of cases, the Company has ensured the availability of its power plants to generate power and has continued to supply power during the period of lockdown. In line with the directions of MOP dated 15 & 16 May 2020, issued in accordance with the announcement of GOI under the Atmanirbhar Bharat Special Economic and Comprehensive package, to allow a rebate of between 20%-25% on the capacity charges during the lock down period subject to approval of the Board, an amount of ₹ 1,363.00 crore has been approved by the Board, to be allowed during the year 2020-21. The entire amount has since been accounted for and disclosed as exceptional item.

b) CERC issued an order dated 3 April 2020 whereby it was directed that Late Payment Surcharge (LPSC) shall apply at a reduced rate of 12% p.a. instead of the normal rate of 18% p.a. on the payments becoming overdue during the period from 24 March 2020 to 30 June 2020 to contain the impact of COVID-19. Further, GOI has notified Electricity (Late Payment Surcharge) Rules, 2021 on 22 February 2021.These rules envisage that base rate of LPSC to be considered as SBI one year MCLR, as on 1 April of the financial year, plus five percent. The rate of LPSC shall be increased by 0.5 percent for every month of delay, provided that the LPSC shall not be more than 3 percent higher than the base rate at any time.

c) Further, under the Atmanirbhar Bharat package, the Company has deferred the capacity charges to DISCOMS for the lockdown period for the power not scheduled to be payable without interest after the lock down period in three equal monthly installments. The impact on profit for the the year due to the reduction in LPSC rate and deferment of capacity charges, is not material.

The demand for power is continuously increasing with increase in economic activities in the Country, although demand may get impacted in short term due to lock downs in certain parts of the country.The Management does not anticipate any material medium to long-term impact on the financial position of the Company. The Company will continue to closely

monitor any material changes to the future economic conditions and take appropriate remedial measures as needed to respond to the Covid related risks. if any.

44. a) The Company has a system of obtaining periodic confirmation of balances from banks and other parties. There are no unconfirmed balances in respect of bank accounts and borrowings from banks & financial institutions. With regard to receivables for energy sales, the Company sends demand intimations to the beneficiaries with details of amount paid and balance outstanding which can be said to be automatically confirmed on receipt of subsequent payment from such beneficiaries. In addition, reconciliation with beneficiaries and other customers is generally done on quarterly basis. So far as trade/other payables and loans and advances are concerned, the balance confirmation letters/emails with the negative assertion as referred in the Standard on Auditing (SA) 505 (Revised) 'External Confirmations', were sent to the parties. Some of such balances are subject to confirmation/reconciliation. Adjustments, if any will be accounted for on confirmation/reconciliation of the same, which in the opinion of the management will not have a material impact.

b) In the opinion of the management, the value of assets, other than property, plant and equipment and non-current investments, on realisation in the ordinary course of business, will not be less than the value at which these are stated in the Balance Sheet.

c) The levy of transit fee/entry tax on supplies of fuel to some of the power stations has been paid under protest as the matters are sub-judice at various courts. In case the Company gets refund/demand from fuel suppliers/tax authorities on settlement of these cases, the same will be passed on to respective beneficiaries.

45. a) On 7 February 2021, a massive unprecedented flood consisting of debris and muck, silt, boulders, rock pieces, etc. caused by glacier burst in the upstream of the project in the Himalayas, hit a part of the Company's under construction 520 MW hydropower project in the state of Uttarakhand. This resulted in large scale inundation and silting at the project site, especially the barrage intake structure, desilting chamber/basin and adjoining facilities including their approach. However, the main power house and dam was not significantly affected by the floods. Most of the mechanical and electrical equipment are in safe condition.

Industry Experts engaged by the Company including experienced officials of the Company, are preparing a comprehensive assessment -cum- action plan for restoration of the project. It is anticipated that the restoration work may take time up to the end of the next financial year i.e. 2021-22, which is being closely monitored by the Company. Insurance cover is available for the loss/damage caused. The company is committed to the completion of the project at the earliest.

The carrying cost of the project as at 31 March 2021 is ₹ **5,337.69 crore** (31 March 2020: ₹ 4,868.79 crore). Damage to the project due to the calamity is indemnifiable as stated above and Management is of the view that there would not be any material impact on the financials and confident that any additional expenditure consequent to the natural calamity, would be covered as part of project cost as per Tariff Regulations, hence no adjustment is considered necessary in respect of the carrying value of the project.

b) The Company is executing a hydro power project in the state of Uttarakhand, where all the clearances were accorded. A case was filed in Hon'ble Supreme Court of India after the natural disaster in Uttarakhand in June 2013 to review whether the various existing and ongoing hydro projects have contributed to environmental degradation. Hon'ble Supreme Court of India on 7 May 2014, ordered that no further construction shall be undertaken in the projects under consideration until further orders, which included the said hydro project of the Company. In the proceedings, Hon'ble Supreme Court is examining to allow few projects which have all clearances which includes the project of the Company where the work has been stopped. Aggregate cost incurred on the project up to 31 March 2021 is ₹**163.86 crore** (31 March 2020: ₹ 163.40 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no adjustment is considered necessary in respect of the carrying value of the project.

46. a) The environmental clearance ("clearance") granted by the Ministry of Environment and Forest, Government of India (MoEF) for one of the Company's project consisting of three units of 800 MW each, was challenged before the National Green Tribunal (NGT). The NGT disposed off the appeal, inter alia, directing that the order of clearance be remanded to the MoEF to pass an order granting or declining clearance to the project proponent afresh in accordance with the law and the judgement of the NGT and for referring the matter to the Expert Appraisal Committee ("Committee") for its re-scrutiny, which shall complete the process within six months from the date of NGT order. NGT also directed that the environmental clearance shall be kept in abeyance and the Company shall maintain status quo in relation to the project during the period of review by the Committee or till fresh order is passed by the MoEF, whichever is earlier. The Company filed an appeal challenging the NGT order before the Hon'ble Supreme Court of India which stayed the order of the NGT and the matter is sub-judice. All the units of the project have been declared commercial in the earlier years. The carrying cost of the project as at 31 March 2021 is ₹ **15,115.02 crore** (31 March 2020: ₹ 15,662.28 crore). Management is confident that the approval for the project shall be granted, hence no adjustment is considered necessary in respect of the carrying value of the project.

b) The Company is executing a thermal power project consisting of two units of 800 MW each in the State of Telangana. The project construction commenced in the year 2016 after obtaining the requisite approval and Environment Clearance (EC) from MOEF&CC (Ministry of Environment, Forest and Climate Change). On 27 May 2021, the National Green Tribunal (NGT) has passed an order instructing MOEF&CC to keep the EC granted for the project in abeyance for a period of seven months or till the period the re-appraisal is done and additional conditions imposed by the MOEF&CC, whichever is earlier. NGT has further directed the MOEF&CC to conduct additional studies pertaining to Environment Impact Assessment of the project, to be carried out through the company, for further assessment by its Expert Appraisal Committee (EAC) and get recommendations of the EAC for imposing additional conditions by the MOEF&CC, if any, on the company for allowing the units to operate. The Company has obtained advice of prominent legal experts and has filed an appeal before Hon'ble Supreme Court of India against the directions of NGT. Both the units of the project are in advanced stage of construction and commissioning of the units is envisaged in the next year. The carrying cost of the project as at 31 March 2021 is ₹ **9,376.31 crore** (31 March 2020: ₹ 8,017.48 crore). Management is confident that the approval for the continuation of the project shall be granted, hence no adjustment is considered necessary in respect of the carrying value of the project.

47. Disclosure as per Ind AS 1 'Presentation of financial statements'

a) Changes in significant accounting policies:

During the year, following changes to the accounting policies have been made:

i) CERC has notified Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2021, dated 19 February 2021. These amendments are applicable to a generating company which has the arrangement for supply of coal or lignite from the integrated mine(s) allocated to it, for one or more of its specified end use generating stations, whose tariff is required to be determined by the Commission. The company has integrated coal mines and hence these amendments are applicable to the Company. Consequently, related significant accounting policies viz. C.1.5, C.5.2, C.6 and C.15 have been modified.

ii) Certain other changes have also been made in the policies nos. B.1, C.1, C.3, C.5, C.6, C.9, C.10, C.11, C.15, C.16, C.18, C.19, C.21, C.27, C.28, D.2 and D.4 for improved disclosures. There is no impact on the financial statements due to these changes, however, the policy numbers have been rearranged in the current year as required.

b) Reclassifications and comparative figures

Certain reclassifications have been made to the comparative period's financial statements to enhance comparability with the current year's financial statements.

As a result, certain line items have been reclassified in the balance sheet and statement of cash flows, the details of which are as under:

Items of balance sheet before and after reclassification as at 31 March 2020

₹ Crore

Sl. No.	Particulars	Amount before reclassification	Reclassification	Amount after reclassification
1	Other financial assets-Non current (Note-9)	1,425.16	(21.56)	1,403.60
	Other non-current assets (Note-10)	11,122.62	341.88	11,464.50
	Trade receivables (Note-13)	15,668.11	(52.92)	15,615.19
	Other financial assets-Current (Note-17)	11,529.13	50.03	11,579.16
	Other current assets (Note-18)	8,378.41	(317.43)	8,060.98
2	Other non-current liabilities (Note-27)	-	541.88	541.88
	Other current liabilities (Note-31)	1,270.90	28.36	1,299.26
	Deferred revenue (Note-33)	3,242.54	(570.24)	2,672.30
	Provisions - non current (Note-25)	635.69	191.05	826.74
	Provisions - current (Note-32)	6,830.22	(191.05)	6,639.17

Items of statement of cash flows before and after reclassification for the year ended 31 March 2020

₹ Crore

Sl. No.	Particulars	Amount before reclassification	Reclassification	Amount after reclassification
1	Cash flow from operating activities	22,014.26	(430.28)	21,583.98
	Cash flow from investing activities	(27,677.12)	430.28	(27,246.84)
	Cash flow from financing activities	5,658.88	-	5,658.88

48. Disclosure as per Ind AS 2 'Inventories'

a) Amount of inventories consumed and recognized as expense during the year is as under:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Fuel cost	**52,849.64**	54,241.82
Others (included in Note 40 - Other expenses)	**1,377.49**	1,330.91
Total*	**54,227.13**	55,572.73

*Includes imported materials consumed during the year ended 31 March 2021 amounting to ₹ **776.78 crore** (31 March 2020: ₹ 2,021.33 crore).

b) Carrying amount of inventories pledged as security for borrowings as at 31 March 2021 is ₹ **Nil** (31 March 2020: ₹ 10,731.86 crore).

49. Income taxes related disclosures

(I) Disclosure as per Ind AS 12 'Income taxes'

(a) Income tax expense

i) Income tax recognised in the statement of profit and loss

₹ Crore

Particulars	For the year ended	
	31 March 2021	31 March 2020
Current tax expense		
Current year	**2,597.35**	2,493.29
Taxes for earlier years	**(1,874.12)**	2,660.17
Pertaining to regulatory deferral account balances (A)	**376.72**	1,022.31
Total current tax expense (B)	**1,099.95**	6,175.77
Deferred tax expense		
Origination and reversal of temporary differences	**4,267.50**	5,410.81
Less: MAT credit entitlement	**3,065.34**	1,382.32
Total deferred tax expense (C)	**1,202.16**	4,028.49
Income tax expense (D=B+C-A)	**1,925.39**	9,181.95
Pertaining to regulatory deferral account balances	**376.72**	1,022.31
Total tax expense including tax on movement in regulatory deferral account balances	**2,302.11**	10,204.26

ii) Income tax recognised in other comprehensive income

₹ Crore

Particulars	For the year ended					
	31 March 2021			31 March 2020		
	Before tax	Tax expense/ (benefit)	Net of tax	Before tax	Tax expense/ (benefit)	Net of tax
- Net actuarial losses on defined benefit plans	**(139.33)**	**(24.34)**	**(114.99)**	(346.04)	(60.46)	(285.58)
- Net gains/(losses) on fair value of equity instruments	**46.80**	-	**46.80**	(41.64)	-	(41.64)
	(92.53)	**(24.34)**	**(68.19)**	(387.68)	(60.46)	(327.22)

iii) Reconciliation of tax expense and the accounting profit multiplied by India's domestic tax rate

₹ Crore

Particulars	For the year ended	
	31 March 2021	31 March 2020
Profit before tax including movement in regulatory deferral account balances	**16,071.63**	20,317.07
Tax using the Company's domestic tax rate of 34.944 % (31 March 2020 - 34.944%)	**5,616.07**	7,099.60
Tax effect of:		
Non-deductible tax expenses	**166.02**	2.61
Tax free income	-	(36.76)
Deferred tax expenses / (income)	**1,202.16**	4,028.49
Previous year tax liability	**(1,874.12)**	2,660.17
Minimum alternate tax adjustments	**(2,808.02)**	(3,549.85)
Total tax expense recognized in the statement of profit and loss	**2,302.11**	10,204.26

(b) Tax losses carried forward

₹ Crore

Particulars	31 March 2021	Expiry date	31 March 2020	Expiry date
Long-term capital loss for which no deferred tax asset has been recognised due to uncertainty involved	2,105.19	31-03-2029	-	-

(II) Other disclosures

(a) The GOI introduced Vivad se Vishwas Scheme (VsVs Scheme) through 'The Direct Tax Vivad Se Vishwas Act, 2020'. During the previous year, the Company had created an additional tax provision amounting to ₹ 2,661.47 crore as it proposed to settle all its pending Income Tax disputes for fourteen years (from F.Y. 2003-04 to 2016-17) by opting for the VsVs scheme. During the year, the Company decided to settle its pending disputes for three years only (i.e. FY 2003-04, 2004-05 and 2008-09), under the VsVs scheme, for which the Company is in the process of completion of procedural formalities. Accordingly, excess tax provision amounting to ₹ 1,889.05 crores has been written back during the year. Further, contingent liabilities for the remaining eleven years have been reinstated, amounting to ₹ 5,322.64 crore along with possible reimbursement of ₹ 1,789.69 crore. Refer Note 69.

50. Disclosure as per Ind AS 19 'Employee benefits'

(i) Defined contribution plans:

Pension

The defined contribution pension scheme of the Company for its employees which is effective from 1 January 2007, is administered through a separate trust. The obligation of the Company is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post retirement medical facility (PRMF) or any other retirement benefits. An amount of ₹ **223.99 crore** (31 March 2020: ₹ 95.59 crore) for the year is recognized as expense on this account and charged to the statement of profit and loss.

(ii) **Defined benefit plans:**

A. Provident fund

The Company pays fixed contribution to provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The Company has an obligation to ensure minimum rate of return to the members as specified by GOI. Accordingly, the Company has obtained report of the actuary, based on which overall interest earnings and cumulative surplus is more than the statutory interest payment requirement for all the periods presented. Further, contribution to employees pension scheme is paid to the appropriate authorities.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the provident fund plan as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Net defined benefit (asset)/liability - Current	**(94.41)**	(75.05)

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Opening balance	**9,704.06**	9,089.80	**9,779.11**	9,134.68	**(75.05)**	(44.88)
Current service cost recognised in statement of profit and loss	**340.74**	310.00		-	**340.74**	310.00
Interest cost/(income)	**812.84**	704.46	**(812.84)**	(704.46)	-	-
Total	**1,153.58**	1,014.46	**(812.84)**	(704.46)	**340.74**	310.00
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	-	0.05	-	-	-	0.05
Financial assumptions	-	1.24	-	-	-	1.24
Experience adjustment	**0.69**	42.87	-	-	**0.69**	42.87
Return on plan assets excluding interest income	-	-	**(20.05)**	(74.33)	**(20.05)**	(74.33)
Total	**0.69**	44.16	**(20.05)**	(74.33)	**(19.36)**	(30.17)
Other						
Contribution by participants	**1,074.27**	822.48	**1,074.27**	822.48	-	-
Contribution by employer	-	-	**340.74**	310.00	**(340.74)**	(310.00)
Benefits paid	**1,365.63**	1,266.84	**1,365.63**	1,266.84	-	-
Closing balance	**10,566.97**	9,704.06	**10,661.38**	9,779.11	**(94.41)**	(75.05)

Pursuant to paragraph 57 of Ind AS 19, accounting by an entity for defined benefit plans, inter-alia, involves determining the amount of the net defined benefit liability (asset) which shall be adjusted for any effect of limiting a net defined benefit asset to the asset ceiling prescribed in paragraph 64. As per Para 64 of Ind AS 19, in case of surplus in a defined benefit plan, an entity shall measure the net defined benefit asset at the lower of actual surplus or the value of the assets ceiling determined using the discount rate. The asset ceiling is the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. Further, paragraph 65 provides that a net defined benefit asset may arise where a defined benefit plan has been overfunded or where actuarial gains have arisen.

As per the provisions of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Company has no right to the benefits either in the form of refund from the plan or lower future contribution to the plan towards the net surplus of ₹ **94.41crore** (31 March 2020: ₹ 75.05 crore) determined through actuarial valuation. Accordingly,

Company has not recognised the surplus as an asset, and the remeasurement loss /gains in 'Other Comprehensive Income', as these pertain to the Provident Fund Trust and not to the Company.

B. Gratuity and pension

a) The Company has a defined benefit gratuity plan. Every employee who has rendered continuous service of five years or more is entitled to gratuity at 15 days salary (15/26 X last drawn basic salary plus dearness allowance) for each completed year of service subject to a maximum of ₹ 0.20 crore on superannuation, resignation, termination, disablement or on death, considering the provisions of the Payment of Gratuity Act, 1972, as amended. The gratuity scheme is funded by the Company and is managed by separate trust. The liability for gratuity scheme is recognised on the basis of actuarial valuation.

b) The Company has pension schemes at two of its stations in respect of employees taken over from erstwhile state government power utilities. These pension schemes are unfunded. The liability for the pension schemes is recognised on the basis of actuarial valuation.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the gratuity and pension plan and the amounts recognised in the Company's financial statements as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Net defined benefit (asset)/liability :		
Gratuity (funded)	**112.82**	164.37
Pension (non-funded)	**569.36**	591.83
Total	**682.18**	756.20
Break-up		
Non-current	**535.43**	554.52
Current	**146.75**	201.68

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Opening balance	**2,632.26**	2,542.21	**1,876.06**	2,014.81	**756.20**	527.40
Included in profit or loss for the year:						
Current service cost	**101.31**	100.40	-	-	**101.31**	100.40
Past service cost	-	-	-	-	-	-
Interest cost (income)	**177.67**	197.01	**(137.73)**	(148.38)	**39.94**	48.63
Total amount recognised in profit or loss for the year	**278.98**	297.41	**(137.73)**	(148.38)	**141.25**	149.03
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Demographic assumptions	-	(1.16)	-	-	-	(1.16)
Financial assumptions	-	159.68	-	-	-	159.68
Experience adjustment	**19.06**	(22.09)	-	-	**19.06**	(22.09)
Return on plan assets excluding interest income	-	-	**(34.57)**	(11.89)	**(34.57)**	(11.89)
Total amount recognised in other comprehensive income	**19.06**	136.43	**(34.57)**	(11.89)	**(15.51)**	124.54
Out of the above an amount of ₹ **0.83 crore** (31 March 2020: ₹ 4.38 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by employer	-	-	**164.37**	-	**(164.37)**	-
Benefits paid	**297.90**	343.79	**262.51**	299.02	**35.39**	44.77
Closing balance	**2,632.40**	2,632.26	**1,950.22**	1,876.06	**682.18**	756.20

Out of the above net liability , an amount of ₹ **112.82 crore** (31 March 2020: ₹ 176.26 crore) has been adjusted with the amount recoverable from the trust.

C. Post-Retirement Medical Facility (PRMF)

The Company has Post-Retirement Medical Facility (PRMF), under which the retired employees and their spouses are provided medical facilities in the Company hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Company. The liability for the same is recognised annually on the basis of actuarial valuation. A trust has been constituted for its employees superannuated on or after 1 January 2007, for the sole purpose of providing post retirement medical facility to them.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the PRMF and the amounts recognised in the Company's financial statements as at balance sheet date:

₹ Crore

Particulars	**As at 31 March 2021**	As at 31 March 2020
Net defined benefit (asset)/liability - Current (funded)	**170.04**	253.02

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Opening balance	**1,960.62**	1,635.86	**1,707.60**	1,635.86	**253.02**	-
Included in profit or loss:						
Current service cost	**39.62**	42.26	-	-	**39.62**	42.26
Past service cost	-	-	-	-	-	-
Interest cost (income)	**132.34**	126.78	**(132.34)**	(115.76)	-	11.02
Total amount recognised in profit or loss	**171.96**	169.04	**(132.34)**	(115.76)	**39.62**	53.28

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	-	(0.98)	-	-	-	(0.98)
Financial assumptions	-	114.14	-	-	-	114.14
Experience adjustment	**171.78**	159.44	-	-	**171.78**	159.44
Return on plan assets excluding interest income	-	-	**(13.93)**	(40.26)	**(13.93)**	(40.26)
Total amount recognised in other comprehensive income	**171.78**	272.60	**(13.93)**	(40.26)	**157.85**	232.34
Out of the above an amount of ₹ **4.19 crore** (31 March 2020: ₹ 8.13 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by participants	-	-	**27.43**	32.60	**(27.43)**	(32.60)
Contribution by employer	-	-	**253.02**	-	**(253.02)**	-
Benefits paid	**115.00**	116.88	**115.00**	116.88	-	-
Closing balance	**2,189.36**	1,960.62	**2,019.32**	1,707.60	**170.04**	253.02

Out of the above net liability, an amount of ₹ **170.04 crore** (31 March 2020: ₹ 113.30 crore) has been adjusted with the amount recoverable from the trust.

D. Other retirement benefit plans

Other retirement benefit plans include baggage allowance for settlement at home town for employees and dependents and farewell gift to the superannuating employees. The scheme above is unfunded and liability for the same is recognised on the basis of actuarial valuation.

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Net defined benefit (asset)/liability (non-funded) :	**200.73**	190.12
Non-current	**176.24**	168.22
Current	**24.49**	21.90

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation	
	As at 31 March 2021	As at 31 March 2020
Opening balance	**190.12**	174.76
Included in profit or loss:		
Current service cost	**10.08**	9.92
Past service cost	-	-
Interest cost (income)	**12.83**	13.54
Total amount recognised in profit or loss	**22.91**	23.46
Included in other comprehensive income:		
Remeasurement loss (gain):		

₹ Crore

Particulars	Defined benefit obligation	
	As at 31 March 2021	As at 31 March 2020
Actuarial loss (gain) arising from:		
Demographic assumptions	-	(0.06)
Financial assumptions	-	11.51
Experience adjustment	(2.01)	(9.78)
Return on plan assets excluding interest income	-	-
Total amount recognised in other comprehensive income	**(2.01)**	1.67
Other		
Contributions paid by the employer	-	-
Benefits paid	**10.29**	9.77
Closing balance	**200.73**	190.12

E. Plan assets

Plan assets comprise the following

₹ Crore

Particulars	As at 31 March 2021			As at 31 March 2020		
	Quoted	Unquoted	Total	Quoted	Unquoted	Total
State government securities	**5,247.23**	-	**5,247.23**	4,516.05	-	4,516.05
Central government securities	**1,798.42**	-	**1,798.42**	1,838.96	-	1,838.96
Corporate bonds and term deposits	**4,410.03**	**80.91**	**4,490.94**	4,275.18	73.73	4,348.91
Money market instruments/liquid mutual fund	**0.45**	-	**0.45**	0.59	-	0.59
Equity and equity linked investments	**94.31**	-	**94.31**	114.34	-	114.34
Investments with insurance companies	-	**3,091.53**	**3,091.53**	-	2,599.46	2,599.46
Total (excluding accrued interest)	**11,550.44**	**3,172.44**	**14,722.88**	10,745.12	2,673.19	13,418.31

As at 31 March 2021, an amount of ₹ **210.00 crore** (31 March 2020: ₹ 280.00 crore) is included in the value of plan assets in respect of the reporting enterprise's own financial instruments (Corporate bonds).

Actual return on plan assets is ₹ **1,151.46 crore** (31 March 2020: ₹ 1,095.10 crore).

F. Defined benefit obligations

i. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date:

Particulars	As at 31 March 2021	As at 31 March 2020
Discount rate	**6.75%**	6.75%
Expected return on plan assets		
Gratuity	**6.75%**	6.75%
Pension	**6.75%**	6.75%
PRMF	**6.75%**	6.75%
Annual increase in costs	**6.50%**	6.50%
Salary escalation rate	**6.50%**	6.50%

The estimates of future salary increases considered in actuarial valuation, take account of inflation, seniority, promotion and other relevant factors, such as supply and demand in the employment market. Further, the expected return on plan assets is determined considering several applicable factors mainly the composition of plan assets held, assessed risk of asset management and historical returns from plan assets.

ii. Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

Particulars	As at 31 March 2021		As at 31 March 2020	
	Increase	Decrease	Increase	Decrease
Discount rate (0.5% movement)	**(169.87)**	**178.76**	(156.74)	167.38
Annual increase in costs (0.5% movement)	**78.57**	**(76.36)**	72.75	(68.58)
Salary escalation rate (0.5% movement)	**98.22**	**(93.17)**	96.57	(91.08)

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

The sensitivity analysis above have been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

G. Risk exposure

Through its defined benefit plans, the Company is exposed to a number of risks, the most significant of which are detailed below:

a) Asset volatility

The plan liabilities are calculated using a discount rate set with reference to government bond yields; if plan assets underperform this yield, this will create a deficit. Most of the plan asset investments are in fixed income securities with high grades and in government securities. These are subject to interest rate risk and the fund manages interest rate risk with derivatives to minimise risk to an acceptable level. A portion of the funds are invested in equity securities and in alternative investments which have low correlation with equity securities. The Company has a risk management strategy where the aggregate amount of risk exposure on a portfolio level is maintained at a fixed range. Any deviations from the range are corrected by rebalancing the portfolio. The Company intends to maintain the above investment mix in the continuing years.

b) Changes in discount rate

A decrease in discount rate will increase plan liabilities, although this will be partially offset by an increase in the value of the plans' assets holdings.

c) Inflation risks

In the pension plans, the pension payments are not linked to inflation, so this is a less material risk.

d) Life expectancy

The pension plan obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plans' liabilities. This is particularly significant where inflationary increases result in higher sensitivity to changes in life expectancy.

The Company ensures that the investment positions are managed within an asset-liability matching (ALM) framework that has been developed to achieve long-term investments that are in line with the obligations under the employee benefit plans. Within this framework, the Company's ALM objective is to match assets to the pension obligations by investing in long-term fixed interest securities with maturities that match the benefit payments as they fall due and in the appropriate currency.

The Company actively monitors how the duration and the expected yield of the investments are matching the expected cash outflows arising from the employee benefit obligations. The Company has not changed the processes used to manage its risks from previous periods. The Company uses derivatives to manage some of its

risk. Investments are well diversified, such that the failure of any single investment would not have a material impact on the overall level of assets.

A large portion of assets consist of government and corporate bonds. The plan asset mix is in compliance with the requirements of the respective local regulations.

H. Expected maturity analysis of the defined benefit plans in future years

₹ Crore

Particulars	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years	Total
31 March 2021					
Gratuity and pension	**291.28**	**287.19**	**657.69**	**1,396.24**	**2,632.40**
Post-retirement medical facility (PRMF)	**135.72**	**167.71**	**599.41**	**1,286.52**	**2,189.36**
Provident fund	**1,349.89**	**1,200.19**	**2,754.62**	**5,262.27**	**10,566.97**
Other post-employment benefit plans	**24.49**	**23.98**	**55.78**	**96.48**	**200.73**
Total	**1,801.38**	**1,679.07**	**4,067.50**	**8,041.51**	**15,589.46**
31 March 2020					
Gratuity and pension	288.21	266.40	677.77	1,399.88	2,632.26
Post-retirement medical facility (PRMF)	115.97	143.31	512.21	1,189.13	1,960.62
Provident fund	1,132.40	955.20	2,660.28	4,956.18	9,704.06
Other post-employment benefit plans	21.90	20.28	53.77	94.17	190.12
Total	1,558.48	1,385.19	3,904.03	7,639.36	14,487.06

Expected contributions to post-employment benefit plans for the year ending 31 March 2022 are ₹ **532.75 crore.**

The weighted average duration of the defined benefit plan obligation at the end of the reporting period is **15.37 years** (31 March 2020: 15.19 years).

(iii) Other long term employee benefit plans

A. Leave

The Company provides for earned leave benefit (including compensated absences) and half-pay leave to the employees of the Company which accrue annually at 30 days and 20 days respectively. Earned leave (EL) is en-cashable while in service. Half-pay leaves (HPL) are en-cashable only on separation beyond the age of 50 years up to the maximum of 300 days. However, total number of leave (i.e. EL & HPL combined) that can be encashed on superannuation shall be restricted to 300 days and no commutation of half-pay leave shall be permissible. The scheme is unfunded and liability for the same is recognised on the basis of actuarial valuation. During the year, provision amounting to ₹ **100.19 crore** has been made on the basis of actuarial valuation at the year end and debited to statement of profit and loss (31 March 2020: ₹ 235.44 crore)

B. Other employee benefits

Provision for long service award and family economic rehabilitation scheme amounting to ₹ **2.30 crore** (31 March 2020: ₹ 10.74 crore) for the year have been made on the basis of actuarial valuation at the year end and debited to the statement of profit and loss.

51. Disclosure as per Ind AS 21 'The Effects of Changes in Foreign Exchange Rates'

The amount of exchange differences (net) debited to the statement of profit and loss, net of movement in regulatory deferral account balances, is **(-) ₹ 12.54 crore** (31 March 2020: debited to Statement of profit and loss ₹ 21.91 crore).

52. Disclosure as per Ind AS 23 'Borrowing Costs'

Borrowing costs capitalised during the year is **₹ 2,780.29 crore** (31 March 2020: ₹ 4,410.28 crore).

53. Disclosure as per Ind AS 24 'Related Party Disclosures'

a) List of related parties:

i) Subsidiary companies:

1. Bhartiya Rail Bijlee Company Ltd.
2. Kanti Bijlee Utpadan Nigam Ltd.
3. NTPC Vidyut Vyapar Nigam Ltd.
4. NTPC Electric Supply Company Ltd.
5. Patratu Vidyut Utpadan Nigam Ltd.
6. Nabinagar Power Generating Company Ltd.
7. NTPC Mining Ltd. (w.e.f. 29 August 2019)
8. THDC India Ltd. (THDCIL) (w.e.f. 27 March 2020)
9. North Eastern Electric Power Corporation Ltd. (NEEPCO) (w.e.f. 27 March 2020)
10. NTPC EDMC Waste Solutions Private Ltd. (w.e.f. 1 June 2020)
11. NTPC Renewable Energy Ltd. (w.e.f. 7 October 2020)
12. Ratnagiri Gas & Power Private Ltd. (Joint venture company upto 30 December 2020)

Subsidiary company of THDCIL

1. TUSCO Limited

ii) Joint ventures companies:

1. Utility Powertech Ltd.
2. NTPC-GE Power Services Private Ltd.
3. NTPC-SAIL Power Company Ltd.
4. NTPC Tamil Nadu Energy Company Ltd.
5. Aravali Power Company Private Ltd.
6. NTPC BHEL Power Projects Private Ltd.
7. Meja Urja Nigam Private Ltd.
8. Transformers and Electricals Kerala Ltd.
9. National High Power Test Laboratory Private Ltd.
10. Energy Efficiency Services Ltd.
11. CIL NTPC Urja Private Ltd.
12. Anushakti Vidhyut Nigam Ltd.
13. Hindustan Urvarak & Rasayan Ltd.
14. Konkan LNG Ltd. (upto 23 February 2021)
15. Trincomalee Power Company Ltd.
16. Bangladesh-India Friendship Power Company Private Ltd.

Joint venture company of NEEPCO

1. KSK Dibbin Hydro Power Private Ltd.

iii) Key Management Personnel (KMP):

Whole Time Directors

Mr. Gurdeep Singh	Chairman and Managing Director	
Mr. A.K.Gautam[1]	Director (Finance)	W.e.f. 18 October 2019
Mr. Dillip Kumar Patel	Director (HR)	W.e.f. 1 April 2020
Mr. Ramesh Babu V.	Director (Operations)	W.e.f. 1 May 2020
Mr. Chandan Kumar Mondol	Director (Commercial)	W.e.f. 1 August 2020
Mr. Ujjwal Kanti Bhattacharya	Director (Projects)	W.e.f 28 August 2020

Mr. A.K.Gupta	Director (Commercial)	Upto 31 July 2020
Mr. Prakash Tiwari	Director (Operations)	Upto 30 April 2020
Mr. Saptarshi Roy	Director (Human Resources)	Upto 31 March 2020
Mr. S.K.Roy	Director (Projects)	Upto 30 November 2019
Mr. P.K.Mohapatra	Director (Technical)	Upto 31 July 2019
Mr. K.Sreekant[2]	Director (Finance)	Upto 12 August 2019
Independent Directors		
Dr. Gauri Trivedi	Non-executive Director	Upto 15 November 2019
Mr. Seethapathy Chander	Non-executive Director	Upto 12 June 2019
Mr. M.P.Singh	Non-executive Director	Upto 7 September 2020
Mr. Pradeep Kumar Deb	Non-executive Director	Upto 7 September 2020
Mr. Shashi Shekhar	Non-executive Director	Upto 7 September 2020
Mr. Subhash Joshi	Non-executive Director	Upto 7 September 2020
Mr. Vinod Kumar	Non-executive Director	Upto 7 September 2020
Dr. K.P.K.Pillay	Non-executive Director	
Dr. Bhim Singh	Non-executive Director	
Government Nominee Directors		
Mr. Vivek Kumar Dewangan	Non-executive Director	
Mr. Ashish Upadhyaya	Non-executive Director	W.e.f. 22 January 2020
Ms. Archana Agarwal	Non-executive Director	Upto 22 April 2019
Chief Financial Officer and Company Secretary		
Mr. Sudhir Arya	Chief Financial Officer	Upto 30 July 2019
Ms. Nandini Sarkar	Company Secretary	W.e.f. 1 August 2018

1. Chief Financial Officer w.e.f. 1 August 2019
2. Holding additional charge, in addition to Director (Finance), Power Grid Corporation of India Ltd.

iv) Post employment benefit plans:

1. NTPC Limited Employees Provident Fund
2. NTPC Employees Gratuity Fund
3. NTPC Post Retirement Employees Medical Benefit Fund
4. NTPC Limited Defined Contribution Pension Trust

v) Entities under the control of the same government:

The Company is a Central Public Sector Undertaking (CPSU) controlled by Central Government by holding majority of shares (Note 20). Pursuant to Paragraph 25 and 26 of Ind AS 24, entities over which the same government has control or joint control of, or significant influence, then the reporting entity and other entities shall be regarded as related parties. Transactions with these parties are carried out at market terms at arm length basis. The Company has applied the exemption available for government related entities and have made limited disclosures in the financial statements. Such entities with which the Company has significant transactions include but not limited to Coal India Ltd., Singareni Coalfields Ltd., GAIL (India) Ltd., BHEL Ltd., SAIL Ltd., Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd and PGCIL.

vi) Others:

1. NTPC Education and Research Society
2. NTPC Foundation

b) Transactions with the related parties are as follows:

₹ Crore

Particulars	Subsidiary Companies		Joint venture Companies	
	For the year ended		For the year ended	
	31 March 2021	31 March 2020	31 March 2021	31 March 2020
i) Sales/purchase of goods and services				
- Contracts for works/services for services received by the Company	5.45	3.20	1,613.80	1,286.34
- Contracts for works/services for services provided by the Company	93.97	45.41	37.11	41.55
- Sale/purchase of goods	1,896.41	2,075.00	22.75	38.77
ii) Sales/purchase of assets	-	0.50	2.52	3.26
iii) Deputation of employees	57.93	52.08	57.42	63.24
iv) Dividend received	772.53	-	501.66	205.60
v) Equity contributions made	1,024.72	846.90	620.45	970.57
vi) Loans granted	1,038.45	143.00	-	12.40
vii) Interest on loan	49.64	24.18	1.86	0.79
viii) Guarantees received	-	-	4.80	18.01
ix) Financial guarantees issued	247.60	-	-	-

Note: Refer Note 69 C(b) and (c) for other commitments with subsidiary and joint venture companies

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Transactions with post employment benefit plans		
- Contributions made during the year	820.89	824.28
Compensation to Key management personnel		
- Short term employee benefits	5.75	5.07
- Post employment benefits	0.11	0.13
- Other long term benefits	0.28	0.27
- Termination benefits	0.81	1.51
- Sitting fee	0.57	0.73
Total compensation to key management personnel	7.52	7.71

Transactions with the related parties under the control of the same government:

₹ Crore

Sl. No.	Name of the Company	Nature of transaction by the Company	For the year ended 31 March 2021	For the year ended 31 March 2020
1	Bharat Coking Coal Ltd.	Purchase of coal	423.46	1,345.65
2	Central Coalfields Ltd.		2,849.76	2,982.07
3	Eastern Coalfields Ltd.		6,548.35	7,441.19
4	Mahanadi Coalfields Ltd.		3,967.78	3,555.98
5	Northern Coalfields Ltd.		10,758.98	9,118.06
6	South Eastern Coalfields Ltd.		5,371.79	4,775.45
7	Western Coalfields Ltd.		985.01	827.70
8	Coal India Ltd.		33.33	33.96
9	Singareni Collieries Company Ltd.		4,801.46	5,765.84
10	Bharat Heavy Electricals Ltd.	Purchase of equipment and erection services	1,040.03	1,004.40
		Purchase of spares	625.78	482.12
		Receipt of maintenance services	829.67	1,102.75

₹ Crore

Sl. No.	Name of the Company	Nature of transaction by the Company	For the year ended 31 March 2021	For the year ended 31 March 2020
11	GAIL (India) Ltd.	Purchase of natural gas	1,349.23	2,226.82
12	Indian Oil Corporation Ltd.	Purchase of fuel /oil products	689.77	1,058.86
13	Bharat Petroleum Corporation Ltd.	Purchase of fuel /oil products	203.65	260.67
14	Hindustan Petroleum Corporation Ltd.	Purchase of fuel /oil products	192.82	332.69
15	Steel Authority of India Ltd.	Purchase of steel and iron products	262.54	237.15
16	REC Ltd.	Consultancy services provided by the Company	-	40.29
17	RITES Ltd	Receipt of maintenance services	434.03	631.91
18	PGCIL	Purchase of equipments and providing services	228.63	23.88
19	Other entities	Purchase of equipment and erection services	17.31	32.86
		Purchase of spares	32.14	35.02
		Receipt of maintenance services	127.69	250.01
		Consultancy and other services provided by the Company	91.66	52.87

₹ Crore

Transactions with others listed at (a)(vi) above	For the year ended 31 March 2021	For the year ended 31 March 2020
- Contracts for works/services for services received by the Company	5.52	60.88

c) **Outstanding balances with related parties are as follows:**

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Amount recoverable towards loans from		
- Subsidiary companies	1,150.39	193.00
- Joint venture companies	19.78	19.09
- Key management personnel	0.15	0.03
- Others	0.60	0.60
Amount recoverable other than loans from		
- Subsidiary companies	518.78	579.59
- Joint venture companies	55.30	109.33
- Post employment benefit plans	205.23	37.42
- Others	0.57	0.42
Amount payable to		
- Joint venture companies	289.64	382.28
- Post employment benefit plans	0.01	230.54

d) **Individually significant transactions**

₹ Crore

Particulars	Nature of relationship	For the year ended 31 March 2021	For the year ended 31 March 2020
Contracts for works/services for services received by the Company			
Utility Powertech Ltd.	Joint Venture Company	**1,359.62**	1,099.16
NTPC BHEL Power Projects Private Ltd.	Joint Venture Company	**87.29**	99.28
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**140.21**	79.35
Contracts for works/services for services provided by the Company			
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary Company	**37.60**	20.82
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**6.51**	10.86
Nabinagar Power Generating Company Ltd.	Subsidiary Company	**8.77**	8.69
THDC India Ltd.	Subsidiary Company	**28.47**	-
Bhartiya Rail Bijlee Company Ltd.	Subsidiary Company	**6.55**	4.28
NTPC Renewable Energy Ltd.	Subsidiary Company	**5.55**	-
NTPC SAIL Power Company Ltd	Joint Venture Company	**7.54**	14.18
Meja Urja Nigam Private Limited	Joint Venture Company	**10.34**	12.05
Aravali Power Company Private Ltd.	Joint Venture Company	**4.38**	5.82
NTPC Tamilnadu Energy Company Ltd.	Joint Venture Company	**8.77**	5.54
Energy Efficiency Services Ltd.	Joint Venture Company	**5.43**	3.52
Sale of goods			
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**1,796.32**	1,873.19
Nabinagar Power Generating Company Ltd.	Subsidiary Company	**100.09**	200.91
Purchase of goods			
Energy Efficiency Services Ltd.	Joint Venture Company	**18.47**	38.01
Transformers and Electricals Kerala Ltd.	Joint Venture Company	**3.28**	-
Dividend received			
NTPC-SAIL Power Company Ltd.	Joint Venture Company	**95.00**	50.00
Aravali Power Company Private Ltd.	Joint Venture Company	**350.00**	146.83
NTPC-Tamil Nadu Energy Company Ltd.	Joint Venture Company	**51.41**	-
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**30.00**	-
North Eastern Electric Power Corporation Ltd.	Subsidiary Company	**25.00**	-
Bhartiya Rail Bijlee Company Ltd.	Subsidiary Company	**190.28**	-
THDC India Ltd.	Subsidiary Company	**527.25**	-
Energy Efficiency Services Ltd.	Joint Venture Company	-	4.47
Utility Powertech Ltd.	Joint Venture Company	**5.00**	4.00
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**0.25**	0.30
Equity contributions made			
Bhartiya Rail Bijlee Company Ltd.	Subsidiary Company	-	53.00
Kanti Bijlee Utpadan Nigam Ltd.	Subsidiary Company	**60.00**	100.00
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary Company	**389.50**	264.00
Nabinagar Power Generating Company Ltd.	Subsidiary Company	**270.02**	429.85

₹ Crore

Particulars	Nature of relationship	For the year ended 31 March 2021	For the year ended 31 March 2020
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**10.00**	-
NTPC Renewable Energy Ltd.	Subsidiary Company	**295.05**	-
NTPC EDMC Waster Solutions Pvt. Ltd.	Subsidiary Company	**0.15**	-
Meja Urja Nigam Private Ltd.	Joint Venture Company	**142.60**	262.31
Energy Efficiency Services Ltd.	Joint Venture Company	-	218.11
NTPC Mining Ltd	Subsidiary Company	-	0.05
Bangladesh-India Friendship Power Company Pvt. Ltd.	Joint Venture Company	**88.88**	166.89
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**8.29**	12.50
Hindustan Urvarak & Rasayan Ltd.	Joint Venture Company	**380.67**	310.76
Loans granted			
Ratnagiri Gas & Power Private Ltd.	Subsidiary Company	**885.00**	-
Kanti Bijlee Utpadan Nigam Ltd.	Subsidiary Company	**150.00**	83.00
NTPC Renewable Energy Ltd.	Subsidiary Company	**3.45**	-
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	-	60.00
National High Power Test Laboratory Private Ltd.	Joint Venture Company	-	12.40
Guarantees received			
Utility Powertech Ltd.	Joint Venture Company	**4.80**	17.80
NTPC GE Power Services Private Ltd.	Joint Venture Company	-	0.21
Financial Guarantees issued			
NTPC Electric Supply Company Ltd.	Subsidiary Company	**10.00**	-
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary Company	**237.60**	-

e) Terms and conditions of transactions with the related parties

i) Transactions with the related parties are made on normal commercial terms and conditions and at arm length price.

ii) The Company is assigning jobs on contract basis, for sundry works in plants/stations/offices to M/s Utility Powertech Ltd. (UPL), a 50:50 joint venture between the Company and Reliance Infrastructure Ltd. UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations. The Company has entered into Power Station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.

iii) The Company is seconding its personnel to subsidiary and joint venture companies as per the terms and conditions agreed between the companies, which are similar to those applicable for secondment of employees to other companies and institutions. The cost incurred by the Company towards superannuation and employee benefits are recovered from these companies.

iv) Loans granted to subsidiaries and joint venture companies are detailed below:

Sl. No.	Name of the subsidiary (S)/ joint venture (JV) company	Loan granted (Amount in ₹ crore)	Rate of interest (p.a.)	Repayment schedule	Purpose	Year of grant of loan
1	Kanti Bijlee Utpadan Nigam Ltd. (S)	193.00	10% (quarterly rest) upto 31.12.2020. W.e.f 01.01.2021, SBI 1-year MCLR + 100 bps (quarterly rest) to be reset on 1st April every year based on SBI 1-year MCLR prevailing on the date of reset	Repayable in six equal semi-annual installments from 30 September 2020.	To sustain ongoing operation activities and meet debt servicing requirements.	2017-18

Sl. No.	Name of the subsidiary (S)/ joint venture (JV) company	Loan granted (Amount in ₹ crore)	Rate of interest (p.a.)	Repayment schedule	Purpose	Year of grant of loan
		150.00	10% (quarterly rest) upto 31.12.2020. w.e.f 01.01.2021 SBI 1-year MCLR + 100 bps (quarterly rest) to be reset on 1st April every year based on SBI 1-year MCLR prevailing on the date of reset	Repayable in six equal quarterly installments from 31 December 2021.	**For loan repayment , interest payment and to discharge statutory obligations.**	2019-20
2	National High Power Test Laboratory Private Ltd. (JV)	18.40	10% (quarterly rest)	Principal repayable in twenty semi-annual installments from 30 September 2022 . Interest payable half yearly.	For repayment of loans / contractual obligations	2019-20
3	Ratnagiri Gas and Power Pvt Ltd. (S)	885.00	10% p.a. (quarterly rest) which will be reviewed and mutually decided at the beginning of each financial year i.e., 1st April of each year and shall be applicable for the entire financial year.	Loan shall be repaid in 53 quarterly installments as per the loan agreement starting from 31.03.2021 and Last Installment shall be paid on 31.03.2034.	For debt settlement with Lenders	2020-21
		570.18	Interest shall be payable w.e.f. 01.04.2034 or after full repayment of Inter-Corporate Loan of ₹. 885 crore whichever is earlier as per mutually agreed terms & Conditions.	Principal Repayment shall start from FY 2034-35 or after full repayment of Inter-Corporate Loan of ₹ 885 crore whichever is earlier as per mutually decided Schedule.	Novation of residual debt by existing lenders in favor of NTPC .	2020-21*
4	NTPC Renewables Energy Ltd (S)	15.00	SBI 1-year MCLR + 100 bps on the date of first disbursement to be reset on 1st April 2021 based on SBI 1-year MCLR prevailing on the date of reset.	Out of the loan granted, an amount of ₹ 3.45 crore was drawn which has been fully repaid / adjusted during the year.	To meet immediate requirement for Filing application to AP upto 4 GW, filing an application to Registrars of Companies (RoC) for enhancing Authorized capital, meeting other immediate administrative expenditure, etc	2020-21
5	NTPC Electric Supply Company Ltd (S)	1.50	SBI 1-year MCLR + 100 bps on the date of first disbursement to be reset on 1st April 2021 based on SBI 1-year MCLR prevailing on the date of reset	The Loan to be repaid in one installment on or before 6 months from the date of first disbursement. No amount drawn during the year.	To meet the Revenue Expenditure needs.	2020-21

*Note: The loan of ₹ 570.18 crore to RGPPL has not been recognized in the books due to uncertainty involved therein.

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v) Consultancy services provided by the Company to subsidiary and joint venture companies are generally on nomination basis at the terms, conditions and principles applicable for consultancy services provided to other parties.

vi) Outstanding balances of subsidiary and joint venture companies at the year-end are unsecured , except in respect of loan to RGPPL which is secured (Refer Note 8 c)) and settlement occurs through banking transaction. These balances other than loans are interest free. The Company has not recorded any impairment of receivables relating to amounts owed by related parties. This assessment is undertaken in each financial year through examining the financial position of the related party and the market in which the related party operates.

vii) Refer Note 56 (b), (c) and (d) in respect of impairment loss on investment in Ratnagiri Gas & Power Private Ltd.and certain other joint venture companies.

viii) Refer Note 69 (C) towards restrictions on disposal of investment and commitment towards further investments in the subsidiary and joint venture companies.

54. Disclosure as per Ind AS 27 'Separate financial statements'

a) Investment in subsidiary companies:*

Company name	Country of incorporation	Proportion of ownership interest	
		As at 31 March 2021	As at 31 March 2020
NTPC Electric Supply Company Ltd.	India	100.00	100.00
NTPC Vidyut Vyapar Nigam Ltd.	India	100.00	100.00
Kanti Bijlee Utpadan Nigam Ltd.	India	100.00	100.00
Bhartiya Rail Bijlee Company Ltd.	India	74.00	74.00
Patratu Vidyut Utpadan Nigam Ltd.	India	74.00	74.00
Nabinagar Power Generating Company Ltd.	India	100.00	100.00
NTPC Mining Ltd.	India	100.00	100.00
THDC India Ltd.	India	74.496	74.496
North Eastern Electric Power Corporation Ltd.	India	100.00	100.00
NTPC EDMC Waste Solutions Private Ltd.(w.e.f. 1 June 2020)	India	74.00	-
NTPC Renewable Energy Ltd. (w.e.f. 7 October 2020)	India	100.00	-
Ratnagiri Gas & Power Private Ltd.#	India	86.49	-

b) Investment in joint venture companies:*

Company name	Country of incorporation	Proportion of ownership interest	
		As at 31 March 2021	As at 31 March 2020
Utility Powertech Ltd.	India	50.00	50.00
NTPC-GE Power Services Private Ltd.	India	50.00	50.00
NTPC-SAIL Power Company Ltd.	India	50.00	50.00
NTPC-Tamil Nadu Energy Company Ltd.	India	50.00	50.00
Ratnagiri Gas & Power Private Ltd. (Upto 30 December 2020)#	India	-	25.51
Konkan LNG Ltd. (upto 23 February 2021)#	India	-	14.82

Company name	Country of incorporation	Proportion of ownership interest	
		As at 31 March 2021	As at 31 March 2020
Aravali Power Company Private Ltd.	India	**50.00**	50.00
NTPC BHEL Power Projects Private Ltd.	India	**50.00**	50.00
Meja Urja Nigam Private Ltd.	India	**50.00**	50.00
Transformers and Electricals Kerala Ltd.	India	**44.60**	44.60
National High Power Test Laboratory Private Ltd.	India	**20.00**	20.00
Energy Efficiency Services Ltd.	India	**47.15**	47.15
CIL NTPC Urja Private Ltd.	India	**50.00**	50.00
Anushakti Vidhyut Nigam Ltd.	India	**49.00**	49.00
Hindustan Urvarak and Rasayan Ltd.	India	**29.67**	29.67
Trincomalee Power Company Ltd.	Srilanka	**50.00**	50.00
Bangladesh-India Friendship Power Company Private Ltd.	Bangladesh	**50.00**	50.00

* Equity investments in subsidiary and joint venture companies are measured at cost as per the provisions of Ind AS 27 on 'Separate Financial Statements'.

Refer Note 6 d).

55. Disclosure as per Ind AS 33 'Earnings per share'

(i) Basic and diluted earnings per share (in ₹)

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
From operations including net movement in regulatory deferral account balances (a) **[A/D]**	**13.99**	10.22
From regulatory deferral account balances (b) **[B/D]**	**1.81**	4.88
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C/D]**	**12.18**	5.34
Nominal value per share	**10.00**	10.00

(ii) Profit attributable to equity shareholders (used as numerator) (₹ Crore)

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
From operations including net movement in regulatory deferral account balances (a) **[A]**	**13,769.52**	10,112.81
From regulatory deferral account balances (b) **[B]**	**1,779.39**	4,828.84
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C]**	**11,990.13**	5,283.97

(iii) Weighted average number of equity shares (used as denominator) (Nos.)

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance of issued equity shares	**9,89,45,57,280**	9,89,45,57,280
Less: Buyback of shares during the year	**19,78,91,146**	-
Closing balance of issued equity shares	**9,69,66,66,134**	9,89,45,57,280
Weighted average number of equity shares for Basic and Diluted EPS [D]*	**9,84,46,77,868**	9,89,45,57,280

*Earning per share for the year ended 31 March 2021 has been computed on the basis of weighted average number of shares outstanding during the year considering buy back of 19,78,91,146 fully paid-up equity shares completed on 30 December 2020. (Also refer Note 20 (e)(i))

56. Disclosure as per Ind AS 36 'Impairment of Assets'

As required by Ind AS 36, an assessment of impairment of assets was carried out and based on such assessment, the Company has accounted impairment losses as under:

a) For the Company, the recoverable amount of the property, plant and equipment & intangible assets of the Cash Generating Units (CGU) is value in use and amounts to ₹ **2,54,366.54 crore** (31 March 2020: ₹ 2,39,455.07 crore). This includes the carrying value of one of the thermal power stations of the Company (460 MW) whose operations have been discontinued w.e.f. the end of 31 March 2021, amounting to ₹ **213.64 crore.** The net realisable value of the assets of the station has been assessed which is more than its carrying value.

The discount rate used for the computation of value in use for the generating plant (thermal, gas and hydro) and coal mining is **7.74 %** (31 March 2020: 8.00%) and for solar plant is **7.57 %** (31 March 2020: 7.78%).

b) The Company has investments in M/s Ratnagiri Gas & Power Pvt. Ltd. (RGPPL), an erstwhile joint venture of the Company. RGPPL had incurred losses during last few years which has resulted in substantial erosion of net worth of RGPPL. Also, value of RGPPL's assets had declined significantly more than would be expected as a result of the passage of time or normal use. Further, Power Block (CGU) of RGPPL is not operating at its installed capacity from last many years. The recoverable amount of this investment was assessed at ₹ 18.06 crore and accordingly the Company had provision for impairment of ₹ 816.49 crore in respect of such investment as at 31 March 2020. During the year, the assessment of impairment of its investment in RGPPL has been carried out by an independent expert, impact of which is explained below:

Recoverable amount is based on the value in use as its fair value less cost of disposals cannot be estimated.

Recoverable amount of investment in RGPPL has been assessed at ₹ Nil and is based on the present value of future cash flows expected to be derived from gas based power plant of RGPPL till 31 March 2039. The period is based on the estimated useful life of the power plant. Decrease in recoverable amount of investment in RGPPL is due to decrease in the value in use as compared to the previous year. This has led to addition in provision for impairment by ₹ **18.06 crore** in the current year (31 March 2020: impairment provision of ₹ 41.47 crore).

Following are the key assumptions used to determine the recoverable amount of investment:

- Capacity : 1,967 MW (31 March 2020: 1,967 MW)
- Auxiliary consumption : 2.00% (31 March 2020: 2.00 %)
- Plant Load Factor (PLF) : 25.40% (31 March 2020: 25.40%)
- Tariff : INR 5.5/kwh (31 March 2020: INR 5.5/kwh) (gross of transmission charges and losses)

No growth rates have been assumed and the past experience have been considered for future cash flows which are expected to be derived.

The post-tax discount rate used for the future cash flows is **12.50%** (31 March 2020: 11.50%).

RGPPL has become a subsidiary during the year. Refer Note 6 (d) in this regard.

c) In respect of investment in NTPC BHEL Power Project Pvt. Ltd., provision for impairment on investments has been recognised at ₹ **50.00 crore** (31 March 2020: ₹ 50.00 crore). Also refer Note 6 b).

d) In respect of investment in Trincomalee Power Company Limited , provision for impairment on investments has been recognised at ₹ **14.14 crore** (31 March 2020: Nil).

e) In respect of investment in Konkan LNG Limited (KLL), the impairment provision accounted upto 31 March 2020 amounting to ₹ 103.47 crore has been written back consequent to disposal of investment in KLL during the year. Also refer Note 6 d).

57. Disclosure as per Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets'

Movements in provisions:

₹ Crore

Particulars	Provision for obligations incidental to land acquisition		Provision for tariff adjustment		Others		Total	
	For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Carrying amount at the beginning of the year	**3,506.01**	3,499.74	**190.68**	98.77	**1,610.27**	1,996.93	**5,306.96**	5,595.44
Additions during the year	**760.77**	494.97	**169.60**	91.91	**519.22**	205.63	**1,449.59**	792.51
Amounts used during the year	**(510.99)**	(488.47)	-	-	**(2.20)**	(210.28)	**(513.19)**	(698.75)
Reversal/adjustments during the year	**(379.99)**	(0.23)	-	-	**(10.62)**	(382.01)	**(390.61)**	(382.24)
Carrying amount at the end of the year	**3,375.80**	3,506.01	**360.28**	190.68	**2,116.67**	1,610.27	**5,852.75**	5,306.96

i) Provision for obligations incidental to land acquisition

Provision for obligations incidental to land acquisition includes expenditure on rehabilitation & resettlement (R&R) including the amounts payable to the project affected persons (PAPs) towards land, expenditure for providing community facilities and expenditure in connection with environmental aspects of the project. The Company has estimated the provision based on the Rehabilitation Action Plan (RAP) approved by the board/competent authority or agreements/directions/ demand letters of the local/government authorities. The outflow of said provision is expected to be incurred immediately on fulfillment of conditions by the land oustees/receipts of directions of the local/government authorities.

ii) Provision for tariff adjustment

Billing to beneficiaries is being done based on tariff orders issued under Regulation 2014 except few stations where billing is done on provisional basis due to non-receipt of tariff orders. In such cases, accounting is done based on trued up cash expenditure as per Regulation 2019. Provision for tariff adjustment of ₹ **169.60 crore** (31 March 2020: ₹ 91.91 crore) is mainly towards the estimated interest payable to beneficiaries at the time of issue of tariff orders.

iii) Provision - Others

(a) Provision for others comprise ₹ **103.88 crore** (31 March 2020: ₹ 101.05 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2 (Refer Note 59), ₹ **2,010.17 crore** (31 March 2020: ₹ 1,506.83 crore) towards provision for cases under litigation and ₹ **2.62 crore** (31 March 2020: ₹ 2.39 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation.

(b) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years, after which it was to be transferred to the Company at ₹ 1/-. After commencement of the operations, the operator had raised several disputes, invoked arbitration and raised substantial claims on the Company. Based on the interim arbitral award and subsequent directions of the Hon'ble Supreme Court of India, an amount of ₹ 356.31 crore was paid upto 31 March 2019.

Further, the Arbitral Tribunal had awarded a claim of ₹ 1,891.09 crore plus applicable interest in favour of the operator, during the financial year 2018-19. The Company aggrieved by the arbitral award and considering legal opinion obtained, had filed an appeal before the Hon'ble High Court of Delhi (Hon'ble High Court) against the said arbitral award in its entirety.

In the financial year 2019-20, against the appeal of the Company, Hon'ble High Court directed the Company to deposit ₹ 500.00 crore with the Registrar General of the Court. The said amount was deposited with the Hon'ble High Court on 5 November 2019. Hon'ble High Court vide its order dated 8 January 2020 directed the parties to commence formal handing over of the infrastructure in the presence of appointed Local Commissioner and also directed release of ₹ 500.00 crore to the operator by the Registrar General subject to verification of bank guarantee and outcome of the application of the Company for formal handing over of the infrastructure. On 17 January 2020 unconditional BG was submitted by the operator to Registrar General and ₹500.00 crore was released to the operator by the Hon'ble High Court. As per order of Hon'ble High Court, formal handing over of the infrastructure started on 20 January 2020 at the project site. However, due to certain local administrative issues initially and further due to Covid-19 pandemic, Local Commissioner's visit had to be deferred.

In view of delay in the handover exercise, NTPC had filed an Application in Hon'ble High Court praying to pass further directions to operator in this regard. Hon'ble High Court on 11 November 2020 disposed off the application requesting the Ld. Local Commissioner appointed by the Court, to visit the project site expeditiously preferably within 2 weeks and carry out the commission. The handing over exercise has been delayed due to operator's issues with local labours at the site and Covid situation. Date of hearing at Hon'ble High Court of Delhi has been adjourned several times in light of restricted functioning of the Hon'ble High Court and now stands adjourned till 15 July 2021 in view of the current Covid-19 situation.

Pending final disposal of the appeal by the Hon'ble High Court, considering the provisions of Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' and Significant Accounting Policies of the Company, provision has been updated by interest to ₹ **38.09 crore** (31 March 2020:₹ 37.92 crore) and the balance amount of ₹ **2,153.57 crore** (31 March 2020: ₹ 2,014.84 crore) has been considered as contingent liability.

Also Refer Note 66 and 69.

iv) In respect of provision for cases under litigation, outflow of econmic benefits is dependent upon the final outcome of such cases.

v) In all these cases, outflow of economic benefits is expected within next one year.

vi) Sensitivity of estimates on provisions:

The assumptions made for provisions relating to current period are consistent with those in the earlier years. The assumptions and estimates used for recognition of such provisions are qualitative in nature and their likelihood could alter in next financial year. It is impracticable for the Company to compute the possible effect of changes in assumptions and estimates used in recognizing these provisions.

vii) Contingent liabilities and contingent assets

Disclosure with respect to claims against the Company not acknowledged as debts and contingent assets are made in Note 69.

58. Disclosure as per Ind AS 38 'Intangible Assets'

Research expenditure recognised as expense in the Statement of Profit and Loss during the year is ₹ **161.34 crore** (31 March 2020: ₹ 134.36 crore).

59. Disclosure as per Ind AS 106, 'Exploration for and Evaluation of Mineral Resources'

a) The Company along-with some public sector undertakings had entered into Production Sharing Contracts (PSCs) with GOI for three oil exploration blocks namely KG-OSN-2009/1, KG-OSN-2009/4 and AN-DWN-2009/13 under VIII round of New Exploration Licensing Policy (NELP VIII) with 10% participating interest (PI) in each of the blocks.

In the case of Block AN-DWN-2009/13 and KG-OSN-2009/1, Oil and Natural Gas Corporation Ltd. (ONGC) was the operator and the Company along-with the consortium partners have relinquished both the blocks to Directorate General of Hydrocarbons (DGH).

Based on the un-audited statement of the accounts for the above blocks forwarded by ONGC, the operator, the Company's share in the assets and liabilities and expenses is as under:

₹ **Crore**

Particulars	**As at 31 March 2021 (Unaudited)**	As at 31 March 2020 (Unaudited)
Assets	**0.01**	0.01
Liabilities	**0.49**	0.49
Capital commitments	-	-

For the year ended 31 March 2021 and 31 March 2020, there are no income / expense and operating/investing cash flow from exploration activities.

For exploration activities in block KG-OSN-2009/4 DGH has agreed for drilling of one well and have instructed to carry out airborne Full Tensor Gravity Gradiometer (FTG) survey in conditionally & partial cleared area. ONGC has completed drilling of one well. Airborne Full Tensor Gravity Gradiometer (FTG) survey work is also completed. The Company along-with the consortium partners has decided to relinquish the block and Oil and Natural Gas Corporation Ltd. (ONGC), the operator, has submitted an application to Directorate General of Hydrocarbons (DGH) in this regard, in the earlier years.

b) Exploration activities in the block AA-ONN-2003/2 were abandoned in January 2011 due to unforeseen geological conditions and withdrawal of the operator. Attempts to reconstitute the consortium to accomplish the residual exploratory activities did not yield result. In the meanwhile, Ministry of Petroleum & Natural Gas, GoI demanded in January 2011 the cost of unfinished minimum work programme from the consortium with NTPC's share being USD 7.516 million. During the year, provision in this respect has been updated to ₹ 103.88 crore from ₹ 101.04 crore along-with interest. The Company has sought waiver of the claim citing force majeure conditions at site leading to discontinuation of exploratory activities.

The Company has accounted for expenditure of ₹ **2.92 crore** (31 March 2020: ₹ 16.03 crore) towards updation of liabilities relating to MWP and other liabilities of M/s Geopetrol International, the operator to complete the winding up activities of the Block. The Company's share in the assets and liabilities are as under:

₹ **Crore**

Particulars	**As at 31 March 2021 (Unaudited)**	As at 31 March 2020 (Unaudited)
Assets	**9.19**	9.19
Liabilities (including unfinished MWP)	**106.24**	103.32

Provision of ₹ **8.26 crore** as at 31 March 2021 (31 March 2020: ₹ 8.26 crore) has been made towards the assets under exploration and estimated obsolescence in the inventory.

For the year ended 31 March 2021 and 31 March 2020, there are no income and operating/investing cash flow from exploration activities. The value of assets reported above is based on statement received from the operator in the earlier years.

c) The Company had entered into production sharing contracts (PSC) with GOI for exploration block namely CB-ONN-2009/5 VIII round of New Exploration Licensing Policy (NELP VIII) with 100% participating interest (PI) in the block.

MWP for the block has been completed. No oil or gas of commercial value was observed in any of the wells. Accordingly, the block has been relinquished to DGH, GOI.

Company's share in assets and liabilities and expenses is as under:

₹ **Crore**

Particulars	**As at 31 March 2021**	As at 31 March 2020
Assets	**6.11**	6.11
Liabilities	**0.25**	0.25

₹ **Crore**

Particulars	**For the year ended 31 March 2021**	For the year ended 31 March 2020
Expenses	**-**	0.01

Provision of ₹ **6.07 crore** as at 31 March 2021 (31 March 2020: ₹ 6.07 crore) has been made towards estimated obsolescence in the inventory.

For the year ended 31 March 2021 and 31 March 2020, there are no income, operating and investing cash flows from exploration activities.

d i) The Company has started coal production from three mines i.e Pakri-Barwadih, Dulanga & Talaipalli. Other mines i.e. Chatti-Bariatu, Kerandari & Badam are in various stages of development. Pakri Barwadih was declared commercial w.e.f. 1 April 2019 and about 7 MMT coal was extracted during the current year. Dulanga was declared commercial w.e.f. 1 October 2020 and about 3 MMT coal was extracted during the current year. At Talaipalli, coal mine extraction has already started and at Chatti-Bariatu and Kerandari coal mining projects land acquisition and other mine development activities are in progress and these are also disclosed in Note 3 - Capital work in progress under 'Development of coal mines'.

ii) a) Exploration and evaluation activities are taking place at under ground mine area/dip side area (North west quarry) of PB block. An amount of ₹ **59.39 crore** (31 March 2020: ₹ 55.89 crore) has since been incurred at this area towards various exploratory activities.

b) Banai and Bhalumuda coal blocks were unexplored at the time of allotment by GOI. The Company carried out the detailed exploration and preparation of Geological Report (GR) and Mining Plan through M/s. CMPDIL. Due to the geo-mining constraints, likely less percentage of coal extraction in these two adjacent coal blocks and non-availability of any non-coal bearing land in the vicinity for OB dumping, the Company approached Ministry of Coal on 26 December 2020 for surrendering of these blocks, with a request for consideration of reimbursement of the expenses incurred by the Company. Further, as per the Coal Block Development and Production Agreement (CBDPA) signed by the Company with MOC in respect of these blocks, the performance security (BG) submitted by the Company shall be released in the event of termination of agreement by the Company upon submitting the mine plan and the Company has requested for release of the same.

In Banai coal block, expenses of ₹ 64.74 crore has been incurred towards detailed exploration & GR, DGPS survey, route survey for 132 KV power line, initial payment towards preparation of mining plan, feasibility study for railway siding by the Company etc. In Bhalumuda coal block, expenses of ₹ 62.16 crore has been incurred mainly towards exploration & GR.

The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR would be reimbursed from the new allocatee through MOC as per past experience of the Company. Keeping in view the above, an amount of ₹ 121.57 crore has been accounted as recoverable and included under 'Other current assets- financial assets'. Balance amount of ₹ 5.33 crore has been provided for in the Statement of profit and loss with a corresponding provision for unserviceable intangible assets under development (Note-5).

c) Mandakini-B coal block was also unexplored at the time of allotment by GOI. The Company carried out detailed exploration and preparation of GR and Mining Plan through M/s CMPDIL. MOC approved the Mining Plan, but the mine development activities could not be proceeded due to the resistance of the villagers which was beyond the control of the Company. The villagers did not allow to start site specific studies like Socio Economic survey, EIA/ EMP studies and other initial block development activities since last two and half years due to their unreasonable demands for land compensation, permanent employment, etc. Considering the delay in block development activities beyond control, the Company has approached Ministry of Coal on 26 December 2020 for surrendering these blocks, with a request for consideration of reimbursement of expenses incurred by the Company.

An amount of ₹ 93.40 crore has been incurred in this coal block towards exploration & GR, preparation of mining plan, feasibility report, area drainage study, etc. The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR would be reimbursed from the new allocatee through MOC as per past experience of the Company.Keeping in view the above, an amount of ₹ 53.93 crore has been accounted as recoverable and included under 'Other current assets- financial assets'. Balance amount of ₹ 39.47 crore has been provided for in the Statement of profit and loss with a corresponding provision for unserviceable intangible assets under development (Note-5).

MOC issued a notice dated 9 February 2021 under clause 24.3.2 of the Allotment Agreement that, on completion of notice period of 15 business days, the Allotment Agreement and the Order dated 18th. Aug.2016 shall stand terminated and the performance security of ₹ 168.00 crore shall be appropriated. The Company invoked the dispute resolution clause contained in clause 25 (Governing Law and Dispute resolution) of the Allotment Agreement and requested to hold appropriate discussions as provided in the dispute resolution clause. However, the BG (Performance Security) of ₹ 168.00 crore was encashed by MOC on 22 March 2021 citing delay in achieving of the milestones of efficiency parameters which were beyond the control of the Company. The Company has approached MOP on 30 March 2021 to take up the matter in Alternate Mechanism for Resolution of CPSE Disputes (AMRCD). Pending resolution of the dispute through AMRCD, the amount of BG encashed by MOC has been disclosed as recoverable from MOC under 'Claims recoverable' in Note-17-'Current assets-Other financial assets'. However, a provision of ₹ 168.00 crore has been made in the Statement of profit and loss.

d) The Coal Block Development and Production Agreement (CBDPA) signed by the Company with MOC is silent about the recoverability of expenditure incurred in case of termination of the CBDPA. Moreover, the fresh auction / allocation of mines by MOC may also take substantial time and is dependent upon the coal demand-supply scenario of the country in the days to come. Considering the uncertainty involved on the recoverability of the amounts in respect of Banai, Bhalamuda and Mandakini-B coal blocks as stated at b) and c) above, a provision towards the amount disclosed under 'Çlaims recoverable' of ₹ 175.50 crore has also been made in the Statement of profit and loss towards the expenses recoverable in respect of these blocks.

iii) In the year 2018-19, the Company took over Barauni Thermal Power Station from Bihar State Power Generation Company Limited (BSPGCL). Ministry of Coal, Government of India has transferred Badam coal mine, the linked coal mine of Barauni TPS. Environment Clearance for the project is available. Stage-I Forest Clearance was transferred to the Company from BSPGCL on 14 January 2020. Application for Stage-II forest clearance is pending with Forest Department, Govt. of Jharkhand. Mining lease is pending with Govt. of Jharkhand and tendering process for appointment of MDO is in progress.

Assets and liabilities of coal exploration and evaluation activities are as under: **₹ Crore**

Particulars	**For the year ended 31 March 2021**	For the year ended 31 March 2020
Assets	**108.38**	292.46
Liabilities	**4.07**	7.15

For the year ended 31 March 2021 and 31 March 2020, there are no income, expenses and operating cash flows from coal exploration activities. Cash flows from investing activities for the year ended 31 March 2021 is ₹ **23.20 crore** (31 March 2020: ₹ 56.39 crore)

60. Disclosure as per Ind AS 108 'Operating Segments'

A. General Information

The Company has two reportable segments, as described below, which are the Company's strategic business units. The strategic business units offer different products and services, and are managed separately because they require different technology and marketing strategies. For each of the strategic business units, the Chief Operating Decision Maker (CODM) reviews internal management reports on at least a quarterly basis.

The following summary describes the operations in each of the Company's reportable segments:

Generation of energy : Generation and sale of bulk power to State Power Utilities.

