Power Grid Corporation of India Limited

Fastest Growing Electric Utility in Asia

Press & Analysts’ Meets
Mumbai
May 27, 2016
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• Annual Accounts for FY2015-16 are yet to be approved by the shareholders.
# Major Highlights

## POWERGRID Overview

## Sector Overview & Performance

### Performance (FY16)
- Financial
- Operational

### Journey - Last 5 years

### Performance (FY16) – Consultancy, Telecom, CSR & Sustainability

### Projects Targeted in FY17 & Status of TBCB Projects

### Outlook, Investment Programme & Way Forward

### Major Recognitions
Major Highlights
POWERGRID Stock getting included¹

Thank You
for your continued faith & confidence

¹- w.e.f. 20-Jun-2016; Source: BSE Notice dated 20-5-16
FY16: Major Highlights

- **Highest ever yearly Capitalization**: ₹ 31,788 crore
- **Highest ever TL ckm addition (Annual)**: 13,717 ckm
- **Gross Fixed Assets surpassed**: ₹ 1.5 lakh cr.
- **Annual Income surpassed**: ₹ 20,000 crore
- **Profit After Tax surpassed**: ₹ 6,000 crore

Financials scale new peaks
## FY16: Other Highlights

<table>
<thead>
<tr>
<th>NER-Agra HVDC (Pole-I)</th>
<th>World’s longest multi-terminal ±800kV HVDC Tr. Line commissioned</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAARC Interconnections</strong></td>
<td>Additional Link(s) with Nepal &amp; Bangladesh completed &amp; operationalised</td>
</tr>
<tr>
<td><strong>Projects acquired through TBCB</strong></td>
<td>1\textsuperscript{st} line* successfully charged in time</td>
</tr>
<tr>
<td>* 400kV D/C Khammam – Nagarjunasagar</td>
<td></td>
</tr>
</tbody>
</table>

### Support in Natural Calamities
- Nepal Earthquake (Apr-15)
- Chennai floods (Dec-15)
- Manipur Earthquake (Jan-16)
POWERGRID Overview
>90% ISTS Transmission Network owned by POWERGRID

Trans. Lines: 1037 Nos. - ~ 129,600 ckm

Sub-stations: 208 Nos. - ~ 255,000 MVA

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

>45% power generated in India transmitted through POWERGRID

CREDIT RATINGS

- Domestic
  - AAA
  - Stable
  - CRISIL
- International
  - AAA
  - Stable
  - ICRA
  - AAA
  - Stable
  - CARE
  - AAA
  - Stable
  - CARE

- S&P
  - AAA
  - Stable Outlook
- Fitch
  - BBB (-)
  - Stable Outlook

1- Based on BSE Closing Price of ₹ 139.10 per sschar as on 31.3.2016
Physical Data as on 30.04.2016
POWERGRID Group

Shareholding pattern as of 31st March, 2016

Government of India 57.90%
Institutions 34.80%
Non-Institutions 7.30%

Joint Ventures (13) (% POWERGRID equity holding)
- Powerlinks Trans. Ltd. (49%)
- Torrent Power Grid Ltd. (26%)
- Parbati Koldam Trans. Co. Ltd. (26%)
- Bihar Grid Company Ltd. (50%)
- Cross Border Power Trans. Co. Ltd. (26%)
- National High Power Test Laboratory (20%)
- Energy Efficiency Services Ltd. (13.64%)
- North Eastern Trans. Co. (26%)
- Jaypee Powergrid Ltd. (26%)
- Teesta Valley Power Trans. Ltd. (26%)
- Kalinga Bidyut Prasaran Nigam Pvt. Ltd. (50%)
- Teesta Valley Power Trans. Ltd. (26%)
- Power Transmission Co. Nepal Ltd. (26%) (POWERGRID’s 1st Intl JV)
- RINL POWERGRID TLT Pvt. Ltd. (50%)

Subsidiaries (11) (100%)
- POSOCO (Grid Management)
- Grid Conductors Limited
- Cos. Acquired through TBCB
  1. POWERGRID NM Trans. Ltd.
  2. POWERGRID Vemagiri Trans. Ltd.
  3. POWERGRID Vizag Trans. Ltd.
  4. POWERGRID Unchahar Trans. Ltd.
  5. POWERGRID Kala Amb Trans. Ltd.
  6. POWERGRID Jabalpur Trans. Ltd.
  7. POWERGRID Warora Transmission Ltd.
  8. POWERGRID Parli Transmission Ltd.
  9. POWERGRID Southern Interconnector Trans. System Ltd.

