पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)
पावरग्रिड
केन्द्रीय कार्यालय: "सौदामिनी" प्लॉट सं. 2, सैक्टर–29, गुड़गाँव–122 001, (हरियाणा) दूरभाष: 0124-2571700-719, फैक्स : 0124-2571762,
"Saudamini" Plot No. 2, Sector-29, Gurgaon-122 001, (Haryana) Tel. : 0124-2571700-719, Fax : 0124-2571762, Web.: www.powergridindia.com
CIN : L40101DL1989GOI038121

C/COS/Listing/NSE/

Dt: 10.02.2017

The GM (Listing)
National Stock Exchange of India Ltd.,
Exchange Plaza, Plot No.C/1, G Block,
Bandra Kurla Complex,
Bandra (East),
Mumbai.

Ref: Symbol: POWERGRID; Series: EQ; ISIN: INE752E01010

Dear Sir,

Sub: Regulation 30 of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015

In .terms of Regulation 30 of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, it is informed that a Press and Analysts' Meet of POWERGRID has been held on 10.02.2017. A copy of presentation given at Press and Analysts' Meet is enclosed please.

Thanking You,

Yours faithfully,

Divya Tandon

(Divya Tandon)
Company Secretary &
Compliance Officer

POWER GRID CORPORATION OF INDIA LIMITED

Q3 FY 2016-17

Analyst Meet

Mumbai **February 10, 2017**

Disclaimer

By attending the meeting where this presentation is made, or by reading the presentation slides, you agree to be bound by the following limitations:

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- *Annual Accounts for FY2015-16 have been approved by the shareholders.*

Recent Highlights

Power Transmission Opportunities in India

POWERGRID Today

Performance (Q3FY17)

- Transmission

Performance (Q3FY17)

- Consultancy
- Telecom

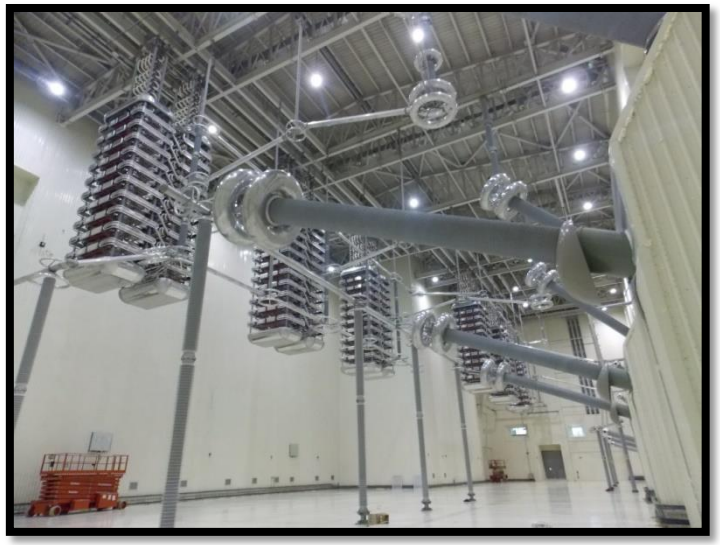
XII Plan Performance

Investment Outlook

Recent Highlights

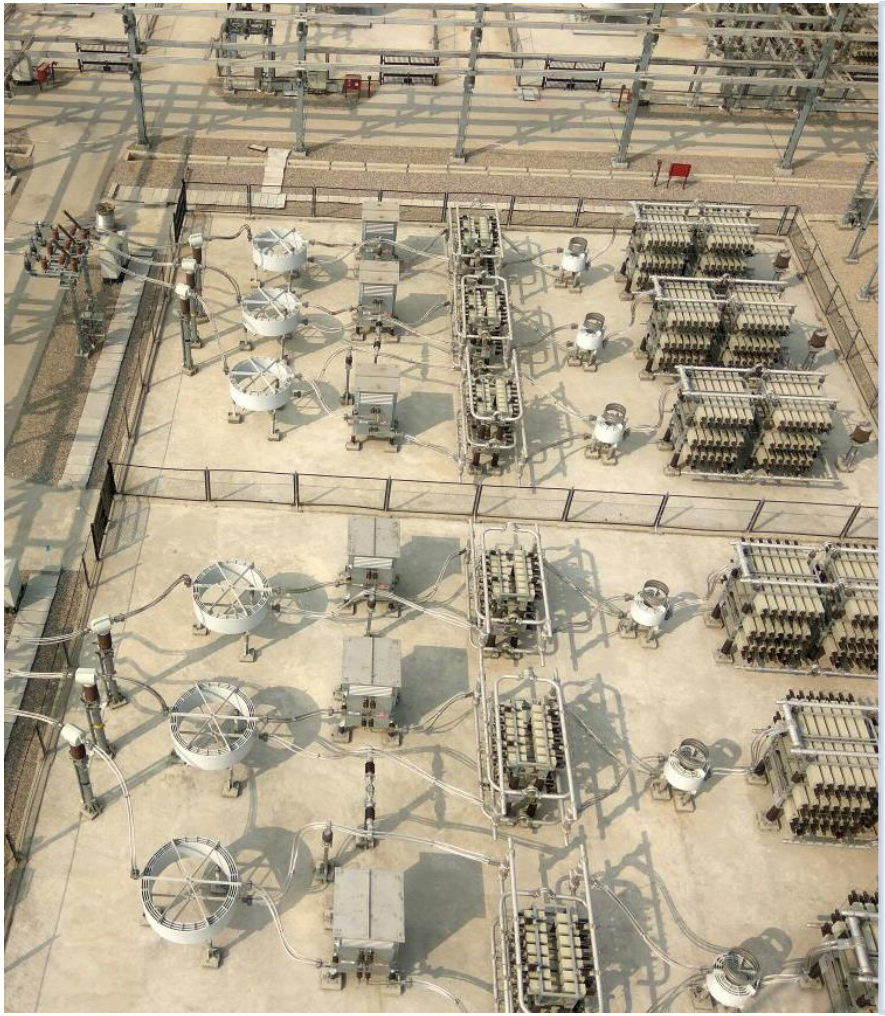
±800kV HVDC Champa-Kurukshetra Pole-I

Power Flow Test Charged – Commissioning targeted in Feb'17



- **Power Transfer: 3000MW**
  - ✓ Between Champa in WR and Kurukshetra in NR
- **Being implemented in Phases**
  - ✓ Phase-I, Pole-I: 1500 MW (~₹ 6,000 crore)
  - ✓ Phase-I, Pole-II: 1500 MW (~₹ 3,200 crore)
- **Line Length**: ~ 1,300 km.
- **Upgrade to 6000MW in Phase-II**
- **Largest 400/200 kV GIS in India: 51 bays**

