



POWER GRID CORPORATION OF INDIA LIMITED

Q3 FY 2015-16

Press & Analysts' Meet

Mumbai

January 28, 2016

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- Conversion rate of 1US\$= ₹66.33 (as on 31.12.15) has been used throughout the presentation, unless otherwise stated.*

Highlights – Q3FY16

POWERGRID Today

Performance during FY16 (9 months)

- Financial
- Physical
- Operations
- Grid Management
- Other Businesses – Consultancy & Telecom

Renewable & SAARC

Investment & Funding Programme

Highlights - Q3FY16

NER - Agra HVDC Interconnection Pole I

-

Commercial Operation from Nov.1, 2015

- **World's longest (1750km) multi-terminal ± 800 kV HVDC**
- **Passes through 4 States: Assam, WB, Bihar, UP**
- **Crossing more than 40 rivers**
- **Ultimate Capacity: 6000 MW – Planned to facilitate harnessing hydro-potential in NER & Bhutan**

1st Line under TBCB Successfully Charged

400kV D/C Khammam – Nagarjunasagar

On Time

Within Cost

- ✓ Traverses ~150km through Telangana & Andhra Pradesh
- ✓ Part of TS for '*System Strengthening in Southern Region for import of Power from Eastern Region*'
- ✓ To facilitate inter-State exchange of power in SR

India - Bangladesh

- 2nd Interconnection completed

**USD 2.59
bn**

- Worth works capitalized in Q3
- Highest-ever Quarterly Capitalization

**USD 4.04
bn**

- Total Capitalization during FY16 (till Dec-15)

23%

- Increase in Income in Q3 w.r.t. Q3FY15

31%

- Increase in Profit After Tax in Q3 w.r.t. Q3FY15

Global Recognition

As per Platts Top 250 Global Energy Company Rankings 2015 & 2014



Fastest Growing Electric Utility in Asia for second successive year

Only Indian CPSE among World's Fastest Growing Energy Companies in 2015

Other
Recognitions



CBIP Award
Best Performing
Transmission
Utility



India Today PSU
Awards-

- Best Performing *Navratna*
- Most Valuable *Navratna*



Rajiv Gandhi
National
Quality Award

Highlights – Q3FY16

ONE Nation Grid Frequency

ONE Price



Daily prices are simple average of non-zero prices in (24*4) no of 15 minutes time block of respective day.

Dec. 29, 2015

Date: 26-12-2015 To 30-12-2015

Date	A1	A2	E1	E2	N1	N2	N3	S1	S2	W1	W2	W3	MCP
26-12-2015	2400.66	2400.66	2400.66	2400.66	2400.66	2400.66	2400.66	3606.12	3606.12	2400.66	2400.66	2400.66	2610.86
27-12-2015	2116.29	2116.29	2116.29	2116.29	2116.29	2116.29	2116.29	3004.03	3004.03	2116.29	2116.29	2116.29	2209.99
28-12-2015	2322.31	2322.31	2322.31	2322.31	2322.31	2322.31	2322.31	2964.77	2964.77	2322.31	2322.31	2322.31	2380.63
29-12-2015	2300.04	2300.04	2300.04	2300.04	2300.04	2300.04	2300.04	2300.04	2300.04	2300.04	2300.04	2300.04	2300.04
30-12-2015	2300.23	2300.23	2300.23	2300.23	2300.23	2300.23	2300.23	2912.73	2912.73	2300.23	2300.23	2300.23	2301.84

→ Avg. Market Clearing Price in ₹ /MWh: ₹ 2.30

Source: India Energy Exchange

Providing Support during Natural Calamities



Floods in Chennai (Nov-Dec, 2015)

- Support to Tamil Nadu to restore EHV lines

- Support extended for restoration of:
 - 400kV line (1 No.) & 230kV lines (2 Nos.) including evacuation lines from Kalpakkam Nuclear Power Plant & North Chennai TPS
- 20mbps dedicate bandwidth extended to MLDC



Earthquake in Manipur (4-Jan, 2016)

- Support to Manipur to restore Power Supply

- Power situation turned critical
- Support extended for restoration works
- Local grid restored within few hours

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 USD 11.14 bn¹

- ✓ **>90% ISTS Transmission Network owned by POWERGRID**
 - ✓ **Trans. Lines: 1014 Nos. - 127,539 ckm**
 - ✓ **Sub-stations: 205 Nos. - 248,164 MVA**
- } 400kV & above: >90%
- ✓ **State-of-the-art technologies like HVDC, SVC, FACTS etc.**
 - ✓ **>40% power generated in India transmitted through POWERGRID**