Others : It includes providing consultancy, project management and supervision, energy trading, oil and gas exploration and coal mining.

Information regarding the results of each reportable segment is included below. Performance is measured based on segment profit before income tax, as included in the internal management reports that are reviewed by the Company's Board. Segment profit is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

Transfer prices between operating segments are on an arm's length basis in a manner similar to transactions with third parties.

The corporate office expenses have been included in segment results during the year as they are allocated to segments on a reasonable basis which were hither to disclosed as unallocable. Further, assets under construction along with capital advances and capital liabilities have been included in the respective segments to determine segment assets and liabilities which were hither to included in unallocated assets and liabilities. Consequently, previous year figures have been regrouped / rearranged appropriately.

B. Information about reportable segments and reconciliations to amounts reflected in the financial statements:

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Segment revenue						
Sale of energy/consultancy, project management and supervision fee*	**95,579.66**	94,093.66	**4,884.47**	4,874.48	**1,00,464.13**	98,968.14
Other income	**2,881.20**	2,490.26	**87.98**	116.63	**2,969.18**	2,606.89
	98,460.86	96,583.92	**4,972.45**	4,991.11	**1,03,433.31**	1,01,575.03
Intersegment elimination					**(1,424.50)**	(1,524.81)
Unallocated corporate interest and other income					**1,543.90**	428.19
Total	**98,460.86**	96,583.92	**4,972.45**	4,991.11	**1,03,552.71**	1,00,478.41
Segment result (including net movements in regulatory deferral account balances)**	**23,793.73**	26,310.57	**(34.34)**	520.03	**23,759.39**	26,830.60
Unallocated corporate interest and other income					**1,543.90**	428.19
Unallocated corporate expenses, interest and finance costs					**7,868.66**	6,941.72
Exceptional items					**1,363.00**	-
Profit before tax					**16,071.63**	20,317.07
Income tax expense (including tax on net movements in regulatory deferral account balances)					**2,302.11**	10,204.26
Profit after tax					**13,769.52**	10,112.81

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020
Depreciation and amortisation expense	**10,251.07**	8,444.24	**22.48**	34.82	**10,273.55**	8,479.06
Non-cash expenses other than depreciation and amortisation	**453.19**	157.25	**391.13**	26.28	**844.32**	183.53
Capital expenditure	**21,315.90**	20,062.57	**205.33**	1,538.52	**21,521.23**	21,601.09

₹ Crore

Particulars	Generation of energy		Others		Total	
	As at		As at		As at	
	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020
Segment assets	**2,96,267.42**	2,85,899.88	**10,653.55**	10,838.29	**3,06,920.97**	2,96,738.17
Unallocated corporate and other assets					**36,298.42**	30,929.28
Total assets	**2,96,267.42**	2,85,899.88	**10,653.55**	10,838.29	**3,43,219.39**	3,27,667.45
Segment liabilities	**33,279.28**	31,961.88	**4,370.24**	4,298.27	**37,649.52**	36,260.15
Unallocated corporate and other liabilities					**1,86,584.38**	1,77,837.86
Total liabilities	**33,279.28**	31,961.88	**4,370.24**	4,298.27	**2,24,233.90**	2,14,098.01

* Includes ₹ **1,154.64 crore** (31 March 2020: ₹ 31.59 crore) for sales related to earlier years.

** Generation segment result would have been ₹ **22,639.09 crore** (31 March 2020: ₹ 26,278.98 crore) without including the sales related to earlier years amounting to ₹ **1,154.64 crore** (31 March 2020: ₹ 31.59 crore).

Reconciliation of Assets and Liabilities

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Segment assets (A)	**3,06,920.97**	2,96,738.17
Unallocated corporate and other assets:		
Non current investments	**28,125.65**	26,400.89
Current investments	**499.99**	-
Cash and cash equivalents and other bank balances	**1,076.77**	808.63
Loans	**1,368.88**	405.55
Other current assets	**117.36**	155.85
Advance tax (net of provision)	**3,936.04**	1,601.24
Other unallocable assets	**1,173.73**	1,557.12
Total unallocated corporate and other assets (B)	**36,298.42**	30,929.28
Total Assets (A+B)	**3,43,219.39**	3,27,667.45
Segment liabilities(A)	**37,649.52**	36,260.15
Unallocated corporate and other liabilities:		
Non current borrowings	**1,63,606.43**	1,54,662.31
Deferred tax liability	**9,160.99**	8,093.98
Borrowings current	**12,859.74**	14,049.36
Other unallocable liabilities	**957.22**	1,032.21
Total unallocated corporate and other liabilities (B)	**1,86,584.38**	1,77,837.86
Total Liabilities (A+B)	**2,24,233.90**	2,14,098.01

Reconciliation of profit after tax

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Segment result (including net movements in regulatory deferral account balances) (A)	**23,759.39**	26,830.60
Unallocated corporate interest and other income (B)		
Dividend from non-current investments	**1,283.19**	210.40
Interest income	**137.97**	129.92
Miscellaneous income	**122.74**	87.87
Sub-total (B)	**1,543.90**	428.19
Unallocated corporate expenses, interest and finance costs(C)		
Finance costs	**7,459.03**	6,781.97
Other expenses	**409.63**	159.75
Sub total (C)	**7,868.66**	6,941.72
Profit before tax (including net movements in regulatory deferral account balances) (A+B-C)	**17,434.63**	20,317.07
Exceptional items	**1,363.00**	-
Income tax expense (including tax on net movements in regulatory deferral account balances)	**2,302.11**	10,204.26
Profit after tax	**13,769.52**	10,112.81

The operations of the Company are mainly carried out within the country and therefore there is no reportable geographical segment.

C. Information about major customers

Revenue from customers under 'Generation of energy' segment which is more than 10% of the Company's total revenues, are as under:

Name of the customer	For the year ended			
	31 March 2021		31 March 2020	
	Amount (₹ Crore)	%age	Amount (₹ Crore)	%age
Maharashtra State Electricity Distribution Company Ltd.	**11,018.92**	**11.11**	10,379.87	10.62

61. Financial Risk Management

The Company's principal financial liabilities comprise loans and borrowings in foreign as well as domestic currency, trade payables and other payables. The main purpose of these financial liabilities is to finance the Company's operations. The Company's principal financial assets include loans, trade and other receivables, and cash and short-term deposits that derive directly from its operations. The Company also holds equity investments and enter into derivative contracts such as forward contracts, options and swaps. Derivatives are used exclusively for hedging purposes and not as trading or speculative instruments.

The Company is exposed to the following risks from its use of financial instruments:

- Credit risk
- Liquidity risk
- Market risk

This note presents information about the Company's exposure to each of the above risks, the Company's objectives, policies and processes for measuring and managing risk.

Risk	Exposure arising from	Measurement	Management
Credit Risk	Trade receivables, unbilled revenue, derivative financial instruments, financial assets measured at amortised cost and cash and cash equivalents.	Ageing analysis Credit ratings	Credit limits, letters of credit and diversification of bank deposits.
Liquidity risk	Borrowings and other liabilities	Rolling cash flows forecast	Availability of committed credit lines and borrowing facilities
Market risk – foreign currency risk	- Future commercial transactions - Recognised financial assets and liabilities not denominated in Indian rupee (₹)	Cash flow forecasting	Forward foreign exchange contracts Foreign currency options Currency and interest rate swaps and principal only swaps
Market risk – interest rate risk	Non-current borrowings at variable rates	Sensitivity analysis	Different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.)

Risk management framework

The Company's activities make it susceptible to various risks. The Company has taken adequate measures to address such concerns by developing adequate systems and practices.

In order to institutionalize the risk management in the Company, an elaborate Enterprise Risk Management (ERM) framework has been developed. The Board of Directors has overall responsibility for the establishment and oversight of the Company's risk management framework. As a part of the implementation of ERM framework, a 'Risk Management Committee (RMC)' with functional directors as its members has been entrusted with the responsibility to identify and review the risks, formulate action plans and strategies to mitigate risks on short-term as well as long-term basis.

The RMC meets every quarter to deliberate on strategies. Risks are regularly monitored through reporting of key performance indicators. Outcomes of RMC are submitted for information of the Board of Directors.

Credit risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations resulting in a financial loss to the Company. Credit risk arises principally from trade receivables, unbilled revenue, loans, cash and cash equivalents and deposits with banks and financial institutions.

Trade receivables & unbilled revenue

The Company primarily sells electricity to bulk customers comprising mainly state utilities owned by State Governments. The Company has a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). The TPAs were signed among the Govt. of India, RBI and the individual State Governments subsequent to the issuance of the One Time Settlement Scheme of SEBs dues during 2001-02 by the GOI, which were valid till October 2016. Govt of India subsequently approved the extension of these TPAs for another period of 10 years. Most of the States have signed these extended TPAs and signing is in progress for the balance states.

CERC Tariff Regulations allow payment against monthly bill towards energy charges within a period of forty five days from the date of bill and levy of surcharge @ 18% p.a. on delayed payment beyond forty five days. GOI has notified Electricity (Late Payment Surcharge) Rules, 2021 on 22 February 2021.These rules envisage that base rate of LPSC to be considered as SBI one year MCLR, as on 1 April of the financial year, plus five percent. The rate of LPSC shall be increased by 0.5 percent for every month of delay, provided that the LPSC shall not be more than 3 percent higher than the base rate at any time.

A default occurs when in the view of management there is no significant possibility of recovery of receivables after considering all available options for recovery.

As per the provisions of the TPA, the customers are required to establish LC covering 105% of the average monthly billing of the Company for last 12 months. The TPA also provided that if there is any default in payment of current dues by any State Utility, the outstanding dues can be deducted from the State's RBI account and paid to the concerned CPSU. There is also provision of regulation of power by the Company in case of non payment of dues and non-establishment of LC.

In addition to above, MoP vide its communications dated 28 June 2019 and subsequent clarifications, further emphasised on ensuring availability of suitable payment security mechanism to be maintained by DISCOMs. Further, to liquidate the outstanding dues of the discoms towards the generating companies, GOI has announced a Scheme for offering ₹ 90,000 crore in soft loans under the Aatmanirbhar Bharat package. The Discoms are expected to take the benefit of the this Scheme and pay their outstanding dues.

These payment security mechanisms have served the Company well over the years. The Company has not experienced any significant impairment losses in respect of trade receivables in the past years. Since the Company has its power stations as well as customers spread over various states of India, geographically there is no concentration of credit risk.

Unbilled revenue primarily relates to the Company's right to consideration for sale effected but not billed at the reporting date and have substantially the same risk characteristics as the trade receivables for the same type of contracts.

Investments

The Company limits its exposure to credit risk by investing in only Government of India Securities, State Government Securities and other counterparties have a high credit rating. The management actively monitors the interest rate and maturity period of these investments. The Company does not expect the counterparty to fail to meet its obligations, and has not experienced any significant impairment losses in respect of any of the investments.

Loans

The Company has given loans to employees, subsidiary companies, joint venture companies and other parties. Loans to the employee are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company. The loan provided to group companies are collectible in full and risk of default is negligible. Loan to APIIC is against a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

Cash and cash equivalents

The Company held cash and cash equivalents of ₹ **90.05 crore** (31 March 2020: ₹ 20.37 crore). The cash and cash equivalents are held with banks with high rating.

Balances with banks and financial institutions, other than cash and cash equivalents

The Company held balances with banks and financial institutions, including earmarked balances, of ₹ **2,248.41 crore** (31 March 2020: ₹ 2,188.74 crore). In order to manage the risk, Company places deposits with only high rated banks/institutions.

(i) Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

₹ Crore

Particulars	**As at 31 March 2021**	As at 31 March 2020
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)		
Non-current investments	**28,125.65**	26,400.89
Non-current loans	**1,498.12**	600.26
Other non-current financial assets*	**1,092.84**	1,206.32
Current investments	**499.99**	-
Cash and cash equivalents	**90.05**	20.37
Bank balances other than cash and cash equivalents	**2,248.41**	2,188.74
Current loans	**416.82**	308.56
Other current financial assets**	**617.00**	554.01
Total (A)	**34,588.88**	31,279.15
Financial assets for which loss allowance is measured using life-time Expected Credit Losses (ECL) as per simplified approach		
Trade receivables	**13,701.72**	15,615.19
Unbilled revenue	**12,304.88**	11,025.15
Total (B)	**26,006.60**	26,640.34
Total (A+B)	**60,595.48**	57,919.49

* Excluding share application money pending allotment (Refer Note 9)

** Excluding unbilled revenue (Refer Note 17)

(ii) Provision for expected credit losses

(a) Financial assets for which loss allowance is measured using 12 month expected credit losses

The Company has assets where the counter-parties have sufficient capacity to meet the obligations and where the risk of default is very low. Accordingly, no loss allowance for impairment has been recognised.

(b) Financial assets for which loss allowance is measured using life-time expected credit losses as per simplified approach

The Company has customers (State government utilities) with capacity to meet the obligations and therefore the risk of default is negligible or nil. Further, management believes that the unimpaired amounts that are past due by more than 30 days are still collectible in full, based on historical payment behaviour and extensive analysis of customer credit risk. Hence, no impairment loss has been recognised during the reporting periods in respect of trade receivables and unbilled revenue.

(iii)Ageing analysis of trade receivables

The ageing analysis of the trade receivables is as below:

₹ Crore

Ageing	Not due	0-30 days past due	31-60 days past due	61-90 days past due	91-120 days past due	More than 120 days past due	Total
Gross carrying amount as at 31 March 2021	**6,216.60**	**1,947.74**	**975.89**	**504.50**	**409.30**	**3,647.89**	**13,701.92**
Gross carrying amount as at 31 March 2020	4,751.62	2,993.12	1,718.48	1,015.49	507.90	4,628.78	15,615.39

(iv) Reconciliation of impairment loss provisions

The movement in the allowance for impairment in respect of financial assets during the year is as follows:

₹ Crore

Particulars	Investments	Trade receivables	Advances	Claims recoverable	Total
Balance as at 1 April 2019	969.24	0.34	0.06	15.07	984.71
Impairment loss recognised	41.48	-	-	-	41.48
Amounts written off / written back	36.28	0.14	-	14.95	51.37
Balance as at 31 March 2020	974.44	0.20	0.06	0.12	974.82
Impairment loss recognised	32.20	-	-	343.51	375.71
Amounts written off / written back	103.47	-	0.03	0.01	103.51
Balance as at 31 March 2021	**903.17**	**0.20**	**0.03**	**343.62**	**1,247.02**

Based on historic default rates, the Company believes that no impairment allowance is necessary in respect of any other financial assets as the amounts of such allowances are not significant.

Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Company's reputation.

The Company has an appropriate liquidity risk management framework for the management of short, medium and long-term funding and liquidity management requirements. The Company manages liquidity risk by maintaining adequate cash reserves, banking facilities and reserve borrowing facilities by continuously monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities.

The Company's Treasury department is responsible for managing the short-term and long-term liquidity requirements of the Company. Short-term liquidity situation is reviewed daily by the Treasury department. The Board of directors has established policies to manage liquidity risk and the Company's Treasury department operates in line with such policies. Any breaches of these policies are reported to the Board of Directors. Long-term liquidity position is reviewed on a regular basis by the Board of Directors and appropriate decisions are taken according to the situation.

Typically, the Company ensures that it has sufficient cash on demand to meet expected operational expenses for a month, including the servicing of financial obligations, this excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters.

As part of the CERC Regulations, tariff inter-alia includes recovery of capital cost. The tariff regulations also provide for recovery of energy charges, operations and maintenance expenses and interest on normative working capital requirements. Since billing to the customers are generally on a monthly basis, the Company maintains sufficient liquidity to service financial obligations and to meet its operational requirements.

(i) Financing arrangements

The Company had access to the following undrawn borrowing facilities at the end of the reporting period:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Floating-rate borrowings		
Cash credit	**2,465.00**	2,767.13
Term loans	**3,533.60**	8,145.00
Foreign currency loans	**4,617.56**	3,993.15
Total	**10,616.16**	14,905.28

(ii) Maturities of financial liabilities

The following are the contractual maturities of derivative and non-derivative financial liabilities, based on contractual cash flows:

31 March 2021

₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	806.71	1,541.51	6,044.87	12,862.47	18,783.99	**40,039.55**
Unsecured bonds	274.73	170.57	-	8,374.10	3,500.00	**12,319.40**
Rupee term loans from banks	678.75	2,305.98	3,962.45	16,379.51	41,610.88	**64,937.57**
Rupee term loans from others	18.03	16.67	33.34	16.57	-	**84.61**
Lease obligations	140.77	50.00	65.95	170.17	2,229.13	**2,656.02**
Foreign currency notes	182.29	4,841.95	5,611.00	10,738.70	7,326.40	**28,700.34**
Unsecured foreign currency loans from banks and financial institutions	161.41	1,026.29	686.98	2,088.80	11,376.01	**15,339.49**
Unsecured foreign currency loans (guaranteed by GOI)	-	200.10	197.30	591.89	624.16	**1,613.45**
Commercial paper and cash credit	8,500.00	4,500.00	-	-	-	**13,000.00**
Trade and other payables	17,078.78	6,600.78	829.01	1,788.07	2,068.78	**28,365.42**

31 March 2020 ₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	453.67	2,282.66	1,194.50	17,666.00	20,025.33	41,622.16
Rupee term loans from banks	1,045.20	1,259.27	3,406.16	14,857.19	42,064.78	62,632.60
Rupee term loans from others	34.87	673.52	898.52	2,645.11	416.67	4,668.69
Lease obligations	85.27	59.45	76.04	154.81	2,273.72	2,649.29
Foreign currency notes	189.88	180.03	5,803.00	13,028.70	11,066.90	30,268.51
Unsecured foreign currency loans from banks and financial institutions	176.39	1,511.08	1,166.79	2,074.26	8,051.70	12,980.22
Unsecured foreign currency loans (guaranteed by GOI)	-	210.64	207.24	621.71	862.83	1,902.42
Commercial paper and cash credit	12,680.21	1,500.00	-	-	-	14,180.21
Trade and other payables	17,095.85	6,701.86	609.28	795.67	2,159.29	27,361.95

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates will affect the Company's income. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

The Board of Directors is responsible for setting up of policies and procedures to manage market risks of the Company. All such transactions are carried out within the guidelines set by the risk management committee.

Currency risk

The Company is exposed to foreign currency risk on certain transactions that are denominated in a currency other than entity's functional currency, hence exposure to exchange rate fluctuations arises. The risk is that the functional currency value of cash flows will vary as a result of movements in exchange rates.

The currency profile of financial assets and financial liabilities as at 31 March 2021 and 31 March 2020 are as below:

As at 31 March 2021 ₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	0.23	-	-	-	0.23
Cash and cash equivalents	0.40	-	-	0.04	0.44
Other financial assets	1.41	0.01	0.83	0.53	2.78
Total	**2.04**	**0.01**	**0.83**	**0.57**	**3.45**
Financial liabilities					
Foreign currency bonds	21,227.65	4,384.00	-	3,088.69*	28,700.34
Unsecured foreign currency loans from banks and financial institutions	2,879.03	1,253.24	12,820.67	-	16,952.94
Trade payables and other financial liabilities	1,870.15	799.49	67.85	1.31	2,738.80
Total	**25,976.83**	**6,436.73**	**12,888.52**	**3,090.00**	**48,392.08**

* ₹ 1,007.00 crore - Rupee denominated USD settled Green Masala Bonds and ₹ 1,908.00 crore-Rupee denominated USD settled Masala bonds and interest accrued thereon.

As at 31 March 2020 ₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	-	-	-	-	-
Cash and cash equivalents	0.35	-	-	0.07	0.42
Other financial assets	1.35	-	0.83	0.54	2.72
Total	1.70	-	0.83	0.61	3.14
Financial liabilities					
Foreign currency bonds	21,800.90	4,240.85	-	4,226.76*	30,268.51
Unsecured foreign currency loans from banks and financial institutions	4,316.67	1,458.58	9,107.39	-	14,882.64
Trade payables and other financial liabilities	1,974.02	915.34	94.85	8.63	2,992.84
Total	28,091.59	6,614.77	9,202.24	4,235.39	48,143.99

* ₹ 2000.00 crore - ₹ denominated USD settled Green Masala Bonds and ₹2,000.00 crore - ₹ denominated USD settled Masala bonds.

The gain/(loss) on account of exchange rate variations on all foreign currency loans and foreign currency monetary items (up to COD) is recoverable from beneficiaries. Therefore, currency risk in respect of such exposure would not be very significant.

Sensitivity analysis

Since the impact of strengthening or weakening of INR against USD, Euro, JPY and other currencies on the statement of profit and loss would not be very significant; therefore, sensitivity analysis for currency risk is not disclosed.

Embedded derivatives

Certain contracts of the Company for construction of power plants with vendors awarded through International Competitive Bidding are denominated in a third currency i.e. a currency which is not the functional currency of any of the parties to the contract. The Company has examined the applicability of provisions of Ind AS 109 'Financial Instruments' for accounting of embedded derivatives in such contracts considering the opinion of the Expert Advisory Committee of the Institute of Chartered Accountants of India in this regard.

The Company has awarded the above contracts without any intention to enter into any derivative contract or to leverage/ take position and without any option/intention to net settle at any point of time during the tenure of the contract. Such contracts, which normally have a tenure ranging from three to ten years, consist of numerous items having varied dates of delivery and payment schedule. Further, forward exchange rates are not realistically available for such longer periods. Accordingly, the Company is of the view that separately recognising the foreign currency derivative embedded in such contracts is impracticable. Moreover, the option available under Ind AS 109 to designate the entire hybrid contract at fair value through profit or loss is also not considered practical in the absence of a reliable valuation model.

Further, the Company is a rate regulated entity whose tariffs are determined by CERC using a cost plus methodology for which, the actual costs incurred on account of property, plant and equipment is considered for determining the capital base for fixation of tariff. Moreover, the impact on the financial statements will not be material having regard to outstanding contracts as at the year end and also the fact that the Company is in the regulatory environment for which the provisions of Ind AS 114-'Regulatory deferral accounts' are applicable. Hence, the Company has continued to account for such contracts without separately recognising the foreign currency derivative embedded therein.

Interest rate risk

The Company is exposed to interest rate risk arising mainly from non-current borrowings with floating interest rates. The Company is exposed to interest rate risk because the cash flows associated with floating rate borrowings will fluctuate with changes in interest rates. The Company manages the interest rate risks by entering into different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.).

At the reporting date, the interest rate profile of the Company's interest-bearing financial instruments is as follows:

₹ Crore

Particulars	31 March 2021	31 March 2020
Financial Assets:		
Fixed-rate instruments		
Loans to related parties	**892.25**	212.72
Loans to others	**23.28**	24.17
Bank deposits	**2,190.08**	2,131.83
Total	**3,105.61**	2,368.72
Variable-rate instruments		
Loans to related parties	**278.66**	-
Total	**278.66**	-
Financial Liabilities:		
Fixed-rate instruments		
Bonds	**52,355.90**	41,619.18
Foreign currency loans/notes*	**32,626.33**	34,872.71
Rupee term loans	**84.61**	118.52
Commercial paper and cash credit	**12,859.74**	13,819.32
Lease obligations	**872.42**	829.67
Total (A)	**98,799.00**	91,259.40
Variable-rate instruments		
Foreign currency loans/notes	**12,729.58**	10,039.45
Rupee term loans	**64,937.58**	67,182.77
Cash credit	-	230.04
Total (B)	**77,667.16**	77,452.26
Total (A+B)	**1,76,466.16**	1,68,711.66

*Includes ₹ 1,007.00 crore - Rupee denominated USD settled Green Masala Bonds and ₹ 1,908.00 crore Rupee denominated USD settled Masala bonds (31 March 2020: includes ₹ 2000.00 crore - Rupee denominated USD settled Green Masala Bonds and ₹ 2,000.00 crore Rupee denominated USD settled Masala bonds).

Fair value sensitivity analysis for fixed-rate instruments

The Company's fixed rate instruments are carried at amortised cost. They are therefore not subject to interest rate risk, since neither the carrying amount nor the future cash flows will fluctuate because of a change in market interest rates.

Cash flow sensitivity analysis for variable-rate instruments

A change of 50 basis points in interest rates at the reporting date would have increased (decreased) profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for the previous year.

₹ Crore

Particulars	Profit or loss	
	50 bp increase	50 bp decrease
31 March 2021		
Foreign currency loans/notes	**(52.47)**	**52.47**
Rupee term loans	**(329.90)**	**329.90**
Cash credit	**(3.70)**	**3.70**
	(386.07)	**386.07**
31 March 2020		
Foreign currency loans/notes	(43.65)	43.65
Rupee term loans	(271.25)	271.25
Cash credit	(2.72)	2.72
	(317.62)	317.62

Of the above mentioned increase in the interest expense, an amount of ₹ **128.85 crore** (31 March 2020: ₹ 162.47 crore) is expected to be capitalised and recovered from beneficiaries through tariff.

62. Fair Value Measurements

a) Financial instruments by category

₹ Crore

Particulars	31 March 2021			31 March 2020		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
Financial assets						
Investments						
- Equity instruments	3.78	93.30	28,028.57	3.78	46.50	26,350.61
- Mutual funds	499.99	-	-	-	-	-
Trade Receivables	-	-	13,701.72	-	-	15,615.19
Loans	-	-	1,914.94	-	-	908.82
Cash and cash equivalents	-	-	90.05	-	-	20.37
Other bank balances	-	-	2,248.41	-	-	2,188.74
Finance lease receivables	-	-	437.77	-	-	464.37
Other financial assets*	-	-	13,576.95	-	-	12,321.11
	503.77	93.30	59,998.41	3.78	46.50	57,869.21
Financial liabilities						
Borrowings	-	-	1,62,734.01	-	-	1,53,832.64
Commercial paper and cash credit	-	-	12,859.74	-	-	14,049.36
Lease obligations	-	-	872.42	-	-	829.67
Trade payables	-	-	7,262.48	-	-	9,068.64
Payable for capital expenditure	-	-	16,137.38	-	-	14,070.70
Other financial liabilities	-	-	2,928.22	-	-	2,173.67
Total	-	-	2,02,794.25	-	-	1,94,024.68

* Excluding share application money pending allotment (Refer Note 9)

b) Fair value hierarchy

This section explains the judgements and estimates made in determining the fair values of the financial instruments that are (a) recognised and measured at fair value and (b) measured at amortised cost and for which fair values are disclosed in the financial statements. To provide an indication about the reliability of the inputs used in determining fair value, the Company has classified its financial instruments into the three levels prescribed under the Ind AS. An explanation of each level follows underneath the table.

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2021	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	93.30	-	-	93.30
Investments in mutual funds	-	499.99	-	499.99
Investments in unquoted equity instruments	-	-	3.78	3.78
Total	93.30	499.99	3.78	597.07

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2020	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	46.50	-	-	46.50
Investments in unquoted equity instruments	-	-	3.78	3.78
Total	46.50	-	3.78	50.28

The Company has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements and reports directly to the Director (Finance). The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of Ind AS, including the level in the fair value hierarchy in which the valuations should be classified. Significant valuation issues are reported to the Company's Audit Committee.

Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows.

Level 1: Level 1 hierarchy includes financial instruments measured using quoted prices. This includes investments in quoted equity instruments. Quoted equity instruments are valued using quoted prices on national stock exchange.

Level 2: The fair value of financial instruments that are not traded in an active market is determined using valuation techniques which maximise the use of observable market data and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2. This level includes mutual funds which are valued using the closing NAV.

Level 3: If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3. The fair value of financial assets and liabilities included in Level 3 is determined in accordance with generally accepted pricing models based on discounted cash flow analysis using prices from prevailing market transactions and dealer quotes of similar instruments.

There have been no transfers in either direction for the years ended 31 March 2021 and 31 March 2020.

c) Valuation technique used to determine fair value:

Specific valuation techniques used to fair value of financial instruments include:

i) For financial instruments other than at ii), iii) and iv) - the use of quoted market prices

ii) For investments in mutual funds - Closing NAV is used.

iii) For financial liabilities (vendor liabilities, debentures/bonds, foreign currency notes, domestic/foreign currency loans): Discounted cash flow; appropriate market borrowing rate of the entity as of each balance sheet date used for discounting.

iv) For financial assets (employee loans) - Discounted cash flow; appropriate market rate (SBI lending rate) as of each balance sheet date used for discounting.

d) Fair value of financial assets and liabilities measured at amortised cost

₹ Crore

Particulars	**Level**	**As at 31 March 2021**		As at 31 March 2020	
		Carrying amount	**Fair value**	Carrying amount	Fair value
Financial assets					
Investments in subsidiary and joint venture companies	3	**28,028.57**	**28,028.57**	26,350.61	26,350.61
Loans	3	**1,914.94**	**1,922.84**	908.82	919.25
Finance lease receivables	3	**437.77**	**437.77**	464.37	464.37

₹ Crore

Particulars	Level	As at 31 March 2021		As at 31 March 2020	
		Carrying amount	Fair value	Carrying amount	Fair value
Claims recoverable	3	**747.65**	**747.65**	821.55	821.55
Trade receivables	3	**13,701.72**	**13,701.72**	15,615.19	15,615.19
Cash and cash equivalents	1	**90.05**	**90.05**	20.37	20.37
Bank balances other than cash and cash equivalents	1	**2,248.41**	**2,248.41**	2,188.74	2,188.74
Other financial assets	3	**12,925.30**	**12,925.30**	11,696.84	11,696.84
		60,094.41	**60,102.31**	58,066.49	58,076.92
Financial liabilities					
Bonds/Debentures	1	**7,701.05**	**8,103.59**	8,898.25	9,920.36
	2	**33,640.24**	**37,817.73**	204.60	248.22
	3	**11,014.62**	**13,205.23**	32,516.33	36,676.63
Foreign currency notes	2	**20,334.80**	**21,780.49**	21,755.39	21,700.87
	3	**8,308.56**	**8,933.60**	8,440.39	9,070.10
Foreign currency loans	3	**16,712.56**	**16,982.20**	14,716.39	15,051.46
Rupee term loans	3	**65,022.18**	**65,023.98**	67,301.29	67,302.42
Lease obligations	3	**872.42**	**872.42**	829.67	829.67
Borrowings - current	1	**12,859.74**	**12,859.74**	14,049.36	14,049.36
Trade payables and payable for capital expenditure	3	**23,399.86**	**23,299.28**	23,139.34	23,115.52
Other financial liabilities	3	**2,928.22**	**2,928.22**	2,173.67	2,173.67
		2,02,794.25	**2,11,806.48**	1,94,024.68	2,00,138.28

The carrying amounts of current trade receivables, current trade payables, payable for capital expenditure, investment in subsidiary and joint venture companies, cash and cash equivalents and other financial assets and liabilities are considered to be the same as their fair values, due to their short-term nature.

The carrying values for finance lease receivables approximates the fair value as these are periodically evaluated based on credit worthiness of customer and allowance for estimated losses is recorded based on this evaluation. Also, carrying amount of claims recoverable approximates its fair value as these are recoverable immediately.

The fair values for loans, borrowings, non-current trade payables and payable for capital expenditure were calculated based on cash flows discounted using a current discount rate. They are classified at respective levels based on availability of quoted prices and inclusion of observable/non observable inputs.

63. Capital Management

The Company's objectives when managing capital are to:

- safeguard its ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders and
- maintain an appropriate capital structure of debt and equity.

The Board of Directors has the primary responsibility to maintain a strong capital base and reduce the cost of capital through prudent management in deployment of funds and sourcing by leveraging opportunities in domestic and international financial markets so as to maintain investors, creditors & markets' confidence and to sustain future development of the business. The Board of Directors monitors the return on capital, which the Company defines as returns from operating activities divided

by total shareholders' equity deployed in operating activities. The Board of Directors also monitors the level of dividends to equity shareholders in line with the dividend distribution policy of the Company.

Under the terms of major borrowing facilities, the Company is required to comply with the following financial covenants:

(i) Total liability to networth ranges between 2:1 to 3:1.

(ii) Ratio of EBITDA to interest expense shall not at any time be less than 1.75 : 1.

(iii) Debt service coverage ratio not less than 1.10:1 (in case of foreign currency borrowings).

There have been no breaches in the financial covenants of any interest bearing borrowings.

The Company monitors capital, using a medium term view of three to five years, on the basis of a number of financial ratios generally used by industry and by the rating agencies. The Company is not subject to externally imposed capital requirements.

The Company monitors capital using gearing ratio which is net debt divided by total equity. Net debt comprises of non-current borrowings (including current maturities and interest accrued there on) and current borrowings less cash and cash equivalents. Equity includes equity share capital and reserves that are managed as capital. The gearing ratio at the end of the reporting period was as follows:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Borrowings	**1,76,466.17**	1,68,711.67
Less: Cash and cash equivalents	**90.05**	20.37
Net Debt	**1,76,376.12**	1,68,691.30
Total Equity	**1,18,985.49**	1,13,569.44
Net Debt to Equity Ratio	**1.48**	1.49

64. Disclosure as per Ind AS 114, 'Regulatory Deferral Accounts'

(i) Nature of rate regulated activities

The Company is mainly engaged in generation and sale of electricity. The price to be charged by the Company for electricity sold to its beneficiaries is determined by the CERC which provides extensive guidance on the principles and methodologies for determination of the tariff for the purpose of sale of electricity. The tariff is based on allowable costs like interest, depreciation, operation & maintenance expenses, etc. with a stipulated return.

This form of rate regulation is known as cost-of-service regulations which provide the Company to recover its costs of providing the goods or services plus a fair return.

(ii) Recognition and measurement

(a) As per the CERC Tariff Regulations, any gain or loss on account of exchange risk variation during the construction period shall form part of the capital cost till the declaration of Commercial Operation Date (COD) to be considered for calculation of tariff. The CERC during the past period in tariff orders for various stations has allowed exchange differences incurred during the construction period in the capital cost. Accordingly, exchange differences arising during the construction period is within the scope of Ind AS 114.

Further, any loss or gain on account of exchange differences on foreign currency loans for operating stations shall be recoverable from / payable to beneficiaries on actual payment basis, as per the said Regulations. Accordingly, such exchange differences are also within the scope of Ind AS 114.

In view of the above, exchange differences arising from settlement/translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Net Movements in Regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of (-) ₹ **382.42 crore** for the year ended as at 31 March 2021 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2020: ₹ 1,202.93 crore accounted as 'Regulatory deferral account debit balance'.)

(b) Revision of pay scales of employees of PSEs w.e.f. 1 January 2017 has been implemented based on the guidelines issued by Department of Public Enterprises (DPE). The guidelines provide payment of superannuation benefits @ 30% of basic + DA to be provided to the employees of CPSEs which includes gratuity at the enhanced ceiling of ₹ 0.20 crore from the existing ceiling of ₹ 0.10 crore. As per Proviso 8(3) of Terms and Conditions of Tariff Regulations 2014 applicable for the

period 2014-19, truing up exercise in respect of Change in Law or compliance of existing law will be taken up by CERC. The increase in gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore falls under the category of 'Change in law' and a regulatory asset has been created. The Payment of Gratuity Act, 1972 has since been amended and the ceiling has been increased to ₹ 0.20 crore.

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the above-mentioned provision related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created upto 31 March 2019 (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This has been taken up with CERC through truing up tariff petition.

(c) CERC Regulations provide that deferred tax liability upto 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹ **1,437.85 crore** (31 March 2020: ₹ 4,000.77 crore) for the year ended 31 March 2021 has been accounted for as 'Regulatory deferral account debit balance'.

(d) The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash, has been favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016 subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount of ₹ **1,003.79 crore** (31 March 2020: ₹ 647.56 crore) for the year ended 31 March 2021 has been accounted for as 'Regulatory deferral account debit balance'.

(e) CERC Regulations provide that the capital expenditure in respect of existing generating station incurred /projected to be incurred , inter-alia , towards liabilities to meet award of arbitration (i) within the original scope of work after the COD upto the cut off date (Regulations 24) ; (ii) within the original scope of work and after the cut off date (Regulations 25); and (iii) beyond the original scope of work (Regulation 26), will be admitted by CERC subject to prudence check. Keeping in view the above, regulatory deferral account debit balance has been accounted corresponding to the amount debited to Statement of profit & loss in respect of arbitration cases amounting to ₹ **110.81 crore** for the year ended 31 March 2021 (31 March 2020:Nil).

(iii) Risks associated with future recovery/reversal of regulatory deferral account balances:

(i) demand risk due to changes in consumer attitudes, the availability of alternative sources of supply

(ii) regulatory risk on account of changes in regulations and submission or approval of a rate-setting application or the entity's assessment of the expected future regulatory actions

(iii) other risks including currency or other market risks, if any

(iv) Reconciliation of the carrying amounts:

The regulated assets/liability recognized in the books to be recovered from or payable to beneficiaries in future periods are as follows:

a) Regulatory deferral account debit balance - Note 19

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

₹ Crore

Particulars	**For the year ended 31 March 2021**	For the year ended 31 March 2020
A. Opening balance	**9,122.76**	3,406.00
B. Additions during the year	**2,170.03**	5,851.26
C. Adjustments during the year	**(135.15)**	(134.39)
D. Amount collected/refunded during the year	**(13.92)**	(0.11)
E. Regulatory deferral account balances recognized in the statement of profit and loss (B+D)	**2,156.11**	5,851.15
F. Closing balance (A+C+E)	**11,143.72**	9,122.76

b) **Net movements in regulatory deferral account balances [I]**

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Exchange differences	**(382.42)**	1,202.93
Deferred tax	**1,437.85**	4,000.77
Ash transportation cost	**1,003.79**	647.56
Arbitration cases	**110.81**	-
Sub total (i)	**2,170.03**	5,851.26
Amount collected / refunded during the year (ii)	**(13.92)**	(0.11)
Net movement in regulatory deferral account balances (i)+(ii)	**2,156.11**	5,851.15
c) Tax on net movements in regulatory deferral account balances [II]	**376.72**	1,022.31
d) Total amount recognized in the statement of profit and loss during the year [I-II]	**1,779.39**	4,828.84

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects.

65. Disclosure as per Ind AS 115, 'Revenue from contracts with customers'

I. Nature of goods and services

The revenue of the Company comprises of income from energy sales, sale of energy through trading, consultancy and other services. The following is a description of the principal activities:

(a) Revenue from energy sales

The major revenue of the Company comes from energy sales. The Company sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private Discoms operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for energy sales:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy sales	The Company recognises revenue from contracts for energy sales over time as the customers simultaneously receive and consume the benefits provided by the Company. The tariff for computing revenue from energy sales is determined in terms of CERC Regulations as notified from time to time. The amount of revenue recognised for energy sales is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(b) Revenue from energy trading, consultancy and other services

(i) Sale of Energy through trading

The Company is purchasing power from the developers and selling it to the Discoms on principal to principal basis

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Sale of energy through trading	The Company recognises revenue from contracts for sale of energy through trading over time as the customers simultaneously receive and consume the benefits provided by the Company. The tariff for computing revenue from sale of energy through trading is determined as per the terms of the agreements. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(ii) Consultancy and other services

The Company undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management & supervision, construction management, operation & maintenance of power plants, research & development, management consultancy etc.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for consultancy and other services:

Product/Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Consultancy services	The Company recognises revenue from contracts for consultancy services over time as the customers simultaneously receive and consume the benefits provided by the Company. For the assets (e.g. deliverables, reports etc.) transferred under the contracts, the assets do not have alternative use to the Company and the Company has enforceable right to payment for performance completed to date. The revenue from consultancy services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Operation and maintenance services	The Company recognises revenue from contracts for operation and maintenance services over time as the customers simultaneously receive and consume the benefits provided by the Company. The revenue from operation and maintenance services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Deen Dayal Upadhyay Gramin Jyoti Yojna (DDUGJY Scheme)	The Company recognises revenue from work done under DDUGJY scheme over time as the assets do not have alternative use to the Company and the Company has enforceable right to payment for performance completed to date. The revenue from DDUGJY scheme is determined as per the terms of the contract. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Pradhan Mantri Sahaj Bijli Har Ghar Yojna (SAUBHAGYA Scheme)	The Company recognises revenue from work done under SAUBHAGYA scheme at a point in time when the Company transfers control of goods and services under the contract to the customers. The revenue from SAUBHAGYA scheme is determined as per the terms of the contracts. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.

(iii) Sale of captive coal to subsidiary company

The revenue also includes revenue from sale of captive coal to subsidiary.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of captive coal:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Sale of captive coal to subsidiary company	The Company recognises revenue from contracts for sale of captive coal to subsidiary company when control of the goods is transferred to customers. The tariff for computing revenue from sale of captive coal to subsidiary company is determined in terms of CERC Tariff Regulations applicable for input price of coal from captive mines. The amounts are billed as and when goods are transferred and are payable as per agreed procedures.

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II. Disaggregation of revenue

In the following table, revenue is disaggregated by type of product and services, geographical market and timing of revenue recognition:

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020
Geographical markets						
India	**95,579.66**	94,093.66	**3,459.74**	3,349.67	**99,039.40**	97,443.33
Others	-	-	**0.23**	-	**0.23**	-
	95,579.66	94,093.66	**3,459.97**	3,349.67	**99,039.63**	97,443.33
Timing of revenue recognition						
Products and services transferred over time	**95,579.66**	94,093.66	**3,459.97**	3,349.67	**99,039.63**	97,443.33
	95,579.66	94,093.66	**3,459.97**	3,349.67	**99,039.63**	97,443.33

III. Reconciliation of revenue recognised with contract price:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Contract price	**99,431.16**	97,877.17
Adjustments for:		
Rebates	**(391.53)**	(433.84)
Revenue recognised	**99,039.63**	97,443.33

IV. Contract balances

Contract assets are recognised when there is excess of revenue earned over billings on contracts. Contract assets are transferred to unbilled revenue when there is unconditional right to receive cash, and only passage of time is required, as per contractual terms. The contract liabilities primarily relate to the advance consideration received from the customers which are referred as 'advances from customers / payable to beneficiaries'.

The following table provides information about trade receivables, unbilled revenue and advances from customers / payable to beneficiaries:

₹ Crore

Particulars	As at 31 March 2021		As at 1 April 2020	
	Current	Non-current	Current	Non-current
Trade receivables	**13,701.72**	-	15,615.19	-
Unbilled revenue	**12,304.88**	-	11,025.15	-
Advances from customers / payable to beneficiaries	**1,432.67**	-	652.34	-

The amount of revenue recognised from performance obligations satisfied (or partially satisfied) in previous periods, mainly due to change in transaction prices is ₹ **1,154.64 crore** (31 March 2020 : ₹ 31.59 crore).

V. Transaction price allocated to the remaining performance obligations

Performance obligations related to sale of energy:

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations, where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. Therefore, transaction price to be allocated to remaining performance obligations cannot be determined reliably for the entire duration of the contract.

Performance obligations related to other contracts:

For rest of the contracts, transaction price for remaining performance obligations amounts to ₹ **723.34 crore** (31 March 2020: ₹ 747.23 crore) which shall be received over the contract period in proportion of the work performed/services provided by the Company.

VI. Practical expedients applied as per Ind AS 115:

a. The company has not disclosed information about remaining performance obligations that have original expected duration of one year or less and where the revenue recognised corresponds directly with the value to the customer of the entity's performance completed to date.

b. The Company does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Company has not adjusted any of the transaction prices for the time value of money.

VII. The Company has not incurred any incremental costs of obtaining contracts with a customer and therefore, not recognised an asset for such costs.

66. Disclosure as per Ind AS 116 'Leases'

(A) Company as Lessee

(i) The Company's significant leasing arrangements are in respect of the following assets:

(a) Premises for residential use of employees, offices and guest houses/ transit camps on lease which are not non-cancellable and are usually renewable on mutually agreeable terms. The company generally incurs amount on improvements which are significant to the respective lease and hence the cancellable period of the lease during which the company intends to continue considering the past experience / practice, is considered for the purpose of determining the lease period.

(b) The Company has taken electrical vehicles on operating lease for a period of six years, which can be further extended at mutually agreed terms. Lease rentals are subject to escalation of 10% per annum.

(c) A helicopter on wet lease basis.

(d) The Company has taken certain vehicles (other than electrical) on lease for a period of four years, which can be further extended at mutually agreed terms. There are no escalations in the lease rentals as per terms of the agreement. However, the Company has purchase option for such vehicles at the end of the lease term.

(e) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years after which it was to be transferred to the Company at ₹ 1/-. Refer Note no. 57 (iii)(b).

(f) The Company acquires land on leasehold basis for a period generally ranging from 25 years to 99 years from the government authorities which can be renewed further based on mutually agreed terms and conditions. The leases are non cancellable. These leases are capitalised at the present value of the total minimum lease payments to be paid over the lease term. Future lease rentals are recognised as 'Lease obligations' at their present values. The Right-of-use land is amortised considering the significant accounting policies of the Company.

(ii) The following are the carrying amounts of lease liabilities recognised and the movements during the year :

₹ Crore

Particulars	**For the year ended 31 March 2021**	For the year ended 31 March 2020
Opening Balance	**829.67**	186.41
- Additions in lease liabilities	**36.05**	648.21
- Interest cost during the year	**49.27**	37.82
- Payment of lease liabilities	**(42.57)**	(42.77)
Closing Balance	**872.42**	829.67
Current	**151.80**	106.41
Non Current	**720.62**	723.26

(iii) Maturity Analysis of the lease liabilities:

₹ Crore

Contractual undiscounted cash flows	As at 31 March 2021	As at 31 March 2020
3 months or less	140.77	85.27
3-12 Months	50.00	59.45
1-2 Years	65.95	76.04
2-5 Years	170.17	154.81
More than 5 Years	2,229.13	2273.72
Total	2,656.02	2649.29

(iv) The following are the amounts recognised in Statement of profit and loss:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Depreciation and amortisation expense for right-of-use assets	219.77	276.93
Interest expense on lease liabilities	49.27	37.82
Expense relating to short-term leases	7.24	10.55

(v) The following are the amounts disclosed in the cash flow statement:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Cash Outflow from leases	49.81	53.32

(B) Leases as lessor

a) Finance leases

The Company had classified the arrangement with its customer for Stage I of a power station in the nature of lease based on the principles enunciated in Appendix C of Ind AS 17 - 'Leases' and accounted for as finance lease in accordance with those principles. This arrangement continues to be classified as finance lease after transition to Ind AS 116 - 'Leases'.

The power purchase agreement with the beneficiary is for a period of twenty five years from the date of transfer and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and for such further period of time as the parties may mutually agree.

The following are the amounts recognised in Statement of profit and loss:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
i) Finance income on the net investment in the lease	51.54	59.90
ii) Income relating to variable lease payments not included in the measurement of the net investment in the lease	690.11	899.19

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Less than one year	108.54	108.54
Between one and two years	108.54	108.54
Between two and three years	108.54	108.54
Between three and four years	217.20	108.54
Between four and five years	-	214.16
More than five years	-	-
Total minimum lease payments	542.82	648.32
Less amounts representing unearned finance income	105.05	183.95
Present value of minimum lease payments	437.77	464.37

b) **Operating leases**

The Company had classified the arrangement with its customer for two power stations (one thermal and one gas) as lease based on the principles enunciated in Appendix C of Ind AS 17 and accounted for as operating lease in accordance with those principles. These arrangements continue to be classified as operating lease after transition to Ind AS 116 'Leases'.

(i) **Thermal Power Station**

Power Purchase Agreements (PPA) signed with the beneficiary was operative for a period of five years from the date of take over of the plant and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and conditions for such further period as the parties may mutually agree.

(ii) **Gas Power Station**

PPA signed with the beneficiary on 6 January 1995 was operative for five years from the date of commercial operation of last unit of the station and may be mutually extended, renewed or replaced by another agreement on such terms and on such further period of time as the parties may mutually agree. As per the supplementary agreement dated 15 February 2013 the validity period is extended for a further period of 12 years from 1 March 2013.

The following are the amounts recognised in Statement of profit and loss in respect of the above stations:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Lease Income	156.18	156.18
Income relating to variable lease payments that do not depend on an index or a rate	1057.32	973.13

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Less than one year	19.58	156.18
Between one and two years	19.58	19.58
Between two and three years	19.58	19.58
Between three and four years	3.91	19.58
Between four and five years	-	3.91
More than five years	-	-
Total	**62.65**	218.83

67. Information in respect of micro and small enterprises as at 31 March 2021 as required by Schedule III to the Companies Act, 2013 and Micro, Small and Medium Enterprises Development Act, 2006 (MSMED Act)

₹ Crore

Particulars	31 March 2021	31 March 2020
a) Amount remaining unpaid to any supplier:		
Principal amount	617.63	729.01
Interest due thereon	-	-
b) Amount of interest paid in terms of Section 16 of the MSMED Act along-with the amount paid to the suppliers beyond the appointed day.	-	-
c) Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding the interest specified under the MSMED Act.	-	-
d) Amount of interest accrued and remaining unpaid	-	-

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₹ Crore

Particulars	31 March 2021	31 March 2020
e) Amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprises, for the purpose of disallowances as a deductible expenditure under Section 23 of MSMED Act	-	-

The payment to the vendors are made as and when they are due, as per terms and conditions of respective contracts.

68. Disclosure as required by Schedule V of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015:

A. Loans and advances in the nature of loans:

1. To Subsidiary companies

₹ Crore

Name of the Company	Outstanding balance as at		Maximum amount outstanding during the year ended	
	31 March 2021	31 March 2020	31 March 2021	31 March 2020
Kanti Bijlee Utpadan Nigam Ltd.	278.66	193.00	343.00	253.50
Ratnagiri Gas and Power Private Ltd.	871.73	-	885.00	7.00
NTPC Vidyut Vyapar Nigam Ltd.	-	-	-	60.00
NTPC Renewable Energy Limited	-	-	3.45	-

2. To Joint venture companies

₹ Crore

Name of the Company	Outstanding balance as at		Maximum amount outstanding during the year ended	
	31 March 2021	31 March 2020	31 March 2021	31 March 2020
National High Power Test Laboratory Private Ltd.	18.40	18.40	18.40	18.40

3. To Firms/companies in which directors are interested : ₹ Nil

B. Investment by the loanee (as detailed above) in the shares of NTPC and its subsidiaries : ₹ Nil

69. Contingent liabilities, contingent assets and commitments

A. Contingent liabilities

a. Claims against the Company not acknowledged as debts

(i) Capital works

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Claims by contractors under capital works	12,880.46	11,611.59

Some of the contractors for supply and installation of equipment and execution of works at our projects have lodged claims on the Company for the above amounts seeking enhancement of the contract price, revision of work schedule with price escalation, compensation for the extended period of work, idle charges etc. These claims are being contested by the Company as being not admissible in terms of the provisions of the respective contracts.

The Company is pursuing various options under the dispute resolution mechanism available in the contracts for settlement of these claims. It is not practicable to make a realistic estimate of the outflow of resources if any, for settlement of such claims pending resolution.

(ii) **Land compensation cases**

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Claims by land oustees	**456.92**	422.96

In respect of land acquired for the projects, the erstwhile land owners have claimed higher compensation before various authorities/courts which are yet to be settled. Against such cases, contingent liability of these amounts has been estimated.

(iii) **Fuel suppliers**

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Claims towards grade slippages	**2,046.70**	2,997.23
Other claims	**1,776.27**	1,223.20

Pending resolution of the issues with the coal companies, above amounts towards grade slippage pursuant to third party sampling has been estimated by the Company as contingent liability. Further, other claims represent claims made by fuel companies towards surface transportation charges, custom duty on service margin on imported coal, take or pay claims of gas suppliers, etc. ,estimated by the Company as contingent liability.

The Company is pursuing with the fuel companies, related ministries and other options under the dispute resolution mechanism available for settlement of these claims.

(iv) **Others**

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Claims by government agencies / others	**1,004.52**	834.00

In respect of claims made by various State/Central Government departments/Authorities towards building permission fee, penalty on diversion of agricultural land to non-agricultural use, non agricultural land assessment tax, water royalty, other claims, etc. and by others, a contingent liability of the above amounts has been estimated.

(v) **Possible reimbursement in respect of (i) to (iii) above**

In respect of claims included in (i) and (ii) above, payments, if any, by the Company on settlement of the claims would be eligible for inclusion in the capital cost for the purpose of determination of tariff as per CERC Tariff Regulations subject to prudence check by the CERC. In case of (iii), the estimated possible reimbursement by way of recovery through tariff as per Regulations is ₹ **3,810.71 crore** (31 March 2020: ₹ 4,149.16 crore).

b. **Disputed tax matters**

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Tax matters before various authorities	**6,019.47**	612.54

Disputed income tax/sales tax/excise and other tax matters are pending before various Appellate Authorities. Many of these matters were adjudicated in favour of the Company but are disputed before higher authorities by the concerned departments. In respect of these disputed cases, the Company estimate possible reimbursement of ₹ **2,301.10 crore** (31 March 2020: ₹ 483.97 crore). The amount paid under dispute/adjusted by the authorities in respect of the cases amounts to ₹ **2,866.26 crore** (31 March 2020: ₹ 21.28 crore). Also refer Note 49 (II)(a).

c. **Others**

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Bills discounted with banks	**16,295.05**	10,692.34
Coal transportation [Refer Note 57(iii)(b)]	**2,153.57**	2,014.84
Others	**433.13**	429.08

Bills discounted with banks against trade receivables has been disclosed under contingent liabilities. (Refer Note-13). In case of any claim on the Company from the banks in this regard, entire amount shall be recoverable from the beneficiaries along with surcharge. Others include contingent liabilities disclosed on an estimated basis relating to likely claims that may arise in connection with abandoned oil exploration activities, land use agreements, service tax reimbursements,etc .

Some of the beneficiaries have filed appeals against the tariff orders of the CERC. The amount of contingent liability in this regard is not ascertainable.

B. Contingent assets

(i) While determining the tariff for some of the Company's power stations, CERC has disallowed certain capital expenditure incurred by the Company. The Company aggrieved over such issues has filed appeals with the Appellate Tribunal for Electricity (APTEL)/Hon'ble Supreme Court against the tariff orders issued by the CERC. Based on past experience, the Company believes that a favourable outcome is probable. However, it is impracticable to estimate the financial effect of the same as its receipt is dependent on the outcome of the judgement.

(ii) CERC Tariff Regulations provide for levy of Late Payment Surcharge by generating company in case of delay in payment by beneficiaries beyond specified number of days from the date of presentation of bill. However, in view of significant uncertainties in the ultimate collection of the said surcharge from some of the beneficiaries against partial bills as estimated by the management, an amount of ₹ **181.93 crore** as on 31 March 2021 (31 March 2020: ₹ 105.27 crore) has not been recognised.

C. Commitments

a) Estimated amount of contracts remaining to be executed on capital account is as under:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Property, plant and equipment	**45,278.28**	50,351.63
Intangible assets	**10.32**	77.26
Total	**45,288.60**	50,428.89

b) In respect of investments in subsidiary companies (including share application money pending allotment), the Company has restrictions for their disposal as at 31 March 2021 as under:

₹ Crore

Name of the Subsidiary	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2021	31 March 2020
Bhartiya Rail Bijlee Company Ltd.	5 years from the date of commercial operation of the last unit of the project.	**1,774.12**	1,774.12
Kanti Bijlee Utpadan Nigam Ltd.	As per loan agreement, minimum equity of 51% shall be maintained at all times until final settlement of loan i.e., 4 years moratorium period and subsequently 11 years for repayment.	**1,670.67**	1,610.67
Patratu Vidyut Utpadan Nigam Ltd.	5 years from the date of signing of agreement or till the date of commercial operation of the last new unit of Phase-I, whichever is later.	**887.62**	498.12
Nabinagar Power Generating Company Ltd.	NTPC shall not transfer/assign or pledge shares until final settlement of loan i.e. 5 years moratorium and subsequently 15 years for repayment.	**4,687.03**	4,417.01
THDC India Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company.	**7,500.00**	7,500.00
North Eastern Electric Power Corporation Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding / or total voting power in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company. Further, NTPC shall continue to hold 100% of paid up capital and voting power in the subsidiary till all amounts repayable under the loan agreement executed between the subsidiary and KfW are repaid.	**4,000.00**	4,000.00
NTPC EDMC Waste Solutions Pvt. Ltd.	5 years from the date of incorporation (i.e. 01 June 2020)	**0.15**	-
Total		**20,519.59**	19,799.92

c) In respect of investments in joint venture companies (including share application money pending allotment), the Company has restrictions for their disposal as at 31 March 2021 as under:

₹ Crore

Name of the Joint Venture Company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2021	31 March 2020
Transformers and Electricals Kerala Ltd.	3 years from the date of acquisition (i.e.19.06.2009) or upgradation capacity enhancement scheme whichever is later. Also refer Note 6 (e).	**31.34**	31.34
NTPC BHEL Power Projects Private Ltd.	3 years from the date of completion of first EPC contract of single order value of not less than ₹500 crore or till further such time as mutually agreed. Also refer Note 6 (d).	**50.00**	50.00
National High Power Test Laboratory Private Ltd.	5 years from the date of incorporation (i.e. 22.05.2009) or completion of project whichever is later.	**30.40**	30.40
CIL NTPC Urja Private Ltd.	5 years from the date of incorporation (i.e. 27.04.2010) or commercial operation whichever is later.	**0.08**	0.08
Trincomalee Power Company Ltd.	12 years from the initial operation date.	**15.20**	15.20
Bangladesh-India Friendship Power Company Private Ltd.	15 years from the date of commercial operation date.	**533.60**	444.72
Meja Urja Nigam Private Ltd.	5 years from the date of incorporation (i.e. 02.04.2008) or commercial operation whichever is later.	-	1,581.64
Hindustan Urvarak and Rasayan Ltd.	(a) 5 years from the date of incorporation (15.06.2016) or 2 years from commercial operation date of any one of the proposed projects at Sindri, Gorakhpur and Barauni or date of allotment of shares for first time, whichever is later. (b) As per Sponsors Support undertaking , NTPC shall jointly and severally with the other sponsors provide additional funds to meet all cost overrun incurred/to be incurred in relation to the Project. Further, NTPC shall jointly with the other sponsors, retain 51% of total equity share capital of the JV and management control until the final settlement date of the loan facility (door to door tenure of 15 years).	**1,131.76**	751.09
Total		**1,792.38**	2,904.47

d) In respect of other investments, the Company has restrictions for their disposal as at 31 March 2021 as under:

₹ Crore

Name of the Company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2021	31 March 2020
International Coal Ventures Private Ltd.	5 years from the date of incorporation (i.e. 20.05.2009) or till such time an undertaking for non-disposal of such share is given to FI/Banks for their assistance to the Company whichever is later. Also refer Note 7(c)	**1.40**	1.40
Total		**1.40**	1.40

e) The Company has commitments of ₹ **7,499.90 crore** (31 March 2020: ₹ 4,487.78 crore) towards further investment in the subsidiary companies as at 31 March 2021.

f) The Company has commitments of ₹ **2,253.53 crore** (31 March 2020: ₹ 2,900.40 crore) towards further investment in the joint venture entities as at 31 March 2021.

g) The Company has commitments of ₹ **507.60 crore** (31 March 2020: ₹ 507.60 crore) towards further investment in other investments as at 31 March 2021.

h) The Company has commitments of bank guarantee of 0.50% of total contract price to be undertaken by NTPC-BHEL Power Projects Private Ltd. (a joint venture company) to a cumulative amount of ₹ **75.00 crore** (31 March 2020: ₹ 75.00 crore).

i) The Company has agreed to provide unconditional and irrevocable financial support to NTPC GE Power Services Ltd.

(a joint venture company) for meeting financial qualifying requirement for execution of Flue Gas De-sulfurisation (FGD) projects in India. Such support shall be provided by way of Letter of Undertaking to a cumulative exposure up to the award value of the contract(s) not exceeding ₹ 600.00 Crore and cumulative exposure of the Company, in proportion to shareholding, would not exceed ₹ **300.00 crore** (31 March 2020: ₹ 300.00 crore).

j) The Company has provided corporate guarantee for an amount of ₹ **237.60 crore** (31 March 2020: ₹ Nil) for Patratu Vidyut Utpadan Nigam Ltd. (PVUNL) (a subsidiary company) in favor of Axis Bank for sanction of bank guarantee issued to Ministry of Coal for performance security against the milestones of Banhardih coal mine development of PVUNL.

k) The Company has provided comfort letter for NTPC Electric Supply Company Limited (NESCL) (a subsidiary company) to ICICI Bank in relation for sanction of Bank Guarantee facilities for an amount of ₹ **10.00 crore** (31 March 2020: ₹ Nil) to enable NESCL to participate in the bid process for privatization of DISCOM of Union Territory (UT) of Chandigarh.

l) The Company has agreed to provide borrowing support to NTPC Renewable Energy Limited (a subsidiary company) upto ₹ **6,000 crore** (31 March 2020: ₹ Nil) in the form of long term / short term loan, bank guarantee, corporate guarantee / comfort letter to banks, etc., in case it is required by NTPC Renewable Energy Limited.

m) Company's commitment towards the minimum work programme in respect of oil exploration activities of joint operations has been disclosed in Note 59.

n) Jhabua Power Limited (JPL), having an operational thermal power capacity of 1 x 600 MW was admitted to National Company Law Tribunal (NCLT) on 27 March 2019, and is presently undergoing Corporate Insolvency Resolution Process in NCLT. Invitation for Expression of Interest for submission of Resolution Plan for JPL was published by Resolution Professional on 19 August 2019. The Board of Directors of the Company had accorded in-principle approval for submission of Resolution Plan for acquisition of JPL. Subsequently, the Company has submitted the Resolution Plan to Resolution Professional on due date of 30 December 2019 and revised Resolution plan on 30 November 2020 and 16 April 2021 based on discussions with Committee of Creditors/Resolution Professional. The revised Resolution Plan is currently under consideration by Resolution Professional / Committee of Creditors.

o) Company's commitment in respect of lease agreements has been disclosed in Note 66.

70. Corporate Social Responsibility Expenses (CSR)

As per Section 135 of the Companies Act, 2013 read with guidelines issued by Department of Public Enterprises, GOI, the Company is required to spend, in every financial year, at least two per cent of the average net profits of the Company made during the three immediately preceding financial years in accordance with its CSR Policy. The details of CSR expenses for the year are as under:

₹ **Crore**

Particulars	**For the year ended 31 March 2021**	For the year ended 31 March 2020
A. Amount required to be spent during the year		
(i) Gross amount (2% of average net profit as per Section 135 of Companies Act,2013)	**278.57**	252.68
(ii) Surplus arising out of CSR projects	-	-
(iii) Set off available from previous year	-	-
(iv) Total CSR obligation for the year [(i)+(ii) -(iii)]	**278.57**	252.68
B. Amount approved by the Board to be spent during the year	**418.87**	304.92
C. Amount spent during the year on:		
a) Construction/acquisition of any asset	-	1.13
b) On purposes other than (a) above	**418.87**	303.79
Total	**418.87**	304.92
D. Set off available for succeeding years	**140.30**	-
E. Amount unspent during the year	-	-

Note:- The set off available in the succeeding years is not recognised as an asset as a matter of prudence, considering the uncertainty involved in the adjustment of the same in future years.

i) Amount spent during the year ended 31 March 2021:

₹ **Crore**

Particulars	**In cash**	**Yet to be paid in cash**	**Total**
a) Construction/acquisition of any asset	-	-	-
b) On purposes other than (a) above	**405.43**	**13.44**	**418.87**

Amount spent during the year ended 31 March 2020:

₹ Crore

Particulars	In cash	Yet to be paid in cash	Total
a) Construction/acquisition of any asset	1.10	0.03	1.13
b) On purposes other than (a) above	294.30	9.49	303.79

ii) Details of contribution to a trust controlled by the company in relation to CSR expenditure:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Contribution given to NTPC Foundation	**2.21**	45.03

iii) Break-up of the CSR expenses under major heads is as under:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
1. Eradicating Hunger and Poverty, Health Care and Sanitation	**288.00**	47.83
2. Education and Skill Development	**62.96**	124.57
3. Empowerment of Women and other Economically Backward Sections	**0.79**	1.53
4. Environmental Sustainability	**33.41**	73.20
5. Art & Culture	**0.03**	2.36
6. Sports	**1.74**	2.51
7. Rural Development	**31.83**	40.02
8. Disaster management, including relief, rehabilitation and reconstruction activities	**0.11**	12.90
Total	**418.87**	304.92

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

These are the Notes referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N.Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Surinder Kr.Khattar)
Partner
M No.084993

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place: Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place:Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 19 June 2021
Digitally signed by signatories

INDEPENDENT AUDITORS' REPORT

To

The Members of NTPC Limited

Report on the Audit of the Standalone Financial Statements

Opinion

We have audited the Standalone Financial Statements of NTPC Limited ("the Company"), which comprise the Balance Sheet as at 31 March 2021, the Statement of Profit and Loss (including Other Comprehensive Income), the Statement of Changes in Equity and the Statement of Cash Flows for the year then ended and notes to the financial statements, including a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "Standalone Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Standalone Financial Statements give the information required by the Companies Act, 2013 ("the Act") in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the state of affairs (financial position) of the Company as at 31 March, 2021, and its profit (financial performance including other comprehensive income), changes in equity and its cash flows for the year ended on that date.

Basis for Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) specified under section 143(10) of the Act. Our responsibilities under those Standards are further described in the Auditors' Responsibilities for the Audit of the Standalone Financial Statements section of our report. We are independent of the Company in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Standalone Financial Statements under the provisions of the Act and the Rules thereunder, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter

We draw attention to the following matters in the notes to the Standalone Financial Statements:

(a) Note No. 34(a) regarding billing and accounting of sales on provisional basis.

(b) Note No. 46(a) in respect of one of the projects of Company consisting of three units of 800MW each, where the order of National Green Tribunal (NGT) on the matter of environmental clearance for the project has been stayed by the Hon'ble Supreme Court of India, the matter is sub-judice and the units have since been declared commercial.

(c) Note no. 46(b) in respect of one of the projects under construction consisting of two units of 800MW each, where the National Green Tribunal (NGT) has passed an order to keep the environment clearance granted to the project in abeyance, and directed to carry out additional studies relating to environmental impact assessment, and the Company has filed an appeal before Hon'ble Supreme Court of India.

(d) Note No. 57(iii)(b) with respect to appeal filed by the company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the Company and the related provision made/disclosure of contingent liability as mentioned in the said note.

Our opinion is not modified in respect of these matters.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Standalone Financial Statements of the current period. These matters were addressed in the context of our audit of the Standalone Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, description of how our audit addressed the matter is provided in that context. We have determined the matters described below to be the key audit matters to be communicated in our report.

Sr. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
1.	**Recognition and Measurement of revenue from Sale of Energy** The company records revenue from sale of energy as per the principles enunciated under Ind AS 115, based on tariff approved by the Central Electricity Regulatory Commission (CERC) as modified by the orders of Appellate Authorities. Pending issue of provisional/final tariff order w.e.f. 01 April 2019 sales has been provisionally recognised considering the applicable CERC Tariff Regulations 2019. This is considered as key audit matter due to the nature and extent of estimates made as per the CERC Tariff Regulations, which leads to recognition and measurement of revenue from sale of energy being complex and judgemental. (Refer Note No. 34 to the Standalone Financial Statements, read with the Significant Accounting Policy No. C.15)	We have obtained an understanding of the CERC Tariff Regulations, orders, circulars, guidelines and the Company's internal circulars and procedures in respect of recognition and measurement of revenue from sale of energy comprising of capacity and energy charges and adopted the following audit procedures: - Evaluated and tested the effectiveness of the Company's design of internal controls relating to recognition and measurement of revenue from sale of energy. - Verified the accounting of revenue from sale of energy based on provisional tariff computed as per the principles of CERC Tariff Regulations 2019. Based on the above procedure performed, the recognition and measurement of revenue from sale of energy is considered to be adequate and reasonable.
2.	**Impairment assessment of Property, Plant and Equipment (PPE)** The Company has a material operational asset base (PPE) relating to generation of electricity and is one of the components for determining the tariff as per the CERC Tariff Regulations, which may be vulnerable to impairment. We considered this as a key audit matter as the carrying value of PPE requires impairment assessment based on the future expected cash flows associated with the power plants (Cash generating units), (Refer Note No. 56(a) to the Standalone Financial Statements, read with the Accounting Policy No. C.20)	We have obtained an understanding and tested the design and operating effectiveness of controls as established by the Company's management for impairment assessment of PPE. We evaluated the Company's process of impairment assessment in assessing the appropriateness of the impairment model including the independent assessment of discount rate, economic growth rate, terminal value etc. We evaluated and checked the calculations of the cash flow forecasts prepared by the Company taking into consideration the CERC (Terms and Conditions of Tariff) Regulations, 2019 (applicable for the tariff period of 5 years from 1 April 2019 to 31 March 2024) along with the aforementioned assumptions. Based on the above procedures performed, we observed that the Company's impairment assessment of the PPE is adequate and reasonable.

Sr. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
3.	**Deferred Tax Asset relating to MAT Credit Entitlement and corresponding Regulatory Deferral Liability** The company has recognised deferred tax asset relating to MAT credit entitlement. Utilisation of MAT credit will result in lower outflow of Income Tax in future years and accordingly Regulatory Deferral Liability attributable to the said MAT credit entitlement has also been recognised, payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations. The recoverability of this deferred tax asset relating to MAT credit entitlement is dependent upon the generation of sufficient future taxable profits to utilise such entitlement within the stipulated period prescribed under the Income Tax Act,1961. We identified this as a key audit matter because of the importance of this matter to the intended users of the Financial Statements and its materiality; and requirement of judgement in forecasting future taxable profits for recognition of MAT credit entitlement considering the recoverability of such tax credits within allowed time frame as per the provisions of the Income Tax Act,1961. (Refer Note No. 19,26,49 & 64 to the Standalone Financial Statements, read with the Accounting Policy No. C.4 and C.18)	We have obtained an understanding for recognition of deferred tax asset relating to MAT credit entitlement and corresponding liability of the same in Regulatory Deferral Account including the management's judgement. We further assessed the related forecasts of future taxable profits and evaluated the reasonableness of the considerations /assumptions underlying the preparation of these forecasts. We have also verified the regulatory deferral account balance attributable to the said MAT credit, payable to the beneficiaries in subsequent periods. Based on the above procedures performed, the recognition and measurement of Deferred tax asset relating to MAT credit entitlement and attributable Regulatory Deferral Liability towards beneficiaries, is considered adequate and reasonable.
4.	**Contingent Liabilities** There are a number of litigations pending before various forums against the Company and the management's judgement is required for estimating the amount to be disclosed as contingent liability. We identified this as a key audit matter because the estimates on which these amounts are based involve a significant degree of management judgement in interpreting the cases and it may be subject to management bias. (Refer Note No. 69 to the Standalone Financial Statements, read with the Accounting Policy No. C.13)	We have obtained an understanding of the Company's internal instructions and procedures in respect of estimation and disclosure of contingent liabilities and adopted the following audit procedures: - understood and tested the design and operating effectiveness of controls as established by the management for obtaining all relevant information for pending litigation cases; - discussed with the management regarding any material developments thereto and latest status of legal matters; - read various correspondences and related documents pertaining to litigation cases and relevant external legal opinions obtained by the management and performed substantive procedures on calculations supporting the disclosure of contingent liabilities; - examined management's judgements and assessments in respect of whether provisions are required; - considered the management assessments of those matters that are not disclosed as contingent liability since the probability of material outflow is considered to be remote; - reviewed the adequacy and completeness of disclosures; Based on the above procedures performed, the estimation and disclosures of contingent liabilities is considered to be adequate and reasonable.

Information other than the Standalone Financial Statements and Auditors' Report thereon

The Company's Board of Directors is responsible for the preparation of the other information. The other information comprises the Corporate Governance Report, and the information included in the Directors' Report including Annexures, Management Discussion and Analysis, Business Responsibility Report and other company related information (but does not include the Standalone Financial Statements and our auditors' report thereon), which are expected to be made available to us after the date of this auditors' report.

Our opinion on the Standalone Financial Statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the Standalone Financial Statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the Standalone Financial Statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

When we read other information, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate actions, if required.

Responsibilities of management and those charged with governance for the Standalone Financial Statements.