-400/+600MVAr SVC - Commissioned at Ludhiana



- **One of the Largest Range Swing SVCs in the World**
- **Envisaged to improves Power Quality & Grid Stability**
- **Project included a high degree of local engineering & local production (Make-in-India)**
  - ✓ Thyristor Valves, Protection & Control Systems manufactured and tested locally in India

Project Execution

Major Elements Completed since Oct'16

- **ER-SR Interconnection**
  - Angul-Srikakulam-Vemagiri
- **Strengthening in SR**
  - Nagapattinam PS – Salem – Dharmapuri; Tuticorin-Dharmapuri
- **Strengthening in Western UP**
  - Dehradun-Baghpat-Saharanpur; Dehradun-Roorkee

Commissioning/ Capitalization

Completed/ Commissioned in FY17 (Apr'16-Jan'17)

- ✓ **~ ₹ 26,700 crore:**
  - Completed (including Champa-Kurukshetra HVDC & TBCB)

- ✓ **~ ₹ 20,700 crore:**
  - Commissioned/ Capitalized (incl. TBCB)

Special Highlight

POWERGRID Market Capitalization crosses ₹ 1 lakh crore

POWERGRID Stock crosses ₹ 200 mark

Snapshot: BSE 01.02.17

Power Transmission Opportunities in India

Glimpse of Indian Power System

Broad Parameters

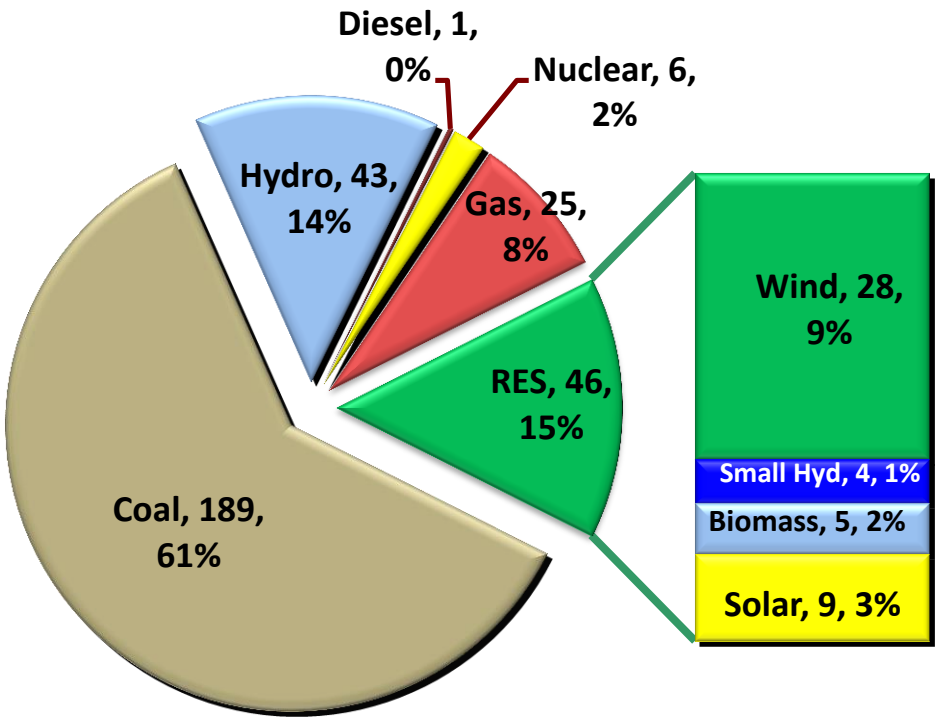
Total Installed Capacity
~ 310 GW
CAGR (Mar12-Dec16): 9.7%

Annual Consumption
1200 BU
Growth: 5.64% (y-o-y)

Peak Demand Met:
157 GW

Power Market
9-10%

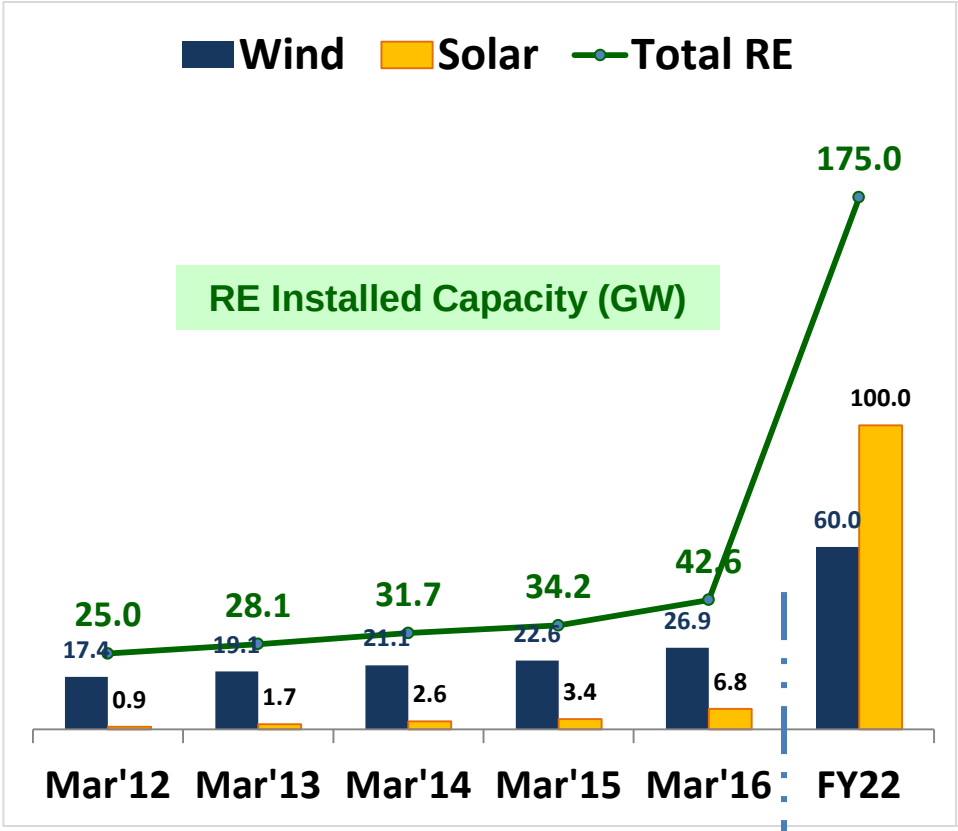
Capacity (GW): Source-wise Segmentation (%)

