



POWERGRID

Fastest Growing Electric Utility in Asia for 3rd successive year

An S&P BSE SENSEX Company

Q2 FY 2016-17

Press Meet

New Delhi

November 9, 2016

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Recent Highlights

Indian Power Sector – Overview & Outlook

POWERGRID Today

Performance (Q2FY17) ■ Transmission

Performance (Q2FY17) ■ Consultancy
 ■ Telecom

XII Plan Performance

Investment Outlook

Recent Highlights

±800kV NER-Agra HVDC

- **Pole-II commissioned**

TBCB Projects

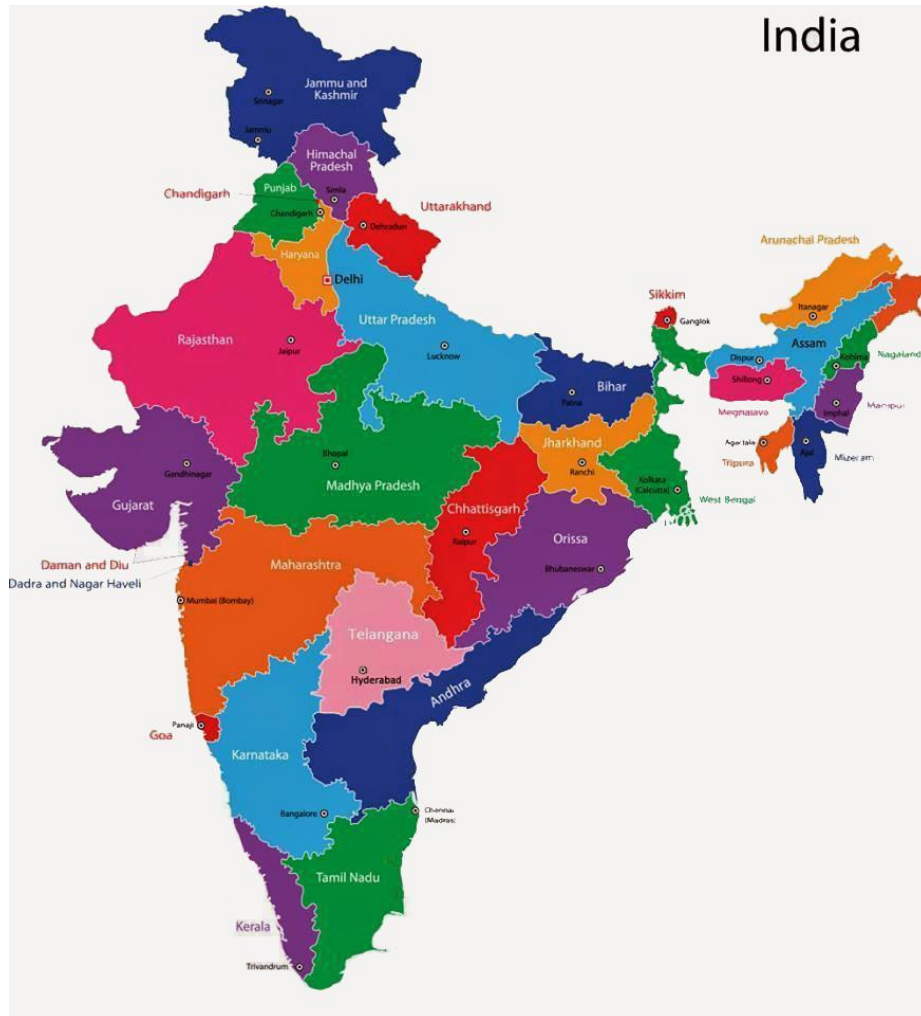
- **POWERGRID Vizag Trans. Ltd. - completed**
 - 765kV D/C Srikakulam – Vemagiri Pooling Station TL (~345 ckm)
 - 400kV D/C Khammam – Nagarjunasagar TL (~ 146 ckm)
- **POWERGRID Unchahar Trans. Ltd. - completed**
 - 400kV D/C Unchahar-Fatehpur TL (~106ckm)
- **POWERGRID NM Transmission Ltd.**
 - 765kV D/C Nagapattinam – Salem TL (~212ckm) – **completed**
 - 765kV S/C Salem – Madhugiri TL (~ 234ckm)- under constn.

