TATA POWER

TATA

93rd Annual Report 2011-12

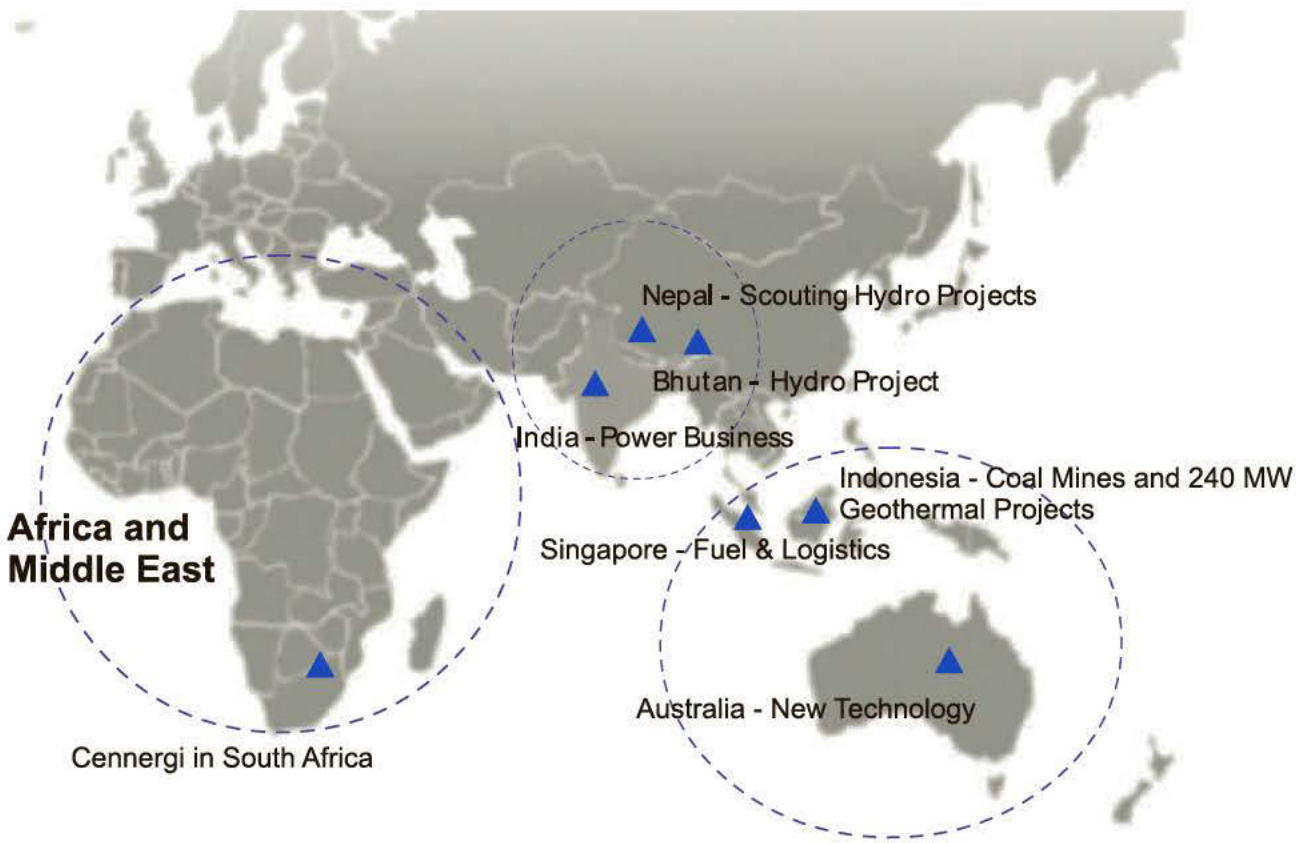
Lighting up Lives!



International Presence for Multi-Fold Growth

The vision of Shri Jamshetji Tata to generate and provide clean and affordable power for India has now become a global phenomenon. Tata Power, India's largest integrated power Company aims to light up lives, both in India as well as overseas, while retaining its satisfied customer base, being a neighbour of choice for its communities, implementing world class safety standards and delivering sustainable value to all stakeholders.

