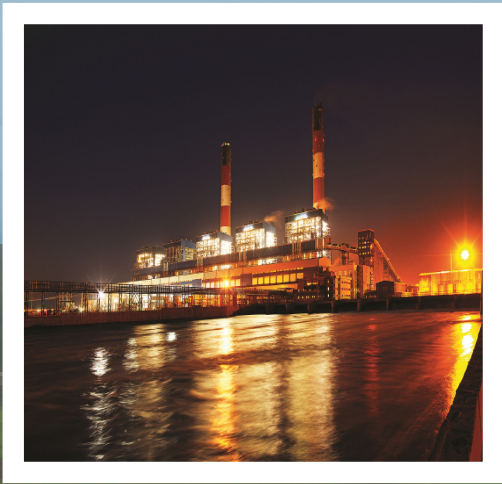


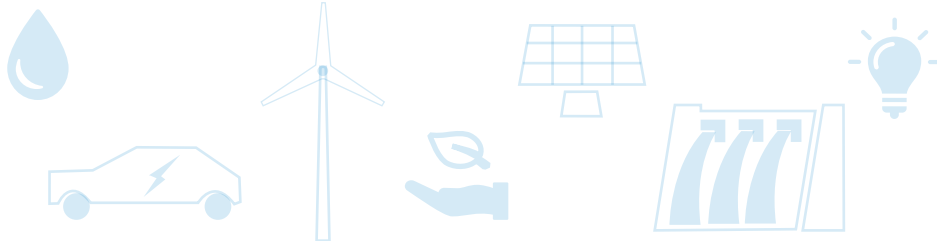
TATA POWER



**SUSTAINABILITY REPORT
FY 2018-19**



**EMPOWERING CONSUMERS
OF THE FUTURE**



INTRODUCTION FROM CEO & MD

GRI 102-14, 54

What comes from the people
and the planet should go back to
them, many times over

- J R D Tata



Dear Stakeholders,

It gives me immense pleasure in presenting Tata Power Company Limited's ninth Sustainability Report for FY 19. It has been a journey that has witnessed significant milestones in the Company's aspiration to be a global exemplar in Sustainability.

India had made a commitment to achieve 40 percent of total energy demand from non-fossil fuel sources by 2030 at the 2015 United Nations Climate Change Conference (COP 21). India continues to add record volumes of solar and wind energy capacities even as the net capacity additions in the coal sector remain stunted. According to government data, India added just under 6 Gigawatts (GW) of solar power capacity upto FY 18. Around 1.4 GW of wind energy capacity was also added during this period. Along with other technologies, the total renewable energy capacity added was 8.5 GW.

In line with the commitment to the Paris Agreement and strategic intent of having 40-50% generation capacity from non-fossil fuel sources, Tata Power has made significant progress with a present capacity of 10,957MW and 33% renewable portfolio of the present installed capacity and is continuing to grow exponentially. Right now, we are 2.6 million consumers and we could become 10 million in 3-5 years. In addition, the report includes United Nations Sustainable Development Goals prioritization and roadmap with action plans for a five-year horizon. Further, guided by the Integrated Reporting framework, this report depicts value creation and showcases the performance and operational competencies.

Further, Tata Power is venturing into several new business services which we believe will empower our customers to save and be green. Some of the new business services for Tata Power are Solar Rooftop systems, Home Automation, EV charging solutions and other value-added services for customers. Tata Power, through its subsidiary, Tata Power Solar, launched Residential Solar Rooftop solutions for its customers in Mumbai, Delhi, Ajmer and is growing its presence across cities in India. These rooftop solutions will help in providing easy and cost-effective solutions for residential customers and is expected to save up to ₹ 50,000 annually for 25 years. We believe this adds tremendous value to our rooftop solar customers. Recently, Tata Power Solar has added another feather to its cap by commissioning a rooftop solar installation by partnering with Cricket Club of India (CCI) on the famous Brabourne Stadium in Mumbai. This project is now the world's largest solar rooftop installation on a cricket stadium.

The company continued its community development initiatives and scaled to positively impact 24.67 lakhs beneficiaries across 348 villages and 220 urban clusters in 15 states of the country. 8 flagship initiatives were scaled across all locations with an integrated development approach to transform the socio-economic status at household level. Some of the flagship initiatives include women empowerment initiatives like Dhaaga, Abha, Women SHG and Youth skilling initiatives like TPSDI and Daksh.

This Sustainability Report presents progress made on material aspects including challenges faced and lessons learnt. The report is prepared in accordance with the Global Reporting Initiative (GRI) standards. Comprehensive option which is relevant to core business activities and practices (including the Electrical Utility Sector disclosure).

Yours sincerely

Praveer Sinha

CEO & MD, Tata Power

ABOUT THIS REPORT- SCOPE AND BOUNDARY

GRI 102-1, 2, 3, 4, 5, 10, 46, 49, 50, 51, 52, 53, GRI 201-1

Reporting period:

1st April 2018 to 31st March 2019

In accordance with:

Global Reporting Initiative (GRI) standards: Comprehensive option (including the Electrical Utility Sector disclosure).

Other guidelines followed:

- Sustainable Development Goals (SDGs) of the United Nations
- Integrated Reporting <IR> guidance by International Integrated Reporting Council (IIRC)
- Carbon Disclosure Project (CDP)

Scope:

This Report covers information on Tata Power (Thermal, Hydro, Renewables and Transmission & Distribution), The Materiality Study for Tata Power was revisited in 2019 which included eight thermal generating stations – Trombay; Coastal Gujarat Power Limited (CGPL), Mundra; Maithon Power Limited (MPL), Maithon; Jojobera; Haldia; Industrial Energy Limited (IEL), Jamshedpur (Unit 5, PH#6), Kalinganagar, three Hydro generating stations, namely Bhira, Bhivpuri, and Khopoli, Renewables business -TPSSL, TPREL (include WREL) and Transmission business - Mumbai license area & Distribution business – Mumbai distribution, TPDDL and TPADL

Main organizational changes – GRI 102-10

There have been no significant changes in the structure or ownership during the reporting period.

This report excludes all International Operations, Joint Ventures (JVs), Associates and Upcoming projects.



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TATA POWER'S JOURNEY ON UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS (UN SDGs)

Tata Power, an entity of the TATA Group is India's largest Integrated Power Company. We have completed 104 years of operations in February 2019 and are proud of achieving this milestone with constant stakeholder trust as we continue to serve the nation. Our founder Jamsetji N. Tata, believed that clean, cheap and abundant power is one of the basic ingredients for the economic progress of a city, a state, or a country. Beginning our journey in 1915, by commissioning India's first hydroelectric project in Khopoli, Maharashtra, our start was based on sustainable generation of power.

Tata Power generates electricity from Thermal, Hydro, Wind and Solar, as well as from waste heat recovery. In continuation with our pioneering nature and with the intent of delivering sustainable value to all stakeholders, we have added ~200 MW of renewable capacity in FY19 taking the contribution from clean sources in our portfolio to 33%. Our increased thrust on renewable capacity addition is also aligned to support India's Nationally Determined Contributions (NDC). The total generation capacity from our non-fossil fuel based plants is 3,617 MW which includes 1,388 MW of solar and 1,161 MW of wind. Besides Generation, the major business activities of the Company encompass Transmission, Distribution-cum-Retail, Power Trading, Power Services, Coal Mines and Logistics, Strategic Engineering for defence applications, Solar Photovoltaic (PV) manufacturing and associated project management services (Engineering, Procurement, and Construction). We give highest importance to the health, safety and well being of all our stakeholders in making business decisions.

'Leadership with Care' continues to be our principle value for sustainable practices. Over the 100 legendary years of existence, Tata Power has set a standard in adopting sustainable practices in its core business domain. Tata Power's approach to 'Sustainability' is one of the company's key differentiators setting it apart from its competitors with its Sustainability Model bringing in transparency, sensitivity and care to meet the needs and requirements of its stakeholders. Tata Power has an integrated approach to sustainability that covers environment, climate change, biodiversity and community relations and gives an edge to the company's strategic investment, leading to social progress, financial returns, enhanced stakeholder relations, and better environmental management. Tata Power has a long history of aligning to the cause of climate change and setting for itself a non-fossil generation capacity target, which has been further strengthened by the expanding renewable portfolio.

Tata Power has implemented a number of initiatives for education, employment, entrepreneurship and essential amenities for communities surrounding our operation sites. Our initiatives like 'Tata Power Club Enerji' reaches out to over 533 schools in Ajmer, Ahmedabad, Bengaluru, Belgaum, Pune, Jamshedpur, Kolkata, Lonavala, Mumbai and an expanding network of cities. Being active since 10 years, the initiative reached out to more than 23.84 million citizens and managed to save 29.8 million units of electricity thereby mitigating 28,000 tonnes of CO₂. A number of choices are being provided to our customers for effective energy utilization through demand side management. Our suppliers and vendors are also sensitized on Sustainability with the help of Responsible Supply Chain Management (RSCM) policy which covers Health & Safety, Environment, Human Rights and Ethics & Compliance. We have taken strides in the setting up of Electric Vehicle (EV) charging stations across Mumbai in order to make it future ready for sustainable transport. Home automation, smart metering, whole system integrated piece are some areas that we are currently focussing on.

To further the value of Sustainability in business, Tata Power has adopted the Global Goals or Sustainable Development Goals by United Nations. The SDGs are a set of goals which have been adopted by all the members of the United Nations in order to accomplish sustainable development for all. These 17 SDGs represent an urgent call to end poverty, environment protection and ensure development for all people globally. On September 2015, 193 countries adopted the SDGs for taking action on global challenges. The 2030 Agenda of the SDGs provide a chance for businesses to align their operations with the adoption of sustainability. They also help to overcome the major threats of natural disasters induced by climate change, managing natural resources, eradicating poverty, fostering peace and reducing inequalities. Businesses are essential contributors towards sustainable development.

The next 11 years are considered crucial for countries who have signed the declaration on the 2030 agenda for sustainable development adhering to the SDGs. India has set ambitious targets for itself to achieve the SDGs and has incorporated them in the National Development Agenda. Businesses that take action to help achieve the SDGs stand to benefit by increasing the potential to improve or maintain social license to operate, enhance relationships with customers, employees and other critical stakeholders, and the opportunity to develop a sustainability strategy that zeroes in on the business's biggest societal impacts.

While growing number of businesses are promising to take action on the SDGs, as yet no established framework or standard exists to help them report that action. In light of this challenge, Tata Power conceptualized an inhouse methodology on the SDG journey by following the steps of **SDG mapping—SDG Prioritization—SDG Roadmap**.



SDG Mapping

The first step towards SDG study was SDG mapping across the organization. Listing out all the initiatives undertaken by Tata Power from its reports in the public domain across company locations. The next step in prioritizing the SDGs was the incorporation of inputs from key stakeholders on priority initiatives and the outcomes from engaging with the core team for categorization. Establishing a business linkage for the initiatives along with the SDG linkages facilitated by the target stakeholders' unique perspective. These inputs were also beneficial in deciding the weightage to be given to each parameter in the priority weightage multiplier.

What we did?

- Compiling initiatives across the Company's locations with respect to 17 SDGs
- Identify key stakeholders and conduct discussions with them to seek more inputs on initiatives
- Discussions with Leadership for further categorization and confirmation of the status of the initiative.

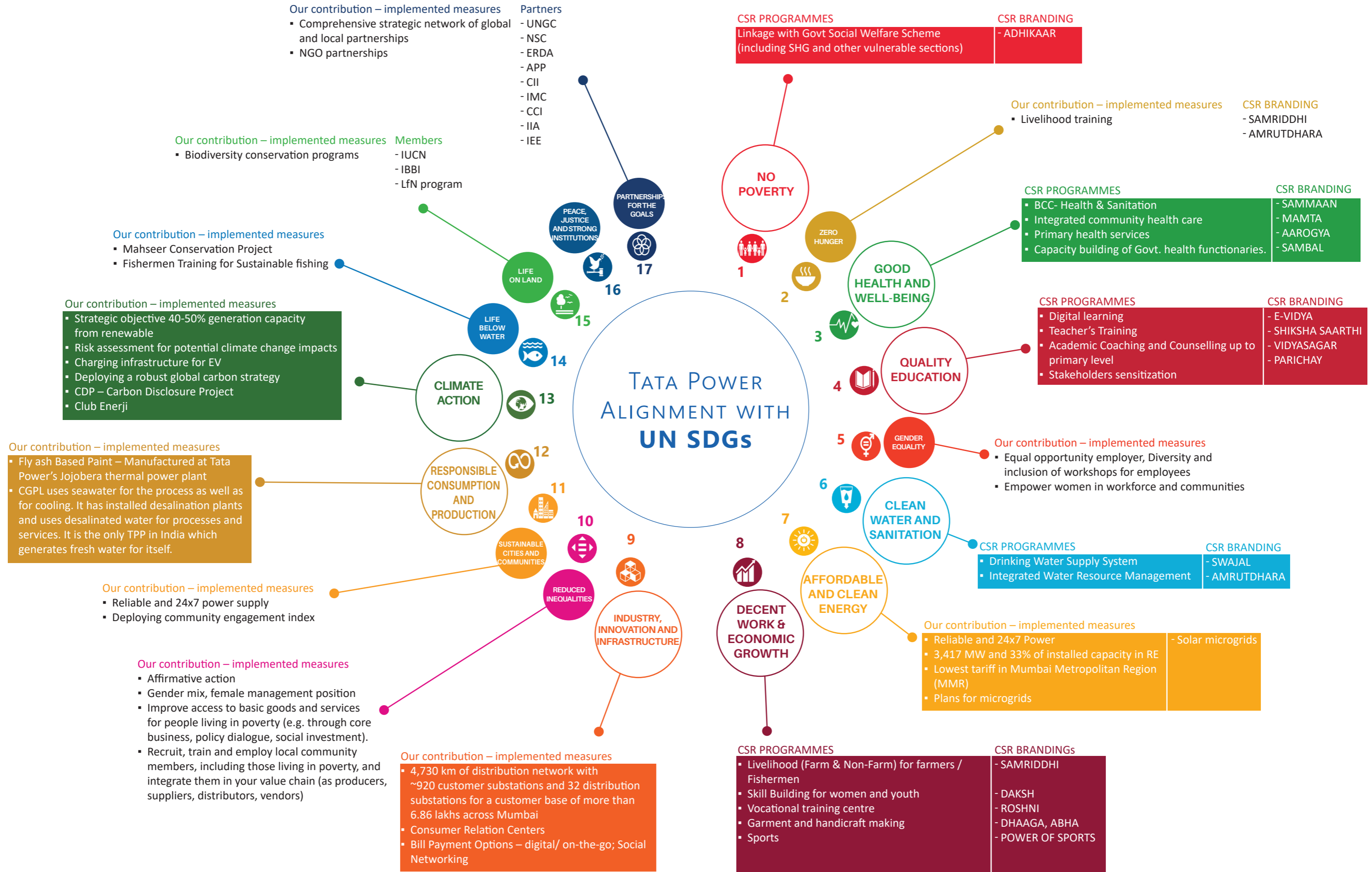
Information Sources

- **Internal** - Sustainability Report, CSR Report, Annual Report, TBEM Report, Tata group SDG Report
- **External** - Thought leadership articles on SDGs; benchmark report from leading companies

Outcome of the Mapping

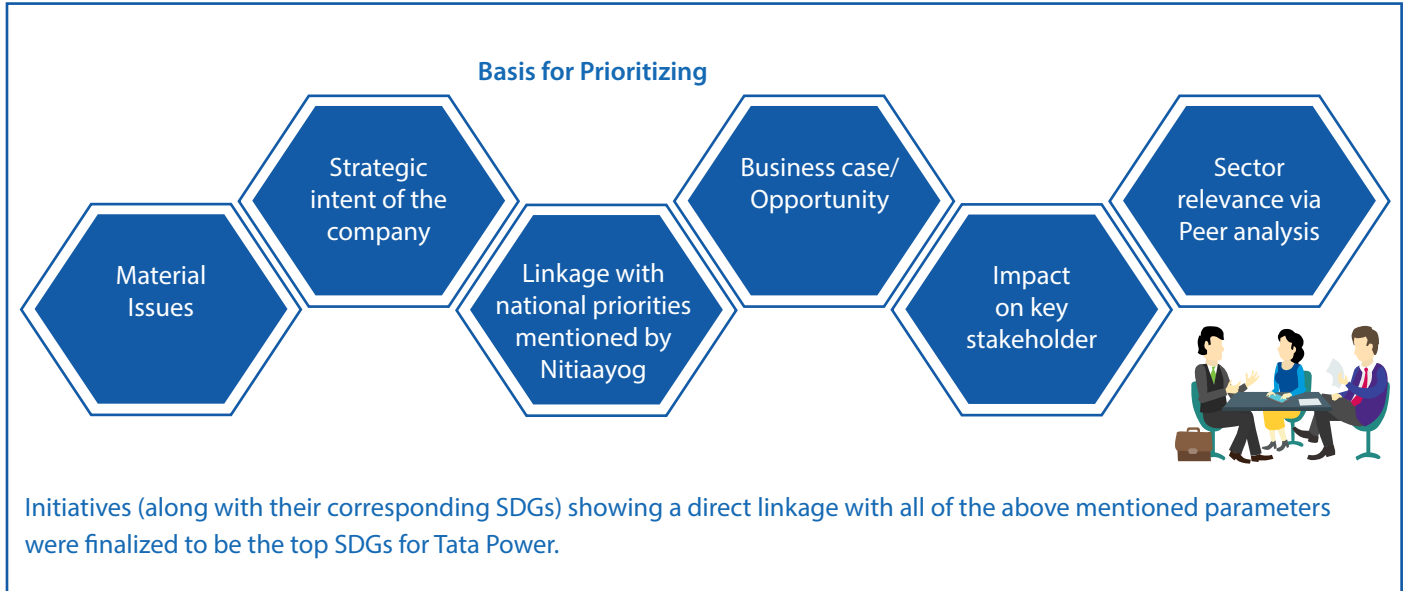
- Bifurcating Business initiatives and CSR initiatives
- Stakeholder mapping for Initiatives
- Linking of initiatives with SDGs