POWERGRID & Railways

- **Beginning of a New Journey**
- Railway Electrification works of 761 route km assigned on Consultancy basis

Indian Power Sector = Overview & Outlook

Indian Power Sector - Overview



Peak Demand : 157 GW

Installed Capacity : 306 GW
Thermal :69%
Renewables :15%
Hydro :14%
Nuclear : 2%

Renewables : 46 GW

Growth rate : 7- 8 % per annum

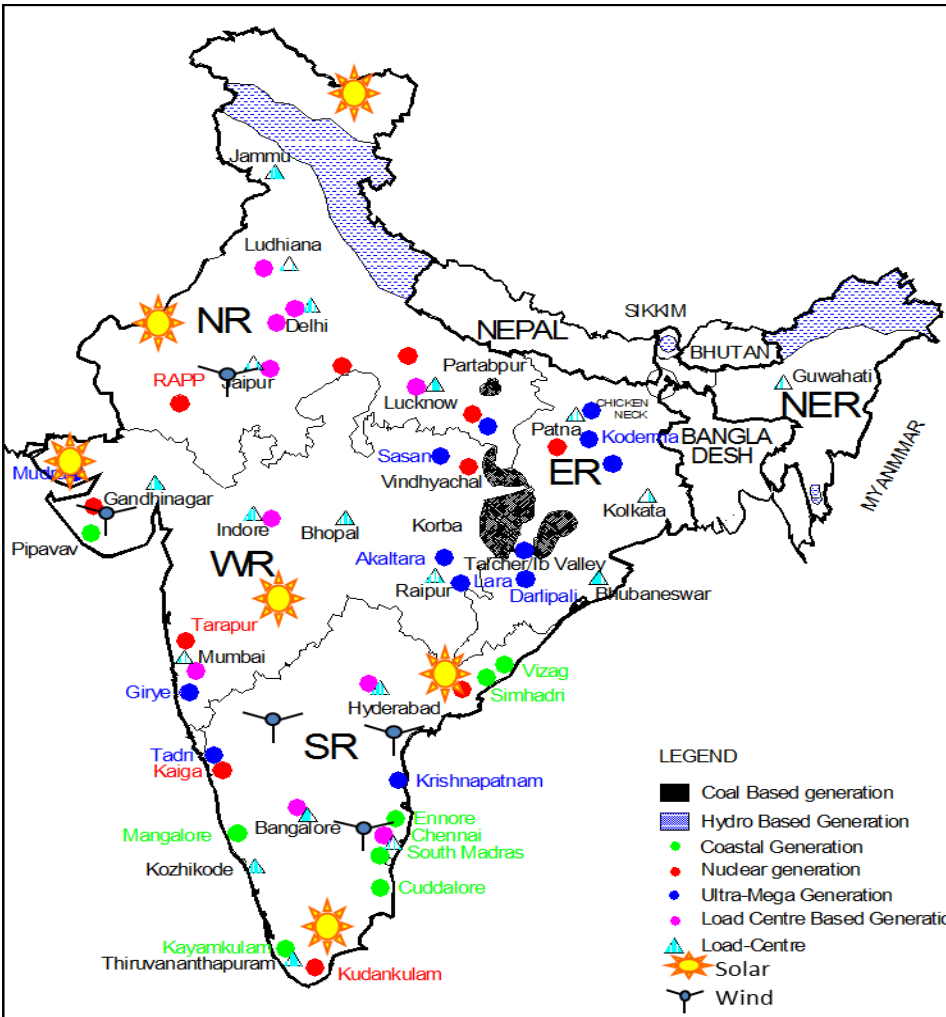
❖ Transmission growth driven by

- Uneven distribution of energy resources vis-à-vis uneven demand growth
- Need of Long Distance Transmission System
- Continuous momentum in Transmission expansion
 - Sustained GDP growth : 7-8% (Projected > 10%+)
 - Govt. of India focus on Increasing Electricity Access to Rural Area
- Adequate Margin – To Cater Power Market, Reliability