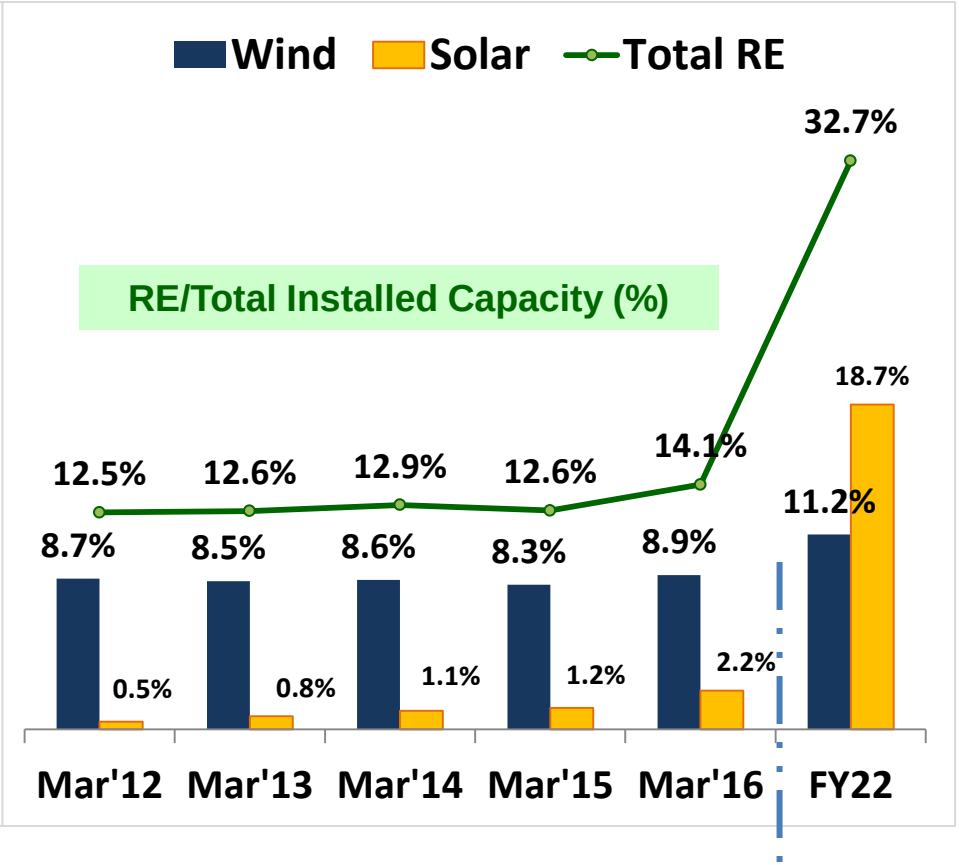


As on Dec 2016, CEA Reports

Indian Power System- Changing Paradigm

Renewable: 46 GW CAGR (Mar12-Dec16): 14.1%



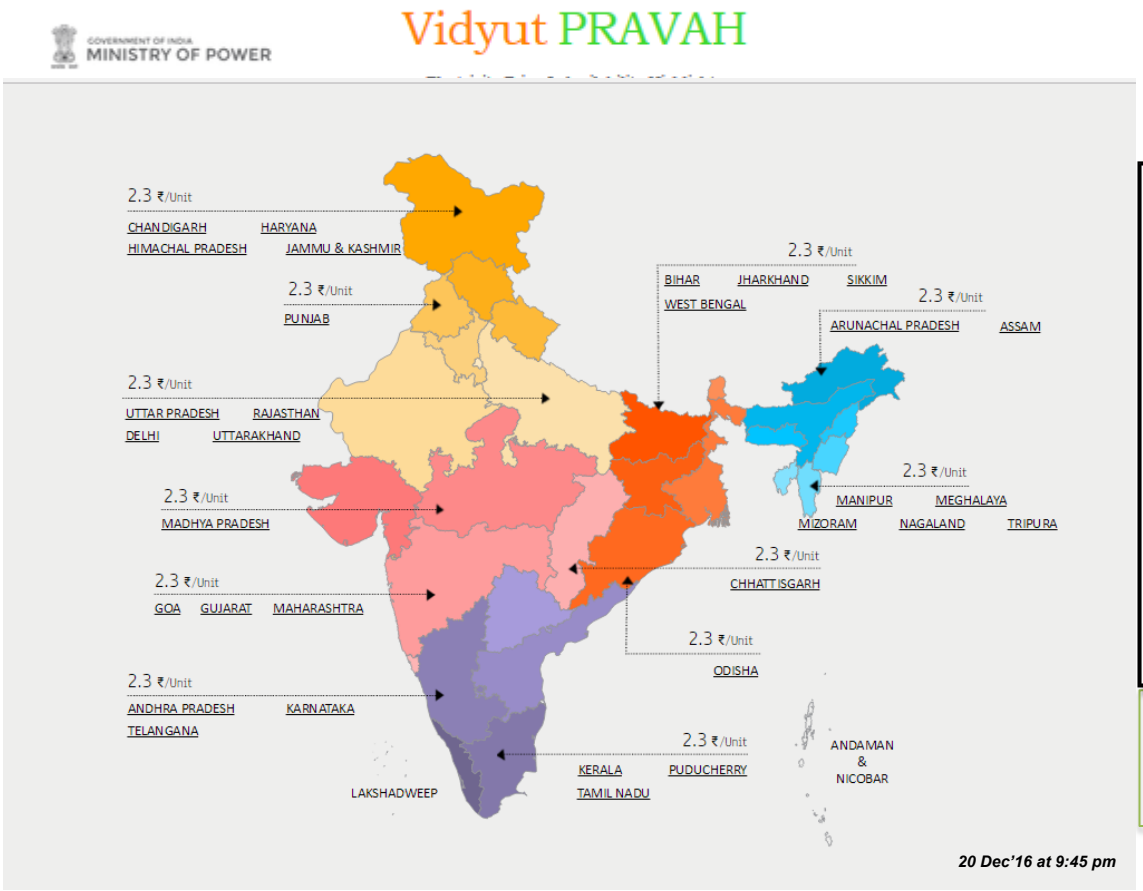


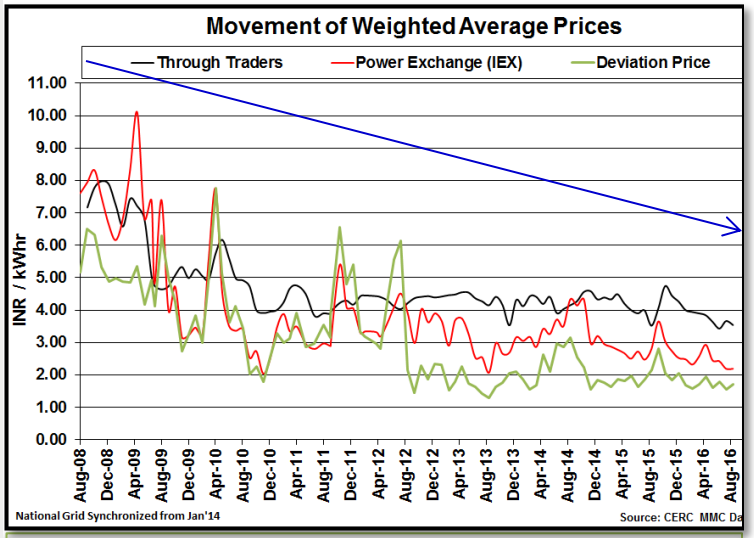
Indian Power Sector - Outlook

- **24x7 Affordable Power for All by 2019**
- **Renewable Integration : 175 GW by 2022**
- **Per Capita Consumption : about 4000 units by 2030; CAGR:10%**
- **Seamless SAARC Power Grid**

Towards 24x7 Power For All by 2019

One Nation – One Grid – One Price

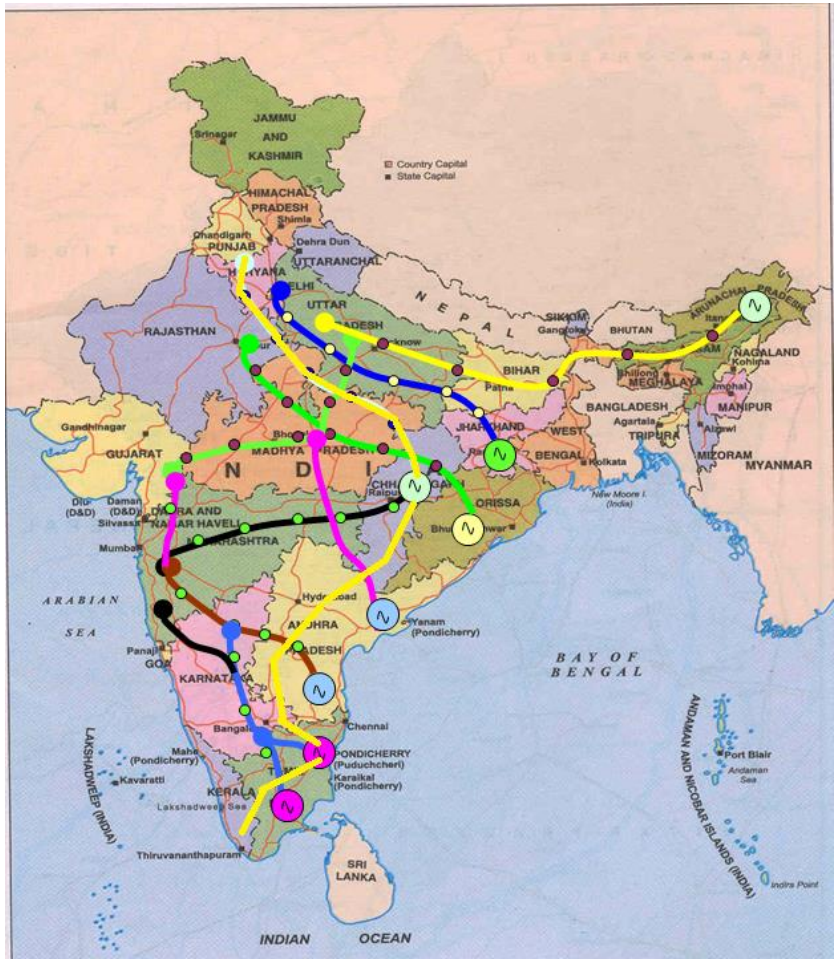