Tata Power's multi-fold growth validates its bright future, brimming with possibilities and full of promise to power the future as a pioneer of technological innovations and green initiatives. The Company's growing global footprint is complemented by considerable efforts to decrease its carbon footprint. As the Company enhances its **International presence for Multi-fold Growth**, here is a glimpse of its reach.



Global Presence in Energy Sector

Tata Power is looking to aggressively expand its global operations and has already made its foray into some key markets.

Indonesia: Coal reserves and developing a geothermal project: The Company has acquired 30% stake in Indonesia's leading coal companies viz. PT Kaltim Prima Coal (KPC) and PT Arutmin Indonesia and has also entered into an offtake agreement with KPC.

Additionally, a consortium comprising of Tata Power, Origin Energy, Australia and PT Supraco, Indonesia won the Sorik Marapi geothermal project in Northern Sumatra, Indonesia. The project is estimated to support the development of approximately 240 MW of geothermal generation capacity.

South Africa: Exploring growth opportunities: Cennergi has been established as a Joint Venture (JV) between Tata Power and Exxaro Resources, a South Africa-based diversified resources company. Based in South Africa, Cennergi will focus on the exploration of electricity generation opportunities in South Africa, Botswana and Namibia. The initial project pipeline focuses on renewable energy projects in South Africa and Cennergi's strategy is to create a balanced portfolio of generation assets.

Singapore: Coal supply, shipping and trading: The Company has incorporated Trust Energy Resources as a wholly owned subsidiary in Singapore. Trust Energy's scope of business is shipping of coal for Tata Power's thermal power generation operations, ship owning/chartering and operating, trading in coal and identifying coal mining assets/companies.

Bhutan: Hydro presence: The Company has a JV with the Royal Government of Bhutan under which it is implementing the 114 MW Dagachhu Hydro Project with Druk Green Power Company.

Australia: Developing cutting edge technology: The Company has invested in a 10% stake in Australian company - Geodynamics. It has also entered into a partnership with Australian solar power company, Sunengy, to build a pilot plant for low-cost, floating on water, solar technology in India. The Company has also invested in Exergen, Australia for clean coal technologies.

Nepal: Scouting hydro projects: The Company has partnered with SN Power (Norway) to set up joint ventures for developing hydropower projects in India and Nepal. The companies are pursuing potential project opportunities based on the vast reserves of renewable energy in the Himalayan region.

The Company has prioritized seven countries in three geographies for international play. These include South Africa and other Sub-Saharan Africa countries, Indonesia, Vietnam, Turkey and Middle-East. The Company is also in the process of deploying resources in these geographies to understand the market dynamics and scout for opportunities.











Growth Plans in India

Projects under implementation:

Developing India's first Ultra Mega Power Project (UMPP) at Mundra, Gujarat:

Tata Power was the first to be awarded a UMPP in 2007 and has also been the first to have financially closed a UMPP. India's first 800 MW sized super critical unit has been commissioned on 9th March 2012. Work on Units 2, 3, 4 and 5 is also on track and these units are progressing well. The choice of super critical technology will help achieve high efficiency thus saving fuel and reducing green house emissions vis-à-vis conventional technology prevailing in the country.

As a good corporate Citizen, the Company's efforts in community development are focused on education, health, income generation and livelihood, natural resource management, infrastructure and institution building. Some of its noticeable efforts include 'Project Sujaan' which has led to overall improvement in academic performance among the children; grazing land mitigation and providing fodder for (3000) cattle in villages applauded by the national and state authorities; Self Help Group initiative providing support to 227 women of the villages by initiating micro-finance activity and health management comprising of prevention of blindness programme reaching out to 244 people. With the assistance of a grass root NGO it has also implemented Project 'Uttkarsh', a holistic community development program giving impetus to safe drinking water by installing RO plants, rural energy and water management by construction of check dams, creation of Adarsh Agwanwadi, establishment of milk collection centers, activities related to farming and drip irrigation and many more.