Our Contribution to UNSDGs



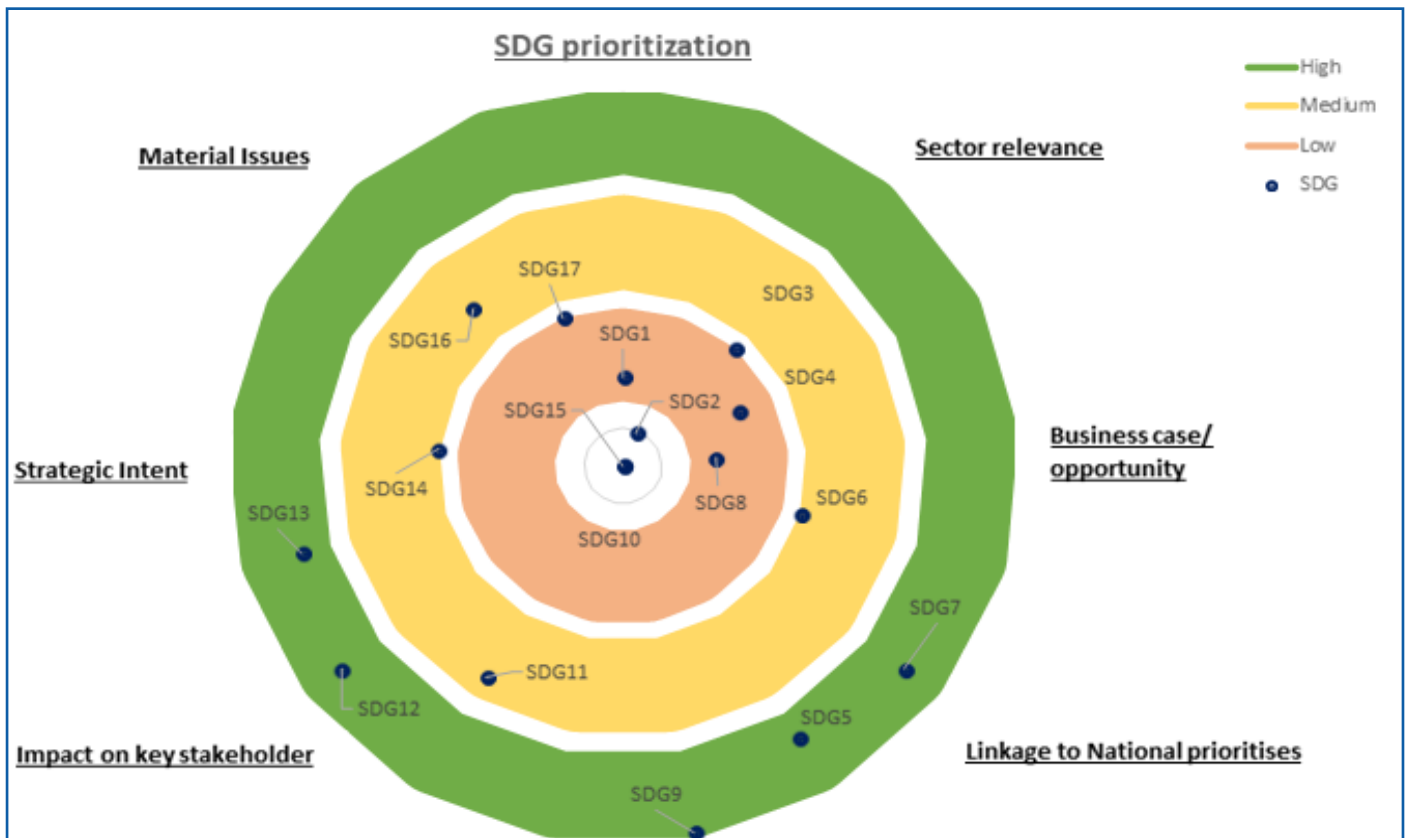
SDG Prioritization

The SDG mapping helped in identifying the importance of each SDG. The prioritization exercise was to check the SDG alignment and describe the linkage of each SDG to business focus areas like material issues, sector relevance, linkage with national priorities, business case/opportunity, strategic intent of the company and its impact on key stakeholders. SDGs were given a point for its applicability to the above parameters and was measured weightage of each of the six parameters to develop a priority weightage multiplier. This would help in deciding which parameter was predominant and having highest weightage.



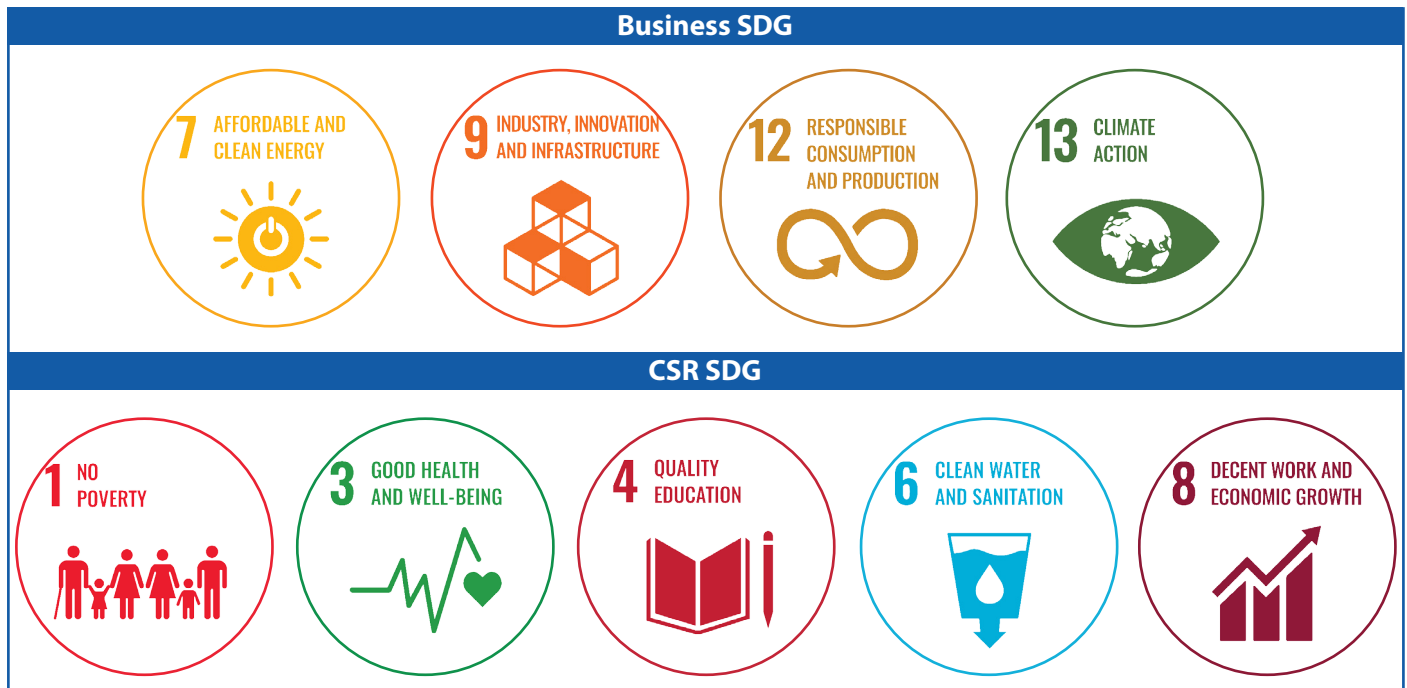
Prioritization results

The High zone (green band) refers to the SDG which has maximum impact on the parameters and in the decreasing order Medium and Low zone impact is not as significant. The Business SDG's derived from the exercise and adopted for Tata Power are SDG 7, SDG 9, SDG 12, SDG 13. The CSR SDGs, SDG 1, SDG 3, SDG 4, SDG 6 & SDG 8 have been identified as a result of the CSR need assessment study conducted by Tata Power in 2016.



Classification of prioritized SDGs as Business SDGs and CSR SDGs

The prioritized SDGs for Tata Power were further classified as Business and CSR SDGs. Tata Power confirms and reinforces the commitment to address the prioritized UN SDGs.



SDG 7: Affordable and Clean Energy

Tata Power is a leading player in renewables generation and it is expected that there would be significant growth opportunities in renewables (both organic and inorganic) in the future and Tata Power plans to increase its footprint through value-accretive projects. With strategic focus on Renewables, the Company is eyeing growth in utility scale solar projects, rooftop solar and Services opportunities in the Renewables space and continues to look for projects with sustainable and certain returns. Tata Power has launched retail Rooftop solar business catering to small enterprises and household needs in 18 cities. We also launched residential solar rooftop solutions in several cities and installed 65 EV charging points across the country. Tata Power's future growth would be in conventional power generation with emphasis on renewable power. Under SDG 7 Tata Power has adopted the below targets;

- Renewables generation capacity growth as per the Strategic Intent
- Cumulative capacity addition and improving the market share of Solar Rooftop business
- Identify & implement Hybrid Renewable Power Possibilities
- Acquire capabilities in Floating solar photovoltaic
- Increase the solar pumps business market share

SDG 9: Industry Innovation and Infrastructure

Tata Power is a lead adopter of technology and has enabled adoption of advanced/disruptive technologies as well as develop some products and technological processes through a structured short/ medium and long-term technological roadmap. We have moved to work in various innovative areas in a collaborative manner, rather than sourcing of new technology. Efforts made towards Technology absorption, adaptation and innovation by Tata Power include setting up of Innovation councils across divisions to come up with innovative projects that have a business impact, Bottom Ash and waste plastic-based bricks for heavy load applications, utilization of drones for maintenance, including thermal imaging of assets, drone-based image analytics for solar and wind assets, and deploying function specific robots for application in hydros and CW pipelines. Tata Power has taken targets on SDG 9 viz.

- Benchmark in reduction of AT&C losses
- New Businesses- Implementation of EV Charging Infrastructure/ Home automation / ESCO / Smart meters/ Battery Storage
- Technology and Ideation

SDG 12: Responsible Consumption and Production

Under the Care for Environment philosophy, Tata Power is in the process of minimizing atmospheric pollution by installing Flue Gas Desulphurization (FGD) systems at all coal fired power plants by 2022 (as per dates given by the MoP, GoI). Tata Power has improved the ash utilization at its coal fired power stations and is continuously working on reduction in fresh-water consumption at thermal power plants. Tata Power has taken targets under SDG 12 viz.

- Generating operational energy requirement from renewables
- Reduction of SOX, NOX and PM
- Reduction of Specific water consumption
- Zero waste to landfills
- Conservation of energy for all operational locations

SDG 13: Climate Action

As a responsible Company, Tata Power addresses global long-term challenges such as climate change and diminishing resources in a socially, ecologically and economically responsible manner. As per the company's strategic intent 2025, Tata Power aims to generate 40-50% of its generating capacity from non-fossil fuel sources like hydro, solar, wind, waste heat recovery, etc. Environment and climate change related risks are identified and added to the risk register for periodic reviews. Additionally, Club Enerji our flagship energy and resource conservation initiative, has been working ceaselessly towards creating responsible citizens of tomorrow who focus on conserving energy and natural resources, waste management, combating climate change and active citizenship and also influence the people around them on responsible use of energy. Tata Power currently has five of its renewable projects registered under the Clean Development Mechanism (CDM) program with United Nations Framework Convention on Climate Change (UNFCCC). UNFCCC. Walwhan Renewable Energy Limited (WREL) has eight CDM registered. The targets adopted under SDG 13 are;

- Reduce the GHG emission intensity
- Carbon Management
- Demand Side Management

SDG Roadmap with Action Plans and SDG Dashboard

SDG Roadmap was created with targets & KPIs for Tata Power across the top 4 prioritized SDGs. The SDG roadmap was developed for three consecutive years – FY20, FY21, FY22. Current initiatives and systems in place were listed out for achieving the targets. The activities to be undertaken along with yearly targets were proposed for Tata Power to achieve its SDG objectives. The progress on these targets is monitored quarterly through SDG dashboard with the help of Sustainability SPOCs at all locations and departments. The annual results will demonstrate the contribution Tata Power has made in achieving the national goals and global goals. Tata Power is probably the only company in India which has not only mapped its initiatives with SDGs but charted a way forward by creating a roadmap and adopting targets on each of the prioritized business SDGs.



Goal #1



NO POVERTY

End poverty in all its forms everywhere

RELEVANCE

Tata Power has developed a unique CSR program to bridge the gap between individuals and government entitlements cum schemes which are supposed to benefit them. The program focusses on linkage of beneficiaries with various Government schemes for all categories of population - children, youth, women, men, aged, destitute, widows etc.

INITIATIVES / RESULTS UNDER GOAL #1

This initiative is being scaled across 15 locations.

- Engaging Employees as Adhikaar Champions for direct involvement
- Usage of Technology to leverage Government Linkages
- In the year 2019, the program has covered more than 3.43 lakhs of beneficiaries.

Adhikaar

3.43 lakhs beneficiaries
enabled access to various
Govt. schemes.

CSR PROGRAMMES

Linkage with Govt Social Welfare Scheme (including SHG and other vulnerable sections)

CSR BRANDING

- ADHIKAAR

CASE STUDY:

FINANCIAL INCLUSIVITY - ADHIKAAR



The objective of program Adhikaar is to empower people to access their social and financial entitlements through convergence, which is facilitated by Tata Power. It is a people centric and technology enabled movement to empower the people with focus on the marginalized and vulnerable community (women, old age people, especially disabled & disadvantaged) by providing access to Government resources

While Tata Power has made progress on this intervention, the Company aims to increase the scale. To achieve the desired outcome, Tata Power, has adopted two-pronged strategic approach, with Focus on both Social and Economic Schemes.

Goal #3



GOOD HEALTH AND WELL-BEING

Ensure healthy lives and promote well-being for all at all ages

RELEVANCE

Tata Power's Integrated Community Health Care initiative aims at providing solutions for better health care. Our approach is to partner with Government Health machineries for behavioural change communication, community mobilization and awareness on Mother and Child health care in our geographies.

INITIATIVES / RESULTS UNDER GOAL #3

- Focus in community health and sanitation through behaviour change communication
- 4.13 lakh women children positively impacted leading open

CSR PROGRAMMES

- BCC- Health & Sanitation
- Integrated community health care
- Primary health services
- Capacity building of Govt. health functionaries.

CSR BRANDING

- SAMMAAN
- MAMTA
- AAROGYA
- SAMBAL

CASE STUDY:

COMMUNITY LED TOTAL SANITATION (CLTS)



Community Led Total Sanitation (CLTS) is a behavioural change programme which follows an integrated approach to achieving and sustaining Open Defecation Free (ODF) status in villages. CLTS approach emphasizes on behavioural change and community mobilization instead of hardware/monetary support/ subsidy. It compels the community to analyse their sanitation and waste situation and brings about collective decision-making to stop Open Defecation.

Awareness creation and sensitisation is done through strong messaging on ill effects of OD and unhygienic living conditions /environment using art, street plays, storytelling as well as capacity building for masons. CLTS programme can further lead on to adoption and improvement of hygienic practices; solid waste management and protection and maintenance of drinking water sources.

Ghasiram Murmu begins his sanitation journey at home



Mama

4.13 lakh women, men & children covered under health and sanitation

Mr. Ghasiram Murmu (35 years) a tribal who is differently abled stays with his family at Khakripara, Mahtodih, in the neighbourhood of the Jojobera plant. The family did not have a toilet in their house, so they had to travel far for defecation.

Mr. Ghasiram Murmu and his family participated in the awareness activities organised in the village which helped them understand the importance of adopting health and hygiene related practices.

The family put all their savings and decided to construct the toilet themselves to reduce labour cost. The whole family worked together and build a specially designed western toilet with the assistance of Aident- Tata Power's NGO partner. The family is now using the toilet regularly and have stopped defecating in the open. The family has set an example of positive change in the village and their story inspires everyone to adapt and change their behaviour by constructing the toilets in their house to maintain a healthy life.

Goal #4



QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

RELEVANCE

Tata Power believes education is the first step towards development of society. It has direct linkage with poverty and standard of health. Education is one of the guaranteed rights to its citizens, and through CSR's Education Excellence Initiative we facilitate the reach.

INITIATIVES / RESULTS UNDER GOAL #4

TPSDI Introduces Maintenance Skills Courses in Mechanical and Electrical, a 12-week course to train, test, and certify Mechanical and Electrical Engineers in Maithon & Jojobera.

CSR PROGRAMMES

- Digital learning
- Teacher's Training
- Academic Coaching and Counselling up to primary level
- Stakeholders sensitization

CSR BRANDING

- E-VIDYA
- SHIKSHA SAARTHI
- VIDYASAGAR
- PARICHAY

CASE STUDY:

SHIKSHA SAARTHI PROGRAMME

Mota Asambiya is village of Mandvi Taluka in Kutch District. During 6 days workshop, Dhara Maheta – a Vigyan Mitra met Ashwin Govindbhai Maheshwari who is studying in 6th standard. His parents Govindbhai Maheshwari and Premilaben Maheshwari are illiterate and they speak only Kutchi. Ashwin has 3 elder sisters and out of them only one sister is studying in 8th standard. Initially it was observed that Ashwin was not taking part in any group activity of the workshop, was inattentive and disruptive.



e-Vidya

Covering 1.34 lakh children across all locations

This behaviour of Ashwin was creating trouble for other group members. who couldn't concentrate on their work. It became absolutely necessary to know "What was the reason behind this kind of behaviour?"

So one day, during break time he was asked the reason for his behaviour and whether he can understand activities of workshop and what were the difficulties. He did not reply at all. But his friend Ramesh, who was standing beside him, replied and said Ashwin is having difficulties understanding Gujarati language. He can understand only Kutchi language.

After this revelation whatever Vigyan Mitra was teaching in Gujarati, was translated in Kutchi also. After doing that it was observed that Ashwin started to answer questions and was actively taking part in all activities. Interestingly, his group members also enthusiastically translated all activities in Kutchi for Ashwin.



Amar needed only little extra care, guidance and motivation.

Since last year TaRL (Teaching at Right Level) program is running in entire Mandvi block. Mr. Velji Dhoriya – Cluster Resource Leader (CRL) from Shiksha Saarthi team had visited the Mota Layja primary school as per his regular plan. During the TaRL class visit Mr. Veljibhai had giving demonstration of Mind Map activity of CAMaL. All the students were participating joyfully in the activity, but one student was not participating and seemed bored, that was Amar Rameshbhai Patni. Amar's parents work as labor. They are illiterate and did not give any attention to their son's education.

Veljibhai (CRL) had noticed that and discussed about Amar with his class teacher, Sonalben Goswami. Sonalben said that, "This boy is not taking part in any activity, he is on very poor level in studies, and even cannot read Gujarati alphabets.

Veljibhai met his parents and discussed with them about their son's education requesting his Father Ramesh fulji patni to look after Amar's education. After that Amar's parents started taking interest in his studies. As of now, Amar Ramesh Patani is actively participating in all activities of TaRL, and studying really well.

After that Veljibhai affectionately praised Amar and made him comfortable. After some time Amar started responding positively. Slowly he started enjoying all activities, started participating enthusiastically and also learned many alphabets. When Veljibhai met his teacher again and showed her Amar's active participation in group task, he candidly admitted that students, if treated with affection, can study better.

"Some slow learning students like Amar need only a little extra care, guidance & motivation."

Goal #6



CLEAN WATER AND SANITATION

Ensure availability and sustainable management of water and sanitation for all

RELEVANCE

Our CSR focus on water has a dual approach, which addresses solutions for drinking and household purpose as well as tackles demand side and supply side management for agriculture through Participatory Ground Water Management and enhanced use of water through innovative ways of conservation.

INITIATIVES / RESULTS UNDER GOAL #6

- Focus on participatory ground water management led to coverage of 4.9 lakh
- Drinking water initiative covered more than 6.8 lakh beneficiary

CSR PROGRAMMES

- Drinking Water Supply System
- Integrated Water Resource Management

CSR BRANDING

- SWAJAL
- AMRUTDHARA

CASE STUDY:

PARTICIPATORY GROUNDWATER MANAGEMENT (IRRIGATION AND DRINKING)

Irrigated water resource management

It has been proven that groundwater resource is most reliable and secure source of water that describes the community's development rate and health of environment. Today society is already convinced that without proper groundwater management, it is difficult to maintain developmental pace and a healthy lifestyle. The difficulty arises in how to manage groundwater as it is invisible and is a dynamic resource and as it is being used by multiple stakeholders without any regulations.