The Company's Board of Directors is responsible for the matters stated in Section 134(5) of the Act with respect to the preparation of these Standalone Financial Statements that give a true and fair view of the financial position, financial performance, total comprehensive income, changes in equity and cash flows of the Company in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Company and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the Standalone Financial Statements, that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the Standalone Financial Statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

The Board of Directors is also responsible for overseeing the Company's financial reporting process.

Auditors' Responsibilities for the Audit of the Standalone Financial Statements

Our objectives are to obtain reasonable assurance about whether the Standalone Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Standalone Financial Statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Standalone Financial Statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under section 143(3)(i) of the Act, we are also responsible for expressing our opinion on whether the company has adequate Internal Financial Controls with reference to standalone financial statements in place and the operating effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the Standalone Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the Standalone Financial Statements, including the disclosures, and whether the Standalone Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Standalone Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

1. As required by the Companies (Auditor's Report) Order, 2016 ("the Order") issued by the Central Government of India in terms of Section 143(11) of the Act, and on the basis of such checks of the books and records of the Company as we considered appropriate and according to the information and explanations given to us, we give in "Annexure 1" a statement on the matters specified in paragraphs 3 and 4 of the said Order, to the extent applicable.
2. We are enclosing our report in terms of Section 143(5) of the Act, on the basis of such checks of the books and records of the Company as we considered appropriate and according to the information and explanations given to us, in the "Annexure 2" on the directions issued by the Comptroller and Auditor General of India.
3. As required by Section 143(3) of the Act, we report that:
   (a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.
   (b) In our opinion, proper books of account as required by law have been kept by the Company so far as it appears from our examination of those books.
   (c) The Balance Sheet, the Statement of Profit and Loss (including Other Comprehensive Income), the Statement of Changes in Equity and the Statement of Cash Flows dealt with by this Report are in agreement with the books of account.
   (d) In our opinion, the aforesaid Standalone Financial Statements comply with the Indian Accounting Standards prescribed under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended.
   (e) Being a Government Company pursuant to the Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, provisions of sub-section (2) of Section 164 of the Act, are not applicable to the Company
   (f) With respect to the adequacy of the Internal Financial Controls with reference to the Standalone Financial Statement of the Company and the operating effectiveness of such controls, refer to our separate report in "Annexure 3".
   (g) As per Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, Section 197 of the Act is not applicable to the Government Companies. Accordingly, reporting in accordance with requirement of provisions of section 197(16) of the Act is not applicable on the Company.

(h) With respect to the other matters to be included in the Auditors' Report in accordance with Rule 11 of the Companies (Audit and Auditors) Rules, 2014, as amended, in our opinion and to the best of our information and according to the explanations given to us:

I. The Company has disclosed the impact of pending litigations on its financial position in its Standalone Financial Statements. Refer Note No. 69 to the Standalone Financial Statements;

II. The Company has made provision, as required under the applicable law or Indian accounting standards, for material foreseeable losses, if any, on long-term contracts including derivative contracts.

III. There has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Company.

For S.K.Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 21091382AAAAJQ1583
Place: New Delhi

For S.N. Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Surinder Kr. Khattar)
Partner
M. No. 084993
UDIN: 21084993AAAACR3364
Place: New Delhi

For Varma & Varma
Chartered Accountants
FRN 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 21025854AAAACO1024
Place: Chennai

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 21079236AAAAAF5990
Place: Jaipur

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 21057318AAAABD7694
Place: Bhubaneshwar

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 21073488AAAABN8343
Place: Kanpur

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN:21072534AAAAHB1480
Place: Hazaribagh

Dated: 19 June, 2021

Digitally signed by signatories

ANNEXURE 1 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 1 under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2021

(i) (a) The Company has generally maintained proper records showing full particulars including quantitative details and situation of fixed assets (Property, Plant & Equipment).

(b) The Company is having a regular programme of physical verification of all fixed assets (Property, Plant & Equipment) over a period of three years, which, in our opinion, is reasonable having regard to the size of the Company and the nature of its fixed assets. No material discrepancies were noticed on such verification.

(c) The title deeds of all the immovable properties are held in the name of the Company except as follows:

Description of Asset	No. of cases	Area in acres	Gross block as on 31.03.2021 (₹ Crore)	Net block as on 31.03.2021 (₹ Crore)	Remarks
Land					As per explanation given to us, the Company is taking appropriate steps for completion of legal formalities
- Freehold	999	10190.47	1562.01	1562.01	
- Leasehold (Right of use)	114	9756.00	1383.22	1131.73	
Building & Structures	2	-	4.97	2.06	

(ii) In our opinion the inventory has been physically verified by the management at reasonable intervals. No material discrepancies were noticed on such physical verification.

(iii) The Company has not granted any loans, secured or unsecured to any companies, firms, limited liability partnership or other parties covered in the register maintained under Section 189 of the Act.

In view of the above, reporting under clause 3 (iii)(a), 3 (iii)(b) and 3 (iii)(c) of the Order is not applicable.

(iv) In our opinion and according to the information and explanations given to us, the Company has complied with the provisions of Section 185 and 186 of the Act, as applicable, in respect of loans advanced to subsidiary companies & joint venture company, investments made in the subsidiary and joint venture companies and guarantees issued in favor of Banks for subsidiary companies. The Company has not given any security in respect of which the provisions of section 185 and 186 of the Act are applicable.

(v) The Company has not accepted deposits from the public. As such, the directives issued by the Reserve Bank of India, the provisions of Sections 73 to 76 or any other relevant provisions of the Act and the rules framed thereunder are not applicable to the Company. The Company has obtained deposits from the dependents of employees who die or suffer permanent total disability for which the Company has applied to the Ministry of Corporate Affairs, Government of India for continuation of the exemption earlier obtained in respect of applicability of Section 58A of the Companies Act, 1956, which is still awaited (refer Note No. 30 (d) of the Standalone Financial Statements). No order has been passed with respect to Section 73 to 76, by the Company Law Board or National Company Law Tribunal or Reserve Bank of India or any Court or any other Tribunal.

(vi) We have broadly reviewed the accounts and records maintained by the Company pursuant to the Rules made by the Central Government for the maintenance of cost records under sub-section (1) of Section 148 of the Act read with Companies (Cost Records & Audit) Rules, 2014, as amended and we are of the opinion that prima facie the prescribed accounts and records have been made and maintained. We have not, however, made detailed examination of the records with a view to determine whether they are accurate and complete.

(vii) (a) Undisputed statutory dues including provident fund, income tax, sales tax, goods and service tax, service tax, duty of customs, duty of excise, value added tax, cess and other statutory dues have generally been regularly deposited with the appropriate authorities and there are no undisputed statutory dues outstanding as on 31 March 2021 for a period of more than six months from the date they became payable. We have been informed that employees' state insurance is not applicable to the Company.

(b) According to information and explanations given to us, the gross disputed statutory dues of income tax or sales tax or service tax or duty of customs or duty of excise or value added tax amounts to ₹ 14,813.37 crore in aggregate as on 31 March 2021, out of which ₹ 5,133.57 crore has been deposited under protest/adjusted by tax authorities and the balance of ₹ 9,679.80 crore of dues have not been deposited on account of matters pending before appropriate authorities as detailed below:

Sl No.	Name of the statute	Nature of the disputed statutory dues	Period to which the amount relates (Financial Year)	Forum where the dispute is pending	Gross Disputed Amount (₹ crore)	Amount deposited under protest/ adjusted by Tax Authorities (₹ crore)	Amount not deposited (₹ crores)
1	Income Tax Act, 1961	Income Tax / TDS	2006-07	Assessing Officer	0.78	0.78	-
			2001-02, 2005-06 to 2007-08, 2009-10 to 2011-12	Income Tax Appellate Tribunal*	13,173.11	3,625.67	9,547.44
			2009-10 to 2017-18	Commissioner of Income Tax (Appeals)	1,495.63	1,495.63	-
			2013-14 to 2014-15	Assistant Commissioner of Income Tax	0.32	0.13	0.19
				Sub Total	**14,669.84**	**5,122.21**	**9,547.63**
2	Sales tax and Value Added Tax Act of various states	Sales Tax / VAT	2000-01	High Court	2.72	0.05	2.67
			1985-86, 2000-01 to 2010-11, 2014-15	Appellate Tribunal / Board of Revenue	32.16	7.53	24.63
			2005-06 to 2008-09	Commissioner of Sales Tax (Appeals)	5.21	1.17	4.04
			2000-01, 2002-03, 2004-05, 2006-07, 2014-15 to 2016-17	Additional Commissioner of Sales Tax **	20.30	1.86	18.44
			1988-89 to 1997-98, 2014-15, 2015-16	Additional Commissioner of sales Tax (Appeal)	2.20	0.17	2.03
			2001-02 to 2006-07	Deputy Commissioner Sales Tax	11.66	-	11.66
			2015-16	Joint Commissioner of Sales Tax (Appeals)	1.08	0.10	0.98
			2000-01, 2004-05, 2005-06	Joint Commissioner of Sales Tax ***	3.70	0.36	3.34
				Sub Total	**79.03**	**11.24**	**67.79**
3	Finance Act, 1994	Service Tax	2012-13 to 2017-18	CESTAT	1.17	0.05	1.12
			2009-10 to 2016-17	Commissioner (Appeals)	58.54	0.05	58.49
				Sub Total	**59.71**	**0.10**	**59.61**

Sl No.	Name of the statute	Nature of the disputed statutory dues	Period to which the amount relates (Financial Year)	Forum where the dispute is pending	Gross Disputed Amount (₹ crore)	Amount deposited under protest/ adjusted by Tax Authorities (₹ crore)	Amount not deposited (₹ crores)
4	Customs Act, 1962	Custom Duty	2005-06 to 2015-16	Commissioner of Customs (Appeal)	0.29	0.02	0.27
			1996-97 to 2000-01, 2010-11	CESTAT	4.50	-	4.50
				Sub Total	**4.79**	**0.02**	**4.77**
Total					**14,813.37**	**5,133.57**	**9,679.80**

Remarks:

* includes disputed amount of income tax ₹ 10,270.94 crore including interest of ₹ 5,765.89 crore in respect of certain matters, where the lower Appellate Authority has decided in favor of the company, although the Assessing Officer has disputed the same with appropriate Appellate Authority.

** includes ₹ 19.05 crore towards demand for VAT and CST raised by Sales Tax authority, which has been stayed by Commissioner / Additional Commissioner of sales tax.

*** includes ₹ 3.57 crore towards demand for CST raised by Sales Tax Officer, which has been stayed by the Hon'ble High Court.

Disputed statutory dues include interest and penalty wherever applicable.

During the year Company has settled its disputed income tax dues amounting to ₹ 2246.95 crore for the FY 2003-04, 2004-05 and 2008-09 by opting Vivad se Vishwas Scheme 2020 (VsVs) where due amount of income tax is deposited by the company and procedural formalities are under completion.

(viii) In our opinion and according to the information and explanations given to us, the Company has not defaulted in repayment of loans or borrowings to financial institutions, banks or dues to debenture holders. The company has not taken any loan from the Government.

(ix) The Company has not raised any money by way of initial public offer or further public offer (including debt instruments). According to the information and explanations given to us, the money raised by the Company by way of term loans have been applied for the purposes for which they were obtained.

(x) According to the information and explanations given to us and as represented by the Management and based on our examination of the books and records of the Company and in accordance with generally accepted auditing practices in India, no case of fraud by the Company or any fraud on the Company by its officers or employees has been noticed or reported during the year.

(xi) As per Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, Section 197 of the Act is not applicable to the Government Companies. Accordingly, provisions of clause 3 (xi) of the Order are not applicable to the Company.

(xii) The provisions of clause 3 (xii) of the Order, for Nidhi Company, are not applicable to the Company.

(xiii) The Company has complied with the provisions of Section 177 and 188 of the Act w.r.t. transactions with the related parties, wherever applicable. Details of the transactions with the related parties have been disclosed in the Standalone Financial Statements as required by the applicable Indian Accounting Standards.

(xiv) The Company has not made any preferential allotment or private placement of shares or fully or partly convertible debentures during the year under review. Accordingly, provisions of clause 3 (xiv) of the Order are not applicable to the Company.

(xv) The Company has not entered into any non-cash transactions with the directors or persons connected with them as covered under Section 192 of the Act.

(xvi) According to information and explanation given to us, the Company is not required to be registered under section 45-IA of Reserve Bank of India Act, 1934. Accordingly, provision of clause 3(xvi) of the Order is not applicable to the Company.

For S.K.Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 21091382AAAAJQ1583
Place: New Delhi

For S.N. Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Surinder Kr. Khattar)
Partner
M. No. 084993
UDIN: 21084993AAAACR3364
Place: New Delhi

For Varma & Varma
Chartered Accountants
FRN 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 21025854AAAACO1024
Place: Chennai

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 21079236AAAAAF5990
Place: Jaipur

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 21057318AAAABD7694
Place: Bhubaneshwar

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 21073488AAAABN8343
Place: Kanpur

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN:21072534AAAAHB1480
Place: Hazaribagh

Dated: 19 June, 2021

Digitally signed by signatories

Generating Power & Smiles 24x7 for the Nation

ANNEXURE 2 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 2 under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2021

Sl. No.	Directions u/s 143(5) of the Companies Act, 2013	Auditors' reply on action taken on the directions	Impact on financial statement
1	Whether the Company has system in place to process all the accounting transactions through IT system? If yes, the implications of processing of accounting transactions outside IT system on the integrity of the accounts along with the financial implications, if any, may be stated.	As per the information and explanations given to us, the Company has a system in place to process all the accounting transactions through IT system. SAP-ERP has been implemented for all the processes like Financial Accounting (FI), Controlling (CO), Sales and Distribution (SD), Payroll / Human Capital Management (HCM), Material Management (MM), Commercial billing / Industry Solution Utilities (ISU), etc. Based on the audit procedures carried out and as per the information and explanations given to us, no accounting transactions have been processed / carried outside the IT system. Accordingly, there are no implications on the integrity of the accounts.	Nil
2	Whether there is any restructuring of an existing loan or cases of waiver/write off of debts/ loans/ interest etc. made by a lender to the company due to the company's inability to repay the loan? If yes, the financial impact may be stated.	Based on the audit procedures carried out and as per the information and explanations given to us, there was no restructuring of existing loans or cases of waiver/write off of debts/ loans/ interest etc. made by the lender to the company due to the company's inability to repay the loan.	Nil
3	Whether funds received / receivable for specific schemes from Central / State agencies were properly accounted for/utilized as per its term and conditions? List the cases of deviation.	Based on the audit procedures carried out and as per the information and explanations given to us, the funds received/receivable for specific schemes from Central/State agencies were properly accounted for/ utilized as per the respective terms and conditions.	Nil

For S.K.Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 21091382AAAAJQ1583
Place: New Delhi

For S.N. Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Surinder Kr. Khattar)
Partner
M. No. 084993
UDIN: 21084993AAAACR3364
Place: New Delhi

For Varma & Varma
Chartered Accountants
FRN 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 21025854AAAACO1024
Place: Chennai

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 21079236AAAAAF5990
Place: Jaipur

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 21057318AAAABD7694
Place: Bhubaneshwar

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 21073488AAAABN8343
Place: Kanpur

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN:21072534AAAAHB1480
Place: Hazaribagh

Dated: 19 June, 2021

Digitally signed by signatories

ANNEXURE 3 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 3 (f) under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2021

Report on the Internal Financial Controls with reference to the Standalone Financial Statement under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 ("the Act").

We have audited the internal financial controls with reference to the Standalone Financial Statements of NTPC Limited ("the Company") as of 31 March 2021 in conjunction with our audit of the Standalone Financial Statements of the Company for the year ended on that date.

Management's Responsibility for Internal Financial Controls

The Company's management is responsible for establishing and maintaining internal financial controls based on the internal controls over financial reporting criteria established by the Company considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by The Institute of Chartered Accountants of India (ICAI). These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to Company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Act.

Auditors' Responsibility

Our responsibility is to express an opinion on the Company's internal financial controls with reference to the Standalone Financial Statements based on our audit. We conducted our audit in accordance with the Guidance Note on Audit of Internal Financial Controls over Financial Reporting (the "Guidance Note") and the Standards on Auditing, issued by ICAI and deemed to be prescribed under section 143(10) of the Act, to the extent applicable to an audit of internal financial controls, both applicable to an audit of Internal Financial Controls and, both issued by ICAI. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls with reference to the Standalone Financial Statements was established and maintained and if such controls operated effectively in all material respects.

Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial control with reference to the standalone Financial Statements and their operating effectiveness. Our audit of internal financial control with reference to the Standalone Financial Statements included obtaining an understanding of internal financial control with reference to the Standalone Financial Statements, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditors' judgement, including the assessment of the risks of material misstatement of the Standalone Financial Statements, whether due to fraud or error.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the Company's internal financial controls with reference to the Standalone Financial Statements.

Meaning of Internal Financial Controls with reference to the Standalone Financial Statements

A Company's internal financial control with reference to the Standalone Financial Statements is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of Standalone Financial Statements for external purposes in accordance with generally accepted accounting principles. A Company's internal financial control with reference to the Standalone Financial Statements includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of Standalone Financial Statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the Standalone Financial Statements.

Inherent Limitations of Internal Financial Controls with reference to the Standalone Financial Statements

Because of the inherent limitations of internal financial controls with reference to the Standalone Financial Statements, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls with reference to the Standalone Financial Statements to future periods are subject to the risk that the internal financial controls with reference to the Standalone Financial Statements may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinion

In our opinion, to the best of our information and according to the explanations given to us, the Company has, in all material respects, an adequate internal financial controls with reference to the Standalone Financial Statements in place and such internal financial controls with reference to the Standalone Financial Statements were operating effectively as at 31 March 2021, based on the internal controls over financial reporting criteria established by the Company considering the components of internal controls stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by the ICAI.

For S.K.Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 21091382AAAAJQ1583
Place: New Delhi

For S.N. Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Surinder Kr. Khattar)
Partner
M. No. 084993
UDIN: 21084993AAAACR3364
Place: New Delhi

For Varma & Varma
Chartered Accountants
FRN 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 21025854AAAACO1024
Place: Chennai

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 21079236AAAAAF5990
Place: Jaipur

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 21057318AAAABD7694
Place: Bhubaneshwar

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 21073488AAAABN8343
Place: Kanpur

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN:21072534AAAAHB1480
Place: Hazaribagh

Dated: 19 June, 2021

Digitally signed by signatories



MEJA Super Thermal Power Project

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6)(b) OF THE COMPANIES ACT, 2013 ON THE FINANCIAL STATEMENTS OF NTPC LIMITED FOR THE YEAR ENDED 31 MARCH 2021

The preparation of financial statements of NTPC Limited for the year ended 31 March 2021 in accordance with the financial reporting framework prescribed under the Companies Act, 2013 (Act) is the responsibility of the management of the company. The statutory auditors appointed by the Comptroller and Auditor General of India under section 139 (5) of the Act are responsible for expressing opinion on the financial statements under section 143 of the Act based on independent audit in accordance with the standards on auditing prescribed under section 143(10) of the Act. This is stated to have been done by them vide their Audit Report dated 19June 2021.

I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit of the financial statements of NTPC Limited for the year ended 31 March 2021 under Section 143(6) (a) of the Act. This supplementary audit has been carried out independently without access to the working papers of the statutory auditors and is limited primarily to inquiries of the statutory auditors and company personnel and a selective examination of some of the accounting records.

On the basis of my supplementary audit nothing significant has come to my knowledge which would give rise to any comment upon or supplement to statutory auditors' report under section 143(6) (b) of the Act.

For and on behalf of the
Comptroller & Auditor General of India

(D.K. Sekar)
Director General of Audit (Energy),
Delhi

Place: New Delhi
Dated: 13 August 2021



A View of LARA Super Thermal Power Project

EMPLOYEE COST SUMMARY

₹ Crore

Description	2016-17	2017-18	2018-19	2019-20	2020-21
A. Salary, wages and benefits	5,114.83	5,469.28	5,596.61	5,530.64	**5,302.16**
(Incl. Provident fund and other contributions)					
B. Other benefits					
1. Welfare expenses	210.75	308.47	302.11	257.12	**272.56**
2. Township	226.19	245.86	260.94	281.79	**288.57**
3. Educational and school facilities	24.66	33.98	31.12	31.77	**27.67**
4. Medical facilities	185.40	192.03	234.82	254.44	**249.53**
5. Subsidised transport	12.25	11.51	13.32	13.04	**2.90**
6. Social and cultural activities	9.70	7.74	9.31	9.96	**9.08**
7. Subsidised canteen	47.62	62.42	76.48	86.85	**81.80**
Total (B)	**716.57**	**862.01**	**928.10**	**934.97**	**932.11**
Total (A+B)	**5,831.40**	**6,331.29**	**6,524.71**	**6,465.61**	**6,234.27**
8. Year end no. of employees	20,593	19,739	18,359	17,398	**16,798**
9. Average no. of employees	21,113	20,166	19,049	17,879	**17,098**
10. Average salary, wages and benefits per employee per annum (₹)	2,422,597	2,712,129	2,938,007	3,093,372	**3,101,041**
11. Average cost of other benefits per employee per annum (₹)	339,398	427,457	487,217	522,943	**545,157**
12. Average cost of employees remuneration and benefits per annum (₹)	2,761,995	3,139,586	3,425,224	3,616,315	**3,646,198**

Note: 1. Welfare expenses are net of amounts included in Sl. no. 2 to Sl. no. 7.



The 1.45 KM long cement free Fly ash based Geopolymer road inside Telangana Project

Revenue expenditure on Social Overhead for the year ended on 31.03.2021

₹ Crore

S. No.	Particular	Township	Educational and School Facilities	Medical Facilities	Subsidised Transport	Social and Cultural Activities	Subsidised Canteen	Total	Previous Year
1	Payment to employees	38.65	-	162.06	-	-	-	200.71	214.47
2	Material consumed	15.18	-	15.25	-	-	-	30.43	22.31
3	Rates and taxes	1.23	-	-	-	-	-	1.23	1.43
4	Welfare expenses	2.59	23.58	157.48	2.90	8.28	74.63	269.46	324.07
5	Others including repairs & maintenance	213.94	1.67	75.81	0.10	0.12	6.88	298.52	279.00
6	Depreciation	80.13	2.42	3.33	-	0.68	0.29	86.85	79.56
7	**Sub-total (1 to 6)**	**351.72**	**27.67**	**413.93**	**3.00**	**9.08**	**81.80**	**887.20**	**920.84**
8	Less : Recoveries	24.50	-	2.34	0.10	-	-	26.94	28.51
9	**Net expenditure (7-8)**	**327.22**	**27.67**	**411.59**	**2.90**	**9.08**	**81.80**	**860.26**	**892.33**
10	Previous Year	**329.44**	**31.77**	**421.26**	**13.04**	**9.96**	**86.85**	**892.33**	-



NTPC Rojmal Wind Project

CONSOLIDATED BALANCE SHEET AS AT 31 MARCH 2021

₹ Crore

Particulars	Note No.	As at 31 March 2021	As at 31 March 2020
ASSETS			
Non-current assets			
Property, plant and equipment	2	**2,02,598.05**	1,87,176.46
Capital work-in-progress	3	**97,404.16**	98,210.94
Intangible assets	4	**647.13**	626.33
Intangible assets under development	5	**101.87**	297.53
Investments accounted for using the equity method	6	**9,992.18**	9,256.31
Financial assets			
Investments	7	**97.08**	50.28
Loans	8	**554.97**	511.08
Other financial assets	9	**1,092.84**	1,206.32
Deferred tax assets (net)	10	**1,075.89**	1,096.60
Other non-current assets	11	**17,031.51**	14,092.61
Total non-current assets		**3,30,595.68**	3,12,524.46
Current assets			
Inventories	12	**9,809.60**	11,138.54
Financial assets			
Investments	13	**499.99**	-
Trade receivables	14	**17,718.07**	20,314.59
Cash and cash equivalents	15	**950.02**	589.52
Bank balances other than cash and cash equivalents	16	**3,437.78**	2,624.77
Loans	17	**259.13**	252.67
Other financial assets	18	**14,991.26**	13,081.12
Current tax assets (net)	19	**64.70**	60.96
Other current assets	20	**9,086.70**	8,501.08
Total current assets		**56,817.25**	56,563.25
Regulatory deferral account debit balances	21	**11,553.28**	9,397.73
TOTAL ASSETS		**3,98,966.21**	3,78,485.44
EQUITY AND LIABILITIES			
Equity			
Equity share capital	22	**9,696.67**	9,894.56
Other equity	23	**1,16,041.80**	1,08,944.60
Total equity attributable to owners of the Company		**1,25,738.47**	1,18,839.16
Non-controlling interests	24	**3,523.71**	3,317.19
Total equity		**1,29,262.18**	1,22,156.35
Liabilities			
Non-current liabilities			
Financial liabilities			
Borrowings	25	**1,81,271.91**	1,76,020.02
Trade payables	26		
Total outstanding dues of micro and small enterprises		**13.78**	10.35
Total outstanding dues of creditors other than micro and small enterprises		**66.35**	57.75
Other financial liabilities	27	**2,089.14**	1,404.45
Provisions	28	**1,042.39**	1,085.02
Deferred tax liabilities (net)	29	**9,887.82**	8,715.42
Other non-current liabilities	30	**1,996.47**	1,551.13
Total non-current liabilities		**1,96,367.86**	1,88,844.14

₹ Crore

Particulars	Note No.	As at 31 March 2021	As at 31 March 2020
Current liabilities			
Financial liabilities			
Borrowings	31	**15,964.62**	16,556.23
Trade payables	32		
Total outstanding dues of micro and small enterprises		**404.12**	512.24
Total outstanding dues of creditors other than micro and small enterprises		**8,322.16**	9,596.34
Other financial liabilities	33	**36,301.39**	28,646.96
Other current liabilities	34	**1,949.50**	1,856.19
Provisions	35	**8,113.60**	7,372.06
Current tax liabilities (net)	36	**17.50**	1.71
Total current liabilities		**71,072.89**	64,541.73
Deferred revenue	37	**2,263.28**	2,943.22
TOTAL EQUITY AND LIABILITIES		**3,98,966.21**	3,78,485.44
Significant accounting policies	1		

The accompanying notes 1 to 75 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar) Company Secretary	(A.K. Gautam) Director (Finance) DIN: 08293632	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037

This is the Consolidated Balance Sheet referred to in our report of even date

For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N	For S.N. Dhawan & Co LLP Chartered Accountants Firm Reg. No. 000050N/N500045	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S
(Rohit Mehta) Partner M No. 091382	(Mukesh Bansal) Partner M No.505269	(P.R.Prasanna Varma) Partner M No.025854 Place:Chennai

For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C	For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323920E	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C	For V.K. Jindal & Co Chartered Accountants Firm Reg. No. 001468C
(Thalendra Sharma) Partner M No.079236 Place:Jaipur	(C.K.Prusty) Partner M No. 057318 Place: Bhubaneshwar	(Ranjeet Singh) Partner M.No.073488 Place: Kanpur	(Suresh Agarwal) Partner M.No.072534 Place: Hazaribagh

Place : New Delhi
Dated : 19 June 2021
Digitally signed by signatories

CONSOLIDATED STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2021

₹ Crore

Particulars	Note No.	For the year ended 31 March 2021	For the year ended 31 March 2020
Income			
Revenue from operations	38	**1,11,531.15**	1,09,464.04
Other income	39	**4,015.68**	2,908.54
Total income		**1,15,546.83**	1,12,372.58
Expenses			
Fuel cost	40	**56,099.26**	57,185.62
Electricity purchased for trading		**5,049.42**	5,185.95
Employee benefits expense	41	**5,953.93**	5,830.48
Finance costs	42	**9,224.14**	8,116.85
Depreciation, amortization and impairment expense	43	**12,450.31**	10,356.16
Other expenses	44	**10,454.71**	9,725.41
Total expenses		**99,231.77**	96,400.47
Profit before share of profits of joint ventures accounted for using equity method, tax and regulatory deferral account balances		**16,315.06**	15,972.11
Add: Share of profits of joint ventures accounted for using equity method		**683.87**	405.40
Profit before exceptional items, tax and regulatory deferral account balances		**16,998.93**	16,377.51
Exceptional items	47	**1,512.19**	-
Profit before tax and regulatory deferral account balances		**15,486.74**	16,377.51
Tax expense	53		
Current tax			
Current year		**2,958.80**	2,782.89
Earlier years		**(1,867.74)**	2,743.64
Deferred tax		**1,329.47**	3,821.01
Total tax expense		**2,420.53**	9,347.54
Profit before regulatory deferral account balances		**13,066.21**	7,029.97
Net movement in regulatory deferral account balances (net of tax)	69	**1,903.19**	4,872.01
Profit for the year		**14,969.40**	11,901.98
Other comprehensive income			
Items that will not be reclassified to profit or loss			
- Net actuarial gains/(losses) on defined benefit plans		**(151.74)**	(372.10)
- Net gains/(losses) on fair value of equity instruments		**46.80**	(41.64)
- Share of other comprehensive income of joint ventures accounted for using the equity method		**(2.77)**	(0.50)
Income tax on items that will not be classfied to profit or loss			
- Net actuarial gains/(losses) on defined benefit plans		**28.82**	66.52
Items that will be reclassified to profit or loss			
- Exchange differences on translation of foreign operations		**(20.20)**	40.00
Other comprehensive income for the year		**(99.09)**	(307.72)
Total comprehensive income for the year		**14,870.31**	11,594.26
Profit attributable to:			
Owners of the Parent Company		**14,634.63**	11,600.23
Non-controlling interests		**334.77**	301.75
		14,969.40	11,901.98
Other comprehensive income attributable to:			
Owners of the Parent Company		**(99.17)**	(303.43)
Non-controlling interests		**0.08**	(4.29)
		(99.09)	(307.72)

₹ Crore

Particulars	Note No.	For the year ended 31 March 2021	For the year ended 31 March 2020
Total comprehensive income attributable to:			
Owners of the Parent Company		**14,535.46**	11,296.80
Non-controlling interests		**334.85**	297.46
		14,870.31	11,594.26
Earnings per equity share attributable to owners of the parent company (Par value ₹ 10/- each)	58		
Basic & Diluted (₹) (including net movement in regulatory deferral account balances)		**14.87**	11.72
Basic & Diluted (₹) (excluding net movement in regulatory deferral account balances)		**12.93**	6.80
Significant accounting policies	1		

The accompanying notes 1 to 75 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar) Company Secretary	(A.K. Gautam) Director (Finance) DIN: 08293632	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037

This is the Consolidated Statement of Profit and Loss referred to in our report of even date

For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N	For S.N. Dhawan & Co LLP Chartered Accountants Firm Reg. No. 000050N/N500045	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S
(Rohit Mehta) Partner M No. 091382	(Mukesh Bansal) Partner M No.505269	(P.R.Prasanna Varma) Partner M No.025854 Place:Chennai

For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C	For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323220E	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C	For V.K. Jindal & Co Chartered Accountants Firm Reg. No. 001468C
(Thalendra Sharma) Partner M No.079236 Place:Jaipur	(C.K.Prusty) Partner M No. 057318 Place: Bhubaneshwar	(Ranjeet Singh) Partner M.No.073488 Place: Kanpur	(Suresh Agarwal) Partner M.No.072534 Place: Hazaribagh

Place : New Delhi
Dated : 19 June 2021
Digitally signed by signatories

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 MARCH 2021

(A) Equity share capital

For the year ended 31 March 2021 — ₹ Crore

Particulars	Amount
Balance as at 1 April 2020	9,894.56
Changes in equity share capital due to buyback of shares during the year (refer Note 22)	(197.89)
Balance as at 31 March 2021	9,696.67

For the year ended 31 March 2020 — ₹ Crore

Particulars	Amount
Balance as at 1 April 2019	9,894.56
Changes in equity share capital during the year	-
Balance as at 31 March 2020	9,894.56

(B) Other equity

For the year ended 31 March 2021 — ₹ Crore

Particulars	Attributable to owners of the parent company												Other equity attributable to owners of the parent company	Non-controlling interests	Total
	Reserves & surplus										Items of other comprehensive income (OCI)				
	Capital reserve	Other capital reserve - common control	Securities premium	Capital redemption reserve	Bonds/ Debentures redemption reserve	Self insurance reserve	Fly ash utilisation reserve fund	Corporate Social Responsibility reserve	General reserve	Retained earnings	Equity instruments through OCI	Foreign currency translation reserve			
Balance as at 1 April 2020	**72.86**	**(5,159.26)**	**2,228.46**	-	**7,700.97**	-	**599.72**	**2.35**	**92,499.15**	**11,009.35**	**(50.58)**	**41.58**	**1,08,944.60**	**3,317.19**	**1,12,261.79**
Profit for the year	-	-	-	-	-	-	-	-	-	14,634.63	-	-	**14,634.63**	**334.77**	**14,969.40**
Other comprehensive income	-	-	-	-	-	-	-	-	-	(125.77)	46.80	(20.20)	**(99.17)**	**0.08**	**(99.09)**
Total comprehensive income	-	-	-	-	-	-	-	-	-	14,508.86	46.80	(20.20)	**14,535.46**	**334.85**	**14,870.31**
Impact of business combination and additional non-controlling interest arising on acquisition /disposal of interest & other adjustments	438.61	-	-	-	-	200.00	-	-	-	0.24	-	-	**638.85**	**119.03**	**757.88**
Adjustments from retained earnings	-	-	-	-	-	-	-	-	-	(85.08)	85.08	-	-	-	-
Transfer to retained earnings	-	-	-	-	(771.00)	-	-	(2.35)	-	773.35	-	-	-	-	-
Transfer from retained earnings	-	-	-	-	40.50	-	-	-	6,581.00	(6,621.50)	-	-	-	-	-
Accretion / (utilisation) in fly ash utlisation fund (net) (Note 23)	-	-	-	-	-	-	19.88	-	-	-	-	-	**19.88**	-	**19.88**
Utilised for buyback of equity shares (Note 23)	-	-	(2,228.46)	-	-	-	-	-	(337.47)	-	-	-	**(2,565.93)**	-	**(2,565.93)**
Transferred to capital redemption reserve (Note 23)	-	-	-	197.89	-	-	-	-	(197.89)	-	-	-	-	-	-
Final dividend paid for the year 2019-20 (Note 23)	-	-	-	-	-	-	-	-	-	(2,622.06)	-	-	**(2,622.06)**	**(247.36)**	**(2,869.42)**
Interim dividend paid for the year 2020-21 (Note 23)	-	-	-	-	-	-	-	-	-	(2,909.00)	-	-	**(2,909.00)**	-	**(2,909.00)**
Balance as at 31 March 2021	**511.47**	**(5,159.26)**	-	**197.89**	**6,970.47**	**200.00**	**619.60**	-	**98,544.79**	**14,054.16**	**81.30**	**21.38**	**1,16,041.80**	**3,523.71**	**1,19,565.51**

For the year ended 31 March 2020

₹ Crore

Particulars	Attributable to owners of the parent company												Other equity attributable to owners of the parent company	Non-controlling interests (NCI)	Total
	Reserves & surplus										Items of other comprehensive income (OCI)				
	Capital reserve	Other capital reserve - common control	Securities premium	Capital redemption reserve	Bonds/ Debentures redemption reserve	Self insurance reserve	Fly ash utilisation reserve fund	Corporate Social Responsibility reserve	General reserve	Retained earnings	Equity instruments through OCI	Foreign currency translation reserve			
Balance as at 1 April 2019	72.86	(5,170.26)	2,228.46	-	8,597.97	-	638.11	2.39	85,999.15	9,100.33	(8.94)	1.58	1,01,461.65	2,908.20	1,04,369.85
Profit for the year	-	-	-	-	-	-	-	-	-	11,600.23	-	-	11,600.23	301.75	11,901.98
Other comprehensive income	-	-	-	-	-	-	-	-	-	(301.79)	(41.64)	40.00	(303.43)	(4.29)	(307.72)
Total comprehensive income	-	-	-	-	-	-	-	-	-	11,298.44	(41.64)	40.00	11,296.80	297.46	11,594.26
Additional non-controlling interest arising on acquisition / disposal of interest & other adjustments	-	-	-	-	-	-	-	-	-	3.82	-	-	3.82	150.28	154.10
Impact of adjustments in share of net profits of joint ventures accounted for using equity method pertaining to previous years	-	-	-	-	-	-	-	-	-	(53.94)	-	-	(53.94)	-	(53.94)
Transfer to retained earnings	-	-	-	-	(897.00)	-	-	(2.49)	-	899.49	-	-	-	-	-
Transfer from retained earnings	-	-	-	-	-	-	-	2.45	6,500.00	(6,502.45)	-	-	-	-	-
Accretion / (utilisation) in fly ash utlisation fund (net) (Note 23)	-	-	-	-	-	-	(38.39)	-	-	-	-	-	(38.39)	-	(38.39)
Final dividend paid for the year 2018-19 (Refer Note 23)	-	-	-	-	-	-	-	-	-	(2,606.50)	-	-	(2,606.50)	(32.14)	(2,638.64)
Tax on final dividend	-	-	-	-	-	-	-	-	-	(533.93)	-	-	(533.93)	(6.61)	(540.54)
Interim dividend paid for the year 2019-20 (Refer Note 23)	-	-	-	-	-	-	-	-	-	(494.73)	-	-	(494.73)	-	(494.73)
Tax on interim dividend	-	-	-	-	-	-	-	-	-	(101.18)	-	-	(101.18)	-	(101.18)
Preaquisition adjustment for issue of further share capital by THDCIL	-	11.00	-	-	-	-	-	-	-	-	-	-	11.00	-	11.00
Balance as at 31 March 2020	72.86	(5,159.26)	2,228.46	-	7,700.97	-	599.72	2.35	92,499.15	11,009.35	(50.58)	41.58	1,08,944.60	3,317.19	1,12,261.79

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Consolidated Statement of Changes in Equity referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Mukesh Bansal)
Partner
M No.505269

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place:Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place:Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 19 June 2021
Digitally signed by signatories

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2021

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
A. CASH FLOW FROM OPERATING ACTIVITIES			
Profit before tax		**16,998.93**	16,377.51
Add: Net movement in regulatory deferral account balances (net of tax)		**1,903.19**	4,872.01
Add: Tax on net movement in regulatory deferral account balances		**387.50**	1,032.07
Profit before tax including movement in regulatory deferral account balances		**19,289.62**	22,281.59
Adjustment for:			
Depreciation, amortisation and impairment expense	**12,450.31**		10,356.16
Provisions	**907.54**		421.12
Special rebate to beneficiaries - exceptional item	**(1,512.19)**		-
Share of net profits of joint ventures accounted for using equity method	**(683.87)**		(405.40)
On account of government grants	**477.38**		(91.54)
Deferred foreign currency fluctuation asset	**527.46**		(1,072.34)
Deferred income from foreign currency fluctuation	**(412.13)**		1,340.04
Regulatory deferral account debit balances	**(2,290.69)**		(5,904.08)
Fly ash utilisation reserve fund	**19.88**		(38.39)
Exchange differences on translation of foreign currency cash and cash equivalents	-		0.03
Finance costs	**9,162.74**		8,060.61
Unwinding of discount on vendor liabilities	**61.40**		56.24
Interest income/Late payment Surcharge/Income on investments	**(3,390.34)**		(1,986.27)
Dividend income	**(9.00)**		(4.80)
Provisions written back	**(64.19)**		(484.06)
Loss on disposal of investment accounted through equity method	**15.88**		-
Profit on de-recognition of property, plant and equipment	**(3.36)**		(12.59)
Loss on de-recognition of property, plant and equipment	**137.27**		64.19
		15,394.09	10,298.92
Operating profit before working capital changes		**34,683.71**	32,580.51
Adjustment for:			
Trade receivables	**1,805.87**		(7,086.60)
Inventories	**2,032.27**		(2,309.68)
Trade payables, provisions, other financial liabilities and other liabilities	**(24.25)**		1,524.12
Loans, other financial assets and other assets	**(2,985.25)**		2,502.01
		828.64	(5,370.15)
Cash generated from operations		**35,512.35**	27,210.36
Income taxes (paid) / refunded		**(3,068.29)**	(3,320.69)
Net cash from/(used in) operating activities - A		**32,444.06**	23,889.67



₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
B. CASH FLOW FROM INVESTING ACTIVITIES			
Purchase of property, plant and equipment & intangible assets	**(23,312.34)**		(18,230.44)
Disposal of property, plant and equipment & intangible assets	**30.36**		167.93
Investment in mutual funds	**(499.99)**		-
Investment in joint venture companies	**(118.78)**		(764.98)
Consideration paid towards acquisition of NEEPCO and THDCIL	-		(11,500.00)
Business combinations	**126.69**		-
Interest income/Late payment Surcharge/Income on investments received	**4,186.63**		1,045.63
Dividend received	**9.00**		4.80
Income tax paid on income from investing activities	**(637.37)**		(326.97)
Bank balances other than cash and cash equivalents	**(818.65)**		(24.09)
Net cash from/(used in) investing activities - B		**(21,034.45)**	(29,628.12)
C. CASH FLOW FROM FINANCING ACTIVITIES			
Proceeds from non-current borrowings	**35,361.97**		33,653.14
Repayment of non-current borrowings	**(23,912.83)**		(9,583.31)
Proceeds from current borrowings	**(591.61)**		(812.62)
Payment of lease obligations	**(57.03)**		(78.71)
Interest paid	**(13,307.37)**		(13,399.15)
Buy back of equity share capital	**(2,763.82)**		-
Dividend paid	**(5,778.42)**		(3,133.37)
Tax on dividend	-		(641.72)
Net cash from/(used in) financing activities - C		**(11,049.11)**	6,004.26
D. Exchange differences on translation of foreign currency cash and cash equivalents		-	(0.03)
Net increase/(decrease) in cash and cash equivalents (A+B+C+D)		**360.50**	265.78
Cash and cash equivalents at the beginning of the year (see Note 1 and 2 below)		**589.52**	323.74
Cash and cash equivalents at the end of the year (see Note 1 and 2 below)		**950.02**	589.52

Notes:

1. Cash and cash equivalents consist of cheques, drafts, stamps in hand, balances with banks and deposits with original maturity of upto three months.
2. Reconciliation of cash and cash equivalents:

Cash and cash equivalents as per Note 15	**950.02**	589.52

3. Refer Note 65 for details of undrawn borrowing facilities that may be available for future operating activities and to settle capital commitments.

4 Reconciliation between the opening and closing balances in the Balance Sheet for liabilities arising from financing activities:

For the year ended 31 March 2021

₹ Crore

Particulars	Non-current borrowings**	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2020	**1,85,572.47**	**855.61**	**16,556.23**
Cash flows during the year	**(1,858.23)**	**(57.03)**	**(591.61)**
Non-cash changes due to:			
- Acquisitions under finance lease	-	**98.91**	-
- Equity shares issued	**(136.86)**	-	-
- Interest on borrowings	**13,196.05**	-	-
- Variation in exchange rates	**(1,126.49)**	-	-
- Transaction costs on borrowings	**(57.86)**	-	-
Closing balance as at 31 March 2021	**1,95,589.08**	**897.49**	**15,964.62**

For the year ended 31 March 2020

₹ Crore

Particulars	Non-current borrowings**	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2019	1,57,194.01	186.41	17,368.85
Cash flows during the year	10,670.68	(78.71)	(812.62)
Non-cash changes due to:			
- Acquisitions under finance lease	-	747.91	-
- Acquisition of subsidiary	-	-	-
- Interest on borrowings	14,062.75	-	-
- Variation in exchange rates	3,665.59	-	-
- Transaction costs on borrowings	(20.56)	-	-
Closing balance as at 31 March 2020	1,85,572.47	855.61	16,556.23

* Includes current maturities of non-current borrowings and interest accrued thereon, refer Note 25 and Note 33.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Consolidated statement of cash flows referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Mukesh Bansal)
Partner
M No.505269

For Varma & Varma
Chartered Accountants
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(P.R.Prasanna Varma)
Partner
M No.025854
Place:Chennai

For Parakh & Co.
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(Thalendra Sharma)
Partner
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Place:Jaipur

For C.K. Prusty & Associates
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Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 19 June 2021
Digitally signed by signatories

Notes forming part of Consolidated Financial Statements

Note 1. Group Information and Significant Accounting Policies

A. Reporting entity

NTPC Limited (the 'Company' or 'Parent Company') is a Company domiciled in India and limited by shares (CIN: L40101DL1975GOI007966). The shares of the Company are listed and traded on the National Stock Exchange of India Limited (NSE) and BSE Limited in India. The address of the Company's registered office is NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi - 110003. These consolidated financial statements comprise the financial statements of the Company and its subsidiaries (referred to collectively as the 'Group') and the Group's interest in its joint ventures. The Group is primarily involved in the generation and sale of bulk power to State Power Utilities. Other business of the Group includes providing consultancy, project management & supervision, energy trading, oil & gas exploration and coal mining.

B. Basis of preparation

1. Statement of Compliance

These consolidated financial statements are prepared on going concern basis following accrual system of accounting and comply with the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Companies Act, 2013 read with the Companies (Indian Accounting Standards) Rules, 2015 as amended, and other relevant provisions of the Companies Act, 2013 and the provisions of the Electricity Act, 2003 to the extent applicable.

These financial statements were approved for issue by the Board of Directors in its meeting held on 19 June 2021.

2. Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis except for:

- Certain financial assets and liabilities (including derivative instruments) that are measured at fair value (refer serial no. 28 of accounting policy regarding financial instruments); and
- Plan assets in the case of employees defined benefit plans that are measured at fair value.

The methods used to measure fair values are discussed in notes to the financial statements.

Historical cost is the amount of cash or cash equivalents paid or the fair value of the consideration given to acquire assets at the time of their acquisition or the amount of proceeds received in exchange for the obligation, or at the amounts of cash or cash equivalents expected to be paid to satisfy the liability in the normal course of business. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

3. Functional and presentation currency

These consolidated financial statements are presented in Indian Rupees (₹) which is the Company's functional currency. All financial information presented in (₹) has been rounded to the nearest crore (up to two decimals), except when indicated otherwise.

4. Current and non-current classification

The Group presents assets and liabilities in the balance sheet based on current/non-current classification.

An asset is classified as current when it is:

- Expected to be realized or intended to be sold or consumed in normal operating cycle;
- Held primarily for the purpose of trading;
- Expected to be realized within twelve months after the reporting period; or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is classified as current when:

- It is expected to be settled in normal operating cycle;

Generating Power & Smiles 24x7 for the Nation

- It is held primarily for the purpose of trading;
- It is due to be settled within twelve months after the reporting period; or
- There is no unconditional right to defer settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets/liabilities are classified as non-current.

Assets and liabilities are classified between current and non-current considering 12 months period as normal operating cycle.

C. Significant accounting policies

A summary of the significant accounting policies applied in the preparation of the consolidated financial statements are as given below. These accounting policies have been applied consistently to all periods presented in the consolidated financial statements.

The Group has elected to utilize the option under Ind AS 101 - 'First time adoption of Indian Accounting Standards' by not applying the provisions of Ind AS 16 - 'Property, plant and equipment' & Ind AS 38 - 'Intangible assets' retrospectively and continue to use the previous GAAP carrying amount as a deemed cost under Ind AS at the date of transition to Ind AS i.e. 1 April 2015. Therefore, the carrying amount of property, plant and equipment and intangible assets as per the previous GAAP as at 1 April 2015, i.e. the Group's date of transition to Ind AS, were maintained on transition to Ind AS.

1. Basis of consolidation

The financial statements of subsidiary companies and joint venture companies are drawn up to the same reporting date as of the Company for the purpose of consolidation.

1.1 Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the relevant activities of the investee. Subsidiaries are fully consolidated from the date on which control is acquired by the Group and are continued to be consolidated until the date that such control ceases.

The Group combines the financial statements of the parent and its subsidiaries line by line adding together like items of assets, liabilities, equity, income and expenses. Intercompany transactions, balances and unrealized gains on transactions between Group companies are eliminated. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with Group's accounting policies.

Non-controlling interests (NCI) in the results and equity of subsidiaries are shown separately in the consolidated statement of profit and loss, consolidated statement of changes in equity and consolidated balance sheet respectively.

Changes in the Group's equity interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

When the Group loses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, and any related NCI and other components of equity. Any interest retained in the former subsidiary is measured at fair value at the date the control is lost. Any resulting gain or loss is recognized in statement of profit and loss. All amounts previously recognized in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets and liabilities of the subsidiary i.e. reclassified to consolidated statement of profit and loss or transferred to equity as specified by applicable Ind AS. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset.

1.2 Joint ventures

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

Interests in joint ventures are accounted for using the equity method, after initially being recognized at cost in the consolidated balance sheet.

Under the equity method of accounting, the investments are initially recognized at cost and adjusted thereafter to recognize the Group's share of the post-acquisition profits or losses of the investee in profit and loss, and the Group's share of other comprehensive income (OCI) of the investee in OCI. Dividends received or receivable from joint ventures are recognized as a reduction in the carrying amount of the investment.

When the Group's share of losses in an equity-accounted investment equals or exceeds its interest in the entity, which includes any long term interest that, in substance, form part of Group investment in joint venture, the Group does not recognize further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the joint venture. Losses recognized using the equity method in excess of the entity's investment in ordinary shares are applied to the other components of the entity's interest in an associate or a joint venture in the reverse order of their seniority i.e. priority in liquidation.

The statement of profit and loss reflects the Group' share of results of operations of the joint venture. Any change in the OCI of those investee is presented as presented as part of the Group OCI. Unrealized gains on transactions between the Group and its joint ventures are eliminated to the extent of the Group's interest in these entities. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. When necessary, adjustments are made to the financial statements of joint ventures to bring their accounting policies into line with the Group's accounting policies.

The carrying amount of equity accounted as investments are tested for impairment in accordance with the policy described in D.11 below.

When the Group ceases to apply equity method of accounting for an investment because of a loss of joint control, any retained interest in the entity is re-measured to its fair value with the change in carrying amount recognized in statement of profit and loss. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as a financial asset. In addition, any amounts previously recognized in OCI in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in OCI are reclassified to profit or loss.

If the ownership interest in a joint venture is reduced but joint control is retained, only a proportionate share of the amounts previously recognized in OCI are reclassified to profit or loss where appropriate.

2. Property, plant and equipment

2.1. Initial recognition and measurement

An item of property, plant and equipment is recognized as an asset if and only if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably.

Items of property, plant and equipment are initially recognized at cost. Cost comprises purchase price including import duties and non-refundable purchase taxes after deducting trade discounts and rebates, any cost directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the present value of initial estimate of cost of dismantling, removal and restoration.

Subsequent measurement is done at cost less accumulated depreciation/amortization and accumulated impairment losses.

When parts of an item of property, plant and equipment that are significant in value and have different useful lives as compared to the main asset, they are recognized separately.

Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relatable to land in possession are treated as cost of land.

In the case of assets put to use, where final settlement of bills with contractors is yet to be effected, capitalization is done on provisional basis subject to necessary adjustment in the year of final settlement.

Assets and systems common to more than one generating unit are capitalized on the basis of engineering estimates/assessments.

Items of spare parts, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized. Other spare parts are carried as inventory and recognized in the statement of profit and loss on consumption.

The acquisition or construction of some items of property, plant and equipment although not directly increasing

the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for the Group to obtain future economic benefits from its other assets. Such items are recognized as property, plant and equipment.

2.2. Subsequent costs

Subsequent expenditure is recognized in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

Expenditure on major inspection and overhauls of generating unit is capitalized, when it meets the asset recognition criteria. Any remaining carrying amount of the cost of the previous inspection and overhaul is derecognized.

The cost of replacing major part of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group and its cost can be measured reliably. The carrying amount of the replaced part is derecognized regardless of whether the replaced part has been depreciated separately. If it is not practicable to determine the carrying amount of the replaced part, the Group uses the cost of the replacement as an indication of what the cost of replaced part was at the time it was acquired or constructed. The costs of the day-to-day servicing of property, plant and equipment are recognized in the statement of profit and loss as and when incurred.

2.3. Decommissioning costs

The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

2.4. De-recognition

Property, plant and equipment is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on de-recognition of an item of property, plant and equipment are determined as the difference between sale proceeds from disposal, if any, and the carrying amount of property, plant and equipment and are recognized in the statement of profit and loss.

In circumstance, where an item of property, plant and equipment is abandoned, the net carrying cost relating to the property, plant and equipment is written off in the same period.

2.5. Depreciation/amortization

Depreciation is recognized in statement of profit and loss on a straight-line basis over the estimated useful life of each part of an item of property, plant and equipment.

Depreciation on the assets of the generation of electricity business, integrated coal mining and on the assets of Corporate & other offices of the Group, covered under Part B of Schedule II of the Companies Act, 2013, is charged on straight-line method following the rates and methodology notified by the Central Electricity Regulatory Commission (CERC) Tariff Regulations.

Depreciation on the assets of the oil & gas exploration and consultancy business is charged on straight-line method following the useful life specified in Schedule II of the Companies Act, 2013 except for the assets referred below.

Depreciation on the following assets is provided on their estimated useful lives, which are different from the useful lives as prescribed under Schedule II to the Companies Act, 2013, ascertained on the basis of technical evaluation/ assessment:

a) Kutcha roads	2 years
b) Enabling works	
- residential buildings	15 years
- internal electrification of residential buildings	10 years
- non-residential buildings including their internal electrification, water supply, sewerage & drainage works, railway sidings, aerodromes, helipads and airstrips	5 years
c) Personal computers & laptops including peripherals	3 years
d) Photocopiers, fax machines, water coolers and refrigerators	5 years
e) Temporary erections including wooden structures	1 year
f) Telephone exchange	15 years
g) Wireless systems, VSAT equipment, display devices viz. projectors, screens, CCTV, audio video conferencing systems and other communication equipment	6 years
h) Energy saving electrical appliances and fittings	2-7 years
i) Solar/wind power plants which are not governed by CERC Tariff Regulations	25 years

Major overhaul and inspection costs which have been capitalized are depreciated over the period until the next scheduled outage or actual major inspection/overhaul, whichever is earlier.

Capital spares are depreciated considering the useful life ranging between 2 to 40 years based on technical assessment.

Right-of-use land and buildings relating to generation of electricity business governed by CERC Tariff Regulations are fully amortized over the lease period or life of the related plant whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Right-of-use land and buildings relating to generation of electricity business not governed by CERC tariff Regulations are fully amortized over the lease period or life of the related plant whichever is lower.

Right-of-use land and buildings relating to corporate, and other offices are fully amortized over lease period or twenty-five years whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Land acquired under Coal Bearing Areas (Acquisition & Development) Act, 1957 and Other right-of-use land acquired for mining business are amortized over the right of use period or balance life of the project whichever is lower.

In respect of integrated coal mines, the mines closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine on commercial declaration.

Depreciation on additions to/deductions from property, plant and equipment during the year is charged on pro-rata basis from/up to the month in which the asset is available for use/sale, disposal or earmarked for disposal.

Where the cost of depreciable assets has undergone a change during the year due to increase/decrease in long-term liabilities (recognized up to 31 March 2016) on account of exchange fluctuation and price adjustment change in duties or similar factors, the unamortized balance of such asset is charged off prospectively over the remaining useful life determined following the applicable accounting policies relating to depreciation/amortization.

Where it is probable that future economic benefits deriving from the expenditure incurred will flow to the Group and the cost of the item can be measured reliably, subsequent expenditure on a property, plant and equipment along-with its unamortized depreciable amount is charged off prospectively over the revised useful life determined by technical assessment.

The residual values, useful lives and method of depreciation of assets other than the assets of generation of electricity business and integrated coal mines governed by CERC Tariff Regulations, are reviewed at each financial year end and adjusted prospectively, wherever required.

Depreciation of an asset ceases at the earlier of the date that the asset is classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with Ind AS 105 and the date that the asset is derecognised.

Refer policy no. C.20 in respect of depreciation/amortization of right-of-use assets.

3. Capital work-in-progress

Cost incurred for property, plant and equipment that are not ready for their intended use as on the reporting date, is classified under capital work-in-progress.

The cost of self-constructed assets includes the cost of materials & direct labour, any other costs directly attributable to bringing the assets to the location and condition necessary for it to be capable of operating in the manner intended by management and the borrowing costs attributable to the acquisition or construction of qualifying asset.

Expenses directly attributable to construction of property, plant and equipment incurred till they are ready for their intended use are identified and allocated on a systematic basis on the cost of related assets.

Deposit works/cost plus contracts are accounted for on the basis of statements of account received from the contractors.

Unsettled liabilities for price variation/exchange rate variation in case of contracts are accounted for on estimated basis as per terms of the contracts.

4. Intangible assets and intangible assets under development

4.1. Initial recognition and measurement

An intangible asset is recognized if and only if it is probable that the expected future economic benefits that are attributable to the asset will flow to the Group and the cost of the asset can be measured reliably.

Intangible assets that are acquired by the Group, which have finite useful lives, are recognized at cost. Subsequent measurement is done at cost less accumulated amortization and accumulated impairment losses. Cost comprises purchase price including import duties, non-refundable taxes after deducting trade discounts and rebates and any directly attributable expenses of preparing the asset for its intended use.

Expenditure on development activities is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Group intends to & has sufficient resources to complete development and to use or sell the asset.

Expenditure incurred which are eligible for capitalizations under intangible assets are carried as intangible assets under development till they are ready for their intended use.

4.2. Subsequent costs

Subsequent expenditure is recognized as an increase in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

4.3. De-recognition

An intangible asset is derecognized when no future economic benefits are expected from their use or upon their disposal. Gain or loss on de-recognition of an intangible asset is determined as the difference between the net disposal proceeds, if any, and the carrying amount of intangible assets and are recognized in the statement of profit and loss.

4.4. Amortization

Cost of software recognized as intangible asset, is amortized on straight-line method over a period of legal right to use or 3 years, whichever is less. Other intangible assets are amortized on straight-line method over the period of legal right to use or life of the related plant, whichever is less.

The amortization period and the amortization method of intangible assets with a finite useful life is reviewed at each financial year end and adjusted prospectively, wherever required.

5. Regulatory deferral account balances

Expense/income recognized in the statement of profit and loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'.

Regulatory deferral account balances are adjusted in the year in which the same become recoverable from or payable to the beneficiaries.

Regulatory deferral account balances are evaluated at each balance sheet date to ensure that the underlying activities meet the recognition criteria and it is probable that future economic benefits associated with such balances will flow to the Group. If these criteria are not met, the regulatory deferral account balances are derecognized.

6. Exploration for and evaluation of mineral resources

6.1. Oil and gas exploration activities

All exploration costs incurred in drilling and equipping exploratory and appraisal wells, cost of drilling exploratory type stratigraphic test wells are initially capitalized as 'Exploratory wells-in-progress' under 'Intangible assets under development' till the time these are either transferred to oil and gas assets when a well is ready for commercial production or expensed as exploration cost (including allocated depreciation) as and when determined to be dry or of no further use, as the case may be.

Costs of exploratory wells are not carried over unless it could be reasonably demonstrated that there are indications of sufficient quantity of reserves and sufficient progress is being made in assessing the reserves and the economic & operating viability of the project. All such carried over costs are subject to review for impairment.

Cost of surveys and prospecting activities conducted in the search of oil and gas are expensed in the year in which these are incurred.

6.2. Coal mining exploration activities

Exploration and evaluation assets comprise capitalized costs which is generally the expenditure incurred associated with finding the mineral by carrying out topographical, geological, geochemical and geophysical studies, exploratory drilling, trenching, sampling, expenditure for activities in relation to evaluation of technical feasibility and commercial viability, acquisition of rights to explore etc.

Exploration and evaluation expenditure incurred after obtaining the mining right or the legal right to explore are capitalized as exploration and evaluation assets under 'Intangible assets under development' and stated at cost less impairment if any. Exploration and evaluation assets are assessed for impairment indicators at least annually.

Once the proved reserves are determined and development of mine/project is sanctioned.

Exploration and evaluation assets are transferred to 'Development of Coal Mines' under 'Capital Work in Progress'. However, if proved reserves are not determined, exploration and evaluation asset is derecognized.

Exploration and evaluation expenditure incurred prior to obtaining the mining right or the legal right to explore are expensed as incurred.

7. Development expenditure on coal mines

When proved reserves are determined and development of mines/project is sanctioned, exploration and evaluation assets are transferred to 'Development of coal mines' under 'Capital work-in-progress'.

Subsequent expenditure is capitalized only where it either enhances the economic benefits of the development/ producing asset or replaces part of the existing development/producing asset. Any remaining costs associated with the part replaced are expensed.

The development expenditure capitalized is net of value of coal extracted during development phase.

Date of commercial operation of integrated coal mines shall be determined on the occurring of earliest of following milestones as provided in CERC tariff regulations:

1) The first date of the year succeeding the year in which 25% of the peak rated capacity as per the mining plan is achieved; or

2) The first date of the year succeeding the year in which the value of production exceeds the total expenditure in that year; or

3) The date of two years from the date of commencement of production;

On the date of commercial operation, the assets under capital work-in-progress are classified as a component of property, plant and equipment under 'Mining property'.

Gains and losses on de-recognition of assets referred above, are determined as the difference between the net disposal proceeds, if any, and the carrying amount of respective assets and are recognized in the statement of profit and loss.

7.1. Stripping activity expense/adjustment

Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Group has to incur such expenses over the life of the mine as technically estimated.

Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue.

Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be, and adjusted as provided in the CERC Tariff Regulations.

7.2. Mines closure, site restoration and decommissioning obligations

The Group's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Group estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. The estimate of expenses is escalated for inflation and then discounted at a pre-tax discount rate that reflects current market assessment of the time value of money and risk, such that the amount of provision reflects the present value of expenditure required to settle the obligation. The Group recognizes a corresponding asset under property, plant and equipment as a separate item for the cost associated with such obligation.

The value of the obligation is progressively increased over time as the effect of discounting unwinds and the same is recognized as finance costs.

Further, a specific escrow account is maintained for this purpose as per approved mine closure plan. The progressive mine closure expenses incurred on year to year basis, forming part of the total mine closure obligation, are initially recognized as receivable from escrow account and thereafter adjusted with the obligation in the year in which the amount is withdrawn from escrow account after concurrence of the certifying agency.

8. Joint operations

The Group has joint arrangements with others for operations in the nature of joint operations. The Group recognizes, on

a line-by-line basis its share of the assets, liabilities and expenses of these joint operations as per the arrangement which are accounted based on the respective accounting policies of the Group.

9. Borrowing costs

Borrowing costs consist of (a) interest expense calculated using the effective interest method as described in Ind AS 109 – 'Financial Instruments' (b) interest expense on lease liabilities recognized in accordance with Ind AS 116– 'Leases' and(c) exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

Borrowing costs that are directly attributable to the acquisition, construction/exploration/ development or erection of qualifying assets are capitalized as part of cost of such asset until such time the assets are substantially ready for their intended use. Qualifying assets are assets which necessarily take substantial period of time to get ready for their intended use or sale.

When the Group borrows funds specifically for the purpose of obtaining a qualifying asset, the borrowing costs incurred are capitalized. When Group borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the capitalization of the borrowing costs is computed based on the weighted average cost of all borrowings that are outstanding during the period and used for the acquisition, construction/exploration or erection of the qualifying asset. However, borrowing costs applicable to borrowings made specifically for the purpose of obtaining a qualifying asset, are excluded from this calculation, until substantially all the activities necessary to prepare that asset for its intended use or sale are complete.

Income earned on temporary investment made out of the borrowings pending utilization for expenditure on the qualifying assets is deducted from the borrowing costs eligible for capitalization.

Capitalization of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying assets for their intended use are complete.

Other borrowing costs are recognized as an expense in the year in which they are incurred.

10. Inventories

Inventories are valued at the lower of cost and net realizable value. Cost includes cost of purchase, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Cost is determined on weighted average basis. Costs of purchased inventory are determined after deducting rebates, trade discounts and other similar items. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

The diminution in the value of obsolete, unserviceable, surplus and non-moving items of stores and spares is ascertained on review and provided for.

Steel scrap is valued at estimated realizable value.

11. Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks, cash on hand and short-term deposits with an original maturity of three months or less, that are readily convertible to known amount of cash and which are subject to an insignificant risk of changes in value.

12. Government grants

Government grants are recognized when there is reasonable assurance that they will be received and the Group will comply with the conditions associated with the grant. Grants that compensate the Group for the cost of depreciable asset are recognized as income in statement of profit and loss on a systematic basis over the period and in the proportion in which depreciation is charged. Grants that compensate the Group for expenses incurred are recognized over the period in which the related costs are incurred and the same is deducted from the related expenses.

13. Fly ash utilization reserve fund

Proceeds from sale of ash/ash products along-with income on investment of surplus fund are transferred to 'Fly ash utilization reserve fund' in terms of provisions of gazette notification dated 3 November 2009 issued by Ministry of Environment and Forests, Government of India. The fund is utilized towards expenditure on development of infrastructure/ facilities, promotion & facilitation activities for use of fly ash.

14. Provisions, contingent liabilities and contingent assets

A provision is recognized if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. If

the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at reporting date, taking into account the risks and uncertainties surrounding the obligation.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably. The expense relating to a provision is presented in the statement of profit and loss net of reimbursement, if any.

Contingent liabilities are possible obligations that arise from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events not wholly within the control of the Group. Where it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Contingent liabilities are disclosed on the basis of judgment of the management/independent experts. These are reviewed at each balance sheet date and are adjusted to reflect the current management estimate.

Contingent assets are possible assets that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. Contingent assets are disclosed in the financial statements when inflow of economic benefits is probable on the basis of judgment of management. These are assessed continually to ensure that developments are appropriately reflected in the financial statements.

15. Foreign currency transactions and translation

Transactions in foreign currencies are initially recorded at the functional currency spot exchange rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date. Exchange differences arising on settlement or translation of monetary items are recognized in the statement of profit and loss in the year in which it arises with the exception that exchange differences on long term monetary items related to acquisition of property, plant and equipment recognized up to 31 March 2016 are adjusted to the carrying cost of property, plant and equipment.

Non-monetary items denominated in foreign currency which are measured in terms of historical cost are recorded using the exchange rate at the date of the transaction. In case of advance consideration received or paid in a foreign currency, the date of transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it), is when the Group initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration.

The results and financial position of foreign operations (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities are translated at the closing rate at the date of that balance sheet
- Income and expenses are translated at average exchange rates (unless this is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions), and
- All resulting exchange differences are recognized in OCI.

On consolidation, exchange differences arising from the translation of any net investment in foreign entities are recognized in OCI. The associated exchange differences are reclassified to profit or loss, as part of the gain or loss on disposal of the net investment.

16. Revenue

Group's revenues arise from sale and trading of energy, consultancy, project management & supervision services, income on assets under lease, supply of coal from integrated coal mines and other income. Revenue from other income comprises interest from banks, employees, contractors etc., dividend from mutual fund investments, surcharge received from beneficiaries for delayed payments, sale of scrap, other miscellaneous income, etc.

16.1. Revenue from sale of energy

The majority of the Group's operations in India are regulated under the Electricity Act, 2003. Accordingly, the CERC determines the tariff for the Group's power plants based on the norms prescribed in the tariff regulations as applicable from time to time. Tariff is based on the capital cost incurred for a specific power plant and primarily comprises two

components: capacity charge i.e. a fixed charge that includes depreciation, return on equity, interest on working capital, operating & maintenance expenses, interest on loan and energy charge i.e. a variable charge primarily based on fuel costs. Tariff for Group's integrated coal mines are also determined by CERC based on the norms prescribed in the CERC Tariff Regulations.

Revenue is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the products or services and excludes amounts collected on behalf of third parties. The Group recognizes revenue when (or as) the performance obligation is satisfied, which typically occurs when (or as) control over the products or services is transferred to a customer.

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. As at each reporting date, revenue from sale of energy includes an accrual for sales delivered to beneficiaries but not yet billed i.e. contract assets/ unbilled revenue.

The incentives/disincentives are accounted for based on the norms notified/approved by the CERC as per principles enunciated in Ind AS 115 - 'Revenue from contracts with customers'. In cases of power stations where the same have not been notified/approved, incentives/disincentives are accounted for on provisional basis.

Part of revenue from energy sale where CERC tariff Regulations are not applicable is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries and trading of power through power exchanges.

Exchange differences arising from settlement/translation of monetary items denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Regulatory deferred account balances' and such balances are adjusted in the year in which the same becomes recoverable/payable to the beneficiaries.

Exchange differences on account of translation of foreign currency borrowings recognized up to 31 March 2016, to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Deferred foreign currency fluctuation asset' with corresponding credit to 'Deferred income from foreign currency fluctuation'. Deferred income from foreign currency fluctuation account is amortized in the proportion in which depreciation is charged on such exchange differences and same is adjusted against depreciation expense. Fair value changes in respect of forward exchange contracts for derivatives recoverable from/payable to the beneficiaries as per the CERC Tariff Regulations, are recognized in sales.

Revenue from sale of energy through trading is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries as per the guidelines issued by Ministry of New and Renewable Energy, Government of India.

Rebates allowed to beneficiaries as early payment incentives are deducted from the amount of revenue.

16.2. Revenue from services

Revenue from consultancy, project management and supervision services rendered is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the services, which is determined on output method and excludes amounts collected on behalf of third parties. The Group recognizes revenue when the performance obligation is satisfied, which typically occurs when control over the services is transferred to a customer.

Reimbursement of expenses is recognized as other income, as per the terms of the service contracts.

Contract modifications are accounted for when additions, deletions or changes are approved either to the contract scope or contract price. The accounting for modifications of contracts involves assessing whether the services added to an existing contract are distinct and whether the pricing is at the standalone selling price. Services added that are not distinct are accounted for on a cumulative catch up basis, while those that are distinct are accounted for prospectively, either as a separate contract, if the additional services are priced at the standalone selling price, or as a termination of the existing contract and creation of a new contract if not priced at the standalone selling price.

16.3. Other income

Interest income is recognized, when no significant uncertainty as to measurability or collectability exist, on a time proportion basis taking into account the amount outstanding and the applicable interest rate, using the effective interest rate method (EIR). For credit impaired financial assets the EIR is applied to the net carrying amount of the financial asset (after deduction of the loss allowance). EIR is the rate that discounts the estimated future cash receipts

through the expected life of the financial asset to the net carrying amount of the financial asset. For purchased or originated credit-impaired (POCI) financial assets interest income is recognized by calculating the credit-adjusted EIR and applying that rate to the amortized cost of the asset. The credit-adjusted EIR is the interest rate that, at original recognition, discounts the estimated future cash flows (including credit losses) to the amortized cost of the POCI assets.

Scrap other than steel scrap is accounted for as and when sold.

Insurance claims for loss of profit are accounted for in the year of acceptance. Other insurance claims are accounted for based on certainty of realization.

Revenue from rentals and operating leases is recognized on an accrual basis in accordance with the substance of the relevant agreement.

For debt instruments measured either at amortized cost or at fair value through other comprehensive income (OCI), interest income is recorded using the EIR. EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortized cost of a financial liability. When calculating the EIR, the Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in other income in the statement of profit and loss.

The interest/surcharge on late payment/overdue trade receivables for sale of energy is recognized when no significant uncertainty as to measurability or collectability exists.

Interest/surcharge recoverable on advances to contractors and suppliers as well as warranty claims wherever there is uncertainty of realization/acceptance are not treated as accrued and are therefore, accounted for on receipt/ acceptance.

Dividend income is recognized in profit or loss only when the right to receive is established, it is probable that the economic benefits associated with the dividend will flow to the Group, and the amount of the dividend can be measured reliably.

17. Employee benefits

17.1. Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions to separate entities and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution plans are recognized as an employee benefits expense in statement of profit and loss in the period during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available. Contributions to a defined contribution plan that are due after more than 12 months after the end of the period in which the employees render the service are discounted to their present value.

The Group has a defined contribution pension scheme which is administered through a separate trust. The obligation of the Group is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post-retirement medical facility (PRMF) or any other retirement benefits. The Group's contribution towards pension is made to National Pension Trust (NPS) for the employees opted for the scheme. The contributions to the defined contribution pension scheme of the Company/NPS for the year are recognized as an expense and charged to the statement of profit and loss.