1050 MW Maithon Power Project:

1050 MW (2 x 525 MW) Greenfield coal-fired mega power plant at Maithon (Jharkhand), under the aegis of Maithon Power Limited, a 74:26 JV between Tata Power and Damodar Valley Corporation is under implementation. Unit 1 has been commissioned and Unit 2 has been synchronised.

236 MW Dugar Hydro Project:

The Tata Power - SN Power (Norway) Consortium JV won the bid for 236 MW Dugar Hydro Power Project in Himachal Pradesh. The run of the river "Dugar Hydro Electric Project" will primarily feed the Northern grid. Pre-feasibility studies are under progress by the joint project team.

Projects under development:

1600 MW Coastal Maharashtra Project:

All statutory clearances required to start the project implementation are in place. Land acquisition is in progress. The Company also signed an Agreement with Government of Maharashtra for the Relief & Rehabilitation (R&R) package for the farmers in the Dehrand / Shahpur villages. Economic options for coal sourcing and logistics are under evaluation.

1980 MW Tiruldih Power Project, Jharkhand:

The process of land acquisition for the project is in progress. In-principle clearance has been received from Railways for transportation of coal from Tubed Coal Block. The Company has successfully extended MoU with the Government of Jharkhand which is valid for 3 years.

660 MW Naraj Marthapur Project, Orissa:

The major clearances for the project have been obtained. The environmental clearance has been granted by MoEF, subject to clearance from National Board of Wild Life for which the process is on. Proposal for using clean technology is also under discussion for this project.



Putting Safety First

At Tata Power, safety is considered a Value rather than simple priority. The Company is committed to ensuring zero harm to its employees, contractors and the communities in which it operates. This is integral to the Company's business process and it is focusing on continual improvement in the areas of health and safety across its operations. Tata Power has made significant advancements in the field of safety by implementing various safety measures this year, chief of which are:

Safety Management System (SMS) has been upgraded to meet the requirement of British Safety Council 5 star SMS model. Several new safety standards and procedures were introduced to strengthen the SMS. Around 150 internal auditors from various disciplines were trained.

Internal safety organization was strengthened and regional Apex Safety Committees were introduced to enable greater participation of line management in safety activities. Dedicated Office safety committees were established to drive improvement in offices.

The Company has deployed new behavioural based safety initiatives known as **Safety Intervention Auditing & Training** across the organisation. The Company has co-created a program for behavioural changes in contract workmen in collaboration with AAKAR, a NGO.

Several Risk-based third party **Safety audits** were conducted on electrical, fuel and fire protection systems. Electrical Safety audits for customer's premises were introduced to ensure safety of major customers. Safety inspection process was streamlined with the introduction of standard safety inspection checklists.

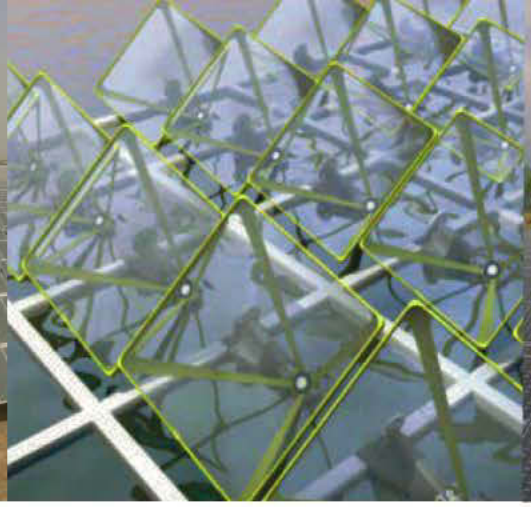
Several **off-the-job safety measures** were implemented to enhance the safety awareness on Road safety and Home safety amongst employees, their families and school children in the operating vicinity.