All these questions make groundwater management more complex. The complexity doesn't end with its scientific understanding or developing recharge plan, but it requires sensitization of users with base of geo-hydrology study. PGWM is being demonstrated at Kankavati Sandstone Aquifer of coastal Kutch in collaboration with ACT, Coastal Gujarat Power Limited (CGPL), and Geo Science Services (GSS). By adopting multi-disciplinary approach and PGWM program, the impact has been made on entire cluster in term of awareness of resource, technological intervention, groundwater recharge augmentation, demand management, water security for human and cattle and institution building.

The project activities involve decentralized land and water management planning at micro level through scoping study, improving capacities of communities to understand groundwater dynamics of the area and develop management tools and protocols to ensure safe and required water resources for livelihood as well as domestic

need. In addition, the project also involves innovative activities for demand as well as supply side management. The impacts from the project are of different layers ranging from community level at village scale to institution level at aquifer scale. Besides the project outputs such as team of local youth with geo-hydrological knowhow, community institutes, farmer groups are utilizing the water with strong scientific base and ecologically sensitive ways. The project implementation has demonstrated how community multi stakeholder participation can be built among different stakeholders e.g. rural urban community, industry, scientific institutions, government department, academic institutes and CBOs etc. the programme provides direct indirect benefit 19 project villages of Mundra and Mandvi – Kutch district, Gujarat. The recent trend shows that the ground water table has increased in the nearby areas due to various conservation and recharge interventions. Currently more than 350 farmers are part of the farmers group and have been benefitted through Micro Irrigation System. The strong advocacy under the project has brought in many other stakeholders including district and the state government, private institutions like IIT Gandhinagar, funding agencies like Arghyam and other corporates to replicate the model in the region. PGWM programme has been taken to next level in the year 2018-19 with the financial support from IIT Gandhinagar (WIN WATSAN Foundation), Gujarat by developing GIS based lab in the region, technological innovation and enhance the weather and ground water monitoring and strengthen database. This research lab is now an aquifer knowledge platform for many stakeholders.

Looking to this successful model, the PGWM programme was replicated to Maithon- Dhanbad in the year 2018-19 and similar geo hydrological study was commissioned by Tata Power (Maithon Unit). At Maithon people are largely dependent on groundwater sources for drinking water and ironically there has been no/limited water harvesting project undertaken w.r.t groundwater recharge. The study focused on assessment of existing drinking water scenario, geo-hydrological studies, water resource inventory, landform mapping, surface geology and aquifer mapping, groundwater quality study, groundwater potential zonation, estimation of water demand and supply and village wise action plan.



Amrutdhara
Drinking water and
PGWM covering 10.6 lakh
beneficiaries

Drinking water supply system (RO water transforms Rashida's life)

Rashida Khatoon, is a resident of JJ Cluster in Delhi. She and her family has been facing shortage of clean drinking water and were dependent of water from tankers to fulfill their basic needs. This was leading to health hazards and illnesses. While filling water from tankers, there were fights between the community members. The Sanjeevani RO water per day is adequate for her family with 3 children. This RO water is being used for cooking and drinking. Use of RO water has helped improve their health and living conditions.

As part of Corporate Social Responsibility, Tata Power has undertaken safe drinking water initiative (Swajal) in which 1100 Tata Swachh Water purifiers were provided benefiting more than 36000 students from 286 schools across 7 states of the country. The initiative has been owned by the community and schools for ensuring self -sustainability. This has led to improved attendance and reduction in water borne illness among children.

Goal #7



AFFORDABLE AND CLEAN ENERGY

Ensure access to affordable, reliable, sustainable and modern energy for all

RELEVANCE

Tata Power is a leading player in renewables generation and it is expected that there would be significant growth opportunities in renewables (both organic and inorganic) in the future and Tata Power plans to increase its footprint through value-accretive projects.

INITIATIVES / RESULTS UNDER GOAL #7

- Reliable and 24x7 power
- 3,417 MW and 33% of installed capacity in RE
- Lowest tariff in Mumbai Metropolitan Region (MMR)
- Solar microgrids

CASE STUDIES:

SOLAR ROOFTOP, PUMPS AND MICROGRIDS



820.8 kWp Solar Rooftop Installation – CCI Stadium, Mumbai

Tata Power Solar commissioned 820.8 kWp at Cricket Club of India (CCI), Mumbai in 100 days. The Stadium was inaugurated by Shri Devendra Fadnavis, Honourable Chief Minister of Maharashtra. Tata Power Solar joined hands with Cricket Club of India to utilise the potential of solar energy. The installation of this solar rooftop project helped to generate over 1.12 million electricity per year, which led to 25% of savings in the power consumption cost. At present, on an average (apart from Stadium Flood lights, which run on DG), the Stadium consumes 4 lakhs kWh / month. However, with the new solar installation, on an average basis the consumption from the grid would fall to approximately 3 lakhs kWh/month. CCI will also be able to curb the emission of over 840 tonnes of carbon dioxide annually.

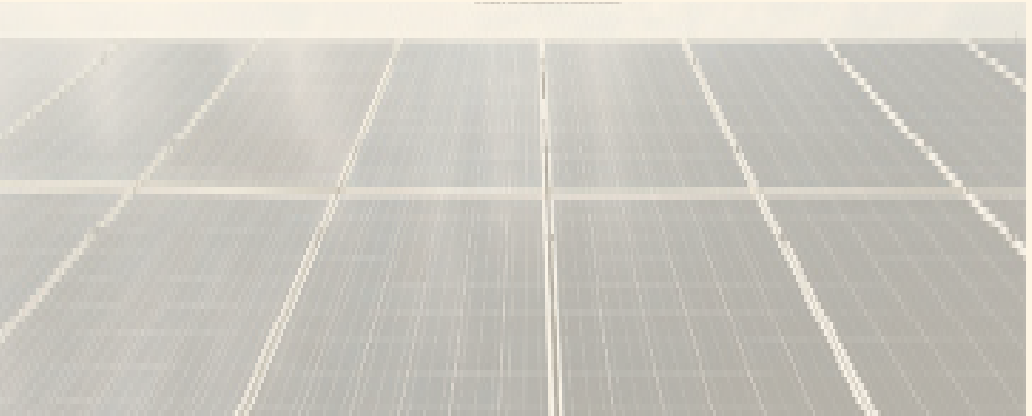
Benefits

- 820.8 kWp Solar Rooftop System
- CCI stadium in Mumbai goes green
- Estimated generation 1.12 million units per annum
- Offset 840 tonnes of carbon annually



110 kW Solar Microgrid – Sundarbans, West Bengal, India

Travelling from Howrah for 81 kms taking a 90 minutes ferry ride from Patharpratima, is what takes one to the beautiful village of Indrapur, in Sundarbans which leaves you spellbound. A very agile and densely packed village that does most of its business to and from the ferry dock, they manage to go about their day-to-day activities in very limited sunlight with almost next to none grid connected homes. Tata Power Solar successfully custom designed, engineered and installed a 110 kW solar plant that was commissioned in March 2011. The grid matches the average sunlight that the village gets 1 bright day followed by 1 cloudy day. Tata Power Solar has skillfully designed a solar powered grid that is simple, easy to use & maintain and manages to do all this at a very low cost of implementation. For a community that is remote and removed from civilization, Tata Power Solar has successfully provided Indrapur an economically viable and sustainable source of energy.



Empowering Communities:

Tata Power Solar through this Microgrids project has brought electricity and accessibility in the lives of people who have been operating remotely from the rest of the civilization. Over 2000 families have electricity and children are able to use good quality of light to do their homework after dark. Literacy rates have improved and the island economy has been boosted by extended working hours, especially the periodically held village markets in India. The village now enjoys a night bazaar where its people are able to go buy fresh fruits and vegetables.

Goal #8



DECENT WORK & ECONOMIC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

RELEVANCE

Our focus is to address livelihood access by enhancing crop productivity by diversified crop production as well as linkage with market. For youth and women, skill development programs are conducted as per market demand and linked back to.

INITIATIVES / RESULTS UNDER GOAL #8

- 12,000 Youth Trained
- 319 joined TCS (18% from AA community)
- Rs 15,000 Approx monthly income

CSR PROGRAMMES

- Livelihood (Farm & Non-Farm) for farmers / Fishermen
- Skill Building for women
- Skill Building for youth
- Micro-enterprise women and Youth
- SHG formation and strengthening
- Garment and handicraft making
- Sports

CSR BRANDINGS

- SAMRIDDHI
- ABHA
- DAKSH
- UDYAMEE
- ROSHNI
- DHAAGA
- POWER OF SPORTS



Women centric microenterprise scaled 1,050 members with average income of Rs 2,140 pm

CASE STUDY:

TATA POWER'S SKILL DEVELOPMENT INSTITUTE (TPSDI), TCS - TATA POWER YOUTH EMPLOYABILITY PROGRAMME AND DHAAGA



Tata Power's Skill Development Institute (TPSDI)

TPSDI is an endeavour from the Tata Power to empower youth and others with employable skills, especially in the Power and allied sectors, and to address the skill gap challenge faced by the Indian Power Sector.

The Institute provides modular training and certification across a wide range of employable skills. TPSDI was launched on Feb 9, 2015 as part of Tata Power's Centenary Year celebrations by the Tata Group Chairman. Aligning to this, Tata Power inaugurated TPSDI Skills on wheels which is a mobile concept to make skill training accessible to people. This initiative will provide Recognition for Prior Learning (RPL), Motor Rewinding, and Solar Skills; etc.

The aim of launching Skills on Wheels is to provide training to neighbouring electricians by making training even more accessible to them.

- TPSDI has been awarded with ISO 29990:2010 and ISO 9001:2015 dual certification by the Bureau Veritas, a certification body accredited by the National Accreditation Board.
- TPSDI has been honoured at the 6th Global Training & Development Leadership Awards for 'Excellence in Training & Development'. – 16th Feb. 2018



TCS - Tata Power Youth Employability Programme

This programme is a collaborative effort between TCS and Tata Power for employability training for unemployed Youth in Organized Sectors. The candidates are trained on soft skills, business communication and etiquettes. Once the training programme is completed the candidates go through a written test and those selected will undergo three rounds of interviews with the HR department of TCS - Kolkata. Those selected there get direct employment in the BPS/KPO services of TCS.

The programme started in Naraj Marthapur, and now is replicated in Maithon and Kalinganagar.



Dhaaga

Dhaaga is a women based micro-enterprise initiative of Tata Power with an objective of empowering women and creating livelihoods. This initiative has led to promotion of the local talent and conserve their traditional artform. The Rabari women artisan and tribal santhal women of Gujarat and Jharkhand respectively are engaged in this initiative for promotion of rabari and tiger grass handicrafts.

Goal #9



INDUSTRY, INNOVATION AND INFRASTRUCTURE

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

RELEVANCE

Tata Power is a pioneer credited with steering the energy sector on technology, process and platform. Powering emerging technologies for the 'smart' customer, Tata Power's latest business integrated solutions, focusing on mobility and lifestyle, is poised for multi-fold growth.

With its 103 years track record of technology leadership, project execution excellence, world-class safety processes, customer care and driving green initiatives, Tata Power is committed to 'lighting up lives' for generations to come.

INITIATIVES / RESULTS UNDER GOAL #9

- 4,730 km of distribution network with 920 customer substations and 32 distribution substations for a customer base of more than 6.86 lakhs across Mumbai
- Use of new age technologies in generation and O&M panels, power lines
- Customer relation centres: Bill payment options – digital/ on-the-go; social networking

Highlights:

- First power utility to introduce QR code for bill payments in India
- Smart metering

CASE STUDY:

EV CHARGING INFRASTRUCTURE

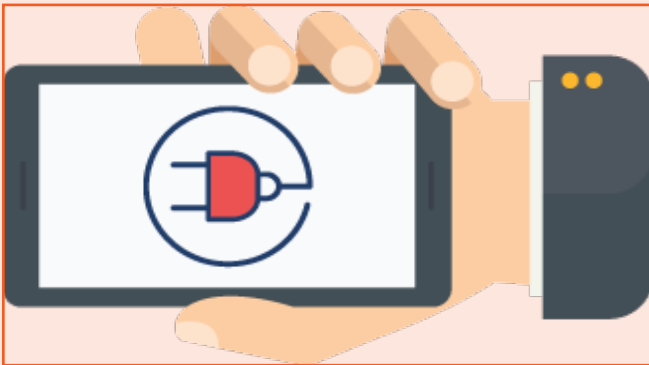
Supporting the Indian Government's 'National electric mobility mission', Tata Power established the first set of Electric Vehicle charging stations in Mumbai - India's financial capital. Now present in Mumbai, Delhi and Hyderabad, our customized EV charging solutions form the infrastructure backbone for a growing EV ecosystem, and provide customers access to energy-efficient options with ease.

Our solution covers power supply, backend power supply infrastructure and customized EV charging solutions.



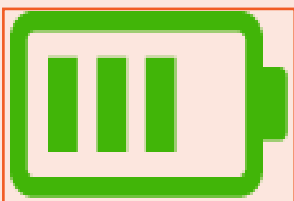
OUR USP

- SMART CHARGING with Tata Power Mobile
- LAST-MILE CHARGING and battery swapping for 2 & 3 wheelers.
- Diverse charging standards and specifications
- Different electric vehicles categories and manufacturers.
- Variety of usecase scenarios - EV Fleet charging solutions, Commercials Spaces & office charging, Public charging etc.



Smart charging with Tata Power Mobile

Tata Power EV Charging mobile app to provide EV owner the convenience of locating charging stations on aerial map, reserving charging slots, getting updates on charging, recommendations on time-of-day use and paying charges online!!



- Charging and battery swapping two wheelers & three wheeler.
- Help increase the life of batteries and ensure smooth journeys long distance

Goal #12



RESPONSIBLE CONSUMPTION AND PRODUCTION

Ensure sustainable consumption and production patterns

RELEVANCE

For the sustainability of the business and responsibility towards the future generation, Tata Power has taken up many initiatives for sustainable consumption. These include most efficient generation of power through use of supercritical power plants and use of renewable energy sources.

INITIATIVES / RESULTS UNDER GOAL #12

- Ensuring efficient use of natural resources
- CII National Energy conservation awards for Discoms
- Responsible Supply chain management
- Fly ash-based paint manufactured in Tata Power's Jojobera Thermal Power Plant

CASE STUDY:

DEMAND SIDE MANAGEMENT (DSM)

Demand Side Management

Demand Side Management (DSM) refers to cooperative activities between the utility and its customers (sometimes with the assistance of third parties such as energy services companies and various trade allies) to implement options for increasing the efficiency of energy utilisation, with resulting benefits to the customer, utility and society as a whole.

Benefits of the DSM initiatives are manifold, some of which are described below:

-Customer benefits

Satisfy electricity demands, Reduce / stabilise costs (bills), Improve value of service, Maintain/improve lifestyle and productivity

-Societal benefits

Reduce environmental degradation, Conserve resources, Protect global environment, Maximise customer welfare

-Utility benefits

Lower cost of service, Improved operating efficiency, flexibility, Reduce capital needs, Improve customer service

Goal #13



CLIMATE ACTION

Take urgent action to combat climate change and its impact

RELEVANCE

In line with the global commitment on the climate change targets, Tata Power has taken a leading role in decarbonising the Indian electricity generation sector. As one of India's largest renewable energy players, Tata Power is positioned at the top of the changing landscape of India's renewable energy focus.

INITIATIVES / RESULTS UNDER GOAL #13

- Strategic objective 40-50% generation capacity from renewable
- Risk assessment for potential climate change impacts
- Charging infrastructure for electric vehicles
- Deploying a robust decarbonisation strategy
- CDP – Carbon Disclosure Project
- Low carbon customer offerings

CASE STUDY:
CLUB ENERJI



Tata Power Club Enerji is a sustainability initiative aimed at creating awareness among school students, who in turn, sensitise their families and neighbourhood towards energy and resource conservation through dynamic and innovative measures. Tata Power seeks to position the Club Enerji programme to be the biggest and most impactful energy and resource conservation and efficiency programme in the country. The current programme is based on the four-stage model of Educate (sensitise school children about energy conservation practices), Engage (empower energy champions to spread awareness amongst peers and the community) and Enhance (enthuse schools to participate and contribute to Club Enerji initiatives) Empower (create self-sustaining Mini Clubs that will lead the movement). Through its revamped website and online module, the program this year has reached out to additional 31,466 digitally on various aspects of conservation include energy & resource conservation, moral and civic values, waste management, combatting climate change, active citizenship, "Say no to Plastics" and Save Water which is the theme for the year. The program is also a case study in IIM -Ahmedabad and has been featured in IIM A TEDx event-inspiring the future.

The initiative has won several domestic and international accolades. These include winning the award in the category of 'Cause Branding' at Global CSR excellence & leadership awards 2019 while ABCI (Association of Business Communicators of India) award for various initiatives each year from 2014-2019.

The club has completed more than 10 years since its inception in 2007. Today, Club Enerji has presence in more than 533 schools across India, has sensitized more than 23.8 million citizens, saved more than 29.8 million units, have a total of 3,86,633 Energy Champions and 3,47,986 Energy Ambassadors, building 2017 self-sustaining Mini Energy Clubs. The program is present in Mumbai, Delhi, Pune, Ahmedabad, Bengaluru, Kolkata, Kalinganagar, Jojobera and Ajmer.

The program has also been recognized as a best practice by Tata group. Some of the international awards won by the program include:

- Club Enerji won gold and silver respectively for Best environmental behaviour change award with new club enerji anthem winning award for Best Social media campaign
- Club Enerji' won an award in the 'Cause Branding' category at Global CSR Excellence & Leadership Awards 2019.
- Club Enerji won an award for its website under the 'digital newsletter category' at the PRCI (Public Relations Council of India) Excellence awards
- Club Eneji along with Tata Power's customer initiative " BE Green" won an award for " Overall content " at CMS (Content Marketing Summit) Asia Awards 2019, South Asia Edition
- The Club Enerji movement was showcased at a prestigious, global platform at a TEDx IIM Ahmedabad event on the topic: "Driving Conservation Through Shaping the Future Generation", under 'Renaissance 2.0: Inspiring a better tomorrow'.

BUSINESS OVERVIEW

Tata Power's journey over a century has been a fascinating saga of pioneering initiatives. Tata Power commits itself to be in the practice of conducting business operations responsibly that results in minimal impact on the environment and initiating several socio-economic changes in and for the community.

In its quest to deliver sustainable energy, Tata Power has been constantly spreading its footprint nationwide, setting new benchmarks for operational efficiencies, investing in global resources and redefining paradigms. Its focus on building lasting and trusting relationships with its customers, partners and employees and the legacy of caring for its communities, remains the bedrock of its continued sustainability. The Company aims to energize consumer lifestyles by providing sustainable power. It hopes to inspire efficient use of energy and endeavour's to educate the consumers, and the world, about the benefits of implementing energy conservation practices. It is committed to developing its business in a way that adds value to its local communities. Also, it aims to set higher benchmarks in terms of development standards, and in the implementation of cutting-edge eco-friendly technologies and processes of energy management.

Tata Power: At a glance

India's largest integrated power company, Tata Power with its subsidiaries & jointly controlled entities, has an installed capacity of 10,957 MW. A pioneer in the field, it has a presence across the entire power value chain: Generation of renewable as well as conventional power including hydro and thermal energy; transmission & distribution, trading and coal & freight logistics. With renewable energy assets in solar and wind accounting for 23.27% of the company's portfolio, Tata Power is a leader in clean energy generation. In line with the company values on sustainable and clean energy development, Tata Power is steering the transformation of utilities to integrated solutions by looking at new business growth in EV charging & storage, distributed generation & rooftops, microgrids and home automation & smart meters.