CREDIT RATINGS



Performance in FY16 (9 months)

Performance- Financial



(US\$ in million)

	Quarter ended		Nine months ended		FY 2014-15
	31.12.2015	31.12.2014	31.12.2015	31.12.2014	
Revenue					
- Transmission Charges	782.45	630.64	2178.80	1817.28	2490.73
- Consultancy Income: Services	17.19	15.38	45.53	33.77	57.44
- Telecom	15.53	10.40	43.42	29.55	41.46
- Other Income	14.77	19.90	41.91	59.70	90.91
Total Income	829.94	676.32	2309.66	1940.30	2680.54
- Operating Expenses(including prior period adjustment)	92.11	92.42*	269.86	268.51*	365.75
EBITDA-Gross Margin	737.83	583.90	2039.80	1671.79	2314.79
Depreciation	238.20	196.14	663.05	552.84	766.62
Interest	194.18	154.53	534.60	443.53	599.88
Tax	62.27	47.94	174.58	137.65	197.65
Profit after Tax	243.18	185.29	667.57	537.77	750.64

* Operating Expenses for the quarter and nine months ending 31-12-2014 includes prior period expenses of USD 4.52 mn and USD 10.85 mn respectively

Performance - Financial

	(US\$ in million except per share data)			
	As on 31.03.2015	As on 30.06.2015	As on 30.09.2015	As on 31.12.2015
Gross Fixed Assets	17,829.64	18,515.15	19,276.35	21,870.50
Capital Work-in-Progress	8,486.66	8,575.00	8,758.33	6,935.02
Debt	14,148.20	14,987.49	15,703.90	15,888.29
Net Worth	5,734.51	5,940.60	6,158.90	6,402.08
Earning Per Share (USD)	0.14	0.04#	0.08#	0.13#
Book Value per Share (USD)	1.10	1.14	1.18	1.22
Key Financial Ratios				
Debt : Equity	71:29	72:28	72:28	72:28**
Return on Net Worth	13.09%	3.47%#	6.89%#	10.43%#

Not Annualized

** Considering Interim Dividend Payment

Performance - Financial (Billing & Realization)

As on 31.12.2015

Total Outstanding

~ USD 0.36 bn
(45 days billing[#])

**Transmission Outstanding
(beyond 60 days)**

~ USD 0.06 bn
(7 days billing[#])

**Billed but not outstanding
(<60 days allowed as per CERC)**

~ USD 0.26 bn
(33 days billing[#])

Avg. Monthly Billing: USD 0.24 bn => 2 months 60 days) billing = USD 0.48 bn

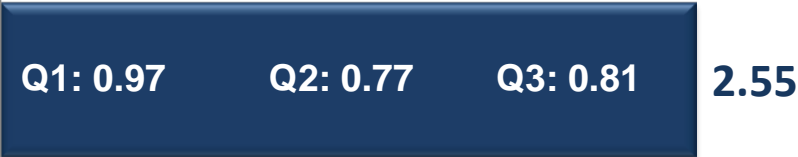
Performance - Financial

Period: 9 months FY16

Capitalisation
(USD in bn)