Power Market
Bringing Efficiency Into the Sector

Snapshot

National Grid Augmentation



11 nos. High Capacity Transmission Corridors

- Creation of Energy Highways based on envisaged load growth
  - **11 high capacity corridors - each capacity of about 4000 MW**
  - **3 high capacity HVDC system (6000 MW each)**
- Wide Area Measurement System (WAMS)
  - Making Smart Grid

Renewable Integration

Challenges

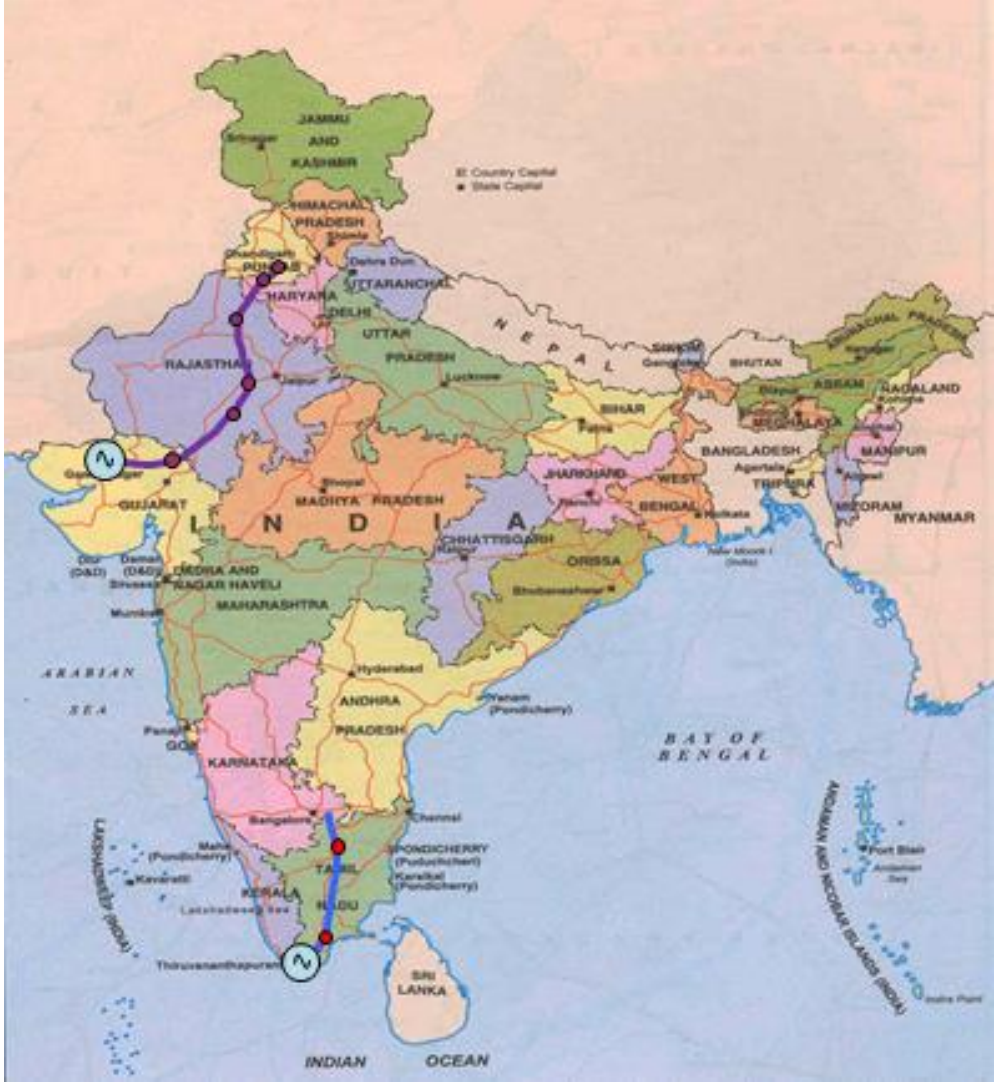
- Intermittency
- Variability
- Matching Transmission Development
- Load- Generation balance

