HIGHLIGHTS 2010-11

Growth in Capacity

- Installed capacity reaches 34,194 MW (including 3364 MW under JVs).
- Highest ever capacity addition of 2490 MW (including 500 MW in JV).
- 14,748 MW under construction at 15 locations.

![Year-wise capacity additions(MW)](chart)

First supercritical unit at Sipat (660 MW) synchronized.

Growth in Commercial Capacity

- 1600 MW declared commercial (including 610 MW under JV).
- Jhajjar Unit-1 and Dadri Unit- 6 declared commercial within CERC’s stipulated timeline making them eligible for additional ROE of 0.5%.

Long Term Growth Plans

- NTPC has prepared a Corporate Plan setting a target of becoming a 1,28,000 MW by 2032 with 28% capacity from non-fossil sources.
- NTPC is working on a basket of new projects of more than 45,000 MW for implementation.
- Government of India has approved allocation of 50% power to the home states from fourteen (14) power projects of NTPC, with total capacity of 35,680 MW.

Sustaining Market Leadership

- Highest ever generation of 220.54 BUs from NTPC units as against 218.84 BUs in 2009-10.
- NTPC’s share in country’s generation was 27.4% in 2010-11, with 17.75% of the national capacity.
**Generation target for 2011-12**

- MOU target of generating 235 BUs from NTPC units in the year 2011-12.

**World Class Capacity Utilization**

- Seven NTPC coal stations figure among the top 10 stations in the country in terms of PLF.
- Achieved Plant Load Factor (PLF) of 88.29% during 2010-11 (National PLF 75.07%).
- Three coal stations achieved PLF of over 95%, seven other stations achieved more than 90% PLF.

**Robust Financials**

- 100% realization of the billing for the eighth consecutive year.
- Provisional and un-audited Net Sales of Rs 14,488 crore in Q4 2010-11 as against Rs. 12,305 crore (unaudited) in Q4 2009-10, registering an increase of 17.74%. Provisional and un-audited Gross Revenue of Rs 15,106 crore in Q4 2010-11 as against Rs. 12,981 crore (unaudited) in Q4 2009-10, registering an increase of 16.37%.
- Provisional and un-audited Profit after tax for Q4 2010-11 is Rs.2,505.42 crore as compared to Rs.2,017.66 crore (unaudited) for Q4 2009-10, an increase of 24.17%.
- Provisional and un-audited Net Sales of Rs. 53,721 crore during 2010-11 as against Rs. 46,169 crore (audited) during 2009-10, registering an increase of 16.36%. The provisional and un-audited Gross Revenue is Rs.56,331 crore during 2010-11 as against Rs.49,247 crore (audited) for the year 2009-10, an increase of 14.38%.
- Provisional and un-audited Profit after tax for the year 2010-11 is Rs.8,826.16 crore as compared to Rs.8,728.2 crore (audited) during the year 2009-10, an increase of 1.12%.
- Interim dividend @ 30% amounting to Rs.2,473.64 crore paid during the year.
- Capital Expenditure of Rs.12,817.61 crore during 2010-11, an increase of 22.46% over the last year’s figure of Rs.10,467.13 crore. NTPC Group’s capital
expenditure was Rs. 16,326.58 crore as against Rs.14,334.54 crore over the last year, an increase of 14%

Approved outlay for 2011-12 for NTPC’s capital schemes is Rs.26,400 crore; for NTPC Group, the outlay is Rs.30,843.72 crore.

Contributed Rs.6,243.99 crore to exchequer on account of Corporate tax, Dividend and tax thereon and wealth tax, an increase of 92% over the previous year.

Shareholders’ Wealth

Among ten largest companies in India with a market cap of more than Rs.1,59,000 crore as on 31.03.2011.

Growing Stature

Awarded “Maharatna” status in May 2010. Gives NTPC power to make equity investments up to Rs.5,000 crore in JVs, wholly owned subsidiaries and for Mergers and Acquisitions, against a power of Rs.1,000 crore as a “Navratna”.


Ranked 341st largest company in the world as per Annual Ranking of top 2000 companies in the world by Forbes

“Excellent” rating under Government of India MOU for the year 2009-10.

Bulk Tendering

Award for 9 units of 660 MW bulk tendering under finalization

Bids invited for 9 units of 800 MW.

Coal Availability and Mining

Coal Linkages received for 9 new projects with a total capacity of 10,920 MW.

Agreement signed with STC for import of 12 MMT of coal.

Coal stock of NTPC stations is 5.35 MMT in March’ 11 [13.5 days’ stock].

Mine Developer and Operator appointed for Pakri Barwadih Coal Mining Block (311.7 Million MT over 27 years).

Focus on Renewables

NTPC Vidyut Vyapar Nigam (NVVN), designated as a nodal agency for phase-I of Jawahar Lal Nehru National Solar Mission, has signed Power Purchase Agreements for 704 MW.
105 MW of solar projects under development by NTPC.

175 MW of wind power capacities under development by NTPC.

**Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY)**

NTPC Electric Supply Company Ltd (NESCL) completed electrification of 4315 villages and provided 12.52 lakhs BPL connections.

**Leveraging Expertise**

During 2010-11, Consultancy Wing secured orders valued total Rs. 153.72 crore

Consultancy wing working on a capacity of more than 21,000 MW apart from 7690 MW of NTPC JV projects.

**Global Footprints**

**Bangladesh (1320 MW Project in JV):** Feasibility Report for the site at Khulna has been prepared by NTPC and sent to Bangladesh Power Development Board.

**Sri Lanka (500 MW Project in JV):** Joint Venture Agreement (JVA), Power Purchase Agreement and Board of Investment (BOI) agreement has been finalized. JVA will be signed after clearance from Sri Lankan authorities.

**Bhutan (620 MW Project):** NTPC is preparing the Detailed Project Report for Amochhu HEP in Bhutan (620 MW).

**Accolades**

Most Respected Company in the Power Sector 2011 by Businessworld.