Shareholding in PTC 4.1%
Dividend Paying

Energy Efficiency Services Ltd. (13.64%)
RINL POWERGRID TLT Pvt. Ltd. (50%)
Kalinga Bidyut Prasaran Nigam Pvt. Ltd. (50%)
POSOCO (Grid Management)
Grid Conductors Limited

One Nation Grid Frequency

INSTITUTIONS 57.90%
GOVERNMENT OF INDIA 34.80%
NON-INSTITUTIONS 7.30%

Dividend Paying

INSTITUTIONS 57.90%
GOVERNMENT OF INDIA 34.80%
NON-INSTITUTIONS 7.30%

Dividend Paying

INSTITUTIONS 57.90%
GOVERNMENT OF INDIA 34.80%
NON-INSTITUTIONS 7.30%

Dividend Paying
Sector
-
Overview & Performance
Power Sector Overview & Performance

Generation & Power Supply

<table>
<thead>
<tr>
<th></th>
<th>Installed Capacity incl. RE (GW)</th>
<th>RE Capacity (GW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the end of FY12 (Mar-12)</td>
<td>200</td>
<td>24.5</td>
</tr>
<tr>
<td>At the end of FY16 (Mar-16)</td>
<td>302</td>
<td>42.8</td>
</tr>
<tr>
<td>Addn. in 4 years (Apr12-Mar16)</td>
<td>102</td>
<td>18.3</td>
</tr>
<tr>
<td>Addn. in FY16</td>
<td>30</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Per Capita Consumption: 1075 kWh (2015-16 Prov.)

Energy Generated in FY16
- 1,107 BU (5.6% ↑)
- RE Generation: 60.5 BU (Apr15-Feb16)

Power Supply Position in FY16
- Energy Deficit: 2.1% (23.5 BU)
- Peak Deficit: 3.2% (5 GW)

Source: CEA website / GoI
### Transmission Infrastructure

<table>
<thead>
<tr>
<th></th>
<th>Transmission (ckm)</th>
<th>X-formation Capacity (MVA)</th>
<th>I-R Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the end of FY12 (Mar-12)</td>
<td>257,481</td>
<td>409,551</td>
<td>27,750#</td>
</tr>
<tr>
<td>At the end of FY16 (Mar-16)</td>
<td>341,551</td>
<td>658,949</td>
<td>58,850#</td>
</tr>
<tr>
<td>Addn. in 4 years (Apr12-Mar16)</td>
<td>84,070</td>
<td>249,398</td>
<td>31,100</td>
</tr>
<tr>
<td>Addn. by POWERGRID</td>
<td>36,123</td>
<td>130,823</td>
<td>24,900</td>
</tr>
<tr>
<td>Addn. in FY16 by POWERGRID only</td>
<td>13,717</td>
<td>23,578</td>
<td>12,400</td>
</tr>
</tbody>
</table>

# including 600MW I-R Capacity pertaining to 132kV lines

For voltage levels 220kV & above

Power Transmission – An Enabler for seamless flow of power

FY16

I-R Exchange
117 BU (31%↑)

STOA – Txns
44,545 (17%↑)

STOA – Energy Txn.
98 BU (21% ↑)

Source: CEA website/ POWERGRID/ POSOCO
POWERGRID- Major Assets commissioned in FY16

**Transmission Lines**
- 13,717 ckm

**Sub-Stations**
- 15 Nos.
- 23,578 MVA

**Inter-Regional Capacity**
- 12,400 MW

**Major Lines**
- Bareilly-Kashipur
- V’chal – Satna, V’chal-Satna (2nd line)
- Meerut – Moga
- 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
- Angul – Jharsuguda (2nd line)
- Ballia – Varanasi,
- Kishenganj-Patna
- LILOs- Meerut-Kaithal