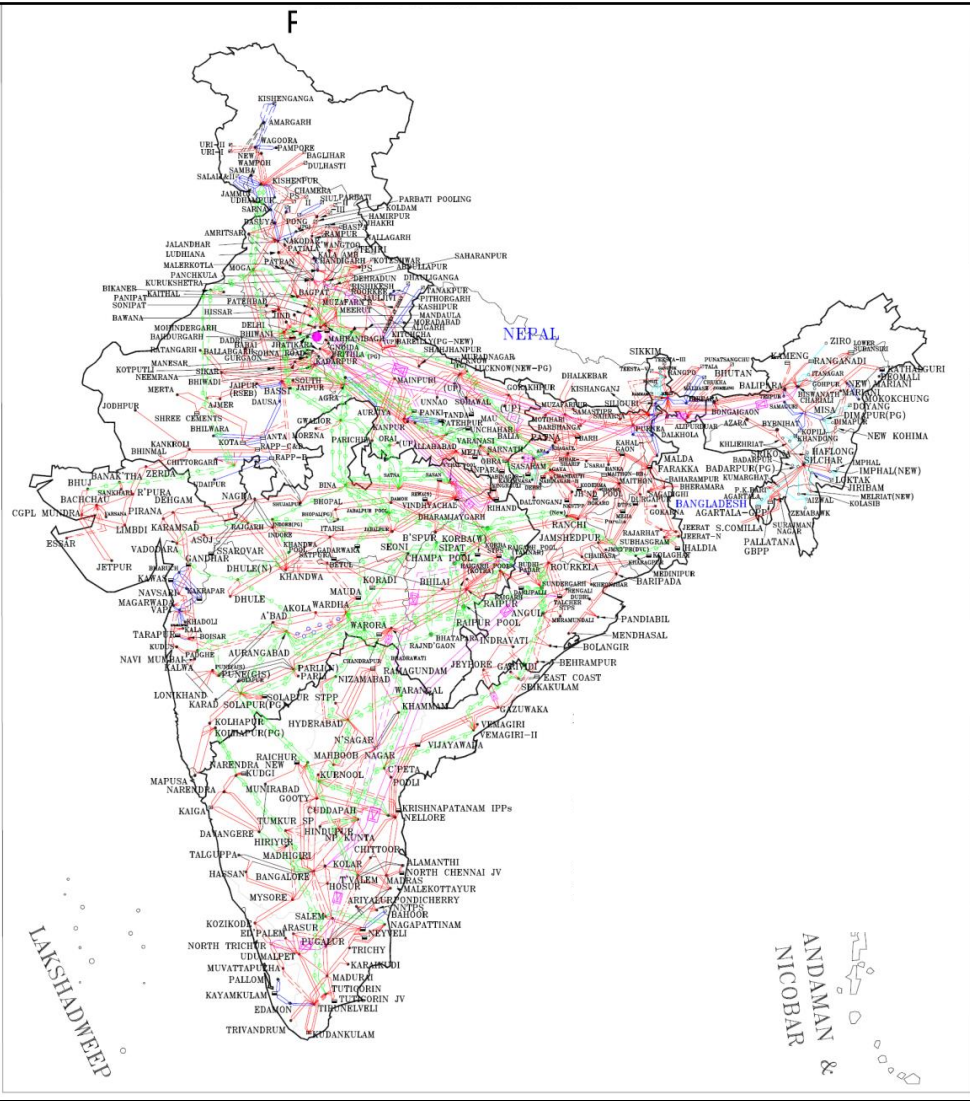
Generation Potential in India

Energy resources (coal, water etc.) unevenly distributed

- **Hydro** – In North Eastern & Northern Himalayan region
- **Coal** – In Central India
 - Chhattisgarh , Orissa , Jharkhand, Madhya Pradesh
- **Coastal based**
 - Andhra Pradesh, Tamil Nadu, Gujarat
- **Renewable Energy- Solar & Wind Across the country**
 - *Major Potential Areas: Tamil Nadu, Andhra Pradesh, Karnataka, Rajasthan, Maharashtra, Gujarat*