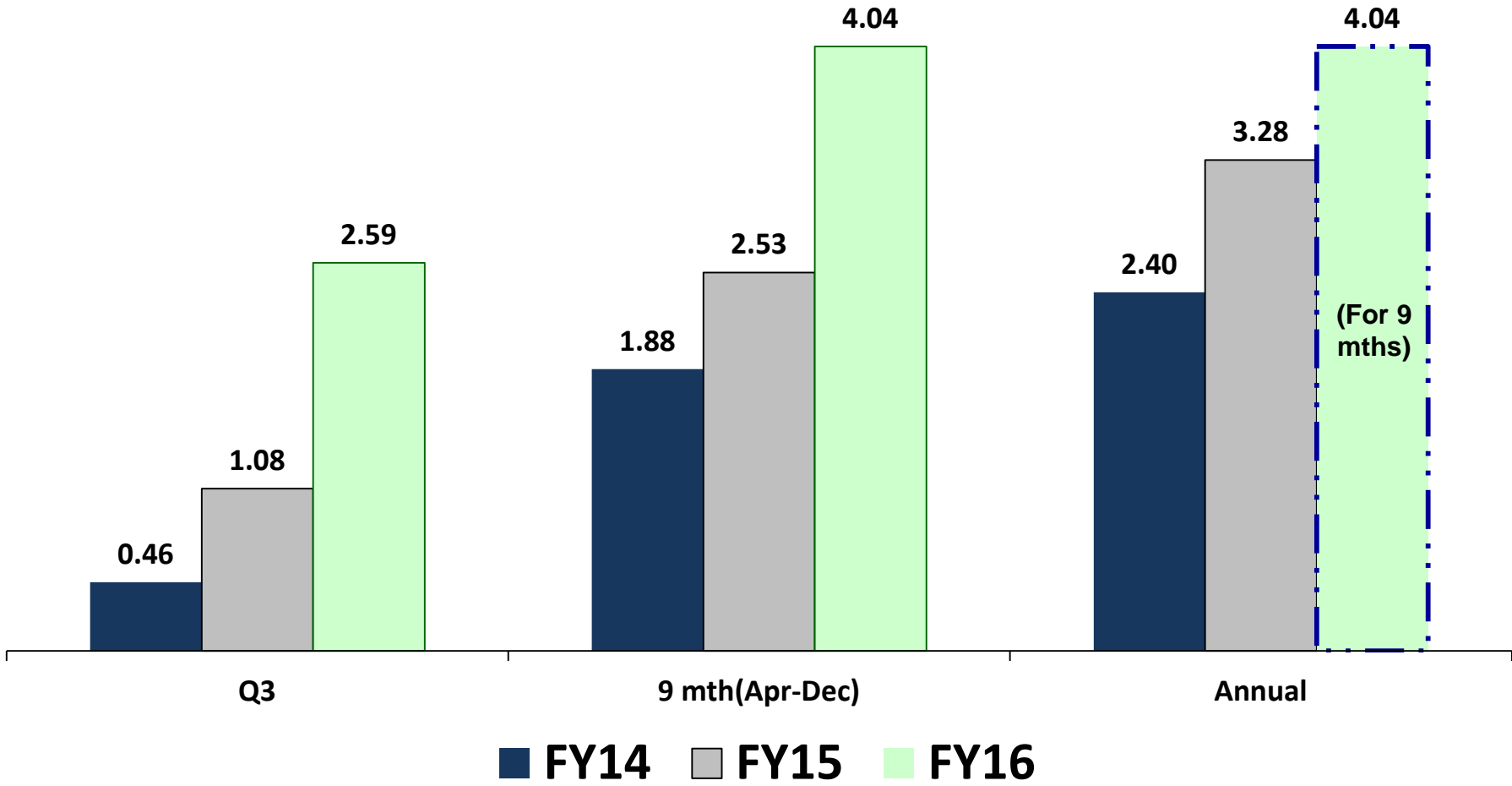


Capex
(USD in bn)



Performance – Physical (3 years)