Tata Power has created successful Public Private Partnerships in generating, transmitting & distributing energy in India. Such Public-Private Partnerships are named as follows:

PPP	Local Distribution Board
Tata Power Delhi Distribution Limited	Delhi Vidyut Board for distribution in North Delhi
Tata Power Ajmer Distribution Ltd	Ajmer Vidyut Vitran Nigam Ltd. for distribution in Ajmer
Powerlinks Transmission Ltd	Power Grid Corporation of India Ltd. for evacuation of Power from Tala hydro plant in Bhutan to Delhi
Maithon Power Ltd	Damodar Valley Corporation for a 1,050 MW Mega Power Project at Jharkhand

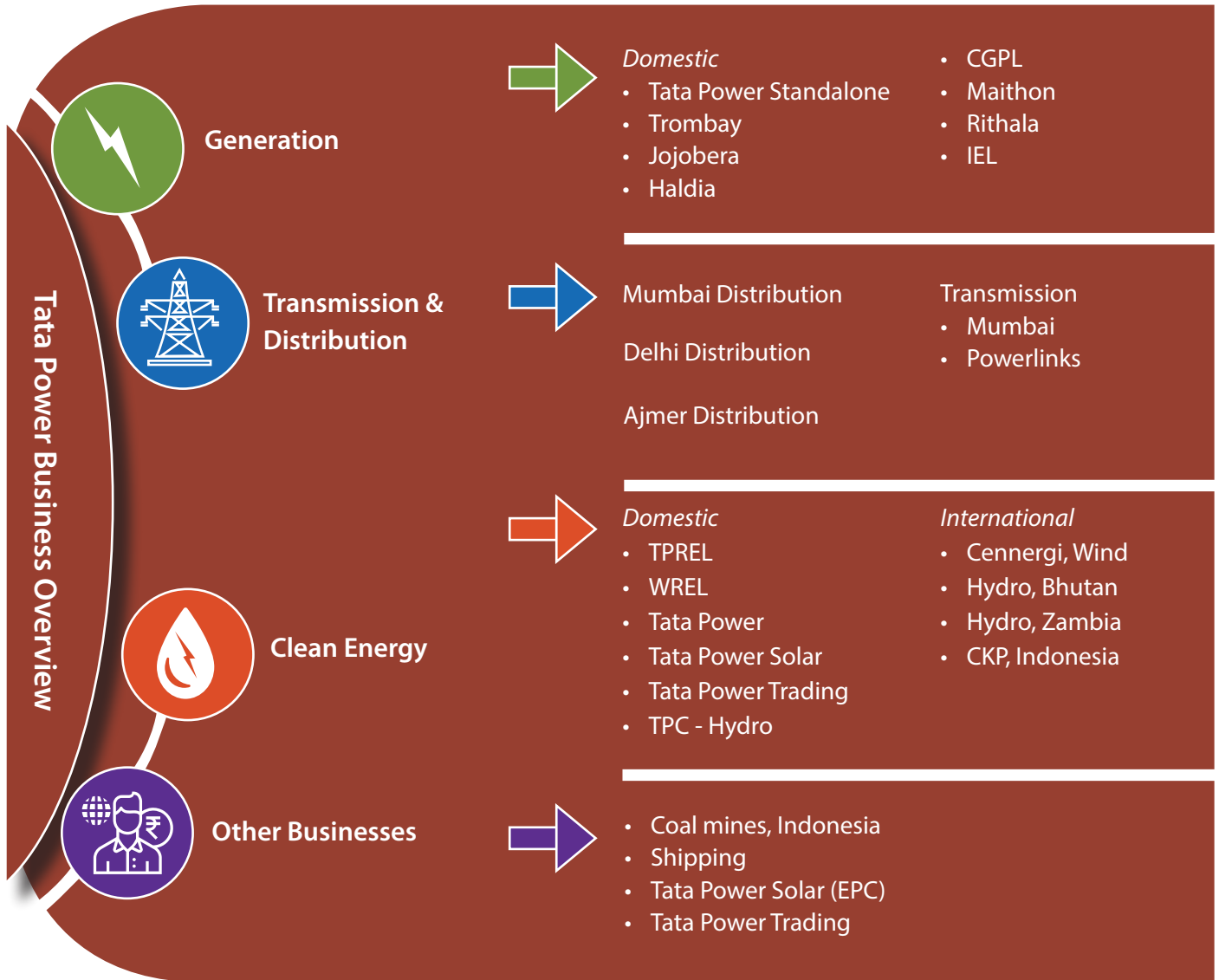
As of 2019, Tata Power serves more than 2.6 million distribution consumers in India. The company had also developed the country's first 4,000 MW Ultra Mega Power Project at Mundra (Gujarat) based on super-critical technology.

With growing international focus, Tata Power's global presence includes strategic investments in

- Indonesia through a 30% stake in the coal company PT Kaltim Prima Coal (KPC); 26% stake in mines at PT Baramulti Suksessarana Tbk (BSSR)
- Singapore through Trust Energy Resources
- South Africa through a joint venture called 'Cennergi' to develop projects in sub-Saharan Africa
- Zambia through a 50:50 joint venture with ZESCO for 120 MW Hydro project
- Georgia through AGL which is a joint venture with Clean Energy, Norway & IFC for development of 187 MW hydro project
- Bhutan through a hydro project in partnership with The Royal Government of Bhutan

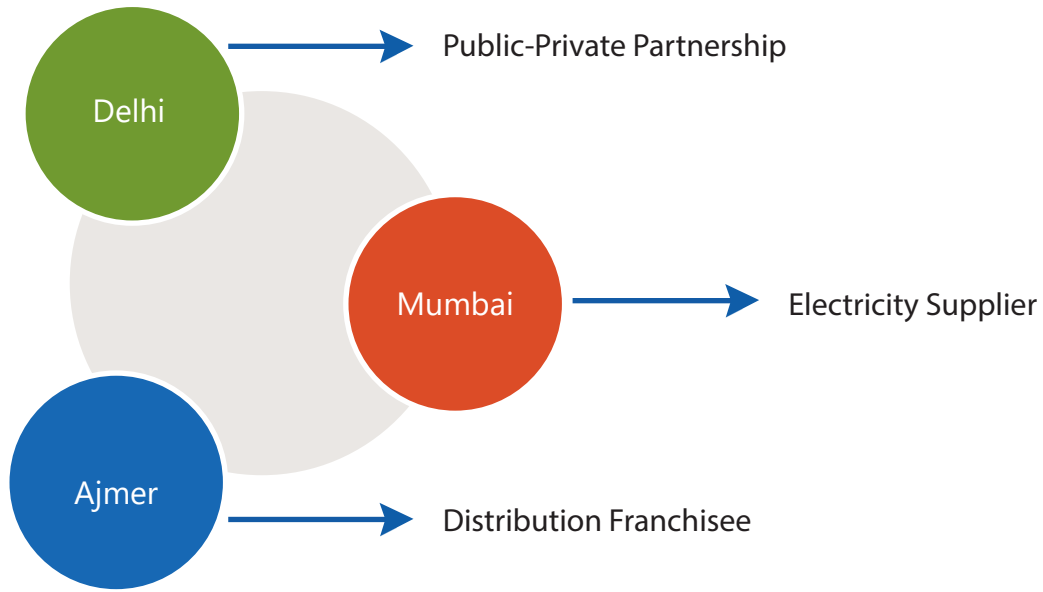
With its more than 100 years track record of technology leadership, project execution excellence, world-class safety processes, customer care and driving green initiatives, Tata Power is poised for multi-fold growth and committed to 'lighting up lives' for generations to come.

Tata Power Group's FY 19 Revenue increased to ₹ 29,493 crore, up 12% as compared to ₹ 26,430 crore mainly due to increase in fuel and power purchase cost related to regulated business, capacity addition in renewables business and good operational performance by businesses. *GRI 102-6, 7*



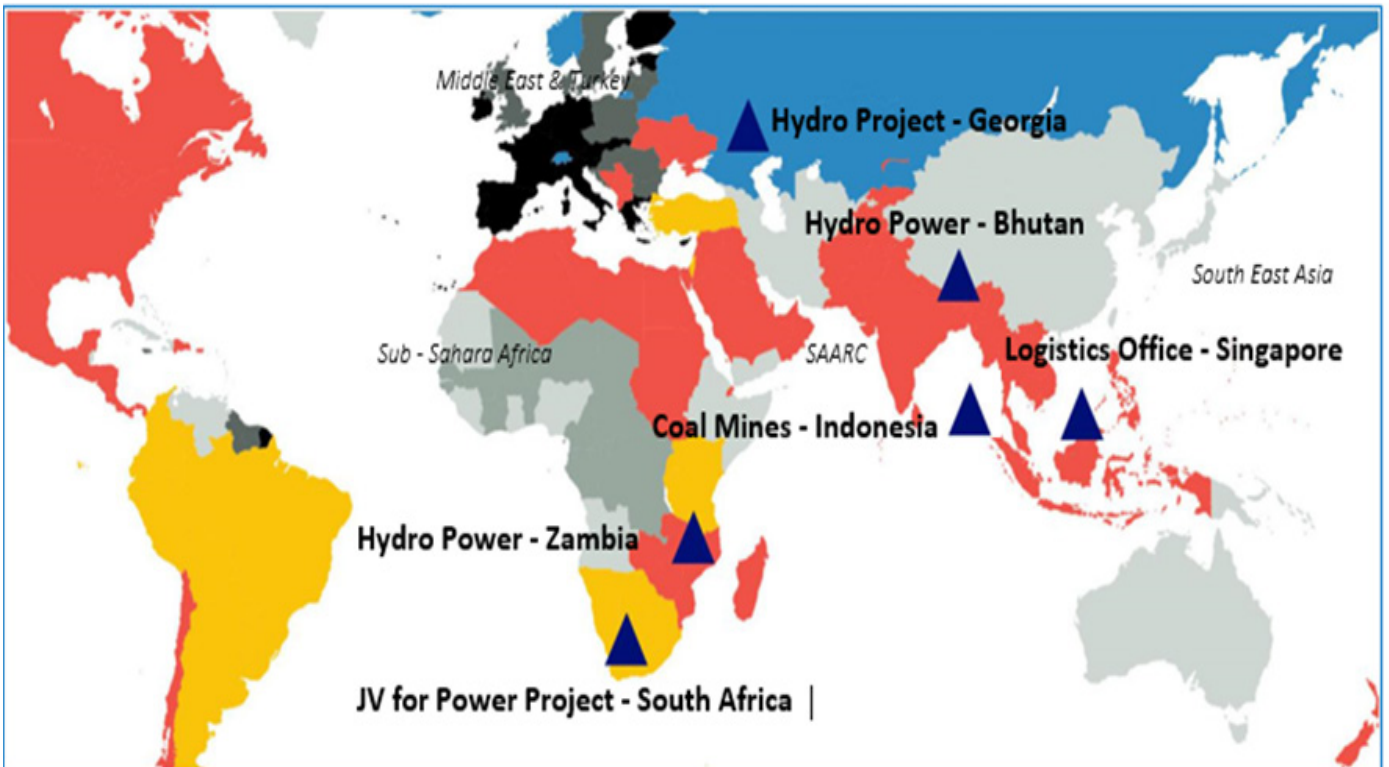
Further, the generated power is diverted through a broad mix of tariff models including regulated returns, captive, Independent Power Producer (IPP), Ultra Mega Power Project (UMPP) and merchant sales. Tata Power is diversifying from only conventional energy generation to new and renewable energy. With wind and solar operational capacity of 2,549 MW and approx. 400 MW is currently in pipeline. Tata Power is one of the largest non-conventional energy players in the country.

Presently, Tata Power is in the distribution business in three cities—Mumbai, Delhi and Ajmer and in all these places it has a different business model.

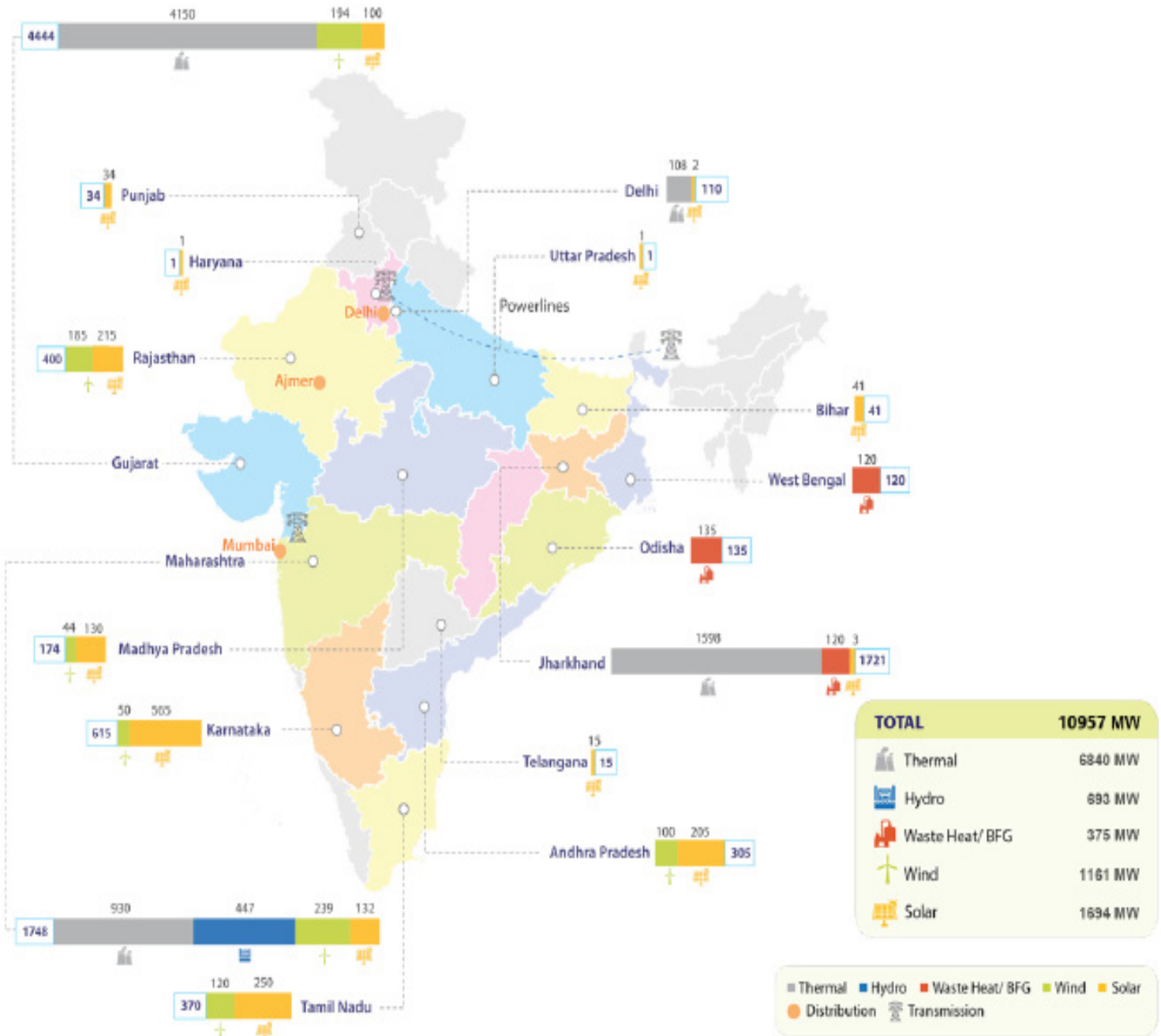


Global Portfolio of Assets

Tata Power has an international presence around the globe and has various projects in Indonesia, Bhutan, Georgia, South Africa & Zambia.



India Footprint



Activities across Value Chain of Power

Fuel

Through long term contacts and shared values, Tata Power has secured the supply of fuel for its operations. Tata Power will continue to tap new fuel assets from across the globe and will utilize the fuel as the need arises for sustainable supply for its operations.

The details of fuel supply are as following:

Project	Requirement	Source
Trombay	3 MTPA coal Oil 1 MMSCMD of Gas	Coal Mines, Indonesia Nearby refineries GAIL
Mundra	12 MTPA coal	Coal Mines, Indonesia
Maithon	4.5 MTPA coal	Coal India Ltd.
Jojobera	Coal	West Bokaro Coal Fields and Mahanadi Coal Fields
Haldia	Flue gas	Tata Steel, Haldia
IEL	Furnace & Coke oven gas Coal	Tata Steel, Jamshedpur West Bokaro Coal Fields

Fuel Transportation

Tata Power's Trust Energy Resources is a wholly owned subsidiary in Singapore. Trust Energy's scope of business is to securitize regular coal supply and the shipping of coal for Tata Power's thermal power generation operations.

Generation

Tata Power's present portfolio in power generation is 10,957MW and has over 400 MW projects in various stages of execution and development. Tata Power's Hydro generating stations are in Khopoli, Bhivpuri and Bhira. The thermal power generating stations are at Trombay, Mundra, Maithon, Jojobera, Haldia, Kalinganagar and Jamshedpur. In this reporting year, there was an addition of 294 MW to the generation capacity from thermal, hydro, wind and solar power. The details of installed capacity are provided in the table below.

Details of Installed Capacity

Fuel Source	Generating plant	State/ Country	Installed Capacity (MW)	Total Capacity (MW)
Thermal	Trombay	Maharashtra	1,430	7,232
	Mundra	Gujarat	4,150	
	Maithon	Jharkhand	1,050	
	Jojobera	Jharkhand	428	
	Indonesia	Indonesia	54	
	IEL Unit-5	Jharkhand	120	
Oil/Gas	Rithala*	New Delhi	108	108
Thermal Waste/ Heat Recovery	Haldia	West Bengal	120	375
	Jamshedpur (unit 6)	Jharkhand	120	
	Kalinganagar (unit 1 & 2)	Odisha	135	
Hydro	Bhira	Maharashtra	300	693
	Khopoli	Maharashtra	72	
	Bhivpuri	Maharashtra	75	
	Dagachhu	Bhutan	126	
	Itezhi	Zambia	120	
Renewable	Wind Farms	Andhra Pradesh	100	1,161
		Gujarat	193.6	
		Karnataka	50.4	
		Madhya Pradesh	44	
		Maharashtra	238.6	
		Rajasthan	185	
		Tamil Nadu	120	
		South Africa	230	
	Solar	Andhra Pradesh	205	1,388
		Bihar	40	
		Delhi	1.65	
		Gujarat	100	
		Haryana	1	
		Jharkhand	3	
		Karnataka	414	
		Madhya Pradesh	130	
		Maharashtra	128	
		Punjab	34	
		Rajasthan	65	
		Tamil Nadu	250.25	
Telangana	15			
Uttar Pradesh	1			
Total			10,957	

*not operational



Renewable Portfolio

Tata Power has 33% of installed capacity i.e. 3,617 MW (as on 31st March 2019) from clean generation sources (includes renewables, waste heat recovery units, hydros), in keeping with its strategic intent to generate 40-50% of total installed capacity from non-GHG sources by 2025. To achieve the set target, various domestic, as well as international projects, are under execution and development stages.