PSU Excellence Award 2010 in the Best Financial Performance Category by Indian Chamber of Commerce and Department of Public Enterprises.

Award for “Best HR Strategy in line with Business” and award for “Talent Management” at the Asia Best Employer Brand Ceremony held at Singapore in 2010.

Ranked seventh in top 10 Great Places to Work for the year 2010 by Great Places to Work Institute’s India chapter in collaboration with Economic Times.

CII-ITC Sustainability Award - 2010 constituted by CII-ITC Centre of Excellence for Sustainable Development awarded to Talcher Thermal Power Station.

Shri Mishri Lal Choudhary, Senior Technician with NTPC –Anta received prestigious Prime Minister’s Shram Vir Award.
PERFORMANCE 2010-11

CAPACITY GROWTH

Additions during the year - 2490 MW:

<table>
<thead>
<tr>
<th>Project</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTPC Owned</td>
<td></td>
</tr>
<tr>
<td>Dadri, Unit # 6</td>
<td>490</td>
</tr>
<tr>
<td>Korba, Unit # 7</td>
<td>500</td>
</tr>
<tr>
<td>Farakka, Unit # 6</td>
<td>500</td>
</tr>
<tr>
<td>Simhadri, Unit-3</td>
<td>500</td>
</tr>
<tr>
<td>Under JVs</td>
<td></td>
</tr>
<tr>
<td>Jhajjar, Unit # 1</td>
<td>500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2490</strong></td>
</tr>
</tbody>
</table>

1600 MW declared commercial

<table>
<thead>
<tr>
<th>Project</th>
<th>Capacity (MW)</th>
<th>Commercial Operation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dadri, Unit # 6</td>
<td>490</td>
<td>31.07.2010</td>
</tr>
<tr>
<td>Kanti, Unit # 2</td>
<td>110</td>
<td>15.10.2010</td>
</tr>
<tr>
<td>Jhajjar, Unit # 1</td>
<td>500</td>
<td>05.03.2011</td>
</tr>
<tr>
<td>Korba, Unit # 7</td>
<td>500</td>
<td>21.03.2011</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1600</strong></td>
<td></td>
</tr>
</tbody>
</table>

MOU Target of 4320 MW for 2011-12

<table>
<thead>
<tr>
<th>Project</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sipat, Stage - I</td>
<td>1320 (2x660MW)</td>
</tr>
<tr>
<td>Jhajjar</td>
<td>1000 (2x500 MW)</td>
</tr>
<tr>
<td>Vallur</td>
<td>1000 (2x500MW)</td>
</tr>
<tr>
<td>Simhadri Stage - II</td>
<td>500</td>
</tr>
<tr>
<td>Mouda Stage - I</td>
<td>500*</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4320</strong></td>
</tr>
</tbody>
</table>

*Best efforts basis

Total Capacity Under Construction: 14,748 MW

<table>
<thead>
<tr>
<th>Project</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sipat-I (Coal), Chhattisgarh</td>
<td>1980</td>
</tr>
<tr>
<td>Indira Gandhi STPP - JV With HPGCL &amp; IPGCL (Coal), Haryana</td>
<td>1000</td>
</tr>
<tr>
<td>Simhadri-II (Coal), Andhra Pradesh</td>
<td>500</td>
</tr>
<tr>
<td>Vallur (Phase -I &amp; Phase –II) (Coal) - JV With TNEB, Tamil Nadu</td>
<td>1500</td>
</tr>
<tr>
<td>Mouda-I (Coal), Maharashtra</td>
<td>1000</td>
</tr>
<tr>
<td>Rihand-III (Coal), Uttar Pradesh</td>
<td>1000</td>
</tr>
<tr>
<td>Vindhyachal-IV (Coal), Madhya Pradesh</td>
<td>1000</td>
</tr>
<tr>
<td>Bongaigaon (Coal), Assam</td>
<td>750</td>
</tr>
<tr>
<td>Barh –I (Coal), Bihar</td>
<td>1980</td>
</tr>
<tr>
<td>Barh-II (Coal), Bihar</td>
<td>1320</td>
</tr>
</tbody>
</table>
Projects for which bids invited: 16,192 MW

- Nine 660 MW units under bulk tendering (award under finalisation):

<table>
<thead>
<tr>
<th>Projects</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solapur (2x660)</td>
<td>1320</td>
</tr>
<tr>
<td>Meja (2x660)</td>
<td>1320</td>
</tr>
<tr>
<td>Mouda-II (2x660)</td>
<td>1320</td>
</tr>
<tr>
<td>Nabinagar (3x660)</td>
<td>1980</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5940</strong></td>
</tr>
</tbody>
</table>

- Nine 800 MW units under bulk tendering

<table>
<thead>
<tr>
<th>Projects</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lara (2X800)</td>
<td>1600</td>
</tr>
<tr>
<td>Darlipalli (2X800)</td>
<td>1600</td>
</tr>
<tr>
<td>Kudgi (3X800)</td>
<td>2400</td>
</tr>
<tr>
<td>Gajmara (2X800)</td>
<td>1600</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7200</strong></td>
</tr>
</tbody>
</table>

- Other thermal projects:

<table>
<thead>
<tr>
<th>Projects</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanda (2X660)</td>
<td>1320</td>
</tr>
<tr>
<td>Unchahar (1X500)</td>
<td>500</td>
</tr>
<tr>
<td>Vindhyachal-V (1X500)</td>
<td>500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2320</strong></td>
</tr>
</tbody>
</table>

- Hydro projects:

<table>
<thead>
<tr>
<th>Projects</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lata Tapovan (3X57)</td>
<td>171</td>
</tr>
<tr>
<td>Ramman – III (3X40)</td>
<td>120</td>
</tr>
<tr>
<td>Rupsiyabagar</td>
<td>261</td>
</tr>
<tr>
<td>Khasiyabara (3X87)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>552</strong></td>
</tr>
</tbody>
</table>

- Renewable projects:

<table>
<thead>
<tr>
<th>Projects</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind- Modurgudda, Karnataka</td>
<td>36</td>
</tr>
<tr>
<td>Wind- Chakala, Maharashtra</td>
<td>39</td>
</tr>
<tr>
<td>Wind-Guledagudda- Karnataka</td>
<td>100</td>
</tr>
<tr>
<td>Solar-Dadri</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>180</strong></td>
</tr>
</tbody>
</table>

Further, projects for which FR approved: 17,680 MW
ENVIRONMENT CLEARANCE

Environment clearance of MOEF obtained for all 660MW Bulk tendered projects viz. Solapur(2x660MW), Mouda-II(2x660MW), Meja JV(2x 660MW, Nabinagar JV(3x660MW).