17.2. Defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Group's liability towards gratuity, pension scheme at two of the stations in respect of taken over employees from the erstwhile state government power utility, post-retirement medical facility(PRMF), baggage allowance for settlement at home town after retirement, farewell gift on retirement and provident fund scheme to the extent of interest liability on provident fund contribution are in the nature of defined benefit plans.

The Group pays fixed contribution to the provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The contributions to the fund for the year are recognized as expense and are charged to the statement of profit and loss. The obligation of the Group is to make such fixed contributions and to ensure a minimum rate of return to the members as specified by the Government of India.

The gratuity is funded by the Group and is managed by separate trust. The Group has PRMF, under which retired employee and the spouse are provided medical facilities in the Group hospitals/empaneled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Group.

The Group's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the

amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of any plan assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a benefit to the Group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. An economic benefit is available to the Group if it is realizable during the life of the plan, or on settlement of the plan liabilities. Remeasurement comprising of actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in the Other Comprehensive Income (OCI) in the period in which they arise.

Past service costs are recognized in statement of profit and loss on the earlier of the date of the plan amendment or curtailment, and the date that the Group recognizes related restructuring costs. If a plan amendment, curtailment or settlement occurs, the current service cost and the net interest for the period after the re-measurement are determined using the assumptions used for the re-measurement.

17.3. Other long-term employee benefits

Benefits under the Group's leave encashment, long-service award and economic rehabilitation scheme constitute other long term employee benefits.

The Group's net obligation in respect of these long-term employee benefits is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value and the fair value of any related assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. Remeasurement comprising of actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in statement of profit and loss account in the period in which they arise.

The obligations are presented as current liabilities in the balance sheet if the Group does not have an unconditional right to defer settlement for at least twelve months after the reporting period, regardless of when the actual settlement is expected to occur.

17.4. Short-term benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid under performance related pay if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

18. Other expenses

Expenses on ex-gratia payments under voluntary retirement scheme, training & recruitment and voluntary community development are charged to statement of profit and loss in the year incurred.

Expenditure on research is charged to revenue as and when incurred. Expenditure on development is charged to revenue as and when incurred unless it meets the recognition criteria for intangible asset as per Ind AS 38- 'Intangible assets'.

Preliminary expenses on account of new projects incurred prior to approval of feasibility report/techno economic clearance are charged to statement of profit and loss.

Net pre-commissioning income/expenditure is adjusted directly in the cost of related assets and systems.

Transit and handling losses of coal as per Group's norms are included in cost of coal.

19. Income tax

Income tax expense comprises current and deferred tax. Current tax expense is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

Current tax is the expected tax payable on the taxable income for the year computed as per the provisions of Income Tax Act, 1961, using tax rates enacted or substantively enacted by the end of the reporting period, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method, on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the tax bases of assets and liabilities. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they materialize, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax assets against the current tax liabilities, and they relate to income taxes levied by the same tax authority.

Deferred tax is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that future taxable profits will be available against which the deductible temporary difference can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the sufficient taxable profits will be available in future to allow all or part of deferred tax assets to be utilized.

Deferred tax liabilities are not recognized for taxable temporary differences between the carrying amount and tax bases of investments in subsidiaries and interests in joint venture where the Group is able to control the timing of the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are not recognized for temporary differences between the carrying amount and tax bases of investments in subsidiaries and interest in joint arrangements where it is not probable that the differences will reverse in the foreseeable future and taxable profit will not be available against which the temporary difference can be utilized.

Additional income taxes that arise from the distribution of dividends are recognized at the same time that the liability to pay the related dividend is recognized. The income tax consequences of dividends are recognized in profit or loss, other comprehensive income or equity according to where the Group originally recognized those past transactions or events.

Deferred tax assets include Minimum Alternative Tax (MAT) paid in accordance with the tax laws in India, which is likely to give future economic benefits in the form of availability of set off against future income tax liability. MAT credit is recognized as deferred tax asset in the balance sheet when the asset can be measured reliably and it is probable that the future taxable profit will be available against which MAT credit can be utilized.

When there is uncertainty regarding income tax treatments, the Group assesses whether a tax authority is likely to accept an uncertain tax treatment. If it concludes that the tax authority is unlikely to accept an uncertain tax treatment, the effect of the uncertainty on taxable income, tax bases and unused tax losses and unused tax credits is recognized. The effect of the uncertainty is recognized using the method that, in each case, best reflects the outcome of the uncertainty: the most likely outcome or the expected value. For each case, the Group evaluates whether to consider each uncertain tax treatment separately, or in conjunction with another or several other uncertain tax treatments, based on the approach that best prefixes the resolution of uncertainty.

20. Leases

20.1. As lessee

The Group assesses whether a contract contains a lease, at inception of a contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Group assesses whether: (1) the contact involves the use of an identified asset (2) the Group has substantially all of the economic benefits from use of the asset through the period of the lease and (3) the Group has the right to direct the use of the asset.

The Group recognizes a right-of-use asset and a corresponding lease liability for all lease arrangements in which it is a lessee, except for leases with a term of twelve months or less (short-term leases) and leases for low value underlying assets. For these short-term and leases for low value underlying assets, the Group recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease.

Certain lease arrangements include the options to extend or terminate the lease before the end of the lease term. Right-of use assets and lease liabilities include these options when it is reasonably certain that the option to extend the lease will be exercised/option to terminate the lease will not be exercised.

The right-of-use assets are initially recognized at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or prior to the commencement date of the lease plus any initial direct costs less any lease incentives. They are subsequently measured at cost less accumulated depreciation/amortization and impairment losses and adjusted for any reassessment of lease liabilities.

Right-of-use assets are depreciated/amortized from the commencement date to the end of the useful life of the underlying asset, if the lease transfers ownership of the underlying asset by the end of lease term or if the cost of right-of-use assets reflects that the purchase option will be exercised. Otherwise, Right-of-use assets are depreciated/ amortized from the commencement date on a straight-line basis over the shorter of the lease term and useful life of the underlying asset.

Right-of-use assets are evaluated for recoverability whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. For the purpose of impairment testing, the recoverable amount (i.e. the higher of the fair value less cost to sell and the value-in-use) is determined on an individual asset basis unless the asset does not generate cash flows that are largely independent of those from other assets. In such cases, the recoverable amount is determined for the Cash Generating Unit (CGU) to which the asset belongs.

The lease liability is initially measured at amortized cost at the present value of the future lease payments. In calculating the present value, lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, using the incremental borrowing rate. Lease liabilities are re-measured with a corresponding adjustment to the related right-of-use asset if the Group changes its assessment whether it will exercise an extension or a termination option.

20.2. As lessor

At the inception of an arrangement, the Group determines whether such an arrangement is or contains a lease. A specific asset is subject of a lease if fulfillment of the arrangement is dependent on the use of that specified asset. An arrangement conveys the right to use the asset if the arrangement conveys to the customer the right to control the use of the underlying asset. Arrangements that do not take the legal form of a lease but convey rights to customers/ suppliers to use an asset in return for a payment or a series of payments are identified as either finance leases or operating leases.

Accounting for finance leases

Where the Group determines a long term Power Purchase Agreement (PPA) to be or to contain a lease and where the off taker has the principal risk and rewards of ownership of the power plant through its contractual arrangements with the Group, the arrangement is considered a finance lease. Capacity payments are apportioned between capital repayments relating to the provision of the plant, finance income and service income. The finance income element of the capacity payment is recognized as revenue, using a rate of return specific to the plant to give a constant periodic rate of return on the net investment in each period. The service income element of the capacity payment is the difference between the total capacity payment and the amount recognized as finance income and capital repayments and recognized as revenue as it is earned.

The amounts due from lessees under finance leases are recorded in the balance sheet as financial assets, classified as 'Finance lease receivables', at the amount equal to the net investment in the lease.

Accounting for operating leases

Where the Group determines a long term PPA to be or to contain a lease and where the Group retains the principal risks and rewards of ownership of the power plant, the arrangement is considered an operating lease.

For operating leases, the power plant is capitalized as property, plant and equipment and depreciated over its economic life. Rental income from operating leases is recognized on a straight line basis over the term of the arrangement.

21. Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment considering the provisions of Ind AS 36 - 'Impairment of Assets'. If any such indication exists, then the asset's recoverable amount is estimated.

The recoverable amount of an asset or cash-generating unit is the higher of its fair value less costs to disposal and its value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the 'cash-generating unit', or "CGU").

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in the statement of profit and loss. Impairment losses recognized in respect of CGUs are reduced from the carrying amounts of the assets of the CGU.

Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to

determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of accumulated depreciation or amortization, if no impairment loss had been recognized.

22. Operating segments

In accordance with Ind AS 108 – 'Operating segments', the operating segments used to present segment information are identified on the basis of internal reports used by the Group's management to allocate resources to the segments and assess their performance. The Board of Directors is collectively the Group's 'Chief Operating Decision Maker' or 'CODM' within the meaning of Ind AS 108. The indicators used for internal reporting purposes may evolve in connection with performance assessment measures put in place.

Segment results that are reported to the CODM include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly corporate expenses, finance costs, income tax expenses and corporate income that are not directly attributable to segments.

Revenue directly attributable to the segments is considered as segment revenue. Expenses directly attributable to the segments and common expenses allocated on a reasonable basis are considered as segment expenses.

Segment capital expenditure is the total cost incurred during the period to acquire property, plant and equipment, capital work in progress, intangible assets other than goodwill and intangible assets under development.

Segment assets comprise property, plant and equipment, intangible assets, capital work in progress, intangible assets under development, advances for capital expenditures, trade and other receivables, inventories and other assets that can be directly or reasonably allocated to segments. For the purpose of segment reporting, property, plant and equipment have been allocated to segments based on the extent of usage of assets for operations attributable to the respective segments. Unallocated assets comprise investments, income tax assets, corporate assets and other assets that cannot reasonably be allocated to segments.

Segment liabilities include all operating liabilities in respect of a segment and consist principally of trade payable, payable for capital expenditure and other payables, provision for employee benefits and other provisions. Unallocated liabilities comprise equity, income tax liabilities, loans and borrowings and other liabilities and provisions that cannot reasonably be allocated to segments.

23. Business Combinations

Acquisition of subsidiaries and businesses are accounted for using the acquisition method as at the date of the acquisition, which is the date at which control is transferred to the Group. The consideration transferred in each business combination is measured at the aggregate of the acquisition date fair values of assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree, equity interests issued by the Group in exchange for control of the acquiree and fair value of any asset or liability resulting from a contingent consideration arrangement. The identifiable assets acquired and liabilities assumed are recognized at fair values on their acquisition date (except certain assets and liabilities which are required to be measured as per the applicable standard) and the non-controlling interest is initially recognized at the non-controlling interest's proportionate share of the acquiree's net identifiable assets.

Acquisition related costs are recognized in the consolidated statement of profit and loss.

Goodwill is initially measured at cost, being the excess of the consideration transferred, amount of any non-controlling interest recognized in the acquired entity and acquisition date fair value of any previous equity interest in the acquired entity over the Group's interest in the net fair value of the identifiable assets acquired, liabilities assumed and contingent liabilities recognized. Where the fair value of the identifiable assets acquired and liabilities assumed exceed the consideration transferred, amount of any non-controlling interest recognized in the acquired entity and acquisition date fair value of any previous equity interest in the acquired entity after reassessing the fair values of the net assets and contingent liabilities, the excess is recognized as capital reserve on consolidation.

Business combinations arising from transfers of interests in entities that are under the common control are accounted for using the pooling of interest method. The difference, if any, between the amounts recorded as share capital issued plus any additional consideration in the form of cash or other assets and the amount of share capital of the transferor is transferred to capital reserve and is presented separately from other capital reserves.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date. Any gains or losses arising from such re-measurement are recognized in statement of profit and loss or OCI, as appropriate. When the Group obtains control of a business that is a joint operation, then it considers such an acquisition as a business combination achieved in stages.

24. Dividends

Dividends and interim dividends payable to the Group's shareholders are recognized as changes in equity in the period in which they are approved by the shareholders and the Board of Directors respectively.

25. Material prior period errors

Material prior period errors are corrected retrospectively by restating the comparative amounts for the prior periods presented in which the error occurred. If the error occurred before the earliest period presented, the opening balances of assets, liabilities and equity for the earliest period presented, are restated.

26. Earnings per share

Basic earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Group by the weighted average number of equity shares outstanding during the financial year.

Diluted earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Group by the weighted average number of equity shares considered for deriving basic earnings per equity share and also the weighted average number of equity shares that could have been issued upon conversion of all dilutive potential equity shares.

The number of equity shares and potentially dilutive equity shares are adjusted retrospectively for all periods presented for any bonus shares issued during the financial year.

Basic and diluted earnings per equity share are also computed using the earnings amounts excluding the movements in regulatory deferral account balances.

27. Statement of cash flows

Statement of cash flows is prepared in accordance with the indirect method prescribed in Ind AS 7 - 'Statement of cash flows'.

28. Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. The Group recognizes a financial asset or a financial liability only when it becomes party to the contractual provisions of the instrument.

28.1. Financial assets

Initial recognition and measurement

All financial assets are recognized at fair value on initial recognition, except for trade receivables which are initially measured at transaction price. Transaction costs that are directly attributable to the acquisition of financial assets, which are not valued at fair value through profit or loss, are added to the fair value on initial recognition.

Subsequent measurement

Debt instruments at amortized cost

A 'debt instrument' is measured at the amortized cost if both the following conditions are met:

(a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and

(b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortized cost using the effective interest rate (EIR) method. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of profit and loss. The losses arising from impairment are recognized in the statement of profit and loss. This category generally applies to trade and other receivables.

Debt instrument at FVTOCI (Fair value through OCI)

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:

(a) The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and

(b) The asset's contractual cash flows represent SPPI

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the OCI. However, the Group recognizes interest income, impairment losses & reversals and foreign exchange gain or loss in the statement of profit and loss. On de-recognition of the asset, cumulative gain or loss previously recognized in OCI is reclassified from the equity to the statement of profit and loss. Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL (Fair value through profit or loss)

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as FVTOCI, is classified as at FVTPL.

In addition, the Group may elect to classify a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Interest income on such investments is presented under 'Other income'.

Investment in Equity instruments

All equity investments in entities other than subsidiaries and joint venture companies are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Group decides to classify the same either as at FVTOCI or FVTPL. The Group makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable.

If the Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to statement of profit and loss, even on sale/disposal of investments. However, the Group may transfer the cumulative gain or loss within equity on sale / disposal of the investments.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Dividend on such investments is presented under 'Other income'.

De-recognition

A financial asset (or, where applicable, a part of a financial asset or part of a Group of similar financial assets) is primarily de-recognized (i.e. removed from the Group's balance sheet) when:

- The rights to receive cash flows from the asset have expired, or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

The difference between the carrying amount and the amount of consideration received/receivable is recognized in the statement of profit and loss except for equity instruments classified as at FVTOCI, where such differences are recorded in OCI.

Impairment of financial assets

In accordance with Ind AS 109 – 'Financial Instruments', the Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

(a) Financial assets that are debt instruments, and are measured at amortized cost e.g., loans, debt securities, deposits and bank balance.

(b) Financial assets that are debt instruments and are measured as at FVTOCI.

(c) Lease receivables under Ind AS 116.

(d) Trade receivables, unbilled revenue and contract assets under Ind AS 115.

(e) Loan commitments which are not measured as at FVTPL.

(f) Financial guarantee contracts which are not measured as at FVTPL.

For trade receivables and contract assets/unbilled revenue, the Group applies the simplified approach required by Ind AS 109 - 'Financial Instruments', which requires lifetime expected losses to be recognized from initial recognition.

For recognition of impairment loss on other financial assets and risk exposure (other than purchased or originated credit impaired financial assets), the Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the Group reverts to recognizing impairment loss allowance based on 12-month ECL.

For purchased or originated credit impaired financial assets, a loss allowance is recognized for the cumulative changes in lifetime expected credited losses since initial recognition.

28.2. Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss and financial liabilities at amortized cost, as appropriate. All financial liabilities are recognized initially at fair value and, in the case of liabilities subsequently measured at amortized cost net of directly attributable transaction cost. The Group's financial liabilities include trade and other payables, borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at amortized cost

After initial measurement, such financial liabilities are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in statement of profit and loss when the liabilities are derecognized as well as through the EIR amortization process Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance costs in the statement of profit and loss. This category generally applies to borrowings, trade payables and other contractual liabilities.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the statement of profit and loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in Ind AS 109 are satisfied. For liabilities designated as FVTPL, fair value gains/losses attributable to changes in own credit risk is recognized in OCI. These gains/losses are not subsequently transferred to profit and loss. However, the Group may transfer the cumulative gain or loss within equity on disposal. All other changes in fair value of such liability are recognized in the statement of profit and loss. The Group has not designated any financial liability as at fair value through profit and loss.

De-recognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit and loss.

28.3. Financial guarantee contracts

Financial guarantee contracts issued by the Group are those contracts that require a payment to be made to reimburse the holder for a loss it incurs because the specified debtor fails to make a payment when due in accordance with the terms of a debt instrument. Financial guarantee contracts are recognized initially as a liability at fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantee. Subsequently, the liability is measured at the higher of the amount of loss allowance determined as per impairment requirements of Ind AS 109 - 'Financial Instruments' and the amount recognized less the cumulative amount of income recognized in accordance with the principles of Ind AS 115 'Revenue from Contracts with Customers'.

28.4. Derivative financial instruments

Initial recognition and subsequent measurement

The Group uses derivative financial instruments, such as forward currency contracts and interest rate swaps to hedge its foreign currency risks and interest rate risks of foreign currency loans. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial

liabilities when the fair value is negative. Any gains or losses arising from changes in the fair value of derivatives are taken to statement of profit and loss.

28.5. Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the balance sheet if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

29. Non-current assets held for sale

The Group classifies non-current assets and disposal groups as held for sale if their carrying amounts will be recovered principally through a sale rather than through continuing use and a sale is considered highly probable.

Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification as held for sale, and actions required to complete the plan of sale should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

Non-current assets held for sale and disposal groups are measured at the lower of their carrying amount and the fair value less cost to sell.

Non-current assets classified as held for sale are not depreciated or amortized.

D. Use of estimates and management judgements

The preparation of financial statements requires management to make judgments, estimates and assumptions that may impact the application of accounting policies and the reported value of assets, liabilities, revenue, expenses and related disclosures concerning the items involved as well as contingent assets and liabilities at the balance sheet date. The estimates and management's judgments are based on previous experience & other factors considered reasonable and prudent in the circumstances. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

In order to enhance understanding of the financial statements, information about significant areas of estimation, uncertainty and critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements is as under:

1. **Formulation of accounting policies**

   The accounting policies are formulated in a manner that results in financial statements containing relevant and reliable information about the transactions, other events and conditions to which they apply. Those policies need not be applied when the effect of applying them is immaterial.

2. **Useful life of property, plant and equipment and intangible assets**

   The estimated useful life of property, plant and equipment and intangible assets is based on a number of factors including the effects of obsolescence, demand, competition and other economic factors (such as the stability of the industry and known technological advances) and the level of maintenance expenditures required to obtain the expected future cash flows from the asset.

   Useful life of the assets of the generation of electricity business and integrated coal mines (where tariff is regulated) is determined by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

3. **Recoverable amount of property, plant and equipment and intangible assets**

   The recoverable amount of property, plant and equipment and intangible assets is based on estimates and assumptions regarding in particular the expected market outlook and future cash flows associated with the power plants. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

4. **Defined benefit plans and long-term employee benefits**

   Employee benefit obligations are measured on the basis of actuarial assumptions which include mortality and withdrawal rates as well as assumptions concerning future developments in discount rates, the rate of salary increases and the inflation rate. The Group considers that the assumptions used to measure its obligations are appropriate and documented. However, any changes in these assumptions may have a material impact on the resulting calculations.

5. **Revenues**

The Group records revenue from sale of energy based on tariff rates approved by the CERC as modified by the orders of Appellate Tribunal for Electricity, as per principles enunciated under Ind AS 115. However, in cases where tariff rates are yet to be approved, provisional rates are adopted considering the applicable CERC Tariff Regulations.

6. **Leases not in legal form of lease**

Significant judgment is required to apply lease accounting rules as per Ind AS 116 in determining whether an arrangement contains a lease. In assessing arrangements entered into by the Group, management has exercised judgment to evaluate the right to use the underlying asset, substance of the transactions including legally enforceable agreements and other significant terms and conditions of the arrangements to conclude whether the arrangement meets the criteria as per Ind AS 116.

7. **Assets held for sale**

Significant judgment is required to apply the accounting of non-current assets held for sale under Ind AS 105 - 'Non-current assets held for sale and discontinued operations'. In assessing the applicability, management has exercised judgment to evaluate the availability of the asset for immediate sale, management's commitment for the sale and probability of sale within one year to conclude if their carrying amount will be recovered principally through a sale transaction rather than through continuing use.

8. **Regulatory deferral account balances**

Recognition of regulatory deferral account balances involves significant judgments including about future tariff regulations since these are based on estimation of the amounts expected to be recoverable/payable through tariff in future.

9. **Provisions and contingencies**

The assessments undertaken in recognizing provisions and contingencies have been made in accordance with Ind AS 37 - 'Provisions, contingent liabilities and contingent assets'. The evaluation of the likelihood of the contingent events require best judgment by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, this likelihood could alter.

10. **Classification of joint arrangements**

Group's joint arrangements in the nature of joint operations and joint ventures require unanimous consent from all parties sharing control for decisions about the relevant activities. Parties are jointly and severally liable for the liabilities incurred by the joint arrangements. These arrangements are classified and accounted for as either joint operation or joint venture in accordance with the provisions of Ind AS 111 - 'Joint Arrangements'.

11. **Impairment test of investments in Joint Venture Companies**

The recoverable amount of investment in joint venture companies is based on estimates and assumptions regarding in particular the future cash flows associated with the operations of the investee Company. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

12. **Income taxes**

Significant estimates are involved in determining the provision for current and deferred tax, including amount expected to be paid/recovered for uncertain tax positions.

2. Non-current assets - Property, plant and equipment

As at 31 March 2021 ₹ Crore

Particulars	Gross block				Depreciation, amortisation and impairment				Net block
	As at 1 April 2020	Additions	Deductions/ adjustments	As at 31 March 2021	As at 1 April 2020	For the year	Deductions/ adjustments	Upto 31 March 2021	As at 31 March 2021
Land (including development expenses)									
Freehold	8,759.75	262.63	(13.76)	**9,008.62**	-	-	-	-	**9,008.62**
Right of use	3,378.18	201.05	1.51	**3,580.74**	451.31	135.09	8.08	**594.48**	**2,986.26**
Under submergence (refer footnote (f) below)	2,424.95	10.73	14.47	**2,450.15**	803.66	65.76	-	**869.42**	**1,580.73**
Right of use - Coal Bearing Area Land	3,214.33	139.03	313.58	**3,666.94**	151.48	78.44	-	**229.92**	**3,437.02**
Roads, bridges, culverts and helipads	1,869.32	122.15	71.49	**2,062.96**	278.41	81.86	1.17	**361.44**	**1,701.52**
Building									
Freehold									
Main plant	9,540.86	719.57	1,226.97	**11,487.40**	1,469.13	403.91	430.97	**2,304.01**	**9,183.39**
Others	5,359.79	471.62	94.18	**5,925.59**	734.42	245.65	37.58	**1,017.65**	**4,907.94**
Right of use	33.78	12.05	3.00	**48.83**	13.30	8.30	1.86	**23.46**	**25.37**
Temporary erection	67.60	0.65	4.36	**72.61**	60.60	5.20	3.49	**69.29**	**3.32**
Water supply, drainage and sewerage system	816.99	61.04	107.73	**985.76**	158.92	43.24	75.77	**277.93**	**707.83**
Hydraulic works, barrages, dams, tunnels and power channel	11,153.97	-	(3.26)	**11,150.71**	5,009.00	366.52	(0.04)	**5,375.48**	**5,775.23**
MGR track and signalling system	2,225.76	1,121.01	93.88	**3,440.65**	360.12	181.86	-	**541.98**	**2,898.67**
Railway siding	3,255.19	-	103.99	**3,359.18**	347.44	178.00	-	**525.44**	**2,833.74**
Earth dam reservoir	467.37	60.77	7.99	**536.13**	82.41	29.96	-	**112.37**	**423.76**
Plant and equipment									
Owned	1,78,341.93	22,488.51	7,757.73	**2,08,588.17**	37,800.79	11,257.52	6,870.51	**55,928.82**	**1,52,659.35**
Right of use	85.77	-	-	**85.77**	23.62	4.75	-	**28.37**	**57.40**
Mining Properties	707.03	304.54	-	**1,011.57**	35.35	42.97	-	**78.32**	**933.25**
Site restoration cost	182.43	71.03	-	**253.46**	3.72	5.27	-	**8.99**	**244.47**
Furniture and fixtures	775.36	65.87	2.81	**844.04**	196.04	67.18	(0.52)	**262.70**	**581.34**
Vehicles including speedboats / helicopter									
Owned	56.87	49.97	(14.14)	**92.70**	25.44	3.95	(4.80)	**24.59**	**68.11**
Right of use	33.09	6.33	10.50	**49.92**	5.22	19.12	1.71	**26.05**	**23.87**
Office equipment	460.70	76.66	(10.78)	**526.58**	221.06	52.00	(6.14)	**266.92**	**259.66**
EDP, WP machines and satcom equipment	429.83	96.68	(25.24)	**501.27**	282.48	82.37	(23.37)	**341.48**	**159.79**
Construction equipment	270.30	12.12	2.63	**285.05**	83.07	22.31	0.65	**106.03**	**179.02**
Electrical installations	1,841.99	397.55	19.39	**2,258.93**	239.56	120.02	217.78	**577.36**	**1,681.57**
Communication equipment	103.28	10.03	1.19	**114.50**	48.58	9.28	0.75	**58.61**	**55.89**
Hospital equipment	35.43	9.03	(0.15)	**44.31**	8.40	2.25	0.06	**10.71**	**33.60**
Laboratory and workshop equipment	212.41	13.48	35.27	**261.16**	34.27	13.20	26.36	**73.83**	**187.33**
Assets for ash utilisation	45.52	11.95	-	**57.47**	-	-	-	-	**57.47**
Less: Adjusted from fly ash utilisation reserve fund	45.52	11.95	-	**57.47**	-	-	-	-	**57.47**
Total	**2,36,104.26**	**26,784.10**	**9,805.34**	**2,72,693.70**	**48,927.80**	**13,525.98**	**7,641.87**	**70,095.65**	**2,02,598.05**

As at 31 March 2020 ₹ Crore

Particulars	Gross block				Depreciation, amortisation and impairment				Net block
	As at 1 April 2019	Additions	Deductions/ adjustments	As at 31 March 2020	As at 1 April 2019	For the year	Deductions/ adjustments	Upto 31 March 2020	As at 31 March 2020
Land (including development expenses)									
Freehold	8,718.90	20.11	20.74	8,759.75	-	-	-	-	8,759.75
Right of use	5,495.61	933.49	(3,050.92)	3,378.18	421.07	210.11	(179.87)	451.31	2,926.87
Under submergence (refer footnote (f) below)	2,428.09	36.47	(39.61)	2,424.95	725.19	82.06	(3.59)	803.66	1,621.29
Right of use - Coal Bearing Area Land	-	50.24	3,164.09	3,214.33	-	57.42	94.06	151.48	3,062.85
Roads, bridges, culverts and helipads	1,390.84	261.40	217.08	1,869.32	220.01	64.76	(6.36)	278.41	1,590.91
Building									
Freehold									
Main plant	7,942.14	1,549.50	49.22	9,540.86	1,150.71	320.00	(1.58)	1,469.13	8,071.73
Others	4,305.55	1,052.30	1.94	5,359.79	608.01	213.04	(86.63)	734.42	4,625.37
Right of use	18.91	14.92	(0.05)	33.78	7.42	5.92	(0.04)	13.30	20.48
Temporary erection	63.22	4.09	0.29	67.60	54.68	6.96	(1.04)	60.60	7.00
Water supply, drainage and sewerage system	708.41	90.29	18.29	816.99	120.74	38.19	(0.01)	158.92	658.07
Hydraulic works, barrages, dams, tunnels and power channel	10,843.83	212.88	97.26	11,153.97	4,423.25	582.16	3.59	5,009.00	6,144.97
MGR track and signalling system	1,146.86	1,078.32	0.58	2,225.76	270.10	90.02	-	360.12	1,865.64
Railway siding	1,652.77	1,476.77	125.65	3,255.19	237.47	109.97	-	347.44	2,907.75
Earth dam reservoir	318.89	149.20	(0.72)	467.37	58.19	24.22	-	82.41	384.96
Plant and equipment									
Owned	1,40,950.30	35,677.97	1,713.66	1,78,341.93	29,132.10	9,169.44	(500.75)	37,800.79	1,40,541.14
Right of use	85.77	-	-	85.77	18.87	4.75	-	23.62	62.15
Mining Properties	-	707.03	-	707.03	-	35.35	-	35.35	671.68
Site restoration cost	-	182.43	-	182.43	-	3.72	-	3.72	178.71
Furniture and fixtures	594.79	172.86	7.71	775.36	139.76	60.33	(4.05)	196.04	579.32
Vehicles including speedboats									
Owned	40.30	17.51	(0.94)	56.87	16.98	8.73	(0.27)	25.44	31.43
Right of use	3.25	31.87	(2.03)	33.09	1.98	5.10	(1.86)	5.22	27.87
Office equipment	381.21	81.62	(2.13)	460.70	164.31	57.85	(1.10)	221.06	239.64
EDP, WP machines and satcom equipment	423.66	55.15	(48.98)	429.83	229.62	97.99	(45.13)	282.48	147.35
Construction equipment	240.64	38.83	(9.17)	270.30	68.81	22.14	(7.88)	83.07	187.23
Electrical installations	834.66	994.13	13.20	1,841.99	158.09	82.98	(1.51)	239.56	1,602.43
Communication equipment	89.68	13.25	0.35	103.28	39.63	9.18	(0.23)	48.58	54.70
Hospital Equipment	32.19	3.36	(0.12)	35.43	6.46	1.96	(0.02)	8.40	27.03
Laboratory and workshop equipment	141.17	71.13	0.11	212.41	22.77	11.47	0.03	34.27	178.14
Assets for ash utilisation	40.71	4.81	-	45.52	-	-	-	-	45.52
Less: Adjusted from fly ash utilisation reserve fund	40.71	4.81	-	45.52	-	-	-	-	45.52
Total	1,88,851.64	44,977.12	2,275.50	2,36,104.26	38,296.22	11,375.82	(744.24)	48,927.80	1,87,176.46

a) The conveyancing of the title to **10,552.92 acres** of freehold land of value ₹ **1,753.25 crore** (31 March 2020: 10,478.87 acres of value ₹ 1,611.74 crore), buildings and structures of value ₹ **4.97 crore** (31 March 2020: ₹ 4.97 crore) and also execution of lease agreements for **9,757.14 acres** of right of use land of value ₹ **1,390.35 crore** (31 March 2020: 10,012.14 acres of value ₹ 1,399.87 crore) in favour of the Group are awaiting completion of legal formalities.

b) Land includes **284.35 acres** of freehold land of value ₹ **0.52 crore** (31 March 2020: 284.35 acres of value ₹ 0.52 crore), and **1,939.55 acres** of right of use land of value ₹ **3.81 crore** (31 March 2020: 1939.55 acres of value ₹ 3.81 crore), the value thereof including periodical lease rent accruing thereon is subject to revision on final settlement with the State Government Authorities with demand of late payment charges, if any.

c) Land right of use does not include value of **33 acres** (31 March 2020: 33 acres) of land in possession of the Company. This will be accounted for on settlement of the price thereof by the State Government Authorities.

d) Land includes **1,281.32 acres** of freehold land of value ₹ **118.32 crore** (31 March 2020: 1,284 acres of value ₹ 128.15 crore) and **395 acres** of right of use land of value ₹ **3.10 crore** (31 March 2020: 395 acres of value ₹ 3.10 crore) not in possession of the Company. The Company is taking appropriate steps for repossession of the same.

e) Land-freehold includes an amount of ₹ **263.92 crore** (31 March 2020: ₹ 282.92 crore) deposited with various authorities in respect of land in possession which is subject to adjustment on final determination of price.

f) Gross block of land under submergence represents ₹ **2,271.32 crore** (31 March 2020: ₹ 2,246.12 crore) of freehold land and ₹ **178.83 crore** (31 March 2020: ₹ 178.83 crore) of right of use land. The land has been amortized considering the rate of depreciation provided by the CERC in the tariff regulations and the fact that it will not have any economic value due to deposit of silt and other foreign materials.

g) Possession of land measuring **98 acres** (31 March 2020: 98 acres) consisting of **79 acres** of freehold land (31 March 2020: 79 acres) and **19 acres** of right of use land (31 March 2020: 19 acres) of value ₹ **0.21 crore** (31 March 2020: ₹ 0.21 crore) was transferred to Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (erstwhile UPSEB) for a consideration of ₹ 0.21 crore. Pending approval for transfer of the said land, the area and value of this land has been included in the total land of the Company. The consideration received from erstwhile UPSEB is disclosed under Note 33 - Current liabilities - Other financial liabilities.

h) Refer Note 71 regarding property, plant and equipment under lease.

i) Spare parts of ₹ 5 lakh and above, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized.

j) Property, plant and equipment costing ₹ 5,000/- or less, are depreciated fully in the year of acquisition.

k) Refer Note 25 and Note 31 for information on property, plant and equipment pledged as security by the Group.

l) Refer Note 73(C)(a) for disclosure of contractual commitments for the acquisition of property, plant and equipment.

m) Deduction/adjustments from gross block and depreciation, amortisation and impairment for the year includes:

₹ Crore

Particulars	Gross block		Depreciation, amortisation and impairment	
	For the year ended		For the year ended	
	31 March 2021	31 March 2020	31 March 2021	31 March 2020
Disposal of assets	(39.78)	(59.64)	(30.22)	(46.15)
Retirement of assets	(532.01)	(673.04)	(377.31)	(467.00)
Cost adjustments including exchange differences	1,217.22	3,293.04	-	-
Assets capitalised with retrospective effect/Write back of excess capitalisation	13.18	(54.37)	-	-
Business combinations	9,159.72	-	8,049.91	-
Others	(12.99)	(230.49)	(0.51)	(231.09)
	9,805.34	2,275.50	7,641.87	(744.24)

n) Exchange differences capitalized in Capital work-in-progress (CWIP) are allocated to various heads of CWIP in the year of capitalisation. Exchange differences in respect of assets already capitalised are disclosed in the 'Deductions/Adjustments' column of Property, plant and equipment. Asset-wise details of exchange differences and borrowing costs included in the cost of major heads of CWIP and property, plant and equipment through 'Addition' or 'Deductions/Adjustments' column are given below:

₹ Crore

Particulars	For the year ended 31 March 2021		For the year ended 31 March 2020	
	Exchange Difference included in PPE/CWIP	Borrowing costs included in PPE/CWIP	Exchange Difference included in PPE /CWIP	Borrowing costs included in PPE/CWIP
Building - Freehold				
Main plant	(8.65)	80.11	51.75	97.70
Others	(1.86)	79.17	6.54	123.27
Hydraulic works, barrages, dams, tunnels and power channel	0.58	296.05	27.91	200.56
MGR track and signalling system	(2.36)	43.01	31.82	56.24
Railway siding	-	12.31	0.60	128.65
Plant and equipment	(474.08)	3,008.48	1,915.89	4,690.00
Others including pending allocation	(77.71)	558.57	49.06	753.13
Total	(564.08)	4,077.70	2,083.57	6,049.55

o) Business Combinations

Net block includes items of property, plant and equipment acquired under business combinations (Refer Note 62), details of which are as below:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Leasehold land	2.99	-
Roads, bridges, culverts and helipads	0.29	-
Main plant building-Freehold	34.02	-
Other building-Freehold	8.61	-
Water supply, drainage and sewerage system	8.88	-
Plant and equipment - Owned	991.70	-
Electrical installation	51.10	-
Communication equipment	0.22	-
Others	11.99	-
Total	1,109.80	-

p) **Impairment loss**

Depreciation, amortisation and impairment expense for the year includes impairment loss of M/s Ratnagiri Gas & Power Pvt. Ltd., a subsidiary of the Company, details of which are as below:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Leasehold land	1.29	-
Roads, bridges, culverts and helipads	0.09	-
Main plant building-Freehold	6.49	-
Other building-Freehold	2.70	-
Water supply, drainage and sewerage system	0.24	-
Plant and equipment - Owned	109.69	-
Electrical installation	7.28	-
Communication equipment	0.06	-
Others	3.30	-
Total	131.14	-

q) **Property, plant and equipment subject to operating lease**

(i) The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which are extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Ind AS 116. The net carrying value of such leased assets included above are as under:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Land- Free hold	75.10	74.85
Land- Right of use	0.54	0.61
Roads, bridges, culverts and helipads	12.08	13.99
Main plant building-Freehold	13.93	16.38
Other building-Freehold	38.99	42.01
Water supply, drainage and sewerage system	10.44	11.41
Plant and equipment - Owned	404.53	475.40
Railway siding	2.40	2.65
Electrical installation	4.83	6.05
Others	13.40	14.75
Total	576.24	658.10

(ii) Freehold land includes land measuring **92.23 acres** (31 March 2020: 92.23 acres) of value ₹ **62.53 crore** (31 March 2020: ₹ 62.53 crore) given under operating lease by M/s Patratu Vidyut Utpadan Nigam Ltd., a subsidiary of the Company. Also refer Note 71.

(iii) Vehicles-owned includes electric buses of value ₹ **46.54 crore** (31 March 2020: ₹ Nil) given under operating lease by M/s NTPC Vidyut Vyapar Nigam Ltd., a subsidiary of the Company. Also refer Note 71.

3. Non-current assets - Capital work-in-progress

As at 31 March 2021 ₹ Crore

Particulars	As at 1 April 2020	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2021
Development of land	649.77	238.97	(336.19)	-	**552.55**
Roads, bridges, culverts and helipads	750.99	164.38	(228.89)	122.13	**564.35**
Piling and foundation	712.60	33.93	-	-	**746.53**
Buildings					
Freehold					
Main plant	1,948.67	581.81	225.69	719.57	**2,036.60**
Others	2,039.91	791.28	(478.76)	471.62	**1,880.81**
Temporary erections	27.39	9.16	(8.87)	0.65	**27.03**
Water supply, drainage and sewerage system	104.02	37.52	13.42	40.31	**114.65**
Hydraulic works, barrages, dams, tunnels and power channel	4,284.52	886.94	(8.93)	-	**5,162.53**
MGR track and signalling system	875.57	431.47	(2.07)	1,121.01	**183.96**
Railway siding	1,555.73	614.86	(238.63)	-	**1,931.96**
Earth dam reservoir	309.76	74.06	54.28	60.77	**377.33**
Plant and equipment - owned	72,183.00	18,831.07	4,060.02	21,341.91	**73,732.18**
Furniture and fixtures	40.20	16.43	8.93	19.40	**46.16**
Vehicles	-	48.96	-	47.00	**1.96**
Office equipment	4.65	28.84	1.96	13.74	**21.71**
EDP/WP machines and satcom equipment	8.73	6.40	(0.55)	11.36	**3.22**
Construction equipment	0.13	0.09	(0.04)	0.12	**0.06**
Electrical installations	580.43	166.33	181.97	385.39	**543.34**
Communication equipment	2.89	21.11	(0.49)	2.95	**20.56**
Hospital equipment	0.11	0.57	-	0.22	**0.46**
Laboratory and workshop equipment	5.18	0.54	(0.02)	3.49	**2.21**
Development of coal mines	1,700.62	398.66	(295.46)	223.81	**1,580.01**
	87,784.87	23,383.38	2,947.37	24,585.45	**89,530.17**
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	465.55	34.16	(0.51)	-	**499.20**
Difference in exchange on foreign currency loans	1,401.54	0.94	(207.54)	-	**1,194.94**
Pre-commissioning expenses (net)	268.14	550.33	(359.28)	-	**459.19**
Expenditure during construction period (net)*	4,984.18	5,371.35	(5.81)	-	**10,349.72**
Other expenditure directly attributable to project construction	1,157.32	198.54	(231.80)	12.58	**1,111.48**
Less: Allocated to related works	-	8,736.42	-	-	**8,736.42**
	8,276.73	(2,581.10)	(804.94)	12.58	**4,878.11**
Sub-total	96,061.60	20,802.28	2,142.43	24,598.03	**94,408.28**
Less: Provision for unserviceable works	629.04	92.35	-	-	**721.39**
Construction stores (net of provision)	2,778.38	1,479.74	(540.85)	-	**3,717.27**
Total	**98,210.94**	**22,189.67**	**1,601.58**	**24,598.03**	**97,404.16**

As at 31 March 2020 ₹ Crore

Particulars	As at 1 April 2019	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2020
Development of land	1,017.57	154.75	(515.20)	7.35	649.77
Roads, bridges, culverts and helipads	518.50	419.85	73.75	261.11	750.99
Piling and foundation	676.81	35.79	-	-	712.60
Buildings					
Freehold					
Main plant	2,980.54	688.14	(179.54)	1,540.47	1,948.67
Others	2,660.95	987.97	(588.00)	1,021.01	2,039.91
Temporary erections	38.97	14.95	(23.57)	2.96	27.39
Water supply, drainage and sewerage system	113.93	53.24	27.11	90.26	104.02
Hydraulic works, barrages, dams, tunnels and power channel	3,232.84	1,258.48	6.08	212.88	4,284.52
MGR track and signalling system	936.21	285.96	731.72	1,078.32	875.57
Railway siding	2,688.35	924.63	(580.48)	1,476.77	1,555.73
Earth dam reservoir	271.47	137.82	42.32	141.85	309.76
Plant and equipment-owned	87,278.75	17,349.37	1,459.75	33,904.87	72,183.00
Furniture and fixtures	48.78	25.35	40.12	74.05	40.20
Vehicles	-	-	-	-	-
Office equipment	8.81	2.25	0.62	7.03	4.65
EDP/WP machines and satcom equipment	4.68	9.81	(0.98)	4.78	8.73
Construction equipment	0.13	0.97	(0.97)	-	0.13
Electrical installations	556.94	298.09	634.53	909.13	580.43
Communication equipment	3.12	2.77	(0.16)	2.84	2.89
Hospital equipment	0.04	0.11	-	0.04	0.11
Laboratory and workshop equipment	0.53	5.18	(0.23)	0.30	5.18
Development of coal mines	2,310.71	304.37	(42.88)	871.58	1,700.62
	1,05,348.63	22,959.85	1,083.99	41,607.60	87,784.87
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	532.03	(53.08)	(13.08)	0.32	465.55
Difference in exchange on foreign currency loans	1,569.72	447.21	(615.39)	-	1,401.54
Pre-commissioning expenses (net)	551.64	1,087.43	(1,370.93)	-	268.14
Expenditure during construction period (net)*	4,301.02	8,025.08	(30.96)	-	12,295.14
Other expenditure directly attributable to project construction	2,406.81	74.40	(1,033.13)	290.76	1,157.32
Less: Allocated to related works	-	7,310.96	-	-	7,310.96
	9,361.22	2,270.08	(3,063.49)	291.08	8,276.73
Sub-total	1,14,709.85	25,229.93	(1,979.50)	41,898.68	96,061.60
Less: Provision for unserviceable works	593.56	45.90	(10.42)	-	629.04
Construction stores (net of provision)	3,881.94	2,063.26	(3,166.82)	-	2,778.38
Total	1,17,998.23	27,247.29	(5,135.90)	41,898.68	98,210.94

* Brought from expenditure during construction period (net) - Note 45

a) Construction stores includes material lying with contractors for construction works and are net of provision for shortages pending investigation amounting to ₹ **29.66 crore** (31 March 2020: ₹ 25.64 crore).

b) Pre-commissioning expenses for the year amount to ₹ **651.75 crore** (31 March 2020: ₹ 1,519.26 crore) and after adjustment of pre-commissioning sales of ₹ **101.42 crore** (31 March 2020: ₹ 431.83 crore) resulted in net pre-commissioning expenditure of ₹ **550.33 crore** (31 March 2020: ₹ 1,087.43 crore).

c) Additions to the development of coal mines include expenditure during construction period (net) of ₹ **623.70 crore** (31 March 2020: ₹ 410.85 crore) - [Ref. Note 46] and after netting off the receipts from coal extracted during the development phase amounting to ₹ **278.76 crore** (31 March 2020: ₹ 154.14 crore).

d) Details of exchange differences and borrowing costs capitalised are disclosed in Note 2 (n).

e) Amount capitalised under development of coal mines is included in assets capitalised under 'Mining properties' and 'Site restoration cost' under Property, plant and equipment.

4. Non-current assets - Intangible assets

As at 31 March 2021 ₹ Crore

Particulars	Gross block				Amortisation				Net block
	As at 1 April 2020	Additions	Deductions/ adjustments	As at 31 March 2021	Upto 1 April 2020	For the year	Deductions/ adjustments	Upto 31 March 2021	As at 31 March 2021
Software	104.25	30.52	2.01	**136.78**	66.81	25.26	1.47	**93.54**	**43.24**
Right of use - Land	285.79	3.08	7.95	**296.82**	26.18	9.83	0.46	**36.47**	**260.35**
- Others	384.87	-	34.72	**419.59**	55.59	20.46	-	**76.05**	**343.54**
Total	**774.91**	**33.60**	**44.68**	**853.19**	**148.58**	**55.55**	**1.93**	**206.06**	**647.13**

As at 31 March 2020 ₹ Crore

Particulars	Gross block				Amortisation				Net block
	As at 1 April 2019	Additions	Deductions/ adjustments	As at 31 March 2020	Upto 1 April 2019	For the year	Deductions/ adjustments	Upto 31 March 2020	As at 31 March 2020
Software	61.15	39.90	3.20	104.25	37.59	29.33	(0.11)	66.81	37.44
Right of use - Land	264.54	7.76	13.49	285.79	21.68	9.46	(4.96)	26.18	259.61
- Others	203.97	180.90	-	384.87	41.28	14.31	-	55.59	329.28
Total	529.66	228.56	16.69	774.91	100.55	53.10	(5.07)	148.58	626.33

(a) The right to use of land and others are amortized over the period of legal right to use or life of the related plant, whichever is less.

(b) Cost of acquisition of the right for drawl of water amounting to ₹ **419.59 crore** (31 March 2020: ₹ 384.87 crore) is included under intangible assets – Right to use - Others.

(c) Deductions/adjustments from gross block and amortisation for the year includes:

₹ Crore

	Gross block		Amortisation	
	For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020
Cost adjustments	**35.49**	39.30	**-**	(4.97)
Others	**9.19**	(22.61)	**1.93**	(0.10)
Total	**44.68**	16.69	**1.93**	(5.07)

(d) Refer Note 73(C)(a) for disclosure of contractual commitments for the acquisition of intangible assets.

5. Non-current assets - Intangible assets under development

As at 31 March 2021 ₹ Crore

Particulars	As at 1 April 2020	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2021
Exploration and evaluation assets - coal mines	292.46	22.65	(175.50)	-	139.61
Exploratory wells-in-progress	7.64	-	-	-	7.64
Upfront premium including processing fee	100.83	-	-	-	100.83
Software	4.24	2.52	0.46	1.00	6.22
	405.17	25.17	(175.04)	1.00	254.30
Less: Provision for unserviceable works	107.64	44.79	-	-	152.43
Total	**297.53**	**(19.62)**	**(175.04)**	**1.00**	**101.87**

As at 31 March 2020 ₹ Crore

Particulars	As at 1 April 2019	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2020
Right to use - others	147.52	-	-	147.52	-
Exploration and evaluation assets - coal mines	238.96	20.27	33.23	-	292.46
Exploratory wells-in-progress	7.65	-	(0.01)	-	7.64
Upfront premium including processing fee	100.83	-	-	-	100.83
Software	11.31	4.22	-	11.29	4.24
	506.27	24.49	33.22	158.81	405.17
Less: Provision for unserviceable works	107.64	-	-	-	107.64
Total	398.63	24.49	33.22	158.81	297.53

a) Refer Note 63(d)(ii) w.r.t. exploration and evaluation of assets-coal mines.

6. Non-current assets - Investments accounted for using the equity method

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2021	As at 31 March 2020
Equity instruments - Unquoted (fully paid up - unless otherwise stated, at cost)				
Joint venture companies				
Utility Powertech Ltd. (includes 10,00,000 bonus shares)	20,00,000 (20,00,000)	10 (10)	**89.44**	72.25
NTPC-GE Power Services Private Ltd.	30,00,000 (30,00,000)	10 (10)	**3.07**	6.34
NTPC-SAIL Power Company Ltd.	49,02,50,050 (49,02,50,050)	10 (10)	**1,449.58**	1,369.93
NTPC Tamil Nadu Energy Company Ltd.	1,43,63,96,112 (1,42,81,06,112)	10 (10)	**1,695.27**	1,575.37
Ratnagiri Gas & Power Private Ltd.	- (83,45,56,046)	- (10)	-	-
Konkan LNG Private Ltd.	- (13,97,52,264)	- (10)	-	34.38
Aravali Power Company Private Ltd.	1,43,30,08,200 (1,43,30,08,200)	10 (10)	**3,007.35**	2,993.91

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2021	As at 31 March 2020
NTPC BHEL Power Projects Private Ltd.	5,00,00,000 (5,00,00,000)	10 (10)	-	-
Meja Urja Nigam Private Ltd.	1,72,42,39,800 (1,58,16,39,800)	10 (10)	**1,468.02**	1,303.22
Transformers and Electricals Kerala Ltd.	1,91,63,438 (1,91,63,438)	10 (10)	**35.00**	46.87
National High Power Test Laboratory Private Ltd.	3,04,00,000 (3,04,00,000)	10 (10)	**18.22**	21.97
Energy Efficiency Services Ltd.	46,36,10,000 (46,36,10,000)	10 (10)	**534.61**	556.88
CIL NTPC Urja Private Ltd.	76,900 (76,900)	10 (10)	**0.02**	0.02
Anushakti Vidhyut Nigam Ltd.	49,000 (49,000)	10 (10)	**0.01**	0.01
Hindustan Urvarak and Rasayan Ltd.	1,13,17,65,000 (75,10,85,000)	10 (10)	**1,129.66**	753.77
KSK Dibbin Hydro Power Private Ltd. (Joint venture of Subsidiary Company, NEEPCO Ltd.)	2,79,30,000 (2,79,30,000)	10 (10)	**4.46**	32.37
Trincomalee Power Company Ltd. (* Srilankan rupees)	32,86,061 (32,86,061)	100* (100)*	**1.06**	1.31
Bangladesh-India Friendship Power Company Private Ltd. (** Bangladeshi Taka)	6,42,50,000 (5,42,50,000)	100** (100)**	**556.41**	487.71
Total			**9,992.18**	9,256.31
Aggregate amount of unquoted investments			**9,992.18**	9,256.31

a) Details of interest in joint venture companies, their summarised financial information, restrictions for the disposal of investments held by the Group and commitments towards certain Joint venture companies are disclosed in Note 68.

7. Non-current financial assets - Investments

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2021	As at 31 March 2020
Equity instruments (fully paid up - unless otherwise stated)				
Quoted (designated at fair value through other comprehensive income))				
PTC India Ltd.	1,20,00,000 (1,20,00,000)	10 (10)	**93.30**	46.50
			93.30	46.50
Unquoted (measured at fair value through profit or loss)				
International Coal Ventures Private Ltd.	14,00,000 (14,00,000)	10 (10)	**1.40**	1.40

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2021	As at 31 March 2020
BF-NTPC Energy Systems Ltd.	68,48,681 (68,48,681)	10 (10)	**2.38**	2.38
			3.78	3.78
Co-operative societies			**#**	#
Total			**97.08**	50.28
Aggregate amount of quoted investments - at cost			**12.00**	12.00
Aggregate market value of the quoted investments			**93.30**	46.50
Aggregate amount of unquoted investments			**3.78**	3.78

Equity shares of ₹ **30,200**/- (31 March 2020: ₹ 30,200/-) held in various employee co-operative societies.

a) Investments have been valued as per accounting policy no. C.28.1 (Note 1).

b) The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from PTC India Ltd. (PTC). As the Company was formed by a directive from the GOI, approval of the GOI is awaited for exit by NTPC Limited.

c) The Board of Directors of NTPC Limited in its meeting held on 27 January 2012 accorded in principle approval for withdrawal from International Coal Ventures Private Ltd. (ICVPL). As the Company was formed by a directive from the GOI, approval of the Ministry of Steel, GOI is awaited for exit by NTPC Limited. Pending withdrawal, the Company had lost the joint control over the entity and accordingly, has classified the investment in ICVPL as 'Investment in unquoted equity instruments'.

d) The Board of Directors of NTPC Limited in its meeting held on 19 June 2014 accorded in principle approval for withdrawal from BF-NTPC Energy Systems Ltd. (BF-NTPC), a joint venture of the Company. As BF-NTPC was formed by a directive from the GOI, approval of the GOI was sought for exit by the Company. Ministry of Power, GoI conveyed its approval for winding up of BF-NTPC on 8 January 2018. Consequently, liquidator was appointed in the extra-ordinary general meeting of BF-NTPC held on 9 October 2018. The winding up is under process. Pursuant to winding up proceedings, the Company had lost the joint control over the entity and accordingly, has classified the investment in BF NTPC as 'Investment in unquoted equity instruments'. The difference between the cost of investment and the fair value has been provided for in the earlier years.

e) The Group is of the view that provisions of Ind AS 24 'Related Party Disclosures' and Ind AS 111 'Joint Arrangements' are not applicable to the investments made in PTC India Ltd., International Coal Ventures Private Ltd. and BF-NTPC Energy systems Ltd., and the same has been accounted for as per the provisions of Ind AS 109 'Financial Instruments'.

f) No strategic investments in equity instruments measured at FVTOCI were disposed during the financial year 2020-21, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

8. Non-current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Loans (Considered good, unless otherwise stated)		
Related parties		
Unsecured	**19.08**	19.01
Employees (including accrued interest)		
Secured	**317.21**	292.07
Unsecured	**196.23**	176.65
Others		
Unsecured	**22.45**	23.35
Total	**554.97**	511.08

a) Due from directors and officers of the Group

Directors	**0.08**	0.01
Officers	-	-

b) Loans to related parties include:

Key management personnel	**0.08**	0.01
National High Power Test Laboratory Private Ltd. (Joint venture company)	**18.40**	18.40
NTPC Education and Research Society	**0.60**	0.60

c) Other loans include loan of ₹ **22.39 crore** (31 March 2020: ₹ 23.28 crore) given to Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Group.

9. Non-current assets - Other financial assets

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Claims recoverable	**702.27**	771.36
Finance lease receivables (Refer Note 71)	**366.88**	409.14
Mine closure deposit	**23.69**	25.82
Total	**1,092.84**	1,206.32

a) Claims recoverable includes ₹ **700.30 crore** (31 March 2020: ₹ 749.01 crore) towards the cost incurred upto 31 March 2021 in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI which includes ₹**449.88 crore** (31 March 2020: ₹ 439.57 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court of Delhi. In the event the Hon'ble High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for others (Note 35). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilisation measures, other recurring site expenses and interest costs as well as claims of contractors/vendors for various packages for this project will be compensated in full by the GOI. Hence, no provision is considered necessary.

b) The Company had ascertained that the Power Purchase Agreement (PPA) entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease' under 'Revenue from operations' (Note 38).

c) As per the guidelines from Ministry of Coal, Government of India for preparation of Mine Closure Plan, Escrow Accounts have been opened for each captive mine and the balances held in these escrow accounts are presented as 'Mine closure deposit'. Up to 80% of the total deposited amount including interest accrued in the escrow account shall be released after every five years in line with the periodic examination of the closure plan as per the Guidelines. Interest earned on the escrow account is added to mine closure deposit account.

10. Non-current assets - Deferred tax assets (net)

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Deferred tax assets		
Provisions	**93.88**	107.17
Leave encashment	**7.83**	51.04
Unabsorbed depreciation	**942.69**	835.00
MAT credit entitlement	**87.51**	37.45
Others	**71.39**	75.94
Less: Deferred tax liabilities		
Difference in book depreciation and tax depreciation	**127.41**	10.00
Total	**1,075.89**	1,096.60

a) Deferred tax assets and deferred tax liabilities have been offset to the extent they relate to the same governing laws.

b) The Group has been recognising MAT credit available as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability.

c) Disclosures as per Ind AS 12 'Income Taxes' are provided in Note 53.

Movement in deferred tax assets (net) balances

As at 31 March 2021

₹ Crore

Particulars	As at 1 April 2020	Recognised in statement of profit and loss	Recognised in OCI	Other	As at 31 March 2021
Deferred tax assets					
Provisions	**107.17**	**(12.03)**	-	**(1.26)**	**93.88**
Leave encashment	**51.04**	**(43.21)**	-	-	**7.83**
Unabsorbed depreciation	**835.00**	**107.69**	-	-	**942.69**
MAT credit entitlement	**37.45**	**50.06**	-	-	**87.51**
Others	**75.94**	**0.09**	**0.08**	**(4.72)**	**71.39**
Less: Deferred tax liabilities					
Difference in book depreciation and tax depreciation	**10.00**	**123.38**	-	**(5.97)**	**127.41**
Deferred tax assets (net)	**1,096.60**	**(20.78)**	**0.08**	**(0.01)**	**1,075.89**

As at 31 March 2020

₹ Crore

Particulars	As at 1 April 2019	Recognised in statement of profit and loss	Recognised in OCI	Other	As at 31 March 2020
Deferred tax assets					
Provisions	101.74	5.43	-	-	107.17
Leave encashment	61.40	(10.36)	-	-	51.04
Unabsorbed depreciation	543.33	291.67	-	-	835.00
MAT credit entitlement	9.37	28.08	-	-	37.45
Others	80.30	-	(4.36)	-	75.94
Less: Deferred tax liabilities					
Difference in book depreciation and tax depreciation	(95.32)	105.32	-	-	10.00
Deferred tax assets (net)	891.46	209.50	(4.36)	-	1,096.60

11. Other non-current assets

₹ Crore

Particulars		As at 31 March 2021	As at 31 March 2020
Capital advances			
(Considered good unless otherwise stated)			
Secured		**17.75**	17.83
Unsecured			
Covered by bank guarantee		**3,598.78**	3,258.56
Others		**4,757.75**	3,924.59
Considered doubtful		**168.46**	169.13
Less: Allowance for bad and doubtful advances		**168.46**	169.13
		8,374.28	7,200.98
Advances other than capital advances			
(Considered good unless otherwise stated)			
Security deposits		**370.44**	434.50
Advances to contractors and suppliers			
Unsecured	**2,137.08**		2,082.05
Considered doubtful	**112.57**		112.57
Less: Allowances for bad and doubtful advances	**112.57**		112.57
		2,137.08	2,082.05
Advance tax and tax deducted at source	**15,510.94**		14,870.71
Less: Provision for tax	**11,398.70**		13,069.26
		4,112.24	1,801.45
Deferred foreign currency fluctuation asset		**1,897.47**	2,424.93
Deferred payroll expenditure		**132.47**	143.80
Adjustable from escrow account towards mine closure expenses		**7.52**	4.89
Others		**0.01**	0.01
Total		**17,031.51**	14,092.61

a) In line with accounting policy no. 15 (Note 1), deferred foreign currency fluctuation asset has been accounted and ₹ **98.16 crore** (31 March 2020: ₹ 255.22 crore) being the exchange fluctuations on account of foreign currency loans have been adjusted in 'Energy sales' under 'Revenue from operations' (Note 38).

b) Capital advances include amounts given as advance against works to the following private companies (related parties) in which one or more directors of the Company are directors:

NTPC GE Power Services Private Ltd.	**0.07**	15.81
NTPC BHEL Power Projects Private Ltd.	**216.64**	128.11

c) Capital advances include ₹ **224.29 crore** (31 March 2020: ₹ 224.29 crore), paid to a contractor pending settlement of certain claims which are under arbitration. The amount will be adjusted with the cost of related work or recovered from the party, depending upon the outcome of the arbitration proceedings.

d) Advances to contractors and suppliers include payments to Railways amounting to ₹ **1,963.25 crore** (31 March 2020: ₹ 2,063.56 crore) under customer funding model as per policy on 'Participative model for rail-connectivity and capacity augmentation projects' issued by the Ministry of Railways, GOI. As per this policy, an agreement has been signed between the Company and the Ministry of Railways, GOI on 6 June 2016. As per the agreement, railway projects agreed between the Company and Railways will be constructed, maintained and operated by Railways and ownership of the line and its operations and maintenance will always remain with them. Railways will pay upto 7% of the amount invested through freight rebate on freight volumes every year till the funds provided by the Company are fully recovered along-with interest (equal to the prevailing rate of dividend payable by Railways at the time of signing of respective agreements), subject to the rebate not exceeding the freight amount in the accounting year, after commercial operation date (COD) of the railway projects. The advance is adjusted at projects which have achieved COD based on confirmation from Railways towards freight rebate in consonance with the agreement terms and the interest portion is recognised in Note-39-'Other income'.

e) Secured capital advances are secured against the hypothecation of the construction equipment/material supplied by the contractors/suppliers.

f) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

12. Current assets - Inventories

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Coal	**3,668.02**	5,626.55
Fuel oil	**423.44**	532.22
Naphtha	**66.30**	128.38
Stores and spares	**4,772.54**	4,011.24
Chemicals and consumables	**175.10**	160.66
Loose tools	**13.78**	11.40
Steel scrap	**28.15**	27.80
Others	**872.31**	820.45
	10,019.64	11,318.70
Less: Provision for shortages	**48.70**	24.07
Provision for obsolete/unserviceable items/ diminution in value of surplus inventory	**161.34**	156.09
Total	**9,809.60**	11,138.54
Inventories include material-in-transit		
Coal	**356.74**	330.41
Stores and spares	**46.23**	51.78
Chemicals and consumables	**3.24**	1.58
Loose tools	**0.03**	0.03
Others	**1.10**	3.37

a) Inventory items have been valued as per accounting policy no. C.10 (Note 1).

b) Inventories - Others includes steel, cement, ash bricks etc.

c) Refer Note 25 and 52(b) for information on inventories pledged as security by the Group.

d) Refer Note 52(a) for information on inventories consumed and recognised as expense during the year.

e) Paragraph 32 of Ind AS 2 - Inventories provides that materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. The Group is mainly operating in the regulatory environment and as per CERC Tariff Regulations, cost of fuel and other inventory items are recovered as per extant tariff regulations. Accordingly, the realizable value of the inventories is not lower than the cost.

13. Current financial assets - Investments

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Unquoted		
Investment in mutual funds (measured at fair value through profit or loss)		
Baroda Liquid Fund - Plan-B-Growth	**499.99**	-
Total	**499.99**	-

a) Investments have been valued as per accounting policy no. C.28 (Note 1)

Generating Power & Smiles 24x7 for the Nation

14. Current financial assets - Trade receivables

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Trade receivables		
Unsecured, considered good	**17,718.07**	20,314.59
Credit impaired	**546.84**	188.57
	18,264.91	20,503.16
Less: Allowance for credit impaired trade receivables	**546.84**	188.57
Total	**17,718.07**	20,314.59

a) Based on arrangements between Group, banks and beneficiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net off bills discounted amounting to ₹ **16,410.05 crore** (31 March 2020: ₹ 10,842.34 crore). Also refer Note 73 A(c).

b) Amounts receivable from related parties are disclosed in Note 57.

c) The margin and other tariff have been billed to Discoms including Rajasthan as per the guidelines of MNRE for JNNSM-I uniformely by M/s NVVN Ltd., a subsidiary of the Company. However, three Rajasthan Discoms have not paid the bills issued amounting to ₹ **163.36 crore** (31 March 2020: ₹ 163.36 crore). The above cases were filed with Central Electricity Regulatory Commission (CERC) wherein CERC has decided in favour of the subsidiary in all the matters stated above. However, in all the above cases Rajasthan Discoms have filed appeal with Appellate Tribunal for Electricity (ATE) against order of CERC. The case is pending with ATE. Hence, the subsidiary has not considered making provision for these outstanding dues in the Books.

Further, in matters related to outstanding dues towards payment of trading margin @1.5 paise/unit instead of 7.0 paise/unit in respect of M/s NVVN Ltd, CERC has advised to decide the matter with mutual consent. However, the subsidiary has filed appeal with Appellate Tribunal for Electricity (ATE) against CERC order and requested ATE to direct Rajasthan Discoms to make payment of differential trading margin and surcharge thereon. The case is pending with ATE. Based on order of CERC a provision for the disputed amount of ₹ 85.15 crore has been recognised during the previous year.

d) Credit impaired receivables as at 31 March 2021 also include dues of M/s Ratnagiri Gas & Power Pvt. Ltd, a subsidiary of the Company acquired during the year, amounting to ₹ **392.54 crore** towards non payment of dues by its beneficiaries considering the uncertainty involved.

15. Current financial assets - Cash and cash equivalents

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Balances with banks		
Current accounts	**514.31**	424.42
Deposits with original maturity upto three months (including interest accrued)	**435.50**	164.29
Cheques and drafts on hand	**0.15**	0.73
Others (stamps on hand)	**0.06**	0.08
Total	**950.02**	589.52

16. Current financial assets - Bank balances other than cash and cash equivalents

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Deposits with original maturity of more than three months and maturing within one year (including interest accrued)	**1,986.78**	1,015.47
Earmarked balances with banks #	**1,451.00**	1,609.30
Total	**3,437.78**	2,624.77
# Earmarked balances with banks towards:		
Redemption of bonds due for repayment within one year	**-**	111.00
Fly ash utilisation reserve fund*	**619.60**	599.72
DDUGJY Scheme of the GOI**	**599.72**	804.63
Unpaid dividend account balance	**19.84**	19.35
Amount deposited as per court orders	**24.00**	23.13
Unpaid interest/refund account balance - Bonds	**6.15**	5.22
Payment Security Fund - MNRE[(a)]	**27.34**	27.34
Payment Security Scheme of MNRE[(b)]	**0.01**	0.09
Unpaid interest on public deposit	**0.03**	0.03
Margin money	**118.14**	15.14
Security with government authorities	**0.01**	0.01
Others	**36.16**	3.64
Total	**1,451.00**	1,609.30

* Refer Note 24 (g) regarding fly ash utilization reserve fund.

** Out of advance for DDUGJY Scheme of the GOI. Refer Note 33(c) and 34(a).

a) In line with the guidelines issued by Ministry of New and Renewable Energy (MNRE), GOI under National Solar Mission-II, a Payment Security Fund/Working Capital Fund will be set up/created by the MNRE. Upon creation of the said fund, amounts accrued from encashment of bank guarantee, penalties/liquidated damages on developers deducted by the Group from the Solar Power Developers (SPDs) as per the guidelines of MNRE shall be transferred to this fund. The said fund is yet to be created by MNRE. Pending creation of the fund, amount deducted by the Group on account of liquidated damages/penalties from the SPDs is earmarked for the said fund and is not available for use by the Group.

b) Funds received from MNRE under payment security scheme. For corresponding liability refer Note 33(h).

17. Current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Loans (including interest accrued)		
(Considered good unless otherwise stated)		
Related parties		
Unsecured	**1.44**	0.71
Employees		
Secured	**81.72**	79.22
Unsecured	**175.06**	171.83
Others		
Unsecured	**0.91**	0.91
Total	**259.13**	252.67

a) Due from Directors and Officers of the Group		
Directors	**0.07**	0.02
Officers	**-**	-
b) Loans to related parties include:		
Key management personnel	**0.07**	0.02
National High Power Test Laboratory Private Ltd. (Joint venture company)	**1.37**	0.69

c) Other loans include loans of ₹ **0.89 crore** (31 March 2020: ₹ 0.89 crore) given to APIIC which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Group.

18. Current assets - Other financial assets

₹ Crore

Particulars		As at 31 March 2021	As at 31 March 2020
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**240.45**	101.21
Employees			
Unsecured	**18.42**		16.29
Considered doubtful	**0.11**		0.14
Less: Allowance for bad and doubtful advances	**0.11**		0.14
		18.42	16.29
Others			
Unsecured		**4.46**	17.40
		263.33	134.90
Claims recoverable			
Unsecured, considered good	**39.83**		50.19
Considered doubtful	**343.62**		0.12
Less: Allowance for doubtful claims	**343.62**		0.12
		39.83	50.19
Unbilled revenue		**13,954.30**	12,231.18
Finance lease receivables		**70.89**	55.23
Mine closure deposit		**39.59**	21.56
Security deposits		**495.58**	495.86
Others		**127.74**	92.20
Total		**14,991.26**	13,081.12

a) Unbilled revenue is net of credits to be passed to beneficiaries at the time of billing and includes ₹ **11,694.10 crore** (31 March 2020: ₹ 9,036.87 crore) billed to the beneficiaries after 31 March for energy sales.

b) Advances to related parties include:		
Joint venture companies	**39.47**	81.73
c) Advances include amounts due from the following private companies in which one or more directors of the Company are directors:		
NTPC-GE Power Services Private Ltd.	**1.76**	1.10
Aravali Power Company Private Ltd.	**1.22**	4.83
NTPC BHEL Power Projects Private Ltd.	**-**	7.02
Meja Urja Nigam Private Ltd.	**13.78**	7.97

d) Other financial assets - Others include amount recoverable from contractors and other parties towards hire charges, rent/ electricity etc.

19. Current assets - Current tax assets (net)

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Current tax assets (net)	**64.70**	60.96

20. Current assets - Other current assets

₹ Crore

Particulars		As at 31 March 2021	As at 31 March 2020
Security deposits (unsecured)		**1,825.37**	1,518.83
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**2,157.92**	729.65
Employees			
Unsecured		**1.51**	3.19
Contractors and suppliers			
Secured	**1.16**		-
Unsecured	**908.76**		913.18
Considered doubtful	**18.40**		18.21
Less: Allowance for bad and doubtful advances	**18.40**		18.21
		909.92	913.18
Others			
Unsecured		**172.10**	121.11
		3,241.45	1,767.13
Interest accrued on			
Advance to contractors		**33.41**	36.18
Claims recoverable			
Unsecured, considered good	**3,763.44**		4,773.76
Considered doubtful	**125.87**		125.00
Less: Allowance for doubtful claims	**125.87**		125.00
		3,763.44	4,773.76
Assets held for disposal		**96.94**	249.22
Deferred payroll expenditure		**24.94**	26.05
Adjustable from Escrow Account for mine closure expenses		**30.08**	19.56
Others		**71.07**	110.35
Total		**9,086.70**	8,501.08

a) Security deposits (unsecured) include ₹ **28.97 crore** (31 March 2020: ₹ 28.45 crore) towards sales tax deposited with sales/commercial tax authorities, ₹ **902.14 crore** (31 March 2020: ₹ 494.47 crore) deposited with Courts, ₹ **209.56 crore** (31 March 2020: ₹ 199.74 crore) deposited with LIC for making annuity payments to the land oustees and ₹ **500.00 crore** (31 March 2020: ₹ 500.00 crore) deposited against bank guarantee with one of the party as per the direction of the Hon'ble Supreme Court of India, refer Note 60(iii).

b) Advances - others include prepaid expenses amounting to ₹ **138.67 crore** (31 March 2020: ₹ 109.15 crore).

c) Advances - Related parties include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**0.01**	0.01
NTPC BHEL Power Projects Private Ltd.	**3.91**	1.33
Aravali Power Company Private Ltd.	**-**	19.05

d) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

e) Assets held for disposal includes an amount of ₹ **78.76 crore** (31 March 2020: ₹ 156.17 crore) of M/s Patratu Vidyut Utpadan Nigam Ltd., a subsidiary, accounted at fair realisable value net of decommissioning cost based on assessment made by the subsidiary. These assets were initially transferred to the subsidiary by the Scheme notified by the Government of Jharkhand (GoJ) vide notification No. 888 dated 1 April 2016 of Patratu Thermal Power Station, for generation of the electricity under power supply arrangement to Jharkhand Bijli Vitran Nigam Limited (JBVNL), an enterprise of Government of Jharkand (GoJ). However due to heavy cost of generation, JBVNL / GoJ proposed to shut down the plant and scrap all the existing units and accordingly plant has been shut down on 24 Jan 2017. It has been further agreed that consideration of these assets shall be the amount realised from sale of scrap, net of cost.