National Grid – Present



- **765kV/400kV lines: ~ 1,80,376 ckm**
 - **POWERGRID: 1,10,602 ckm**
- **220kV lines: ~ 1,60,804 ckm**
 - **POWERGRID: 8,894 ckm**
- **HVDC Bipole(±500kV/±800kV): 12,939 ckm. – 6 nos.**
 - **POWERGRID: 9,454 ckm – 4 nos.**
- **HVDC Back-to-Back: 7 nos. (3,000MW)**
 - **POWERGRID: 7 nos. (3,000MW)**
- **Series Capacitor : 22 nos.; Thyristor Controlled Series Capacitor (TCSC): 6 nos.**
 - **POWERGRID: 22 nos. (Series Capacitor); 6 nos. (TCSC)**
- **Inter-Regional Capacity: 62,650MW**
 - **POWERGRID: 56,450 MW**

National Grid Strengthening – A Continuing Process

Source: CEA, POWERGRID
Data as on 30.9.2016

One Nation – One Grid – One Price

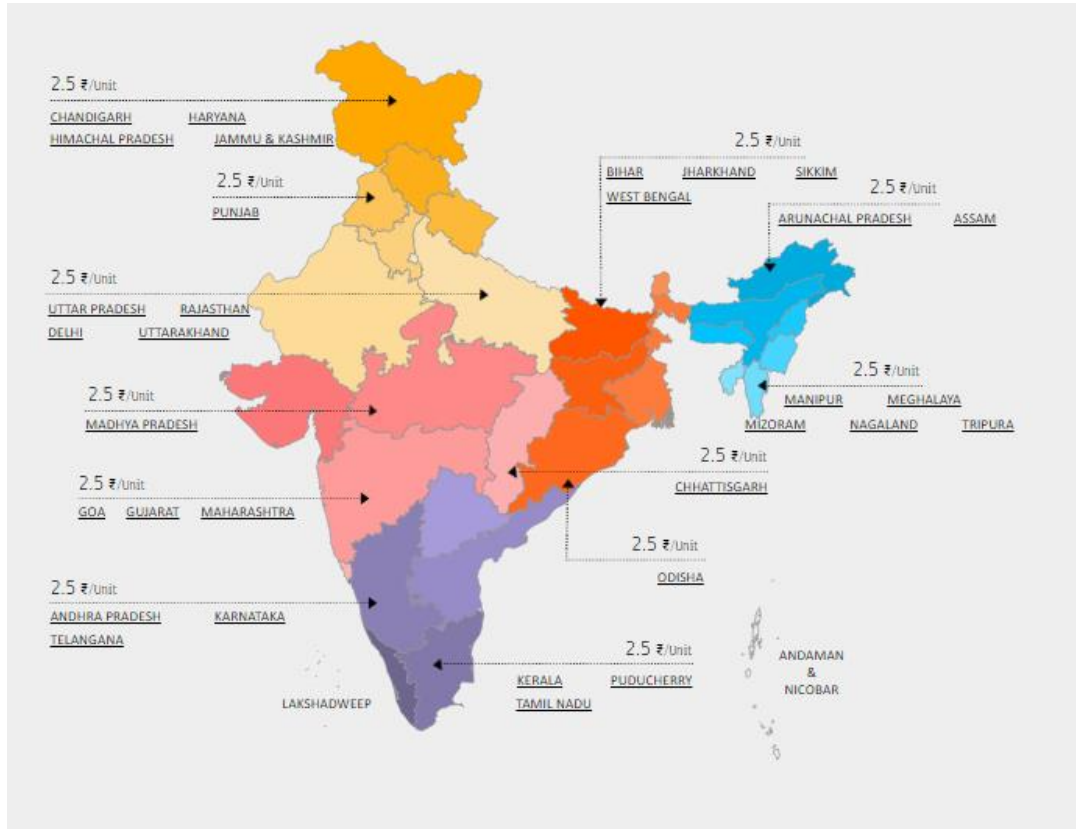


GOVERNMENT OF INDIA
MINISTRY OF POWER

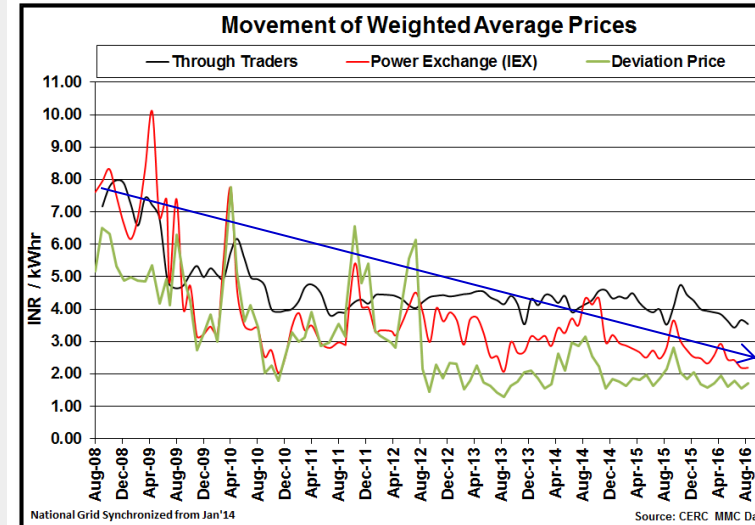
Vidyut PRAVAH

31 Oct'16 at 6.30 pm

Electricity Price & Availability Highlights



Snapshot



**Power Market
Bringing Efficiency Into the Sector**

- **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**

- 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)
- Green Energy Corridors for Renewable Integration
 - Intermittency, Variability, Balancing, matching trans. development
- Wide Area Measurement System (WAMS)- Making Smart Grid
- Dynamic Compensation- STATCOM, SVC etc.
- Renewable Energy Management Centers equipped with RE forecasting