NEW BUSINESS INITIATIVES

JV with Nuclear Power Corporation of India (NPCIL): JV Company between NPCIL (equity-51%) and NTPC (equity-49%), named “Anushakti Vidhyut Nigam Ltd” has been incorporated on 27.01.2011 to set up Nuclear Power Project(s).

JV with ADB for Renewable: JVA has been signed (24.11.2010) amongst NTPC, ADB and Kyuden International Corporation (a wholly owned subsidiary of Kyushu Electric Power Company Inc.), for Establishment of Power Generation capacity of about 500 MW through Renewable Energy Sources. The Joint Venture Company is under incorporation.


OPERATIONAL PERFORMANCE

Seven NTPC coal stations figure among the top 10 stations in the country in terms of PLF:

<table>
<thead>
<tr>
<th>Station</th>
<th>Capacity</th>
<th>Rank</th>
<th>PLF (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dahanu</td>
<td>500</td>
<td>1</td>
<td>101.0</td>
</tr>
<tr>
<td>OP Jindal, Raigarh</td>
<td>1000</td>
<td>2</td>
<td>98.0</td>
</tr>
<tr>
<td>Singrauli</td>
<td>2000</td>
<td>3</td>
<td>96.5</td>
</tr>
<tr>
<td>Sipat</td>
<td>1000</td>
<td>4</td>
<td>96.5</td>
</tr>
<tr>
<td>Torangallu (JINDAL)</td>
<td>860</td>
<td>5</td>
<td>96.2</td>
</tr>
<tr>
<td>Simhadri</td>
<td>1000</td>
<td>6</td>
<td>96.1</td>
</tr>
<tr>
<td>Vindhyachal</td>
<td>3260</td>
<td>7</td>
<td>94.6</td>
</tr>
<tr>
<td>Talcher Th.</td>
<td>460</td>
<td>8</td>
<td>94.2</td>
</tr>
<tr>
<td>Unchahar</td>
<td>1050</td>
<td>9</td>
<td>93.3</td>
</tr>
<tr>
<td>Rihand</td>
<td>2000</td>
<td>10</td>
<td>93.1</td>
</tr>
</tbody>
</table>

Generation from NTPC units increased by around 1% to 220.54 BU from 218.84 BU in 2009-10.

Average PLF of NTPC coal stations was 88.29%. Singrauli Power Station achieved the highest PLF of 96.54%
First stage of Singrauli Super Thermal Power Station (5X200 MW) achieved best ever PLF of 101.11%.
Out of fifteen coal stations, three stations have achieved PLF of more than 95% and seven other stations achieved PLF of more than 90%.
Average PLF of gas stations was 71.77%.
Coal Stations of NTPC achieved an Availability of 91.6% against 91.4% achieved in 2009-10.

Sustaining Market Leadership:

<table>
<thead>
<tr>
<th></th>
<th>2010-11</th>
<th>2009-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total electricity available in the country</td>
<td>811.104 BUs</td>
<td></td>
</tr>
<tr>
<td>Electricity import from Bhutan</td>
<td>5.61 BUs</td>
<td></td>
</tr>
<tr>
<td>Total Electricity Generation in the Country</td>
<td>805.494 BUs</td>
<td></td>
</tr>
<tr>
<td>Total Generation from NTPC</td>
<td>220.54 BUs</td>
<td></td>
</tr>
<tr>
<td>NTPC’s share in total electricity generation in the country</td>
<td>27.40%</td>
<td></td>
</tr>
</tbody>
</table>

FUEL SUPPLY SCENARIO

<table>
<thead>
<tr>
<th></th>
<th>Receipt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010-11</td>
</tr>
<tr>
<td>Coal</td>
<td></td>
</tr>
<tr>
<td>Coal – Domestic</td>
<td>126.64 MMT</td>
</tr>
<tr>
<td>Coal - Imported</td>
<td>10.56 MMT (Eq.domestic coal: 17 MMT)</td>
</tr>
<tr>
<td>Total</td>
<td>137.2 MMT (Eq. domestic coal: 143.64 MMT)</td>
</tr>
<tr>
<td>Gas</td>
<td></td>
</tr>
<tr>
<td>Gas – APM+PMT</td>
<td>9.00 MMSCMD</td>
</tr>
<tr>
<td>Gas – Long Term/ Fallback/ Spot RLNG</td>
<td>2.86 MMSCMD</td>
</tr>
<tr>
<td>Gas - KG D6</td>
<td>1.91 MMSCMD</td>
</tr>
<tr>
<td>Total</td>
<td>13.77 MMSCMD</td>
</tr>
</tbody>
</table>

Coal

Coal Linkages received for 9 new projects with a total capacity of 10,920 MW.
Agreement signed with STC for import of 12 MMT of coal.
Bids being invited for direct import of 4 MMT of coal.
Coal stock of NTPC stations is 5.35 MMT in March’ 11 [13.5 days' stock].

Coal Mine Development

Mine Developer cum Operator appointed at Pakri Barwadih.

Coal Block Acquisition Abroad
Proposals received by NTPC for acquisition of coal mines abroad from Investment bankers as well as mine owners from countries like Indonesia, South Africa, Mozambique and Australia are under review.