Remedial Measures

- Green Energy Corridors
- Green Energy Corridors-II (Solar Park Integration)
- Dynamic Compensation
- Renewable Energy Management Centres
- Storage

Renewables involves Integration i.e. bringing together separate elements to create a whole unit

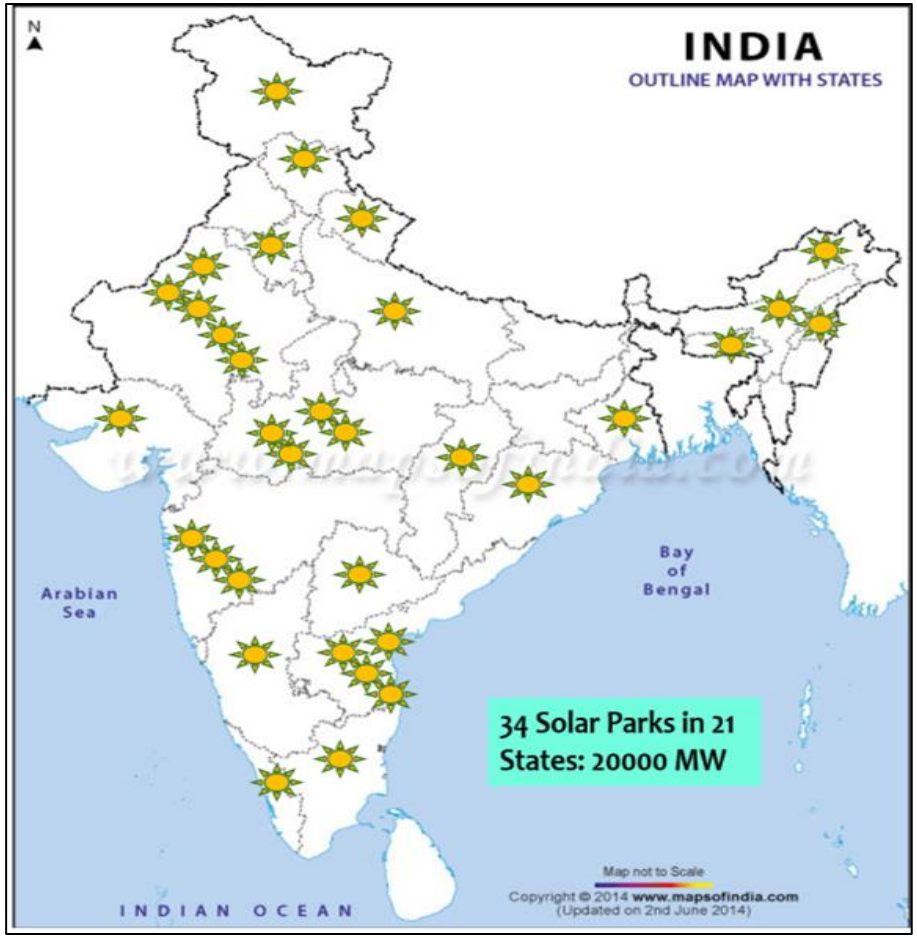
Development of Green Energy Corridors



Green Energy Corridors for Renewables (Inter-State Transmission Systems)

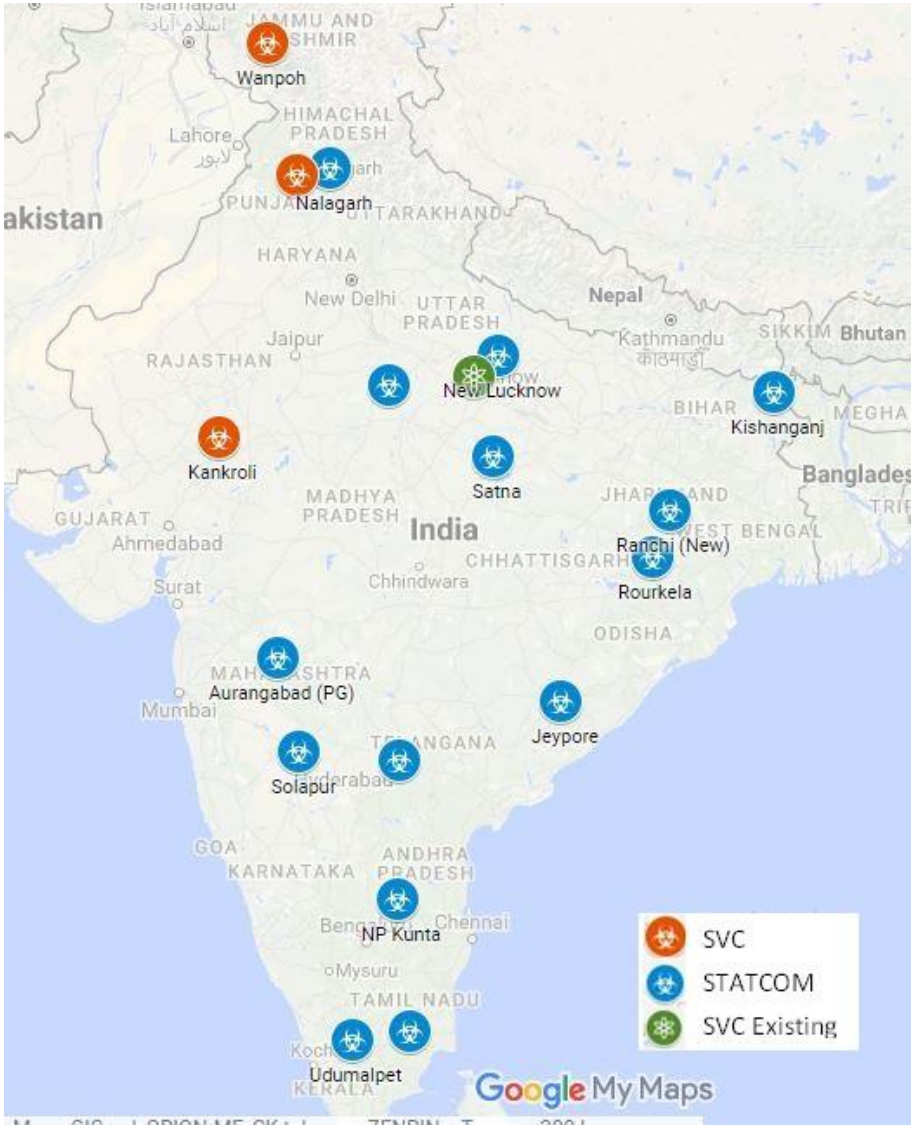
Green Energy Corridors-II: Solar Parks Integration