The company has following projects under execution:

- 150 MW project at Pavagada solar park, Karnataka
- 150 MW MSEDCL project at Chhayana, Rajasthan
- 100 MW UPNEDA project.
- 187 MW hydro project in Georgia

Transmission

Tata Power continuously pursues the expansion of its transmission network in the Mumbai License Area. It also keenly tracks any growth opportunities in the transmission sector and reviews each such opportunity for risks and rewards. The Company also plans to pursue viable M&A opportunities through its investment platform.

The current portfolio in the transmission business include:

Over 1,188 Ckms of transmission lines, connecting generating stations to 22 receiving stations (TPC-T) 2,328 Ckms of 220 kV and 400 kV transmission lines to evacuate power from Eastern/ North Eastern region to Northern Region (PTL).

- The Transmission assets (Mumbai License Area) had a grid availability of 99.48% as against the MERC norm of 98%.
- 110 kV GIS, 33 kV GIS and 250 MVA ICT has been commissioned along with station auxiliaries at Versova, Mumbai.
- In PTL, the availability of the lines was maintained at 99.83% for Eastern Region in FY18 and 99.95% for Northern Region against the minimum stipulated availability of 98.5%.

Distribution and Supply

Tata Power has approximately 4,500 Ckms of distribution network with customer base of more than 7 lakhs in Mumbai. Tata Power has some bulk customers which includes Port Trust, BARC, Refineries, Mumbai Metro, data centres and other residential projects.

In FY19, Tata Power Delhi Distribution Limited (TPDDL), had a registered a customer base of 1.64 million spanning across an area of 510 sq. km. in Northern and North-Western part of Delhi.

In FY19, The AT&C losses of TPDDL stood at 7.92%. Also met a peak demand of 2,074 MW in FY19 vs 1,791 MW in FY18. TPDDL, in its strive to enhance reliability, has been able to reduce the System Average Interruption Duration Index (SAIDI) to a level of 29.16 hours against 43 hours in previous financial year.

Tata Power Ajmer Distribution Limited TPADL, a wholly-owned subsidiary of The Tata Power Company Ltd. was formed as a Special Purpose Vehicle (SPV) to take-over the supply and distribution of power in Ajmer city. TPADL entered into an agreement with AVVNL for distribution of power supply for 20 years and started operation from July 2017. The total area under the franchisee is around 190 sq. km. The total consumer base is around 1.38 lakh and total peak demand is 110 MW.

Supporting the Indian Government's 'National electric mobility mission', Tata Power established the Electric Vehicle (EV) charging stations in Mumbai, Delhi and Hyderabad, also covering power supply, backend power supply

infrastructure and customized EV charging solutions. The EV charging solutions form the infrastructure backbone for a growing EV ecosystem and provide customers access to energy-efficient options with ease. The Company is a pioneer in technology adoption and is steadfast in strengthening and expanding its position in fast-evolving energy market with new avenues in the renewable space.

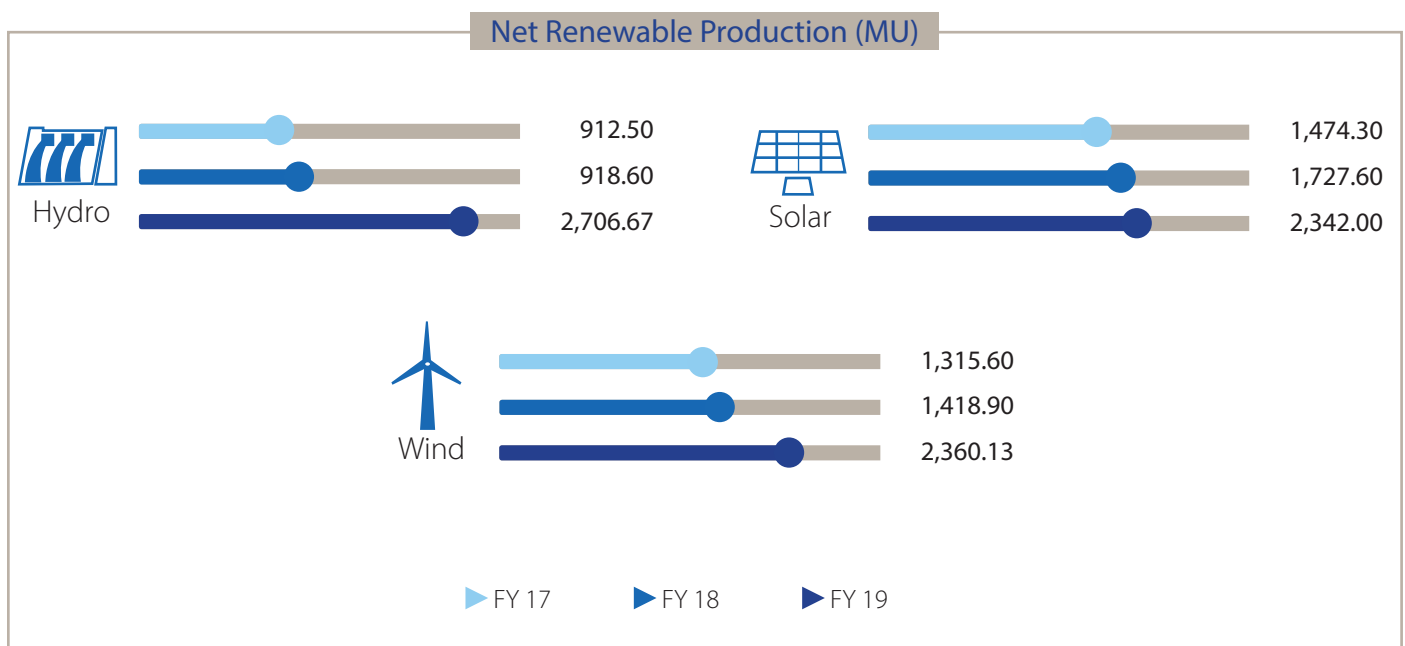
In FY19, Tata Power signed strategic MoUs to set up EV charging stations with Oil Marketing companies like HPCL, IOCL and is working closely with other key stakeholders in creating and promoting the EV charging ecosystem in India. Further, over the past year, Tata Power EV charging network's presence was established in Mumbai, Delhi, Hyderabad, Bengaluru, Vishakhapatnam, Vijayawada and Lucknow under various business models. The Company aims to continuously grow its EV charging infrastructure footprint by installing charging stations at other strategic locations across the country.

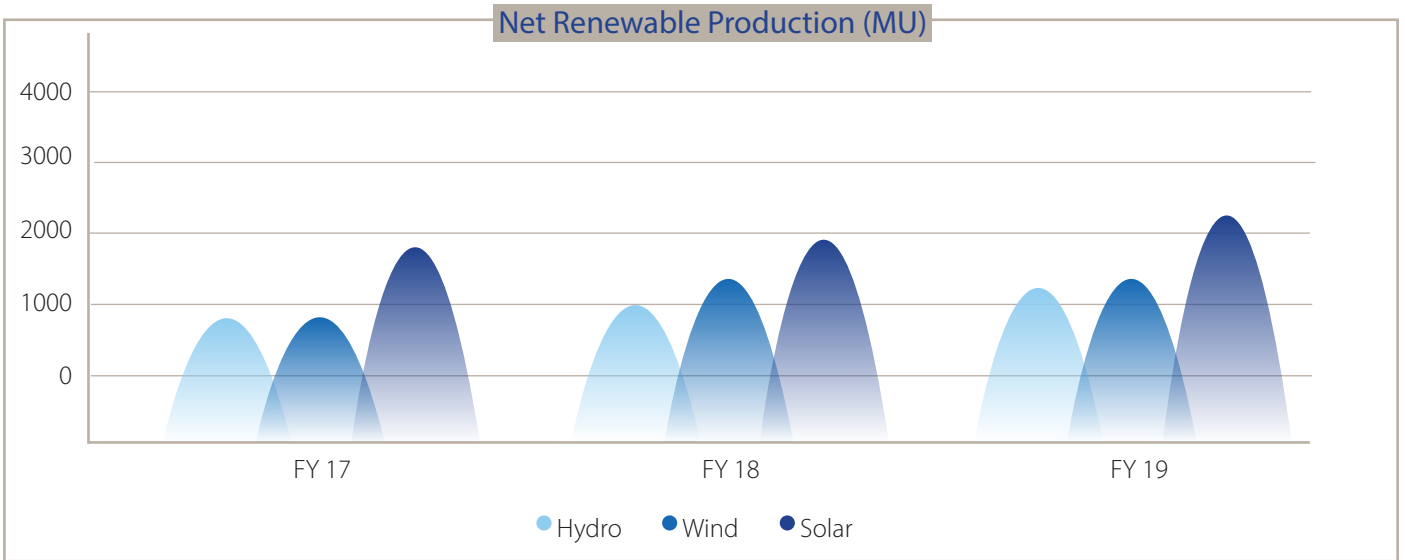
The profitability of renewable portfolio – Making case for new business models

Tata Power's renewable portfolio in India has registered a healthy consolidated PAT of ₹ 435 crore in FY19, a 10% increase from FY18. The renewable business capacity of Tata Power crossed 2,500 MW and non-fossil fuel portfolio stood at 3,242 MW. Another 400 MW of capacity is under construction by (TPREL). The operating renewable portfolio of TPREL has grown to 875 MW, comprising 405 MW wind and 470 MW solar respectively. Tata Power will continue to work towards ensuring its renewable business remains the largest renewable in the country, WREL is a fully owned subsidiary of TPREL and has one of the largest operating solar portfolios spread across India. It has an operating capacity of 1,010 MW, out of which 864 MW is solar and 146 MW is wind power.

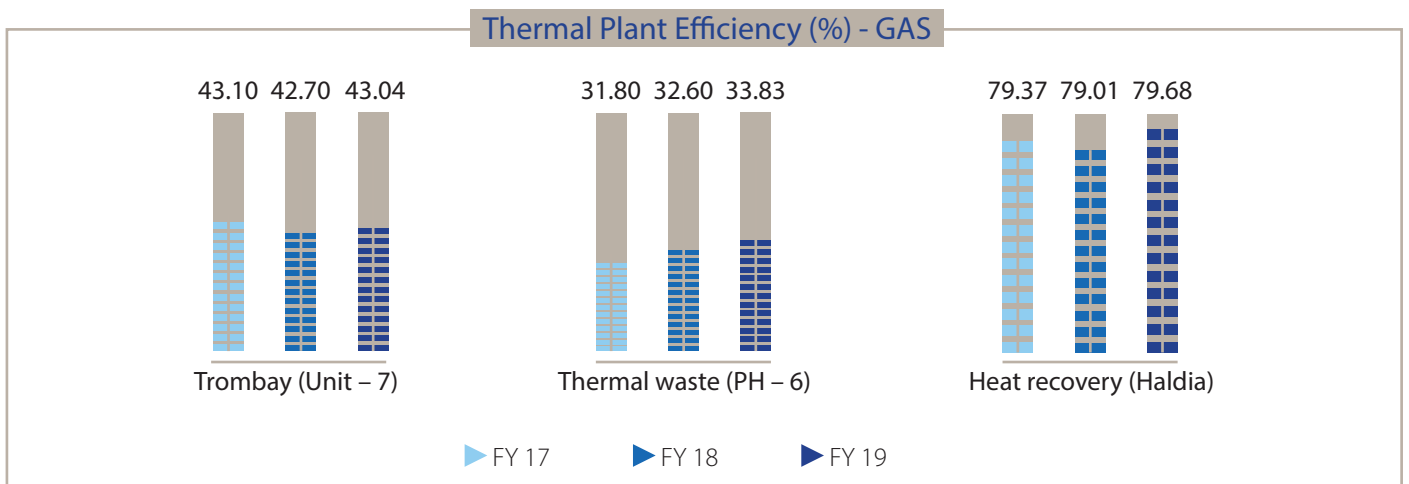
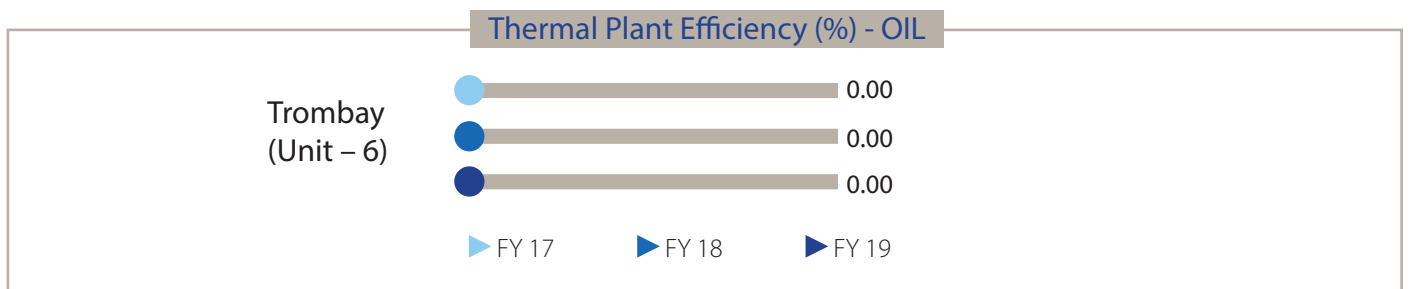
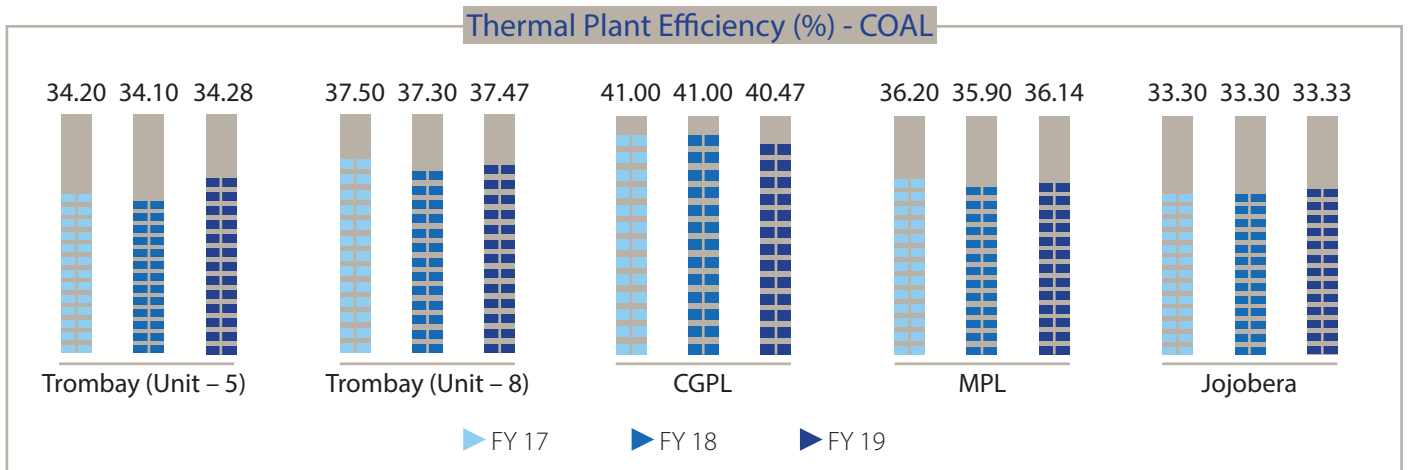
Energy Availability and Reliability

Tata Power, as a sustainable power utility, endeavors to operate its stations efficiently. Tata Power has non-interrupted energy supply or acceptable levels of energy interruptions to generate a consistent electrical output and is available to meet predicted peaks in demand. The Generation (Thermal/ Renewables), Average Generation Efficiency (%) of Thermal Station based on the Energy Source and Average Plant Availability factor of Thermal Stations by energy source areas follows.

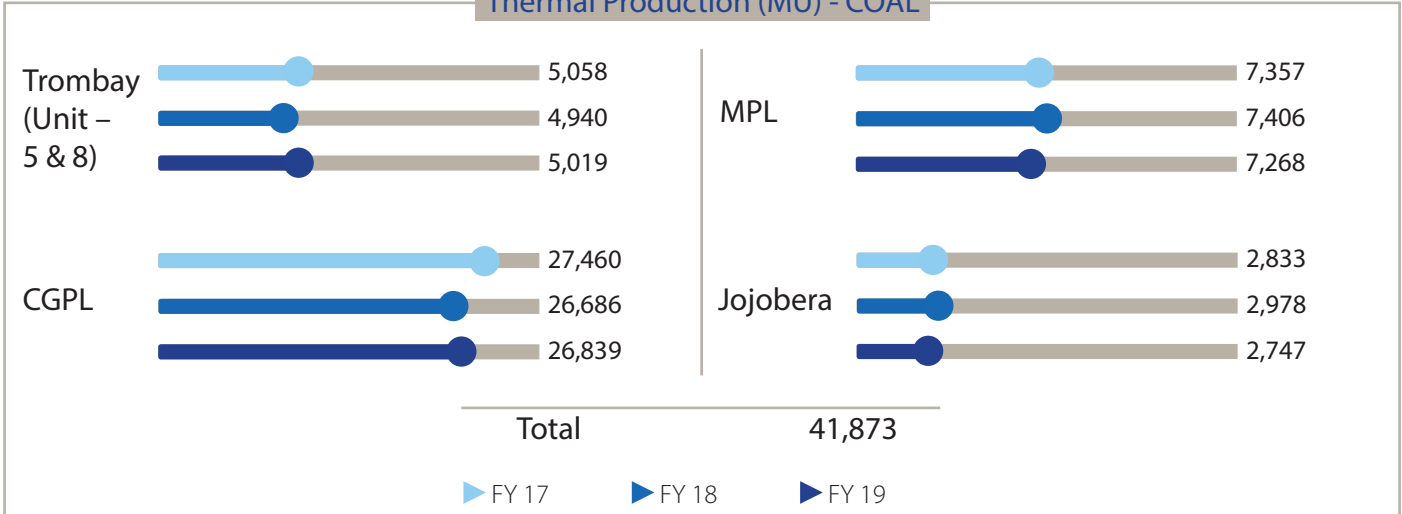




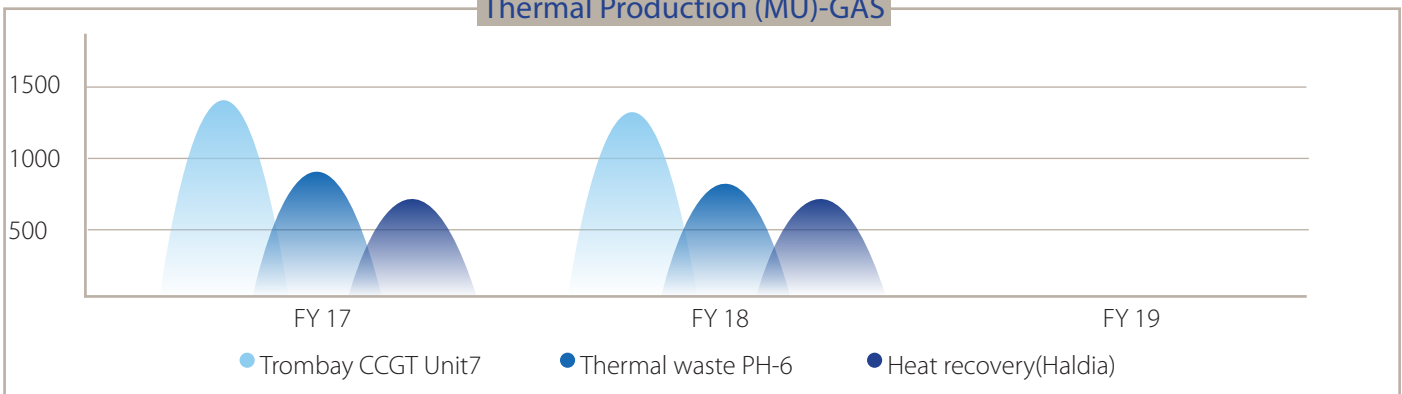
Average generation efficiency (%) of Thermal station based on the energy source