International Coal Ventures Private Limited (ICVL), a Joint Venture Company amongst SAIL, CIL, RINL, NMDC and NTPC is pursuing coal opportunities in Australia, Mozambique, USA, South Africa and Indonesia.

**FINANCIAL PERFORMANCE**

Provisional and un-audited Net Sales of Rs 14,488 crore in Q4 2010-11 as against Rs. 12,305 crore (unaudited) in Q4 2009-10, registering an increase of 17.74%. Provisional and un-audited Gross Revenue of Rs 15,106 crore in Q4 2010-11 as against Rs. 12,981 crore (unaudited) in Q4 2009-10, registering an increase of 16.37%.

Provisional and un-audited Profit after tax for Q4 2010-11 is Rs.2,505.42 crore as compared to Rs.2,017.66 crore (unaudited) for Q4 2009-10, an increase of 24.17%.

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![Robust Topline Growth](image)

Provisional and un-audited Profit after tax for the year 2010-11 is Rs.8,826.16 crore as compared to Rs.8,728.2 crore (audited) during the year 2009-10, an increase of 1.12%.

![Robust Bottomline Growth](image)
Approved outlay for 2011-12 for NTPC’s capital schemes is Rs. 26,400 crore; for NTPC Group, the outlay is Rs.30,843.72 crore.

Capital Expenditure of Rs.12,817.61 crore during 2010-11, an increase of 22.46% over the last year’s figure of Rs.10,467.13 crore. NTPC Group’s capital expenditure was Rs. 16,326.58 crore as against Rs.14,334.54 crore over the last year, an increase of 14%

FII’s holding increased to 3.53% as on 31.03.2011 from 2.55% on 31.03.2010. NTPC’s scrip closed at Rs. 193.10 at the end of the financial year at National Stock Exchange.

Declared an interim dividend of Rs. 3/- per equity share having face value of Rs. 10/- being 30% of paid-up capital translating into a dividend payout of Rs.2,473.64 crore.

Contributed Rs.6,243.99 crore to exchequer on account of corporate tax (Rs. 3,074.40 crore), dividend (Rs. 2,647.60 crore), dividend distribution tax (Rs. 518.07 crore) and wealth tax (Rs. 3.92 crore).

New loans aggregating to Rs.3,479 crore tied up with domestic Banks and other Financial institutions during 2010-11 including Rs.2,000 crore from HUDCO and Rs.1,000 crore from HDFC Bank. Cumulative loans of Rs.52,787.35 crore tied up so far.

A bilateral loan facility of USD 300 million tied up with the Bank of Tokyo-Mitsubishi UFJ, Ltd, Singapore.

Five series of Bonds on Private Placement basis issued to eligible Institutions aggregating Rs.720 crore:

Out of the five Series of Bonds issued during the year, four Series of Bonds aggregating to Rs. 420 crore have been issued to Army Group Insurance Fund (AGIF) under the Funding Line extended by AGIF for Rs.1,200 crore.

Outstanding amount of Bonds as on 31.03.2011 is Rs.9,570 crore as against total amount of Rs.14,755.35 crore raised so far.

**Public Deposits**

Interest rates of Public Deposit Schemes were revised upwards with effect from 24.09.2010. The present interest rates are 6.50%, 6.75% and 7.00% for 1 year, 2 years and 3 years schemes respectively. As on 31.03.2011, there are 244 deposit holders with outstanding deposit amount aggregating to Rs.13.26 crore.

**COMMERCIAL PERFORMANCE**

100% realization of billing for the eighth consecutive year.

All beneficiaries are maintaining LCs corresponding to 105% of their average monthly billing.

Government of India has approved allocation of 50% power to the home states from fourteen (14) power projects of NTPC, with total capacity of 35,680 MW.

Jhajjar Unit-1 and Dadri Unit- 6 declared commercial within CERC’s stipulated timeline making them eligible for additional ROE of 0.5%.

CERC has issued tariff orders allowing additional capitalization of about Rs.612 crore for the period 2004-09 during 2010-11.

An amount of Rs 1,699.32 crore was received towards redemption of State Government Bonds and long term advance of Delhi. An interest of Rs 896.38 crore was also received as per the one time settlement scheme.
Under Customer Relationship Management Programme, 68 customer support workshops conducted and training facilities extended to 156 officials of state utilities free of cost.

CONTRACTS MANAGEMENT

Bids invited for bulk ordering of 9 units of 800 MW.
Corporate Contracts amounting to total value of more than Rs. 2,400 crore were awarded which included 57 contracts for NTPC and 14 contracts on behalf of JV Companies.
Letter of Intent issued for Turbine Generator package for 660 MW Bulk tendering projects at Solapur, Mouda-II and Meja.
Award for ‘Mine Developer and Operator Package’ for Development and Operation of Pakri Barwadih Coal Mining Block.
19 contracts have also been awarded for supply of RLNG on delivery basis for NTPC’s gas projects.

STRATEGIC INITIATIVES

For Faster Project Execution
- Empowering Regions/ Sites and restructuring of Regions
- Revision of Delegation of Power
- New Project formulation methods
- Vendor enlistment
- Diversifying vendor base

Technology Roadmap up to 2032
NTPC has drawn a long term technology roadmap up to 2032 which involves development, adoption and promotion of safe, efficient and clean technologies for entire value chain of power generation business.
Some of the target technologies are:
- Setting up of Coal Fired Units with Ultra Supercritical Parameters targeting efficiency comparable to the best available technology in the world.
- Establishment of Indian Coal Based Gasifier & Gas cleaning System for IGCC, development of 100MW IGCC power block and subsequent scaling up to higher capacities.
- No sub-critical technology power plant shall be ordered from 12th Plan onwards.

DEALING WITH CLIMATE CHANGE

By 2032, NTPC targets to have 28% of its installed capacity from non-fossil sources.
Implementing high efficiency super critical technologies.