The proceeds realised during the year from dismantling of the existing units, current assets & Scrap less administrative expenses towards the sale, land lease and any other incidental expenses has been credited to GoJ in lieu of the Specified Assets Transfer consideration as per the agreement. The corresponding liability on account of these assets has been created and disclosed under Note 34(c) after setting off amount recoverable toward dismantling cost.

f) Asset held for disposal includes an amount of ₹ **14.55 crore** (31 March 2020: ₹ 89.31 crore) in respect of one of the power stations which has since been shut down in compliance to order of Delhi Pollution Control Committee (DPCC) dated 25 July 2018. The operations of the station was permanently discontinued w.e.f. 15 October 2018 and the assets of the power station are in the process of disposal and/or being utilised at other locations of the Company.

21. Regulatory deferral account debit balances

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
On account of		
Exchange differences	**954.80**	1,359.52
Employee benefits expense	**932.42**	932.42
Deferred tax	**7,582.55**	6,178.08
Ash transportation cost	**1,830.65**	826.85
Arbitration cases	**110.81**	-
Others	**142.05**	100.86
Total	**11,553.28**	9,397.73

a) Regulatory deferral account balances have been accounted in line with Accounting policy no. C.5 (Note 1). Refer Note 69 for detailed disclosures.

b) CERC Tariff Regulations, 2019 provide for recovery of deferred tax liability (DTL) as at 31 March 2009 from the beneficiaries. Accordingly, DTL as at 31 March 2009 is recoverable on materialisation from the beneficiaries. Regulations, 2014 and Regulations, 2019 provide for grossing-up the rate of return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. Accordingly, deferred tax liability for the period from 1 April 2014 will be reversed in future years when the related DTL forms part of current tax. Keeping in view the above, the Group has recognized such deferred tax as regulatory deferral account debit balances, since the amounts are recoverable in future years.

22. Equity share capital

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Equity share capital		
Authorised		
10,00,00,00,000 shares of par value ₹10/- each (10,00,00,00,000 shares of par value ₹10/- each as at 31 March 2020)	**10,000.00**	10,000.00
Issued, subscribed and fully paid up		
9,69,66,66,134 shares of par value ₹ 10/- each (9,89,45,57,280 shares of par value ₹10/- each as at 31 March 2020)	**9,696.67**	9,894.56

a) Reconciliation of the shares outstanding at the beginning and at the end of the year:

Particulars	Number of Shares	
	As at 31 March 2021	As at 31 March 2020
At the beginning of the year	**9,89,45,57,280**	9,89,45,57,280
Less: Buyback of shares during the year	**19,78,91,146**	-
Outstanding at the end of the year	**9,69,66,66,134**	9,89,45,57,280

b) Terms and rights attached to equity shares:

The Company has only one class of equity shares having a par value ₹10/- per share. The holders of the equity shares are entitled to receive dividends as declared from time to time and are entitled to voting rights proportionate to their share holding at the meetings of shareholders.

c) Dividends:

₹ Crore

Particulars	Paid during the year ended	
	31 March 2021	31 March 2020
(i) Dividends paid and recognised during the year		
Final dividend for the year ended 31 March 2020 of ₹ **2.65** (31 March 2019: ₹ 2.50) per equity share	**2,622.06**	2,473.64
Interim dividend for the year ended 31 March 2021 of ₹ **3.00** (31 March 2020: ₹ 0.50) per equity share	**2,909.00**	494.73

₹ Crore

(ii) Dividends not recognised at the end of the reporting period	31 March 2021	31 March 2020
In addition to the above dividends, since year end the directors have recommended the payment of a final dividend of ₹ **3.15** (31 March 2020: ₹ 2.65) per fully paid equity share. This proposed dividend is subject to the approval of shareholders in the ensuing Annual General Meeting.	**3,054.45**	2,622.06

d) Details of shareholders holding more than 5% shares in the Company:

Particulars	As at 31 March 2021		As at 31 March 2020	
	No. of shares	%age holding	No. of shares	%age holding
- President of India	**4,95,53,46,251**	**51.10**	5,04,80,97,508	51.02
- Life Insurance Corporation of India (including shares held in various Funds/Schemes)	**1,06,24,20,836**	**10.96**	1,03,26,64,560	10.44
- ICICI Prudential Mutual Fund	**64,75,68,645**	**6.68**	73,55,85,649	7.43

e) **For the period of preceeding five years as on the Balance sheet date:**

(i) Shares bought back:

Pursuant to the approval of Board of Directors of the Company for buyback of equity shares in its meeting held on 2 November 2020, the Company has bought back 19,78,91,146 equity shares of the Company for an aggregate amount of ₹ 2,275.75 crore being 2% of the total paid up equity share capital at ₹ 115.00 per equity share. The settlement of all valid bids was completed on 30 December 2020 and the equity shares bought back were extinguished on 1 January 2021. Accordingly, the paid up equity share capital has been reduced by ₹ 197.89 crore and other equity is reduced by ₹ 2,565.93 crore (including tax on buy back of shares of ₹ 484.06 crore and other buyback expenses of ₹ 4.01 crore (net of tax)). Further, earnings per share has been adjusted on account of buy back of shares.

(ii) Shares allotted as fully paid up by way of bonus shares:

The Company had issued 164,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares in the financial year 2018-19 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

23. Other equity

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Capital reserve	**511.47**	72.86
Other capital reserve - common control	**(5,159.26)**	(5,159.26)
Securities premium	**-**	2,228.46
Capital redemption reserve	**197.89**	-
Bonds/debentures redemption reserve	**6,970.47**	7,700.97
Self insurance reserve	**200.00**	-
Fly ash utilisation reserve fund	**619.60**	599.72
Corporate social responsibility (CSR) reserve	**-**	2.35
General reserve	**98,544.79**	92,499.15
Retained earnings	**14,054.16**	11,009.35
Items of other comprehensive income	**102.68**	(9.00)
Total	**1,16,041.80**	1,08,944.60

(a) Capital reserve

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**72.86**	72.86
Add: Addition during the year	**438.61**	-
Closing balance	**511.47**	72.86

Opening capital reserve represents amount received by the parent company as consideration under settlement for withdrawal from a erstwhile JV project and acquisition of M/s NPGCL, a subsidiary of the Company. Addition during the year is on account of acquisition of M/s Ratnagiri Gas & Power Pvt Ltd (M/s RGPPL), a subsidiary of the Company. This amount will be utilised as per the provisions of the Companies Act, 2013.

(b) Other capital reserve - common control

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**(5,159.26)**	(5,170.26)
Add: Adjustments during the year	**-**	11.00
Closing balance	**(5,159.26)**	(5,159.26)

Consequent to the acquisition of THDC India Ltd. and NEEPCO in the previous year, the difference between the Company's share in their share capitals and the consideration paid has been recognized as other capital reserve - common control.

(c) Securities premium

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**2,228.46**	2,228.46
Less: Utilised for buyback of equity shares	**2,228.46**	-
Closing balance	**-**	2,228.46

Securities premium is used to record the premium on issue of shares/securities. The amount has been utilised for buyback of equity shares during the year in accordance with the provisions of the Companies Act, 2013.

(d) Capital redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**-**	-
Add: Transfer from General Reserve	**197.89**	-
Closing balance	**197.89**	-

Capital redemption reserve is created when company purchases its own shares out of free reserves or securities premium, as required by Companies Act, 2013. A sum equal to the nominal value of the shares so purchased is transferred to capital redemption reserve. This reserve will be utilised in accordance with the provisions of the Companies Act, 2013.

(e) Bonds/Debentures redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**7,700.97**	8,597.97
Add : Transfer from retained earnings	**40.50**	-
Less: Transfer to retained earnings	**771.00**	897.00
Closing balance	**6,970.47**	7,700.97

In accordance with applicable provisions of the Companies Act, 2013 read with Rules, the Group has created Debenture Redemption Reserve out of profits of the Company, considering the Companies (Share Capital and Debentures) Amendment Rules, 2019 notified on 16 August 2019. The outstanding balance of Bonds / Debenture Redemption Reserve shall be written back as and when the respective bonds / debentures are redeemed.

(f) Self insurance reserve

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**-**	-
Add: Addition during the year	**200.00**	-
Closing balance	**200.00**	-

Self Insurance reserve is created by M/s RGPPL (a subsidiary of the Company), to cover machinery break down for which the subsidiary has not entered into any insurance cover agreement with insurance companies.

(g) Fly ash utilisation reserve fund

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**599.72**	638.11
Add : Transferred during the year:		
Revenue from operations	**185.92**	176.17
Other income	**20.92**	35.66
Less : Utilised during the year:		
Capital expenditure	**11.95**	4.81
Other expenses	**170.39**	211.96
Tax Expense	**4.62**	33.45
Closing balance	**619.60**	599.72

Pursuant to Gazette Notification dated 3 November 2009, issued by the Ministry of Environment and Forest (MOEF), Government of India (GOI), the amount collected from sale of fly ash and fly ash based products should be kept in a separate account head and shall be utilized only for the development of infrastructure or facility, promotion & facilitation activities for use of fly ash until 100 percent fly ash utilization level is achieved.

The fund balance has been kept in 'Bank balances other than cash & cash equivalents' (Note 16). Also refer Note 21 & 69 for ash transportation cost.

(h) Corporate social responsibility (CSR) reserve

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**2.35**	2.39
Add : Transfer from retained earnings	**-**	2.45
Less: Transfer to retained earnings	**2.35**	2.49
Closing balance	**-**	2.35

In terms of Section 135 of the Companies Act, 2013 read with guidelines on corporate social responsibility issued by Department of Public Enterprises (DPE), GOI, the companies in the Group wherever applicable are required to spend, in every financial year, at least two per cent of the average net profits of the respective companies made during the three immediately preceding financial years in accordance with their CSR Policy. The amount equivalent to unspent CSR expenditure transferred in the previous year to CSR reserve from retained earnings, has been transferred back to retained earnings on actual expenditure / in view of amendment to Companies Act, 2013 notified on 22 January 2021.

(i) General reserve

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**92,499.15**	85,999.15
Add : Transfer from retained earnings	**6,581.00**	6,500.00
Less : Utilised for buyback of equity shares	**337.47**	-
Less : Transferred to capital redemption reserve	**197.89**	-
Closing balance	**98,544.79**	92,499.15

General reserve is used from time to time to transfer profits from retained earnings for appropriation purposes. The same will be utilised as per the provisions of the Companies Act, 2013. During the year, an amount of ₹ 337.47 crore has been utilised for buyback of equity shares in accordance with the provisions of the Companies Act, 2013 and an amount equivalent to face value of shares bought back amounting to ₹ 197.89 crore has been transferred to capital redemption reserve.

(j) Retained earnings

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**11,009.35**	9,100.33
Add: Profit for the year as per statement of profit and loss	**14,634.63**	11,600.23
Impact of adjustments in respect of joint ventures accounted for using equity method pertaining to previous years	**-**	(53.94)
Impact of changes in NCI interest and other adjustments	**0.24**	3.82
Transfer from bonds/debentures redemption reserve	**771.00**	897.00
Transfer from CSR reserve	**2.35**	2.49
Less: Transfer to bonds/debentures redemption reserve	**40.50**	-
Transfer to CSR reserve	**-**	2.45
Transfer to general reserve	**6,581.00**	6,500.00
Adjustment with reserve for equity instruments through OCI	**85.08**	-
Final dividend paid	**2,622.06**	2,606.50
Tax on final dividend paid	**-**	533.93
Interim dividend paid	**2,909.00**	494.73
Tax on interim dividend paid	**-**	101.18
	14,179.93	11,311.14
Items of other comprehensive income recognised directly in retained earnings:		
- Net actuarial gains/(losses) on defined benefit plans (net of tax)	**(123.00)**	(301.29)
- Share of other comprehensive income/(expense) of joint ventures accounted for using the equity method (net of tax)	**(2.77)**	(0.50)
Closing balance	**14,054.16**	11,009.35

Retained Earnings are the profits of the Company earned till date net of appropriations. The same will be utilised for the purposes as per the provisions of the Companies Act, 2013.

(k) Items of other comprehensive income

(i) Reserve for equity instruments through OCI

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**(50.58)**	(8.94)
Add: Fair value gains/(losses) on equity instruments for the year	**46.80**	(41.64)
Add: Adjustment from retained earnings	**85.08**	-
Closing balance (i)	**81.30**	(50.58)

The Group has elected to recognize changes in the fair value of certain investments in equity instruments in other comprehensive income. These changes are accumulated in reserve for equity instruments through OCI within equity. The Group transfers amounts from this reserve to retained earnings when the relevant equity instruments are derecognized. The adjustment during the year is on account of reconciliation of cost of the equity instruments and its fair value.

(ii) Foreign currency translation reserve

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**41.58**	1.58
Add: Currency translation of foreign operations for the year	**(20.20)**	40.00
Closing balance (ii)	**21.38**	41.58
Total (i+ii)	**102.68**	(9.00)

Exchange differences arising on translation of the joint ventures are recognised in other comprehensive income as described in accounting policy and accumulated in a separate reserve within equity. The cumulative amount will be reclassified to profit or loss when the net investment is disposed-off.

24. Non-controlling interest

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance	**3,317.19**	2,908.20
Add: Share of profit for the year	**334.77**	301.75
Share of OCI	**0.08**	(4.29)
Additional non-controlling interest arising on acquisition / disposal of interest & other adjustments	**119.03**	150.28
Less: Dividend paid to NCI	**247.36**	32.14
Dividend distribution tax on the above	**-**	6.61
Closing balance	**3,523.71**	3,317.19

25. Non current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Bonds/debentures		
Secured		
7.37% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3A)[IX]	**188.97**	188.98
7.62% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3B)[IX]	**171.73**	171.74
8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2034 (Fifty First Issue C - Private Placement) [III]	**322.11**	322.11
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3A)[VI]	**319.87**	319.93
8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3B)[VI]	**410.32**	410.39

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
7.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 14 December 2031 (Sixty Sixth Issue - Private Placement)[II]	**4,010.39**	4,009.35
7.49% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 November 2031 (Sixty Fourth Issue - Private Placement)[X]	**720.62**	720.70
7.28% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2A)[IX]	**133.48**	133.48
7.53% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2B)[IX]	**49.92**	49.91
7.32% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)[X]	**4,522.27**	4,522.50
8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2029 (Fifty First Issue B - Private Placement) [III]	**105.70**	105.70
8.30% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement) [V]	**4,068.92**	4,069.62
8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2A)[VI]	**256.10**	256.14
8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2B)[VI]	**93.71**	93.73
7.47% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 16 September 2026 (Sixty Third Issue - Private Placement)[X]	**696.85**	696.89
7.58% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 23 August 2026 (Sixty Second Issue - Private Placement)[X]	**836.39**	836.60
8.05% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 5 May 2026 (Sixtieth Issue - Private Placement)[X]	**1,072.85**	1,072.62
8.19% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 December 2025 (Fifty Seventh Issue - Private Placement)[X]	**511.86**	511.80
7.11% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1A)[IX]	**112.03**	112.02
7.36% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1B)[IX]	**68.23**	68.21
7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 10,00,000/- each redeemable at par in full on 21 August 2025 (Fifty Fifth Issue - Private Placement)[VII]	**313.10**	313.13
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22 September 2024 (Fifty Third Issue - Private Placement)[VII]	**1,047.99**	1,047.85

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 March 2024 (Fifty Second Issue - Private Placement)[III]	**751.54**	751.54
8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at par in full on 4 March 2024 (Fifty First Issue A - Private Placement)[III]	**75.47**	75.47
8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1A)[VI]	**499.95**	500.03
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1B)[VI]	**213.89**	213.92
9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 04 May 2023 and ending on 04 May 2027 (Forty Fourth Issue - Private Placement)[VI]	**542.07**	542.08
8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 1 May 2023 (Seventeenth Issue - Private Placement)[I]	**50.01**	50.01
8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 April 2023 (Forty Ninth Issue - Private Placement)[VI]	**217.46**	217.46
8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of ₹ 12.50 each redeemable at par in three annual installments of ₹ 2.50, ₹ 5.00 and ₹ 5.00 at the end of 8th year, 9th year and 10th year on 25 March 2023, 25 March 2024 and 25 March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)[VIII]	**10,323.61**	10,323.61
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 March 2023 (Forty Eighth Issue - Private Placement)[VI]	**301.86**	301.79
9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25 January 2023 and ending on 25 January 2027 (Forty Second Issue - Private Placement)[III]	**508.14**	508.36
8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 October 2022 (Forty Seventh Issue - Private Placement)[VI]	**407.00**	406.96
7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 3 May 2022 (Sixty Eighth Issue - Private Placement)[X]	**3,277.53**	3,277.51
6.72% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 November 2021 (Sixty Fifth Issue - Private Placement)[X]	**716.46**	716.36
8.10% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27 May 2021, 27 May 2026 and 27 May 2031 respectively (Sixty first issue - Private Placement)[IX]	**1,145.99**	1,146.01



₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
8.33% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 February 2021 (Fifty Ninth Issue - Private Placement)[X]	-	660.46
8.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 19 January 2021 (Thirty Seventh Issue - Private placement)[III]	-	317.20
8.18% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 31 December 2020 (Fifty Eight Issue - Private Placement)[X]	-	306.12
11.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in five equal annual installments commencing from 6 November 2019 and ending on 6 November 2023 (Twenty Seventh Issue - Private Placement)[III]	**220.87**	294.50
9.3473% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20 July 2018 and ending on 20 July 2032 (Forty Sixth Issue - Private Placement)[VI]	**64.07**	69.42
9.4376% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16 May 2018 and ending on 16 May 2032 (Forty Fifth Issue - Private Placement)[VI]	**64.11**	69.46
9.2573% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2 March 2018 and ending on 2 March 2032 (Forty Third Issue - Private Placement)[III]	**58.70**	64.04
9.6713% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23 December 2017 and ending on 23 December 2031 (Forty First Issue - Private Placement)[III]	**58.86**	64.22
9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29 July 2017 and ending on 29 July 2031 (Fortieth Issue - Private Placement)[III]	**58.82**	64.17
9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9 June 2017 and ending on 9 June 2031 (Thirty Ninth Issue - Private Placement)[III]	**82.25**	89.73
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22 March 2017 and ending on 22 March 2031 (Thirty Eighth Issue - Private Placement)[III]	**53.33**	58.66
8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 December 2016 and ending on 15 December 2030 (Thirty Sixth Issue - Private Placement)[III]	**53.20**	58.52

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 September 2016 and ending on 15 September 2030 (Thirty Fifth Issue - Private Placement)[III]	**85.10**	93.61
8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10 June 2016 and ending on 10 June 2030 (Thirty Fourth Issue - Private Placement)[III]	**106.32**	116.96
8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25 March 2016 and ending on 25 March 2030 (Thirty Second Issue - Private Placement)[III]	**67.05**	74.50
8.6077% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 9 September 2011 and ending on 9 March 2021 (Twenty Fourth Issue - Private Placement)[IV]	-	51.06
8.3796% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 5 August 2011 and ending on 5 February 2021 (Twenty Third Issue - Private Placement)[IV]	-	51.03
8.1771% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2 July 2011 and ending on 2 January 2021 (Twenty Second Issue - Private Placement)[IV]	-	51.01
Bonds issued by NEEPCO, a subsidiary of the Company		
7.55% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in four installments on 10 December 2026, 10 June 2027, 10 December 2027 and 10 June 2028 with call option on 10 June 2025, 10 December 2025, 10 June 2026, 10 December 2026, 10 June 2027 and 10 December 2027. (Twenty Second Issue - Private Placement)[XI(i)]	**511.23**	-
8.68% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 30 September 2026, 30 September 2027, 30 September 2028, 30 September 2029 and 30 September 2030 (Sixteenth Issue - Private Placement)[XI(iii)]	**922.40**	922.28
8.69% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in two installments on 26 September 2026 and 26 September 2027 with call option on 26 September 2024, 26 March 2025, 26 September 2025, 26 March 2026, 26 September 2026 and 26 March 2027 (Twenty First Issue - Private Placement)[XI(i)]	**149.97**	149.94
8.75% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in four installments on 6 September 2026, 6 March 2027, 6 September 2027 and 6 March 2028 with call option on 6 March 2023, 10 August 2023, 10 February 2024, 10 August 2024, 10 February 2025, 10 August 2025, 10 February 2026, 10 August 2026, 10 February 2027, 10 August 2027, 10 February 2028 (Nineteenth Issue - Private Placement)[XI(ii)]	**303.35**	303.39
7.68% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in two installments on 15 May 2025 and 15 November 2025 with call option on 15 November 2022, 15 May 2023, 15 November 2023, 15 May 2024, 15 November 2024, 15 May 2025 (Eighteenth Issue - Private Placement)[XI(ii)]	**514.17**	514.19

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
9.50% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in four installments on 29 May 2024, 29 November 2024, 29 May 2025 & 29 November 2025 with call option on 29 November 2023, 29 May 2024, 29 November 2024, 29 May 2025 (Twentieth Issue - Private Placement)[XI(i)]	**309.39**	309.41
10.20% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par on 15 December 2021 with a put & call option on 15 December 2018 (Eleventh Issue - Private Placement)[XI(vii)]	**40.86**	40.86
9.15% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 25 March 2021, 25 March 2022, 25 March 2023, 25 March 2024 and 25 March 2025 (Fifteenth Issue - Private Placement)[XI(iv)]	**480.84**	601.05
9.60% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 1 October 2020, 1 October 2021, 1 October 2022, 1 October 2023 and 1 October 2024 (Fourteenth Issue - Private Placement)[XI(i)]	**2,000.00**	2,500.00
7.80% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par on 27 May 2020 (Seventeenth Issue - Private Placement)[XI(i)]	-	308.01
9.00% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 15 March 2019, 15 March 2020, 15 March 2021, 15 March 2022 and 15 March 2023 (Thirteenth Issue - Private Placement)[XI(v)]	**29.18**	43.68
9.25% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 27 June 2018, 27 June 2019, 27 June 2020, 27 June 2021 and 27 June 2022 (Twelth Issue - Private Placement)[XI(vi)]	**49.67**	74.51
Bonds issued by THDC India Ltd., a subsidiary of the Company		
7.45% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 20 Januray 2031 (Series IV)[XII(iv)]	**760.87**	-
7.19% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 23 July 2030 (Series III)[XII(iii)]	**839.55**	-
8.75% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 5 September 2029 (Series II)[XII(i)]	**1,574.08**	1,574.59
7.59% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 3 October 2025 (Series I)[XII(ii)]	**622.46**	622.46
	49,145.09	49,583.55
Bonds/debentures		
Unsecured		
6.29% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 11 April 2031 (Seventy First Issue - Private Placement)	**1,041.99**	-
6.43% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 27 January 2031 (Seventy Third Issue - Private Placement)	**2,528.05**	-
5.45% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 October 2025 (Seventy Second Issue - Private Placement)	**4,100.15**	-
6.55% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 April 2023 (Seventy Issue - Private Placement)	**4,648.65**	-
	61,463.93	49,583.55

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Foreign currency notes		
Unsecured		
4.500 % Fixed rate notes due for repayment on 19 March 2028	**2,948.68**	3,026.26
2.750 % Fixed rate notes due for repayment on 1 February 2027	**4,367.53**	4,220.99
4.250 % Fixed rate notes due for repayment on 26 February 2026	**3,703.35**	3,800.85
4.375 % Fixed rate notes due for repayment on 26 November 2024	**3,759.25**	3,860.77
3.750 % Fixed rate notes due for repayment on 3 April 2024	**3,327.46**	3,415.75
4.750 % Fixed rate notes due for repayment on 3 October 2022	**3,703.00**	3,803.00
7.250 % Fixed global INR denominated bonds due for repayment on 3 May 2022	**2,032.42**	2,128.81
7.375 % Fixed green global INR denominated bonds due for repayment on 10 August 2021	**1,054.12**	2,090.59
5.625 % Fixed rate notes due for repayment on 14 July 2021	**3,747.55**	3,848.76
	28,643.36	30,195.78
Term loans		
From Banks		
Secured		
Rupee term loans[XIII]	**7,861.27**	6,408.78
Foreign currency loans[XIV]	**207.48**	290.21
Unsecured		
Foreign currency loans	**12,198.00**	9,923.06
Rupee term loans	**64,937.57**	62,632.60
From Others		
Secured		
Rupee term loans[XIII]	**13,135.93**	14,432.87
Unsecured		
Foreign currency loans (guaranteed by GOI)	**3,111.05**	3,436.14
Other foreign currency loans	**2,901.11**	2,890.91
Rupee term loans	**838.13**	5,487.34
Rupee term loans from Government of India	**291.25**	291.23
Lease obligations		
Secured	**14.04**	21.97
Unsecured	**883.45**	833.64
	1,96,486.57	1,86,428.08
Less: Current maturities of		
Bonds - secured	**1,893.00**	2,500.50
Foreign Currency Fixed Rate Notes	**4,710.00**	-
Foreign currency loans from banks - secured	**75.38**	77.32
Rupee term loans from banks - secured	**739.36**	344.60
Foreign currency loans from banks - unsecured	**756.63**	1,252.86
Rupee term loans from banks - unsecured	**2,962.46**	1,966.91
Rupee term loans from others - secured	**935.48**	406.07
Foreign currency loans from other - unsecured (guaranteed by GOI)	**310.68**	307.46

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Other foreign currency loans from others - unsecured	**393.22**	389.31
Rupee term loans from others - unsecured	**33.34**	690.19
Lease obligations - secured	**9.63**	8.75
Lease obligations - unsecured	**152.16**	109.45
Interest accrued but not due on secured borrowings	**1,419.48**	1,580.28
Interest accrued but not due on unsecured borrowings	**823.84**	774.36
Total	**1,81,271.91**	1,76,020.02

a) Details of terms of repayment and rate of interest

i) Secured rupee term loan from banks and financial institutions carry floating rate of interest linked to SBI base rate or Base rate of respective lender or three year AAA bond yield rate plus agreed margin or three year AAA bond yield rate plus agreed margin with reset after three years or one year MCLR plus annual reset or prevalent rate notified by the lender for category 'A' public sector undertakings or fixed interest rate of 9.36% p.a. These loans are repayable in installments as per the terms of the respective loan agreements. The repayment period extends from a period of five to twenty years after 6 months from the date of COD or from the date specified in the loan agreements.

ii) Secured foreign currency loans from banks carry interest rate of 3 months LIBOR plus 2.75% p.a. as margin and is repayable in 39 equal quarterly installments w.e.f. 20.06.2014.

iii) Unsecured foreign currency loans (guaranteed by GOI) - Others include loans carrying fixed rate of interest ranging from 0.85% p.a. to 3.46% p.a. and are repayable in 11 to 20 semi annual installments as of 31 March 2021.

Unsecured foreign currency loans (guaranteed by GOI) - Others also include loans carrying interest rate linked to LIBOR plus variable spread and are repayable in 23 years on half yearly installment from 15 November 2017 to 15 May 2040.

iv) Unsecured foreign currency loans – Banks include loans of ₹ **108.20 crore** (31 March 2020: ₹ 132.59 crore) which carry fixed rate of interest of 1.88% p.a. and loans of ₹ **12,089.80 crore** (31 March 2020: ₹ 9,790.47 crore) which carry floating rate of interest linked to 6M USD LIBOR/6M JPY LIBOR. These loans are repayable in 1 to 25 semi-annual/annual installments as of 31 March 2021, commencing after moratorium period if any, as per the terms of the respective loan agreements.

v) Unsecured foreign currency loans – Others include loans of ₹ **2,261.33 crore** (31 March 2020: ₹ 2,641.92 crore) which carry fixed rate of interest ranging from 1.88% p.a. to 4.13% p.a and loans of ₹ **639.78 crore** (31 March 2020: ₹ 248.99 crore) which carry floating rate of interest linked to 6M JPY LIBOR. These loans are repayable in 3 to 25 semi annual installments as of 31 March 2021, commencing after moratorium period if any, as per the terms of the respective loan agreements.

vi) Unsecured rupee term loans from banks and others carry interest rate ranging from 5.88% p.a. to 6.65% p.a. with monthly/half-yearly rests. These loans are repayable in half-yearly/yearly installments as per the terms of the respective loan agreements. The repayment period extends from a period of 8 to 15 years after a moratorium period of 3 to 6 years.

Unsecured rupee term loans include ₹ **753.51 crore** (31 March 2020: ₹ 818.65 crore) from Government of Jharkhand to M/s Patratu Vidyut Utpadan Nigam Ltd., a Subsidiary of the parent company, which carry interest at the rate of 10% p.a. until the date of investment approval and afterwards equivalent to weighted average cost of borrowing subject to ceiling of 10% per annum. The said loan is proposed to be utilised as consideration for subsequent issue and allotment of shares in its % ownership as prescribed in the related JV agreement. This also includes deemed loan on account of cost of land transferred to the subsidiary company.

vii) Unsecured rupee term loans from Government of India carry interest rate of 1% p.a.. This loan is repayable in yearly installments as per the terms of the loan agreement. The repayment period is 15 years starting from 30 January 2018.

b) The lease obligations are repayable in installments as per the terms of the respective lease agreements generally over a period of more than 1 year and upto 99 years.

c) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

d) Pursuant to the invitation by the Company to eligible holders of the 7.375% Fixed green global INR denominated bonds due for repayment on 10 August 2021 and 7.250% Fixed global INR denominated bonds due for repayment on 3 May 2022, for cash settlement as per the Tender Offer Memorandum, the Company has settled on 22 December 2020, part of its borrowings amounting to ₹ 993.00 crore and ₹ 92.00 crore respectively, along with interest, against the valid offers received.

Details of securities

I Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of title deeds of the immovable properties pertaining to National Capital Power Station.

II Secured by Equitable mortgage of the immovable properties pertaining to Vindhyachal Super Thermal Power Station on first charge basis.

III Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Sipat Super Thermal Power Project by extension of charge already created.

IV Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of the title deeds of the immovable properties pertaining to Sipat Super Thermal Power Project.

V Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Vindhyachal Super Thermal Power Station.

VI Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to National Capital Power Station by extension of charge already created.

VII Secured by English mortgage of the immovable properties pertaining to Solapur Super Thermal Power Project on first charge basis.

VIII Secured by Equitable mortgage of the immovable properties pertaining to Barh Super Thermal Power Project on first charge basis.

IX Secured by English mortgage, on pari-passu charge basis, of the immovable properties pertaining to Solapur Super Thermal Power Project.

X Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Barh Super Thermal Power Project.

XI (i) Secured by way of mortgage of assets attached to the earth as well as other movable assets of the Kameng Hydro Electric Project, Arunchal Pradesh and the landed property in the District of Mehsana, Gujarat.

(ii) Secured by way of mortgage of the assets attached to the earth as well as other movable assets of the Pare Hydro Electric Project, Arunchal Pradesh and the landed property in the District of Mehsana, Gujarat.

(iii) Secured by way of mortgage of the assets attached to the earth as well as other movable assets of the Tuirial Hydro Electric Project in Mizoram, Kopili Hydro Electric Project in Assam and the landed property in the District of Mehsana, Gujarat.

(iv) Secured by way of mortgage of the assets of the Agartala Gas Turbine Project (original open-cycle plant) in Tripura, assets except the gas turbines & steam turbines in the Assam Gas Based Project, Assam, assets except plant & machinery in the generating station in the Ranganadi Hydro Electric Project, Arunachal Pradesh and the landed property in the District of Mehsana, Gujarat.

(v) Secured by way of mortgage of the steam turbines of the Assam Gas Based Power Plant, Assam and the landed property in the District of Mehsana, Gujarat.

(vi) Secured by way of mortgage of all the plant and machinery in the generating station of the Ranganadi Hydro Electric Project, Arunachal Pradesh and the landed property in the District of Mehsana, Gujarat.

(vii) Secured by way of mortgage of the gas turbines of the Assam Gas Based Power Project, Assam and the landed property in the District of Mehsana, Gujarat.

XII (i) Secured by first charge on paripassu basis on movable assets of Tehri HPP Stage-I including book debts.

(ii) Secured by first charge on paripassu basis on movable assets of Tehri HPP Stage-I.

(iii) Secured by first charge on paripassu basis on movable assets of Koteshwar HEP & Wind Power Projects of Patan & Dwarka.

(iv) Secured by first charge on paripassu basis on the movable CWIP and future movable assets of pump storage plant located at Tehri.

XIII (i) Secured by a first priority charge on all assets, present & future, movable & immovable and land of 975.05 acres and second charge on all inventories and receivables, in respect of loan from consortium led by SBI for Kanti Bijlee Utpadan Nigam Ltd. expansion project. The security will rank pari-pasu with all term lenders of the project. The charge has been created in favor of SBI Cap Trustee Co. Ltd. and Canara Bank. Legal mortgage of land in favour of security trustee has been executed for 877.18 acres out of 975.05 acres of land.

(ii) Secured by equitable mortgage/ hypothecation of all present and future fixed and movable assets of Nabinagar TPP (4*250) MW of Bhartiya Rail Bijlee Company Ltd., a subsidiary company, as first charge, ranking pari passu. The term loan is secured on pari passu basis on the project assets (Units - I to IV).

(iii) Secured by all existing and future moveable assets of Patratu Vidyut Utpadan Nigam Ltd, a subsidiary company, including equipment, machinery and other current assets, book debts, receivables and all other moveables.

(iv) Secured by a first pari passu charge on entire current assets and fixed assets of Nabinagar Power Generating Company Limited, a subsidiary of the Company.

Secured by a first pari passu charge on all assets, present and future, movable and immovable through a deed of hypothecation and simple mortgage of 2500 acres of land of Nabinagar Power Generating Company Limited, a subsidiary of the Company.

(v) Secured by pari passu charge over assets of the Kameng Hydro Electric Power Project (600 MW) situated at Arunachal Pradesh of NEEPCO, a subsidiary company.

(vi) Secured by first charge on pari passu basis on assets of Tehri stage-I i.e. dam, power house civil construction, power house electrical & mechanical equipments not covered under other borrowings and project township of Tehri dam and HPP together with all rights and interest appertaining there to, of THDC India Ltd., a subsidiary company.

(vii) Secured by first charge on pari passu basis on assets of Koteshwar HEP, of THDC India Ltd., a subsidiary company.

(viii) Secured against first charge on pari passu basis on assets of Tehri PSP of THDC India Ltd., a subsidiary company.

XIV Secured by hypothecation of all movable & immovable assets (including plant, machinery) created / to be created in respect of Tripura Gas Based Power Plant, Agartala and Agartala Gas Turbine Projects –Extension, Agartala of NEEPCO, a subsidiary of the Company.

XV The secured lease obligations are secured against assets taken on lease.

XVI Security cover mentioned at Sl. No. I to XIV is above 100% of the debt securities outstanding.

26. Non-current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Trade payables for goods and services		
Total outstanding dues of		
- micro and small enterprises	**13.78**	10.35
- creditors other than micro and small enterprises	**66.35**	57.75
Total	**80.13**	68.10

a) Disclosures as required under Companies Act, 2013 / Micro, Small and Medium Enterprises Development Act, 2006 (MSMED) are provided in Note 74.

b) Amounts payable to related parties are disclosed in Note 57.

27. Non-current liabilities- Other financial liabilities

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Payable for capital expenditure		
- micro and small enterprises	**13.71**	14.03
- other than micro and small enterprises	**2,045.56**	1,362.04
Deposits from contractors and others	**29.75**	27.02
Others	**0.12**	1.36
Total	**2,089.14**	1,404.45

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 74.

b) Amounts payable to related parties are disclosed in Note 57.

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28. Non-current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Provision for employee benefits	**1,023.71**	1,078.36
Others	**18.68**	6.66
Total	**1,042.39**	1,085.02

Disclosures as per Ind AS 19 'Employee benefits' are provided in Note 54.

29. Non-current liabilities - Deferred tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Deferred tax liability		
Difference in book depreciation and tax depreciation	**25,387.36**	20,918.95
Less: Deferred tax assets		
Provisions	**925.01**	1,200.23
Statutory dues	**363.67**	325.21
Leave encashment	**468.67**	399.15
Unabsorbed depreciation	**1,024.49**	619.99
MAT credit entitlement	**12,705.04**	9,639.70
Others	**12.66**	19.25
Total	**9,887.82**	8,715.42

a) Deferred tax assets and deferred tax liabilities have been offset to the extent they relate to the same governing laws.

b) The Company has been recognising MAT credit available to the Company as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability.

c) Disclosures as per Ind AS 12 'Income Taxes' are provided in Note 53.

d) Others include deferred tax assets on account of payments related to voluntary retirement schemes and other deferred tax adjustments.

Movement in deferred tax liabilities (net) balances

As at 31 March 2021

₹ Crore

Particulars	As at 1 April 2020	Recognised in statement of profit and loss	Recognised in OCI	Other	As at 31 March 2021
Deferred tax liability					
Difference in book depreciation and tax depreciation	20,918.95	4,606.03	-	(137.62)	**25,387.36**
Less: Deferred tax assets					
Provisions	1,200.23	(193.51)	-	(81.71)	**925.01**
Statutory dues	325.21	(12.73)	-	51.19	**363.67**
Leave encashment	399.15	40.34	-	29.18	**468.67**
Unabsorbed depreciation	619.99	404.50	-	-	**1,024.49**
MAT credit entitlement	9,639.70	3,065.34	-	-	**12,705.04**
Others	19.25	(6.60)	-	0.01	**12.66**
Deferred tax liability (net)	**8,715.42**	**1,308.69**	-	**(136.29)**	**9,887.82**

As at 31 March 2020 ₹ Crore

Particulars	As at 1 April 2019	Recognised in statement of profit and loss	Recognised in OCI	Other	As at 31 March 2020
Deferred tax liability					
Difference in book depreciation and tax depreciation	15,675.00	5,379.31	-	(135.36)	20,918.95
Less: Deferred tax assets					
Provisions	1,541.19	(340.25)	-	(0.71)	1,200.23
Statutory dues	277.25	47.96	-	-	325.21
Leave encashment	357.54	41.61	-	-	399.15
Unabsorbed depreciation	397.79	222.20	-	-	619.99
MAT credit entitlement	8,257.38	1,382.32	-	-	9,639.70
Others	24.28	(5.04)	-	0.01	19.25
Deferred tax liability (net)	4,819.57	4,030.51	-	(134.66)	8,715.42

30. Other non-current liabilities

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Government grants	**1,996.47**	1,551.13

a) Government grants include grant received in advance amounting to ₹ **592.20 crore** (31 March 2020: Nil) for which attached conditions are to be fulfilled / works to be completed relating to various solar power plants. This amount will be recognized as revenue corresponding to the depreciation charge in future years on completion of related projects.

b) Government grants also include:

(i) Grant received from GOI through Government of Bihar for renovation & modernisation of Kanti Bijlee Utpadan Nigam Ltd. (a subsidiary of the Company) amounting to ₹ **44.85 crore** (31 March 2020: ₹ 134.54 crore). This amount will be recognized as revenue corresponding to the depreciation charge in future years.

(ii) Grant received from Govt. of Uttar Pradesh towards irrigation sector by THDC India Ltd. (a subsidiary of the Company) amounting to ₹ **595.87 crore** (31 March 2020: ₹ 614.67 crore). This amount will be recognized as revenue corresponding to the depreciation charge in future years.

(iii) Grant received from Ministry of Development of North Eastern Region by NEEPCO (a subsidiary of the Company) amounting to ₹ **243.94 crore** (31 March 2020: ₹ 260.04 crore). As per the Investment Approval sanctioned vide the Ministry of Power's letter no.7/7/2009-H-I dated 14 January 2011, an amount of ₹ 300.00 crores has been sanctioned by the Ministry of Development of North Eastern Region (MDONER) as a part of the approved funding pattern for the Tuirial Hydro Electric Project, Mizoram. The grant is being amortised during normative useful life of the project since its commissioning.

(iv) Balance Government grants represent unamortised portion of grant received. This includes ₹ **493.43 crore** (31 March 2020: ₹ 518.52 crore) received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects. This amount will be recognized as revenue corresponding to the depreciation charge in future years.

Refer Note 34 w.r.t. current portion of Government grants.

31. Current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Loans repayable on demand		
From banks		
Secured		
Cash credit	**627.84**	1,573.38

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₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Unsecured		
Cash credit	**727.04**	1,367.35
Other Loans		
Secured		
Short term loans	**1,750.00**	796.35
Unsecured		
Commercial paper	**12,859.74**	12,819.15
Total	**15,964.62**	16,556.23

(a) Secured cash credit includes:

(i) Cash credit secured by first (hypothecation) charge on stock / stores / spares and other current assets (excluding receivables), of the parent company, paripassu with other consortium banks and trustees for bond holders and first (hypothecation) charge on receivables ranking pari passu with consortium banks.

(ii) Cash credit secured by hypothecation of trade receivables and inventory of Kanti Bijlee Utpadan Nigam Ltd., a subsidiary of the Company, with floating rate of interest linked to the bank's MCLR rate. The loan is secured by second charges on all immovable properties, movable properties, both present & future, pertaining to project, including land measuring 975.05 acres.

(iii) Cash credit secured by a first pari passu charge on entire current assets and fixed assets of the of Nabinagar Power Generating Company Limited, a subsidiary of the Company.

(iv) Cash credit secured against hypothecation of the stocks of stores and spares and book debt, both present and future, of the NEEPCO, a subsidiary of the Company.

(v) Cash credit secured against secured by way of second charge on block of assets of Tehri Stage-1 and Koteshwar HEP including machinery spares, tools & accessories, fuel stock, spares & material at project site of THDC India Ltd., a subsidiary of the Company.

(b) Secured short term loans include:

(i) Secured by pari passu charge over assets of the Kameng Hydro Electric Power Project (600 MW) situated at Arunachal Pradesh of NEEPCO, a subsidiary of the Company.

(ii) Secured against trade receivables of Koteshwar HEP and second charge on block of assets of Teheri Stage-I and Koteshwar HEP of THDC India Ltd., a subsidiary of the Company.

(iii) Secured by pari passu first charge on fixed assets and & first charge on entire current assets of Bhartiya Rail Bijlee Company Limited, a subsidiary of the Company.

(c) Borrowings under Commercial paper are net of unamortised discount as at 31 March 2021 amounting to ₹ **140.26 crore** (31 March 2020: ₹ 130.85 crore)

(d) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

32. Current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Trade payables for goods and services		
Total outstanding dues of		
- micro and small enterprises	**404.12**	512.24
- creditors other than micro and small enterprises	**8,322.16**	9,596.34
Total	**8,726.28**	10,108.58

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 74.

b) Amounts payable to related parties are disclosed in Note 57.

33. Current liabilities - Other financial liabilities

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Current maturities of non-current borrowings		
Bonds - secured	1,893.00	2,500.50
Foreign currency notes - unsecured	4,710.00	-
From Banks		
Secured		
Foreign currency loans	75.38	77.32
Rupee term loans	739.36	344.60
Unsecured		
Foreign currency loans	756.63	1,252.86
Rupee term loans	2,962.46	1,966.91
From Others		
Secured		
Rupee term loans	935.48	406.07
Unsecured		
Foreign currency loans (guaranteed by GOI)	310.68	307.46
Other foreign currency loans	393.22	389.31
Rupee term loans	33.34	690.19
	12,809.55	7,935.22
Current maturities of lease obligations - Secured	9.63	8.75
Current maturities of lease obligations - Unsecured	152.16	109.45
Interest accrued but not due on secured borrowings	1,419.48	1,580.28
Interest accrued but not due on unsecured borrowings	823.84	774.36
Unpaid dividends	19.84	19.35
Unpaid matured deposits and interest accrued thereon	0.19	0.19
Unpaid matured bonds and interest accrued thereon	6.54	5.55
Unpaid bond refund money-Tax free bonds	0.19	0.24
Book overdraft	2.92	3.61
Payable to customers	919.13	62.01
Payable for capital expenditure		
- micro and small enterprises	238.98	237.06
- other than micro and small enterprises	17,054.82	15,109.49
Other payables		
Deposits from contractors and others	388.83	241.90
Payable to employees	700.79	994.31
Retention on account of encashment of bank guarantee (solar)	286.72	286.83
Payable to Solar Payment Security account	299.84	301.12
Others	1,167.94	977.24
Total	**36,301.39**	28,646.96

a) Details in respect of rate of interest and terms of repayment of current maturities of secured and unsecured non-current borrowings indicated above are disclosed in Note 25.

b) Unpaid dividends, matured deposits, bonds and interest include the amounts which have either not been claimed by the investors/holders of the equity shares/bonds/fixed deposits or are on hold pending legal formalities etc. Out of the above, the amount required to be transferred to Investor Education and Protection Fund has been transferred.

c) 'Other payables - Others' mainly includes ₹ **286.16 crore** (31 March 2020: ₹ 410.27 crore) towards the implementation of Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) Scheme of the GOI being carried out by the Company. The funds for the implementation of these schemes are provided by the agencies nominated by the GOI in this regard. Further, 'Other payables - Others' also include ₹**380.48 crore** (31 March 2020: ₹ 380.48 crore) payable to the Department of Water Resource, Government of Odisha and amount payable to hospitals, etc.

d) The Company had obtained exemption from the Ministry of Corporate Affairs (MCA), GOI in respect of applicability of Section 58A from the erstwhile Companies Act, 1956 in respect of deposits held from the dependants of employees who die or suffer permanent total disability under the 'Employees Rehabilitation Scheme' (said amount is included in "Other payables - Others"). Consequent upon enactment of the Companies Act, 2013, the Company has written to the MCA for clarification on continuation of above exemption granted earlier, which is still awaited. Based on an expert opinion, the amount accepted under the Scheme is not considered as a deposit under the Companies Act, 2013.

e) Retention on account of encashment of bank guarantee (solar) represents amounts retained by M/s NVVN Ltd., a wholly owned subsidiary, pursuant to directions received from the Ministry of New and Renewable Energy vide letter ref. no. 29/5/2010-11/JNNSM(ST) dated 29 June 2012 and clarifications thereafter.

f) Disclosures as required under the Companies Act, 2013 / MSMED Act, 2006 are provided in Note 74.

g) Amounts payable to related parties are disclosed in Note 57.

h) Solar Payment Security Account was created by MNRE, Government of India vide OM No. 29/5/2010-11/JNNSM(ST) dated 30 June 2011 as Gross Budgetary Support (GBS) by Ministry of New and Renewable Energy (MNRE), Government of India for ensuring timely payment to Solar Power Developers (SPDs) in the event of default by State Utilities/Discoms. This fund is to be recouped after receipt of payment from State Utilities/Discoms against these bills. This fund was incorporated in the books of accounts of NVVN with effect from 01 Jan 2019 for better monitoring and control of the fund. The funds not withdrawn are invested in Term deposits and balance amount is kept in Current account (refer Note 16).

34. Current liabilities - Other current liabilities

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Advances from customers and others	**863.52**	781.00
Government Grants	**151.52**	119.48
Other payables		
Statutory dues	**564.80**	697.65
Others	**369.66**	258.06
Total	**1,949.50**	1,856.19

(a) Advance received for the DDUGJY (including interest thereon) of ₹ **377.31 crore** (31 March 2020: ₹ 460.98 crore) is included in 'Advance from customers and others'. Refer Note 33(c). Tax deducted at source on the interest is included in 'Advance tax and tax deducted at source' - Note 11.

(b) Refer Note 30 w.r.t. accounting of Government grants.

(c) Others include an amount ₹ **250.41 crore** (31 March 2020: ₹ 187.49 crore) payable to Government of Jharkand on disposal of the assets held for sale. Refer Note 20(e).

35. Current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Provision for		
Employee benefits	**1,912.72**	1,737.40
Obligations incidental to land acquisition	**3,590.13**	3,754.29
Tariff adjustment	**360.28**	190.68
Others	**2,250.47**	1,689.69
Total	**8,113.60**	7,372.06

a) Disclosures required by Ind AS 19 'Employee Benefits' are provided in Note 54.

b) Disclosures required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' are provided in Note 60.

c) Provision for others mainly comprise ₹ **103.88 crore** (31 March 2020: ₹ 101.05 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2 (Refer Note 63), ₹ **2,055.91 crore** (31 March 2020: ₹ 1,551.18 crore) towards provision for cases under litigation and ₹ **3.05 crore** (31 March 2020: ₹ 2.41 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation.

36. Current liabilities - Current tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Current tax liabilities (net)	**17.50**	1.71

37. Deferred revenue

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
On account of		
Advance against depreciation	**205.12**	212.71
Income from foreign currency fluctuation	**2,055.01**	2,728.32
Deferred fair valuation gain	**3.15**	2.19
Total	**2,263.28**	2,943.22

a) Advance against depreciation (AAD) was an element of tariff provided under the Tariff Regulations for 2001-04 and 2004-09 to facilitate debt servicing by the generators since it was considered that depreciation recovered in the tariff considering a useful life of 25 years is not adequate for debt servicing. Though this amount is not repayable to the beneficiaries, keeping in view the matching principle, and in line with the opinion of the Expert Advisory Committee (EAC) of the Institute of Chartered Accountants of India (ICAI), this was treated as deferred revenue to the extent depreciation chargeable in the accounts is considered to be higher than the depreciation recoverable in tariff in future years. Since AAD is in the nature of deferred revenue and does not constitute a liability, it has been disclosed in this note separately from equity and liabilities.

b) Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years as provided in accounting policy no. C.16 (Note 1). This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities.

38. Revenue from operations

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
Energy sales (including electricity duty)		**1,03,794.08**	1,01,422.65
Sale of energy through trading		**7,143.81**	7,303.06
Consultancy, project management and supervision fee		**172.03**	196.24
Lease rentals on assets on operating lease		**156.18**	156.18
Commission - energy trading business		**1.78**	0.50
		1,11,267.88	1,09,078.63
Sale of fly ash/ash products	**185.92**		176.17
Less: Transferred to fly ash utilisation reserve fund	**185.92**		176.17
		-	-
Other operating revenues			
Interest from beneficiaries		**31.27**	129.91
Energy internally consumed		**62.58**	76.93
Interest income on assets under finance lease		**51.54**	59.90
Recognised from government grants		**117.83**	118.67
Others		**0.05**	-
		263.27	385.41
Total		**1,11,531.15**	1,09,464.04

a) (i) The Central Electricity Regulatory Commission (CERC) notified the CERC (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019) for determination of tariff for the tariff period 2019-2024. Pending issue of provisional/final tariff orders with effect from 1 April 2019, capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019. In case of new projects, which got commercialised from 1 April 2019 and projects where tariff approved and applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in tariff petitions. Energy charges are billed as per the operational norms specified in the Regulations 2019. The amount provisionally billed is ₹ **1,01,959.08 crore** (31 March 2020: ₹ 98,705.70 crore).

(ii) Sales have been provisionally recognized at ₹ **1,02,861.88 crore** (31 March 2020: ₹ 98,940.49 crore) on the said basis.

b) Sales include ₹ **(-) 1,101.47 crore** (31 March 2020: ₹ 1,768.88 crore) on account of income tax recoverable from / (refundable to) the beneficiaries as per Regulations, 2004 due to reversal of tax provisions created in the previous year pursuant to 'Vivad se Vishwas Scheme' (VsVS) introduced by the government vide 'The Direct Tax Vivad Se Vishwas Act, 2020 for settlement of pending income tax disputes. Sales also include ₹ **95.08 crore** (31 March 2020: ₹ 92.79 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019. Also refer Note 53(II)(a).

c) Sales include ₹ **1,185.02 crore** (31 March 2020: ₹ 60.93 crore) pertaining to earlier years on account of revision of energy charges due to grade slippages and other adjustments.

d) Energy sales include electricity duty amounting to ₹ **1,228.54 crore** (31 March 2020: ₹ 999.75 crore).

e) Energy sales and sale of energy through trading are net of rebate to beneficiaries amounting to ₹ **518.03 crore** (31 March 2020: ₹ 472.79 crore).

f) Other operating revenue includes ₹ **62.58 crore** (31 March 2020: ₹ 76.93 crore) towards energy internally consumed, valued at variable cost of generation and the corresponding amount is included in power charges in Note 44.

g) CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover from /pay to the beneficiaries the under/over recovered amount along-with simple interest. Accordingly, the interest recoverable from the beneficiaries amounting to ₹ **31.27 crore** (31 March 2020: ₹ 129.91 crore) has been accounted as 'Interest from beneficiaries'. Further, the amount payable to the beneficiaries has been accounted as 'Interest to beneficiaries' in Note 44.

h) The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which may be extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease.

i) The Company had ascertained that the PPA entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition date to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease'.

j) CERC vide notification dated 19 February 2021, notified the Second amendment to Tariff Regulations 2019, which inter alia includes mechanism for determination of transfer price of coal from integrated coal mines to generating stations and are effective for the period 2019-24. Coal extracted from Company's captive mines and supplied to generating stations have been accounted considering these Regulations.

k) Sale of energy through trading includes export sales amounting to ₹ **1,491.77 crore** (31 March 2020: ₹ 1,788.41 crore) to Nepal and Bangladesh by M/s NVVN Ltd., a subsidiary of the Company.

39. Other income

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
Interest from			
Financial assets at amortized cost			
Loan to employees		**71.02**	68.47
Deposits with banks		**71.45**	54.09
Deposits with banks out of fly ash utilisation reserve fund	**20.92**		35.66
Less: Transferred to fly ash utilisation reserve fund	**20.92**		35.66
		-	-
Deposits with banks - DDUGJY funds	**28.41**		24.24
Less: Transferred to DDUGJY advance from customers	**28.41**		24.24
		-	-
Deposits with banks - Solar payment security account	-		2.23
Less: Transferred to Solar payment security account	-		2.23
		-	-
Deposits with banks - Retention on account of BG encashment (Solar)	-		0.09
Less: Transferred to Retention on account of BG encashment (Solar)	-		0.09
		-	-
Advance to contractors and suppliers		**129.91**	51.60
Income Tax refunds		**32.66**	65.61
Others		**18.51**	28.30
Dividend from			
Non-current investment in equity instruments designated at fair value through OCI		**9.00**	4.80
Other non-operating income			
Late payment surcharge from beneficiaries		**3318.87**	1928.56
Hire charges for equipment		**2.25**	1.91
Sale of scrap		**150.00**	66.50
Gain on sale of current investments measured at fair value through profit or loss		**0.02**	2.80
Miscellaneous income		**224.39**	211.06
Profit on de-recognition of property, plant and equipment		**3.36**	12.59
Provisions written back			
Doubtful loans, advances and claims		**0.11**	24.91
Shortage in inventories		**11.89**	21.44
Obsolescence in inventories		**7.23**	6.73
Arbitration cases		**7.60**	374.18
Others		**37.36**	56.80
		4,095.63	2,980.35
Less: Transferred to expenditure during construction period (net)- Note 45		**57.30**	60.63
Transferred to expenditure during development of coal mines (net)- Note 46		**1.97**	1.24
Transferred to payable to Govt. of Jharkhand-Note 34		**20.68**	9.94
Total		**4,015.68**	2,908.54

a) 'Interest from others' includes interest on advance to APIIC for drawal of water and deposits with LIC towards annuity to the land losers.

b) Miscellaneous income includes income from township recoveries and receipts towards insurance claims.

c) 'Provisions written back - Arbitration cases' include an amount of ₹ **Nil** (31 March 2020: ₹ 356.31 crore) pertaining to dispute relating to movement of coal by the operator. Refer Note 60(iii)(b).

d) 'Provisions written back - Others' includes provision for shortage in construction stores, shortage in property, plant and equipment and excess provision written back.

40. Fuel cost

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Coal	**53,407.36**	53,845.86
Gas	**2,047.10**	2,678.37
Naptha	**68.44**	0.57
Oil	**576.36**	660.82
Total	**56,099.26**	57,185.62

41. Employee benefits expense

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Salaries and wages	**5,691.56**	5,943.33
Contribution to provident and other funds	**804.39**	703.62
Staff welfare expenses	**653.64**	710.35
	7,149.59	7,357.30
Less: Allocated to fuel inventory	**274.44**	293.10
Transferred to expenditure during construction period (net) - Note 45	**797.36**	1,101.67
Transferred to expenditure during development of coal mines (net) - Note 46	**60.51**	66.17
Reimbursements for employees on deputation	**61.84**	64.67
Adjusted with payable to Govt. of Jharkhand - Note 34	**1.51**	1.21
Total	**5,953.93**	5,830.48

a) Disclosures as per Ind AS 19 - 'Employee Benefits' in respect of provision made towards various employee benefits are provided in Note 54.

42. Finance costs

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Finance costs on financial liabilities measured at amortised cost		
Bonds	**4,423.44**	3,848.82
Foreign currency term loans	**309.19**	424.66
Rupee term loans	**6,462.78**	6,302.77
Foreign currency bonds/notes	**1,507.54**	1,426.43
Cash credit	**185.97**	178.93
Unwinding of discount on vendor liabilities	**163.65**	124.21
Commercial papers	**556.95**	865.54
	13,609.52	13,171.36
Interest on non financial items	**78.86**	104.52
Exchange differences regarded as an adjustment to borrowing costs	**(431.08)**	846.24
Other borrowing costs		
Guarantee fee	**29.95**	29.81
Others	**14.59**	14.47
	44.54	44.28
Sub-Total	**13,301.84**	14,166.40
Less: Transferred to expenditure during construction period (net) - Note 45	**3,809.18**	5,821.81
Transferred to expenditure during development of coal mines (net) - Note 46	**268.52**	227.74
Total	**9,224.14**	8,116.85

a) 'Other borrowing costs - Others' include bond issue and service expenses, commitment charges, exposure premium and insurance premium & other expenses on foreign currency loans / bonds/ notes.

b) Refer Note 71 w.r.t. Interest expense relating to lease obligations.

43. Depreciation, amortisation and impairment expense

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
On property, plant and equipment - Note 2	**13,525.98**	11,375.82
On intangible assets - Note 4	**55.55**	53.10
	13,581.53	11,428.92
Less: Allocated to fuel inventory	**723.91**	582.51
Transferred to expenditure during construction period (net) - Note 45	**113.70**	236.48
Transferred to expenditure during development of coal mines (net) - Note 46	**32.43**	34.75
Adjustment with deferred revenue from deferred foreign currency fluctuation	**261.18**	219.02
Total	**12,450.31**	10,356.16

a) Refer Note 71 w.r.t. depreciation expense of right of use assets.

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44. Other expenses

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
Power charges	443.60		537.04
Less: Recovered from contractors and employees	42.86		37.60
		400.74	499.44
Water charges		696.15	729.66
Cost of captive coal		1,412.21	1,349.68
Stores consumed		99.49	82.88
Rent		9.51	12.07
Repairs and maintenance			
Buildings	342.49		330.08
Plant and equipment	3,372.27		2,889.10
Others	427.93		462.85
		4,142.69	3,682.03
Load dispatch centre charges		33.60	54.84
Insurance		370.26	218.36
Interest to beneficiaries		0.07	72.16
Rates and taxes		136.75	132.97
Water cess and environment protection cess		1.53	17.37
Training and recruitment expenses	23.60		50.32
Less: Receipts	0.62		0.36
		22.98	49.96
Communication expenses		83.04	87.95
Travelling expenses		195.47	278.63
Tender expenses	24.00		8.42
Less: Receipt from sale of tenders	3.66		1.09
		20.34	7.33
Payment to auditors		6.58	6.22
Advertisement and publicity		10.39	23.25
Electricity duty		1,162.98	952.40
Security expenses		1,261.95	1,103.13
Entertainment expenses		62.59	72.50
Expenses for guest house	60.40		55.38
Less: Recoveries	1.04		1.01
		59.36	54.37
Education expenses		69.07	61.40
Donation / Grants		11.60	8.00
Ash utilisation and marketing expenses		1,175.17	859.72
Directors sitting fee		0.57	0.73
Professional charges and consultancy fee		103.62	116.04
Legal expenses		47.74	55.43
EDP hire and other charges		50.65	40.48
Printing and stationery		5.51	7.33
Oil and gas exploration expenses		0.09	0.14
Hiring of vehicles		101.95	120.53
Net loss/(gain) in foreign currency transactions and translations		(152.01)	962.17

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Cost of hedging	0.34	(0.99)
Derivatives MTM loss/(gain) (net)	-	1.28
Horticulture expenses	61.49	61.39
Hire charges of helicopter/aircraft	8.40	1.05
Hire charges of construction equipment	8.62	14.47
Transport vehicle running expenses	15.44	18.81
Loss on de-recognition of property, plant and equipment	137.27	64.19
Loss on disposal of investments in joint venture accounted through equity method	15.88	-
Miscellaneous expenses	293.64	292.79
	12,143.72	12,172.16
Less: Allocated to fuel inventory	1,854.64	1,942.58
Transferred to expenditure during construction period (net) - Note 45	703.94	911.98
Transferred to expenditure during development of coal mines (net) - Note 46	263.71	82.37
Transferred to derivative MTM loss/(gain) recoverable/(payable) from/to beneficiaries	-	1.28
Transferred to corporate social responsibility expenses	55.46	47.97
Adjusted with payable to Govt. of Jharkhand-Note 34	10.37	10.85
Transferred to fly ash utilisation reserve fund	170.39	211.96
	9,085.21	8,963.17
Corporate Social Responsibility (CSR) expense	461.96	341.12
Provisions for		
Tariff adjustments	169.60	91.91
Obsolescence in inventories	4.47	12.99
Shortages in inventories	35.23	20.45
Unserviceable capital works	137.15	147.70
Unfinished minimum work programme for oil and gas exploration	2.83	15.91
Arbitration cases	181.92	39.83
Shortages in construction stores	5.66	1.64
Doubtful loans, advances and claims	344.83	2.44
Doubtful trade receivables	-	85.18
Others	25.85	3.07
	907.54	421.12
Total	10,454.71	9,725.41

a) During the development stage of mine, transfer price of coal extracted from Company's captive mine has been determined considering the CERC Regulations. The same has been netted from the cost of captive coal and carried to 'Development of coal mines' (Note 3) through 'Transferred to expenditure during development of coal mines' (Note 46).

b) Details in respect of payment to auditors:

As Auditor		
Audit fee	2.72	2.93
Tax audit fee	0.86	0.68
Limited review	1.44	1.15
In other capacity		
Other services (certification fee)	1.23	0.65
Reimbursement of expenses	0.33	0.81
Total	6.58	6.22

Payment to the auditors includes ₹ **0.83 crore** (31 March 2020: ₹ 0.51 crore) relating to earlier year.

c) CERC Regulations provides that where after the truing-up, the tariff recovered is more than the tariff approved by the Commission, the generating Company shall pay to the beneficiaries the over recovered amount along-with simple interest. Accordingly, the interest payable to the beneficiaries amounting to ₹ **0.07 crore** (31 March 2020: ₹ 72.16 crore) has been accounted and disclosed as 'Interest to beneficiaries'.

d) Miscellaneous expenses include expenditure on books & periodicals, workshops, operating expenses of DG sets, brokerage and commission, bank charges, furnishing expenses, etc.

e) Provisions - Others include provision for doubtful debts, etc.

45. Expenditure during construction period (net)*

₹ Crore

Particulars		For the year ended 31 March 2021	For the year ended 31 March 2020
A. Employee benefits expense			
Salaries and wages		**650.08**	893.36
Contribution to provident and other funds		**99.09**	116.14
Staff welfare expenses		**48.19**	92.17
Total (A)		**797.36**	1,101.67
B. Finance costs			
Finance costs on financial liabilities measured at amortised cost			
Bonds		**1,310.07**	1,622.12
Foreign currency term loans		**54.66**	153.80
Rupee term loans		**2,074.14**	2,833.48
Foreign currency bonds/notes		**354.35**	531.84
Others		**72.05**	79.78
Unwinding of discount on vendor liabilities		**94.00**	59.05
Exchange differences regarded as an adjustment to borrowing costs		**(172.63)**	518.35
Other borrowing costs - others		**22.54**	23.39
Total (B)		**3,809.18**	5,821.81
C. Depreciation and amortisation expense		**113.70**	236.48
D. Other expenses			
Power charges	**296.60**		351.12
Less: Recovered from contractors and employees	**10.91**		8.73
		285.69	342.39
Water charges		**12.30**	41.05
Rent		**2.03**	2.66
Repairs and maintenance			
Buildings	**2.73**		10.75
Plant and equipment	**0.07**		0.37
Others	**69.92**		130.63
		72.72	141.75
Insurance		**13.08**	21.25
Rates and taxes		**13.41**	35.27
Communication expenses		**8.06**	11.50
Travelling expenses		**23.29**	45.33
Tender expenses		**21.75**	7.54

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Advertisement and publicity	0.88	1.19
Security expenses	136.26	130.41
Entertainment expenses	3.08	4.39
Expenses for guest house	6.16	7.15
Professional charges and consultancy fee	5.79	11.56
Legal expenses	3.87	7.76
EDP hire and other charges	1.23	2.25
Printing and stationery	0.37	0.69
Miscellaneous expenses	93.97	97.84
Total (D)	703.94	911.98
E. Less: Other income		
Interest from advances to contractors and suppliers	27.43	29.51
Interest others	16.22	19.30
Hire charges for equipment	0.37	0.30
Sale of scrap	-	0.23
Miscellaneous income	13.28	11.29
Total (E)	57.30	60.63
F. Net actuarial losses on defined benefit plans	4.47	13.77
Grand total (A+B+C+D-E+F)**	5,371.35	8,025.08

* Other than for expenditure during development of coal mines- (Note 46)

** Carried to Capital work-in-progress - (Note 3)

46. Expenditure during development of coal mines (net)

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
A. Employee benefits expense		
Salaries and wages	48.37	52.90
Contribution to provident and other funds	5.28	4.89
Staff welfare expenses	6.86	8.38
Total (A)	60.51	66.17
B. Finance costs		
Finance costs on financial liabilities measured at amortised cost		
Bonds	86.57	64.07
Rupee term loans	173.65	154.67
Unwinding of discount on vendor liabilities	8.25	8.92
Other borrowing costs - others	0.05	0.08
Total (B)	268.52	227.74

₹ Crore

Particulars			For the year ended 31 March 2021	For the year ended 31 March 2020
C. Depreciation and amortisation expense			**32.43**	34.75
D. Other expenses				
Power charges			**1.03**	1.40
Rent			**0.72**	0.44
Repairs and maintenance				
Buildings	**0.16**			0.65
Others	**3.66**			4.45
			3.82	5.10
Cost of captive coal produced			**218.17**	46.23
Insurance			**0.01**	0.09
Rates and taxes			**1.38**	0.95
Communication expenses			**0.95**	1.30
Travelling expenses			**2.28**	3.68
Advertisement and publicity			**0.04**	0.46
Security expenses			**15.65**	6.65
Entertainment expenses			**0.65**	0.77
Expenses for guest house			**0.12**	0.74
Professional charges and consultancy fee			**7.54**	5.81
Legal expenses			**1.11**	0.11
EDP hire and other charges			**0.16**	0.38
Printing and stationery			**0.19**	0.15
Miscellaneous expenses			**9.89**	8.11
Total (D)			**263.71**	82.37
E. Less: Other income				
Interest from advances to contractors and suppliers			**1.43**	0.69
Interest others			**-**	0.33
Miscellaneous income			**0.54**	0.22
Total (E)			**1.97**	1.24
F. Net actuarial losses on defined benefit plans			**0.50**	1.06
Grand total (A+B+C+D-E+F)*			**623.70**	410.85

*Carried to Capital work-in-progress - (Note 3)

47. Exceptional items

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Special rebate to beneficiaries - Covid-19	**1,512.19**	-

a) The Group is mainly in the business of generation and sale of electricity which is an essential service as emphasized by MOP, GOI. During the outbreak of COVID-19, including recent surge in number of cases, the Company has ensured the availability of its power plants to generate power and has continued to supply power during the period of lockdown. In line with the directions of MOP dated 15 & 16 May 2020, issued in accordance with the announcement of GOI under the Atmanirbhar Bharat Special Economic and Comprehensive package, to allow a rebate of between 20%-25% on the

capacity charges during the lock down period subject to approval of the Board. A rebate of ₹ 1,512.19 crore has been allowed in the financial year 2020-21. The amount has since been accounted for and disclosed as exceptional item.

b) CERC issued an order dated 3 April 2020 whereby it was directed that Late Payment Surcharge (LPSC) shall apply at a reduced rate of 12% p.a. instead of the normal rate of 18% p.a. on the payments becoming overdue during the period from 24 March 2020 to 30 June 2020 to contain the impact of COVID-19. Further, GOI has notified Electricity (Late Payment Surcharge) Rules, 2021 on 22 February 2021.These rules envisage that base rate of LPSC to be considered as SBI one year MCLR, as on 1 April of the financial year, plus five percent. The rate of LPSC shall be increased by 0.5 percent for every month of delay, provided that the LPSC shall not be more than 3 percent higher than the base rate at any time.

c) Further, under the Atmanirbhar Bharat package, the Company has deferred the capacity charges to DISCOMS for the lockdown period for the power not scheduled to be payable without interest after the lock down period in three equal monthly installments. The impact on profit for the the year due to the reduction in LPSC rate and deferment of capacity charges, is not material.

The demand for power is continuously increasing with increase in economic activities in the Country, although demand may get impacted in short term due to lock downs in certain parts of the country.The Management does not anticipate any material medium to long-term impact on the financial position of the Group. The Group will continue to closely monitor any material changes to the future economic conditions and take appropriate remedial measures as needed to respond to the Covid related risks. if any.

48. (a) The Group has a system of obtaining periodic confirmation of balances from banks and other parties. There are no unconfirmed balances in respect of bank accounts and borrowings from banks & financial institutions. With regard to receivables for energy sales, the Group sends demand intimations to the beneficiaries with details of amount paid and balance outstanding which can be said to be automatically confirmed on receipt of subsequent payment from such beneficiaries. In addition, reconciliation with beneficiaries and other customers is generally done on quarterly basis. So far as trade/other payables and loans and advances are concerned, the balance confirmation letters/emails with the negative assertion as referred in the Standard on Auditing (SA) 505 (Revised) 'External Confirmations', were sent to the parties. Some of such balances are subject to confirmation/reconciliation. Adjustments, if any will be accounted for on confirmation/reconciliation of the same, which in the opinion of the management will not have a material impact.

(b) In the opinion of the management, the value of assets, other than property, plant and equipment and non-current investments, on realisation in the ordinary course of business, will not be less than the value at which these are stated in the Balance Sheet.

(c) The levy of transit fee/entry tax on supplies of fuel to some of the power stations has been paid under protest as the matters are sub-judice at various courts. In case the Company gets refund/demand from fuel suppliers/tax authorities on settlement of these cases, the same will be passed on to respective beneficiaries.

49. (a) On 7 February 2021, a massive unprecedented flood consisting of debris and muck, silt, boulders, rock pieces, etc. caused by glacier burst in the upstream of the project in the Himalayas, hit a part of the Company's under construction 520 MW hydropower project in the state of Uttarakhand. This resulted in large scale inundation and silting at the project site, especially the barrage intake structure, desilting chamber/basin and adjoining facilities including their approach. However, the main power house and dam was not significantly affected by the floods. Most of the mechanical and electrical equipment are in safe condition.

Industry Experts engaged by the Company including experienced officials of the Company, are preparing a comprehensive assessment -cum- action plan for restoration of the project. It is anticipated that the restoration work may take time up to the end of the next financial year i.e. 2021-22, which is being closely monitored by the Company. Insurance cover is available for the loss/damage caused. The company is committed to the completion of the project at the earliest.