The safety performance was strongly driven by pre-setting specific targets with SMART lead and lag indicators, incorporating specific **Personal Safety Action Plans** in KRAs of individual employees.

The Company also played an active advocacy role in supporting the efforts of National Disaster Management Authority, International Finance Corporation, Bombay Chamber of Commerce and Industry and Central Electricity Authority.

Consequence Management Policy was introduced to deal with willful safety violations.




Powering a Greener Tomorrow

Leading Renewable & Clean Energy Player

As a responsible utility, Tata Power intends to have 20-25% of its portfolio from clean energy.

Harnessing Wind Energy

Tata Power has an installed capacity of 375 MW and plants spread across the four states of Maharashtra, Gujarat, Tamil Nadu and Karnataka, the leading states in promoting wind power generation in India.

Harnessing Solar Energy

Tata Power has a strong portfolio of 28+ MW of solar generation capacity. It commissioned its solar power project of 25 MW in Mithapur, Gujarat in January 2012 and has also executed a 3 MW solar photo-voltaic plant at Mulshi, one of the largest grid-connected solar projects in the State of Maharashtra. The Company had set up its first solar power plant of 110 kW, way back in 1996 at Walwhan in Lonavla. A 60.48 kWp solar power plant has been installed on the rooftop of one of the Company's offices in Mumbai.

Exploring Geothermal Power

A consortium led by Tata Power along with Origin Energy, Australia and PT Supraco, Indonesia won the Sorik Marapi geothermal project in Northern Sumatra, Indonesia. The Sorik Marapi project is estimated to support the development of approximately 240 MW of geothermal generation capacity and is currently under development.

Exploring clean energy internationally: Two wind projects of 234 MW in South Africa

The Company has formed, a JV with Exxaro to explore power generation opportunities in South Africa. Department of Energy, Government of South Africa has announced Cennergi as preferred bidder for two wind projects of 234 MW - Amakhala 139 MW and Tsitsikamma 95 MW projects.

114 MW Dagachhu Hydro Project

Tata Power also has a JV with the Royal Government of Bhutan under which it is implementing the 114 MW Dagachhu Hydro Project with Druk Green Power Company Ltd.

Apart from developing a robust renewable portfolio, the Company is among the frontrunners in India to be investing in a span of unique pilot projects across energy sources such as Biomass gasification, carbon capture, floating solar and micro wind turbines for mitigating its carbon footprint.









Tata Power has always set a standard in adopting sustainable practices in its business. The intent of our sustainability model is 'Leadership with Care' with four key elements - Care for our Environment; Care for our Customers; Care for our Community and Care for our people.

Care for our Environment addresses various aspects of resource conservation, energy efficiency, carbon footprint, renewable power generation and bio-diversity. The Green Manufacturing Index (GMI) adopted for all manufacturing locations measures these aspects. The Company is also tracking its carbon footprint and encouraging its employees to monitor their personal contribution through a special employee initiative called **Greenolution**.

Care for our Customers initiatives include promoting demand side management and energy efficiency.

'My Mumbai Green Mumbai' was launched as a special initiative last summer with several attractive schemes. Tata Power has once again launched a **Ceiling Fan Replacement Program** for its residential consumers and several attractive schemes like Energy Audits, Thermal storage for AC and Demand response schemes. The Company endeavours to roll out several innovative initiatives which would help customers to save power from time to time under this initiative.

Tata Power Club Enerji is an Energy Conservation Club that provides ground for the youth to share and expand their understanding, and bring about a chain-reaction that can significantly reduce wastage of energy. In 2011-12, the Club reached out to 285 schools nationwide, sensitised over 1.5 million citizens and saved more than 2.8 million units of energy. It has over 25,348 Energy Champions, 26,273 Energy Ambassadors and 1,029 self-sustaining Mini Club Enerjis. **Till date, the savings are equivalent to saving 6200 tonnes of CO_2 and is enough to light up approximately 2900 houses for a year**!