Focus on non-fossil sources of energy
- Currently implementing 1320 MW hydro capacity
  - Koldam - 800 MW
  - Tapovan Vishnugad - 520 MW
NTPC Vidyut Vyapar Nigam (NVVN), designated as a nodal agency for phase-I of Jawahar Lal Nehru National Solar Mission, has signed Power Purchase Agreements for 704 MW.

105 MW of solar projects under development.
- 5 MW Solar PV project at NTPC Dadri project is under award stage.
- Bids being invited shortly for 5 MW solar projects at Port Blair, Andaman and Nicobar islands.
- Bids being invited for 15MW solar energy project in Anta.
- Detailed Project Report under preparation for a combined capacity of 75 MW solar projects at Singrauli, Ramagundam, Unchahar, Korba and Faridabad.
- To promote solar power, GoI has allocated 105 MW of comparatively cheaper power from the Government’s unallocated quota in the upcoming coal based power projects for bundling with solar power.

175 MW of wind power capacities under development
- Wind energy projects at Chakla, Maharashtra (39 MW) and Modurgudda, Karnataka (36 MW) are under award stage. PPA signed with Karnataka and Maharashtra.
- Bids invited for 100 MW wind energy projects at Guledagudda, Karnataka.

Development of Advance Ultra Super Critical technology
- Under National Mission on Clean Coal (Carbon) Technologies, NTPC, BHEL and Indira Gandhi Centre for Advanced Research (IGCAR) have entered into MOU for indigenous development of advance ultra super critical technology which will have enhanced efficiency in the range of 45-47% and about 15-17% less CO₂ emission as compared to conventional 500 MW sub-critical thermal power plants.

Reduction in GHG emissions
- Since inception of Centre for Power Efficiency & Environmental Protection (CenPEEP), more than 30 MMT of CO₂ has been avoided in NTPC.

Energy Conservation
- In the year 2010-11, NTPC carried out 96 energy audits in different power plants, which resulted in savings amounting to approx Rs.31 crore.

Creation of Green Wealth
- The company has been undertaking massive afforestation in and around its projects. Till date more than 19 million trees have been planted.
- The afforestation has not only contributed to the aesthetics but also helps in carbon sequestration by serving as a ‘sink’ for the pollutants released from the stations and thereby protecting the quality of ecology and environment in and around the projects.

GLOBAL FOOTPRINTS

Bangladesh- 1320 MW coal based Project in Khulna
- NTPC Board has approved the Joint Venture Agreement (JVA) with Bangladesh Power Development Board (BPDB) and it is likely to be signed soon.
- Feasibility Report for the site at Khulna has been prepared by NTPC and sent to BPDB.
Sri Lanka (2x250 MW Coal based Power Project in Trincomalee, Sri Lanka)

Joint Venture Agreement (JVA), Power Purchase Agreement (PPA) and Board of Investment (BOI) Agreement have been finalized. JVA will be signed after getting clearance from Sri Lankan authorities.

Ceylon Electricity Board (CEB) has already acquired land at Sampur.

Bhutan (620 MW Hydro Project):


Site specific surveys and investigations are under process and the Detailed Project Report is in advanced stage of finalization.

CONSULTANCY SERVICES

Consultancy wing is working on a capacity of more than 21,000 MW apart from 7690 MW of NTPC JV projects.

Provisional Gross Income of Rs.166 crore (9.71% increase from last year) and provisional net profit of Rs.56 crore.

Orders secured for Rs.153.72 crore, including 14 overseas orders.

Received two orders valued at Rs. 1.06 crore each to provide consultancy Services to BPDB for preparation of Feasibility report for 1000 -1320 MW (2X500 MW - 2X660 MW) capacity imported coal based Power Plants in Khulna & Chittagong, Bangladesh.

NTPC ENERGY TECHNOLOGY RESEARCH ALLIANCE (NETRA)

Robotic mechanism for Boiler inspection developed, patent filed.

Solar heating mechanism for Air conditioning plant being set up.

100 TR air conditioning plant based on waste heat recovery from flue gas being established.

Artificial Neural Network (ANN) based advisory systems developed and deployed for enhancing power plant efficiency and optimizing water chemistry.

International patent filed on CO₂ absorption based on pressure swing adsorption technology, using Zeolite developed for the project.

MOU signed with KfW, Germany for undertaking research studies on Solar and setting up solar research station at NETRA.

Setting up of solar thermal R&D test platform for demonstration and validation of solar thermal power generation technologies.

ASH UTILISATION

During the year 2010-11, about 26.028 MMT of ash has been utilized for various productive purposes which is 55.14% of the total ash generation against MOU target of 55%.

Major beneficiary of fly ash utilization has been Cement and Concrete Industry which has utilized 9.879 MMT fly ash.

Mega Fly Ash Brick Manufacturing Plants with capacity “One Lac Bricks per day” have also been commissioned at Sipat and Dadri.

1.18 MMT of ash from Talcher-Thermal has been utilized for filling of abandoned South Balanda coal mine of MCL in Odisha during 2010-11.

Ash is also being exported from NTPC stations in Simhadri and Unchahar.
**HUMAN RESOURCE MANAGEMENT**

- Total employee strength is 25,144 as on 31.03.2011, as against 24,955 on 31.03.2010 (including employees in JVs & Subsidiaries).
- Man-MW ratio improved to 0.77 from 0.80 in the previous year.
- During 2010-11, 938 fresh professionals joined including 379 through campus recruitment from IITs/NITs; to recruit about 1200 fresh professionals during 2011-12.

**UPDATES ON JVs and SUBSIDIARIES**

**NTPC Vidyut Vyapar Nigam Ltd.**

- Transacted a business of 6933 MUs of power in 2010-11 as against 5549 MUs in 2009-10.
- Sold 23 Lakh MT of Fly Ash and 600 MT of Cenosphere.
- Under JNNSM, NVVN has signed Power Purchase Agreements for 704 MW.
  - Projects under Migration Scheme (Solar PV – 54 MW, Solar Thermal – 30 MW)
  - PPA signed with 16 Solar Power Developers on 15th October 2010
- New Projects (Solar PV – 150 MW, Solar Thermal – 470 MW)
  - PPA with thirty six selected Solar Power Developers signed by 10th January 2011.
  - PSA signed with Discoms of Andhra Pradesh, Karnataka, West Bengal, Rajasthan, Odisha, Punjab and Uttar Pradesh by 7th February 2011.