**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)#
- Kishenganj (GIS)
- Varanasi (GIS)

**Inter-Regional**
- Barh – Gorakhpur
- Gwalior-Jaipur
- Biswanath Chariyali – Agra (NE-NR/WR Interconnector) – Pole I
- Ranchi-Dharamjaygarh
- Kudgi-Kolhapur
- Extn. of Biharsharif-Sasaram to Varanasi

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

# Initially envisaged as part of HVDC
### Enhancement of Capacity in last 2 years (FY15, FY16)

<table>
<thead>
<tr>
<th>Direction</th>
<th>Current Capacity</th>
<th>Envisaged Capacity</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>WR to NR</td>
<td>3,700 MW</td>
<td>7,600 MW</td>
<td>105% ↑</td>
</tr>
<tr>
<td>NEW Grid to SR</td>
<td>3,450 MW</td>
<td>5,900 MW</td>
<td>71% ↑</td>
</tr>
</tbody>
</table>

### Targeted increase in Capacity in next 2 years (FY17, FY18)

<table>
<thead>
<tr>
<th>Direction</th>
<th>Envisaged Capacity</th>
<th>Additional Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>WR to NR</td>
<td>17,000 MW</td>
<td>9,400 MW</td>
</tr>
<tr>
<td>NEW Grid to SR</td>
<td>9,900 MW</td>
<td>4,000 MW</td>
</tr>
</tbody>
</table>
Transmission - Congestion Management

I-R Power flow from WR to NR & WR to SR (MUs)

- WR-NR: > 4x
- WR - SR: > 2x

Source: POSOCO
### Transmission-Positives Steps towards Project Execution

<table>
<thead>
<tr>
<th>Improvement in Forest Clearance Process</th>
<th>Permission to start work after Stage-I/ In-principle approval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Enhancement in delegation of powers of Regional Offices of MoEFCC</td>
</tr>
<tr>
<td></td>
<td>Easing Compensatory Afforestation (CA) conditions in TBCB projects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Right of Way (RoW) Compensation (Reviewed)</th>
<th>New guidelines (in Oct, 2015) for compensation issued:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Compensation of land cost below tower base (85% of cost of land)</td>
</tr>
<tr>
<td></td>
<td>- Compensation towards diminution of land value under RoW (15% of land cost)</td>
</tr>
<tr>
<td></td>
<td>This is in addition to compensation provision prevalent earlier</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recognition to early completion</th>
<th>In the case of actual date of commissioning (COD) prior to Scheduled COD for Transmission Lines under System Strengthening Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Developer entitled to claim Tr. charges from actual COD</td>
</tr>
</tbody>
</table>
Performance (FY16)
### Performance (FY16)- Financial

<table>
<thead>
<tr>
<th>Description</th>
<th>Quarter ended</th>
<th>Year ended</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standalone</td>
<td>Standalone</td>
</tr>
<tr>
<td>Income</td>
<td>31.03.2016</td>
<td>31.03.2015</td>
</tr>
<tr>
<td>Transmission Charges</td>
<td>5,492</td>
<td>4,468</td>
</tr>
<tr>
<td>Consultancy – Services</td>
<td>163</td>
<td>157</td>
</tr>
<tr>
<td>Telecom</td>
<td>105</td>
<td>79</td>
</tr>
<tr>
<td>Other Income</td>
<td>201</td>
<td>206</td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td><strong>5,961</strong></td>
<td><strong>4,910</strong></td>
</tr>
<tr>
<td>Operating Expenses (including prior period adjustment)</td>
<td>666</td>
<td>645</td>
</tr>
<tr>
<td><strong>EBITDA-Gross Margin</strong></td>
<td><strong>5,295</strong></td>
<td><strong>4,265</strong></td>
</tr>
<tr>
<td>Depreciation</td>
<td>1,785</td>
<td>1,418</td>
</tr>
<tr>
<td>Interest</td>
<td>1,477</td>
<td>1,038</td>
</tr>
<tr>
<td>Extraordinary Items (Net of Tax exp.)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tax</td>
<td>434</td>
<td>397</td>
</tr>
<tr>
<td><strong>Profit after Tax</strong></td>
<td><strong>1,599</strong></td>
<td><strong>1,412</strong></td>
</tr>
</tbody>
</table>