34 Solar Parks 20 GW



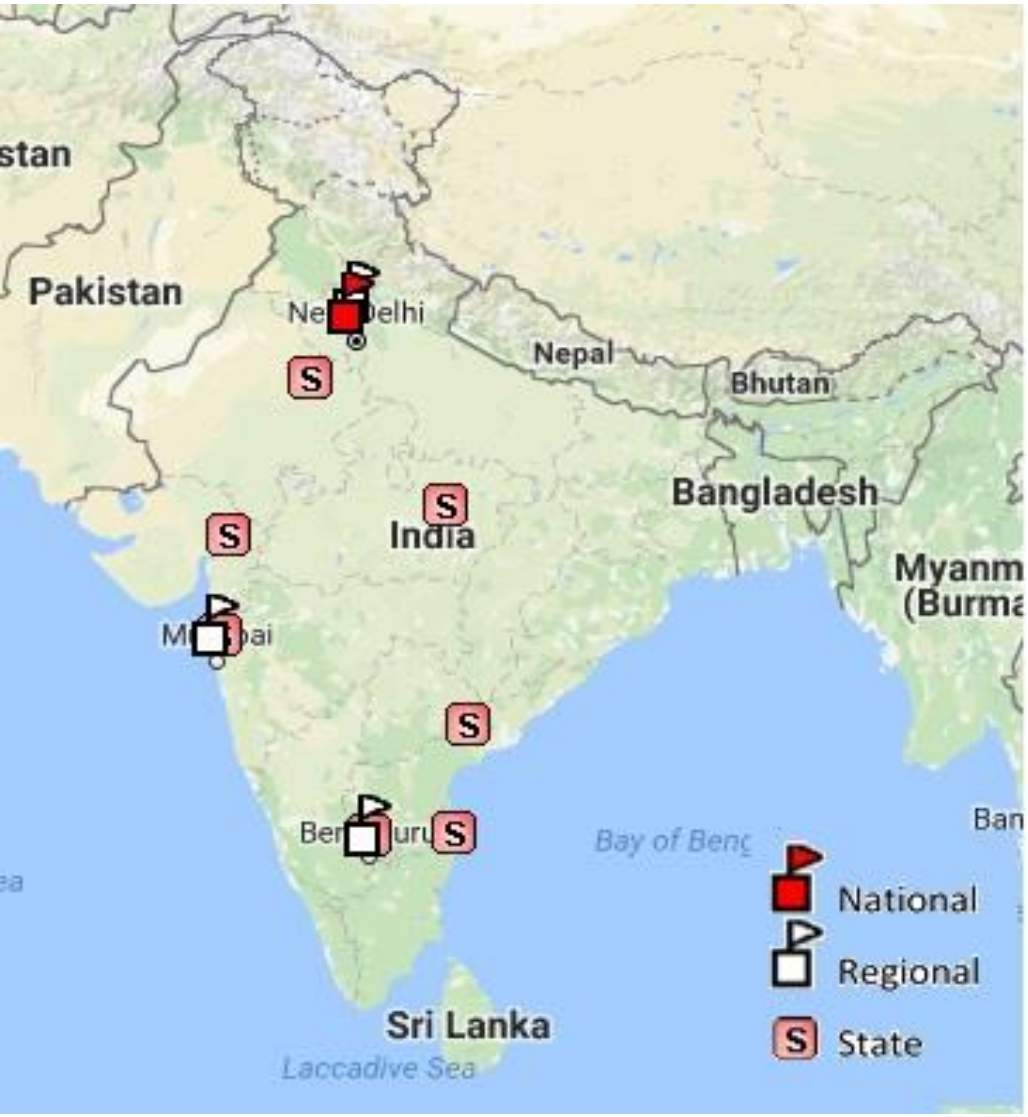
- **Inter-State transmission**
  - ✓ 13 solar parks
  - ✓ ~ 9,220 MW capacity
- **Intra-State transmission**
  - ✓ 21 solar parks
  - ✓ ~ 10,780 MW capacity

Dynamic Compensation



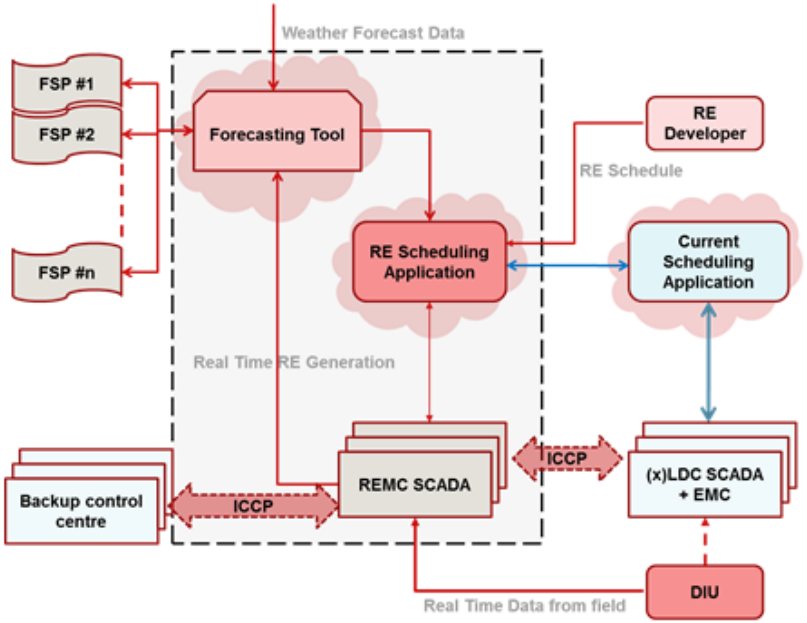
- **Maintaining Grid Parameters**
- **Hybrid STATCOMs**
  - **14 Nos.**
  - **400 – 600 MVAR**
- **SVCs**
  - **4 Nos.**
  - **500 - 1000 MVAR**