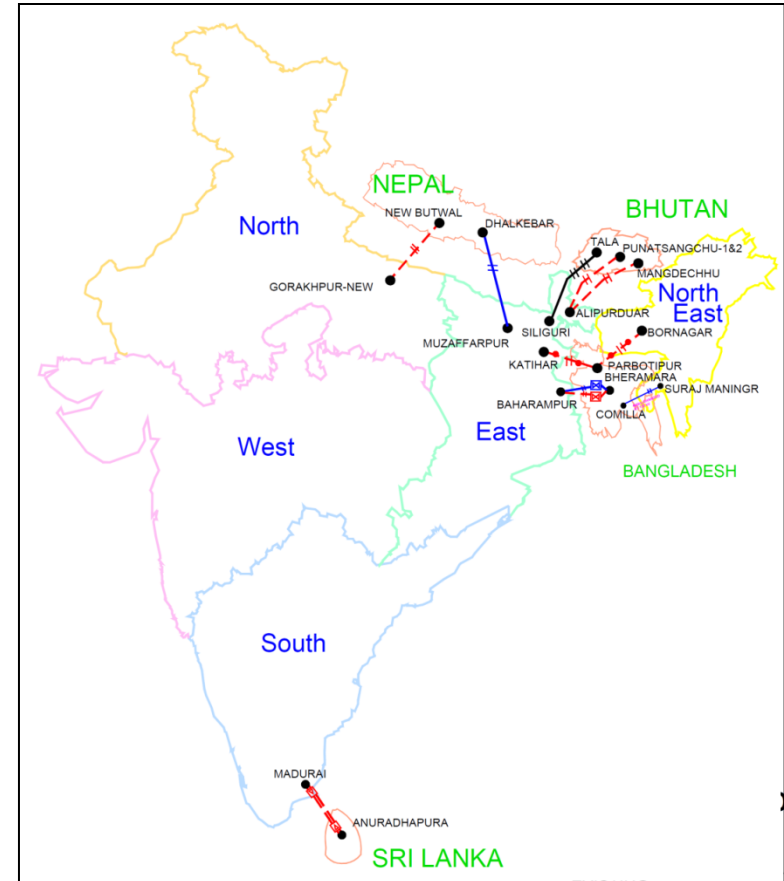


11 nos. High Capacity Transmission Corridors



Green Energy Corridors for Renewables

- 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



POWERGRID Today

POWERGRID Today

A 'NAVRATNA' ENTERPRISE	CENTRAL TRANSMISSION UTILITY	LISTED COMPANY since 2007	GOVT. SHAREHOLDING 57.90%	PAYING DIVIDEND SINCE 1993-94	Market Capitalization ₹ 92,599 crore ¹
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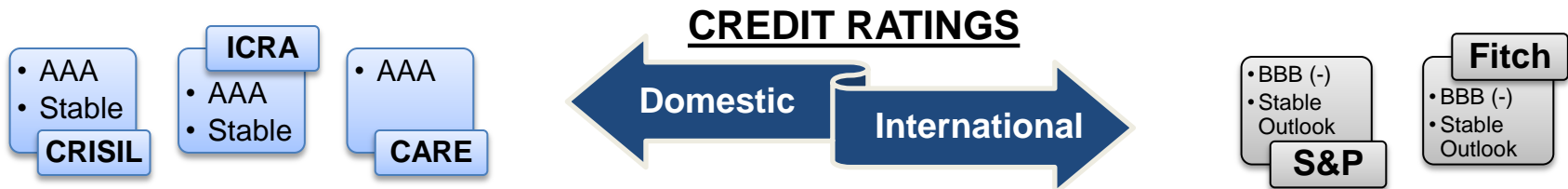
✓ **>90% ISTS Transmission Network owned by POWERGRID**

✓ **POWERGRID's Transmission Assets:**

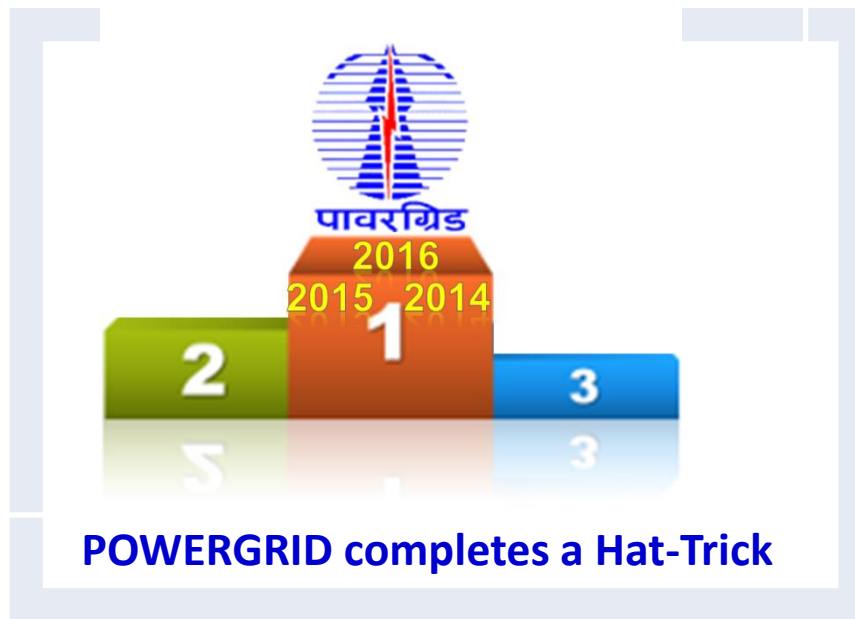
- Trans. Lines: 132,138 ckm
 - Sub-stations: 213 Nos. - 273,862 MVA
 - Availability: 99.78% (Apr16-Sep16)
- } 400kV & above: >90%

✓ **State-of-the-art technologies like HVDC, SVC, FACTS etc.**

✓ **>45% power generated in India transmitted through POWERGRID**



Physical parameters as on 31st October, 2016



**Fastest Growing
Electric Utility in
Asia#
for
3rd successive
year (2014, 2015
& 2016)**

Also, 3rd Fastest Growing Electric Utility, Globally#

#- Based on Platts Top50 Fastest Growing Energy Companies List 2016 & Platts Top250 Energy Companies Rankings 2014, 2015 & 2016

Awarded as the Winner in Power Transmission Category at
'D&B India's Leading Infrastructure Companies & Infra Awards 2016@'

@ - by D&B: Dun & Bradstreet

Performance in Q2FY17 (Jul16-Sep16)

Performance- Financial (Q2 & H1FY17)



(₹ in crore)