Several Safety audits and awareness campaigns like **'Safe Monsoons'** are organized to undertake pre-emptive measures to minimize customer woes during the monsoons and ensure safety to consumers every year. Our **customer care centres** have also been built with the Architecture of Care.

The Company intends to be 'neighbour of choice' by demonstrating exceptional **Care for its Communities.** The Company continues to focus on developmental initiatives for enrichment and growth of its neighbouring communities. Its social outreach program operates in 176 villages of 14 districts in 7 states of India and includes initiatives in the area of income generation, healthcare, infrastructure development, social welfare and education.

As an organization, Tata Power **cares for its employees and partners** and has several initiatives that are spearheaded for their learning and development.



Highlights of the Year

- Crossed 5000 MW capacity mark, re-affirming its position as India's largest integrated power company.
- Commissioned Unit 1 successfully for 4000 MW Mundra Ultra Mega Power Project.
- Commissioned Unit 1 and synchronized Unit 2 of 1050 MW Maithon Project.
- Commissioned 25 MW Solar Project in Mithapur, Gujarat.
- Formed a Joint Venture (JV) Company - "Cennergi" with Exxaro to explore power generation opportunities in South Africa. Department of Energy, Government of South Africa announced Cennergi as preferred bidder for two wind projects of 234 MW - Amakhala 139 MW and Tsitsikamma 95 MW projects.
- Crossed 375 MW of installed wind power capacity.
- Signed the Share Purchase Agreement to acquire British Petroleum Solar UK's 51% equity in Tata BP Solar India Ltd.



Financial Highlights

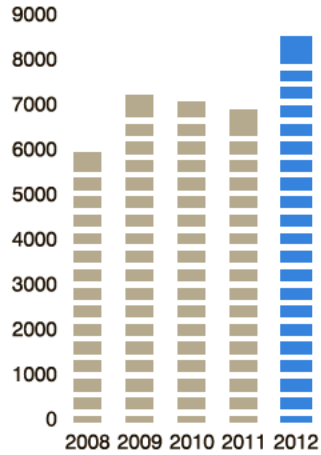
Standalone

- The Company's Standalone Revenue from operations has increased by 23% at ₹ 8495.84 crore as compared to ₹ 6918.48 crore in FY11.
- Standalone Profit After Tax (PAT) was up by 24% at ₹ 1169.73 crore as compared to ₹ 941.49 crore in FY11 due to strong operational performance of power business and higher dividends from Coal SPVs.
- Board maintained Dividend at ₹ 1.25 per share of ₹ 1/- each.