The carrying cost of the project as at 31 March 2021 is ₹ **5,337.69 crore** (31 March 2020: ₹ 4,868.79 crore). Damage to the project due to the calamity is indemnifiable as stated above and Management is of the view that there would not be any material impact on the financials and confident that any additional expenditure consequent to the natural calamity, would be covered as part of project cost as per Tariff Regulations, hence no adjustment is considered necessary in respect of the carrying value of the project.

(b) The Company is executing a hydro power project in the state of Uttarakhand, where all the clearances were accorded. A case was filed in Hon'ble Supreme Court of India after the natural disaster in Uttarakhand in June 2013 to review whether the various existing and ongoing hydro projects have contributed to environmental degradation. Hon'ble Supreme Court

of India on 7 May 2014, ordered that no further construction shall be undertaken in the projects under consideration until further orders, which included the said hydro project of the Company. In the proceedings, Hon'ble Supreme Court is examining to allow few projects which have all clearances which includes the project of the Company where the work has been stopped. Aggregate cost incurred on the project up to 31 March 2021 is ₹**163.86 crore** (31 March 2020: ₹ 163.40 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no adjustment is considered necessary in respect of the carrying value of the project..

(c) During the previous year, penstock I - feeding 02 (two) units (50 MW each) of Kopili Hydro Power Station, Umrongso, Assam of the NEEPCO, a subsidiary of the Company, got ruptured on 7 October 2019 following a load through off and tripping of Unit -I (50 MW). Three other units were in full load during the mishap. Rupture happened at three locations of penstock including at location immediately downstream of valve house. Penstock protection valve closing mechanism was damaged in the incident and therefore, the valve could not be closed to isolate the penstock, consequently thereafter, the power house was flooded upto EOT crane beam level within a very short period. At present, Kopili (4 X 50 MW) system in in shutdown condition. Estimated carrying cost of the assets damaged due to aforesaid mishap amounts to ₹ **103.67 crore** (31 March 2020: ₹ 101.68 crore) as per internal assessment by NEEPCO, has been provided for. The subsidiary has lodged a initial insurance claim for an amount of ₹250.00 crore and further action in this matter is in progress.

(d) Patratu Utpadan Nigam Ltd., a subsidiary of the Company, had signed the deed of adherence with Ministry of Coal (MoC) and Jharkhand Urja Utpadan Nigam Ltd. (JUUNL) for Banhardih coal block on 2 June 2017. Subsequently, deed of assignment between PVUNL and JUUNL was executed on 18 May 2018 after consent from MoC. Geological report for the coal block has been handed over by JUUNL in July 2019, and the mining plan has been submitted to MoC in March 2020. A Bank guarantee (BG) of ₹ 237.60 crore has been submitted to MoC towards performance security and MoC appropriated 50% of the BG amount i.e. ₹ 118.80 crore in July 2019 for not complying with the efficiency parameters as specified in the allotment agreement. MoC has been approached for revision of the efficiency parameters (milestones) and also refund of the appropriated amount. A further appropriation of 15% of BG amount i.e. ₹ 35.64 crore has been done by MoC in December 2020 for not complying with some more efficiency parameters as specified in the allotment agreement. The subsidiary company has decided to exercise remedies available in the allotment agreement both for revision of efficiency parameters (milestones) and refund of appropriated value of the bank guarantee and accordingly approached MoC which inter alia includes referring the matter to appropriate tribunal for redressal.

50. (a) The environmental clearance ("clearance") granted by the Ministry of Environment and Forest, Government of India (MoEF) for one of the Company's project consisting of three units of 800 MW each, was challenged before the National Green Tribunal (NGT). The NGT disposed off the appeal, inter alia, directing that the order of clearance be remanded to the MoEF to pass an order granting or declining clearance to the project proponent afresh in accordance with the law and the judgement of the NGT and for referring the matter to the Expert Appraisal Committee ("Committee") for its re-scrutiny, which shall complete the process within six months from the date of NGT order. NGT also directed that the environmental clearance shall be kept in abeyance and the Company shall maintain status quo in relation to the project during the period of review by the Committee or till fresh order is passed by the MoEF, whichever is earlier. The Company filed an appeal challenging the NGT order before the Hon'ble Supreme Court of India which stayed the order of the NGT and the matter is sub-judice. All the units of the project have been declared commercial in the earlier years. The carrying cost of the project as at 31 March 2021 is ₹ **15,115.02 crore** (31 March 2020: ₹ 15,662.28 crore). Management is confident that the approval for the project shall be granted, hence no adjustment is considered necessary in respect of the carrying value of the project.

(b) The Company is executing a thermal power project consisting of two units of 800 MW each in the State of Telangana. The project construction commenced in the year 2016 after obtaining the requisite approval and Environment Clearance (EC) from MOEF&CC. On 27 May 2021, the National Green Tribunal (NGT) has passed an order instructing MOEF&CC to keep the EC granted for the project in abeyance for a period of seven months or till the period the re-appraisal is done and additional conditions imposed by the MOEF&CC, whichever is earlier. NGT has further directed the MOEF&CC to conduct additional studies pertaining to Environment Impact Assessment of the project, to be carried out through the company, for further assessment by its Expert Appraisal Committee (EAC) and get recommendations of the EAC for imposing additional conditions by the MOEF&CC, if any, on the company for allowing the units to operate. The Company has obtained advice of prominent legal experts and has filed an appeal before Hon'ble Supreme Court of India against the directions of NGT. Both the units of the project are in advanced stage of construction and commissioning of the units is envisaged in the next year. The carrying cost of the project as at 31 March 2021 is ₹ **9,376.31 crore** (31 March 2020: ₹ 8,017.48 crore). Management is confident that the approval for the continuation of the project shall be granted, hence no adjustment is considered necessary in respect of the carrying value of the project.

51. Disclosure as per Ind AS 1 'Presentation of financial statements'

a) Changes in significant accounting policies:

During the year, following changes to the accounting policies have been made:

(i) CERC has notified Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2021, dated 19 February 2021. These amendments are applicable to a generating company which has the arrangement for supply of coal or lignite from the integrated mine(s) allocated to it, for one or more of its specified end use generating stations, whose tariff is required to be determined by the Commission. The company has integrated coal mines and hence these amendments are applicable to the Company. Consequently, related significant accounting policies viz. C.2.5, C.6.2, C.7 and C.16 have been modified.

(ii) Certain other changes have also been made in the policies nos. B.1, C.2, C.4, C.6, C.7, C.10, C.11, C.12, C.16, C.17, C.19, C.20, C.22, C.28, C.29, D.2 and D.4 for improved disclosures. There is no impact on the financial statements due to these changes, however, the policy numbers have been rearranged in the current year as required.

b) Reclassifications and comparative figures

Certain reclassifications have been made to the comparative period's financial statements to enhance comparability with the current year's financial statements.

As a result, certain line items have been reclassified in the balance sheet and statement of cash flows, the details of which are as under:

Items of balance sheet before and after reclassification as at 31 March 2020

₹ Crore

Sl. No	Particulars	Amount before reclassification	Reclassification	Amount after reclassification
1	Other financial assets-Non current (Note-9)	1,227.88	(21.56)	1,206.32
	Deferred tax assets (net) (Note-10)	-	1,096.60	1,096.60
	Other non-current assets (Note-11)	13,726.72	365.89	14,092.61
	Trade receivables (Note-14)	20,370.80	(56.21)	20,314.59
	Other financial assets-Current (Note-18)	13,027.80	53.32	13,081.12
	Current tax assets (net) (Note-19)	83.26	(22.30)	60.96
	Other current assets (Note-20)	8,818.51	(317.43)	8,501.08
2	Provisions - non-current (Note-28)	1,169.17	(84.15)	1,085.02
	Deferred tax liabilities (net) (Note-29)	7,617.11	1,098.31	8,715.42
	Other non-current liabilities (Note-30)	-	1,551.13	1,551.13
	Other current liabilities (Note-34)	1,736.71	119.48	1,856.19
	Provisions - current (Note-35)	7,287.91	84.15	7,372.06
	Deferred revenue (Note-37)	4,613.83	(1,670.61)	2,943.22

Items of statement of cash flows before and after reclassification for the year ended 31 March 2020

₹ Crore

Sl. No	Particulars	Amount before reclassification	Reclassification	Amount after reclassification
1	Cash flow from operating activities	24,583.22	(693.55)	23,889.67
	Cash flow from investing activities	(30,321.67)	693.55	(29,628.12)
	Cash flow from financing activities	6,004.26	-	6,004.26

52. Disclosure as per Ind AS 2 'Inventories'

(a) Amount of inventories consumed and recognised as expense during the year is as under:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Fuel cost	**56,099.26**	57,185.62
Others (included in Note 44 - Other expenses)	**1,458.26**	1,526.88
Total	**57,557.52**	58,712.50

(b) Carrying amount of inventories pledged as security for borrowings as at 31 March 2021 is ₹ **630.67 crore** (31 March 2020: ₹ 11,138.71 crore).

53. Income taxes related disclosures

(I) Disclosure as per Ind AS 12 'Income taxes'

(a) Income tax expense

i) Income tax recognised in the statement of profit and loss

₹ Crore

Particulars	For the year ended	
Current tax expense	**31 March 2021**	31 March 2020
Current year	**2,958.80**	2,782.89
Taxes for earlier years	**(1,867.74)**	2,743.64
Pertaining to regulatory deferral account balances (A)	**387.50**	1,032.07
Total current tax expense (B)	**1,478.56**	6,558.60
Deferred tax expense		
Origination and reversal of temporary differences	**4,444.87**	5,231.41
Less: MAT credit entitlement	**3,115.40**	1,410.40
Total deferred tax expense (C)	**1,329.47**	3,821.01
Income tax expense (D=B+C-A)	**2,420.53**	9,347.54
Pertaining to regulatory deferral account balances	**387.50**	1,032.07
Total tax expense including tax on movement in regulatory deferral account balances	**2,808.03**	10,379.61

ii) Income tax recognised in other comprehensive income

₹ Crore

Particulars	For the year ended					
	31 March 2021			31 March 2020		
	Before tax	Tax (expense)/ benefit	Net of tax	Before tax	Tax expense/ (benefit)	Net of tax
- Net actuarial gains/(losses) on defined benefit plans	**(151.74)**	**28.82**	**(122.92)**	(372.10)	66.52	(305.58)
- Net gains/(losses) on fair value of equity instruments	**46.80**	-	**46.80**	(41.64)	-	(41.64)
- Share of other comprehensive income/(expense) of joint ventures accounted for using the equity method	**(2.77)**	-	**(2.77)**	(0.50)	-	(0.50)
- Exchange differences on translation of foreign operations	**(20.20)**	-	**(20.20)**	40.00	-	40.00
	(127.91)	**28.82**	**(99.09)**	(374.24)	66.52	(307.72)

(b) Tax losses carried forward

₹ Crore

Particulars	31 March 2021	Expiry date	31 March 2020	Expiry date
Long-term capital loss for which no deferred tax asset has been recognised due to uncertainty involved	**2,105.19**	**31 March 2029**	-	-

(II) Other disclosures

(a) The GOI introduced Vivad se Vishwas Scheme (VsVs Scheme) through 'The Direct Tax Vivad Se Vishwas Act, 2020'. During the previous year, the Company had created an additional tax provision amounting to ₹ 2,661.47 crore as it proposed to settle all its pending Income Tax disputes for fourteen years (from F.Y. 2003-04 to 2016-17) by opting for the VsVs scheme. During the year, the Company decided to settle its pending disputes for three years only (i.e. FY 2003-04, 2004-05 and 2008-09), under the VsVs scheme, for which the Company is in the process of completion of procedural formalities. Accordingly, excess tax provision amounting to ₹ 1,889.05 crores has been written back during the year. Further, contingent liabilities for the remaining eleven years have been reinstated, amounting to ₹ 5,322.64 crore along with possible reimbursement of ₹ 1,789.69 crore. Refer Note 73.

b) NEEPCO Ltd., a subsidiary of the Company, has also settled certain pending Income Tax disputes by opting for the VsVs Scheme. Accordingly, additional tax expenditure amounting to ₹ 6.04 crore has been accounted for in the Statement of Profit and Loss as current tax relating to the previous years under Vivad Se Vishwas Scheme.

54. Disclosure as per Ind AS 19 'Employee benefits'

(i) Defined contribution plans:

Pension

The defined contribution pension scheme of the Group for its employees which is effective from 1 January 2007, is administered through a separate trust. The obligation of the Group is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post retirement medical facility (PRMF) or any other retirement benefits. An amount of ₹ **270.41 crore** (31 March 2020: ₹ 161.24 crore) for the year is recognized as expense on this account and charged to the statement of profit and loss.

(ii) Defined benefit plans:

A. Provident fund

The Group pays fixed contribution to provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The Group has an obligation to ensure minimum rate of return to the members as specified by GOI. Accordingly, the Group has obtained report of the actuary, based on which overall interest earnings and cumulative surplus is more than the statutory interest payment requirement for all the periods presented. Further, contribution to employees pension scheme is paid to the appropriate authorities.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the provident fund plan as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Net defined benefit (asset)/liability - Current	**(94.61)**	(71.32)

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Opening balance	**10,513.78**	9,747.00	**10,585.10**	9,841.58	**(71.32)**	(94.58)
Current service cost recognised in statement of profit and loss	**367.67**	346.58	-	-	**367.67**	346.58
Interest cost/(income)	**883.93**	755.40	**(885.68)**	(722.78)	**(1.75)**	32.62
Total	**1,251.60**	1,101.98	**(885.68)**	(722.78)	**365.92**	379.20
Remeasurement loss (gain):						

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Actuarial loss (gain) arising from:						
Demographic assumptions	-	0.09	-	-	-	0.09
Financial assumptions	-	1.36	-	-	-	1.36
Experience adjustment	**0.88**	58.05	-	-	**0.88**	58.05
Return on plan assets excluding interest income	-	-	**(22.42)**	(68.86)	**(22.42)**	(68.86)
Total	**0.88**	59.50	**(22.42)**	(68.86)	**(21.54)**	(9.36)
Other						
Contribution by participants	**1,155.97**	927.54	**1,155.98**	927.54	**(0.01)**	-
Contribution by employer	-	-	**367.67**	346.58	**(367.67)**	(346.58)
Benefits paid	**1,416.73**	1,322.24	**1,416.73**	1,322.24	-	-
Closing balance	**11,505.50**	10,513.78	**11,600.12**	10,585.10	**(94.61)**	(71.32)

Pursuant to paragraph 57 of Ind AS 19, accounting by an entity for defined benefit plans, inter-alia, involves determining the amount of the net defined benefit liability (asset) which shall be adjusted for any effect of limiting a net defined benefit asset to the asset ceiling prescribed in paragraph 64. As per Para 64 of Ind AS 19, in case of surplus in a defined benefit plan, an entity shall measure the net defined benefit asset at the lower of actual surplus or the value of the assets ceiling determined using the discount rate. The asset ceiling is the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. Further, paragraph 65 provides that a net defined benefit asset may arise where a defined benefit plan has been overfunded or where actuarial gains have arisen.

As per the provisions of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Group has no right to the benefits either in the form of refund from the plan or lower future contribution to the plan towards the net surplus of ₹ **94.61 crore** (31 March 2020: ₹ 71.32 crore) determined through actuarial valuation. Accordingly, Group has not recognised the surplus as an asset, and the actuarial gains in 'Other Comprehensive Income', as these pertain to the Provident Fund Trust and not to the Group.

B. Gratuity and pension

a) The Group has a defined benefit gratuity plan. Every employee who has rendered continuous service of five years or more is entitled to gratuity at 15 days salary (15/26 X last drawn basic salary plus dearness allowance) for each completed year of service subject to a maximum of ₹ 0.20 crore on superannuation, resignation, termination, disablement or on death, considering the provisions of the Payment of Gratuity Act,1972, as amended.

b) The Group has pension schemes at two of its stations in respect of employees taken over from erstwhile state government power utilities. These pension schemes are unfunded. The liability for the pension schemes is recognised on the basis of actuarial valuation.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the gratuity and pension plan and the amounts recognised in the Group's financial statements as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Net defined benefit (asset)/liability :		
Gratuity (funded)	**128.12**	177.44
Gratuity (non-funded)	**190.35**	191.21
Pension (funded)	-	-
Pension (non-funded)	**569.36**	591.83
	887.83	960.48
Non-current	**706.24**	727.49
Current	**181.59**	232.99

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Opening balance	**3,022.22**	2,923.31	**2,061.74**	2,201.20	**960.48**	722.11
Included in profit or loss:						
Current service cost	**117.96**	118.41	-	-	**117.96**	118.41
Past service cost	0.06	-	-	-	0.06	-
Interest cost (income)	**204.04**	223.54	**(150.26)**	(160.96)	**53.78**	62.58
Total amount recognised in profit or loss	**322.06**	341.95	**(150.26)**	(160.96)	**171.80**	180.99
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	-	(1.17)	-	-	-	(1.17)
Financial assumptions	-	173.62	**0.01**	-	**(0.01)**	173.62
Experience adjustment	**19.68**	(25.93)	-	-	**19.68**	(25.93)
Return on plan assets excluding interest income	-	-	**(33.28)**	(12.41)	**(33.28)**	(12.41)
Total amount recognised in other comprehensive income	**19.68**	146.52	**(33.27)**	(12.41)	**(13.61)**	134.11
Out of the above an amount of ₹ **0.83 crore** (31 March 2020: ₹ 4.38 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by employer	-	-	**177.44**	15.55	**(177.44)**	(15.55)
Benefits paid	**344.19**	389.56	**290.79**	328.38	**53.40**	61.18
Closing balance	**3,019.76**	3,022.22	**2,131.92**	2,061.74	**887.83**	960.48
Out of the above net liability, an amount of ₹ **112.82 crore** (31 March 2020: ₹ 176.26 crore) has been adjusted with the amount recoverable from the trust.						

C. Post-Retirement Medical Facility (PRMF)

The Group has Post-Retirement Medical Facility (PRMF), under which the retired employees and their spouses are provided medical facilities in the Group hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Group. The liability for the same is recognised annually on the basis of actuarial valuation. A trust has been constituted for its employees superannuated on or after 1 January 2007, for the sole purpose of providing post retirement medical facility to them.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the PRMF and the amounts recognised in the Group's financial statements as at balance sheet date:

₹ Crore

Particulars	**As at 31 March 2021**	As at 31 March 2020
Net defined benefit (asset)/liability - (funded)	189.46	258.85
Net defined benefit (asset)/liability - (non-funded)	-	70.26
	189.46	329.11
Non-current	-	65.87
Current	189.46	263.24

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Opening balance	**2,110.72**	1,764.90	**1,781.61**	1,635.86	**329.11**	129.04
Included in profit or loss:						
Current service cost	**48.00**	51.59	-	-	**48.00**	51.59
Past service cost	-	-	-	-	-	-
Interest cost (income)	**142.47**	136.07	**(140.70)**	(120.48)	**1.77**	15.59
Total amount recognised in profit or loss	**190.47**	187.66	**(140.70)**	(120.48)	**49.77**	67.18
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	-	(1.02)	-	-	-	(1.02)
Financial assumptions	**12.08**	116.75	-	-	**12.08**	116.75
Experience adjustment	**174.70**	165.81	-	-	**174.70**	165.81
Return on plan assets excluding interest income	**(3.37)**	-	**(14.54)**	(42.38)	**(17.91)**	(42.38)
Total amount recognised in other comprehensive income	**183.41**	281.54	**(14.54)**	(42.38)	**168.87**	239.16
Out of the above an amount of ₹ **4.14 crore** (31 March 2020: ₹ 10.45 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by participants	-	-	**27.43**	32.60	**(27.43)**	(32.60)
Contribution by employer	-	-	**329.10**	70.02	**(329.10)**	(70.02)
Benefits paid	**122.58**	123.38	**120.82**	119.73	**1.76**	3.65
Closing balance	**2,362.02**	2,110.72	**2,172.56**	1,781.61	**189.46**	329.11
Out of the above net liability, an amount of ₹ **170.04 crore** (31 March 2020: ₹ 113.30 crore) has been adjusted with the amount recoverable from the trust.						

D. Other retirement benefit plans

Other retirement benefit plans include baggage allowance for settlement at home town for employees and dependents and farewell gift to the superannuating employees. The scheme above is unfunded and liability for the same is recognised on the basis of actuarial valuation.

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Net defined benefit (asset)/liability (non-funded) :	**208.28**	196.35
Non-current	**183.43**	174.20
Current	**24.85**	22.15

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation	
	As at 31 March 2021	As at 31 March 2020
Opening balance	**196.35**	180.84
Included in profit or loss:		
Current service cost	**11.72**	10.12
Past service cost	**-**	-
Interest cost (income)	**13.02**	13.89
Total amount recognised in profit or loss	**24.74**	24.01
Included in other comprehensive income:		
Remeasurement loss (gain):		
Actuarial loss (gain) arising from:		
Demographic assumptions	**-**	(0.06)
Financial assumptions	**-**	11.37
Experience adjustment	**(2.37)**	(9.91)
Return on plan assets excluding interest income	**-**	-
Total amount recognised in other comprehensive income	**(2.37)**	1.40
Other		
Contributions paid by the employer	**-**	-
Benefits paid	**10.44**	9.90
Closing balance	**208.28**	196.35

E. Plan assets

Plan assets comprise the following:

₹ Crore

Particulars	As at 31 March 2021			As at 31 March 2020		
	Quoted	Unquoted	Total	Quoted	Unquoted	Total
State government securities	**5,647.80**	**-**	**5,647.80**	4,827.26	-	4,827.26
Central government securities	**2,001.47**	**-**	**2,001.47**	1,998.64	-	1,998.64
Corporate bonds and term deposits	**4,763.22**	**80.91**	**4,844.13**	4,620.76	73.73	4,694.49
Money market instruments/liquid mutual fund	**0.45**	**27.65**	**28.10**	22.22	-	22.22
Equity and equity linked investments	**121.32**	**-**	**121.32**	127.60	-	127.60
Investments with insurance companies	**-**	**3,326.67**	**3,326.67**	-	2,785.84	2,785.84
Total (excluding accrued interest)	**12,534.26**	**3,435.23**	**15,969.49**	11,596.48	2,859.57	14,456.05

As at 31 March 2021, an amount of ₹ **210.00 crore** (31 March 2020: ₹ 280.00 crore) is included in the value of plan assets (in respect of the reporting enterprise's own financial instruments (Corporate bonds).

Actual return on plan assets is ₹ **1,245.12 crore** (31 March 2020: ₹ 1,160.48 crore).

F. Defined benefit obligations

i. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date:

Particulars	As at 31 March 2021	As at 31 March 2020
Discount rate	**6.75%**	6.75%
Expected return on plan assets		
Gratuity	**6.75%**	6.75%
Pension	**6.75%**	6.75%
PRMF	**6.75%**	6.75%
Annual increase in costs	**6.50%**	6.50%
Salary escalation rate	**6.50%**	6.50%

The estimates of future salary increases considered in actuarial valuation, take account of inflation, seniority, promotion and other relevant factors, such as supply and demand in the employment market. Further, the expected return on plan assets is determined considering several applicable factors mainly the composition of plan assets held, assessed risk of asset management and historical returns from plan assets.

ii. Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

₹ Crore

Particulars	As at 31 March 2021		As at 31 March 2020	
	Increase	Decrease	Increase	Decrease
Discount rate (0.5% movement)	**(190.73)**	**200.32**	(431.29)	461.89
Annual increase in costs (0.5% movement)	**90.61**	**(78.32)**	153.19	(147.47)
Salary escalation rate (0.5% movement)	**99.50**	**(94.54)**	298.00	(290.07)

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

The sensitivity analysis above have been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

G. Risk exposure

Through its defined benefit plans, the Company is exposed to a number of risks, the most significant of which are detailed below:

a) Asset volatility

The plan liabilities are calculated using a discount rate set with reference to bond yields; if plan assets underperform this yield, this will create a deficit. Most of the plan asset investments are in fixed income securities with high grades and in government securities. These are subject to interest rate risk and the fund manages interest rate risk with derivatives to minimise risk to an acceptable level. A portion of the funds are invested in equity securities and in alternative investments which have low correlation with equity securities. The equity securities are expected to earn a return in excess of the discount rate and contribute to the plan deficit. The Group has a risk management strategy where the aggregate amount of risk exposure on a portfolio level is maintained at a fixed range. Any deviations from the range are corrected by rebalancing the portfolio. The Group intends to maintain the above investment mix in the continuing years.

b) Changes in discount rate

A decrease in discount rate will increase plan liabilities, although this will be partially offset by an increase in the value of the plans' bond holdings.

c) Inflation risks

In the pension plans, the pensions in payment are not linked to inflation, so this is a less material risk.

d) Life expectancy

The pension plan obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plans' liabilities. This is particularly significant where inflationary increases result in higher sensitivity to changes in life expectancy.

The Group ensures that the investment positions are managed within an asset-liability matching (ALM) framework that has been developed to achieve long-term investments that are in line with the obligations under the employee benefit plans. Within this framework, the Group's ALM objective is to match assets to the pension obligations by investing in long-term fixed interest securities with maturities that match the benefit payments as they fall due and in the appropriate currency.

The Group actively monitors how the duration and the expected yield of the investments are matching the expected cash outflows arising from the employee benefit obligations. The Group has not changed the processes used to manage its risks from previous periods. The Group uses derivatives to manage some of its risk. Investments are well diversified, such that the failure of any single investment would not have a material impact on the overall level of assets.

A large portion of assets consists of government and corporate bonds. The plan asset mix is in compliance with the requirements of the respective local regulations.

H. Expected maturity analysis of the defined benefit plans in future years

₹ Crore

Particulars	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years	Total
31 March 2021					
Gratuity and pension	**331.87**	**327.15**	**769.65**	**1,591.09**	**3,019.76**
Post-retirement medical facility (PRMF)	**142.87**	**175.47**	**627.31**	**1,416.37**	**2,362.02**
Provident fund	**1,398.53**	**1,454.96**	**3,127.10**	**5,524.91**	**11,505.50**
Other post-employment benefit plans	**25.01**	**24.51**	**57.62**	**101.15**	**208.28**
Total	**1,898.28**	**1,982.09**	**4,581.68**	**8,633.52**	**17,095.56**
31 March 2020					
Gratuity and pension	329.51	304.66	799.17	1,588.88	3,022.22
Post-retirement medical facility (PRMF)	122.71	150.67	536.15	1,301.18	2,110.72
Provident fund	1,176.02	1,016.75	2,844.94	5,476.07	10,513.78
Other post-employment benefit plans	23.81	20.62	54.87	97.05	196.35
Total	1,652.05	1,492.70	4,235.14	8,463.18	15,843.07

Expected contributions to post-employment benefit plans for the year ending 31 March 2022 are ₹ **606.15 crore.**

The weighted average duration of the defined benefit plan obligation at the end of the reporting period is **14.93 years** (31 March 2020: 14.91 years).

(iii) Other long term employee benefit plans

A. Leave

The Company provides for earned leave benefit (including compensated absences) and half-pay leave to the employees of the Company which accrue annually at 30 days and 20 days respectively. Earned leave (EL) is en-cashable while in service. Half-pay leaves (HPL) are en-cashable only on separation beyond the age of 50 years up to the maximum of 300 days. However, total number of leave (i.e. EL & HPL combined) that can be encashed on superannuation shall be restricted to 300 days and no commutation of half-pay leave shall be permissible. The scheme is unfunded and liability for the same is recognised on the basis of actuarial valuation. During the year, provision amounting to ₹ **132.98 crore** has been made on the basis of actuarial valuation at the year end and debited to statement of profit and loss (31 March 2020: ₹ 287.53 crore).

B. Other employee benefits

Provision for long service award and family economic rehabilitation scheme amounting to ₹ **7.95 crore** (31 March 2020: ₹ 10.77 crore) for the year have been made on the basis of actuarial valuation at the year end and debited to the statement of profit and loss.

55. Disclosure as per Ind AS 21 'The Effects of Changes in Foreign Exchange Rates'

The amount of exchange differences (net) credited to the statement of profit and loss, net of movement in regulatory deferral account balances, is ₹ **9.70 crore** (31 March 2020: debited to the statement of profit and loss ₹ 18.98 crore).

56. Disclosure as per Ind AS 23 'Borrowing Costs'

Borrowing costs capitalised during the year is ₹ **4,077.70 crore** (31 March 2020: ₹ 6,049.55 crore).

57. Disclosure as per Ind AS 24 'Related Party Disclosures'

a) List of Related parties:

i) Joint venture companies:

1. Utility Powertech Ltd.
2. NTPC GE Power Services Private Ltd.
3. NTPC SAIL Power Company Ltd.
4. NTPC Tamil Nadu Energy Company Ltd.
5. Aravali Power Company Private Ltd.
6. NTPC BHEL Power Projects Private Ltd.
7. Meja Urja Nigam Private Ltd.
8. Transformers and Electricals Kerala Ltd.
9. National High Power Test Laboratory Private Ltd.
10. Energy Efficiency Services Ltd.
11. CIL NTPC Urja Private Ltd.
12. Anushakti Vidhyut Nigam Ltd.
13. Hindustan Urvarak & Rasayan Ltd.
14. Ratnagiri Gas and Power Pvt. Ltd. (joint venture upto 31 December 2020 and subsidiary thereafter)
15. Konkan LNG Ltd. (upto 23 February 2021)
16. Trincomalee Power Company Ltd.
17. Bangladesh-India Friendship Power Company Private Ltd.

Joint venture company of NEEPCO (a Subsidiary of the Company)

1. KSK Dibbin Hydro Power Private Ltd.

ii) Key Management Personnel (KMP):

Parent Company:

Whole Time Directors

Mr. Gurdeep Singh	Chairman and Managing Director	
Mr. A.K.Gautam[1]	Director (Finance)	W.e.f. 18 October 2019
Mr. Dillip Kumar Patel	Director (HR)	W.e.f. 1 April 2020
Mr. Ramesh Babu V.	Director (Operations)	W.e.f. 1 May 2020
Mr. Chandan Kumar Mondol	Director (Commercial)	W.e.f. 1 August 2020
Mr. Ujjwal Kanti Bhattacharya	Director (Projects)	W.e.f 28 August 2020
Mr. A.K.Gupta	Director (Commercial)	Upto 31 July 2020
Mr. Prakash Tiwari	Director (Operations)	Upto 30 April 2020
Mr. Saptarshi Roy	Director (Human Resources)	Upto 31 March 2020
Mr. S.K.Roy	Director (Projects)	Upto 30 November 2019
Mr. P.K.Mohapatra	Director (Technical)	Upto 31 July 2019
Mr. K.Sreekant[2]	Director (Finance)	Upto 12 August 2019

Independent Directors

Dr. Gauri Trivedi	Non-executive Director	Upto 15 November 2019
Mr. Seethapathy Chander	Non-executive Director	Upto 12 June 2019
Mr. M.P.Singh	Non-executive Director	Upto 7 September 2020
Mr. Pradeep Kumar Deb	Non-executive Director	Upto 7 September 2020
Mr. Shashi Shekhar	Non-executive Director	Upto 7 September 2020
Mr. Subhash Joshi	Non-executive Director	Upto 7 September 2020
Mr. Vinod Kumar	Non-executive Director	Upto 7 September 2020
Dr. K.P.K.Pillay	Non-executive Director	
Dr. Bhim Singh	Non-executive Director	

Government Nominee Directors

Mr. Vivek Kumar Dewangan	Non-executive Director	
Mr. Ashish Upadhyaya	Non-executive Director	W.e.f. 22 January 2020
Ms. Archana Agarwal	Non-executive Director	Upto 22 April 2019

Chief Financial Officer and Company Secretary

Mr. Sudhir Arya	Chief Financial Officer	Upto 30 July 2019
Ms. Nandini Sarkar	Company Secretary	W.e.f. 1 August 2018

1. Chief Financial Officer w.e.f. 1 August 2019
2. Holding additional charge, in addition to Director (Finance), Power Grid Corporation of India Ltd.

Subsidiary Companies:

1. NTPC Vidyut Vyapar Nigam Ltd.

Shri A.K. Gautam	Chairman & Director	Director w.e.f. 03/12/2018, Chairman w.e.f 31/07/2020
Shri P.K. Mohapatra	Chairman & Director	Chairman w.e.f 29/06/2018 upto 31/07/2019
Shri A.K. Gupta	Chairman & Director	Chairman w.e.f 07/08/2019 upto 31/07/2020
Shri Chandan Kumar Mondol	Director	Director w.e.f. 18/08/2020
Shri Anil Nautiyal	Director	Director w.e.f. 16/01/2021
Ms. Nandini Sarkar	Director	
Shri Rajnish Bhagat	Director	Director w.e.f. 11/10/2019 till 30/11/2020
Shri C.V. Anand	Director	Director w.e.f 15/03/2018 up to 09/10/2019
Shri Mohit Bhargava	Chief Executive Officer	CEO w.e.f 16/01/2020
Shri Rajnish Bhagat	Chief Executive Officer	CEO w.e.f 11/09/2018 up to 03/06/2019
Shri A.K. Poddar	Chief Executive Officer	CEO w.e.f 18/07/2019 up to 31/12/2019
Shri Kumar Sanjay	Chief Finance Officer	
Shri Nitin Mehra	Company Secretary	

2. NTPC Electric Supply Company Ltd.

Shri Dillip Kumar Patel	Chairman	W.e.f. 6 April 2020
Shri Saptarshi Roy	Chairman	Upto 31 March 2020
Shri Parveen Saxena	Director	
Shri Rajendra Mohan Arya	Director	W.e.f.28 August 2019
Shri Sudhir Arya	Director	Upto 29 July 2019
Ms. Renu Narang	CEO	W.e.f. 9 October 2020
Shri Ajay Dua	CEO	Upto 8 October 2020
Shri Amit Prakash	Company Secretary	W.e.f. 28 January 2021

3. Kanti Bijlee Utpadan Nigam Ltd.

Shri Ramesh Babu V.	Chairman (Non-Executive)	w.e.f. 11 May 2020
Shri Prakash Tiwari	Chairman (Non-Executive)	upto 30 April 2020
Shri Ajay Dua	Non-Executive Director	
Shri Praveen Saxena	Non-Executive Director	w.e.f. 7 February 2021
Shri Asit Kumar Mukherjee	Non-Executive Director	w.e.f. 18 May 2020 upto 31 January 2021
Miss Shoba Pattabhiraman	Non-Executive Director	w.e.f. 1 November 2019

Shri S. Narendra	Non-Executive Director	upto 30 April 2020
Mrs. Sangeeta Bhatia	Non-Executive Director	upto 9 October 2019
Shri A.K. Munda	Chief Executive Officer	w.e.f. 4 December 2020
Shri Subrata Mandal	Chief Executive Officer	w.e.f. 18 February 2020 upto 4 December 2020
Shri U. Banerjee	Chief Executive Officer	upto 17 February 2020
Shri Ranjeet Bhattacharya	Chief Finance Officer	w.e.f. 1 July 2020
Shri V.K.Mittal	Chief Finance Officer	upto 30 June 2020
Ms. Priyanka Sethi	Company Secretary	w.e.f. 22 September 2020
Mrs.Ruchi Aggarwal	Company Secretary	upto 16 March 2020

4. Bhartiya Rail Bijlee Company Limited

Shri Ramesh Babu V	Non-executive Director/Chairman	w.e.f. 18-Aug-2020
Shri A.K. Gupta	Non-executive Director	upto 17th Aug-2020
Shri R.K. Jain	Non-executive Director	
Shri Praveen Saxena	Non-executive Director	w.e.f. 05-March-2021
Shri Asit Kumar Mukherjee	Non-executive Director	upto 28-Feb-2021
Shri S. Narendra	Non-executive Director	upto 30-Apr-2020
Ms. Renu Narang	Non-executive Director	w.e.f. 01-Sep-2019
Shri P M Jeena	Chief Executive Officer	w.e.f. 01-Jun-2020
Shri C Sivakumar	Chief Executive Officer	upto 31-May-2020
Shri Amarendra Kumar	Chief Finance Officer	w.e.f. 13-Jan-2021
Shri Manoj Srivastava	Chief Finance Officer	upto 07-Jan-2021
Shri Vishal Garg	Company Secretary	

5. Patratu Vidyut Utpadan Nigam Ltd.

Shri D K Patel	Chairman	W.e.f. 20 August 2020
Shri A K Gupta	Chairman	W.e.f. 10 April 2020 to 31 July 2020
Shri Saptarshi Roy	Chairman	Upto 25 June 2018 and w.e.f 23 January 2020 upto 31 March 2020
Shri S. K. Roy	Director & Chairman	As chairman w.e.f. 18 July 2018 (as Director w.e.f. 29 November 2017) upto 30 November 2019
Shri Avinash Kumar, IAS	Director	W.e.f. 18 September 2020
Shri Avnish Srivastava	Director	W.e.f. 15 October 2019
Ms. Nandini Sarkar	Director	W.e.f. 15 October 2019
Shri T. R. Datta	Director	W.e.f. 18 July 2018 Upto 31 July 2019
Mrs. Sangeeta Bhatia	Director	W.e.f. 23 August 2018 Upto 31 August 2019
Shri L. Khiangte, IAS	Director	W.e.f. 20 November 2019 upto 15 September 2020
Ms. Vandana Dadel, IAS	Director	W.e.f. 21 November 2018 Upto 7 November 2019
Shri Sital Kumar	CEO	W.e.f. 9 March 2021
Shri Sudarsan Chakrabarti	CEO	Upto 9 March 2021
Shri A. K. Acharya	CFO	
Shri Sipan K. Garg	Company Secretary	

6. Nabinagar Power Generating Company Ltd.

Shri Ramesh Babu V.	Chairman	w.e.f. 18.08.2020
Shri Praveen Saxena	Non-Executive Director	w.e.f 05.02.2021

Shri A. K. Gupta	Non-Executive Director	upto 31.07.2020
Shri C.V.Anand	Non-Executive Director	w.e.f. 30.07.2019
Ms. Alka Saigal	Non-Executive Director	w.e.f. 06.11.2019
Shri S. Narendra	Non-Executive Director	upto 30.04.2020
Shri Asit K Mukerjee	Non-Executive Director	w.e.f. 13.05.2020 upto 31.01.2021
Shri Vijai Singh	Chief Executive Officer	w.e.f. 14.05.2019
Shri S.K.Rath	Chief Financial Officer	w.e.f.16.05.2019
Shri Manish Kumar	Company Secretary	

7. NTPC Mining Ltd.

Mr. Chandan Kumar Mondol	Chairman	W.e.f. 17 August 2020
Shri A. K. Gupta	Chairman	Upto 31 July 2020
Shri Parth Mazumdar	Non-Executive Director	
Shri Aditya Dar	Non-Executive Director	

8. THDC India Ltd.

Shri D V Singh	Chairman & Managing Director	
Shri Vijay Goel	Director (Personnel)	
Shri J. Behera	Director (Finance)	W.e.f. 16 August 2019
Shri R K Bishnoi	Director (Technical)	W.e.f. 1 September 2019
Shri H L Arora	Director (Technical)	Upto 31 August 2019
Shri U.K.Bhattacharya	Non-executive Director	W.e.f. 26 August 2020
Shri A.K.Gautam	Non-executive Director	W.e.f. 23 April 2020
Shri T.Venkatesh	Non-executive Director	
Shri Rajpal	Non-executive Director	Upto 30 April 2021
Shri A.K.Gupta	Non-executive Director	W.e.f. 23 April 2020 to 31 July 2020
Ms. Rashmi Sharma	Company Secretary	

9. North Eastern Electric Power Corporation Ltd.

Shri V K Singh	Chairman & Managing Director	W.e.f. 1 September 2019
Shri Anil Kumar*	Director (Personnel)	
Shri Hemanta Kumar Deka	Director (Technical)	W.e.f 6 July 2020

*Holding additional charge of Director (Finance) w.e.f 2 April 2020.

10. NTPC Renewable Energy Limited

Shri C K Mondol	Chairman	W.e.f. 7 October 2020
Shri Vinay Kumar	Director	W.e.f. 7 October 2020
Shri Aditya Dar	Director	W.e.f. 7 October 2020
Ms. Nandini Sarkar	Director	W.e.f. 9 October 2020
Shri Mohit Bhargava	CEO	W.e.f. 9 October 2020

11.NTPC EDMC Waste Solutions Private Ltd.

Shri Sital Kumar Nischal	Chairman	W.e.f. 1 June 2020
Shri Amit Kumar Kulshreshtha	Director	W.e.f. 1 June 2020
Shri Achal Kumar Arora	Director	W.e.f. 1 June 2020
Shri Sundeep Kumar Sharma	Director	W.e.f. 12 March 2021
Shri Sanjiv Kumar	CEO	W.e.f. 26 February 2021
Shri Manoj Srivastava	CFO	W.e.f. 26 February 2021

12. Ratnagiri Gas & Power Private Ltd.

Shri Chandan Kumar Mondol	Chairman	from 01.04.2020 to 14.12.2020
Shri Sital Kumar	Chairman	w.e.f. 14.12.2020
Shri Parrag Jaiin Nainutia	Non-executive Director	from 01.04.2020 to 13.05.2020
Shri Sanjeev Kumar	Non-executive Director	from 01.04.2020 to 01.06.2020
Shri Sanjay Khandare	Non-executive Director	w.e.f 29.09.2020
Shri Pankaj Patel	Non-executive Director	from 01.04.2020 to 26.03.2021
Shri A K Tiwari	Non-executive Director	from 01.04.2020 to 07.07.2020
Shri Prasoon Kumar	Non-executive Director	from 01.04.2020 to 26.03.2021
Shri Rakesh Kumar Jain	Non-executive Director	from. 10.07.2020 to 26.03.2021
Shri Aditya Dar	Non-executive Director	
Shri Manoj Sharma	Non-executive Director	from 01.04.2020 to 03.02.2021
Shri Bhaskar Niyogi	Non-executive Director	from 01.04.2020 to 09.01.2021
Shri Anilraj Chellan	Non-executive Director	from 01.04.2020 to 21.01.2021
Shri D Paul	Managing Director	from 01.04.2020 to 15.06.2020
Shri Sital Kumar	Managing Director	from 15.06.2020 to 03.12.2020
Shri Asim Kumar Samanta	Managing Director	w.e.f. 16.12.2020
Shri Aditya Agarwal	Company Secretary	
Shri Ajay Sharma	Chief Financial Officer	

iii) Post Employment Benefit Plans:

1. NTPC Limited Employees Provident Fund
2. NTPC Employees Gratuity Fund
3. NTPC Post Retirement Employees Medical Benefit Fund
4. NTPC Limited Defined Contribution Pension Trust
5. THDC Employees Provident Fund Trust
6. THDCIL Employees Defined Contribution Superannuation Pension Trust
7. THDCIL Post Retirement Medical Facility Fund Trust
8. NEEPCO Employees Provident Fund Trust
9. NEEPCO Employees Defined Contribution Superannuation Scheme Trust
10. NEEPCO Employees Social Security Scheme Trust
11. NEEPCO Employees Group Gratuity Assurance Fund Trust
12. RGPPL Employees Gratuity Fund Trust

iv) Entities under the control of the same government:

The Parent company is a Central Public Sector Undertaking (CPSU) controlled by Central Government by holding majority of shares (Note 22). Pursuant to Paragraph 25 and 26 of Ind AS 24, entities over which the same government has control or joint control of, or significant influence, then the reporting entity and other entities shall be regarded as related parties. Transactions with these parties are carried out at market terms at arm length basis. The Group has applied the exemption available for government related entities and have made limited disclosures in the financial statements. Such entities with which the Company has significant transactions include but not limited to Coal India Ltd., Singareni Coalfields Ltd., GAIL (India) Ltd., BHEL Ltd., SAIL Ltd., Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd.

v) Others:

1. NTPC Education and Research Society
2. NTPC Foundation

b) Transactions with the related parties are as follows:

₹ Crore

Particulars	Joint Venture Companies	
	For the year ended	
	31 March 2021	31 March 2020
i) Sales/purchase of goods and services during the year		
- Contracts for works/services for services received by the Group	1,711.51	1,346.57
- Contracts for works/services for services provided by the Group	37.11	41.55
- Purchase of goods	23.82	38.77
ii) Sales/purchase of assets	2.52	3.26
iii) Deputation of employees	57.42	63.24
iv) Dividend received	501.66	205.60
v) Equity contributions made	620.45	970.57
vi) Loans granted	-	12.40
vii) Interest on loan	1.86	0.79
viii) Guarantees received	4.80	18.01

Note: Refer Note no. 68 for other commitments with Joint Venture Companies.

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Transactions with post employment benefit plans		
- Contributions made during the year	1,011.14	824.28
Compensation to Key management personnel		
- Short term employee benefits	19.04	15.54
- Post employment benefits	1.37	1.27
- Other long term benefits	0.68	0.92
- Termination benefits	0.81	1.51
- Sitting fee	0.57	0.73
Total compensation to key management personnel	22.47	19.97

Transactions with the related parties under the control of the same government:

₹ Crore

Sl. No.	Name of the Company	Nature of transaction by the company	For the year ended 31 March 2021	For the year ended 31 March 2020
1	Bharat Coking Coal Ltd.	Purchase of coal	423.46	1,345.65
2	Central Coalfields Ltd		4,428.45	4,255.00
3	Eastern Coalfields Ltd		6,585.07	7,481.60
4	Mahanadi Coalfields Ltd		3,967.78	3,555.98
5	Northern Coalfields Ltd.		10,758.98	9,118.06
6	South Eastern Coalfields Ltd		5,371.79	4,775.45
7	Western Coalfields Ltd.		985.01	827.70
8	Singareni Collieries Company Ltd.		4,801.46	5,765.84
9	Coal India Ltd.		33.33	33.96
10	Bharat Heavy Electricals Ltd.	Purchase of equipment & erection services	2,943.73	2,357.17
		Purchase of spares	625.78	482.12
		Receipt of maintenance services	829.67	1,102.75
11	GAIL (India) Ltd.	Purchase of natural gas	2,076.16	2,226.82
12	Indian Oil Corporation Ltd.	Purchase fuel / oil products	699.44	1,069.14

Sl. No.	Name of the Company	Nature of transaction by the company	For the year ended 31 March 2021	For the year ended 31 March 2020
13	Bharat Petroleum Corporation Ltd.	Purchase fuel / oil products	**250.82**	353.31
14	Hindustan Petroleum Corporation Ltd.	Purchase fuel / oil products	**242.65**	414.18
15	Steel Authority of India Ltd.	Purchase of steel and iron products	**273.66**	251.18
16	Rural Electrification Corporation Ltd.	Consultancy services provided by the Group	-	40.29
17	Rites Ltd	Receipt of maintenance services	**478.74**	680.61
18	National Aluminium Company Limited	Purchase of Bilateral Energy	**22.72**	19.58
19	Power Grid Corporation of India Ltd.	Purchase of equipment and providing services	**329.58**	102.65
20	Power System Operation Corporation Ltd. (POSOCO)	Open Access Booking	**65.41**	38.34
21	Power Grid Corporation of India Ltd.		**57.42**	37.40
22	Others		**0.16**	0.16
23	Damodar Valley Corporation	Purchase of Bilateral Energy	**1,124.69**	890.76
		Sale of Bundled Power	**29.94**	35.90
		Sale of Power	**29.22**	41.06
		Transmission & other Charges	**4.10**	3.96
24	Other entities	Purchase of equipment & erection services	**31.99**	37.72
		Purchase of spares	**32.14**	35.02
		Receipt of maintenance/ consultancy services	**298.23**	396.90
		Consultancy and Other Services provided by the Group	**92.82**	56.36
		Sale of Solar Energy	**35.47**	36.09

₹ Crore

Transactions with others listed at (a)(v) above	For the year ended 31 March 2021	For the year ended 31 March 2020
- Contracts for works/services for services received by the Group	**5.52**	60.88

c) **Outstanding balances with related parties are as follows:**

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Amount recoverable towards loans from		
- Joint venture companies	**19.78**	19.09
- Key management personnel	**0.15**	0.03
- Others	**0.60**	0.60
Amount recoverable other than loans from		
- Joint venture companies	**55.30**	109.33
- Post employment benefit plans	**205.23**	37.42
- Others	**0.57**	0.42
Amount payable to		
- Joint venture companies	**300.15**	391.82
- Post employment benefit plans	**0.01**	230.54

d) Individually significant transactions

₹ Crore

Particulars	Nature of relationship	Amount	
		For the year ended 31 March 2021	For the year ended 31 March 2020
Contracts for works/services for services received by the Group			
Utility Powertech Ltd.	Joint venture company	**1,457.33**	1,159.39
NTPC BHEL Power Projects Private Ltd.	Joint venture company	**87.29**	99.28
NTPC GE Power Services Private Ltd.	Joint venture company	**140.21**	79.35
Contracts for works/services for services provided by the Group			
NTPC SAIL Power Company Ltd.	Joint venture company	**7.54**	14.18
Meja Urja Nigam Private Ltd.	Joint venture company	**10.34**	12.05
Aravali Power Company Private Ltd.	Joint venture company	**4.38**	5.82
NTPC Tamil Nadu Energy Company Ltd.	Joint venture company	**8.77**	5.54
Energy Efficiency Services Ltd.	Joint venture company	**5.43**	3.52
Sale/purchase of goods			
Energy Efficiency Services Ltd.	Joint Venture company	**19.54**	38.01
Transformers and Electricals Kerala Ltd.	Joint Venture company	**3.28**	-
Dividend received			
NTPC SAIL Power Company Ltd.	Joint venture company	**95.00**	50.00
Aravali Power Company Private Ltd.	Joint venture company	**350.00**	146.83
NTPC Tamil Nadu Energy Company Ltd.	Joint venture company	**51.41**	-
Energy Efficiency Services Ltd.	Joint venture company	-	4.47
Utility Powertech Ltd.	Joint venture company	**5.00**	4.00
NTPC GE Power Services Private Ltd.	Joint venture company	**0.25**	0.30
Equity contributions made			
Meja Urja Nigam Private Ltd.	Joint venture company	**142.60**	262.31
Energy Efficiency Services Ltd.	Joint venture company	-	218.11
Bangladesh-India Friendship Power Company Pvt.Ltd.	Joint venture company	**88.88**	166.89
NTPC Tamil Nadu Energy Company Ltd.	Joint venture company	**8.29**	12.50
Hindustan Urvarak & Rasayan Ltd.	Joint venture company	**380.67**	310.76
Loans granted			
National High Power Test Laboratory Private Ltd.	Joint venture company	-	12.40
Guarantees received			
Utility Powertech Ltd.	Joint venture company	**4.80**	17.80
NTPC GE Power Services Private Ltd.	Joint venture company	-	0.21

e) **Terms and conditions of transactions with the related parties**

(i) Transactions with the related parties are made on normal commercial terms and conditions and at arm length price.

(ii) The Group is assigning jobs on contract basis, for sundry works in plants/stations/offices to M/s Utility Powertech Ltd (UPL), a 50:50 joint venture between the Parent Company and Reliance Infrastructure Ltd. UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations. The Group has entered into Power Station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.

(iii) The Group is seconding its personnel to Joint venture companies as per the terms and conditions agreed between the companies, which are similar to those applicable for secondment of employees to other companies and institutions. The cost incurred by the group towards superannuation and employee benefits are recovered from these companies.

(iv) Loans granted to joint venture companies are detailed below:

₹ Crore

Sl. No.	Name of the joint venture company	Loan granted (Amount in ₹ crore)	Rate of interest (p.a.)	Repayment schedule	Purpose	Year of grant of loan
1	National High Power Test Laboratory Private Ltd. (JV)	18.40	10% (quarterly rest)	Principal repayable in twenty semi-annual installments from 30 September 2022. Interest payable half yearly.	For repayment of loans / contractual obligations	2019-20

(v) Consultancy services provided by the Group to Joint venture companies are generally on nomination basis at the terms, conditions and principles applicable for consultancy services provided to other parties.

(vi) Outstanding balances of joint venture companies at the year-end are unsecured and settlement occurs through banking transaction. These balances other than loans are interest free. The Group has not recorded any impairment of receivables relating to amounts owed by related parties. This assessment is undertaken in each financial year through examining the financial position of the related party and the market in which the related party operates.

(vii) Restrictions on disposal of investments and commitments towards further investments in respect of joint venture companies are disclosed in Note 68.

58. Disclosure as per Ind AS 33 'Earnings per Share'

Basic and diluted earnings per share attributable to owners of the parent company (in ₹)

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
From operations including net movement in regulatory deferral account balances (a) **[A/D]**	**14.87**	11.72
From regulatory deferral account balances (b) **[B/D]**	**1.93**	4.92
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C/D]**	**12.93**	6.80
Nominal value per share	**10.00**	10.00

(a) Profit attributable to equity shareholders (used as numerator) (₹ crore)

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
From operations including net movement in regulatory deferral account balances (a) **[A]**	**14,634.63**	11,600.23
From regulatory deferral account balances (b) **[B]**	**1,903.19**	4,872.01
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C]**	**12,731.44**	6,728.22

(b) Weighted average number of equity shares (used as denominator) (in Nos.)

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening balance of issued equity shares	**9,89,45,57,280**	9,89,45,57,280
Less: Buyback of shares during the year	**19,78,91,146**	-
Closing balance of issued equity shares	**9,69,66,66,134**	9,89,45,57,280
Weighted average number of equity shares for Basic and Diluted EPS [D]*	**9,84,46,77,868**	9,89,45,57,280

* Earning per share for the year ended 31 March 2021 has been computed on the basis of weighted average number of shares outstanding during the year considering buy back of 19,78,91,146 fully paid-up equity shares completed on 30 December 2020. (Also refer Note 22(e)(i))

59. Disclosure as per Ind AS 36 'Impairment of Assets'

As required by Ind AS 36, an assessment of impairment of assets was carried out and following has been assessed:

(i) The recoverable amount of the property, plant and equipment & intangible assets of the Cash Generating Units (CGU) of the parent company is value in use and amounts to ₹ **2,54,366.54 crore** (31 March 2020: ₹ 2,39,455.07 crore). This includes the carrying value of one of the thermal power stations of the Company (460 MW) whose operations have been discontinued w.e.f. the end of 31 March 2021, amounting to ₹213.64 crore. The net realisable value of the assets of the station has been assessed which is more than its carrying value. The discount rate used for the computation of value in use for the generating plant (thermal, gas and hydro) and coal mining is **7.74%** (31 March 2020: 8.00%) and for solar plant is **7.57%** (31 March 2020: 7.78%).1

(ii) Based on the impairment study of M/s Ratnagiri Gas & Power Pvt Ltd, an impairment loss of ₹ **134.70 crore** (31 March 2020: ₹ Nil) has been recognised during the year. The impairment study has been done using discounted cash flow income approach. The post tax discount rates used for the future cash flows is 12.50%. The differential discount rate is based on the effective tax rates likely to be applicable during the forecast years. Salvage value of fixed assets and release of net working capital at the end of explicit period has been added to the present value of free cash flows to arrive at the enterprise value. Also refer Note 2 & 43.

60. Disclosure as per Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets'

Movement in provisions: ₹ Crore

Particulars	Provision for obligations incidental to land acquisition		Provision for tariff adjustment		Others		Total	
	For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Carrying amount at the beginning of the year	**3,754.29**	3,763.80	**190.68**	98.77	**1,696.34**	2,069.79	**5,641.31**	5,932.36
Additions during the year	**760.77**	498.21	**169.60**	91.91	**591.29**	231.67	**1,521.66**	821.79
Amounts used during the year	**(544.94)**	(507.48)	-	-	**(18.16)**	(218.85)	**(563.10)**	(726.33)
Reversal / adjustments during the year	**(379.99)**	(0.24)	-	-	**(19.00)**	(386.27)	**(398.99)**	(386.51)
Carrying amount at the end of the year	**3,590.13**	3,754.29	**360.28**	190.68	**2,250.47**	1,696.34	**6,200.88**	5,641.31

i) Provision for obligations incidental to land acquisition

Provision for obligations incidental to land acquisition includes expenditure on rehabilitation & resettlement (R&R) including the amounts payable to the project affected persons (PAPs) towards land, expenditure for providing community facilities and expenditure in connection with environmental aspects of the project. The Company has estimated the provision based on the Rehabilitation Action Plan (RAP) approved by the board/competent authority or agreements/directions/demand letters of the local/government authorities. The outflow of said provision is expected to be incurred immediately on fulfilment of conditions by the land oustees/receipts of directions of the local/government authorities.

ii) Provision for tariff adjustment

Billing to beneficiaries is being done based on tariff orders issued under Regulation 2014 except few stations where billing is done on provisional basis due to non-receipt of tariff orders. In such cases, accounting is done based on trued up cash expenditure as per Regulation 2019. Provision for tariff adjustment of ₹ **169.60 crore** (31 March 2020: ₹ 91.91 crore) is mainly towards the estimated interest payable to beneficiaries at the time of issue of tariff orders.

iii) Provision - Others

(a) Provision for others includes ₹ **103.88 crore** (31 March 2020: ₹ 101.05 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to block AA-ONN-2003/2 [Refer Note 63], ₹ **2,055.91 crore** (31 March 2020: ₹ 1,551.18 crore) towards provision for cases under litigation and ₹**3.05 crore** (31 March 2020: ₹ 2.41 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation.

(b) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years, after which it was to be transferred to the Company at ₹ 1/-. After commencement of the operations, the operator had raised several disputes, invoked arbitration and raised substantial claims on the Company. Based on the interim arbitral award and subsequent directions of the Hon'ble Supreme Court of India, an amount of ₹ 356.31 crore was paid upto 31 March 2019.

Further, the Arbitral Tribunal had awarded a claim of ₹ 1,891.09 crore plus applicable interest in favour of the operator, during the financial year 2018-19. The Company aggrieved by the arbitral award and considering legal opinion obtained, had filed an appeal before the Hon'ble High Court of Delhi (Hon'ble High Court) against the said arbitral award in its entirety.

In the financial year 2019-20, against the appeal of the Company, Hon'ble High Court directed the Company to deposit ₹ 500.00 crore with the Registrar General of the Court. The said amount was deposited with the Hon'ble High Court on 5 November 2019. Hon'ble High Court vide its order dated 8 January 2020 directed the parties to commence formal handing over of the infrastructure in the presence of appointed Local Commissioner and also directed release of ₹ 500.00 crore to the operator by the Registrar General subject to verification of bank guarantee and outcome of the application of the Company for formal handing over of the infrastructure. On 17 January 2020 unconditional BG was submitted by the operator to Registrar General and ₹500.00 crore was released to the operator by the Hon'ble High Court. As per order of Hon'ble High Court, formal handing over of the infrastructure started on 20 January 2020 at the project site. However, due to certain local administrative issues initially and further due to Covid-19 pandemic, Local Commissioner's visit had to be deferred.

In view of delay in the handover exercise, NTPC had filed an Application in Hon'ble High Court praying to pass further directions to operator in this regard. Hon'ble High Court on 11 November 2020 disposed off the application requesting the Ld. Local Commissioner appointed by the Court, to visit the project site expeditiously preferably within 2 weeks and carry out the commission. The handing over exercise has been delayed due to operator's issues with local labours at the site and Covid situation. Date of hearing at Hon'ble High Court of Delhi has been adjourned several times in light of restricted functioning of the Hon'ble High Court and now stands adjourned till 15 July 2021 in view of the current Covid-19 situation.

Pending final disposal of the appeal by the Hon'ble High Court, considering the provisions of Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' and Significant Accounting Policies of the Company, provision has been updated by interest to ₹ **38.09 crore** (31 March 2020:₹ 37.92 crore) and the balance amount of ₹ **2,153.57 crore** (31 March 2020: ₹ 2,014.84 crore) has been considered as contingent liability.

Also Refer Note 71 and 73.

iv) In respect of provision for cases under litigation, outflow of economic benefits is dependent upon the final outcome of such cases.

v) In all these cases, outflow of economic benefits is expected within next one year.

vi) Sensitivity of estimates on provisions

The assumptions made for provisions relating to current period are consistent with those in the earlier years. The assumptions and estimates used for recognition of such provisions are qualitative in nature and their likelihood could alter in next financial year. It is impracticable for the group to compute the possible effect of assumptions and estimates made in recognizing these provisions.

vii) Contingent liabilities and contingent assets

Disclosure with respect to claims against the Group not acknowledged as debts and contingent assets are made in Note 73.

61. Disclosure as per Ind AS 38 'Intangible Assets'

Research expenditure recognised as expense in the Statement of Profit and Loss during the year is ₹ **165.86 crore** (31 March 2020: ₹ 139.16 crore).

62. Disclosure as per Ind AS 103 'Business Combinations'

Acquisition of Ratnagiri Gas & Power Private Limited

(i) During the financial year, the Company has entered into a tripartite framework agreement with Ratnagiri Gas and Power Private Ltd. (RGPPL) and its lenders on 31 December 2020 for settlement of RGPPL's outstanding debt liabilities as per the Composite Resolution Plan. As per the Resolution Plan, the Company has provided inter corporate loan of ₹ 885.00 crore to RGPPL for settlement of loan with the lenders. Further, 35.47% of equity held by lenders in RGPPL have been transferred to the Company as a part of the Resolution Plan. Consequently, the Company's equity shareholding in RGPPL has increased from 25.51% to 60.98% and RGPPL has become a subsidiary company of the Company with effect from 31 December 2020.

(ii) Consideration transferred

The Group paid ₹ Nil as purchase consideration in cash and cash equivalents for acquisition of RGPPL.

(iii) Identifiable assets acquired and liabilities assumed

The following table summarises the recognised amounts of assets acquired and liabilities assumed at the date of acquisition:

₹ Crore

Particulars	Amount
Property, plant & equipment	1,109.80
Capital work-in-progress	30.47
Non current financial assets	2.56
Other non current assets	31.73
Current assets	817.13
Non current liabilities	(1,415.73)
Current liabilities	(527.93)
Total net identifiable assets acquired	**48.03**

(iv) Capital reserve

₹ Crore

Particulars	Amount
Fair value of net identifiable assets	48.03
Less: fair value pertaining to minority interest	18.74
Less: Fair value of previously held equity interest	-
Less: Consideration transferred	-
Total capital reserve	29.29

(v) Revenue and profit contribution

Acquisition of RGPPL has contributed revenue of ₹ 358.26 crore and (-) ₹ 125.38 crore to profit before tax, from 31 December 2020 to 31 March 2021. If acquisition had taken place from 1 April 2020, the consolidated revenue and profit before tax would have been ₹ 1,16,327.53 crore and ₹ 15,487.66 crore respectively.

(vi) Purchase consideration – cash outflow

₹ Crore

Particulars	Amount
Outflow of cash to acquire subsidiary, net of cash acquired	
Cash consideration	-
Less: Cash and cash equivalents acquired	126.69
Net outflow of cash – investing activities	**(126.69)**

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(vii) Gain/(loss) on remeasurement of previously held equity interest

The Group previously held 25.51% interest in RGPPL which was classified as investment in joint venture till 31 December 2020. An amount of ₹ 12.25 crore has been recognised as gain on existing equity interest in RGPPL by the Group as the acquisition date fair value is more than the net carrying value of the previously held equity interest.

63. Disclosure as per Ind AS 106, 'Exploration for and Evaluation of Mineral Resources'

(a) The Company along-with some public sector undertakings had entered into Production Sharing Contracts (PSCs) with GOI for three oil exploration blocks namely KG-OSN-2009/1, KG-OSN-2009/4 and AN-DWN-2009/13 under VIII round of New Exploration Licensing Policy (NELP VIII) with 10% participating interest (PI) in each of the blocks.

In the case of Block AN-DWN-2009/13 and KG-OSN-2009/1, Oil and Natural Gas Corporation Ltd. (ONGC) was the operator and the Company along-with the consortium partners have relinquished both the blocks to Directorate General of Hydrocarbons (DGH).

Based on the un-audited statement of the accounts for the above blocks forwarded by ONGC, the operator, the Company's share in the assets and liabilities and expenses is as under:

₹ Crore

Particulars	As at 31 March 2021 (Unaudited)	As at 31 March 2020 (Unaudited)
Assets	**0.01**	0.01
Liabilities	**0.49**	0.49
Capital commitments	-	-

For the year ended 31 March 2021 and 31 March 2020, there are no income / expense and operating/investing cash flow from exploration activities.

For exploration activities in block KG-OSN-2009/4 DGH has agreed for drilling of one well and have instructed to carry out airborne Full Tensor Gravity Gradiometer (FTG) survey in conditionally & partial cleared area. ONGC has completed drilling of one well. Airborne Full Tensor Gravity Gradiometer (FTG) survey work is also completed. The Company along-with the consortium partners has decided to relinquish the block and Oil and Natural Gas Corporation Ltd. (ONGC), the operator, has submitted an application to Directorate General of Hydrocarbons (DGH) in this regard, in the earlier years.

(b) Exploration activities in the block AA-ONN-2003/2 were abandoned in January 2011 due to unforeseen geological conditions and withdrawal of the operator. Attempts to reconstitute the consortium to accomplish the residual exploratory activities did not yield result. In the meanwhile, Ministry of Petroleum & Natural Gas, GoI demanded in January 2011 the cost of unfinished minimum work programme from the consortium with NTPC's share being USD 7.516 million. During the year, provision in this respect has been updated to ₹ 103.88 crore from ₹ 101.04 crore along-with interest. The Company has sought waiver of the claim citing force majeure conditions at site leading to discontinuation of exploratory activities.

The Company has accounted for expenditure of ₹ **2.92 crore** (31 March 2020: ₹ 16.03 crore) towards updation of liabilities relating to MWP and other liabilities of M/s Geopetrol International, the operator to complete the winding up activities of the Block. The Company's share in the assets and liabilities are as under:

₹ Crore

Particulars	As at 31 March 2021 (Unaudited)	As at 31 March 2020 (Unaudited)
Assets	**9.19**	9.19
Liabilities (including unfinished MWP)	**106.24**	103.32

Provision of ₹ **8.26 crore** as at 31 March 2021 (31 March 2020: ₹ 8.26 crore) has been made towards the assets under exploration and estimated obsolescence in the inventory.
For the year ended 31 March 2021 and 31 March 2020, there are no income and operating/investing cash flow from exploration activities. The value of assets reported above is based on statement received from the operator in the earlier years.

(c) The Company had entered into production sharing contracts (PSC) with GOI for exploration block namely CB-ONN-2009/5 VIII round of New Exploration Licensing Policy (NELP VIII) with 100% participating interest (PI) in the block.
MWP for the block has been completed. No oil or gas of commercial value was observed in any of the wells. Accordingly, the block has been relinquished to DGH, GOI.

Company's share in assets and liabilities and expenses is as under:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Assets	6.11	6.11
Liabilities	0.25	0.25

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Expenses	-	0.01

Provision of ₹ **6.07 crore as** at 31 March 2021 (31 March 2020: ₹ 6.07 crore) has been made towards estimated obsolescence in the inventory.

For the year ended 31 March 2021 and 31 March 2020, there are no income, operating and investing cash flows from exploration activities.

d **(i)** The Company has started coal production from three mines i.e Pakri-Barwadih, Dulanga & Talaipalli. Other mines i.e. Chatti-Bariatu, Kerandari & Badam are in various stages of development. Pakri Barwadih was declared commercial w.e.f. 1 April 2019 and about 7 MMT coal was extracted during the current year. Dulanga was declared commercial w.e.f. 1 October 2020 and about 3 MMT coal was extracted during the current year. At Talaipalli, coal mine extraction has already started and at Chatti-Bariatu and Kerandari coal mining projects land acquisition and other mine development activities are in progress and these are also disclosed in Note 3 - Capital work in progress under 'Development of coal mines'.

(ii) a) Exploration and evaluation activities are taking place at under ground mine area/dip side area (North west quarry) of PB block. An amount of ₹ **59.39 crore** (31 March 2020: ₹ 55.89 crore) has since been incurred at this area towards various exploratory activities.

b) Banai and Bhalumuda coal blocks were unexplored at the time of allotment by GOI. The Company carried out the detailed exploration and preparation of Geological Report (GR) and Mining Plan through M/s. CMPDIL. Due to the geo-mining constraints, likely less percentage of coal extraction in these two adjacent coal blocks and non-availability of any non-coal bearing land in the vicinity for OB dumping, the Company approached Ministry of Coal on 26 December 2020 for surrendering of these blocks, with a request for consideration of reimbursement of the expenses incurred by the Company. Further, as per the Coal Block Development and Production Agreement (CBDPA) signed by the Company with MOC in respect of these blocks, the performance security (BG) submitted by the Company shall be released in the event of termination of agreement by the Company upon submitting the mine plan and the Company has requested for release of the same.

In Banai coal block, expenses of ₹ 64.74 crore has been incurred towards detailed exploration & GR, DGPS survey, route survey for 132 KV power line, initial payment towards preparation of mining plan, feasibility study for railway siding by the Company etc. In Bhalumuda coal block, expenses of ₹ 62.16 crore has been incurred mainly towards exploration & GR.

The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR would be reimbursed from the new allocatee through MOC as per past experience of the Company. Keeping in view the above, an amount of ₹ 121.57 crore has been accounted as recoverable and included under 'Other current assets- financial assets'. Balance amount of ₹ 5.33 crore has been provided for in the Statement of profit and loss with a corresponding provision for unserviceable intangible assets under development (Note-5).

c) Mandakini-B coal block was also unexplored at the time of allotment by GOI. The Company carried out detailed exploration and preparation of GR and Mining Plan through M/s CMPDIL. MOC approved the Mining Plan, but the mine development activities could not be proceeded due to the resistance of the villagers which was beyond the control of the Company. The villagers did not allow to start site specific studies like Socio Economic survey, EIA/EMP studies and other initial block development activities since last two and half years due to their unreasonable demands for land compensation, permanent employment, etc. Considering the delay in block development activities beyond control, the Company has approached Ministry of Coal on 26 December 2020 for surrendering these blocks, with a request for consideration of reimbursement of expenses incurred by the Company.

An amount of ₹ 93.40 crore has been incurred in this coal block towards exploration & GR, preparation of mining plan, feasibility report, area drainage study, etc. The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR would be reimbursed from the new allocatee through MOC as per past experience of the Company.Keeping in view the above, an amount of ₹ 53.93 crore has been accounted as recoverable and included under 'Other current assets- financial assets'. Balance amount of ₹ 39.47 crore has been provided for in the Statement of profit and loss with a corresponding provision for unserviceable intangible assets under development (Note-5).

MOC issued a notice dated 9 February 2021 under clause 24.3.2 of the Allotment Agreement that, on completion of notice period of 15 business days, the Allotment Agreement and the Order dated 18 August 2016 shall stand terminated and the performance security of ₹ 168.00 crore shall be appropriated. The Company invoked the dispute resolution clause contained in clause 25 (Governing Law and Dispute resolution) of the Allotment Agreement and requested to hold appropriate discussions as provided in the dispute resolution clause. However, the BG (Performance Security) of ₹ 168.00 crore was encashed by MOC on 22 March 2021 citing delay in achieving of the milestones of efficiency parameters which were beyond the control of the Company. The Company has approached MOP on 30 March 2021 to take up the matter in Alternate Mechanism for Resolution of CPSE Disputes (AMRCD). Pending resolution of the dispute through AMRCD, the amount of BG encashed by MOC has been disclosed as recoverable from MOC under 'Claims recoverable' in Note-18-'Current assets-Other financial assets'. However, a provision of ₹ 168.00 crore has been made in the Statement of profit and loss.

d) The Coal Block Development and Production Agreement (CBDPA) signed by the Company with MOC is silent about the recoverability of expenditure incurred in case of termination of the CBDPA. Moreover, the fresh auction / allocation of mines by MOC may also take substantial time and is dependent upon the coal demand-supply scenario of the country in the days to come. Considering the uncertainty involved on the recoverability of the amounts in respect of Banai, Bhalamuda and Mandakini-B coal blocks as stated at (b) and (c) above, a provision towards the amount disclosed under 'Çlaims recoverable' of ₹ 175.50 crore has also been made in the Statement of profit and loss towards the expenses recoverable in respect of these blocks.

iii) In the year 2018-19, the Company took over Barauni Thermal Power Station from Bihar State Power Generation Company Limited (BSPGCL). Ministry of Coal, Government of India has transferred Badam coal mine, the linked coal mine of Barauni TPS. Environment Clearance for the project is available. Stage-I Forest Clearance was transferred to the Company from BSPGCL on 14 January 2020. Application for Stage-II forest clearance is pending with Forest Department, Govt. of Jharkhand. Mining lease is pending with Govt. of Jharkhand and tendering process for appointment of MDO is in progress.