**NTPC Electric Supply Company Limited.**

- Under Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY), NESCL is carrying out the implementation in 29 districts in 5 states (Madhya Pradesh, Chhattisgarh, Odisha, Jharkhand and West Bengal). 4315 Un-electrified/De-electrified (UE/DE) villages were made ready and 12.52 Lakh Below Poverty Line (BPL) Rural house hold connections were provided during the financial year 2010-11. The cumulative achievement till 2010-11 is 14408 UE/DE villages and 23.07 Lakh BPL connections.
- Kinesco Power and Utilities Private Limited (a JV between NESCL and KINFRA) has completed one year of operations. The energy sales were 46.17 MUs with T&D loss of 1% and reliability index of 99.93.
Government of Kerala has confirmed their willingness to allocate land on lease basis for setting up of 40 MW wind power project by Kinesco.

**Kanti Bijlee Utpadan Nigam Ltd.**

- Unit # 2 of 110 MW declared commercial in October 2010.

**NTPC-BHEL Power Projects Pvt. Ltd.**

- NBPPPL has entered into a technology collaboration agreement with Dearborn Mid West Conveyor Company, USA for Coal Handling Plant (CHP).
- Discussions are going on with United Conveyor Company, USA for technology tie-up for Ash Handling Plant (AHP).
- NBPPPL received LOI from BHEL for BOP and Civil Works of NEEPCO 100 MW Gas Power Plant.

**Ratnagiri Gas & Power Pvt. Ltd.**

- Record generation of 11877 MUs achieved during the year.

**CORPORATE SOCIAL RESPONSIBILITY**

**Promoting Employability:**
- Adopted 18 ITIs and taking up start of 8 new ITIs at various locations to bridge the skill gap in the power sector; created 1209 extra seats in ITIs. 3919 persons trained at these ITIs during 2010-11.
- Solapur Power Training Institute (SPTI) being established in collaboration with NPTI for imparting specialized training in power sector.
- Financial assistance to Ramakrishna Mission for conducting various activities under the banner “Awakening India” heralding the 150th Birth Anniversary celebration of Swami Vivekananda.
- Financial contribution for construction of houses in Leh which were destroyed by cloudburst in August 2010.
- NTPC Foundation has set up Information and Communication Technology Centre (ICT) at University of Delhi, Lucknow, Ajmer, Thiruvananthapuram and Mysore where more than 950 differently abled students have already benefited.
- Installation of 14 High Mast Lights in and around villages of NTPC Kahalgaon and 2 High Mast Lights in Behrampore villages of NTPC Farakka.
- Financial assistance for construction of one floor each for girls from rural areas studying in colleges in Guntur district of AP.

**Preserving Heritage:** NTPC has signed MOU with Archaeological Survey of India (ASI) and National Culture Fund (NCF) to provide financial support for conservation of 3 identified sites.
- Group of monuments at Mandu (MP),
- Group of temples Jageshwar (Uttarakhand) and
- Archaeological Site Lalitgiri/ Dhauli (Odisha).

**AWARDS & ACCOLADES**

- Most Respected Company in the Power Sector 2011 by Businessworld.
- Ranked No. 1 Independent Power Producer in Asia and 2nd in the world in the Platts Top 250 Global Energy Company list for 2010.
- Ranked 341st in Annual Ranking of top 2000 companies in the world by Forbes.
PSU Excellence Award 2010 in the Best Financial Performance Category by Indian Chamber of Commerce and Department of Public Enterprises.
Award for “Best HR Strategy in line with Business” and award for “Talent Management” at the Asia Best Employer Brand Ceremony held at Singapore in 2010.
HR Excellence Award for PSU Sector for Innovative HR Practices at the Star TV Talent Leadership and HR Awards.
Ranked seventh in top 10 Great Places to Work for the year 2010 by Great Places to Work Institute’s India chapter in collaboration with Economic Times. Also ranked 1st among large organization with over 10,000 employees, 1st in the Public Sector Enterprises segment and 1st in the Manufacturing and Production Industry Segment. NTPC has continuously been part of the Best Workplaces List for last six years.
SCOPE Excellence Award to Shri Arup Roy Choudhury, CMD, NTPC for his outstanding contribution to the public sector management.
Shri A.K. Singhal, Director (Finance) NTPC has been selected for CFO 100 Roll of Honour in recognition of his exceptional contribution to Corporate Finance.
National Capital Thermal Power Project, Dadri awarded the Golden Peacock Environment Management Award for the year 2010.
Shri Mishri Lal Choudhary, Senior Technician with NTPC –Anta received prestigious Prime Minister’s Shram Vir Award by the Ministry of Labour & Employment.
Twelve employees at NTPC’s Ramagundam Station have received Vishwakarma Rashtriya Puraskar-2008 by Ministry of Labour & Employment.
CII-ITC Sustainability Award - 2010 constituted by CII-ITC Centre of Excellence for Sustainable Development awarded to Talcher Thermal Power Station.
CII-Exim Bank Excellence Award has conferred Commendation for Anta and Korba stations for “Strong Commitment to Excel” and Commendation for “Significant Achievement” for Dadri Station.
### Subsidiaries