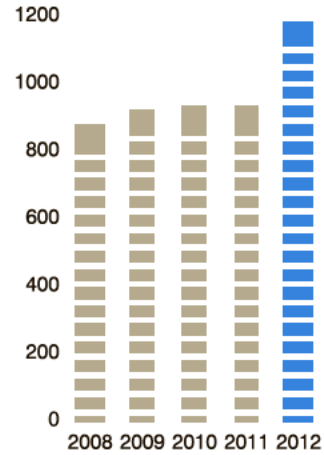
Consolidated

- The Company's Consolidated Revenue from operations was up by 34% at ₹ 26001.40 crore as compared to ₹ 19450.76 crore in FY11.
- Consolidated PAT stood at ₹(1087.68) crore as compared to ₹2059.60 crore in FY11 due to provisions made for Mundra impairment and deferred stripping costs.
- **Coastal Gujarat Power Limited (CGPL):** CGPL, an SPV formed for setting up and operating the 4000 MW Mundra UMPP, posted Revenues from operations of ₹ 8.05 crore during the year. PAT stood at ₹ (2180.54) crore and is mainly due to provision for impairment of ₹1800 crore. CGPL has also commenced trials of using alternate coal which is environment friendly, low in sulphur and cheaper in cost; initial reports have been encouraging and suggest that 70% blending is possible.
- **Maithon Power Limited (MPL):** Revenues from operations for the year stood at ₹ 369.70 crore and PAT stood at ₹ (174.14) crore. The unit has stabilized and, with assured fuel supply, will show improved performance going forward.
- **Industrial Energy Limited (IEL):** The Company reported Revenues from operations of ₹ 433.71 crore, increase of 246% and PAT of ₹ 78.01 crore, up by 214% over last year. Increase in PAT in IEL is mainly due to full year operation of Unit 5 during this financial year.
- **Tata Power Renewable Energy Limited (TPREL):** 25 MW solar project was successfully commissioned and commercial operation date (COD) achieved on 25th January, 2012, within the approved budget and stringent timelines, meeting the contractual commitments to the Government of Gujarat. The plant is performing well without any interruption since COD. The plant has generated cumulative of 9,167 MWH as on 31st March, 2012, posted Revenues from operations of ₹ 13.69 crore and PAT of ₹ 0.95 crore.
- **Tata Power Delhi Distribution Limited:** The Company's distribution subsidiary and JV with Delhi Government, posted Revenues from operations of ₹ 5338.88 crore, up 30% as compared to FY11. The PAT stood at ₹ 338.65 crore, up by 31% as compared to ₹ 258.18 crore last year.
- **Powerlinks Transmission Limited (Powerlinks):** Powerlinks, the first public-private Joint Venture in power transmission in India, has earned Revenues from operations of ₹ 281.63 crore in FY12, as against ₹ 288.41 crore in FY11. The PAT stood at ₹ 112.35 crore, up by 6% as compared to last financial year.
- **Tata Power Trading Company Limited (TPTCL):** TPTCL traded a total of 5583 MUs during the year, resulting in Revenues of ₹ 1926.70 crore, as compared to ₹ 1932.05 crore in FY11. PAT stood at ₹ 14.05 crore, up by 54% as compared to last financial year.

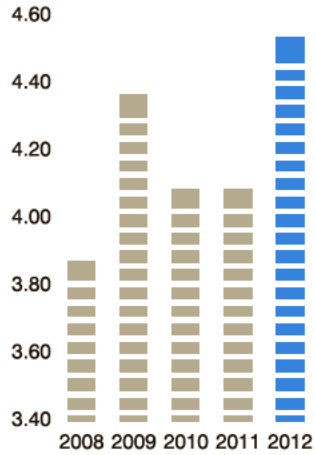
Strong operational performance driving financials



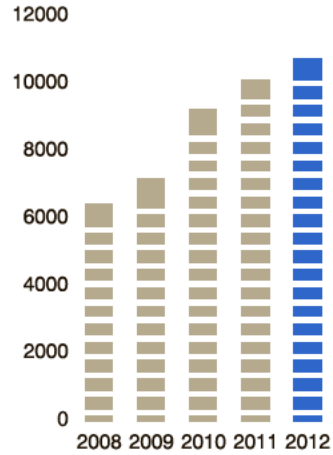
Revenues from Operations (₹ crore)



Profit After Tax (₹ crore)



Earnings Per Share (₹)



Net Worth (₹ crore)

Operational Highlights

The Company has an installed generation capacity of 5299 MW and is India's largest integrated power utility today.

The Company generated 15230 MUs of power from all its power plants and Sales stood at 15240 MUs.

First 150 MW Thermal Unit (Trombay)

First 500 MW Thermal Unit (Trombay)

First Gas insulated Switchgear

Computerized Grid Control & Energy Management System

220 kV Transmission lines in four circuit towers

220 kV Cable Transmission Network

Flue Gas De-sulphurisation plant using sea water

First to introduce SCADA and Fibre Optic ground wire communication

First Pump Shortage Unit in the country of 150 MW Capacity (Bhira)

First 800 MW super-critical Thermal Unit (Mundra)

First Largest Wind Turbine Generator 2 MW(Visapur)

First Largest Single Location Photovoltaic Installation 3 MW (Mulshi)

First 25 MW Solar Power Plant in India

Tata Power is a Lead Adopter of Technology


Trombay Thermal Power Plant


Bhira Hydro Power Plant


Jojobera Power Plant




Haldia Power Plant


Wind Farms