**Growth in Income : 20%**

**Growth in Profit After Tax: 21%**
### Performance (FY16) - Financial

<table>
<thead>
<tr>
<th>Description</th>
<th>As on 31.03.2016</th>
<th>As on 31.03.2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Fixed Assets</td>
<td>1,50,052</td>
<td>118,264</td>
</tr>
<tr>
<td>Capital Work-in-Progress</td>
<td>46,830</td>
<td>56,292</td>
</tr>
<tr>
<td>Debt</td>
<td>1,06,321</td>
<td>93,845</td>
</tr>
<tr>
<td>Net Worth</td>
<td>42,598</td>
<td>38,037</td>
</tr>
<tr>
<td>Earning Per Share (₹)</td>
<td>11.52</td>
<td>9.52</td>
</tr>
<tr>
<td>Book Value per Share (₹)</td>
<td>81.43</td>
<td>72.71</td>
</tr>
</tbody>
</table>

#### Key Financial Ratios

<table>
<thead>
<tr>
<th>Ratio</th>
<th>As on 31.03.2016</th>
<th>As on 31.03.2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt : Equity</td>
<td>71:29</td>
<td>71:29</td>
</tr>
<tr>
<td>Return on Net Worth</td>
<td>14.15%</td>
<td>13.09%</td>
</tr>
</tbody>
</table>
Performance (FY16) - Financial

Billing & Realization

<table>
<thead>
<tr>
<th>Billing</th>
<th>Realization</th>
<th>%age realization</th>
</tr>
</thead>
<tbody>
<tr>
<td>₹ 19,178 crore</td>
<td>₹ 18,668 crore</td>
<td>97.34%</td>
</tr>
</tbody>
</table>

As on 31.03.2016

Total Outstanding

<table>
<thead>
<tr>
<th>Transmission Outstanding</th>
<th>Billed but not outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>(beyond 60 days)</td>
<td>(&lt;60 days allowed as per CERC)</td>
</tr>
<tr>
<td>~ ₹ 367 crore (7 days billing#)</td>
<td>~ ₹ 2,229 crore (43 days billing#)</td>
</tr>
</tbody>
</table>

# Avg. Monthly Billing: ₹ 1598 cr. => 2 months 60 days) billing = ₹ 3,196 cr.
Performance(FY16) - Operational

- **Performance during FY16**
  - Availability: 99.72%
  - Reliability: 0.66 Trippings/line

- **Assets as on Mar-16:**
  - Trans. Lines: 1031 Nos. - 129,354 ckm
  - Sub-stations: 207 Nos. (incl. 24 GIS) - 255,348 MVA
    (104 sub-stations remotely operated)

- **Voltage Landscape migrating to 765kV**
  - TL (765kV & above): 17% vs <1%
  - S/S (765kV & above): 19% vs <1%

- **New Initiatives in Asset Management**
  - Aerial Patrolling (using helicopters) of 17,000 km of TL to commence shortly
  - Use of Unmanned Aerial Vehicles (UAVs/ Drones) commences w.e.f Apr-16
Journey (Last 5 years)
Journey (Last 5 years): Asset Creation

Consistent Asset Growth

Investment-led Asset Growth:

- Gross Fixed Assets (GFA) + Work in Progress (WIP)
- CAGR: GFA (24%)
- 2.37x
- Poised to become 3rd Largest CPSE in the Country

... Consistent increase in ISTS Infrastructure

- TL (‘000 ckm)
- X-fm (‘000MVA)
- S/S (Nos.)
- CAGR: TL (9%); MVA (20%)
- 255.3
- One of the Largest Trans. Companies Globally
Journey (Last 5 years): Profitability

Asset Based Returns & Sustained Profitability….