Assets and liabilities of coal exploration and evaluation activities are as under:

₹ Crore

Particulars	**As at 31 March 2021**	As at 31 March 2020
Assets	**108.38**	292.46
Liabilities	**4.07**	7.15

For the year ended 31 March 2021 and 31 March 2020, there are no income, expenses and operating cash flows from coal exploration activities. Cash flows from investing activities for the year ended 31 March 2021 is ₹ **23.20 crore** (31 March 2020: ₹ 56.39 crore)

64. Disclosure as per Ind AS 108 'Operating segments'

A. General Information

The Group has two reportable segments, as described below, which are the Group's strategic business units. The strategic business units offer different products and services, and are managed separately because they require different technology and marketing strategies. For each of the strategic business units, the Chief Operating Decision Maker (CODM) reviews internal management reports on at least a quarterly basis.

The following summary describes the operations in each of the Group's reportable segments:

Generation of energy: Generation and sale of bulk power to State Power Utilities.

Others: It includes providing consultancy, project management & supervision, energy trading, oil and gas exploration and coal mining.

Information regarding the results of each reportable segment is included below. Performance is measured based on segment profit before income tax, as included in the internal management reports that are reviewed by the Board of Directors. Segment profit is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

Transfer prices between operating segments are on an arm's length basis in a manner similar to transactions with third parties.

The corporate office expenses have been included in segment results during the year as they are allocated to segments on a reasonable basis which were hither to disclosed as unallocable. Further, assets under construction along with capital advances and capital liabilities have been included in the respective segments to determine segment assets and liabilities which were hither to included in unallocated assets and liablities. Consequently, previous year figures have been regrouped / rearranged appropriately.

B. Information about reportable segments and reconciliations to amounts reflected in the financial statements:

₹ Crore

Particulars	Generation of energy		Others		Inter-segment eliminations		Total	
	For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Segment revenue								
Revenue from external customers*	**1,03,946.32**	1,01,575.63	**7,321.56**	7,503.00	**-**	-	**1,11,267.88**	1,09,078.63
Inter-segment revenue	**1,879.21**	1,876.36	**1,600.28**	1,774.80	**(3,479.49)**	(3,651.16)	**-**	-
	1,05,825.53	1,03,451.99	**8,921.84**	9,277.80	**(3,479.49)**	(3,651.16)	**1,11,267.88**	1,09,078.63
Other income	**4,052.71**	2,989.62	**116.66**	148.06	**(7.02)**	(5.86)	**4,162.35**	3,131.82
	1,09,878.24	1,06,441.61	**9,038.50**	9,425.86	**(3,486.51)**	(3,657.02)	**1,15,430.23**	1,12,210.45
Unallocated corporate interest and other income							**116.60**	162.13
Total	**1,09,878.24**	1,06,441.61	**9,038.50**	9,425.86	**(3,486.51)**	(3,657.02)	**1,15,546.83**	1,12,372.58
Segment result (including net movements in regulatory deferral account balances)**	**27,866.02**	29,392.79	**100.83**	571.72	**-**	-	**27,966.85**	29,964.51
Unallocated corporate interest and other income							**116.60**	162.13
Unallocated corporate expenses, interest and finance charges							**9,477.70**	8,250.45
Exceptional items							**1,512.19**	-
Profit before share of net profits of investments accounted for using equity method and tax							**17,093.56**	21,876.19
Add: Share of net profits of joint ventures accounted for using equity method							**683.87**	405.40
Profit before tax							**17,777.43**	22,281.59
Income tax expense (including tax on net movements in regulatory deferral account balances)							**2,808.03**	10,379.61
Profit after tax							**14,969.40**	11,901.98

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Depreciation, amortisation and impairment expense	**12,288.85**	10,177.45	**23.21**	34.92	**12,312.06**	10,212.37
Non-cash expenses other than depreciation and amortisation	**478.28**	268.93	**391.13**	111.46	**869.41**	380.39
Capital expenditure	**36,774.53**	25,751.10	**255.13**	1,539.59	**37,029.66**	27,290.69

₹ Crore

Particulars	Generation of energy		Others		Inter-segment eliminations		Total	
	As at		As at		As at		As at	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Segment assets	**3,68,389.88**	3,51,788.85	**12,788.14**	12,650.57	**(391.88)**	(342.40)	**3,80,786.14**	3,64,097.02
Unallocated corporate and other assets							**18,180.07**	14,388.42
Total assets	**3,68,389.88**	3,51,788.85	**12,788.14**	12,650.57	**(391.88)**	(342.40)	**3,98,966.21**	3,78,485.44
Segment liabilities	**44,497.34**	41,854.57	**5,960.92**	5,711.08	**(391.88)**	(342.40)	**50,066.38**	47,223.25
Unallocated corporate and other liabilities							**2,23,161.36**	2,12,423.03
Total liabilities	**44,497.34**	41,854.57	**5,960.92**	5,711.08	**(391.88)**	(342.40)	**2,73,227.74**	2,59,646.28

* Generation segment includes ₹ **1,185.02 crore** (31 March 2020: ₹ 60.93 crore) for sales related to earlier years.

** Generation segment result would have been ₹ **26,681.00 crore** (31 March 2020: ₹ 29,331.86 crore) without including the sales related to earlier years.

Reconciliation of Assets and Liabilities

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Segment assets (A)	**3,80,786.14**	3,64,097.02
Unallocated corporate and other assets:		
Non current investments	**10,089.26**	9,306.59
Current investments	**499.99**	-
Cash and cash equivalents and other bank balances	**1,076.77**	808.63
Other current assets	**117.36**	155.85
Advance tax (net of provision)	**4,112.24**	1,801.45
Other unallocable assets	**2,284.45**	2,315.90
Total unallocated corporate and other assets (B)	**18,180.07**	14,388.42
Total Assets (A+B)	**3,98,966.21**	3,78,485.44
Segment liabilities(A)	**50,066.38**	47,223.25
Unallocated corporate and other liabilities:		
Non current borrowings	**1,96,486.57**	1,86,428.08
Deferred tax liability	**9,887.82**	8,715.42
Borrowings current	**15,964.62**	16,556.23
Other unallocable liabilities	**822.35**	723.30
Total unallocated corporate and other liabilities (B)	**2,23,161.36**	2,12,423.03
Total Liabilities (A+B)	**2,73,227.74**	2,59,646.28

Reconciliation of profit after tax

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Segment result (including net movements in regulatory deferral account balances) (A)	**27,966.85**	29,964.51
Unallocated corporate interest and other income (B)		
Other Income	**116.60**	162.13
Sub-total (B)	**116.60**	162.13
Unallocated corporate expenses, interest and finance costs(C)		
Finance costs	**9,224.14**	8,116.85
Other expenses	**253.56**	133.60
Sub total (C)	**9,477.70**	8,250.45
Profit before tax (including net movements in regulatory deferral account balances) [D=(A+B-C)]	**18,605.75**	21,876.19
Exceptional items	**1,512.19**	-
Share of net profits of joint ventures accounted for using equity method (E)	**683.87**	405.40
Profit before tax (F=D+E)	**17,777.43**	22,281.59
Income tax expense (including tax on net movements in regulatory deferral account balances) (G)	**2,808.03**	10,379.61
Profit after tax (H=F-G)	**14,969.40**	11,901.98

The operations of the Group are mainly carried out within the country and therefore there is no reportable geographical segment.

C. Information about geographical areas

Segment revenue - Others include export sale of energy through trading amounting to ₹ **1,491.77 crore** (31 March 2020: ₹ 1,788.41 crore) to Nepal and Bangladesh by M/s NVVN Ltd., a subsidiary of the Company.

D. Information about major customers

Revenue from customers under 'Generation of energy' segment which is more than 10% of the Group's total revenues is Nil.

65. Financial Risk Management

The Group's principal financial liabilities comprise loans and borrowings in foreign as well as domestic currency, trade payables and other payables. The main purpose of these financial liabilities is to finance the Group's operations. The Group's principal financial assets include loans, trade and other receivables, and cash and short-term deposits that derive directly from its operations. The Group also holds equity investments and enter into derivative contracts such as forward contracts, options and swaps. Derivatives are used exclusively for hedging purposes and not as trading or speculative instruments.

The Group is exposed to the following risks from its use of financial instruments:

- Credit risk
- Liquidity risk
- Market risk

This note presents information about the Group's exposure to each of the above risks, the Group's objectives, policies and processes for measuring and managing risk.

Risk	Exposure arising from	Measurement	Management
Credit Risk	Trade receivables, unbilled revenue, derivative financial instruments, financial assets measured at amortised cost and cash and cash equivalents.	Ageing analysis Credit ratings	Credit limits, letters of credit and diversification of bank deposits.
Liquidity risk	Borrowings and other liabilities	Rolling cash flows forecast	Availability of committed credit lines and borrowing facilities
Market risk – foreign currency risk	- Future commercial transactions - Recognised financial assets and liabilities not denominated in Indian rupee (₹)	Cash flow forecasting	Forward foreign exchange contracts Foreign currency options Currency and interest rate swaps and principal only swaps
Market risk – interest rate risk	Non-current borrowings at variable rates	Sensitivity analysis	Different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.)

Risk management framework

The Group's activities make it susceptible to various risks. The Group has taken adequate measures to address such concerns by developing adequate systems and practices.

In order to institutionalize the risk management in the Group, an elaborate Enterprise Risk Management (ERM) framework has been developed. The Board of Directors has overall responsibility for the establishment and oversight of the parent company's risk management framework. As a part of the implementation of ERM framework, a 'Risk Management Committee (RMC)' with functional directors as its members has been entrusted with the responsibility to identify and review the risks, formulate action plans and strategies to mitigate risks on short-term as well as long-term basis.

The RMC meets every quarter to deliberate on strategies. Risks are regularly monitored through reporting of key performance indicators. Outcomes of RMC are submitted for information of the Board of Directors.

Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations resulting in a financial loss to the Group. Credit risk arises principally from trade receivables, unbilled revenue, loans, cash and cash equivalents and deposits with banks and financial institutions.

Trade receivables & unbilled revenue

The Group primarily sells electricity to bulk customers comprising mainly state utilities owned by State Governments. The Company has a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). The TPAs were signed among the Govt. of India, RBI and the individual State Governments subsequent to the issuance of the One Time Settlement Scheme of SEBs dues during 2001-02 by the GOI, which were valid till October 2016. Govt of India subsequently approved the extension of these TPAs for another period of 10 years. Most of the States have signed these extended TPAs and signing is in progress for the balance states.

CERC Tariff Regulations allow payment against monthly bill towards energy charges within a period of forty five days from the date of bill and levy of surcharge @ 18% p.a. on delayed payment beyond forty five days. On 22 February 2021, Ministry of power has issued a notification and accordingly Late Payment Surcharge (LPSC) shall be payable on the payment outstanding after the due date at the base rate of LPSC applicable for the period for the first month of default and the rate of LPSC for the successive months of default shall increase by 0.5 percent for every month of delay provided that the LPSC shall not be more than 3 percent higher than the base rate at any time.

A default occurs when in the view of management there is no significant possibility of recovery of receivables after considering all available options for recovery.

As per the provisions of the TPA, the customers are required to establish LC covering 105% of the average monthly billing of the Company for last 12 months. The TPA also provided that if there is any default in payment of current dues by any State Utility the outstanding dues can be deducted from the State's RBI account and paid to the concerned CPSU. There is also provision of regulation of power by the Group in case of non payment of dues and non-establishment of LC.

In addition to above, MoP vide its communications dated 28 June 2019 and subsequent clarifications, further emphasised on ensuring availability of suitable payment security mechanism to be maintained by DISCOMs. Further, to liquidate the outstanding dues of the discoms towards the generating companies, GOI has announced a Scheme for offering ₹ 90,000 crore in soft loans under the Aatmanirbhar Bharat package. The Discoms are expected to take the benefit of the this Scheme and pay their outstanding dues.

These payment security mechanisms have served the Group well over the years. The Group has not experienced any significant impairment losses in respect of trade receivables in the past years. Since the Group has its power stations as well as customers spread over various states of India, geographically there is no concentration of credit risk.

Unbilled revenue primarily relates to the Group's right to consideration for work completed but not billed at the reporting date and have substantially the same risk characteristics as the trade receivables for the same type of contracts.

Investments

The Group limits its exposure to credit risk by investing in only Government of India Securities, State Government Securities and other counterparties have a high credit rating. The management actively monitors the interest rate and maturity period of these investments. The Group does not expect the counterparty to fail to meet its obligations, and has not experienced any significant impairment losses in respect of any of the investments.

Loans

The Group has given loans to employees, joint venture companies and other parties. Loans to the employee are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company. The loan provided to group companies are collectible in full and risk of default is negligible. Loan to APIIC is against a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

Cash and cash equivalents

The Group held cash and cash equivalents of ₹ **950.02 crore** (31 March 2020: ₹ 589.52 crore). The cash and cash equivalents are held with banks with high rating.

Deposits with banks and financial institutions

The Group held deposits with banks and financial institutions of ₹ **3,437.78 crore** (31 March 2020: ₹ 2,624.77 crore). In order to manage the risk, Group places deposits with only high rated banks/institutions.

(i) Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

₹ **Crore**

Particulars	**As at 31 March 2021**	As at 31 March 2020
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)		
Non-current investments	**97.08**	50.28
Non-current loans	**554.97**	511.08
Other non-current financial assets	**1,092.84**	1,206.32
Current investments	**499.99**	-
Cash and cash equivalents	**950.02**	589.52
Bank balances other than cash and cash equivalents	**3,437.78**	2,624.77
Current loans	**259.13**	252.67
Other current financial assets*	**1,036.96**	849.94
Total (A)	**7,928.77**	6,084.58

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Financial assets for which loss allowance is measured using Life time Expected Credit Losses (ECL) as per simplified approach		
Trade receivables	**17,718.07**	20,314.59
Unbilled revenue	**13,954.30**	12,231.18
Total (B)	**31,672.37**	32,545.77
Total (A+B)	**39,601.14**	38,630.35

* Excluding unbilled revenue (Refer Note 18)

(ii) Provision for expected credit losses

(a) Financial assets for which loss allowance is measured using 12 month expected credit losses

The Group has assets where the counter-parties have sufficient capacity to meet the obligations and where the risk of default is very low. Accordingly, no loss allowance for impairment has been recognised.

(b) Financial assets for which loss allowance is measured using life time expected credit losses as per simplified approach

The Group has customers (State government utilities) with capacity to meet the obligations and therefore the risk of default is negligible or nil. Further, management believes that the unimpaired amounts that are past due by more than 30 days are still collectible in full, based on historical payment behaviour and extensive analysis of customer credit risk. Hence, no impairment loss has been recognised during the reporting periods in respect of trade receivables and unbilled revenue.

(iii) Ageing analysis of trade receivables

The ageing analysis of the trade receivables is as below:

₹ Crore

Ageing	Not due	0-30 days past due	31-60 days past due	61-90 days past due	91-120 days past due	More than 120 days past due	Total
Gross carrying amount as at 31 March 2021	**6,540.16**	**2,515.69**	**1,664.11**	**762.24**	**596.07**	**6,186.64**	**18,264.91**
Gross carrying amount as at 31 March 2020	5,064.29	3,330.47	2,064.59	1,221.85	663.58	8,158.38	20,503.16

(iv) Reconciliation of impairment loss provisions

The movement in the allowance for impairment in respect of financial assets during the year was as follows:

₹ Crore

Particulars	Trade receivables	Advances	Claims recoverable	Total
Balance as at 1 April 2019	148.53	0.14	15.07	163.74
Impairment loss recognised	88.18	-	-	88.18
Amounts written off	48.14	-	14.95	63.09
Balance as at 31 March 2020	188.57	0.14	0.12	188.83
Impairment loss recognised	-	-	343.51	343.51
Amounts written off / written back / adjustment during the period	(358.27)	0.03	0.01	(358.23)
Balance as at 31 March 2021	**546.84**	**0.11**	**343.62**	**890.57**

Based on historic default rates, the Group believes that no impairment allowance is necessary in respect of any other financial assets as the amounts of such allowances are not significant.

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group has an appropriate liquidity risk management framework for the management of short, medium and long term funding and liquidity management requirements. The Group manages liquidity risk by maintaining adequate cash reserves, banking facilities and reserve borrowing facilities by continuously monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities.

The Group's treasury department is responsible for managing the short term and long term liquidity requirements of the Group. Short term liquidity situation is reviewed daily by Treasury department. The Board of directors has established policies to manage liquidity risk and the Group's treasury department operates in line with such policies. Any breaches of these policies are reported to the Board of Directors. Long term liquidity position is reviewed on a regular basis by the Board of Directors and appropriate decisions are taken according to the situation.

Typically the Group ensures that it has sufficient cash on demand to meet expected operational expenses for a month, including the servicing of financial obligations, this excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters.

As part of the CERC regulations, tariff inter alia includes recovery of capital cost. The tariff regulations also provide for recovery of energy charges, operations and maintenance expenses and interest on normative working capital requirements. Since billing to the customers are generally on a monthly basis, the Group maintains sufficient liquidity to service financial obligations and to meet its operational requirements.

(i) Financing arrangements

The Group had access to the following undrawn borrowing facilities at the end of the reporting period:

₹ Crore

Particulars	31 March 2021	31 March 2020
Fixed-rate borrowings		
Term loans	-	150.00
Floating-rate borrowings		
Cash credit	**5,230.17**	3,598.32
Term loans	**18,907.83**	23,140.70
Foreign currency loans	**7,534.04**	7,061.70
Total	**31,672.04**	33,950.72

(ii) Maturities of financial liabilities

The following are the contractual maturities of derivative and non-derivative financial liabilities, based on contractual cash flows:

31 March 2021

₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	830.71	2,216.01	6,703.37	14,902.47	24,430.95	**49,083.51**
Unsecured bonds	274.73	170.57	-	8,374.10	3,500.00	**12,319.40**
Rupee term loans from banks	838.74	4,388.13	4,760.92	18,545.36	45,468.37	**74,001.52**
Rupee term loans from others	190.71	821.32	885.58	2,450.81	10,213.60	**14,562.02**
Lease obligations	143.40	57.96	74.00	175.18	2,237.38	**2,687.92**

₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Foreign currency notes	182.29	4,841.95	5,611.00	10,738.70	7,326.40	**28,700.34**
Secured foreign currency loans from banks	18.85	56.53	75.39	56.57	-	**207.34**
Unsecured foreign currency loans from banks and financial institutions	161.41	1,026.29	686.98	2,088.80	11,376.01	**15,339.49**
Unsecured foreign currency loans (guaranteed by GOI)	26.50	290.52	310.68	932.01	1,546.83	**3,106.54**
Commercial paper, cash credit and short term loans	11,604.88	4,500.00	-	-	-	**16,104.88**
Trade and other payables	20,310.21	6,905.31	1,466.81	1,822.34	2,068.78	**32,573.45**

31 March 2020

₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	614.22	3,241.16	1,893.00	19,714.50	24,125.33	49,588.21
Rupee term loans from banks	1,213.69	1,616.41	3,982.35	16,753.96	45,474.97	69,041.38
Rupee term loans from others	383.65	1,130.35	1,510.22	5,635.69	11,552.26	20,212.17
Lease obligations	92.70	64.11	83.73	156.69	2,278.02	2,675.25
Foreign currency notes	189.88	180.03	5,803.00	13,028.70	11,066.90	30,268.51
Secured foreign currency loans from banks	0.25	77.32	77.32	135.32	-	290.21
Unsecured foreign currency loans from banks and financial institutions	176.39	1,511.08	1,166.79	2,074.26	8,051.70	12,980.22
Unsecured foreign currency loans (guaranteed by GOI)	36.30	287.54	315.77	994.92	1,801.62	3,436.15
Commercial paper, cash credit and short term loans	13,264.33	3,422.76	-	-	-	16,687.09
Trade and other payables	21,897.61	6,732.92	1,147.42	984.53	2,159.29	32,921.77

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates will affect the Group's income. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

The Board of directors is responsible for setting up of policies and procedures to manage market risks of the Group. All such transactions are carried out within the guidelines set by the risk management committee.

Currency risk

The Group is exposed to foreign currency risk on certain transactions that are denominated in a currency other than entity's functional currency, hence exposure to exchange rate fluctuations arises. The risk is that the functional currency value of cash flows will vary as a result of movements in exchange rates.

The currency profile of financial assets and financial liabilities as at 31 March 2021 and 31 March 2020 are as below:

31 March 2021

₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	0.23	-	-	-	**0.23**
Cash and cash equivalents	0.40	-	-	0.04	**0.44**
Other financial assets	1.41	0.01	0.83	0.53	**2.78**
Total	**2.04**	**0.01**	**0.83**	**0.57**	**3.45**
Financial liabilities					
Foreign currency bonds	21,227.65	4,384.00	-	3,088.69*	**28,700.34**
Unsecured foreign currency loans from banks and financial institutions	4,372.12	1,253.24	12,820.67	-	**18,446.03**
Secured foreign currency loans from banks	207.34	-	-	-	**207.34**
Trade payables and other financial liabilities	1,962.03	964.32	67.85	8.11	**3,002.31**
Total	**27,769.14**	**6,601.56**	**12,888.52**	**3,096.80**	**50,356.02**

* ₹ 1,007.00 crore - Rupee denominated USD settled Green Masala Bonds and ₹ 1,908.00 crore-Rupee denominated USD settled Masala bonds and interest accrued thereon.

31 March 2020

₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	-	-	-	-	-
Cash and cash equivalents	0.35	-	-	0.07	0.42
Other financial assets	1.35	-	0.83	0.54	2.72
Total	1.70	-	0.83	0.61	3.14
Financial liabilities					
Foreign currency bonds	21,800.90	4,240.85	-	4,226.76*	30,268.51
Unsecured foreign currency loans from banks and financial institutions	5,303.65	2,005.32	9,107.39	-	16,416.36
Secured foreign currency loans from banks	290.21	-	-	-	290.21
Trade payables and other financial liabilities	2,059.98	1,122.31	95.30	17.49	3,295.08
Total	29,454.74	7,368.48	9,202.69	4,244.25	50,270.16

* ₹ 2000.00 crore - Rupee denominated USD settled Green Masala Bonds and ₹2,000.00 crore - Rupee denominated USD settled Masala bonds.

The gain/(loss) on account of exchange rate variations on all foreign currency loans and foreign currency monetary items (up to COD) is recoverable from beneficiaries. Therefore, currency risk in respect of such exposure would not be very significant.

Sensitivity analysis

Since the impact of strengthening or weakening of INR against USD, Euro, JPY and other currencies on the statement of profit and loss would not be very significant; therefore, sensitivity analysis for currency risk is not disclosed.

Embedded derivatives

Certain contracts of the Company for construction of power plants with vendors awarded through International Competitive Bidding are denominated in a third currency i.e. a currency which is not the functional currency of any of the parties to

the contract. The Group has examined the applicability of provisions of Ind AS 109 'Financial Instruments' for accounting of embedded derivatives in such contracts considering the opinion of the Expert Advisory Committee of the Institute of Chartered Accountants of India in this regard.

The Group has awarded the above contracts without any intention to enter into any derivative contract or to leverage/take position and without any option/intention to net settle at any point of time during the tenure of the contract. Such contracts, which normally have a tenure ranging from three to ten years, consist of numerous items having varied dates of delivery and payment schedule. Further, forward exchange rates are not realistically available for such longer periods. Accordingly, the Group is of the view that separately recognising the foreign currency derivative embedded in such contracts is impracticable. Moreover, the option available under Ind AS 109 to designate the entire hybrid contract at fair value through profit or loss is also not considered practical in the absence of a reliable valuation model.

Further, the Group is mainly a rate regulated entity whose tariffs are determined by CERC using a cost plus methodology for which, the actual costs incurred on account of property, plant and equipment is considered for determining the capital base for fixation of tariff. Moreover, the impact on the financial statements will not be material having regard to outstanding contracts as at the year end and also the fact that the Group is mainly in the regulatory environment for which the provisions of Ind AS 114-'Regulatory deferral accounts' are applicable. Hence, the Group has continued to account for such contracts without separately recognising the foreign currency derivative embedded therein.

Interest rate risk

The Group is exposed to interest rate risk arising mainly from non-current borrowings with floating interest rates. The Group is exposed to interest rate risk because the cash flows associated with floating rate borrowings will fluctuate with changes in interest rates. The Group manages the interest rate risks by entering into different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.).

At the reporting date the interest rate profile of the Group's interest-bearing financial instruments is as follows:

₹ Crore

Particulars	**31 March 2021**	31 March 2020
Financial Assets:		
Fixed-rate instruments		
Loan to related parties	**20.52**	19.72
Loans to others	**23.36**	24.26
Bank deposits	**3,641.60**	2,695.11
Total	**3,685.48**	2,739.09
Financial Liabilities:		
Fixed-rate instruments		
Bonds	**61,463.93**	49,583.55
Foreign currency loans/notes*	**33,138.86**	35,419.45
Rupee term loans	**375.86**	410.49
Commercial paper	**12,859.74**	13,819.32
Lease obligations	**897.49**	855.61
Total (A)	**1,08,735.88**	1,00,088.42
Variable-rate instruments		
Foreign currency loans/notes	**13,922.12**	11,026.44
Rupee term loans	**86,688.29**	88,843.06
Cash credit and short term loans	**3,104.88**	2,736.91
Total (B)	**103,715.29**	102,606.41
Total (A+B)	**2,12,451.17**	2,02,694.83

* Includes ₹ 1,007.00 crore - Rupee denominated USD settled Green Masala Bonds and ₹ 1,908.00 crore Rupee denominated USD settled Masala bonds (31 March 2020: includes ₹ 2000.00 crore - Rupee denominated USD settled Green Masala Bonds and ₹ 2,000.00 crore Rupee denominated USD settled Masala bonds).

Fair value sensitivity analysis for fixed-rate instruments

The Group's fixed rate instruments are carried at amortised cost. They are therefore not subject to interest rate risk, since neither the carrying amount nor the future cash flows will fluctuate because of a change in market interest rates.

Cash flow sensitivity analysis for variable-rate instruments

A change of 50 basis points in interest rates at the reporting date would have increased (decreased) profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for the previous year.

₹ Crore

	Profit or loss	
	50 bp increase	50 bp decrease
31 March 2021		
Foreign currency loans/notes	**(56.51)**	**56.51**
Rupee term loans	**(451.76)**	**451.76**
Cash credit	**(5.99)**	**5.99**
	(514.26)	**514.26**
31 March 2020		
Foreign currency loans/notes	(43.65)	43.65
Rupee term loans	(355.17)	355.17
Cash credit	(4.91)	4.91
	(403.73)	403.73

Of the above mentioned increase in the interest expense, an amount of ₹ **128.85 crore** (31 March 2020: ₹ 162.47 crore) is expected to be capitalised and recovered from beneficiaries through tariff.

62. Fair Value Measurements

(a) Financial instruments by category

₹ Crore

Particulars	31 March 2021			31 March 2020		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
Financial assets						
Investments						
- Equity instruments	**3.78**	**93.30**	-	3.78	46.50	-
- Mutual funds	**499.99**	-	-	-	-	-
Trade Receivables	-	-	**17,718.07**	-	-	20,314.59
Loans	-	-	**814.10**	-	-	763.75
Cash and cash equivalents	-	-	**950.02**	-	-	589.52
Other bank balances	-	-	**3,437.78**	-	-	2,624.77
Finance lease receivables	-	-	**437.77**	-	-	464.37
Other financial assets	-	-	**15,646.33**	-	-	13,823.07
Total	**503.77**	**93.30**	**39,004.07**	3.78	46.50	38,580.07
Financial liabilities						
Borrowings	-	-	**1,95,589.08**	-	-	1,85,572.47

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₹ Crore

Particulars	31 March 2021			31 March 2020		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
Commercial paper and cash credit	-	-	15,964.62	-	-	16,556.23
Lease obligations	-	-	897.49	-	-	855.61
Trade payables	-	-	8,806.41	-	-	10,176.68
Payable for capital expenditure	-	-	19,353.07	-	-	16,722.62
Other financial liabilities	-	-	3,822.80	-	-	2,920.73
Total	-	-	2,44,433.47	-	-	2,32,804.34

(b) Fair value hierarchy

This section explains the judgements and estimates made in determining the fair values of the financial instruments that are (a) recognised and measured at fair value and (b) measured at amortised cost and for which fair values are disclosed in the financial statements. To provide an indication about the reliability of the inputs used in determining fair value, the Group has classified its financial instruments into the three levels prescribed under the accounting standard. An explanation of each level follows underneath the table.

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2021	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	93.30	-	-	93.30
Investments in mutual funds	-	499.99	-	499.99
Investments in unquoted equity instruments	-	-	3.78	3.78
	93.30	499.99	3.78	597.07

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2020	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	46.50	-	-	46.50
Investments in unquoted equity instruments	-	-	3.78	3.78
	46.50	-	3.78	50.28

The Group has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements and reports directly to the Director (Finance). The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of Ind AS, including the level in the fair value hierarchy in which the valuations should be classified. Significant valuation issues are reported to the audit committee.

Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

Level 1: Level 1 hierarchy includes financial instruments measured using quoted prices. This includes investments in quoted equity instruments. Quoted equity instruments are valued using quoted prices on national stock exchange.

Level 2: The fair value of financial instruments that are not traded in an active market is determined using valuation techniques which maximise the use of observable market data and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2. This level includes mutual funds which are valued using the closing NAV.

Level 3: If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3. The fair value of financial assets and liabilities included in Level 3 is determined in accordance with generally accepted pricing models based on discounted cash flow analysis using prices from prevailing market transactions and dealer quotes of similar instruments.

There have been no transfers in either direction for the years ended 31 March 2021 and 31 March 2020.

(c) Valuation technique used to determine fair value:

Specific valuation techniques used to fair value of financial instruments include:

i) For financial instruments other than at ii), iii) and iv) - the use of quoted market prices.

ii) For investments in mutual funds - Closing NAV is used.

iii) For financial liabilities (vendor liabilities, debentures/bonds, foreign currency notes, domestic/foreign currency loans): Discounted cash flow; appropriate market borrowing rate of the entity as of each balance sheet date used for discounting.

iv) For financial assets (employee loans) - Discounted cash flow; appropriate market rate (SBI lending rate) as of each balance sheet date used for discounting.

(d) Fair value of financial assets and liabilities measured at amortised cost

₹ Crore

Particulars	Level	As at 31 March 2021		As at 31 March 2020	
		Carrying amount	Fair value	Carrying amount	Fair value
Financial assets					
Loans	3	**814.10**	**822.00**	763.75	774.18
Finance lease receivables	3	**437.77**	**437.77**	464.37	464.37
Claims recoverable	3	**742.10**	**742.10**	821.55	821.55
Trade receivables	3	**17,718.07**	**17,718.07**	20,314.59	20,314.59
Cash and cash equivalents	1	**950.02**	**950.02**	589.52	589.52
Bank balances other than cash and cash equivalents	1	**3,437.78**	**3,437.78**	2,624.77	2,624.77
Other financial assets	3	**14,904.23**	**14,904.23**	13,001.52	13,001.52
		39,004.07	**39,011.97**	38,580.07	38,590.50
Financial liabilities					
Bonds/Debentures	1	**7,701.05**	**8,103.59**	8,898.25	9,920.36
	2	**33,640.24**	**37,817.73**	204.60	248.22
	3	**20,122.64**	**22,609.68**	40,480.70	44,641.00
Foreign currency notes	2	**20,334.80**	**21,780.49**	21,755.39	21,700.87
	3	**8,308.56**	**8,933.60**	8,440.39	9,070.10
Foreign currency loans	3	**18,417.64**	**18,734.07**	16,540.32	16,875.39

₹ Crore

Particulars	Level	As at 31 March 2021		As at 31 March 2020	
		Carrying amount	Fair value	Carrying amount	Fair value
Rupee term loans	2	**5,892.04**	**6,281.47**	7,736.28	7,857.03
	3	**81,172.11**	**82,265.90**	81,516.54	81,517.67
Lease Obligations	3	**897.49**	**897.49**	855.61	855.61
Borrowings - current	1	**15,964.62**	**15,964.62**	16,556.23	16,556.23
Trade payables & payable for capital expenditure	2	**27.84**	**29.22**	29.12	30.51
	3	**28,131.64**	**28,014.30**	26,870.18	26,846.36
Other financial liabilities	3	**3,822.80**	**3,822.80**	2,920.73	2,920.73
Total		**2,44,433.47**	**2,55,254.96**	2,32,804.34	2,39,040.08

The carrying amounts of current trade receivables, current trade payables, payable for capital expenditure, cash and cash equivalents and other financial assets and liabilities are considered to be the same as their fair values, due to their short-term nature.

The carrying values for finance lease receivables approximates the fair value as these are periodically evaluated based on credit worthiness of customer and allowance for estimated losses is recorded based on this evaluation. Also, carrying amount of claims recoverable approximates its fair value as these are recoverable immediately.

The fair values for loans, borrowings, non-current trade payables and payable for capital expenditure were calculated based on cash flows discounted using a current discount rate. They are classified at respective levels based on availability of quoted prices and inclusion of observable/non observable inputs.

67. Capital Management

The Group's objectives when managing capital are to:

- safeguard its ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders and

- maintain an appropriate capital structure of debt and equity.

The Board of Directors has the primary responsibility to maintain a strong capital base and reduce the cost of capital through prudent management in deployment of funds and sourcing by leveraging opportunities in domestic and international financial markets so as to maintain investors, creditors & markets' confidence and to sustain future development of the business. The Board of Directors monitors the return on capital, which the Company defines as returns from operating activities divided by total shareholders' equity deployed in operating activities. The Board of Directors also monitors the level of dividends to equity shareholders in line with the dividend distribution policy of the Company.

Under the terms of major borrowing facilities, the Group is required to comply with the following financial covenants:

(i) Total liability to networth ranges between 2:1 to 3:1.

(ii) Ratio of EBITDA to interest expense shall not at any time be less than 1.75 : 1.

(iii) Debt service coverage ratio not less than 1.10:1 (in case of foreign currency borrowings).

There have been no breaches in the financial covenants of any interest bearing borrowings.

The Group monitors capital, using a medium term view of three to five years, on the basis of a number of financial ratios generally used by industry and by the rating agencies. The Group is not subject to externally imposed capital requirements.

The Group monitors capital using gearing ratio which is net debt divided by total equity. Net debt comprises of non-current and current borrowings less cash and cash equivalent. Equity includes equity share capital and reserves that are managed as capital. The gearing ratio at the end of the reporting period was as follows:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Borrowings	**2,12,451.19**	2,02,984.31
Less: Cash and cash equivalent	**950.02**	589.52
Net Debt	**2,11,501.17**	2,02,394.79
Total Equity	**1,29,262.18**	1,22,156.35
Net Debt to Equity ratio	**1.64**	1.66

68. Disclosure as per Ind AS 112 'Disclosure of Interest in Other Entities'

(a) Subsidiary companies

The Group's subsidiaries at 31 March 2021 are set out below. Unless otherwise stated, they have share capital consisting solely of equity shares that are held directly by the group, and the proportion of ownership interests held equals the voting rights held by the group. The country of incorporation or registration is also their principal place of business.

Name of subsidiary company	Place of business/ country of incorporation	Ownership interest held by the group as at		Ownership interest held by non-controlling interests as at		Principal activities
		As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	
NTPC Electric Supply Company Ltd. (NESCL)	India	**100.00**	100.00	-	-	Consultancy & Distribution of energy
NTPC Vidyut Vyapar Nigam Ltd. (NVVN)	India	**100.00**	100.00	-	-	Trading of energy
Kanti Bijlee Utpadan Nigam Ltd. (KBUNL)	India	**100.00**	100.00	-	-	Generation of energy
Bhartiya Rail Bijlee Company Ltd. (BRBCL)	India	**74.00**	74.00	**26.00**	26.00	Generation of energy
Patratu Vidyut Utpadan Nigam Ltd. (PVUNL)	India	**74.00**	74.00	**26.00**	26.00	Generation of energy
Nabinagar Power Generating Company Ltd. (NPGCL)	India	**100.00**	100.00	-	-	Generation of energy
NTPC Mining Ltd. (NML)	India	**100.00**	100.00	-	-	Coal mining
THDC India Ltd. (THDCIL)	India	**74.496**	74.496	**25.504**	25.504	Generation of energy
North Eastern Electric Power Corporation Ltd. (NEEPCO)	India	**100.00**	100.00	-	-	Generation of energy
NTPC EDMC Waste Solutions Private Ltd. (NTPC EDMC)	India	**74.00**	-	**26.00**	-	Generation of energy
NTPC Renewable Energy Ltd. (NREL)	India	**100.00**	-	-	-	Generation of energy
Ratnagiri Gas & Power Private Ltd. (RGPPL)	India	**86.49**	-	**13.51**	-	Generation of energy

(1) The shareholders of the NESCL in its Extra-ordinary General Meeting held on 24 March, 2015, inter alia, approved the proposal for transfer and vesting of all existing operations of NESCL together with all assets and liabilities relating to such operations to NTPC Limited, the Parent Company, with effect from 1 April, 2015. After obtaining the aforesaid approval, an agreement was entered into with the Parent Company to implement such transfer. In pursuance of the above, it does not have any operations w.e.f 1 April 2015.

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(2) NTPC Mining Ltd has been incorporated on 29 August 2019 as a wholly owned subsidiary of the Company for taking up coal mining business.

(3) The Cabinet Committee on Economic Affairs in its meeting held on November 21, 2019, granted an 'in-principle' approval to the proposal of the Department of Investment and Public Asset Management, Ministry of Finance, Government of India (GOI), for the strategic disinvestment of Government of India's shareholding in THDC India Limited (THDCIL) to NTPC Limited along with transfer of management control. Pursuant to the above, the Company has acquired 74.496% of paid up share capital in THDCIL , held by GOI for an aggregate consideration of ₹ 7,500 crore, on 27 March 2020. Consequently, THDCIL has become the subsidiary of the Company w.e.f. 27 March 2020.

(4) The Cabinet Committee on Economic Affairs in its meeting held on November 21, 2019, granted an 'in-principle' approval to the proposal of the Department of Investment and Public Asset Management, Ministry of Finance, GOI, for the strategic disinvestment of GOI's shareholding in North Eastern Electric Power Corporation Limited (NEEPCO) to NTPC Limited along with transfer of management control. Pursuant to the above, the Company has acquired entire paid up share capital in NEEPCO, held by GOI for an aggregate consideration of ₹ 4,000 crore, on 27 March 2020. Consequently, NEEPCO has become wholly owned subsidiary of the Company w.e.f. 27 March 2020.

(5) The Company has incorporated a subsidiary company 'NTPC EDMC Waste Solutions Pvt. Ltd.', in joint venture with East Delhi Municipal Corporation (EDMC) on 1 June 2020, with equity participation of 74:26 respectively to develop and operate state of the art / modern integrated waste management & energy generation facility. The Board of Directors of the Company in its 494th meeting held on 4 February 2021 had accorded approval for transfer of its shareholding in the subsidiary to M/s NVVN Ltd., a wholly owned subsidiary of the Company which is yet to take place.

(6) NTPC Renewable Energy Ltd. has been incorporated on 7 October 2020 as a wholly owned subsidiary of the Company for taking up renewable energy business.

(7) The Company had an investment of ₹ 834.55 crore as at 1 April 2020 in the equity shares of Ratnagiri Gas and Power Private Ltd. (RGPPL), an erstwhile joint venture of the Company. During the year, the Company has entered into a tripartite framework agreement with RGPPL and its lenders on 31 December 2020 for settlement of RGPPL's outstanding debt liabilities as per the Composite Resolution Plan. As per the Resolution Plan, the Company has provided inter corporate loan of ₹ 885 crore to RGPPL for settlement of loan with the lenders. Further, 35.47% of equity held by lenders in RGPPL have been transferred to the Company as a part of the Resolution Plan at nominal value. Consequently, the Company's equity shareholding in RGPPL has increased from 25.51% to 60.98% and RGPPL has become a subsidiary company of the Company with effect from 31 December 2020. Further, the Company had an investment of ₹ 139.75 crore as at 1 April 2020 in the equity shares of Konkan LNG Ltd. (KLL), an erstwhile joint venture of the Company. The Company has executed Share Purchase Agreements with GAIL (India) Ltd. on 23 February 2021, for purchase of GAIL's share (25.51%) in RGPPL and Sale of Company's share (14.82%) (on fully dilutive basis) in KLL, at a nominal value of ₹ 1/-. Consequently, the Company has exited from KLL after transfer of shares as per the Share Purchase Agreements and the Company's shareholding in RGPPL has become 86.49% with effect from 23 February 2021.

(8) The Board of Directors of the Company in its 479th Board meeting held on 9 November 2019 had accorded approval of Scheme of Amalgamation of Nabinagar Power Generating Co. Limited and Kanti Bijlee Utpadan Nigam Limited (wholly owned subsidiaries of the Company) with the Company under provisions of Section 230-232 of the Companies Act, 2013. The Company has filed application to the Ministry of Corporate Affairs on 5 February, 2021 for approval of Scheme of Amalgamation. The amalgamation is yet to take place.

(b) Non-controlling interests (NCI)

Set out below is summarised financial information for each subsidiary that has non-controlling interest. The amounts disclosed for each subsidiary are before inter-company eliminations.

Summarised balance sheet

₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.		NTPC EDMC		RGPPL	
	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020
Current assets	944.30	1,083.55	553.35	378.33	2,307.21	2,813.65	0.20	-	864.71	-
Current liabilities	2,616.97	874.82	1,152.57	701.55	2,211.54	2,230.88	1.02	-	576.06	-
Net current assets/ (liabilities)	(1,672.67)	208.73	(599.22)	(323.22)	95.67	582.77	(0.82)	-	288.65	-
Non-current assets	8,165.57	8,122.66	5,030.71	3,214.86	16,243.31	14,548.75	0.11	-	1,036.69	-
Non-current liabilities	3,544.73	5,459.19	3,233.68	2,220.33	6,038.71	5,166.64	-	-	1,402.69	-
Net non-current assets	4,620.84	2,663.47	1,797.03	994.53	10,204.60	9,382.11	0.11	-	(366.00)	-
Regulatory deferral account debit balances	6.56	-	-	-	169.72	186.22	-	-	-	-
Regulatory deferral account credit balances	184.60	129.41	0.36	-	550.22	618.63	-	-	-	-
Net assets	2,770.13	2,742.79	1,197.45	671.31	9,919.77	9,532.47	(0.71)	-	(77.35)	-
Accumulated NCI	718.07	711.48	311.34	174.54	2,529.30	2,431.17	(0.19)	-	(37.34)	-

Summarised statement of profit and loss for the year ended

₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.		NTPC EDMC		RGPPL	
	For the year ended 31 March 2021	For the year ended 31 March 2020	For the year ended 31 March 2021	For the year ended 31 March 2020	For the year ended 31 March 2021	For the year ended 31 March 2020	For the year ended 31 March 2021	For the year ended 31 March 2020	For the year ended 31 March 2021	For the year ended 31 March 2020
Total income	2,231.48	2,334.11	0.01	-	2,502.01	2,469.11	-	-	358.26	-
Profit/(loss) for the year	282.48	258.46	(0.21)	(0.41)	1,092.15	920.25	(0.91)	-	(125.38)	-
Other comprehensive income/(expense)	-	-	-	-	0.31	(16.82)	-	-		-
Total comprehensive income/(expense)	282.48	258.46	(0.21)	(0.41)	1,092.46	903.43	(0.91)	-	(125.38)	-
Profit/(loss) allocated to NCI	73.45	67.20	(0.05)	(0.11)	278.62	230.37	(0.24)	-	(16.94)	-
Dividends paid to NCI	66.86	-	-	-	180.50	32.14	-	-	-	-

Summarised cash flows for the year ended

₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.		NTPC EDMC		RGPPL	
	For the year ended 31 March 2021	For the year ended 31 March 2020	For the year ended 31 March 2021	For the year ended 31 March 2020	For the year ended 31 March 2021	For the year ended 31 March 2020	For the year ended 31 March 2021	For the year ended 31 March 2020	For the year ended 31 March 2021	For the year ended 31 March 2020
Cash flows from/(used in) operating activities	1,293.70	923.88	(148.79)	34.56	1,938.98	701.55	(0.11)	-	268.31	-
Cash flows from/(used in) investing activities	(326.85)	(474.98)	(952.95)	(678.96)	(2,094.79)	(1,601.07)	0.11	-	(44.26)	-
Cash flows from/(used in) financing activities	(1,098.80)	(272.51)	1,101.02	645.14	777.39	976.11	0.20	-	(169.47)	-
Net increase/ (decrease) in cash and cash equivalents	(131.95)	176.39	(0.72)	0.74	621.58	76.59	0.20	-	54.58	-

(c) Details of significant restrictions

In respect of investments in subsidiary companies, the Group has restrictions for their disposal as under:

₹ Crore

Name of the Subsidiary	Period of restrictions for disposal of investments as per related agreements	Amount invested	
		As at 31 March 2021	As at 31 March 2020
Bhartiya Rail Bijlee Company Ltd.	5 years from the date of commercial operation of the last unit of the project.	**1,774.12**	1,774.12
Kanti Bijlee Utpadan Nigam Ltd.	As per loan agreement, minimum equity of 51% shall be maintained at all times until final settlement of loan i.e., 4 years moratorium period and subsequently 11 years for repayment.	**1,670.67**	1,610.67
Patratu Vidyut Utpadan Nigam Ltd.	5 years from the date of signing of agreement or till the date of commercial operation of the last new unit of Phase-I, whichever is later.	**887.62**	498.12
Nabinagar Power Generating Company Ltd.	NTPC shall not transfer/assign or pledge shares until final settlement of loan i.e. 5 years moratorium and subsequently 15 years for repayment.	**4,687.03**	4,417.01
THDC India Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company.	**7,500.00**	7,500.00
North Eastern Electric Power Corporation Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding / or total voting power in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company. Further, NTPC shall continue to hold 100% of paid up capital and voting power in the subsidiary till all amounts repayable under the loan agreement executed between the subsidiary and KfW are repaid.	**4,000.00**	4,000.00
NTPC EDMC Waste Solutions Pvt Ltd.	5 years from the date of incorporation (i.e. 01 June 2020)	**0.15**	-
Total		**20,519.59**	19,799.92

(d) Joint operations

The group has entered into production sharing contracts (PSCs) with GoI for some exploration blocks whose principal place of business is in India. For detailed disclosures of these joint operations, refer Note 63.

(e) Interests in joint venture companies

List of joint venture companies as at 31 March 2021 in which the group has interest, is as below. These entities have share capital consisting solely of equity shares, which are held directly by the group. The country of incorporation or registration is also their principal place of business, and the proportion of ownership interest is the same as the proportion of voting rights held.

₹ Crore

Name of joint venture company	Place of business/country of incorporation	Ownership interest held by the group (in %) as at		Accounting method	Carrying amount as at	
		31 March 2021	31 March 2020		31 March 2021	31 March 2020
Utility Powertech Ltd.	India	**50.00**	50.00	Equity method	**89.44**	72.25
NTPC-GE Power Services Private Ltd. $	India	**50.00**	50.00	Equity method	**3.07**	6.34

₹ Crore

Name of joint venture company	Place of business/country of incorporation	Ownership interest held by the group (in %) as at		Accounting method	Carrying amount as at	
		31 March 2021	31 March 2020		**31 March 2021**	31 March 2020
NTPC SAIL Power Company Ltd.	India	**50.00**	50.00	Equity method	**1,449.58**	1,369.93
NTPC Tamil Nadu Energy Company Ltd.	India	**50.00**	50.00	Equity method	**1,695.27**	1,575.37
Ratnagiri Gas & Power Private Ltd.# $	India	-	25.51	Equity method	-	-
Konkan LNG Ltd. #$	India	-	14.82	Equity method	-	34.38
Aravali Power Company Private Ltd.	India	**50.00**	50.00	Equity method	**3,007.35**	2,993.91
NTPC BHEL Power Projects Private Ltd. *$	India	**50.00**	50.00	Equity method	-	-
Meja Urja Nigam Private Ltd.$	India	**50.00**	50.00	Equity method	**1,468.02**	1,303.22
Transformers and Electricals Kerala Ltd. **$	India	**44.60**	44.60	Equity method	**35.00**	46.87
National High Power Test Laboratory Private Ltd. $	India	**20.00**	20.00	Equity method	**18.22**	21.97
Energy Efficiency Services Ltd. $	India	**47.15**	47.15	Equity method	**534.61**	556.88
CIL NTPC Urja Private Ltd. $	India	**50.00**	50.00	Equity method	**0.02**	0.02
Anushakti Vidhyut Nigam Ltd. $	India	**49.00**	49.00	Equity method	**0.01**	0.01
Hindustan Urvarak and Rasayan Ltd.	India	**29.67**	29.67	Equity method	**1,129.66**	753.77
KSK Dibbin Hydro Power Private Ltd. (Joint venture of Subsidiary Company, NEEPCO Ltd.) $	India	**30.00**	30.00	Equity method	**4.46**	32.37
Trincomalee Power Company Ltd. $	Srilanka	**50.00**	50.00	Equity method	**1.06**	1.31
Bangladesh India Friendship Power Company Pvt.Ltd. $	Bangladesh	**50.00**	50.00	Equity method	**556.41**	487.71

$ The financial statements are un-audited and certified by the management of respective companies and have been considered for Consolidated Financial Statements of the Group. The figures appearing in their respective financial statements may change upon completion of their audit.

Refer Note 68(a)(7).

* The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from NTPC BHEL Power Projects Private Ltd. (NTPC-BHEL), a Joint venture of the Group. As NTPC BHEL was formed by a directive from the GOI, approval of exit from GOI is awaited.

** The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from Transformers and Electricals Kerala Ltd. (TELK), a Joint Venture of the Group. GOI has accorded its approval for exit of NTPC from the joint venture. The decision of the Board of Directors of NTPC Limited and approval of GOI has been conveyed to the Government of Kerala (JV Partner) & TELK. The government of Kerala has requested NTPC to review the decision. The matter is under examination.

(i) NTPC BHEL Power Projects Pvt Ltd (NTPC BHEL) (joint venture company) has accumulated losses due to which the Group has recognised accumulated losses equal to the cost of investments of NTPC BHEL as at 31 March 2021. The Group has unrecognised share of losses in respect of NTPC BHEL amounting to ₹ **85.04 crore** as at 31 March 2021 (31 March 2020: ₹ 60.07 crore) as per their unaudited financial statements for the year ended 31 March 2021.

(iv) Summarised financial information of joint venture companies of the group

The tables below provide summarised financial information of joint venture companies of the group. The information disclosed reflects the amounts presented in the financial statements of the relevant joint venture companies and not the group's share of those amounts.

Summarised balance sheet

Particulars	Utility Powertech Ltd.		NTPC GE Power Services Pvt. Ltd.		NTPC SAIL Power Company Ltd.		NTPC Tamil Nadu Energy Company Ltd.		Ratnagiri Gas & Power Private Ltd.		Konkan LNG Ltd.	
	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020
Current assets												
Cash and cash equivalents	28.82	42.32	(0.25)	3.11	83.37	130.35	0.59	29.75	-	117.43	-	18.10
Other assets	488.61	395.28	92.00	130.31	653.62	598.60	2,322.05	3,694.52	-	648.98	-	514.17
Total current assets	517.43	437.60	91.75	133.42	736.99	728.95	2,322.64	3,724.27	-	766.41	-	532.27
Total non-current assets	49.65	60.35	9.82	5.38	4,322.95	4,028.12	6,857.39	7,115.20	-	1,263.27	-	3,679.26
Current liabilities												
Financial liabilities (excluding trade payables and provisions)	158.69	156.26	(0.10)	2.02	490.20	462.83	1,556.80	2,397.82	-	182.42	-	12.10
Other liabilities	188.52	175.69	94.23	123.47	246.28	268.00	543.66	1,276.40	-	420.12	-	145.86
Total current liabilities	347.21	331.95	94.13	125.49	736.48	730.83	2,100.46	3,674.22	-	602.54	-	157.96
Non-current liabilities												
Financial liabilities (excluding trade payables and provisions)	14.49	3.45	-	-	1,418.54	50.76	3,692.88	3,966.23	-	1,369.31	-	3,821.40
Other liabilities	26.52	18.05	1.30	0.64	5.66	1,232.96	114.40	585.17	-	10.73	-	0.18
Total non-current liabilities	41.01	21.50	1.30	0.64	1,424.20	1,283.72	3,807.28	4,551.40	-	1,380.04	-	3,821.58
Regulatory deferral account debit balances	-	-	-	-	-	-	122.71	540.80	-	-	-	-
Regulatory deferral account credit balances	-	-	-	-	-	-	-	-	-	-	-	-
Share application money pending allotment	-	-	-	-	-	-	-	-	-	-	-	-
Net assets	178.86	144.50	6.14	12.67	2,899.26	2,742.52	3,395.00	3,154.65	-	47.10	-	231.99

Reconciliation to carrying amounts

Particulars	Utility Powertech Ltd.		NTPC GE Power Services Pvt. Ltd.		NTPC SAIL Power Company Ltd.		NTPC Tamil Nadu Energy Company Ltd.		Ratnagiri Gas & Power Private Ltd.		Konkan LNG Ltd.	
	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020
Opening net assets	144.50	118.14	12.67	12.85	2,742.52	2,498.24	3,154.65	2,753.91	-	(3,473.90)	-	(72.37)
Profit/(loss) for the year	50.05	32.27	(5.48)	0.56	348.68	368.96	326.04	375.46	-	(174.10)	-	270.27
Other comprehensive income/(expense)	(5.69)	3.74	-	(0.02)	0.30	(4.54)	0.02	(0.01)	-	-	-	(0.01)
Dividends paid	(10.00)	(9.64)	(0.50)	(0.72)	(190.00)	(120.56)	(102.82)	-	-	-	-	-
Other adjustments*	-	(0.01)	(0.55)	-	(2.24)	0.42	17.11	25.29	-	3,695.10	-	34.10
Closing net assets	178.86	144.50	6.14	12.67	2,899.26	2,742.52	3,395.00	3,154.65	-	47.10	-	231.99
Group's share in %	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	-	25.51	-	14.82
Group's share in INR	89.43	72.25	3.07	6.34	1,449.63	1,371.26	1,697.50	1,577.33	-	-	-	34.38
Goodwill/(Restricted reserves)		-		-	(0.05)	(1.33)	(2.23)	(1.96)	-	-	-	-
Carrying amount	89.43	72.25	3.07	6.34	1,449.58	1,369.93	1,695.27	1,575.37	-	-	-	34.38

*Includes adjustments on account of further investment by the Joint venture partners.

Summarised statement of profit and loss for the year ended

Particulars	Utility Powertech Ltd.		NTPC GE Power Services Pvt. Ltd.		NTPC SAIL Power Company Ltd.		NTPC Tamil Nadu Energy Company Ltd.		Ratnagiri Gas & Power Private Ltd.		Konkan LNG Ltd.	
	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020
Revenue from operations	1,406.55	1,186.13	123.46	102.99	2,741.62	2,852.93	2,940.99	3,897.14	-	2,041.61	-	484.86
Other income	13.32	11.59	0.73	0.67	16.53	38.53	139.67	226.99	-	75.68	-	293.31
Depreciation and amortisation	1.26	1.23	1.06	0.85	139.93	156.80	494.38	488.41	-	400.58	-	102.41
Interest expense	1.97	1.83	1.35	0.64	9.31	14.02	552.39	627.83	-	141.71	-	182.06
Income tax expense/ (income)	16.40	17.00	(2.75)	(0.15)	16.57	1.23	147.04	183.36	-	-	-	23.03
Profit/(loss) for the year	50.05	32.27	(5.48)	0.56	348.68	368.96	326.04	375.46	-	(174.10)	-	270.27
Other comprehensive income/(expense)	(5.69)	3.74	-	(0.02)	0.30	(4.54)	0.02	(0.01)	-	-	-	(0.01)
Total comprehensive income/(expense)	44.36	36.01	(5.48)	0.54	348.98	364.42	326.06	375.45	-	(174.10)	-	270.26
Dividends received	-	-	-	-	-	-	-	-	-	-	-	-

Summarised balance sheet

Particulars	Aravali Power Company Private Ltd.		NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.		National High Power Test Laboratory Private Ltd.		Energy Efficiency Services Ltd.	
	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020
Current assets												
Cash and cash equivalents	743.99	210.30	1.06	0.43	397.16	77.50	8.17	0.01	4.09	2.53	211.55	177.73
Other assets	3,037.56	3,505.53	253.51	217.61	899.21	584.06	185.03	190.41	5.54	10.46	4,779.35	4,451.64
Total current assets	3,781.55	3,715.83	254.57	218.04	1,296.37	661.56	193.20	190.42	9.63	12.99	4,990.90	4,629.37
Total non-current assets	6,777.86	6,541.46	366.87	387.26	11,428.85	11,039.03	12.27	13.32	332.96	337.29	4,571.80	4,479.91
Current liabilities												
Financial liabilities (excluding trade payables and provisions)	1,094.83	723.08	67.45	79.25	1,724.96	1,434.26	42.75	37.04	62.23	-	1,791.18	1,221.68
Other liabilities	143.07	77.54	493.18	387.48	81.74	109.04	75.44	61.62	2.47	63.41	1,133.52	1,870.26
Total current liabilities	1,237.90	800.62	560.63	466.73	1,806.70	1,543.30	118.19	98.66	64.70	63.41	2,924.70	3,091.94
Non-current liabilities												
Financial liabilities (excluding trade payables and provisions)	2,796.74	2,992.38	-	-	7,856.00	7,401.52	-	-	186.53	176.77	5,413.18	4,731.66
Other liabilities	11.33	11.49	230.89	258.71	-	-	8.80	-	0.28	0.25	90.98	104.59
Total non-current liabilities	2,808.07	3,003.87	230.89	258.71	7,856.00	7,401.52	8.80	-	186.81	177.02	5,504.16	4,836.25
Regulatory deferral account debit balances	65.53	5.74	-	-	32.19	-	-	-	-	-	-	-
Regulatory deferral account credit balances	344.62	285.41	-	-	155.01	149.33	-	-	-	-	-	-
Share application money pending allotment	-	-	-	-	-	-	-	-	-	-	-	-
Net assets	6,234.35	6,173.13	(170.08)	(120.14)	2,939.70	2,606.44	78.48	105.08	91.08	109.85	1,133.84	1,181.09

Reconciliation to carrying amounts

Particulars	Aravali Power Company Private Ltd.		NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.		National High Power Test Laboratory Private Ltd.		Energy Efficiency Services Ltd.	
	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020
Opening net assets	6,173.13	5,873.05	(120.14)	(32.88)	2,606.44	2,569.50	105.08	93.42	109.85	130.38	1,181.09	829.08
Profit/(loss) for the year	726.78	619.67	(24.51)	(26.15)	44.40	(607.68)	(13.18)	8.41	(19.23)	(21.84)	32.87	44.92
Other comprehensive income/(expense)	0.11	0.32	-	-	-	-	-	-	-	(0.04)	(0.29)	(0.48)
Dividends paid	(700.00)	(354.01)	-	-	-	-	-	-	-	-	-	(11.44)
Other adjustments*	34.33	34.10	(25.43)	(61.11)	288.86	644.62	(13.42)	3.25	0.46	1.35	(79.83)	319.01
Closing net assets	6,234.35	6,173.13	(170.08)	(120.14)	2,939.70	2,606.44	78.48	105.08	91.08	109.85	1,133.84	1,181.09
Group's share in %	50.00	50.00	50.00	50.00	50.00	50.00	44.60	44.60	20.00	20.00	47.15	47.15
Group's share in INR	3,117.18	3,086.57	-	-	1,469.85	1,303.22	35.00	46.87	18.22	21.97	534.61	556.88
Goodwill/(Restricted reserves)	(109.83)	(92.66)	-	-	(1.83)	-	-	-	-	-	-	-
Carrying amount	3,007.35	2,993.91	-	-	1,468.02	1,303.22	35.00	46.87	18.22	21.97	534.61	556.88

*Includes adjustments on account of further investment by the Joint venture partners.

Summarised statement of profit and loss for the year ended

Particulars	Aravali Power Company Private Ltd.		NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.		National High Power Test Laboratory Private Ltd.		Energy Efficiency Services Ltd.	
	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020
Revenue from operations	2,912.55	3,138.77	49.17	60.90	2,096.35	578.24	157.03	203.25	15.39	11.37	1,471.85	1,865.98
Other income	170.22	189.30	1.42	0.16	38.08	19.13	3.47	1.45	0.15	0.19	58.43	68.09
Depreciation and amortisation	426.23	422.28	5.84	6.73	372.91	298.66	1.24	1.28	8.32	7.64	533.05	496.75
Interest expense	259.57	323.87	2.16	1.66	446.38	384.21	6.08	5.76	18.91	16.67	328.50	322.61
Income tax expense/ (income)	94.40	127.16	(8.39)	(9.19)	0.12	(175.20)	-	-	-	-	11.09	(17.70)
Profit/(loss) for the year	726.78	619.67	(24.51)	(26.15)	44.40	(607.68)	(13.18)	8.41	(19.23)	(21.84)	32.87	44.92
Other comprehensive income/(expense)	0.11	0.32	-	-	-	-	-	-	-	(0.04)	(0.29)	(0.48)
Total comprehensive income/(expense)	726.89	619.99	(24.51)	(26.15)	44.40	(607.68)	(13.18)	8.41	(19.23)	(21.88)	32.58	44.44
Dividends received	-	-	-	-	-	-	-	-	-	-	-	-

Summarised balance sheet

Particulars	CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.		Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.	
	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020
Current assets												
Cash and cash equivalents	0.04	0.04	0.02	0.02	592.43	232.67	0.17	0.13	0.19	0.27	191.00	227.88
Other assets	-	-	-	-	42.96	43.16	6.52	7.02	0.02	0.25	1.37	9.10
Total current assets	0.04	0.04	0.02	0.02	635.39	275.83	6.69	7.15	0.21	0.52	192.37	236.98
Total non-current assets	-	-	-	-	16,485.16	8,559.38	114.95	112.95	2.23	2.12	10,056.29	7,988.48
Current liabilities												
Financial liabilities (excluding trade payables and provisions)	-	-	-	-	2,246.43	1,591.20	1.59	1.60	-	-	643.09	270.54
Other liabilities	0.01	0.01	-	-	23.83	51.62	0.53	0.53	0.04	0.03	12.03	10.73
Total current liabilities	0.01	0.01	-	-	2,270.26	1,642.82	2.12	2.13	0.04	0.03	655.12	281.27
Non-current liabilities												
Financial liabilities (excluding trade payables and provisions)	-	-	-	-	9,873.67	4,344.70	11.48	9.98	0.28	-	8,480.73	6,968.77
Other liabilities	-	-	-	-	1,169.20	306.99	0.07	0.07	-	-	-	-
Total non-current liabilities	-	-	-	-	11,042.87	4,651.69	11.55	10.05	0.28	-	8,480.73	6,968.77
Regulatory deferral account debit balances	-	-	-	-	-	-	-	-	-	-	-	-
Regulatory deferral account credit balances	-	-	-	-	-	-	-	-	-	-	-	-
Share application money pending allotment	-	-	-	-	-	-	-	-	-	-	-	-
Net assets	0.03	0.03	0.02	0.02	3,807.42	2,540.70	107.97	107.92	2.12	2.61	1,112.81	975.42

Reconciliation to carrying amounts

Particulars	CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.		Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.	
	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020	As at 31 March 2021	As at 31 March 2020
Opening net assets	0.03	0.04	0.02	0.02	2,540.70	1,330.74	107.92	107.77	2.61	3.16	975.42	561.70
Profit/(loss) for the year	-	(0.01)	-	-	(16.32)	0.05	0.05	0.15	(0.52)	(0.60)	-	-
Other comprehensive income/(expense)	-	-	-	-	-	-	-	-	-	-	-	-
Dividends paid	-	-	-	-	-	-		-	-	-	-	-
Other adjustments*	-	-	-	-	1,283.04	1,209.91		-	0.03	0.05	137.39	413.72
Closing net assets	0.03	0.03	0.02	0.02	3,807.42	2,540.70	107.97	107.92	2.12	2.61	1,112.81	975.42
Group's share in %	50.00	50.00	49.00	49.00	29.67	29.67	30.00	30.00	50.00	50.00	50.00	50.00
Group's share in INR	0.02	0.02	0.01	0.01	1,129.66	753.77	32.39	32.37	1.06	1.31	556.41	487.71
Goodwill/(Restricted reserves)	-	-	-	-	-	-	(27.93)	-	-	-	-	-
Carrying amount	0.02	0.02	0.01	0.01	1,129.66	753.77	4.46	32.37	1.06	1.31	556.41	487.71

* Includes adjustments on account of further investment by the joint venture partners.

Summarised statement of profit and loss for the year ended

Particulars	CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.		Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.	
	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020	31 March 2021	31 March 2020
Revenue from operations	-	-	-	-	1.53	1.53	-	-	-	-	-	-
Other income	-	-	-	-	2.53	15.89	0.52	0.51	0.02	0.05	-	-
Depreciation and amortisation	-	-	-	-	4.24	4.13	0.19	0.20	-	-	-	-
Interest expense	-	-	-	-	1.02	1.32	0.14	0.12	-	-	-	-
Income tax expense/ (income)	-	-	-	-	0.39	0.02	0.10	-	-	(0.01)	-	-
Profit/(loss) for the year	-	(0.01)	-	-	(16.32)	0.05	0.05	0.15	(0.52)	(0.60)	-	-
Other comprehensive income/(expense)	-	-	-	-	-	-	-	-	-	-	-	-
Total comprehensive income/(expense)	-	(0.01)	-	-	(16.32)	0.05	0.05	0.15	(0.52)	(0.60)	-	-
Dividends received	-	-	-	-	-	-	-	-	-	-	-	-

(v) Commitments and contingent liabilities in respect of joint venture companies

The Group has commitments of ₹ **2,253.53 crore** (31 March 2020: ₹ 2,900.40 crore) towards further investment in the joint venture companies as at 31 March 2021.

The Group has commitments of bank guarantee of 0.50 % of total contract price to be undertaken by NTPC-BHEL Power Projects Private Ltd. limited to a cumulative amount of ₹ **75.00 crore** (31 March 2020: ₹ 75.00 crore).

The Group has agreed to provide unconditional and irrevocable financial support to NTPC GE Power Services Ltd. (a joint venture company) for meeting financial qualifying requirement for execution of Flue Gas De-sulfurisation (FGD) projects in India. Such support shall be provided by way of Letter of Undertaking to a cumulative exposure up to the award value of the contract(s) not exceeding ₹ 600.00 crore and cumulative exposure of the Company, in proportion to shareholding, would not exceed ₹ **300.00 crore** (31 March 2020: ₹ 300.00 crore).

₹ Crore

Particulars	**As at 31 March 2021**	As at 31 March 2020
Contingent liabilities		
Share of contingent liabilities incurred jointly with other investors of the joint venture companies	**2,045.34**	894.03
Possible reimbursements	**336.59**	215.47
Capital commitments	**4,604.52**	5,515.49

(vi) Details of significant restrictions

In respect of investments in joint venture companies, the Group has restrictions for their disposal as under:

₹ Crore

Name of the joint venture company	**Period of restrictions for disposal of investments as per related agreements**	**Amount invested as at**	
		31 March 2021	31 March 2020
Transformers and Electricals Kerala Ltd.	3 years from the date of acquisition (i.e.19.06.2009) or upgradation capacity enhancement scheme whichever is later.	**31.34**	31.34
NTPC BHEL Power Projects Private Ltd.	3 years from the date of completion of first EPC contract of single order value of not less than ₹500 crore or till further such time as mutually agreed.	**50.00**	50.00
National High Power Test Laboratory Private Ltd.	5 years from the date of incorporation (i.e. 22.05.2009) or completion of project whichever is later.	**30.40**	30.40
CIL NTPC Urja Private Ltd.	5 years from the date of incorporation (i.e. 27.04.2010) or commercial operation whichever is later.	**0.08**	0.08
Trincomalee Power Company Ltd.	12 years from the initial operation date.	**15.20**	15.20
Bangladesh India Friendship Power Company Private Ltd.	15 years from the date of commercial operation date.	**533.60**	444.72
Meja Urja Nigam Private Ltd.	5 years from the date of incorporation (i.e. 02.04.2008) or commercial operation (i.e. 31.01.2021) whichever is later.	-	1,581.64
Hindustan Urvarak & Rasayan Ltd.	(a) 5 years from the date of incorporation (15.06.2016) or 2 years from commercial operation date of any one of the proposed projects at Sindri, Gorakhpur and Barauni or date of allotment of shares for first time, whichever is later. (b) As per Sponsors Support undertaking , NTPC shall jointly and severally with the other sponsors provide additional funds to meet all cost overrun incurred/to be incurred in relation to the Project. Further, NTPC shall jointly with the other sponsors, retain of 51% of total equity share capital of the JV and management control until the final settlement date of the loan facility (door to door tenure of 15 years).	**1,131.76**	751.09
Total		**1,792.38**	2,904.47

69. Disclosure as per Ind AS 114, 'Regulatory Deferral Accounts'

(i) Nature of rate regulated activities

The Group is mainly engaged in generation and sale of electricity. The price to be charged by the Group for electricity sold to its beneficiaries is determined by the CERC which provides extensive guidance on the principles and methodologies for determination of the tariff for the purpose of sale of electricity. The tariff is based on allowable costs like interest, depreciation, operation & maintenance expenses, etc. with a stipulated return.

This form of rate regulation is known as cost-of-service regulations which provide the Group to recover its costs of providing the goods or services plus a fair return.

(ii) Recognition and measurement

(a) As per the CERC Tariff Regulations, any gain or loss on account of exchange risk variation during the construction period shall form part of the capital cost till the declaration of Commercial Operation Date (COD) to be considered for calculation of tariff. The CERC during the past period in tariff orders for various stations has allowed exchange differences incurred during the construction period in the capital cost. Accordingly, exchange differences arising during the construction period is within the scope of Ind AS 114.

Further, any loss or gain on account of exchange differences on foreign currency loans for operating stations shall be recoverable from / payable to beneficiaries on actual payment basis, as per the said Regulations. Accordingly, such exchange differences are also within the scope of Ind AS 114.

In view of the above, exchange differences arising from settlement/translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Movements in Regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of **(-) ₹ 390.80 crore** for the year ended as at 31 March 2021 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2020: ₹ 1,279.54 crore accounted as 'Regulatory deferral account debit balance'.)

(b) Revision of pay scales of employees of PSEs w.e.f. 1 January 2017 has been implemented based on the guidelines issued by Department of Public Enterprises (DPE). The guidelines provide payment of superannuation benefits @ 30% of basic + DA to be provided to the employees of CPSEs which includes gratuity at the enhanced ceiling of ₹ 0.20 crore from the existing ceiling of ₹ 0.10 crore. As per Proviso 8(3) of Terms and Conditions of Tariff Regulations 2014 applicable for the period 2014-19, truing up exercise in respect of Change in Law or compliance of existing law will be taken up by CERC. The increase in gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore falls under the category of 'Change in law' and a regulatory asset has been created. The Payment of Gratuity Act, 1972 has since been amended and the ceiling has been increased to ₹ 0.20 crore.

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the above-mentioned provision related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This has been taken up with CERC through truing up tariff petition. Accordingly, an amount of ₹ **Nil** (31 March 2020: ₹ 37.27 crore) has been accounted for as Regulatory deferral account debit balance.

(c) CERC Regulations provide that deferred tax liability upto 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹ **1,539.61 crore** (31 March 2020: ₹ 3,852.00 crore) for the year ended 31 March 2021 has been accounted for as 'Regulatory deferral account debit balance'.