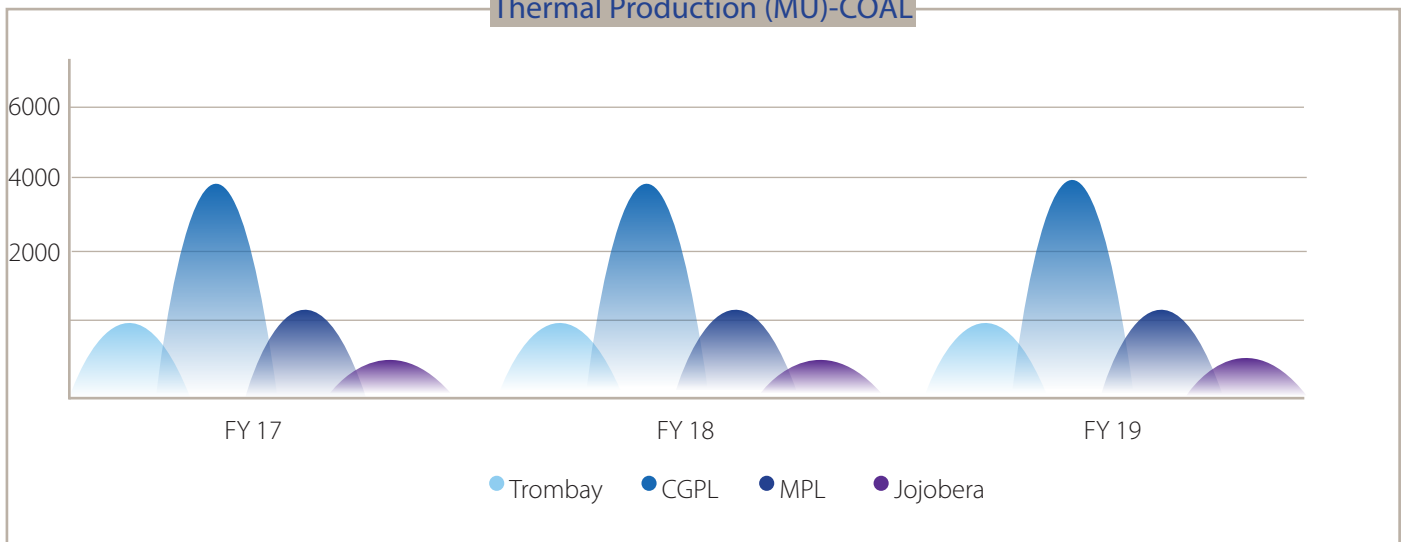
Thermal Production (MU) - COAL



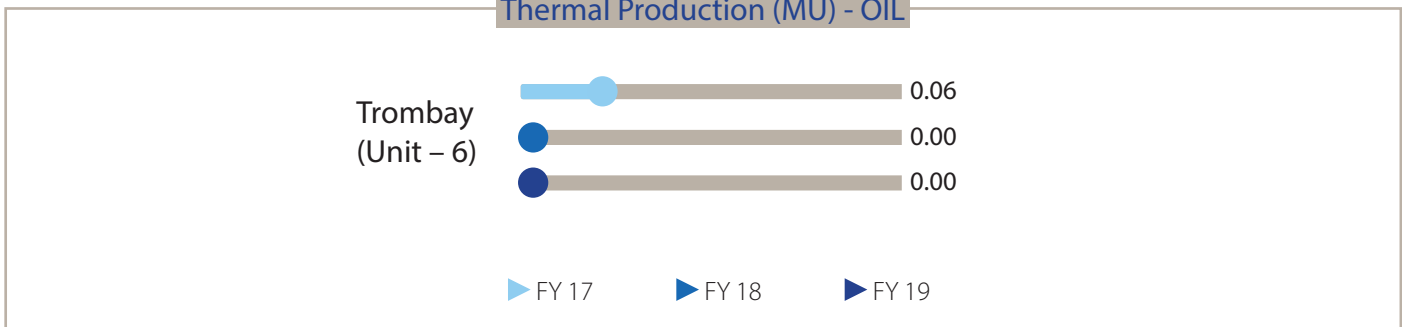
Thermal Production (MU)-GAS



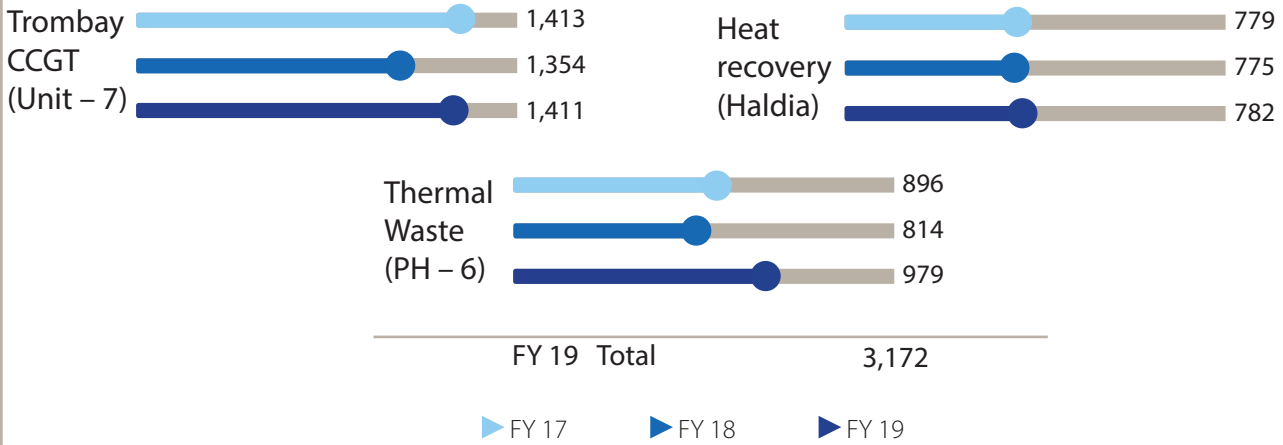
Thermal Production (MU)-COAL



Thermal Production (MU) - OIL

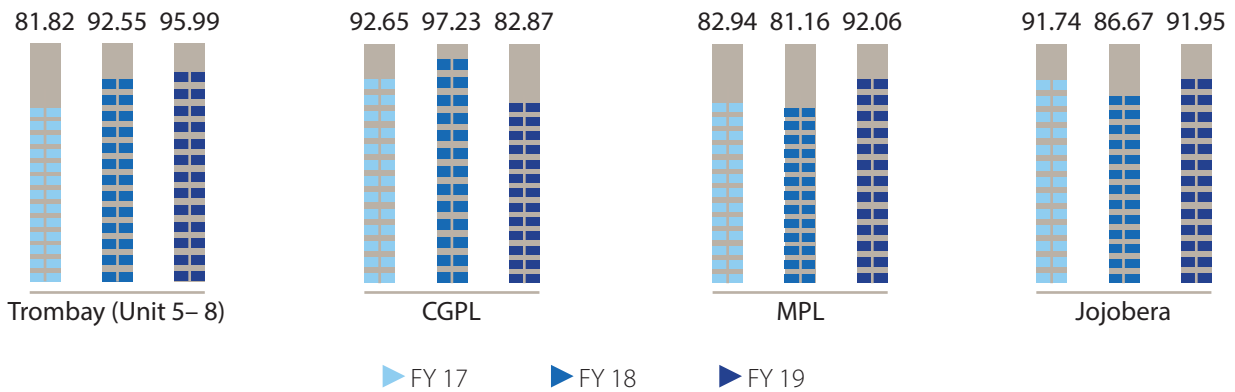


Thermal Production (MU) - GAS

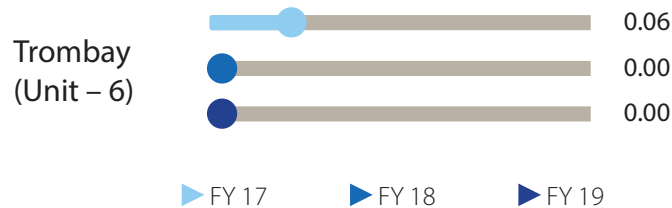


Average plant availability factor of thermal Stations by energy source (%)

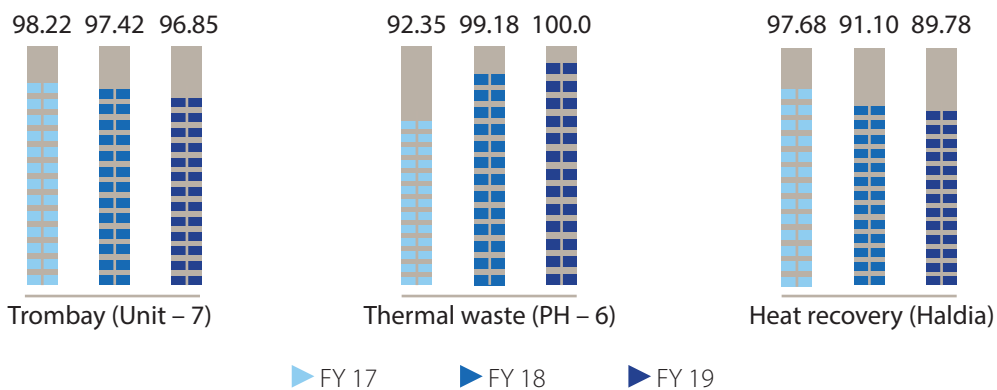
Plant Availability - COAL



Plant Availability - OIL



Plant Availability - GAS

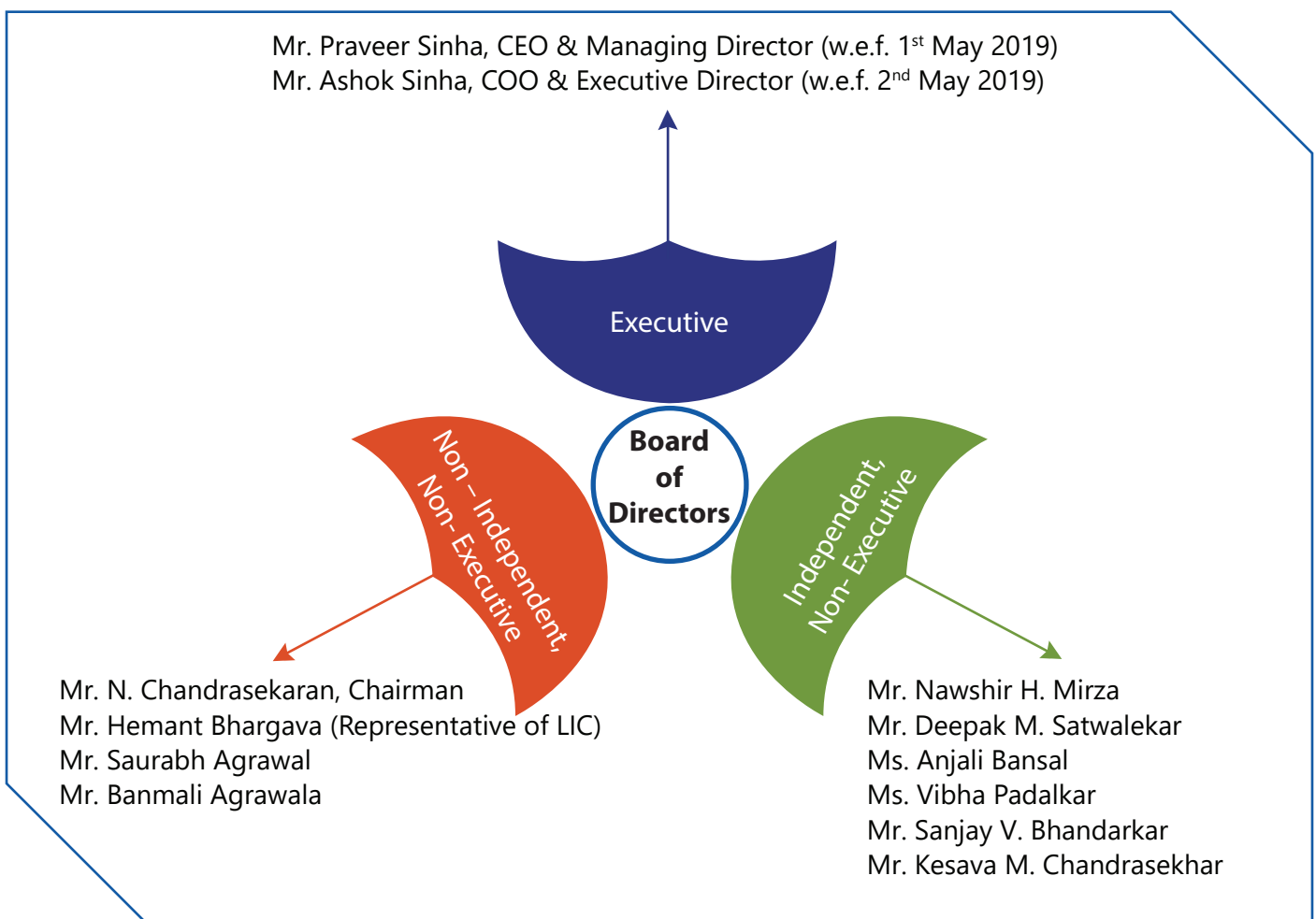


CORPORATE GOVERNANCE

Board Structure - GRI 102-18, 19, 20, 22-39, 45; GRI 405-1

Tata Power's Corporate Governance processes are designed to support effective management of multiple businesses while retaining focus on each one of them. The practice of Corporate Governance at Tata Power takes place at three interlinked levels:

Tata Power's Board is a balanced Board, comprising Executive and Non-Executive Directors. The Non-Executive Directors include the Chairman and independent professionals. The strength of the Board as on 31st March 2019 was twelve; the composition of the Board, including other Directorship(s) was as follows:



In 2018-19, the Board of Directors attended seven meetings. The average director attendance rate was 90.5 %, and was constantly involved in issues related to governance, sustainability, and the Code of Ethics.

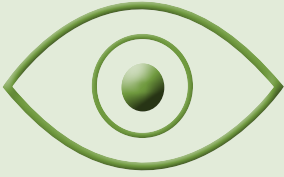
The insights of the shareholding pattern, Committees of the Board, its members and roles-responsibility has been provided in the latest annual report available on www.tatapower.com

The board constitutes of various Committees viz.

- Remuneration Committee
- Audit Committee
- Risk Management Committee
- CSR Committee, etc.

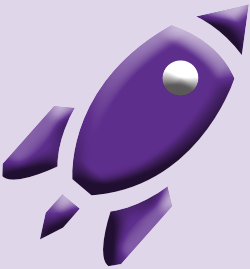
The Value Creation Process - GRI 102-16

Vision, Mission and Values - GRI 102-16



Vision

To be the most admired and responsible Integrated Power Company with an international footprint, delivering sustainable value to all stakeholders.



Mission

Tata Power aims at becoming the most admired and responsible power Company delivering sustainable value by

- Operating assets at benchmark levels
- Executing projects safely, with predictable benchmark quality, cost and time
- Growing the Tata Power businesses, be it across the value chain or across geographies, and in allied or new businesses
- Driving Organisational Transformation that will make the Company have the conviction and capabilities to deliver on the strategic intent
- Achieving the Company's sustainability intent of 'Leadership with Care', by having leading and best-in class practices on Care for Environment, Community, Customers, Shareholders, and People.





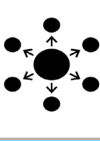
Values

Tata Power values are 'SACRED' to the Company

- **Safety:** Safety is a core value over which no business objective can have a higher priority.
- **Agility:** Speed, responsiveness and being proactive, achieved through collaboration and empowering employees.
- **Care:** Care for our environment, care for our customers and shareholders both existing and potential. Care for our community and care for our people (our employees and partners).
- **Respect:** Treat all stakeholders with respect and dignity.
- **Ethics:** Achieve the most admired standards of Ethics through Integrity and mutual Trust.
- **Diligence:** Do everything (set direction, deploy actions, analyse, review, plan and mitigate risks, etc.) with a thoroughness in delivery, quality and excellence in all areas, and especially in operations, execution and growth

Strategic Intent 2025

Tata Power Operations Viz. Generation, Transmission and Distribution of power in India

		
<p>Generation</p> <p>At all generating stations, conformance to environmental norms, safety, occupational health of the employees (permanent/contract) is considered a priority. Tata Power's Strategic Intent 2025 has considered achieving 40-50% generation portfolio from non-fossil fuel sources to reduce impact on the environment. Further, all thermal stations of Tata Power are IMS compliant.</p>	<p>Transmission</p> <p>Tata Power conducts a campaign called Jan Jagruti Abhiyan to create safety awareness amongst people staying below the overhead High Tension lines in Mumbai. Employees visit different locations under high voltage Transmission Lines and create safety awareness among the community at large. Intensified Jan Jagruti is conducted during Sankranti Festival season, Ganpati Festival, and roof repair season.</p>	<p>Distribution</p> <p>Various initiatives like Safety audits in consumer premises, Club Enerji, Demand Side Management programs, and Be Green initiative creates awareness for customers/society at large on energy efficiency and its conservation, safety, and reducing the carbon footprint.</p>

Tata Power has a clear economic impact on the areas in which it operates. Apart from achieving operational excellence, Tata Power's approach to business on enhancing human capital and innovation to harness disruptions are on high priority. The value creation model revolves around the strategic intent 2025 and is underpinned by its vision, mission and values. It also generates a wide array of services activities in these areas and contributes economic resources to public administrations. The group works to develop excellent management of customer relations, offering them energy products tailored to their needs, promoting efficiency, and ensuring the availability of competitive, sustainable and high-quality energy. The company also practices the best corporate governance systems available to it, including those of compliance and risk management, as well as Tata Code Of Conduct to ensure transparency of information and to preserve Value creation for shareholders.