Renewable Energy Management Center



REMC

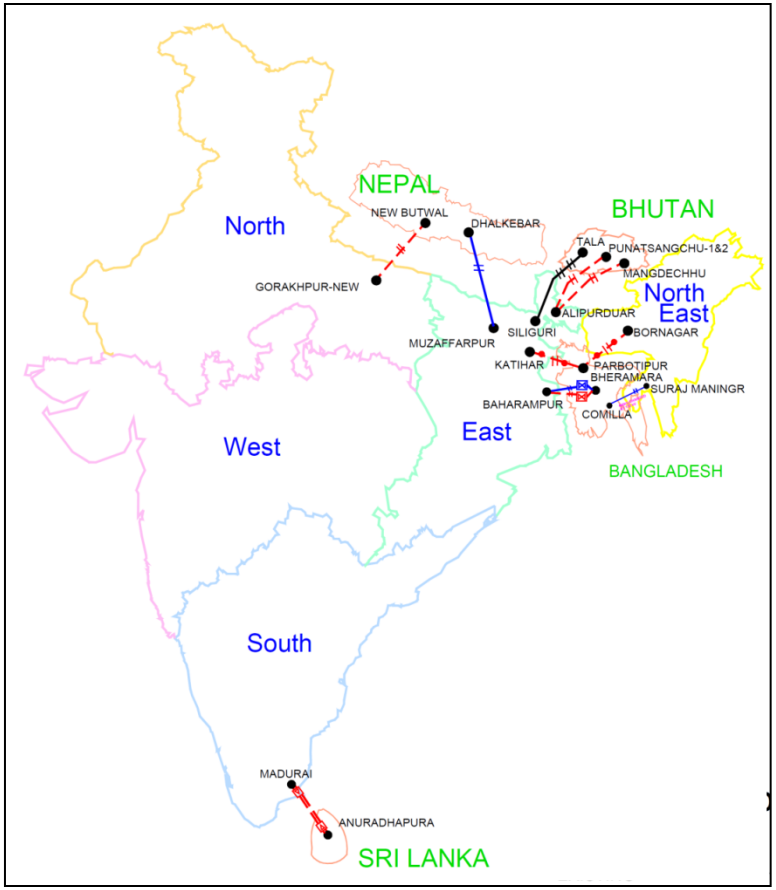
- Co-located with RLDC/SLDC
- RE Forecasting & Scheduling
- Real Time tracking of RE Generation



11 no. of REMC : 7 States + 3 Regions + 1 National level

SAARC Interconnections

- Geographically widely spread Indian Grid can facilitate interconnections with Neighboring countries
- India can provide a good demand market to harness energy resources of other countries
- Optimal utilization of energy resources



Sectoral Investment Envisaged (2017-2022)

➢ Investment Envisaged:

- ✓ **~ ₹ 2,60,000 cr.**
  (includes ₹ 30,000 crore for investments in Trans. Systems below 220kV levels)

➢ Physical Additions Planned:

- ✓ **106,000 ckm of Transmission lines**
- ✓ **292,000 MVA Transformation Capacity**
- ✓ **14,000 MW HVDC Bipole line**

*Source: CEA **Draft** National Electricity Plan(Vol-II) Transmission, 2016*

POWERGRID Today

POWERGRID Today

- ✓ >90% ISTS Transmission Network owned by POWERGRID
- ✓ POWERGRID's Transmission Assets:
  - Trans. Lines: 134,750 ckm
  - Sub-stations: 217 Nos. - 280,362 MVA

  } 400kV & above: >90%
  - Availability: 99.76% (Apr16-Dec16)
- ✓ >45% power generated in India transmitted through POWERGRID
- ✓ POSOCO, POWERGRID's wholly owned subsidiary, hived off into a separate independent company, as per Govt. directives
- ✓ Market Capitalization[1]: ₹ 1,08,059 crore

Physical parameters as on 31st January, 2017

1- Based on BSE Closing Price of ₹ 206.55 per share on 31.01.2017

Performance in FY17 (Q3 & 9 months)

-

Transmission

Performance- Financial (Q3 & 9mths FY17)

(₹ in crore)

Description	Quarter ended			Nine Months ended		
	31.12.2015 As per Ind AS	31.12.2016 As per Ind AS	% change	31.12.2015 As per Ind AS	31.12.2016 As per Ind AS	% change
Revenue						
- Transmission Charges	5,153	6,336	23%	14,335	18,196	27%
- Consultancy Income: Services	114	164	44%	302	438	45%
- Telecom	103	130	26%	288	371	29%
- Other Income	107	158		334	522	
Total Income	**5,477**	**6,788**	24%	**15,259**	**19,527**	28%
-Operating Expenses	583	679		1,696	2,035	
EBITDA-Gross Margin	**4,894**	**6,109**		**13,563**	**17,492**	
Depreciation	1,585	1,965		4,411	5,599	
Finance Cost	1,288	1,643		3,615	4,748	
Tax	415	571		1157	1541	
Profit after Tax	**1,606**	**1,930**	20%	**4,380**	**5,604**	28%
Other Comprehensive Income/ (Exp) – net of Tax	10	(30)		(12)	(14)	
Total Comprehensive Income	**1,616**	**1,900**		**4,368**	**5,590**	

Performance – Financial (Q3 & 9mthsFY17)

(₹ in crore)

	As on 30.09.2016 As per Ind AS	As on 31.12.2016 As per Ind AS	As on 31.12.2015 As per Ind AS
Gross Fixed Assets	**1,58,937**	**1,65,757**	**1,44,795**
Capital Work-in-Progress	**46,335**	**45,991**	**46,000**
Debt	**1,12,284**	**1,15,924**	**1,05,387**
Net Worth	**46,391**	**48,290**	**42,598**
Earning Per Share (₹)	**7.02#**	**10.71#**	**8.37#**
Book Value per Share (₹)	**88.67**	**92.31**	**81.43**
Key Financial Ratios			
Debt : Equity	**71:29**	**71:29**	**71:29**
Return on Net Worth	**7.92%#**	**11.60%#**	**10.28%#**