Income

<table>
<thead>
<tr>
<th>Year</th>
<th>Income (₹ in crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY12</td>
<td>10,785</td>
</tr>
<tr>
<td>FY13</td>
<td>13,328</td>
</tr>
<tr>
<td>FY14</td>
<td>15,721</td>
</tr>
<tr>
<td>FY15</td>
<td>17,780</td>
</tr>
<tr>
<td>FY16</td>
<td>21,281</td>
</tr>
</tbody>
</table>

CAGR: 19%

Profit After Tax

<table>
<thead>
<tr>
<th>Year</th>
<th>Profit After Tax (₹ in crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY12</td>
<td>3,255</td>
</tr>
<tr>
<td>FY13</td>
<td>4,235</td>
</tr>
<tr>
<td>FY14</td>
<td>4,497</td>
</tr>
<tr>
<td>FY15</td>
<td>4,979</td>
</tr>
<tr>
<td>FY16</td>
<td>6,027</td>
</tr>
</tbody>
</table>

CAGR: 20%
Journey (Last 5 years): Returns to Stakeholders

.... and enhanced Shareholder returns....

Earning Per Share & Book Value per Share

<table>
<thead>
<tr>
<th>Year</th>
<th>EPS</th>
<th>BV per share</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY12</td>
<td>50.73</td>
<td>7.03</td>
</tr>
<tr>
<td>FY13</td>
<td>56.62</td>
<td>9.15</td>
</tr>
<tr>
<td>FY14</td>
<td>65.78</td>
<td>9.36</td>
</tr>
<tr>
<td>FY15</td>
<td>72.71</td>
<td>9.52</td>
</tr>
<tr>
<td>FY16</td>
<td>81.43</td>
<td>11.52</td>
</tr>
</tbody>
</table>

Dividend for FY16: ₹ 2.31 per share (including ₹ 1.51 proposed)
Journey (Last 5 years): Project Efficiency

Increasing Capitalization & Efficient Project Mgmt.

**Thrust on Capitalization**

- FY12: 73%
- FY13: 86%
- FY14: 69%
- FY15: 97%
- FY16: 141%

**…and CWIP Management**

- FY12: 17,814
- FY13: 20,037
- FY14: 23,158
- FY15: 22,456
- FY16: 31,788

(Figures ₹ in crore)

Const. Stores & Advances

CWIP (Installed)

73% 86% 69% 97% 141%

17,701 21,037 21,479 39,882 33,951

15,574 19,115 16,409 12,879

(Figures ₹ in crore)
Journey (Last 5 years): Employee Efficiency

Increased Employee Productivity....

- Ckm/ Employee
- MVA/ Employee

....and Employee Efficiency

- Income/ Employee
- Profit/ Employee

(Figures ₹ in lakh)

10.1 11.2 12.3 13.5 15.0
13.5 18.5 23.7 27.1 29.7

117 150 181 208 247
35 48 52 58 70

Setting new benchmarks, year after year
Performance (FY16) – Consultancy Telecom CSR & Sustainability
Performance (FY16): Consultancy - Domestic

Income (incl. Intl. Business)
₹ 465 crore (22%↑)

Orders recd.: 27 Nos.
Project Cost of Orders.: ₹ 810 crore

Major Orders
- TS for Eastern DFCI;
- IPDS Implementation
- Line & S/S for East Central Railways

Ongoing Assignments: 115; Project Cost ₹ 14,826 crore (Balance Cost)

Major 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
Orders recd.: 4
Comml. Proposals submitted: 15
EOIs submitted: 19
New countries approached

Footprints: 18 countries

Major Highlights

✓ New Interconnections with Nepal & Bangladesh - accomplished
✓ Doshi & Charikar Sub-stations & associated lines in Afghanistan - completed
✓ Management Contract in Ethiopia - successfully completed

Ongoing Assignments: 13 Nos.

• 2nd Block of 1x500MW HVDC B2B Stn. at Bheramara
• CASA-1000 Project
• Assignments from ADB & World Bank in Nepal
• Trans. Infrastructure works in Kenya
Performance (FY16): Telecom

- Income: ₹ 392 crore (43%↑)
- 79 New Clients added [(Pvt. 42), Govt(37)]
- Total Order Book > ₹ 2100 crore

- Services provided: Dedicated Leased Lines, Internet, MPLS-VPN, Dark Fiber
- Clientele: Telcos, Govt. Deptts., PSUs & Private Cos., IT Cos.