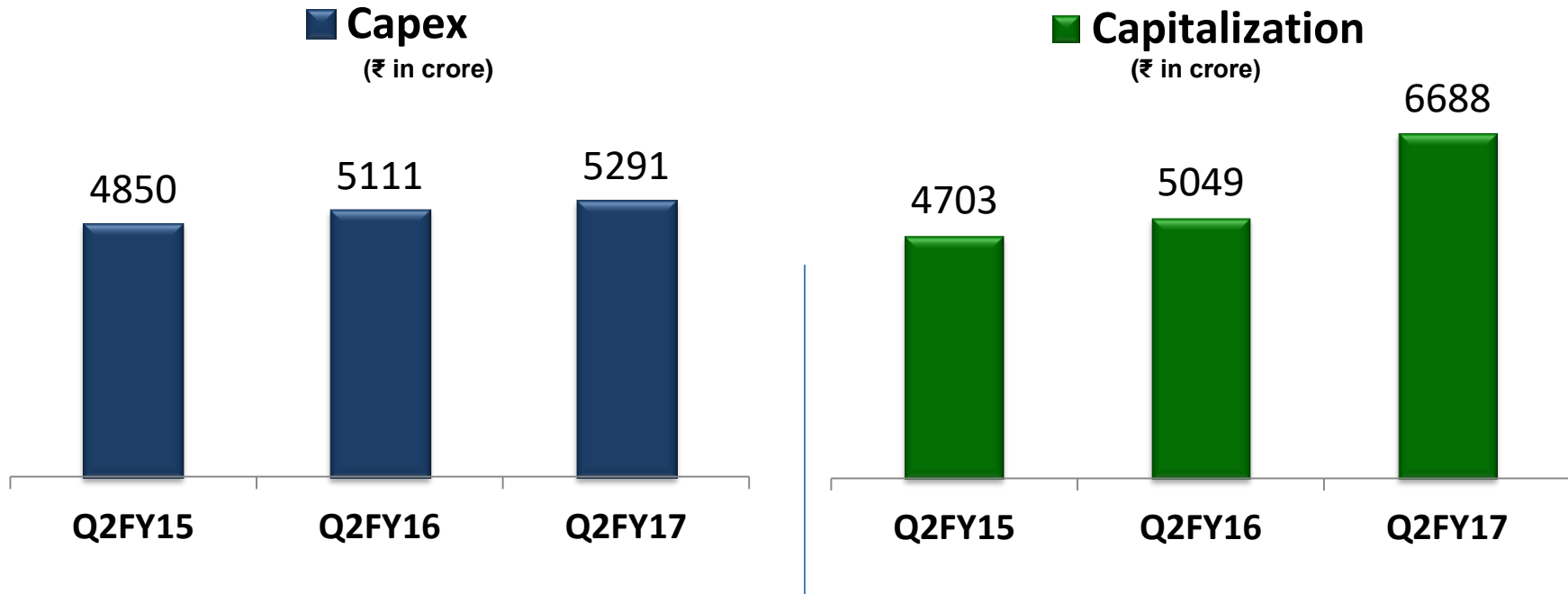
Description	Year ended	Quarter ended			Six Months ended		
	31.03.2016 as per IGAAP	30.09.2015 As per Ind AS	30.09.2016 As per Ind AS	% change	30.09.2015 As per Ind AS	30.09.2016 As per Ind AS	% change
Revenue							
- Transmission Charges	19,945	4,670	5,971	28%	9,182	11,860	29%
- Consultancy Income: Services	465	99	154	56%	188	274	46%
- Telecom	392	97	130	34%	185	241	30%
- Other Income	479	124	225		227	364	
Total Income	21,281	4,990	6,480	30%	9,782	12,739	30%
-Operating Expenses	2,456	558	656	18%	1,113	1,356	22%
EBITDA-Gross Margin	18,825	4,432	5,824	31%	8,669	11,383	31%
Depreciation	6,183	1,448	1,877		2,826	3,634	
Interest	5,023	1,185	1,587		2,327	3,105	
Tax	1,592	381	488		742	970	
Profit after Tax	6,027	1,418	1,872	32%	2,774	3,674	32%
Other Comprehensive Income/ (Exp) – net of Tax		(9)	(1)		(22)	16	
Total Comprehensive Income	6,027	1,409	1,871	33%	2,752	3,690	34%