 # Not Annualized

Performance - Financial (Billing & Realization)

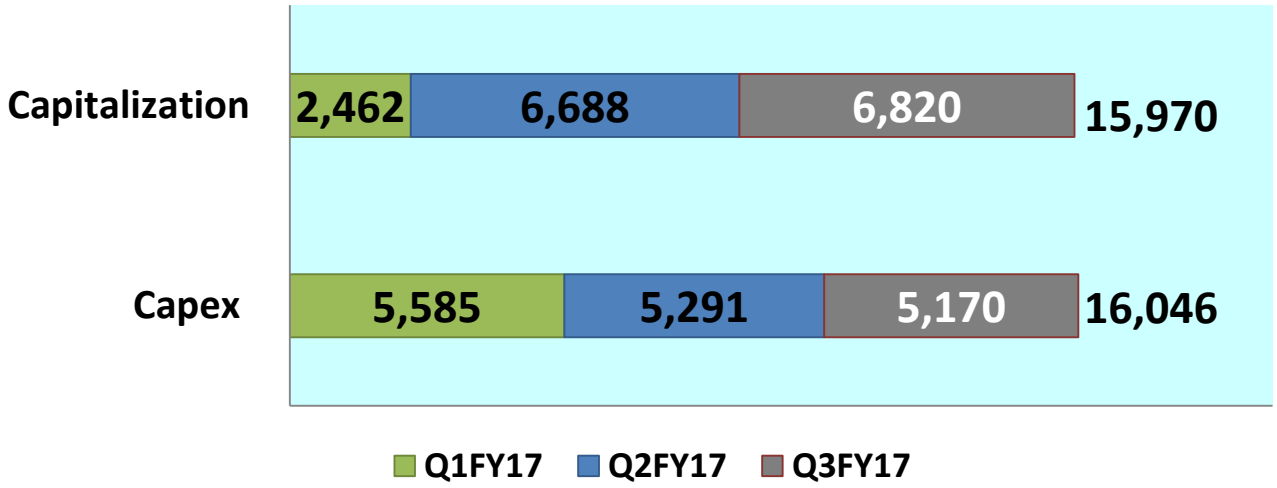
As on 31.12.2016

Total Outstanding	**~ ₹ 3,749 crore (53 days billing#)**
Transmission Outstanding (beyond 60 days)	**~ ₹ 792 crore (11 days billing#)**
Billed but not outstanding (<60 days allowed as per CERC)	**~ ₹ 2,958 crore (42 days billing#)**

 # Avg. Monthly Billing: ₹ 2,126 => 2 months 60 days) billing = ₹ 4,252 crore

Tripartite Agreement signed by 12 States; Others in Progress

Performance: Projects- Q3 & 9mths FY17



Till Jan'17

~ ₹ 20,700 cr. (*)
(Commissioning)

~ ₹ 17,908 cr.

(*) excluding Champa-Kurukshetra ±800kV HVDC

	FY16 (Apr-Dec)	FY17 (Apr-Dec)
Investment Approvals	9,490	28,133
Contracts Awarded	13,465	21,942

Investment Approval in FY17 till date:
₹ 34,809 crore

Performance - Physical

Apr-Dec16 (9mths)

Tr. Line:
~ 4,650 ckm

S/S:
7 Nos.; ~24,000 MVA

Inter-Regional Capacity:
3,600MW

Targeted for Q4FY17

Tr. Line:
~ 4,750 ckm

S/S:
7 Nos.; 14,000 MVA

Inter-Regional Capacity:
11,400MW

Performance- Operations: FY17 (till Dec-16)

Assets (Dec'16)	Trans. Lines:	1062 Nos.
		~ 134,000 ckm
	Sub-stations:	214 Nos.
		~ 278,860 MVA

Performance (Apr-Dec'16)	Availability: 99.76%	Reliability: 0.57*

** Trippings per line*

Performance (Q3FY17)

-

Consultancy & Telecom

Consultancy – Q3FY17

Overall Consultancy Income ↑ 44%
(over Q3FY16)

New Orders in Q3FY17	Domestic: 8 Nos. (Project Cost: ~ ₹ 1300 crore)
	International: 3 Nos. (Project Cost: ~USD 3.3 mn)
Assignments in Hand (Dec'16)	Domestic: 105 Nos. (~₹ 16,700 crore)
	International: 17 Nos.

Telecom – Q3FY17

Increase in Income

26% w.r.t Q3FY16

- **Infrastructure:**
  - **Fiber Optic Network : ~ 36,500km**
  - **Points of Presence : 595**
  - **Backbone Availability : 100%**

- **Major Projects:**
  - **National Knowledge Network (NKN):** Project completed & Under Operation
  - **National Optic Fiber Backbone (NOFN): Work in progress**
    - ✓ Scope of work enhanced to connect 9,372 Gram Panchayats - 5,447 Gram Panchayats connected

XII Plan Performance

XII Plan Performance

Planned Capital Outlay

₹ 110,000 crore

Annual Capex Plan

FY12-13:	FY13-14:	FY14-15:	FY15-16:	FY16-17:
₹20,037 cr. (Achieved)	₹23,158 cr. (Achieved)	₹ 22,456 cr. (Achieved)	₹ 22,584 cr. (Achieved)	₹22,550 cr. [Achieved ₹ 17,908 cr.]

~ ₹ 106,143 crore achieved in XII Plan (Apr12 till Jan17)

Physical Parameters (Ap12-Jan17)

	Target	Achievement
Transmission Lines	40,000 ckm	**41,769 ckm (104%)**
Sub-stations	60 Nos.	**67 Nos. (112%)**
X-formation Capacity	100,000 MVA	**155,837 MVA (155%)**

Investment Outlook

POWERGRID Outlook (as on Dec'16)

Ongoing Projects	approx. ₹ 1,10,000 crore
New Projects	approx. ₹ 13,000 crore
TBCB Projects	approx. ₹ 16,000 crore (as per Empowered Committee Estimate)
Total Works in Hand	**approx. ₹ 1,39,000 crore**

Investment Potential

Transmission (TBCB)- under various stages of bidding	**Inter-State: ₹ 8,697 crore - 7 projects**	**₹ 14,000 crore**
	Intra-State: ₹ 5,265 crore - 10 projects in 4 States	

Thrust of Railways on upgradation and modernisation:	**Railways' Target to achieve electrification of 90% tracks in next 5 years from current levels (<50%)**
	24,000 rkm to electrified by 2021 **(Target: 2000 in FY17; 4000 in FY18, 6000 annually during FY19-FY21)**
	POWERGRID already implementing a pilot for 761 rkm

पावरग्रिड

Thank You