- Infrastructure:
  - Fiber Optic Network: ~ 36,500km (~3,300 km added in FY16)
  - Points of Presence: 595 (233 Nos. added in FY16)
  - Backbone Availability: 100%

- Major Projects:
  - National Knowledge Network (NKN): Project completed & Under Operation
  - National Optic Fiber Network (NOFN): Work for 7,175 Gram Panchayats under progress - 4,120 Gram Panchayats connected
Performance (FY16): CSR & Sustainability

Major Thrust Areas for CSR

- Rural Development
- Skill Development
- Education
- Health
- Environment

Major CSR Projects undertaken in FY16

- Construction of ~9,500 toilets in ~4,250 schools in 7 States under ‘Swachh Bharat Mission’ of GoI
- Skill Development to more than 2000 youth
- Installation of Hand Pumps, Borewells & Solar Street Lights in villages
- Supply of Solar lanterns to 10,000 students in villages
- Scholarships to ~ 5,500 Students
- Supply of Aids and appliances to ~ 2000 persons with disabilities

Sustainability

- 50kWp Solar PV System commissioned at POWERGRID Corporate Center, Gurgaon
- POWERGRID Regional Hq. at Bengaluru – Green Building award from HUDCO
- Solar Plants & LED lights in new S/S Control Rooms
- Rain Water Harvesting in S/S
- 3rd Sustainability Report (A+ Rating) - Released
Projects Targeted for FY17
&
Status of TBCB Projects
Projects in FY17

Transmission Lines
- 15,000 GW-ckm

Major Lines
- Gaya-Varanasi, Varanasi-Kanpur-Jhatikara
- Pachkula-Patiala; Sikar-Jaipur
- Aurangabad-Boisar; Navsari-Boisar; Kala-Kudus
- Raipur PS - Wardha(2nd line), Wardha-Aurangabad
- Dehradun-Baghat, Roorkee-Saharanpur, Dehradun-Abdullapur
- Pasighat – Roing – Tezu - Namsai
- 800kV Champa-Kurukshetra HVDC
- Aurangabad-Padgha
- Mauda-Betul-Khandwa-Indore
- Wardha-Aurangabad (1200kV tower)
- Ranchi-Chandwa-Gaya
- Tiurnelveli-Tuticorin; Tuticorin-Salem-Madhugiri; Salem-Somnahalli; Madhugiri-Yelhanka
- Jabalpur-Orai-Aligarh
- Wardha-Nizamabad-Hyderabad
- Angul-Srikakulam;
- Dulhasti-Kishenpur-New Wanpoh
- Rajarhat-Purnea
- Singrauli-Allhabad-Kanpur; Lucknow-Kanpur
- LILOs- Pandiabil (Baripada-Mendhasal); Navi Mumbai (Lonikhand-Kalwa); NP Kunta (Kadapa-Kolar; Kadapa-Hindupur)

Sub-Stations
- 20 Nos.

Sub-stations
- NP Kunta
- Salem (Dharmapuri)
- Navi Mumbai (GIS)
- Kanpur (GIS)
- Pandiabil (GIS)
- Rajarhat (GIS)
- Saharanpur
- Bagpat (GIS)
- Dehradun
- Betul (GIS)
- Chandwa (GIS)
- Vemagiri (GIS)
- Srikakulam (GIS)
- Nizamabad
- Roing
- Tezu
- Namsai
- Alipurduar HVDC
- Champa HVDC
- Kurukshetra HVDC

Inter-Regional Capacity
- 12,300 MW

Inter-Regional
- Gaya-Varanasi
- Champa-Kurukshetra
- Angul-Srikakulam
- Wardha-Nizamabad
- Biswanath-Chariyali - Agra Pole-II
- Alipurduar – Agra