(d) The petition filed by the Parent Company before CERC for reimbursement of the expenditure on transportation of ash, has been favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016 subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount

of ₹ **1,003.79 crore** (31 March 2020: ₹ 647.56 crore) for the year ended 31 March 2021 has been accounted for as 'Regulatory deferral account debit balance'.

(e) CERC Regulations provide that the capital expenditure in respect of existing generating station incurred /projected to be incurred , inter-alia , towards liabilities to meet award of arbitration (i) within the original scope of work after the COD upto the cut off date (Regulations 24) ; (ii) within the original scope of work and after the cut off date (Regulations 25); and (iii) beyond the original scope of work (Regulation 26), will be admitted by CERC subject to prudence check. Keeping in view the above, regulatory deferral account debit balance has been accounted corresponding to the amount debited to Statement of profit & loss in respect of arbitration cases amounting to ₹ **110.81 crore** (31 March 2020:Nil) for the year ended 31 March 2021.

(f) CERC while determining the annual fixed cost of the Tuirial Hydro Electric Project (TrHEP) of NEEPCO, a subsidiary of the Company, for the period of 30.10.2017 to 31.03.2019 by CERC, allowed depreciation @2% for the said purposes in line with the decision of the Public Investment Board (PIB) of the Govt. of India. The rates and methodology as per the CERC tariff regulations based on which depreciation for TrHEP has been calculated and charged to the Statement of Profit & Loss vary from that allowed to recover through tariff as per the CERC order. Due to higher rate of depreciation as per the CERC regulations, depreciation charged for the first 12 (twelve) years of operation TrHEP will be more than that of the depreciation recoverable through tariff, which will be reversed in future periods during remaining period of normative life of the generating station. Accordingly, the lower depreciation realized during the earlier period of its operation will be recovered/adjusted during later period. In view of above, an amount of ₹ **41.20 crore** (31 March 2020: ₹ 41.18 crore) being the difference of depreciation to the extent recoverable/ adjustable in future period has been recognized as Regulatory deferral account debit balances.

(g) Other expenses which the subsidiaries expect to get reimbursed by the Regulator under the tariff regulations amounting to ₹ **Nil** (31 March 2020: ₹ 2.44 crore) has been recognised as regulatory deferral account balances considering the same falls within the scope of Ind AS 114.

(iii) Risks associated with future recovery/reversal of regulatory deferral account balances:

(a) demand risk due to changes in consumer attitudes, the availability of alternative sources of supply.

(b) regulatory risk on account of changes in regulations and submission or approval of a rate-setting application or the entity's assessment of the expected future regulatory actions.

(c) other risks including currency or other market risks, if any.

(iv) Reconciliation of the carrying amounts:

The regulated assets/liability recognized in the books to be recovered from or payable to beneficiaries in future periods are as follows:

a) Regulatory deferral account debit balance - Note 21

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

₹ **Crore**

Particulars	**For the year ended 31 March 2021**	For the year ended 31 March 2020
A. Opening balance	**9,397.73**	3,628.03
B. Addition during the year	**2,304.61**	5,859.99
C. Adjustments during the year	**(135.14)**	(134.38)
D. Amount collected/refunded during the year	**(13.92)**	44.09
E. Regulatory deferral account balances recognized in the statement of profit and loss (B+D)	**2,290.69**	5,904.08
F. Closing balance (A+C+E)	**11,553.28**	9,397.73

b) **Net movements in regulatory deferral account balances [I]**

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Exchange differences	(390.80)	1,279.54
Deferred tax	1,539.61	3,852.00
Ash transportation cost	1,003.79	647.56
Revision of pay scales	-	37.27
Arbitration cases	110.81	-
Others	41.20	43.62
Sub total (i)	2,304.61	5,859.99
Amount collected / refunded during the year (ii)	(13.92)	44.09
Net movement in regulatory deferral account balances (i)-(ii)	2,290.69	5,904.08

c) Tax on net movements in regulatory deferral account balances [II]	**387.50**	**1,032.07**
d) Total amount recognized in the statement of profit and loss during the year [I-II]	**1,903.19**	**4,872.01**

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects.

70. Disclosure as per Ind AS 115, 'Revenue from contracts with customers'

I. Nature of goods and services

The revenue of the Group comprises of income from energy sales, sale of energy through trading, consultancy and other services. The following is a description of the principal activities:

(A) Revenue from energy sales

The major revenue of the Group comes from energy sales. The Group sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private Discoms operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for energy sales:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy sales	The Group recognises revenue from contracts for energy sales over time as the customers simultaneously receive and consume the benefits provided by the Group. The tariff for computing revenue from energy sales is determined in terms of CERC Regulations as notified from time to time. The amount of revenue recognised for energy sales is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(B) Revenue from energy trading, consultancy and other services

(i) Sale of Energy through trading

(a) The Group is purchasing power from the developers and selling it to the Discoms on principal to principal basis.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading (principal to principal basis)	The Group recognises revenue from contracts for sale of energy through trading over time as the customers simultaneously receive and consume the benefits provided by the Group. The tariff for computing revenue from sale of energy through trading is determined as per the terms of the agreements. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(b) For some of its revenue arrangements, the Group has determined that it is acting as an agent and has recognized revenue on such contracts net of power purchase cost based on the following factors:

a. Another party is primarily responsible for fulfilling the contract as the Group does not have the ability to direct the use of energy supplied or obtain benefits from supply of power.

b. The Group does not have inventory risk before or after the power has been delivered to customers as the power is directly supplied to customer.

c. The Group has no discretion in establishing the price for supply of power. The Group's consideration in these contracts is only based on the difference between sales price charged to procurer and purchase price given to supplier.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading on agency nature:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading (agency nature)	The Group recognises revenue from such arrangements over time on net basis when the units of electricity are delivered to power procurers as the procurers simultaneously receive and consume the benefits from the Group's agency services. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts.

(c) The Group carries out energy trading operations on commission basis. NVVN, a subsidiary of the Parent Company is a "Trader Member" of India Energy Exchange Ltd. (IEX) & Power Exchange India Ltd (PXIL) and undertakes trading of Power and REC on Power Exchange Platform of IEX and PXIL.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading on energy exchange:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading on energy exchange	The Group recognises revenue from contracts for commission for trading on energy exchange over time as the customers simultaneously receive and consume the benefits provided by the Group's performance. The commission for trading of energy is determined as per the terms of the respective agreement. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts.

(ii) Consultancy and other services

The Group undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management & supervision, construction management, operation & maintenance of power plants, research & development, management consultancy etc.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for consultancy and other services:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Consultancy services	The Group recognises revenue from contracts for consultancy services over time as the customers simultaneously receive and consume the benefits provided by the Group. For the assets (e.g. deliverables, reports etc.) transferred under the contracts, the assets do not have alternative use to the Group and the Group has enforceable right to payment for performance completed to date. The revenue from consultancy services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.

Operation and maintenance services	The Group recognises revenue from contracts for operation and maintenance services over time as the customers simultaneously receive and consume the benefits provided by the Group. The revenue from operation and maintenance services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Deen Dayal Upadhyay Gramin Jyoti Yojna (DDUGJY Scheme)	The Group recognises revenue from work done under DDUGJY scheme over time as the assets do not have alternative use to the Group and the Group has enforceable right to payment for performance completed to date. The revenue from DDUGJY scheme is determined as per the terms of the contract. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Pradhan Mantri Sahaj Bijli Har Ghar Vojna (SAUBHAGYA Scheme)	The Group recognises revenue from work done under SAUBHAGYA scheme at a point in time when the Group transfers control of goods and services under the contract to the customers. The revenue from SAUBHAGYA scheme is determined as per the terms of the contracts. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.

II. Disaggregation of revenue

In the following table, revenue is disaggregated by type of product and services, geographical market and timing of revenue recognition:

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2021	31 March 2020	**31 March 2021**	31 March 2020	**31 March 2021**	31 March 2020
Geographical markets						
India	**1,03,950.26**	1,01,578.83	**5,825.62**	5,711.39	**1,09,775.88**	1,07,290.22
Outside India	-	-	**1,492.00**	1,788.41	**1,492.00**	1,788.41
	1,03,950.26	1,01,578.83	**7,317.62**	7,499.80	**1,11,267.88**	1,09,078.63
Timing of revenue recognition						
Products and services transferred over time	**1,03,950.26**	1,01,578.83	**7,317.62**	7,499.80	**1,11,267.88**	1,09,078.63
	1,03,950.26	1,01,578.83	**7,317.62**	7,499.80	**1,11,267.88**	1,09,078.63

III. Reconciliation of revenue recognised with contract price:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Contract price	**1,11,785.91**	1,09,551.42
Adjustments for:		
Rebates	**(518.03)**	(472.79)
Revenue recognised	**1,11,267.88**	1,09,078.63

IV. Contract balances

Contract assets are recognised when there is excess of revenue earned over billings on contracts. Contract assets are transferred to unbilled revenue when there is unconditional right to receive cash, and only passage of time is required, as per contractual terms. The contract liabilities primarily relate to the advance consideration received from the customers which are referred as 'advances from customers / payable to beneficiaries'.

The following table provides information about trade receivables, unbilled revenue and advances from customers:

₹ Crore

Particulars	As at 31 March 2021		As at 1 April 2020	
	Current	Non-current	Current	Non-current
Trade receivables	**17,718.07**	-	20,314.59	-
Unbilled revenue	**13,954.30**	-	12,231.18	-
Advances from customers / Payable to beneficiaries	**1,782.65**	-	843.01	-

The amount of revenue recognised from performance obligations satisfied (or partially satisfied) in previous periods, mainly due to change in transaction prices is ₹ **1,185.02 crore** (31 March 2020 : ₹ 60.93 crore).

V. Transaction price allocated to the remaining performance obligations

Performance obligations related to sale of energy:
Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations, where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. Therefore, transaction price to be allocated to remaining performance obligations cannot be determined reliably for the entire duration of the contract.

Performance obligations related to other contracts:

For rest of the contracts, transaction price for remaining performance obligations amounts to ₹ **723.34 crore** (31 March 2020: ₹ 747.23 crore) which shall be received over the contract period in proportion of the work performed/services provided by the Group.

VI. Practical expedients applied as per Ind AS 115:

a. **The Group has not disclosed information about remaining performance obligations that have original expected** duration of one year or less and where the revenue recognised corresponds directly with the value to the customer of the entity's performance completed to date.

b. The Group does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Group has not adjusted any of the transaction prices for the time value of money.

VII. The Group has not incurred any incremental costs of obtaining contracts with a customer and therefore, not recognised an asset for such costs.

71. Disclosure as per Ind AS 116 'Leases'

(A) Group as Lessee

(i) The Group's significant leasing arrangements are in respect of the following assets:

(a) Premises for residential use of employees, offices and guest houses/ transit camps on lease which are not non-cancellable and are usually renewable on mutually agreeable terms. The company generally incurs amount on improvements which are significant to the respective lease and hence the cancellable period of the lease during which the company intends to continue considering the past experience / practice, is considered for the purpose of determining the lease period.

(b) The Group has taken electrical vehicles on operating lease for a period of five to six years, which can be further extended at mutually agreed terms. Lease rentals are subject to escalation of 10% per annum.

(c) A helicopter on wet lease basis.

(d) The Group has taken certain vehicles (other than electrical) on lease for a period of more than one year to four years, which can be further extended at mutually agreed terms. There are no escalations in the lease rentals as per terms of the agreement. However, the Group has purchase option for some of such vehicles at the end of the lease term.

(e) The Group had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years after which it was to be transferred to the Company at ₹ 1/-. Refer Note no. 60(iii)(b).

(f) The Group acquires land on leasehold basis for a period generally ranging from 5 years to 99 years from the government authorities which can be renewed further based on mutually agreed terms and conditions. The leases are non cancellable. These leases are capitalised at the present value of the total minimum lease payments to be paid over the lease term. Future lease rentals are recognised as 'Lease liablities' at their present values. The Right-of-use land is amortised considering the significant accounting policies of the Group.

(ii) The following are the carrying amounts of lease liabilities recognised and the movements during the year:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Opening Balance	**855.61**	186.41
- Additions in lease liabilities	**46.40**	707.20
- Interest cost during the year	**52.51**	40.71
- Payment of lease liabilities	**(57.03)**	(78.71)
Closing Balance	**897.49**	855.61
Current	**161.79**	118.20
Non Current	**735.70**	737.41

(iii) Maturity Analysis of the lease liabilities:

₹ Crore

Contractual undiscounted cash flows	As at 31 March 2021	As at 31 March 2020
3 months or less	**143.40**	92.70
3-12 Months	**57.96**	64.11
1-2 Years	**74.00**	83.73
2-5 Years	**175.18**	156.69
More than 5 Years	**2,237.38**	2,278.02
Lease liabilities as at 31 March 2020	**2,687.92**	2,675.25

(iv) The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Depreciation and amortisation expense for right-of-use assets	**253.33**	290.93
Interest expense on lease liabilities	**52.51**	40.71
Expense relating to short-term leases	**11.17**	14.89

(v) The following are the amounts disclosed in the cash flow statement:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Cash Outflow from leases	**68.20**	93.60

(B) Leases as lessor

a) Finance leases

The Company had classified the arrangement with its customer for Stage I of a power station in the nature of lease based on the principles enunciated in Appendix C of Ind AS 17 - 'Leases' and accounted for as finance lease in accordance with those principles. This arrangement continues to be classified as finance lease after transition to Ind AS 116 - 'Leases'.

The power purchase agreement with the beneficiary is for a period of twenty five years from the date of transfer and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and for such further period of time as the parties may mutually agree.

The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
i) Finance income on the net investment in the lease	**51.54**	59.90
ii) Income relating to variable lease payments not included in the measurement of the net investment in the lease	**690.11**	899.19

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Less than one year	**108.54**	108.54
Between one and two years	**108.54**	108.54
Between two and three years	**108.54**	108.54
Between three and four years	**217.20**	108.54
Between four and five years	-	214.16
More than five years	-	-
Total minimum lease payments	**542.82**	648.32
Less amounts representing unearned finance income	**105.05**	183.95
Present value of minimum lease payments	**437.77**	464.37

b) Operating leases

(1) The Company had classified the arrangement with its customer for two power stations (one thermal and one gas) as lease based on the principles enunciated in Appendix C of Ind AS 17 and accounted for as operating lease in accordance with those principles. These arrangements continue to be classified as operating lease after transition to Ind AS 116 'Leases'.

(i) Thermal Power Station

Power Purchase Agreements (PPA) signed with the beneficiary was operative for a period of five years from the date of take over of the plant and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and conditions for such further period as the parties may mutually agree.

(ii) Gas Power Station

PPA signed with the beneficiary on 6 January 1995 was operative for five years from the date of commercial operation of last unit of the station and may be mutually extended, renewed or replaced by another agreement on such terms and on such further period of time as the parties may mutually agree. As per the supplementary agreement dated 15 February 2013 the validity period is extended for a further period of 12 years from 1 March 2013.

The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Lease Income	**156.18**	156.18
Income relating to variable lease payments that do not depend on an index or a rate	**1057.32**	973.13

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	**As at 31 March 2021**	As at 31 March 2020
Less than one year	**19.58**	156.18
Between one and two years	**19.58**	19.58
Between two and three years	**19.59**	19.58
Between three and four years	**3.91**	19.58
Between four and five years	-	3.91
More than five years	-	-
Total	**62.66**	218.83

(2) Land given on operating lease

The Group has entered into two leases agreements with one of the vendor for right to use of freehold land of 24.50 acre and 67.73 acre for the period of two years w.e.f. from 25 January 2019 and 21 August 2019 respectively. The Group continues to classify the same as operating lease.

The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Lease Income	**1.55**	1.54
Income relating to variable lease payments that do not depend on an index or a rate	-	-

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Less than one year	0.38	2.05
Between one and two years	-	0.62
Between two and three years	-	-
Between three and four years	-	-
Between four and five years	-	-
More than five years	-	-
Total	**0.38**	2.67

(3) Buses given on operating lease

The Group has entered into an agreement with Directorate of Transport (DoT), Andaman and Nicobar administration to supply the fully built AC eectric buses for a period of 10 years on fixed hire charges per Km per bus. In addition, the Group shall also install, commission and maintain necessary charging infrastructure at DoT depots and identified routes, wherever necessary.

The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the year ended 31 March 2021	For the year ended 31 March 2020
Lease Income	-	-
Income relating to variable lease payments that do not depend on an index or a rate	-	-

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Less than one year	13.20	-
Between one and two years	13.20	-
Between two and three years	13.20	-
Between three and four years	13.20	-
Between four and five years	13.20	-
More than five years	65.99	-
Total	**131.99**	-

72. Disclosure as per Schedule III to the Companies Act,2013

₹ Crore

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of total comprehensive income	Amount
Parent								
NTPC Limited								
31 March 2021	**92.05%**	**118,985.49**	**91.98%**	**13,769.52**	**68.82%**	**(68.19)**	**92.14%**	**13,701.33**
31 March 2020	92.97%	113,569.44	84.97%	10,112.81	106.34%	(327.22)	84.40%	9,785.59
Subsidiaries (Indian)								
Bhartiya Rail Bijlee Company Ltd.								
31 March 2021	**2.14%**	**2,770.13**	**1.89%**	**282.48**	**0.00%**	**-**	**1.90%**	**282.48**
31 March 2020	2.25%	2,742.79	2.17%	258.46	0.00%	-	2.23%	258.46
Kanti Bijlee Utpadan Nigam Ltd.								
31 March 2021	**1.36%**	**1,755.60**	**0.90%**	**134.53**	**0.06%**	**(0.06)**	**0.90%**	**134.47**
31 March 2020	1.28%	1,561.01	0.87%	103.98	0.00%	(0.01)	0.90%	103.97
NTPC Vidyut Vyapar Nigam Ltd.								
31 March 2021	**0.34%**	**442.31**	**0.61%**	**92.03**	**0.00%**	**-**	**0.62%**	**92.03**
31 March 2020	0.30%	370.29	0.15%	17.53	0.00%	-	0.15%	17.53
NTPC Electric Supply Company Ltd.								
31 March 2021	**0.04%**	**55.28**	**0.04%**	**5.52**	**0.00%**	**-**	**0.04%**	**5.52**
31 March 2020	0.04%	49.76	0.06%	7.38	0.00%	-	0.06%	7.38
Patratu Vidyut Utpadan Nigam Ltd.								
31 March 2021	**0.93%**	**1,197.45**	**0.00%**	**(0.21)**	**0.00%**	**-**	**0.00%**	**(0.21)**
31 March 2020	0.55%	671.31	0.00%	(0.41)	0.00%	-	0.00%	(0.41)
Nabinagar Power Generating Company Ltd.								
31 March 2021	**3.90%**	**5,035.77**	**1.22%**	**182.57**	**0.00%**	**-**	**1.23%**	**182.57**
31 March 2020	3.75%	4,575.00	0.94%	111.33	0.00%	-	0.96%	111.33
NTPC Mining Ltd.								
31 March 2021	**0.00%**	**0.05**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2020	0.00%	0.05	0.00%	-	0.00%	-	0.00%	-
THDC India Ltd.								
31 March 2021	**7.67%**	**9,917.24**	**7.30%**	**1,092.15**	**-0.31%**	**0.31**	**7.35%**	**1,092.46**
31 March 2020	7.80%	9,532.47	7.73%	920.25	5.47%	(16.82)	7.79%	903.43
North Eastern Electric Power Corporation Ltd.								
31 March 2021	**4.99%**	**6,453.52**	**0.52%**	**78.33**	**8.26%**	**(8.18)**	**0.47%**	**70.15**
31 March 2020	5.25%	6,408.35	1.39%	165.83	1.03%	(3.17)	1.40%	162.66
NTPC EDMC Waste Solutions Private Ltd.								
31 March 2021	**0.00%**	**(0.71)**	**-0.01%**	**(0.91)**	**0.00%**	**-**	**-0.01%**	**(0.91)**
31 March 2020	0.00%	-	0.00%	-	0.00%	-	0.00%	-
NTPC Renewable Energy Ltd.								
31 March 2021	**0.23%**	**291.54**	**-0.02%**	**(3.51)**	**0.00%**	**-**	**-0.02%**	**(3.51)**
31 March 2020	0.00%	-	0.00%	-	0.00%	-	0.00%	-

₹ Crore

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of total comprehensive income	Amount
Ratnagiri Gas & Power Private Ltd.								
31 March 2021	**-0.06%**	**(77.35)**	**-0.84%**	**(125.38)**	**0.00%**	**-**	**-0.84%**	**(125.38)**
31 March 2020	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Non-controlling interests in all subsidiaries								
31 March 2021	**2.73%**	**3,523.71**	**2.24%**	**334.77**	**-0.08%**	**0.08**	**2.25%**	**334.85**
31 March 2020	2.72%	3,317.19	2.54%	301.75	1.39%	(4.29)	2.57%	297.46
Joint ventures (Investment as per equity method)								
Indian								
Utility Powertech Ltd.								
31 March 2021	**0.07%**	**89.44**	**0.17%**	**25.04**	**2.88%**	**(2.85)**	**0.15%**	**22.19**
31 March 2020	0.06%	72.25	0.13%	15.31	-0.61%	1.87	0.15%	17.18
NTPC GE Power Services Private Ltd.								
31 March 2021	**0.00%**	**3.07**	**-0.02%**	**(3.02)**	**0.00%**	**-**	**-0.02%**	**(3.02)**
31 March 2020	0.01%	6.34	0.00%	0.22	0.00%	(0.01)	0.00%	0.21
NTPC SAIL Power Company Ltd.								
31 March 2021	**1.12%**	**1,449.58**	**1.17%**	**174.50**	**-0.15%**	**0.15**	**1.17%**	**174.65**
31 March 2020	1.12%	1,369.93	1.46%	174.11	0.74%	(2.27)	1.48%	171.84
NTPC Tamil Nadu Energy Company Ltd.								
31 March 2021	**1.31%**	**1,695.27**	**1.09%**	**163.01**	**-0.01%**	**0.01**	**1.10%**	**163.02**
31 March 2020	1.29%	1,575.37	1.58%	187.74	0.00%	(0.01)	1.62%	187.73
Ratnagiri Gas and Power Private Ltd.								
31 March 2021	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2020	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Konkan LNG Ltd.								
31 March 2021	**0.00%**	**-**	**-0.12%**	**(18.50)**	**0.00%**	**-**	**-0.12%**	**(18.50)**
31 March 2020	0.03%	34.38	0.29%	34.38	0.00%	-	0.30%	34.38
Aravali Power Company Private Ltd.								
31 March 2021	**2.33%**	**3,007.35**	**2.43%**	**363.38**	**-0.06%**	**0.06**	**2.44%**	**363.44**
31 March 2020	2.45%	2,993.91	2.32%	276.37	-0.05%	0.16	2.39%	276.53
NTPC BHEL Power Projects Private Ltd.								
31 March 2021	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2020	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Meja Urja Nigam Private Ltd.								
31 March 2021	**1.14%**	**1,468.02**	**0.15%**	**22.20**	**0.00%**	**-**	**0.15%**	**22.20**
31 March 2020	1.07%	1,303.22	-2.55%	(303.84)	0.00%	-	-2.62%	(303.84)
Transformers and Electricals Kerala Ltd.								
31 March 2021	**0.03%**	**35.00**	**-0.08%**	**(11.87)**	**0.00%**	**-**	**-0.08%**	**(11.87)**
31 March 2020	0.04%	46.87	0.04%	5.20	0.00%	-	0.04%	5.20
National High Power Test Laboratory Pvt. Ltd.								

₹ Crore

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of total comprehensive income	Amount
31 March 2021	**0.01%**	**18.22**	**-0.03%**	**(3.75)**	**0.00%**	-	**-0.03%**	**(3.75)**
31 March 2020	0.02%	21.97	-0.03%	(4.10)	0.00%	(0.01)	-0.04%	(4.11)
Energy Efficiency Services Ltd.								
31 March 2021	**0.41%**	**534.61**	**-0.15%**	**(22.13)**	**0.14%**	**(0.14)**	**-0.15%**	**(22.27)**
31 March 2020	0.46%	556.88	0.17%	20.26	0.07%	(0.23)	0.17%	20.03
CIL NTPC Urja Private Ltd.								
31 March 2021	**0.00%**	**0.02**	**0.00%**	-	**0.00%**	-	**0.00%**	-
31 March 2020	0.00%	0.02	0.00%	-	0.00%	-	0.00%	-
Anushakti Vidhyut Nigam Ltd.								
31 March 2021	**0.00%**	**0.01**	**0.00%**	-	**0.00%**	-	**0.00%**	-
31 March 2020	0.00%	0.01	0.00%	-	0.00%	-	0.00%	-
Hindustan Urvarak and Rasayan Ltd.								
31 March 2021	**0.87%**	**1,129.66**	**-0.03%**	**(4.78)**	**0.00%**	-	**-0.03%**	**(4.78)**
31 March 2020	0.62%	753.77	0.00%	0.01	0.00%	-	0.00%	0.01
KSK Dibbin Hydro Power Private Ltd.								
31 March 2021	**0.00%**	**4.46**	**0.00%**	**0.02**	**0.00%**	-	**0.00%**	**0.02**
31 March 2020	0.03%	32.37	0.00%	0.04	0.00%	-	0.00%	0.04
Foreign								
Trincomalee Power Company Ltd.								
31 March 2021	**0.00%**	**1.06**	**0.00%**	**(0.23)**	**0.00%**	-	**0.00%**	**(0.23)**
31 March 2020	0.00%	1.31	0.00%	(0.30)	0.00%	-	0.00%	(0.30)
Bangladesh India Friendship Power Company Private Ltd.								
31 March 2021	**0.43%**	**556.41**	**0.00%**	-	**0.00%**	-	**0.00%**	-
31 March 2020	0.40%	487.71	0.00%	-	0.00%	-	0.00%	-
Intra Group Eliminations								
31 March 2021	**-24.04%**	**(31,080.03)**	**-10.40%**	**(1,556.36)**	**20.47%**	**(20.28)**	**-10.60%**	**(1,576.64)**
31 March 2020	-24.47%	(29,897.62)	-4.22%	(502.33)	-14.39%	44.29	-3.95%	(458.04)
Total								
31 March 2021	**100.00%**	**129,262.18**	**100.00%**	**14,969.40**	**100.00%**	**(99.09)**	**100.00%**	**14,870.31**
31 March 2020	100.00%	122,156.35	100.00%	11,901.98	100.00%	(307.72)	100.00%	11,594.26

73. Contingent liabilities and commitments

A. Contingent liabilities

a. Claims against the group not acknowledged as debts

(i) Capital works

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Claims by contractors under capital works	**15,701.97**	14,191.24

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Some of the contractors for supply and installation of equipment and execution of works at our projects have lodged claims on the Group for the above amounts seeking enhancement of the contract price, revision of work schedule with price escalation, compensation for the extended period of work, idle charges etc. These claims are being contested by the Group as being not admissible in terms of the provisions of the respective contracts.

The Group is pursuing various options under the dispute resolution mechanism available in the contracts for settlement of these claims. It is not practicable to make a realistic estimate of the outflow of resources if any, for settlement of such claims pending resolution.

(ii) Land compensation cases

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Claims by land oustees	**551.54**	537.93

In respect of land acquired for the projects, the erstwhile land owners have claimed higher compensation before various authorities/courts which are yet to be settled. Against such cases, contingent liability of these amounts has been estimated.

(iii) Fuel suppliers

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Claims towards grade slippages	**2,046.70**	2,997.23
Other claims	**1,776.27**	1,223.20

Pending resolution of the issues with the coal companies, above amounts towards grade slippage pursuant to third party sampling has been estimated by the Group as contingent liability. Further, other claims represent claims made by fuel companies towards surface transportation charges, custom duty on service margin on imported coal, take or pay claims of gas suppliers, etc. estimated by the Group as contingent liability.

The Group is pursuing with the fuel companies, related ministries and other options under the dispute resolution mechanism available for settlement of these claims.

(iv) Others

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Claims by government agencies	**2,143.15**	1,565.30

In respect of claims (including applicable interest) made by various State/Central Government departments/ Authorities towards building permission fee, penalty on diversion of agricultural land to non-agricultural use, non agricultural land assessment tax, water royalty, other claims, etc. and by others, contingent liability of the above amounts has been estimated.

(v) Possible reimbursement in respect of (i) to (iii) above

In respect of claims included in (i) and (ii) above, payments, if any, by the Group on settlement of the claims would be eligible for inclusion in the capital cost for the purpose of determination of tariff as per CERC Tariff Regulations subject to prudence check by the CERC. In case of (iii), the estimated possible reimbursement by way of recovery through tariff as per Regulations is ₹ **3,810.71 crore** (31 March 2020: ₹ 4,149.16 crore).

b. Disputed tax matters

₹ Crore

Particulars	As at 31 March 2021	As at 31 March 2020
Claims by government agencies	**7,615.11**	2,490.74

Disputed income tax/sales tax/excise and other tax matters are pending before various Appellate Authorities. Many of these matters were adjudicated in favour of the Group but are disputed before higher authorities by the concerned departments. In respect of these disputed cases, the Group estimate possible reimbursement of ₹ **3,316.50 crore** (31 March 2020: ₹ 1,778.54 crore). The amount paid under dispute/adjusted by the authorities in respect of the cases amounts to ₹ **3,336.00 crore** (31 March 2020: ₹ 488.31 crore). Also refer Note 53(II)(b).

c. Others

₹ **Crore**

Particulars	**As at 31 March 2021**	As at 31 March 2020
Bills discounted with banks	**16,410.05**	10,842.34
Coal transportation [Refer Note 60(iii)(b)]	**2,153.57**	2,014.84
Others	**3,434.38**	3,351.60

Bills discounted with banks against trade receivables has been disclosed under contingent liabilities (Refer Note-14). In case of any claim on the Group from the banks in this regard, entire amount shall be recoverable from the beneficiaries along with surcharge. Others include contingent liabilities disclosed on an estimated basis relating to likely claims that may arise in connection with abandoned oil exploration activities, land use agreements, service tax reimbursements, etc.

In respect of NTPC Vidyut Vyapar Nigam Ltd., a subsidiary of the Company, electricity supplied by the sellers under SWAP arrangements of **305.57849 MUs** (31 March 2020: 66.7074 MUs) are yet to be returned for which the amount is not ascertainable.

Some of the beneficiaries have filed appeals against the tariff orders of the CERC. The amount of contingent liability in this regard is not ascertainable.

d. Joint venture companies

Refer Note 68 for contingent liability relating to joint venture companies.

B. Contingent assets

(i) While determining the tariff for some of the Parent Company's power stations, CERC has disallowed certain capital expenditure incurred by the Parent Company. The Parent Company aggrieved over such issues has filed appeals with the Appellate Tribunal for Electricity (APTEL)/Hon'ble Supreme Court against the tariff orders issued by the CERC. Based on past experience, the Parent Company believes that a favourable outcome is probable. However, it is impracticable to estimate the financial effect of the same as its receipt is dependent on the outcome of the judgement.

(ii) CERC (Terms & Conditions of Tariff) Regulations 2019-24 provide for levy of Late Payment Surcharge by generating company in case of delay in payment by beneficiaries beyond 45 days from the date of presentation of bill. However, in view of significant uncertainities in the ultimate collection from some of the beneficiaries against partial bills as resolved by the management, an amount of ₹ **960.21 crore** as at 31 March 2021 (31 March 2020: ₹ 643.14 crore) has not been recognised.

(iii) An amount of ₹ **7.86 crore** as at 31 March 2021 (31 March 2020: ₹ 7.28 crore) recoverable by M/s Kanti Bijlee Utpadan Nigam Ltd., a subsidiary of the Company, from a bank on account of a bank guarantee encashment has not been recognised in view of uncertainities involved.

C. Commitments

a) Estimated amount of contracts remaining to be executed on capital account (property, plant & equipment and intangible assets) and not provided for is as under:

₹ **Crore**

Particulars	**As at 31 March 2021**	As at 31 March 2020
Property, plant and equipment	**67,355.62**	72,119.33
Intangible assets	**10.32**	77.26
Total	**67,365.94**	72,196.59

b) In respect the following investments, the Group has restrictions for their disposal as at 31 March 2021 as under:

Name of the Company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2021	31 March 2020
International Coal Ventures Private Ltd.	5 years from the date of incorporation (i.e. 20.05.2009) or till such time an undertaking for non-disposal of such share is given to FI/Banks for their assistance to the Company whichever is later. Also refer Note 7.	**1.40**	1.40
Total		**1.40**	1.40

Further, the Group has commitments of ₹ **507.60 crore** (31 March 2020: ₹ 507.60 crore) towards further investment in the other companies as at 31 March 2021.

c) Group's commitment towards the minimum work programme in respect of oil exploration activities of joint operations has been disclosed in Note 63.

d) Group's commitment in respect of lease agreements has been disclosed in Note 71.

e) Jhabua Power Limited (JPL), having an operational thermal power capacity of 1 x 600 MW was admitted to National Company Law Tribunal (NCLT) on 27 March 2019, and is presently undergoing Corporate Insolvency Resolution Process in NCLT. Invitation for Expression of Interest for submission of Resolution Plan for JPL was published by Resolution Professional on 19 August 2019. The Board of Directors of the Company had accorded in-principle approval for submission of Resolution Plan for acquisition of JPL. Subsequently, the Company has submitted the Resolution Plan to Resolution Professional on due date of 30 December 2019 and revised Resolution plan on 30 November 2020 and 16 April 2021 based on discussions with Committee of Creditors/Resolution Professional. The revised Resolution Plan is currently under consideration by Resolution Professional / Committee of Creditors.

f) Refer Note 68 for commitments relating to joint venture companies.

74. Information in respect of micro and small enterprises as at 31 March 2021 as required by Schedule III to the Companies Act, 2013 and Micro, Small and Medium Enterprises Development Act, 2006 (MSMED Act)

₹ **Crore**

Particulars	**31 March 2021**	31 March 2020
a) Amount remaining unpaid to any supplier:		
Principal amount	**670.59**	773.68
Interest due thereon	-	0.19
b) Amount of interest paid in terms of Section 16 of the MSMED Act along-with the amount paid to the suppliers beyond the appointed day.	-	-
c) Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding the interest specified under the MSMED Act.	-	-
d) Amount of interest accrued and remaining unpaid	-	0.19
e) Amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprises, for the purpose of disallowances as a deductible expenditure under Section 23 of MSMED Act	-	-

The payment to the vendors are made as and when they are due, as per terms and conditions of respective contracts.

75. Statement containing salient features of the financial statements of Subsidiaries/Joint Ventures of NTPC Ltd. pursuant to first proviso to sub-section (3) of Section 129 read with Rule 5 of Companies (Accounts) Rules, 2014, in form AOC I is attached.

For and on behalf of the Board of Directors

(Nandini Sarkar) Company Secretary	(A.K. Gautam) Director (Finance) DIN: 08293632	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037

These are the Notes referred to in our report of even date

For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N (Rohit Mehta) Partner M No. 091382	For S.N. Dhawan & Co LLP Chartered Accountants Firm Reg. No. 000050N/N500045 (Mukesh Bansal) Partner M No.505269	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S (P.R.Prasanna Varma) Partner M No.025854 Place:Chennai

For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C	For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323220E	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C	For V.K. Jindal & Co Chartered Accountants Firm Reg. No. 001468C
(Thalendra Sharma) Partner M No.079236 Place:Jaipur	(C.K. Prusty) Partner M No. 057318 Place: Bhubaneshwar	(Ranjeet Singh) Partner M.No.073488 Place: Kanpur	(Suresh Agarwal) Partner M.No.072534 Place: Hazaribagh

Place : New Delhi
Dated : 19 June 2021

Digitally signed by signatories

Generating Power & Smiles 24x7 for the Nation

FORM NO. AOC.1

Statement containing salient features of the financial statements of Subsidiaries/Associate Companies/Joint Ventures of NTPC Ltd.

(Pursuant to first proviso to sub-section (3) of Section 129 read with Rule 5 of Companies (Accounts) Rules, 2014)

Part "A": Subsidiaries

(Amount in ₹ crore)

1.	Sl. No.	1	2	3	4	5	6	7	8	9	10	11	12
2.	Name of the Subsidiary	NTPC Electric Supply Company Ltd.	NTPC Vidyut Vyapar Nigam Ltd.	Kanti Bijlee Utpadan Nigam Ltd.	Bhartiya Rail Bijlee Company Ltd.	Patratu Vidyut Utpadan Nigam Ltd.	Nabinagar Power Generating Company Ltd.	NTPC Mining Ltd.	THDC India Ltd.	North Eastern Electric Power Corporation Ltd.	NTPC EDMC Waste Solutions Private Ltd.	NTPC Renewable Energy Ltd.	Ratnagiri Gas & Power Private Ltd.
3.	The date since when subsidiary was acquired	21.08.2002	01.11.2002	06.09.2006	22.11.2007	15.10.2015	29.06.2018	29.08.2019	27.03.2020	27.03.2020	01.06.2020	07.10.2020	31.12.2020
4.	Reporting period for the subsidiary concerned, if different from the holding company's reporting period	Same as that of Holding Company (01.04.2020 -31.03.2021)	Same as that of Holding Company (01.04.2020 -31.03.2021)	Same as that of Holding Company (01.04.2020 -31.03.2021)	Same as that of Holding Company (01.04.2020 -31.03.2021)	Same as that of Holding Company (01.04.2020 -31.03.2021)	Same as that of Holding Company (01.04.2020 -31.03.2021)	Same as that of Holding Company (01.04.2020 -31.03.2021)	Same as that of Holding Company (01.04.2020 -31.03.2021)	Same as that of Holding Company (01.04.2020 -31.03.2021)	Same as that of Holding Company (01.04.2020 -31.03.2021)	Same as that of Holding Company (01.04.2020 -31.03.2021)	Same as that of Holding Company (01.04.2020 -31.03.2021)
5.	Reporting currency and exchange rate as on the last date of the relevant financial year in the case of foreign subsidiaries.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.	Share capital	0.08	30.00	1,610.67	2,397.46	1,199.49	4,651.03	0.05	3,665.88	3,609.81	0.20	295.05	3,272.30
7.	Reserves & surplus	55.20	412.31	144.93	372.67	(2.04)	384.74	-	6,251.36	2,843.71	(0.91)	(3.51)	(3,349.65)
8.	Total assets	56.98	2,139.06	5,292.11	9,116.43	5,584.06	17,264.87	0.05	18,720.24	15,934.24	0.31	303.75	1,901.40
9.	Total liabilities	1.70	1,696.75	3,536.51	6,346.30	4,386.61	12,229.10	-	8,803.00	9,480.72	1.02	12.21	1,978.75
10.	Investments	-	-	-	-	-	-	-	-	4.46	-	-	-
11.	Turnover	-	4,037.02	1,509.85	2,186.17	-	2,078.45	-	1,796.01	2,288.09	-	-	354.00
12.	Profit before taxation	6.26	124.37	164.63	291.59	(0.21)	266.81	-	1,390.15	80.72	(0.91)	(3.51)	(125.38)
13.	Provision for taxation	0.74	32.35	30.10	9.11	-	84.24	-	298.00	32.81	-	-	-
14.	Profit after taxation	5.52	92.02	134.53	282.48	(0.21)	182.57	-	1,092.15	47.91	(0.91)	(3.51)	(125.38)
15.	Proposed dividend	-	9.00	-	-	-	-	-	190.84	-	-	-	-
16.	% of Shareholding	100.00%	100.00%	100.00%	74.00%	74.00%	100.00%	100.00%	74.496%	100.00%	74.00%	100.00%	86.49%

Notes:

1.	Subsidiaries which are yet to commence operations.	1. NTPC Mining Limited
		2. NTPC EDMC Waste Solutions Private Ltd.
		3. NTPC Renewable Energy Ltd.
2.	Subsidiaries which have been liquidated or sold during the year.	Nil

Part "B" : Associates and Joint Ventures
Statement pursuant to Section 129 (3) of the Companies Act, 2013

Sl. No.	Name of Joint Ventures	Utility Powertech Ltd.	NTPC GE Power Services Pvt. Ltd.	NTPC SAIL Power Company Ltd.	NTPC Tamil Nadu Energy Company Ltd.	Aravali Power Company Pvt. Ltd.	NTPC BHEL Power Projects Pvt. Ltd.	Meja Urja Nigam Pvt. Ltd.	Transformers & Electricals Kerela Ltd.	National High Power Test Laboratory Pvt. Ltd.	Energy Efficiency Services Ltd.	CIL NTPC Urja Pvt. Ltd.	Anushakti Vidhyut Nigam Ltd.	Hindustan Urvarak & Rasayan Limited	Trincomalee Power Company Ltd.	Bangladesh India Friendship Power Company Pvt. Ltd.
1.	Latest Audited Balance Sheet Date	31.03.2021	31.03.2020	31.03.2021	31.03.2021	31.03.2021	31.03.2020	31.03.2020	31.03.2020	31.03.2020	31.03.2020	31.03.2020	31.03.2020	31.03.2021	31.12.2020	30.06.2020
2.	Date on which the Associate or Joint venture was associated or acquired	23.11.1995	27.09.1999	08.02.1999	23.05.2003	21.12.2006	28.04.2008	02.04.2008	19.06.2009	22.05.2009	10.12.2009	27.04.2010	27.01.2011	15.06.2016	26.09.2011	31.10.2012
3.	Shares of Joint Ventures held by the Company on the year end as at 31.03.2021															
	- Number	20,00,000	30,00,000	49,02,50,050	1,43,63,96,112	1,43,30,08,200	5,00,00,000	1,72,42,39,800	1,91,63,438	3,04,00,000	46,36,10,000	76,900	49,000	1,13,17,65,000	32,86,061	6,42,50,000
	- Amount of Investment in Joint Venture (₹ crore)	1.00	3.00	490.25	1,436.40	1,433.01	50.00	1,724.24	31.34	30.40	463.61	0.08	0.05	1,131.76	15.20	533.60
	- Extent of Holding (%)	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	44.60%	20.00%	47.15%	50.00%	49.00%	29.67%	50.00%	50.00%
4.	Description of how there is significant influence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5.	Reason why the Joint Venture is not consolidated	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.	Networth attributable to Shareholding as per latest audited Balance Sheet (₹crore)	89.44	3.07	1,449.58	1,695.27	3,007.35	(85.04)	1,468.02	35.00	18.22	534.61	0.02	0.01	1,129.66	1.06	556.41
7.	Profit/ Loss for the year (Total Comprehensive Income) (₹ crore)															
	i. Considered for Consolidation	22.19	(3.02)	174.65	163.02	363.44	-	22.20	(11.87)	(3.75)	(22.27)	-	-	(4.78)	(0.23)	-
	ii. Not Considered in Consolidation	NA	NA	NA	NA	NA	(85.04)	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

A. Names of Joint Ventures which are yet to commence operations.

1 CIL NTPC Urja Private Ltd.

2 Anushakti Vidyut Nigam Ltd.

3 Hindustan Urvarak & Rasayan Ltd.

4 Trincomalee Power Company Ltd. (incorporated in Srilanka)

5 Bangladesh-India Friendship Power Company Private Ltd. (incorporated in Bangladesh)

B. Names of Associates or Joint Ventures which have been liquidated or sold during the year.

1 Investments in Konkan LNG Ltd. has been disposed off during the year.

2 BF-NTPC Energy Systems Ltd. is in the process of voluntary winding up.

For and on behalf of the Board of Directors

(Nandini Sarkar) Company Secretary	(A.K. Gautam) Director (Finance) DIN: 08293632	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037

For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N (Rohit Mehta) Partner M No. 091382	For S.N. Dhawan & Co LLP Chartered Accountants Firm Reg. No. 000050N/N500045 (Mukesh Bansal) Partner M No.505269	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S (P.R.Prasanna Varma) Partner M No.025854 Place:Chennai

For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C (Thalendra Sharma) Partner M No.079236 Place:Jaipur	For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323220E (C.K.Prusty) Partner M No. 057318 Place: Bhubaneshwar	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C (Ranjeet Singh) Partner M.No.073488 Place: Kanpur	For V.K. Jindal & Co Chartered Accountants Firm Reg. No. 001468C (Suresh Agarwal) Partner M.No.072534 Place: Hazaribagh

Place : New Delhi
Dated : 19 June 2021

Digitally signed by signatories

INDEPENDENT AUDITORS' REPORT

To

The Members of NTPC Limited

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the accompanying Consolidated Financial Statements of NTPC Limited (hereinafter referred to as "the Holding Company") and its subsidiaries (the Holding Company and its subsidiaries together referred to as "the Group"), and its joint ventures, which comprise the Consolidated Balance Sheet as at 31 March, 2021, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Changes in Equity and the Consolidated Statement of Cash Flows for the year then ended, and notes to the Consolidated Financial Statements, including a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "Consolidated Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us the aforesaid Consolidated Financial Statements give the information required by the Companies Act, 2013 ('the Act') in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the consolidated state of affairs (financial position) of the Group and its joint ventures as at March 31, 2021, and their consolidated net profit (financial performance including other comprehensive income), their consolidated changes in equity and consolidated cash flows for the year ended on that date.

Basis for Opinion

We conducted our audit of the Consolidated Financial Statements in accordance with the Standards on Auditing (SAs) specified under section 143(10) of the Act. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the 'Code of Ethics' issued by the Institute of Chartered Accountants of India (ICAI) together with the ethical requirements that are relevant to our audit of the Consolidated Financial Statements under the provisions of the Act and the Rules made thereunder, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ICAI's Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the Consolidated Financial Statements.

Emphasis of Matter

Considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality, we draw attention to the following matters in the notes to the Consolidated Financial Statements:

(a) Note No. 38(a)regarding billing and accounting of sales on provisional basis.

(b) Note No. 50(a) in respect of one of the projects of Holding Company consisting of three units of 800MW each, where the order of National Green Tribunal (NGT) on the matter of environmental clearance for the project has been stayed by the Hon'ble Supreme Court of India; the matter is sub-judice and the units have since been declared commercial.

(c) Note no. 50(b) in respect of one of the projects under construction consisting of two units of 800MW each, where the National Green Tribunal (NGT) has passed an order to keep the environment clearance granted to the project in abeyance, and directed to carry out additional studies relating to environmental impact assessment, and the Holding Company has filed an appeal before Hon'ble Supreme Court of India.

(d) Note No. 60 (iii)(b) with respect to appeal filed by the Holding Company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the Holding Company and the related provision made/disclosure of contingent liability as mentioned in the said note.

Our opinion is not modified in respect of these matters.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Consolidated Financial Statements of the current period. These matters were addressed in the context of our audit of the Consolidated Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each

matter below, description of how our audit addressed the matter is provided in that context. Considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality, below Key Audit Matters have been reproduced from the Independent Auditors' report on the audit of Standalone Financial Statements of the Holding Company.

Sr. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
1.	**Recognition and Measurement of revenue from Sale of Energy** The company records revenue from sale of energy as per the principles enunciated under Ind AS 115, based on tariff approved by the Central Electricity Regulatory Commission (CERC) as modified by the orders of Appellate Authorities. Pending issue of provisional/final tariff order w.e.f. 01 April, 2019 sales has been provisionally recognised considering the applicable CERC Tariff Regulations 2019. This is considered as key audit matter due to the nature and extent of estimates made as per the CERC Tariff Regulations, which leads to recognition and measurement of revenue from sale of energy being complex and judgmental. (Refer Note No. 38 to the Consolidated Financial Statements, read with the Significant Accounting Policy No. C.16)	We have obtained an understanding of the CERC Tariff Regulations, orders, circulars, guidelines and the Company's internal circulars and procedures in respect of recognition and measurement of revenue from sale of energy comprising of capacity and energy charges and adopted the following audit procedures: - Evaluated and tested the effectiveness of the Company's design of internal controls relating to recognition and measurement of revenue from sale of energy. - Verified the accounting of revenue from sale of energy based on provisional tariff computed as per the principles of CERC Tariff Regulations 2019. Based on the above procedure performed, the recognition and measurement of revenue from sale of energy is considered to be adequate and reasonable.
2.	**Impairment assessment of Property, Plant and Equipment (PPE)** The Company has a material operational asset base (PPE) relating to generation of electricity and is one of the components for determining the tariff as per the CERC Tariff Regulations, which may be vulnerable to impairment. We considered this as a key audit matter as the carrying value of PPE requires impairment assessment based on the future expected cash flows associated with the power plants (Cash generating units). (Refer Note No. 59 to the Consolidated Financial Statements, read with the Accounting Policy No. C.21)	We have obtained an understanding and tested the design and operating effectiveness of controls as established by the Company's management for impairment assessment of PPE. We evaluated the Company's process of impairment assessment in assessing the appropriateness of the impairment model including the independent assessment of discount rate, economic growth rate, terminal value etc. We evaluated and checked the calculations of the cash flow forecasts prepared by the Company taking into consideration the CERC (Terms and Conditions of Tariff) Regulations, 2019 (applicable for the tariff period of 5 years from 1 April 2019 to 31 March 2024) along with the aforementioned assumptions. Based on the above procedures performed, we observed that the Company's impairment assessment of the PPE is adequate and reasonable.

3.	**Deferred Tax Asset relating to MAT Credit Entitlement and corresponding Regulatory Deferral Liability** The company has recognised deferred tax asset relating to MAT credit entitlement. Utilisation of MAT credit will result in lower outflow of Income Tax in future years and accordingly Regulatory Deferral Liability attributable to the said MAT credit entitlement has also been recognised, payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations. The recoverability of this deferred tax asset relating to MAT credit entitlement is dependent upon the generation of sufficient future taxable profits to utilise such entitlement within the stipulated period prescribed under the Income Tax Act,1961. We identified this as a key audit matter because of the importance of this matter to the intended users of the Financial Statements and its materiality; and requirement of judgement in forecasting future taxable profits for recognition of MAT credit entitlement considering the recoverability of such tax credits within allowed time frame as per the provisions of the Income Tax Act,1961. (Refer Note No. 21,29,53 & 69 to the Consolidated Financial Statements, read with the Accounting Policy No. C.5 and C.19)	We have obtained an understanding for recognition of deferred tax asset relating to MAT credit entitlement and attributable liability of the same in Regulatory Deferral Account including the management's judgement. We further assessed the related forecasts of future taxable profits and evaluated the reasonableness of the considerations/assumptions underlying the preparation of these forecasts. We have also verified the regulatory deferral account balance corresponding to the said MAT credit payable to the beneficiaries in subsequent periods. Based on the above procedures performed, the recognition and measurement of Deferred tax asset relating to MAT credit entitlement and attributable Regulatory Deferral Liability towards beneficiaries, is considered adequate and reasonable.
4.	**Contingent Liabilities** There are a number of litigations pending before various forums against the Company and the management's judgement is required for estimating the amount to be disclosed as contingent liability. We identified this as a key audit matter because the estimates on which these amounts are based involve a significant degree of management judgement in interpreting the cases and it may be subject to management bias. (Refer Note No. 73 to the Consolidated Financial Statements, read with the Accounting Policy No. C.14)	We have obtained an understanding of the Company's internal instructions and procedures in respect of estimation and disclosure of contingent liabilities and adopted the following audit procedures: - understood and tested the design and operating effectiveness of controls as established by the management for obtaining all relevant information for pending litigation cases; - discussed with the management regarding any material developments thereto and latest status of legal matters; - read various correspondences and related documents pertaining to litigation cases and relevant external legal opinions obtained by the management and performed substantive procedures on calculations supporting the disclosure of contingent liabilities; - examined management's judgements and assessments in respect of whether provisions are required; - considered the management assessments of those matters that are not disclosed as contingent liability since the probability of material outflow is considered to be remote; - reviewed the adequacy and completeness of disclosures; Based on the above procedures performed, the estimation and disclosures of contingent liabilities is considered to be adequate and reasonable.

Information Other than the Consolidated Financial Statements and Auditor's Report Thereon

The Holding Company's Board of Directors is responsible for the preparation of the other information. The other information comprises the information included in the Annual Report related to the Consolidated Financial Statements, but does not include the Consolidated Financial Statements and our auditor's report thereon. The other information is expected to be made available to us after the date of this auditor's report.

Our opinion on the Consolidated Financial Statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the Consolidated Financial Statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Consolidated Financial Statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

When we read the other information, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate actions, if required.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

The Holding Company's Board of Directors is responsible for the preparation and presentation of these Consolidated Financial Statements in terms of the requirements of the Act, that give a true and fair view of the consolidated financial position, consolidated financial performance including other comprehensive income, consolidated Statement of Changes in Equity and consolidated cash flows of the Group including its joint ventures in accordance with the accounting principles generally accepted in India, including the Ind AS Accounting Standards specified under section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended. The respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Group and its joint ventures and for preventing and detecting frauds and other irregularities; the selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and the design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring accuracy and completeness of the accounting records, relevant to the preparation and presentation of the Consolidated Financial Statements that give a true and fair view and are free from material misstatement, whether due to fraud or error, which have been used for the purpose of preparation of the Consolidated Financial Statements by the Directors of the Holding Company, as aforesaid.

In preparing the Consolidated Financial Statements, the respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for assessing the ability of the Group and of its joint ventures to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group and its Joint Ventures or to cease operations, or has no realistic alternative but to do so.

The respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for overseeing the financial reporting process of the Group and of its joint ventures.

Auditors' Responsibility for the audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Consolidated Financial Statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Consolidated Financial Statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under section 143(3)(i) of the Act, we are also responsible for expressing our opinion on whether the holding company, its subsidiaries and joint ventures incorporated in India have adequate internal financial controls with reference to Consolidated Financial Statements in place and the operating effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of Holding Company's management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of the Group and its joint ventures to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the Consolidated Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group and its joint ventures to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the Consolidated Financial Statements, including the disclosures, and whether the Consolidated Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group and its joint ventures to express an opinion on the Consolidated Financial Statements. We are responsible for the direction, supervision and performance of the audit of the financial statements of such entities included in the Consolidated Financial Statements of which we are the independent auditors. For the other entities included in the Consolidated Financial Statements, which have been audited by other auditors, such other auditors remain responsible for the direction, supervision and performance of the audits carried out by them. We remain solely responsible for our audit opinion.

We communicate with those charged with governance of the Holding Company and such other entities included in the Consolidated Financial Statements of which we are the independent auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Consolidated Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Matters

a) We did not audit the financial statements/ financial information of Twelve subsidiaries included in the Consolidated Financial Statement, whose financial statements reflects total Assets of ₹ 76,313.50 crore and Net Assets ₹ 27,843.36 crore as at 31 March 2021; total Revenues of ₹ 15,353.59 crore and Net Cash Inflows amounting to ₹ 154.53 crore for the year ended on that date, as considered in the Consolidated Financial Statements. The Consolidated Financial Statement also includes the Group's share of net profit using the equity method, of ₹ 721.15 crore for the year ended 31 March 2021, as considered in the consolidated financial results, in respect of five joint ventures, whose financial statements have not been audited by us. These financial statements have been audited by their respective independent auditors whose reports have been furnished to us by the management upto 17 June, 2021 and our opinion on the Statement, in so far as it relates to the aforesaid subsidiaries and joint ventures is based solely on the reports of the other auditors and the procedures performed by us are as stated Auditor's Responsibility section above after considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality.

b) The Consolidated Financial Statements also include the Group's share of net profit using equity method of (₹ 37.30) crore for the year ended 31 March 2021 as considered in the Consolidated Financial Statements in respect of eleven joint ventures whose financial statements/ financial information are unaudited.These financial statements/ financial

information have been furnished to us by the Holding Company's Management and our opinion on the Consolidated Financial Statements, in so far as it relates to the Group's share of net profit and disclosures included in respect of these joint ventures, and our report in terms of sub-section (3) of Section 143 of the Act, in so far as it relates to the aforesaid joint ventures, is based solely on such unaudited financial statements/ financial information. Two of the joint ventures as above are located outside India in respect of which the Holding Company's management has provided us the financial statements prepared in accordance with accounting principles generally accepted in India. In our opinion and according to the information and explanations given to us by the Holding Company's Management, the Group's share of net profit and disclosures included in respect of these joint ventures in these Consolidated Financial Statements are not material to the Group.

Our opinion on the Consolidated Financial Statements, and our report on Other Legal and Regulatory Requirements below, is not modified in respect of the matters as stated in para (a) & (b) above, with respect to our reliance on the work done and the reports of the other auditors, the financial statements/financial information certified by the Holding Company's Management.

Report on Other Legal and Regulatory Requirements

1. As required by Section 143(3) of the Act, based on our audit and on the consideration of report of the other auditors on separate financial statements and the other financial information of subsidiaries and joint ventures as mentioned in the 'Other Matters' paragraph, we report, to the extent applicable, that:

   a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid Consolidated Financial Statements.

   b) In our opinion, proper books of account as required by law relating to preparation of the aforesaid Consolidated Financial Statements have been kept so far as it appears from our examination of those books and the reports of the other auditors.

   c) The Consolidated Balance Sheet, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Changes in Equity and the Consolidated Statement of Cash Flows dealt with by this Report are in agreement with the relevant books of account maintained for the purpose of preparation of the Consolidated Financial Statements.

   d) In our opinion, the aforesaid Consolidated Financial Statements comply with the Indian Accounting Standards specified under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended.

   e) Being a Government Company, pursuant to the Notification No. GSR 463(E) dated 5th June 2015 issued by Ministry of Corporate Affairs, Government of India, provisions of sub-section (2) of Section 164 of the Act, are not applicable to the Holding company and its subsidiaries and two Joint Ventures. Further, on the basis of the reports of the auditors of three joint ventures incorporated in India, none of the directors of the joint ventures incorporated in India is disqualified as on 31 March 2021 from being appointed as a director in terms of Section 164 (2) of the Act, wherever applicable.

   f) With respect to the adequacy of the Internal Financial Controls with reference to consolidated financial statements of the Holding Company, its subsidiaries and joint ventures incorporated in India and the operating effectiveness of such controls, refer to our separate report in Annexure 1.

   g) As per Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, Section 197 of the Act is not applicable to the Government Companies. Accordingly, reporting in accordance with requirement of provisions of section 197(16) of the Act is not applicable to the Holding company and its subsidiaries and two Joint Ventures. Further, on the basis of the reports of the auditors of three joint ventures incorporated in India, the managerial remuneration paid/provided by such joint ventures to its directors during the year was in accordance with the provisions of section 197 read with Schedule V of the Act, wherever applicable.

   h) With respect to the other matters to be included in the Auditor's Report in accordance with Rule 11 of the Companies (Audit and Auditor's) Rules, 2014, as amended in our opinion and to the best of our information and according to the explanations given to us and based on the consideration of the report of the other auditors on separate financial statements and also the other financial information of the subsidiaries and joint ventures, as mentioned in

the 'Other Matters' paragraph:

i. The Consolidated Financial Statements disclose the impact of pending litigations on the consolidated financial position of the Group and its joint ventures. Refer Note No. 73 to the Consolidated Financial Statements;

ii. Provision has been made in the Consolidated Financial Statements, as required under the applicable law or Indian Accounting Standards, for material foreseeable losses, on long-term contracts including derivative contracts;

iii. There has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Holding Company, its subsidiaries and joint ventures incorporated in India.

For S.K.Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 21091382AAAAJR6573
Place: New Delhi

For S.N. Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Mukesh Bansal)
Partner
M. No.505269
UDIN: 21505269AAAAAV1224
Place: New Delhi

For Varma & Varma
Chartered Accountants
FRN 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 21025854AAAACP2933
Place: Chennai

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 21079236AAAAAG2875
Place: Jaipur

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 21057318AAAABE9836
Place: Bhubaneshwar

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN:21073488AAAABO9458
Place: Kanpur

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN:21072534AAAAHC3868
Place: Hazaribagh

Dated: 19 June 2021
Digitally signed by signatories

Annexure 1

ANNEXURE TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 1 (f) under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Consolidated Financial Statements for the year ended 31 March 2021

Report on the Internal Financial Controls with reference to Consolidated Financial Statements under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 ("the Act")

In conjunction with our audit of the Consolidated Financial Statements of the Group as of and for the year ended 31 March 2021, we have audited the internal financial controls with reference to Consolidated Financial Statements of NTPC Limited (hereinafter referred to as "the Holding Company") and its subsidiaries (the Holding Company and its subsidiaries together referred to as "the Group"), and joint ventures, which are companies incorporated in India, as of that date.

Management's Responsibility for Internal Financial Controls

The respective Board of Directors of the Holding Company, its subsidiaries, and joint ventures, which are companies incorporated in India, are responsible for establishing and maintaining internal financial controls based on the internal controls over financial reporting criteria established by the Holding Company considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by the Institute of Chartered Accountants of India (ICAI). These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to the respective company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Act.

Auditors' Responsibility

Our responsibility is to express an opinion on the Company's internal financial controls with reference to Consolidated Financial Statements based on our audit. We conducted our audit in accordance with the Guidance Note on Audit of Internal Financial Controls over Financial Reporting (the "Guidance Note") and the Standards on Auditing, both, issued by ICAI and deemed to be prescribed under section 143(10) of the Act, to the extent applicable to an audit of internal financial controls with reference to Consolidated Financial Statements. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls with reference to Consolidated Financial Statements was established and maintained and if such controls operated effectively in all material respects.

Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial control with reference to Consolidated Financial Statements and their operating effectiveness. Our audit of internal financial controls with reference to Consolidated Financial Statements included obtaining an understanding of internal financial controls with reference to Consolidated Financial Statements, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the Consolidated Financial Statements, whether due to fraud or error.

We believe that the audit evidence we have obtained and the audit evidence obtained by the other auditors of the subsidiaries and joint ventures, incorporated in India, in terms of their reports referred to in the 'Other Matters' paragraph below, is sufficient and appropriate to provide a basis for our audit opinion on the internal financial controls of the Group and its Joint Venture Companies incorporated in India, with reference to Consolidated Financial Statements.

Meaning of Internal Financial Controls with reference to Consolidated Financial Statements

A company's internal financial control with reference to Consolidated Financial Statements is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of Consolidated Financial Statements for external purposes in accordance with generally accepted accounting principles. A company's internal financial control with reference to Consolidated Financial Statements includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of Consolidated Financial Statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the Consolidated Financial Statements.

Inherent Limitations of Internal Financial Controls with reference to Consolidated Financial Statements

Because of the inherent limitations of internal financial controls with reference to Consolidated Financial Statements, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and

not be detected. Also, projections of any evaluation of the internal financial controls with reference to Consolidated Financial Statements to future periods are subject to the risk that the internal financial control with reference to Consolidated Financial Statements may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinion

In our opinion and to the best of our information and according to the explanations given to us, the Holding Company, its subsidiaries and joint ventures, which are companies incorporated in India, have, in all material respects, an adequate internal financial controls with reference to Consolidated Financial Statements in place and such internal financial controls with reference to Consolidated Financial Statements were operating effectively as at 31 March 2021, based on the internal controls over financial reporting criteria established by the Group and its Joint Venture Companies incorporated in India considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting issued by ICAI.

Other Matters

Our aforesaid report under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements of the Holding Company, in so far as it relates to twelve subsidiaries and five joint ventures incorporated in India, is based on the corresponding reports of the auditors of such companies incorporated in India.

Our aforesaid report under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements in so far as it relates to nine joint ventures incorporated in India, whose financial statements / financial information are unaudited and our opinion on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements of the Group is not affected as the Group's share of net profit/loss (including Other Comprehensive Income) and disclosures included in respect of these joint ventures in these Consolidated Financial Statements are not material to the Group.

Our report is not modified in respect of the above matters.

For S.K.Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 21091382AAAAJR6573
Place: New Delhi

For S.N. Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Mukesh Bansal)
Partner
M. No.505269
UDIN: 21505269AAAAAV1224
Place: New Delhi

For Varma & Varma
Chartered Accountants
FRN 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 21025854AAAACP2933
Place: Chennai

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 21079236AAAAAG2875
Place: Jaipur

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 21057318AAAABE9836
Place: Bhubaneshwar

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN:21073488AAAABO9458
Place: Kanpur

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN:21072534AAAAHC3868
Place: Hazaribagh

Dated: 19 June 2021
Digitally signed by signatories

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143 (6) (b) READ WITH SECTION 129 (4) OF THE COMPANIES ACT, 2013 ON THE CONSOLIDATED FINANCIAL STATEMENTS OF NTPC LIMITED FOR THE YEAR ENDED 31 MARCH 2021

The preparation of consolidated financial statements of NTPC Limited for the year ended 31 March 2021 in accordance with the financial reporting framework prescribed under the Companies Act, 2013 (Act) is the responsibility of the management of the company. The statutory auditors appointed by the Comptroller and Auditor General of India under section 139(5) read with section 129(4) of the Act are responsible for expressing opinion on the financial statements under section 143 read with section 129(4) of the Act based on independent audit in accordance with the standards on auditing prescribed under section 143(10) of the Act. This is stated to have been done by them vide their Audit Report dated 19 June 2021.

I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit of the consolidated financial statements of NTPC Limited for the year ended 31 March 2021 under section 143(6) (a) read with section 129(4) of the Act. We conducted a supplementary audit of the financial statements of NTPC Limited, NTPC Electric Supply Company Limited, Kanti Bijlee Utpadan Nigam Limited, Patratu Vidyut Utpadan Nigam Limited, THDC India Limited, North Eastern Electric Power Corporation Limited, Ratnagiri Gas & Power Private Limited, NTPC - SAIL Power Company Limited, NTPC Tamilnadu Energy Company Limited, Aravali Power Company Private Limited, Meja Urja Nigam Private Limited, CIL NTPC Urja Private Limited, Anushakti Vidhyut Nigam Limited, Hindustan Urvarak & Rasayan Limited but did not conduct supplementary audit of the financial statements of subsidiaries, associate companies and jointly controlled entities listed in Annexure for the year ended on that date Further, section 139(5) and 143(6)(a) of the act are not applicable to Utility Powertech Limited and NTPC - GE Power Services Private Limited being private entities and Tricomalee Power Company Limited and Bangladesh - India Friendship Power Company Private Limited being incorporated in Foreign countries under the respective laws, for appointment of their Statutory Auditor and for conduct of supplementary audit. Accordingly, Comptroller and Auditor General of India has neither appointed the Statutory Auditors nor conducted the supplementary audit of these companies. This supplementary audit has been carried out independently without access to the working papers of the statutory auditors and is limited primarily to inquiries of the statutory auditors and company personnel and a selective examination of some of the accounting records.

On the basis of my supplementary audit nothing significant has come to my knowledge which would give rise to any comment upon or supplement to statutory auditors' report under section 143(6)(b) of the Act.

(D.K. Sekar)
Director General of Audit (Energy),
Delhi

Place: New Delhi
Dated: 13 August 2021

ANNEXURE

List of Subsidiaries, Associates Companies and Jointly Controlled Entities of NTPC Limited whose financial statements were not audited by the Comptroller and Auditor General of India

A. Subsidiaries Companies:

1. NTPC Vidyut Vyapar Nigam Limited
2. Bhartiya Rail Bijlee Company Limited
3. Nabinagar Power Generating Company Limited
4. NTPC Mining Limited
5. NTPC EDMC Waste Solutions Private Limited
6. NTPC Renewable Energy Limited

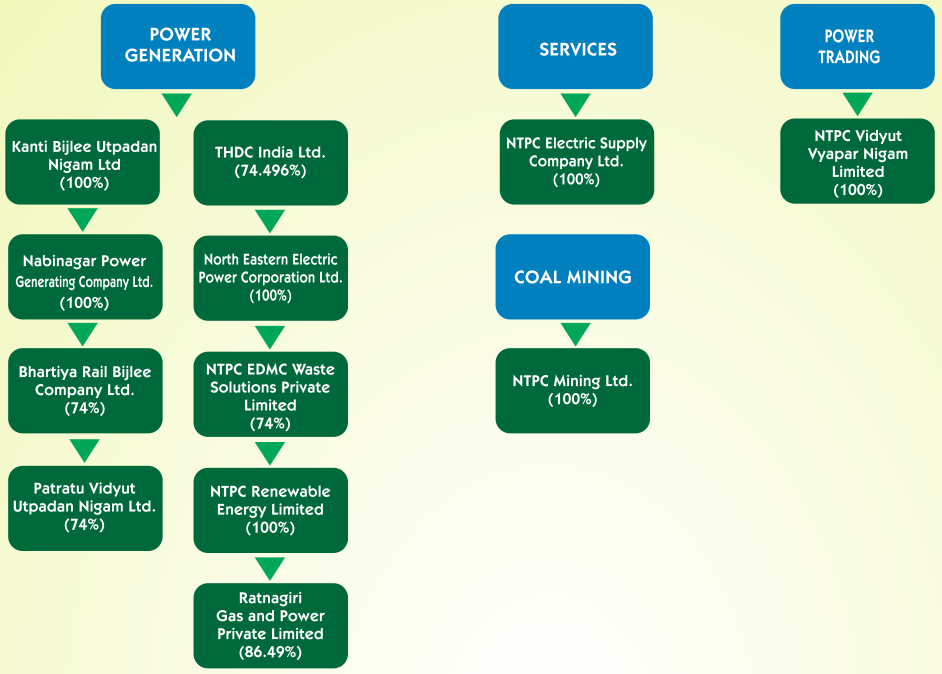
B. Associate Companies and Joint Ventures:

1. NTPC-BHEL Power Projects Private Limited
2. Transformers & Electricals Kerala Limited
3. National High Power Test Laboratory Private Limited
4. Energy Efficiency Services Limited

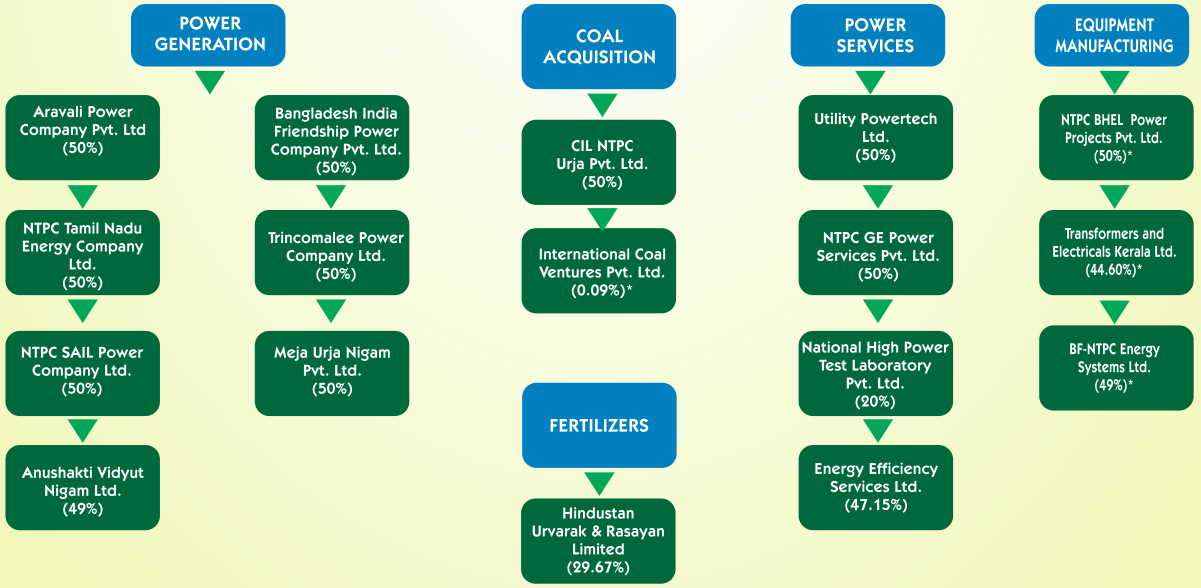


NOTES

Subsidiaries (12)**



Joint Ventures (17)**



*Company has resolved to withdraw from NTPC-BHEL, International Coat Ventures Pvt. Ltd., BF-NTPC Energy Systems Ltd. and TELK
**As on 31.03.2021



CMD and Directors of NTPC Limited

NTPC Limited

(A Govt. of India Enterprise)

(CIN : L40101DL1975GOI007966)

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