Corporate Policies

The Corporate Governance policies adopted by the Board, ranges from Business Dealings to Media Policy, from Human Rights to Responsible Supply Chain which provide oversight and guides the management in deploying these policies. These policies help in making the governance mechanism robust. Some of the policies are as following:

- Tata Code Of Conduct for Prevention of Insider Trading
- Code of Corporate Disclosure Practices
- Code of Conduct for NED and Code of Conduct for Business Dealings
- Whistle Blower Policy
- Policy of Information Security
- IT Policy
- Gift Policy
- Customer Service Policy
- Business Continuity Policy
- Risk Management Policy

In addition to these Corporate Governance policies, Tata Power is also governed by many unique policies, such as; Sustainability, Environment, Community Relations, E-Waste Management, Health and Safety, Human Rights (HuR), Prevention Of Sexual Harassment (POSH), Responsible Supply Chain Management (RSCM), Advocacy, Affirmative Action (AA), Corporate Communication, Energy Conservation and Customer Satisfaction and Media. All information related to these policy statements are available on www.tatapower.com

Risk Management System - GRI 102-11, 15, 25, 28, 29, 30, GRI 103-2, 3, GRI 201-2, GRI 205-1

Risk Management (RM) was introduced at Tata Power in 2004 and since then, the company has implemented many key initiatives for improving Risk Management process. The key initiatives implemented are;

- The Company has developed a Risk Management Policy and Risk Management Strategy document to guide users on implementation of Risk Management processes.
- Based on the RM Strategy document, an online System called Risk Management System © has been implemented across Tata Power Group. Risk plans have been framed for all identified risks and uploaded in the system with mitigation actions, target dates and responsibility. This has enabled continuous tracking of status of mitigation action and monitoring of Risk Mitigation Completion Index (RMCI). Tata Power has obtained a copyright for its Risk Management System.
- The Risk Register contains mitigation plans for eleven categories of risk. Eight Functional Risk Management Committees (FRMCs) closely monitor and review the risk plans for standalone divisions, while nine Subsidiary Risk Management Committees (SRMCs) monitor and review risks for subsidiary companies.
- An Apex RMC at the senior management level and Board RMC - comprising of 3 independent members of the Board and one non-executive director, conduct regular reviews of key risks across the company. This Board RMC has been constituted as per requirement of the Companies Act 2013.
- All risks (totaling to over 280 risks) have been classified into Strategic, Tactical and Operational risks. In addition, risks have been grouped into 20 Risk Themes. This facilitates senior management to focus on Strategic or Tactical risks of key themes.
- A structured method for quantifying risks has been implemented in the online Risk Management System. Guidelines have been provided for quantifying various types of risks. Tata Power has obtained a copyright for its Risk Quantification Methodology. In addition, concept of Insurance has been implemented in the quantification, thereby improving accuracy.
- To facilitate all employees across the company to participate in the Risk identification process, the company has implemented "Risk Perception System" wherein any employee can identify risks and mark to respective leader to confirm and develop Risk Treatment plans.
- To strengthen implementation of RMS, the company has trained over 60 employees on ISO 31000:2009 standards. These employees facilitate in conducting annual audits on maturity of implementation of Risk Management across Tata Power Group. In addition, the company also conducts awareness training on Risk Management to employees on a regular basis.
- The company is a founder member of "RM Next" a focus group formed by industries to improve understanding of Risk Management. Some of the key members of this group include Siemens, L&T, Mahindra & Mahindra, TCS, Wipro, etc to name a few. This group meets on quarterly basis and shares learnings in the areas of Risk Management. These learnings are implemented in respective companies based on need and suitability.
- The Company conducted Deep Dive assessment of its RM process first in 2014 and then in 2017, wherein the scores improved from an average of 3.5 / 5 to 4 / 5.
- Tata Power is the Second Indian Company and the First Company in the Power Sector to be awarded "Statement of Compliance" to ISO 31000:2009 for Risk Management in 2014.

To improve Organisational Resilience & to handle disasters and other catastrophic events, Tata Power has implemented Business Continuity Management (BCM) Systems. Key activities being carried out include the following:

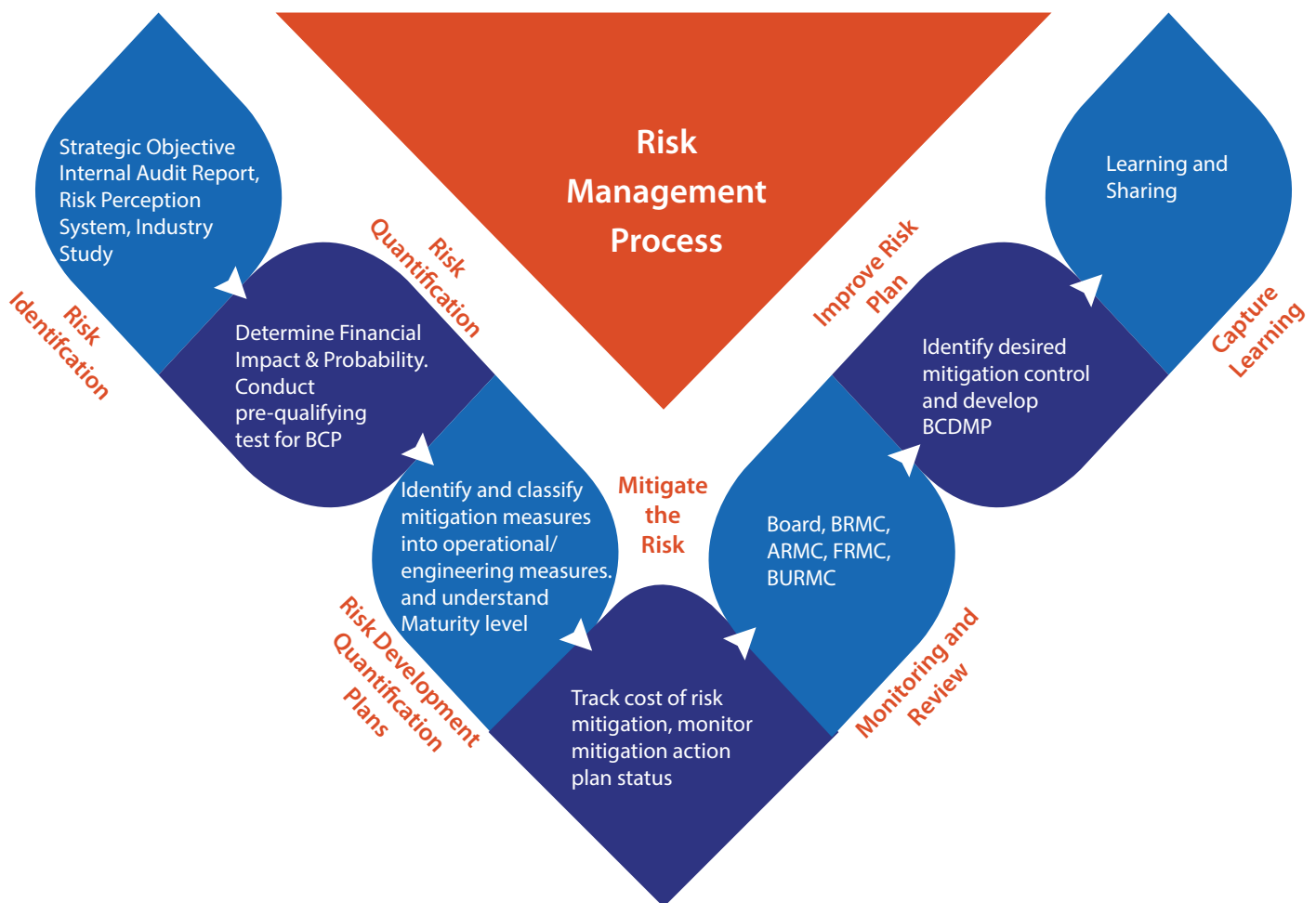
- The Company has developed a Business Continuity Policy and prepared a "Policy & Procedure" document to guide users on implementation of BCM processes.
- To strengthen implementation of BCMS, the company has trained over 80 employees on ISO 22301:2012 standards. These employees facilitate in conducting annual audits on maturity of implementation of BCMS across Tata Power Group. In addition, the company also conducts awareness training on BCMS to employees on a regular basis.
- The Company also conducts regular training on First Aid and Firefighting, experience sharing sessions by persons who have experienced and handled disasters.
- The Company has implemented a process for tracking and reporting on status of mock drills to senior management. In 2016 "Exercise Assessment Sheet" has been developed to rate each location on the quality of

mock drills.

- To facilitate learning, the company interacts with Central Electricity Authority (Ministry of Power) and Tata Sustainability Group.
- Tata Power is the Second Company in the Power Sector to be awarded ISO 22301:2012 Certification by British Standards Institution (BSI).
- BSI based on audit findings computes Accelerator score. This score is calculated based on 7 key parameters of ISO 22301:2012 standards. Due to the various improvement initiatives implemented, the Accelerator scores improved from 55% in 2015 to 87 % in 2018.

Risk Management Process

Due to the nature of its business, the Tata Power is exposed to various types of risks, indicated in the flow diagram below together with the activities aimed at mitigating their effects and ensuring their correct management.



Risk Management policy

In Tata Power, we believe that an effective risk management process is the key to sustain operations thereby protecting shareholder value. Improving Governance processes, achieving strategic objectives and being well prepared for adverse situations/ circumstances, if they were to occur in the activity of the business lifecycle.

Risk Management Committee

The Risk Management Committee consists of three independent directors & one non-Executive Director. Chairperson of the Committee is an Independent Director – Mrs Vibha Padalkar.

Chief Risk Officer, RMC chairperson

The Board has adopted Risk Management Strategy which specifies the objective, benefits of Risk Management, Risk Management Policy, Risk Management Process, Risk Organization Structure, Risk Culture etc. The Risk Management policy is available on the Company's website www.tatapower.com.

The role and responsibilities of this Committee include the following:

- To review Risk Management Policy and its deployment.
- To review Risk Management framework and its effectiveness and set direction.
- To monitor and review Risk Management Plan.
- To decide the risk appetite of the Company and, accordingly, guide the Board in taking up new investments.
- To review the major risks.
- To report high value risks and its mitigation to the Board

Ethics - GRI 205-3, GRI 206-1, GRI 406-1

Tata Power, being a responsible Corporate, values ethical practices and its direct correlation with goodwill to its business. Tata Sons, the holding company for Tata Group of companies have prescribed a code of conduct for Tata Group companies and is known as The Tata Code of Conduct.

The Tata Code of Conduct (TCoC) represents the values and core principles that guide the conduct of every Tata business. The Code lays down the ethical standards that Tata colleagues need to observe in their professional lives. First crafted in 1998 under the visionary leadership of Mr. Ratan Tata, it defines a value system which has endured since the group was founded in 1868.

The Code is a living document. While it has remained unaltered in its essence, it has been amended over the years to stay aligned with changing cultural and regulatory norms across the multiple jurisdictions in which Tata Group conducts its business. TCoC, was first formally articulated in 1998, and has been revised in 2017 by Mr. N. Chandrasekaran after taking over as Chairman of Tata Group of Companies.

TCoC consist of 10 sections and describes Tata Group Values, Core Principles, Code of Conduct for Employees, Customers, communities & environment, Value Chain Partners, Financial Stakeholders, Governments and Group Companies.

TCoC also forms a part of all the investment and contract agreements. Tata Power also has a Human Rights Policy which is applicable to the entire organisation and its operations. During the reporting period there were no instances of non-compliance and demonstration of any anti-competitive behaviour, anti-trust and monopoly practices in the Company.

Being a Tata company, Tata Power is committed to support the constitution and governance systems of the country in which it operates. Tata Power does not support any specific political party or candidate for political office. No monetary benefits were provided in any form to any political party. Tata Power complies with all the statutory requirements of the location in which it operates. The Senior Leadership Team (SLT) of Tata Power reinforces the ethical culture through the guiding clauses of the TCoC in communications to all stakeholders.

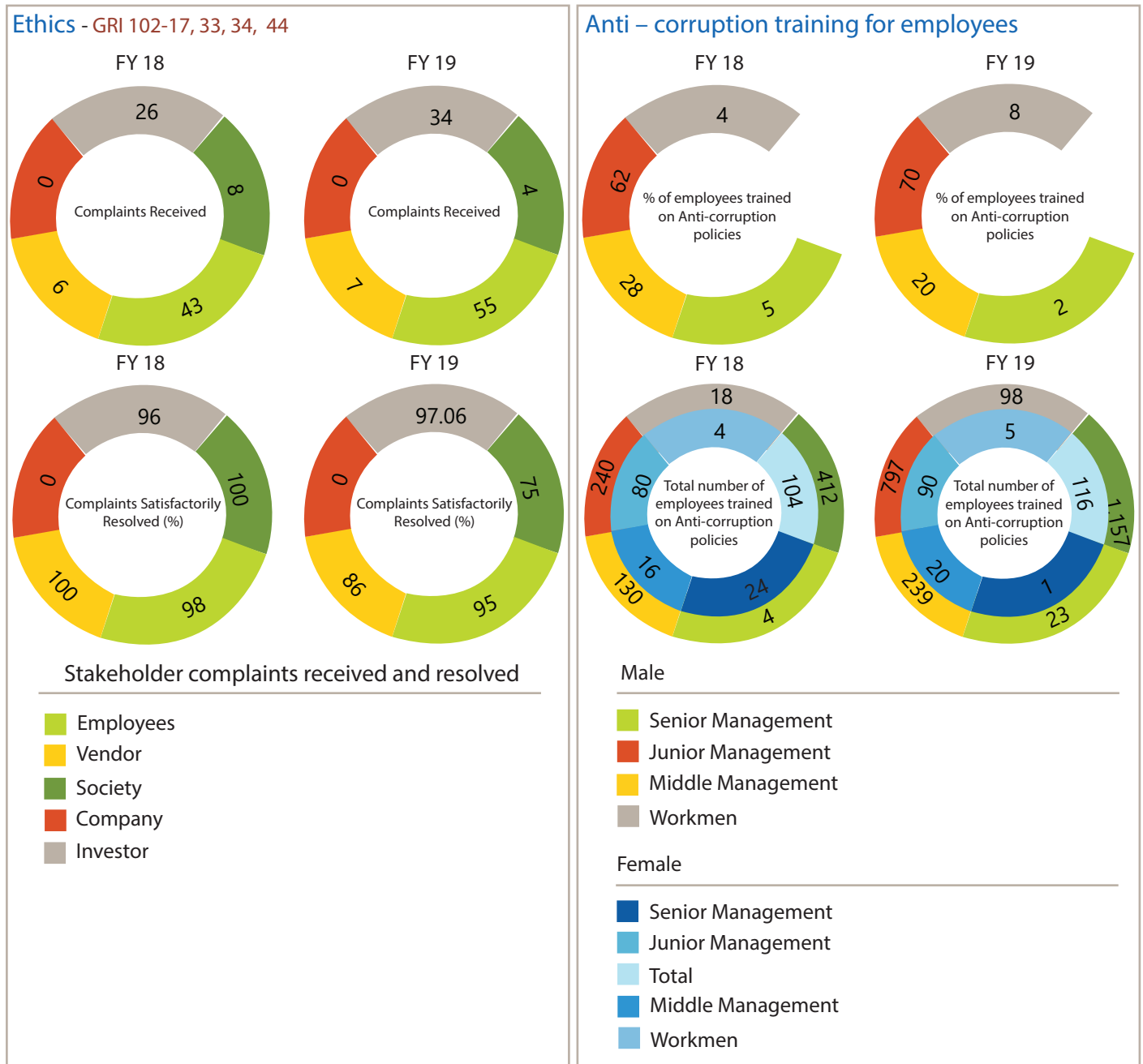
The Apex Committee of Ethics chaired by MD, comprises of and other senior leaders who periodically monitor the functioning of the ethics structures, and provide policy and thought leadership. An organisational structure with the Chief Ethics Counsellor, Head Ethics and Local Ethics Counsellors (LECs), help drive the culture of ethics. The Apex Committee on Ethics meets once annually to provide policy guidelines for the implementation of TCoC and resolve any other policy issue. As a part of the compliance by the governing body - Tata Sons, the MD submits an annual declaration on Business Ethics to the Chairman of the Tata Power and Chief Ethics Officer of Tata Sons.

Every year, Ethics Week is celebrated in the month of February / March, to strengthen the ethical culture across the organisation. Apart from the Ethics Week, Communication on ethics through various channels is done throughout the year.

In the reporting year, 66 concerns (complaints were received from employees, vendors and society. Out of 66 concerns, 51 concerns were disclosed concerns and 15 were anonymous concerns. Majority of the concerns received were related to the TCoC clauses on ethical conduct and ethical dilemmas.

There were no complaints on discrimination, Child labour, forced labour, freedom of association and right of collective bargaining, HuR, etc. In the reporting year, there have been no incidents of violation of rights of indigenous people. TCoC is communicated to all the members of the governance body.

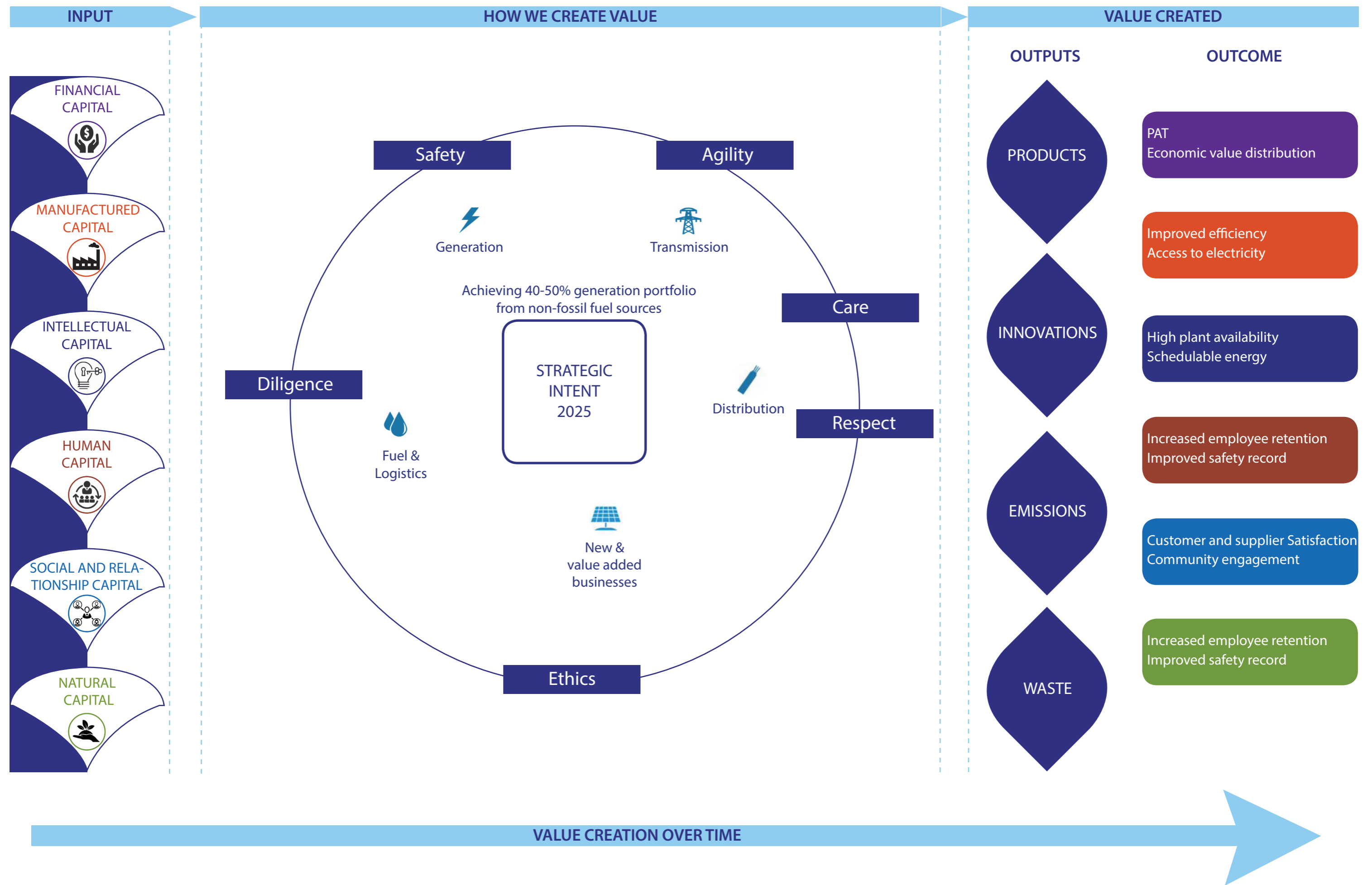
Tata Power received the “World’s Most Ethical Company” recognition from Ethisphere Institute USA for 3 consecutive years, namely 2014, 2015 and 2016. Thereafter the company did not apply for the award but instead became a founding member of Business Ethics Leadership Alliance (BELA), South Asia Chapter.