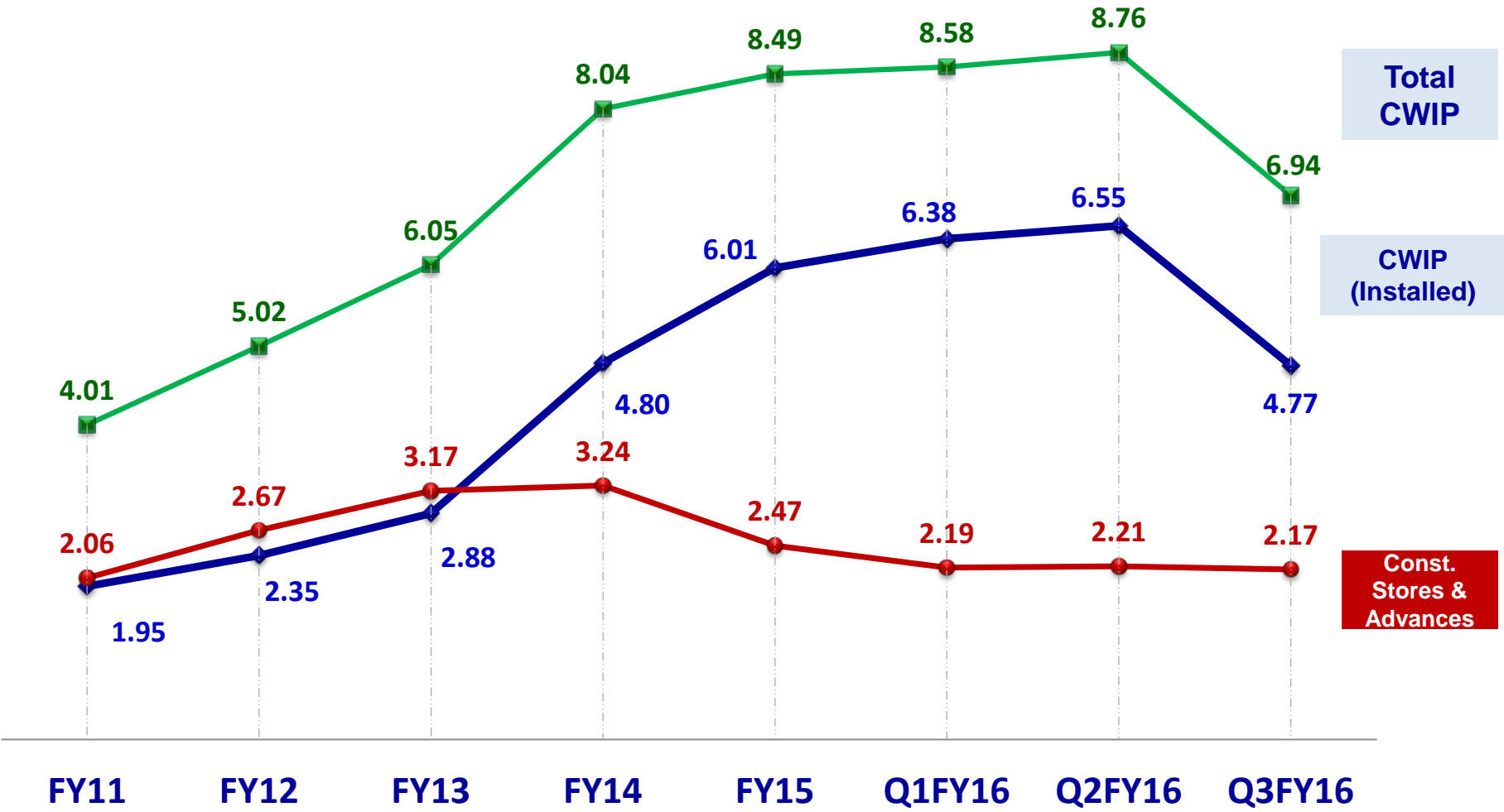
Capitalization



(USD in bn)

Performance – Physical (CWIP)

(USD in bn)



Performance - Physical

Period: 9 months FY16

**Transmission
Line**

- **11,629 ckm**
- **13,109 GW-ckm**

Sub-stations

- **13 Nos.**
- **14,295 MVA**

**Inter-Regional
Capacity**

- **11,000 MW**

Projects in FY16

Transmission Lines

20,500 GW-ckm



Major Lines

- Bareilly-Kashipur, Kashipur-Roorkee
- V'chal – Satna, V'chal-Satna (2nd line)
- Meerut – Moga, Kanpur – Jhatikara
- Barh-Gorakhpur
- Raigarh - Champa
- Silchar – Purba Kanchan Bari
- Vijayawada – Nellore
- Gwalior – Jaipur, Jaipur-Bhiwani(2nd line)
- Biswanath Chariyali – Agra (NE-NR/WR Interconnector) & associated AC system
- Mysore-Kozhikode
- Kudgi-Kolhapur
- Gooty – Madhugiri
- Ranchi-Dharamjaygarh; Dharamjaygarh–Jabalpur
- Kurnool-Raichur
- Aurangabad-Boisar
- Angul – Jharsuguda (2nd line)
- Raipur PS - Wardha(2nd line), Wardha-Aurangabad
- Dehradun-Baghat, Roorkee-Saharanpur
- Pasighat – Roing – Tezu
- Balia – Varanasi, Gaya-Varanasi, Varanasi-Kanpur
- Kishenganj-Patna
- LILOs- Meerut-Kaithal; **Baripada-Mendhasal**;
- 800kV Champa-Kurukshetra HVDC (Pole-I)

Sub-Stations

20 Nos.



Sub-stations

- Vindhyachal PS
- New Melli (GIS)
- Champa PS
- Vadodara (GIS)
- Mokokchung (GIS)
- Biswanath Chariyali AC#
- Biswanath Chariyali HVDC
- Agra HVDC
- Kozhikode
- Kudgi (GIS)
- Kolhapur (GIS)
- Madhugiri (GIS)
- Kurukshetra (GIS)#
- Salem (Dharmapuri)
- Navi Mumbai (GIS)
- Kanpur
- Kishenganj
- Varanasi
- Pandiabil (GIS)
- Saharanpur
- Bagpat (GIS)
- Dehradun
- Roing
- Tezu
- Champa HVDC
- Kurukshetra HVDC