<table>
<thead>
<tr>
<th>Particulars</th>
<th>NTPC Electric Supply Co. Limited</th>
<th>NTPC Vidyut Vyapar Nigam Limited</th>
<th>NTPC Hydro Limited</th>
<th>Kanti Utpadan Nigam Limited</th>
<th>Bijlee Rail Bijlee Company Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Extent of NTPC holding</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>64.57%</td>
<td>74%</td>
</tr>
<tr>
<td>2 Provisional and unaudited financial results for FY-2010-11</td>
<td>Total Income: Rs. 68.91 crore PAT: Rs 7.97 crore.</td>
<td>Total Gross Margin: Rs. 28.30 crore PAT: Rs 25.70 crore.</td>
<td></td>
<td>Total Income: Rs. 37.30 crore PAT: Rs (-)18.43 crore.</td>
<td></td>
</tr>
<tr>
<td>3 Performance for the year 2010-11</td>
<td>Under RGGVY 12.36 lakhs BPL rural households have been electrified.</td>
<td>NVVN has transacted a business of 6933 MUs of power in 2010-11 Sold 23 Lakhs MT of Fly Ash through tendering and 600 MT of Cenosphere through e-auction. Under JNNSM, NVVN has signed Power Purchase Agreements for 704 MW</td>
<td>LATA – TAPOVAN HEP (171 MW capacity) and RAMMAM Stage-III HEP (120 MW capacity) - Hydro Mechanical Works and EM Packages under tendering process in both the projects</td>
<td>Stage-1: Unit # 2 of 110 MW declared commercial in October 2010.</td>
<td>PPA signed on 16.12.2010. Loan agreement with REC signed on 23.03.2011.</td>
</tr>
</tbody>
</table>

Note: Subsidiary Pipavav Power Development Company Limited has been wound up during 2010-11
### JOINT VENTURES UNDER COMMERCIAL OPERATION

<table>
<thead>
<tr>
<th>Name of the JV Company</th>
<th>Promoter’s Equity Holding as on 31.3.2011</th>
<th>Area(s) of Operation</th>
<th>Performance during 2010-11</th>
</tr>
</thead>
</table>
| **1 Utility Powertech Limited (UPL)** | NTPC 50% | To take up assignments of construction, erection and supervision in power sector and other sectors in India and abroad. | • Provisional un-audited Total Income Rs. 304.4 crore  
• Provisional un-audited PAT Rs 5.29 crore |
|  
|  
| NTPC 50% | To own and operate a capacity of 814 MW mostly as captive power plants for SAIL’s steel manufacturing facilities located at Durgapur, Rourkela and Bhilai. | • Provisional un-audited Total Income Rs.2000 crore  
• Provisional un-audited PAT Rs 260 crore |
| **2 NTPC-SAIL Power Company Pvt. Ltd.** | NTPC 50% | To take up Renovation & Modernization assignments of power plants both in India and abroad. | • Provisional un-audited Total Income Rs. 28.4 crore  
• Provisional un-audited PAT Rs. 0.98 crore |
|  
| SAIL 50% | Operating gas based Dabhol Power Project. | • Provisional Unaudited Total Income : Rs. 4484 crore  
• Provisional Unaudited PAT: Rs. 526 crore. |
| **3 NTPC-Alstom Power Services Private Limited** | NTPC 50% | To take up assignments of power plants both in India and abroad. | • Provisional un-audited Total Income Rs. 2000 crore  
• Provisional un-audited PAT Rs 260 crore |
|  
| Alstom Power Generation AG 50% | Operating gas based Dabhol Power Project. | • Provisional Unaudited Total Income : Rs. 4484 crore  
• Provisional Unaudited PAT: Rs. 526 crore. |
| **4 Ratnagiri Gas & Power Pvt. Limited** | NTPC 30.17% | Operating gas based Dabhol Power Project. | • Provisional Unaudited Total Income : Rs. 4484 crore  
• Provisional Unaudited PAT: Rs. 526 crore. |
|  
| GAIL 30.17% | Operating gas based Dabhol Power Project. | • Provisional Unaudited Total Income : Rs. 4484 crore  
• Provisional Unaudited PAT: Rs. 526 crore. |
|  
| MSEBs 17.89% | Operating gas based Dabhol Power Project. | • Provisional Unaudited Total Income : Rs. 4484 crore  
• Provisional Unaudited PAT: Rs. 526 crore. |
|  
| IFIs 21.77% | Operating gas based Dabhol Power Project. | • Provisional Unaudited Total Income : Rs. 4484 crore  
• Provisional Unaudited PAT: Rs. 526 crore. |
| **5 Transformers & Electricals Kerla Ltd. (TELK)** | NTPC 44.6% | For designing and manufacturing Extra High Voltage Electrical equipments in India and manufacturing high capacity transformers | • Provisional Unaudited Total Income : Rs. 192 crore  
• Provisional Unaudited PAT: Rs. 16 crore  
• TELK declared dividend @ 20 % for the year 2009-10 after a gap of 30 years.  
• Production of 5168 MVA during 2010-11 against 5081 MVA in 2009-10. |
|  
| Government of Kerla 55.3% | For designing and manufacturing Extra High Voltage Electrical equipments in India and manufacturing high capacity transformers | • Provisional Unaudited Total Income : Rs. 192 crore  
• Provisional Unaudited PAT: Rs. 16 crore  
• TELK declared dividend @ 20 % for the year 2009-10 after a gap of 30 years.  
• Production of 5168 MVA during 2010-11 against 5081 MVA in 2009-10. |
|  
| Others 0.1% | For designing and manufacturing Extra High Voltage Electrical equipments in India and manufacturing high capacity transformers | • Provisional Unaudited Total Income : Rs. 192 crore  
• Provisional Unaudited PAT: Rs. 16 crore  
• TELK declared dividend @ 20 % for the year 2009-10 after a gap of 30 years.  
• Production of 5168 MVA during 2010-11 against 5081 MVA in 2009-10. |
| **6 Aravalli Power Company Private Ltd.** | NTPC 50% | To set up coal based power Project of 1500 MW (3x500 MW), in Jhajjar District of Haryana. NTPC would also operate and maintain the station on Management Contract basis for at least 25 years. | • Unit-I of 500 MW declared commercial on 05.03.2011  
• Provisional Unaudited Total Income : Rs. 54.16 crore  
• Provisional Unaudited PAT: (-) Rs.44.39 crore. |
|  
| Indraprastha Power Generation Co. Ltd. 25% | To set up coal based power Project of 1500 MW (3x500 MW), in Jhajjar District of Haryana. NTPC would also operate and maintain the station on Management Contract basis for at least 25 years. | • Unit-I of 500 MW declared commercial on 05.03.2011  
• Provisional Unaudited Total Income : Rs. 54.16 crore  
• Provisional Unaudited PAT: (-) Rs.44.39 crore. |
|  
| Haryana Power Generation Corp. Ltd. 25% | To set up coal based power Project of 1500 MW (3x500 MW), in Jhajjar District of Haryana. NTPC would also operate and maintain the station on Management Contract basis for at least 25 years. | • Unit-I of 500 MW declared commercial on 05.03.2011  
• Provisional Unaudited Total Income : Rs. 54.16 crore  
• Provisional Unaudited PAT: (-) Rs.44.39 crore. |