Performance – Financial (Q2 & H1FY17)

	(₹ in crore)				
	As on 31.03.2016 As Per IGAAP	As on 30.06.2015 As per Ind AS	As on 30.06.2016 As per Ind AS	As on 30.09.2015 As per Ind AS	As on 30.09.2016 As per Ind AS
Gross Fixed Assets	1,50,052	1,22,578	1,52,249	1,27,642	1,58,937
Capital Work-in-Progress	46,830	56,878	48,831	58,094	46,335
Debt	1,06,321	99,412	1,09,789	1,04,164	1,12,284
Net Worth	42,598	40,408	45,470	40,987	46,391
Earning Per Share (₹)	11.52	2.59#	3.44#	5.30#	7.02#
Book Value per Share (₹)	81.43	77.24	86.91	78.35	88.67
Key Financial Ratios					
Debt : Equity	71:29	71:29	71:29	72:28	71:29
Return on Net Worth	14.15%	3.36%#	3.96%#	6.76%#	7.92%#

Not Annualized

Project Execution- Q2FY17



Cumulative Commissioning during FY17 till date:
about ₹ 11,000 crore

Performance Summary in H1FY17 (Apr16-Sep16)

	H1FY16	H1FY17
Capex	11,523	10,876
Investment Approvals	9,490	26,948
Contracts Awarded	10,632	18,094

(₹ in crore)

**Increase in Income
56% w.r.t Q2FY16**

**Assignments in Hand:
105 Nos.
(~ ₹ 17,000 cr.)**

- **Major Assignments**
 - NER PSIP; T&D System Strengthening in Sikkim-Arunachal; TS to Leh-Kargil; Lalitpur TPP Evacuation; IPDS at Old Kashi; RE works in Odisha; TS strengthening works for DTL; Assignment from DFCC

Recent Addl. Work: Railway Electrification of 761 route km by Ministry of Railways

**Further Orders under
Development**

- Assignments from Railways, Jammu & Kashmir, Tamil Nadu, Bihar

Footprints in 18 countries

**14
nos.**

Ongoing Assignments (as on Sep-16)

**5
nos.**

New Orders recd.

- Nepal (2); Kenya (1); Bhutan (1) & Bangladesh (1)

**8
nos.**

Eols/ Techno-commercial proposals submitted

- Kenya, Bangladesh, Nepal, Uganda, Liberia, Indonesia

EPC

1 Bid under evaluation (Bangladesh)

**Increase in Income
34% w.r.t Q2FY16**

➤ Infrastructure:

- **Fiber Optic Network** : ~ 36,500km
- **Points of Presence** : 595
- **Backbone Availability** : 99.96%

➤ 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 - 5,082 Gram Panchayats connected

XII Plan Performance

XII Plan Performance

Annual Capex Plan

Planned Capital Outlay
₹ 110,000 crore

FY12-13: ₹20,037 cr. (Achieved)	FY13-14: ₹23,158 cr. (Achieved)	FY14-15: ₹ 22,456 cr. (Achieved)	FY15-16: ₹ 22,584 cr. (Achieved)	FY16-17: ₹22,550 cr. [Achieved ₹ 10,876 cr.]
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~ ₹ 99,111 crore achieved in XII Plan (Apr12 till Sep16)

Physical Parameters (Apr12-Oct16)

38,635 ckm Tr. Line addn. (42%↑ over Mar'12)	XII Plan Target: 40,000 ckm
63 S/S addn. (42%↑ over Mar'12)	XII Plan Target: 60 Nos.
148,337 MVA X-formation Capacity addn. (120%↑ over Mar'12)	XII Plan Target: 100,000 MVA

Investment Outlook

Ongoing Projects	approx. ₹ 1,16,000 crore
New Projects	approx. ₹ 14,000 crore
TBCB Projects	approx. ₹ 16,000 crore (as per Empowered Committee Estimate)
Total Works in Hand	approx. ₹ 1,46,000 crore
Expenditure done (CWIP)	approx. ₹ 46,000 crore
Balance Capex	approx. ₹ 1,00,000 crore

Thank You