*Green font indicates assets commissioned in FY17*

# Initially envisaged as part of HVDC
# Status of TBCB Projects (upto Mar’16)

## Participation
- **23 Projects**

## Success
- **9 (39%)**

## Cost-wise [Annual Levelised Tr. Charges]
- ₹ 1643 crore (47%)

## SPV & Date of Incorporation | Completion | ALTC (₹ in cr.) | Current Status
---|---|---|---
POWERGRID NM Trans. Ltd. (Mar-12) | Oct-16 | 99 | Construction under Progress
POWERGRID Unchahar Trans. Ltd. (Mar-14) | Sep-16 | 17 | Construction under Progress
POWERGRID Kala Amb Trans. Ltd. (May-14) | Jul-17 | 59 | Construction under Progress
POWERGRID Jabalpur Trans. Ltd. (Feb-15) | Jul-18 | 211 | Construction under Progress
POWERGRID Warora Trans. Ltd. (Apr-15) | Nov-17 | 290 | Construction under Progress
POWERGRID Parli Trans. Ltd. (Apr-15) | Jan-18 | 257 | Construction under Progress
POWERGRID Southern I/C Trans. Ltd. (Dec-15) | Apr-19 | 359 | Construction under Progress
POWERGRID Vemagiri Trans. Ltd. (Apr-12) | --- | 120 | Project discontinued

[ALTC: Annual Levelised Trans. Charges]
Outlook, Investment Programme & Way Forward
Capacity addition for Apr17-Mar22 period

- Generation initially envisaged for the period ‘Apr17 to Mar22’ (i.e. FY18-FY22)
  - 86 GW (conventional)
  - 30 GW (Renewables)

- Reworking of Generation & Trans. Plan – under process by GoI
Power Sector Outlook (contd.)

For Renewables: Revised Target 175GW by 2022

<table>
<thead>
<tr>
<th>Solar- 100 GW</th>
<th>Wind- 60 GW</th>
<th>Others- 15 GW</th>
</tr>
</thead>
</table>

Solar: 100 GW
- Ultra Mega Solar Parks: 20 GW
- Rooftop: 40 GW
- Distributed: 40 GW

Solar Capacity Addn.- Year wise Targets
- Upto FY16: 6.7 GW (Actual as on 31.3.16)
- FY17: 12 GW
- FY18: 15 GW
- FY19: 16 GW
- FY20: 17 GW
- FY21 & FY22: 17.5 GW each

Driving Forces
- Thrust on Renewables
- 24x7 Power for All
- Sector Reforms like UDAY

Source: MNRE
### POWERGRID Outlook (as on Apr’16)

<table>
<thead>
<tr>
<th>Projects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing Projects</td>
<td>approx. ₹ 94,000 crore</td>
</tr>
<tr>
<td>New Projects</td>
<td>approx. ₹ 34,000 crore</td>
</tr>
<tr>
<td>TBCB Projects</td>
<td>approx. ₹ 16,000 crore (as per Empowered Committee Estimate)</td>
</tr>
</tbody>
</table>

**Total Works in Hand:** ₹ 1,44,000 crore (approx.)
Planned Investment (Apr12-Mar17)

**Planned Capital Outlay***

- ₹110,000 crore

**Annual Capex Plan**

- 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.

More than ₹ 88,200 crore achieved in first 4 years of XII Plan

**Contracts awarded**

- Cumulative since Apr’12 to Mar’16: ~ ₹ 71,500 crore including
  - ~ ₹ 22,600 crore in FY16

**Investments Approved**

- Cumulative since Apr’12 to Mar’16: ~ ₹ 58,850 crore including
  - Projects worth ~ ₹ 13,200 crore in FY16

[*Projects: Ongoing Projects; Tariff Based Bidding Projects; Projects assigned by GoI; Green Energy Corridors; Intra-State Projects; Transnational Interconnections]*
Way Forward

Strengthening the Core Transmission Business through

✓ Capital Efficiency
✓ Operational Efficiency
✓ Process Innovation

Tapping Opportunities in International Transmission Business through

✓ Consultancy
✓ EPC
✓ Asset Ownership (subsequently)

Increasing Telecom Business by

✓ Leveraging tower infrastructure
✓ Deploying 100G technology for future
Major Recognitions
Major Recognitions

Fastest Growing Electric Utility in Asia for 2nd successive year
Only Indian PSU in the Platts Top50 Fastest Growing Energy Companies 2015

• Source: Platts Top 250 Energy Company Rankings 2014 & 2015

POWERGRID – Only Indian Company among ‘One of the Best Three Asian Companies which host most constructive Analyst Days that professionals find most beneficial’

• Source: Institutional Investor Award: The 2015 All-Asia Best Analyst Day

4th Largest CPSE in terms of Gross Block for 2014-15
(An improvement to previous year)

• Source: PSE Survey for 2014-15 released by DPE, GoI