### OTHER JOINT VENTURES

<table>
<thead>
<tr>
<th>Name of the JV Company</th>
<th>Promoter’s Equity Holding as on 31.3.2011</th>
<th>Area(s) of Operation</th>
<th>Performance during 2010-11</th>
</tr>
</thead>
</table>
| **1 NTPC Tamil Nadu Energy Company Ltd.** | NTPC 50% | To set up a coal-based power station of 1500 MW capacity, at Vallur, using Ennore port infrastructure facilities. | • Erection works in progress.  
• Two units planned for commissioning in 2011-12. |
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Company Name</th>
<th>Subsidiary/ Affiliate</th>
<th>Equity Share</th>
<th>Purpose</th>
<th>Remarks</th>
</tr>
</thead>
</table>
| 2      | Meja Urja Nigam Private Limited                 | NTPC                  | 50%          | To set-up a power plant of 1320 MW (2X660 MW) at Meja Tehsil in Allahabad district in the state of Uttar Pradesh. | • Infrastructure work in progress.  
• LOI issued for TG package.  
• Environmental clearance received from MOEF |
| 3      | NTPC BHEL Power Projects Pvt Ltd.               | NTPC                  | 50%          | To carry out Engineering Procurement and Construction (EPC) activities in the power sector and to engage in manufacturing and supply of equipment for power plants and other infrastructure projects in India and Abroad. | • Provisional Unaudited Total Income : Rs. 115 crore  
• Provisional Unaudited PAT: Rs. 10 crore.  
• Foundation stone laid for Power Equipment Manufacturing Plant at Mannavaram in Sept’2010 |
| 4      | BF-NTPC Energy Systems Limited                  | NTPC                  | 49%          | To establish a facility to take up manufacturing of castings, forgings, fittings and high pressure piping required for power projects and other industries, Balance of Plant (BOP) equipment for the power sector. | • 90.17 acres Land acquired at Solapur for setting up the factory  
• Award of topography & geotechnical works for the site is expected shortly. |
| 5      | Nabinagar Power Generating Company Private Limited | NTPC                  | 50%          | To set-up a coal based power project having capacity of 1980 MW (3X660 MW) and operation & maintenance thereof at Nabinagar in district Aurangabad, Bihar. | • Land acquisition activities in progress.  
Statutory clearances from Forest dept., Defence, AAOI, MoEF have been obtained  
• NIT for STG package and SG package have been issued |
| 6      | National Power Exchange Limited                  | NTPC Limited          | 16.67%       | To operate a Power Exchange at National level.                           | • NPEX received in-principle approval from CERC to set-up and operate a national level power exchange.  
• During the FY 2010-11, paid-up share capital has been increased from Rs. 5 crores to Rs. 13.127 crores.  
• Exchange likely to be operationalized in 12-15 months after getting final approval from CERC. |
| 7      | NTPC-SCCL Global Venture Pvt. Ltd.              | NTPC                  | 50%          | To jointly undertake the development and operation & maintenance of coal Blocks and integrated coal based power projects in India and abroad. | Appointed as MDO for development of NTPC’s Talaiapalli Coal Mining project. |
| 8      | International Coal Ventures Pvt. Ltd.          | NTPC                  | 14.28%       | For overseas acquisition and/or operation of Coal mines or blocks for securing coking coal and thermal coal supplies |  
• Award of project execution work to POWERGRID on deposit work basis at a |
| 9      | National High Power Test                        | NTPC                  | 25%          | For setting up an online High Power Test Laboratory for                  |  

| Laboratory Pvt. Ltd | Powergrid | 25% | short-circuit test facility in the country. | consultancy fees of 10% of the total project cost  
- Investment approval for setting up the laboratory has been accorded by NHPTL |
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<tr>
<td></td>
<td>DVC</td>
<td>25%</td>
<td></td>
<td></td>
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<tr>
<td>10</td>
<td>Energy Efficiency Services Limited</td>
<td>NTPC</td>
<td>25%</td>
<td>To engage in the business of carrying on and promoting business of energy efficiency and climate change, including manufacture and supply of energy efficiency services and products and providing consultancy services in relation to the same.</td>
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<td></td>
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<td>PFC</td>
<td>25%</td>
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<td>Powergrid</td>
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<td>REC</td>
<td>25%</td>
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</table>
| 11                  | CIL NTPC Urja Private Limited | NTPC  | 50%                                      | To carry on the business of acquisition in part or full, of green field or operational Coal/ Lignite mine blocks in India and abroad and development of all kinds of Coal/ lignite mining for supply of fuels to the Company, NTPC and other buyers  
- Exploration of Brahmini North to commence during first quarter of 2011-2012.  
- Job of exploration and preparation of Geological Report has been assigned to Central Mine Planning & Design Institute Limited. |
|                     |           | CIL   | 50%                                      |                                                 |
| 12                  | Anushakti Vidhyut Nigam Limited | NTPC  | 49%                                      | Formed for the purpose of development of nuclear power projects in the country within the framework of Atomic Energy Act, 1962  
- Company has decided initially to set up 2X700 MW PHWRs at Haryana site. |
|                     |           | NPCIL | 51%                                      |                                                 |