Initially envisaged as part of HVDC

Inter-Regional Capacity

16,700 MW



Inter-Regional

- Barh – Gorakhpur
- Gwalior-Jaipur
- Biswanath Chariyali – Agra (NE-NR/WR Interconnector) – Pole I
- Ranchi-Dharamjaygarh
- Kudgi-Kolhapur
- Gaya-Varanasi
- Champa-Kurukshetra Pole-I



Transnational Interconnections

Completed.
Ready for
power flow

- **India-Bangladesh** (Surjyamaninagar-Comilla)
- **India-Nepal** (Muzzafarpur-Dhalkebar)

Green font indicates assets commissioned in FY16

Operations - FY16 (till Dec-15)

- **Assets as on Dec-15:**
 - ✓ **Trans. Lines : 1013 Nos. - 127,266 ckm**
 - ✓ **Sub-stations : 205 Nos. - 246,004 MVA**
(104 sub-stations remotely operated)

- **Performance during FY16 (till Dec-15)**
 - ✓ **Availability : 99.78%**
 - ✓ **Reliability : 0.54 Trippings/ line**

New Initiatives in Asset Management

- ✓ **Aerial Patrolling (using helicopters) of 17,000 km of transmission lines to commence from March, 2016**
- ✓ **Maintenance of transmission lines using helicopters – Bids under evaluation**
- ✓ **Use of Unmanned Aerial System (UAS)/ Drones**

Period: 9 months FY16

83 BU

- **Inter-Regional Power Transfer**

75 BU

- **Energy Transacted through Short Term Open Access**

33,852

- **No. of STOA Transactions**

Orders recd.:

21



**Project Cost of Orders
recd.: ~ USD 0.09 bn**

**Assignments under
execution:**

117



**Project Cost: ~ USD 2.82 bn
(Balance cost)**

✓ Major Ongoing Assignments

- ✓ NER Power System Improvement Project (6 NE States)
- ✓ Strengthening of T&D System in Arunachal & Sikkim
- ✓ 220kV TS to Leh-Kargil (J&K)
- ✓ Evacuation System for Lalitpur TPP (UP)
- ✓ Implementation of IPDS at Old Kashi area

Footprints in 18 countries

14 Nos. - Assignments under execution (as on Dec-15)

Major Ongoing assignments

- 2nd Block of 1x500MW HVDC B2B Stn. at Bheramara
- CASA-1000 Project
- Assignments from ADB & World Bank in Nepal
- Trans. Infrastructure works in Kenya

Management Contract in Ethiopia – Successfully completed

**41 New Clients
added**

[(Pvt. (26), Govt(15))]

**Total Order Book
> USD 0.32 bn**

➤ 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 Network (NOFN):** Work for 6,900 Gram Panchayats under progress - 3,222 Gram Panchayats connected

Renewables & SAARC

Green Energy Corridors (ISTS USD 1.96 bn)

Part A	Works commenced
Part B	Works commenced
Part C	Ready for Award
Part D	Projects under Bidding

TS for Ultra Mega Solar Parks

Andhra Pradesh NP Kunta (1500MW)	Madhya Pradesh Rewa (750MW)	Karnataka Pavagada (Tumkur) (2000MW)	Rajasthan Bhadla (1700MW)	Uttar Pradesh Jalaun (370MW)	Gujarat Banaskantha (750MW)
Implementation commenced		Tendering activities under progress			Scheme under finalization by CEA

SAARC Interconnections

Bhutan

400kV Alipurduar –
Punatsangchu-I HEP
line under
implementation

400kV Jigmeling-
Alipurduar line under
implementation

Bangladesh

400kV Surjyanagar-
Comilla South link
completed.

2nd Block of 1x500MW
HVDC B2B firmed up

Nepal

400kV Muzaffarpur-
Dhalkebar line to be
completed shortly

Investment & Funding Programme

Investment & Funding Programme

XII Plan Capital Outlay*

USD 16.58 bn

Annual Capex Plan

FY13:
USD 3.02 bn
(Achieved)

FY14:
USD 3.37 bn
(Achieved)

FY15:
USD 3.39 bn
(Achieved)

FY16:
USD 3.39 bn
(USD 2.55 bn till Dec-15)

FY17:
USD 3.40 bn

*Projects

Ongoing Projects; Tariff Based Bidding Projects; Projects assigned by GoI; Green Energy Corridors; Intra-State Projects; Transnational Interconnections

FY16 (till Dec-15)

Investments Approved

**USD 1.43 bn
(13 Projects)**

(till date USD 1.81 bn/ 20 Projects)

Contracts Awarded

USD 2.03 bn

Bids opened

~ USD 3.51 bn

NITs issued/ Bids yet to be opened

~ USD 1.36 bn

Thank You