POSH – Prevention of Sexual Harassment

Sexual harassment is a punishable offence and a strict no in Tata Power. An Internal Complaints Committee (ICC) has been appointed for all administrative units/ offices of Tata Power and its group of companies. The policy covers all women at all workplaces in Tata Power and its group of companies.

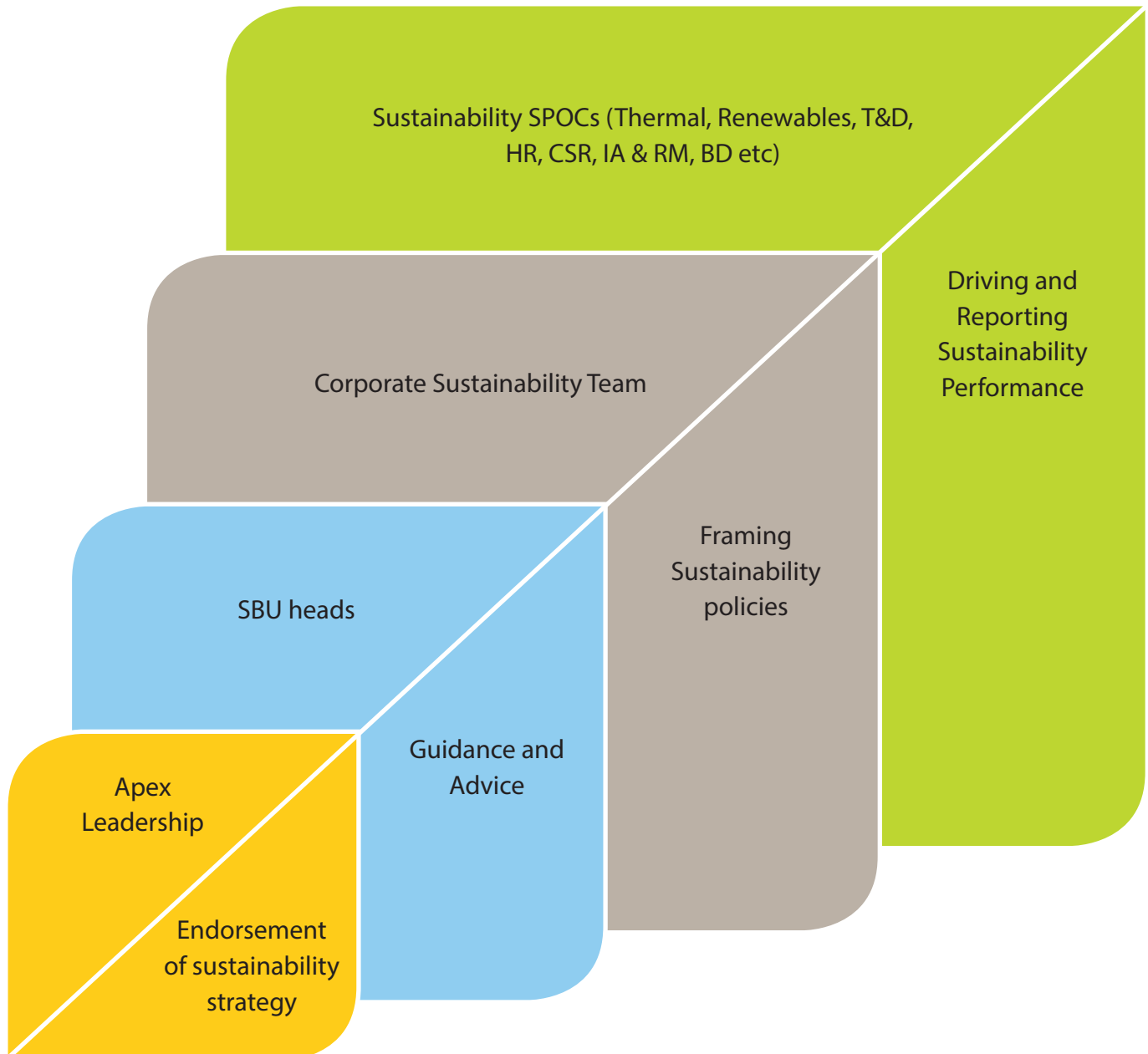
VALUE CREATION MODEL



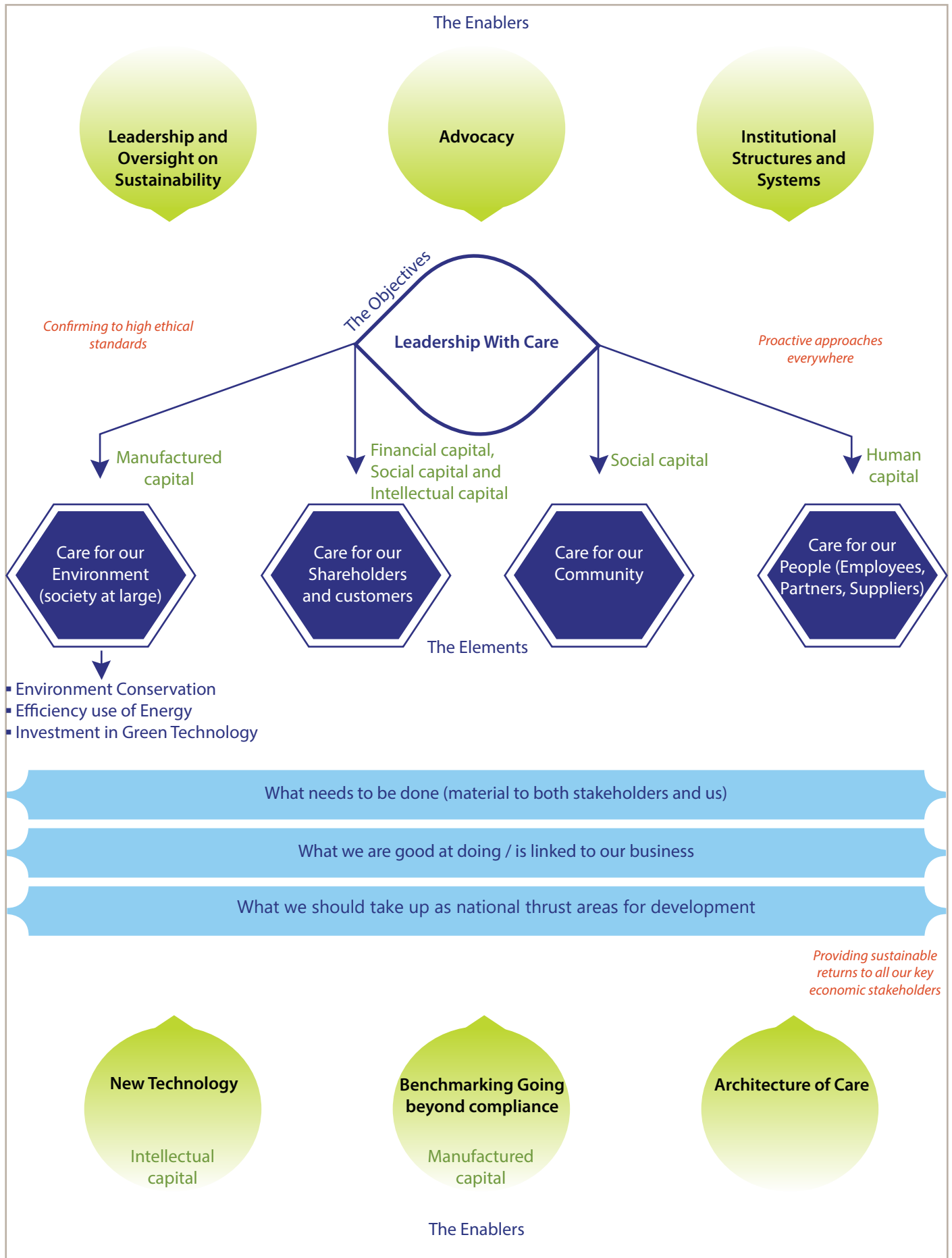
SUSTAINABILITY GOVERNANCE

Tata Power has a unique governance system. This is guided by the SBU heads which comprises of eminent experts from diverse fields like environmental protection, biodiversity conservation, climate change, and community relations. The SBU heads' role is to challenge the organisation's strategies on sustainability issues and guide the company to formulate improved approaches. [GRI 102-16](#), [GRI 414-2](#)

Tata Power's Sustainability department consists of a team from community engagements, CSR, affirmative action & sustainability experts. The structure for Tata Power's sustainability wing is detailed below:



TATA POWER'S SUSTAINABILITY MODEL



Sustainability Policies - GRI 102-12; 412

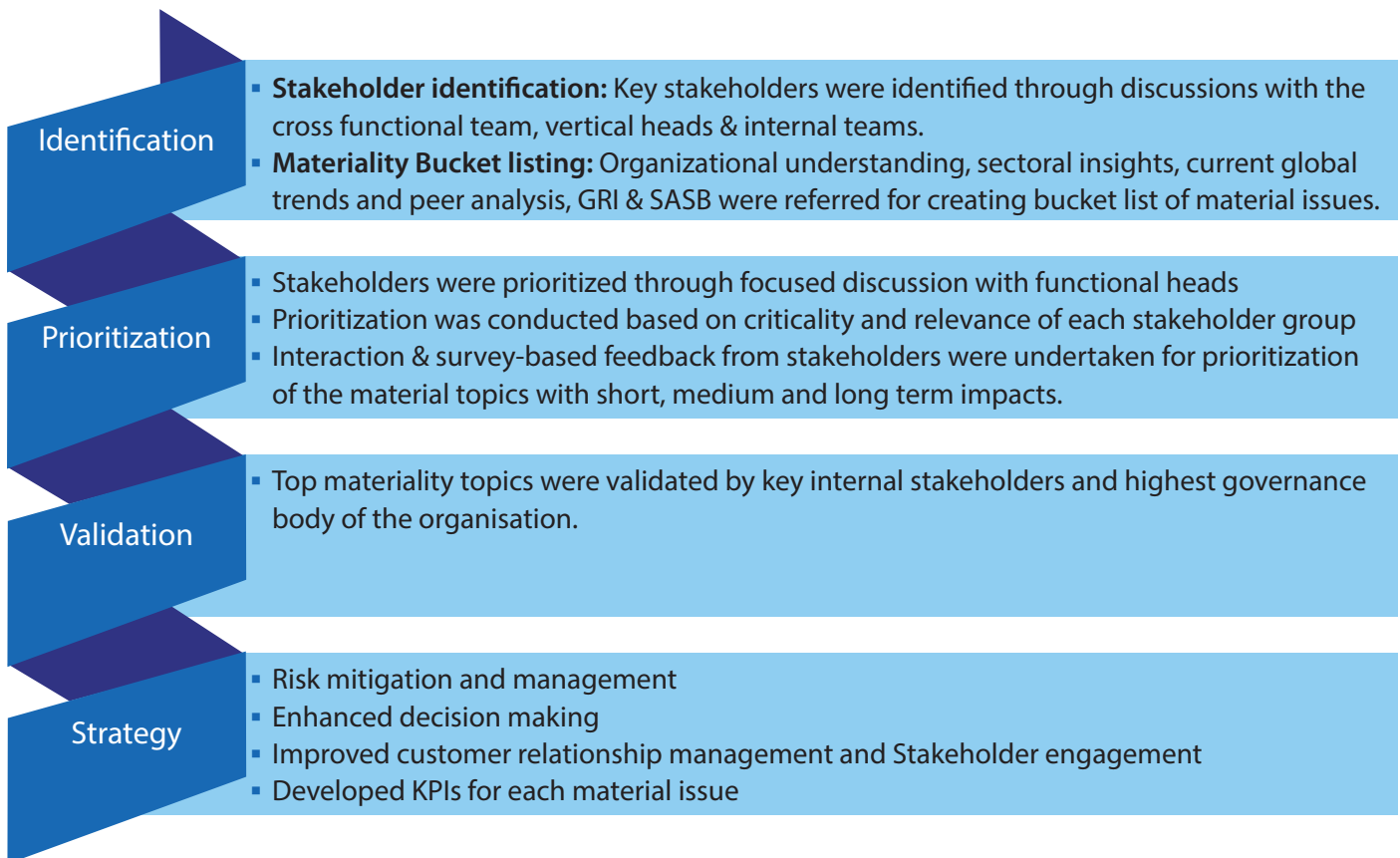
Since the start of the Industrial Revolution, humanity has accelerated certain natural processes that has changed the balance of the planet. If this rate of change is not arrested, human activities will impact the future generations in ways that will be hard to mitigate. The concerns and growing awareness among all stakeholders about global warming and climate change debate poses serious challenges. As a responsible member of society, Tata Power is committed in combating climate change and as a responsible group, it will continue to play a leadership role in Sustainability. Tata Power is committed to tackling the issues of Climate Change by adopting Sustainable and responsible growth. To achieve the same, Tata Power has developed a holistic Sustainability Model. The Policies and Model for Sustainability emanate from the Tata Philosophy based on the powerful and benevolent visions of the founders.

The list of corporate policies is available at "<http://www.tatapower.com/corporate/policies-and-code-of-conduct.aspx>" www.tatapower.com/corporate/policies-and-code-of-conduct.aspx

- Sustainability Policy
- Environment Policy
- Energy Conservation Policy
- CSR
- Safety & Health Policy
- E-Waste Management Policy
- HIV AIDS Policy
- Advocacy Policy
- Human Rights Policy
- Responsible Supply Chain Management Policy
- Volunteering Guideline



Materiality - GRI 102-47, 48, GRI 103-1, 3



The following issues are found to be material by the business and its stakeholders. The stakeholders' engagement study was conducted by a third party.

- Carbon Emissions Management (GHG & Air)
- Resource Availability (Coal & Water)
- Water Management
- Biodiversity
- Innovation in process, service & solutions
- Operational Efficiency
- Future Ready Strategy
- Increase in Renewables Portfolio
- Rural Microgrid to meet increasing demands
- Impact on business due to change in coal tax or carbon pricing
- Customer Relationship
- Demand Side Management
- Sustainable Investing
- Corporate Governance
- Training, Education & Development
- Human Rights – Employees & Value chain

Stakeholders' Engagement - GRI 102-15, 21, 40, 42, 47

Key stakeholders engaged in the Materiality revisit were:

- Financial Community (Investors/Lenders)
- Shareholder
- Regulatory authorities
- Customers
- Board of Directors & Leadership
- Employees
- Employee Union
- Suppliers/Vendors
- NGO
- Civil Society and Local Community
- Media

Stakeholder interaction: We adopted a blended Stakeholder Engagement model for the purpose of materiality assessment. The blended model encompassed various modes of communication including, group workshops, survey-based method, one to one interview (in person and telephonic). We also recorded insights on the frequency & type of interaction desired by each stakeholder group.

Redefining stakeholder relationships - GRI 102- 43

The success of the UJALA programme has also resulted in a paradigm shift in the relationship between distributors of electricity and consumers as it has helped the former manage their loads better and they, in turn, have been helping to propagate the benefits of energy efficiency to consumers. "Lighting systems consume around 17% of the total energy generated in the country. Thus, it is time to abandon the antiquated technologies and embrace new ones. In addition to having launched several demand-side management (DSM) programmes for promoting efficient use of energy, India's largest integrated power company is actively encouraging consumers to switch over to LED lighting products.

The ways in which we are imparting the importance of energy management and conservation to our customers across India - GRI 102-44

Tata Power has undertaken various initiatives in line with its belief in ensuring a greener and sustainable planet. Over the years, the company has been instrumental in rolling out various consumer initiatives like multiple demand-side management (DSM) programmes for promoting efficient use of energy to communicate our goal of sustainability. Apart from this, the company has also initiated Greenolution, which is a unique initiative that is not only participative but also engaging, responsive, and ever-evolving. Through Greenolution, Tata Power has rolled out various practices and programmes to popularise sustainability as a movement by making all stakeholders and the public at large a part of them. Tata Power is also part of a group of 46 leading international companies working together to develop a global policy framework to combat climate change.

Sustainability Initiatives - GRI 102-11, 14, GRI 302-4

Customer Initiatives

▪ Wattloss Challenge

This is a 3-month challenge where participants are awarded for the most energy saved for a period of 3 months. The energy saved will be monitored through electricity bill generated at the end of each month.

▪ Safe Monsoons

As a step towards preparedness for the monsoons, Tata Power has adopted measures to minimize inconvenience to its customers and ensure their safety.

▪ 5 Simple Ways to Make A Difference

Following these simple steps, one can make a difference in daily life and help to save the planet. The 5 steps are as follows:

- Plant or adopt a tree
- Choose public transport
- Save water
- Print on both sides
- Use cloth bags

▪ Power Saving Tips

Tata Power believes in the importance of conserving energy for a better tomorrow. In line with the same, small steps for power saving can aid in reducing energy consumption. The steps are as follows:

- Shift consumption away from the 10 am - 8 pm peak times
- ACs at 26° C
- Switch off from the plug point

Further, Tata Power has entailed energy saving measures for majority power consuming home devices which is available on the website.

- Calculate Your Energy
- Calculate Your Solar Rooftop Potential

Be Green

Tata Power is highly committed to sustainability and has always made consistent efforts in extending this commitment to all our consumers. We have undertaken various initiatives in line with our belief towards ensuring a greener and sustainable planet. The nature of 'BE GREEN' is collaborative and participative and shall include all our consumer initiatives that infuse the aim of sustainability.

In the pilot programme, energy efficient tube lights (FTLs) and 5-Star ceiling fans are being supplied to Tata Power's residential customers in Mumbai. It is facilitating an interesting offer of 50,000 FTLs with electronic ballast at 35 to 40% discount to its end consumers, under the DSM budget. This pilot project has been approved by Maharashtra Electricity Regulatory Commission (MERC), and consumers in Mumbai save 30% energy with the use of these energy-efficient equipment.

Demand Side Management

Demand Side Management (DSM) refers to cooperative activities between the utility and its customers (sometimes with the assistance of third parties such as energy services companies and various trade allies) to implement options for increasing the efficiency of energy utilisation, with resulting benefits to the customer, utility and society as a whole.

Greenolution

The name Greenolution is a fusion of two concepts - 'Green' and 'Evolution'. It signifies the process and initiatives that Tata Power will undertake towards ensuring a greener and sustainable planet. The objective of conceiving this concept is to traverse this journey and make green living a 'way of living'.

'Greenolution' - a unique initiative by Tata Power

It is **Participative | Engaging | Responsible | Evolving | Energetic**

Greenolution is simply a way of life to which every individual pledged to ensure a greener and sustainable planet willingly subscribes. The watchword of our times is 'Green' and 'Evolution'; together comprising the inspiration that green is the only way to evolve. Greenolution represents the face of the generation that never fails to raise a voice when necessary, the generation that is willing to learn as well as teach, that knows how to be responsible and when to be rebellious. This is the face of a new, dynamic India, always open to bringing about positive change.

This is the **GENERATION GREEN**.

Setting new benchmarks as youth icons, it cares for the planet and its future. It is dedicated to the cause of green.



OUR CAPITALS JOURNEY



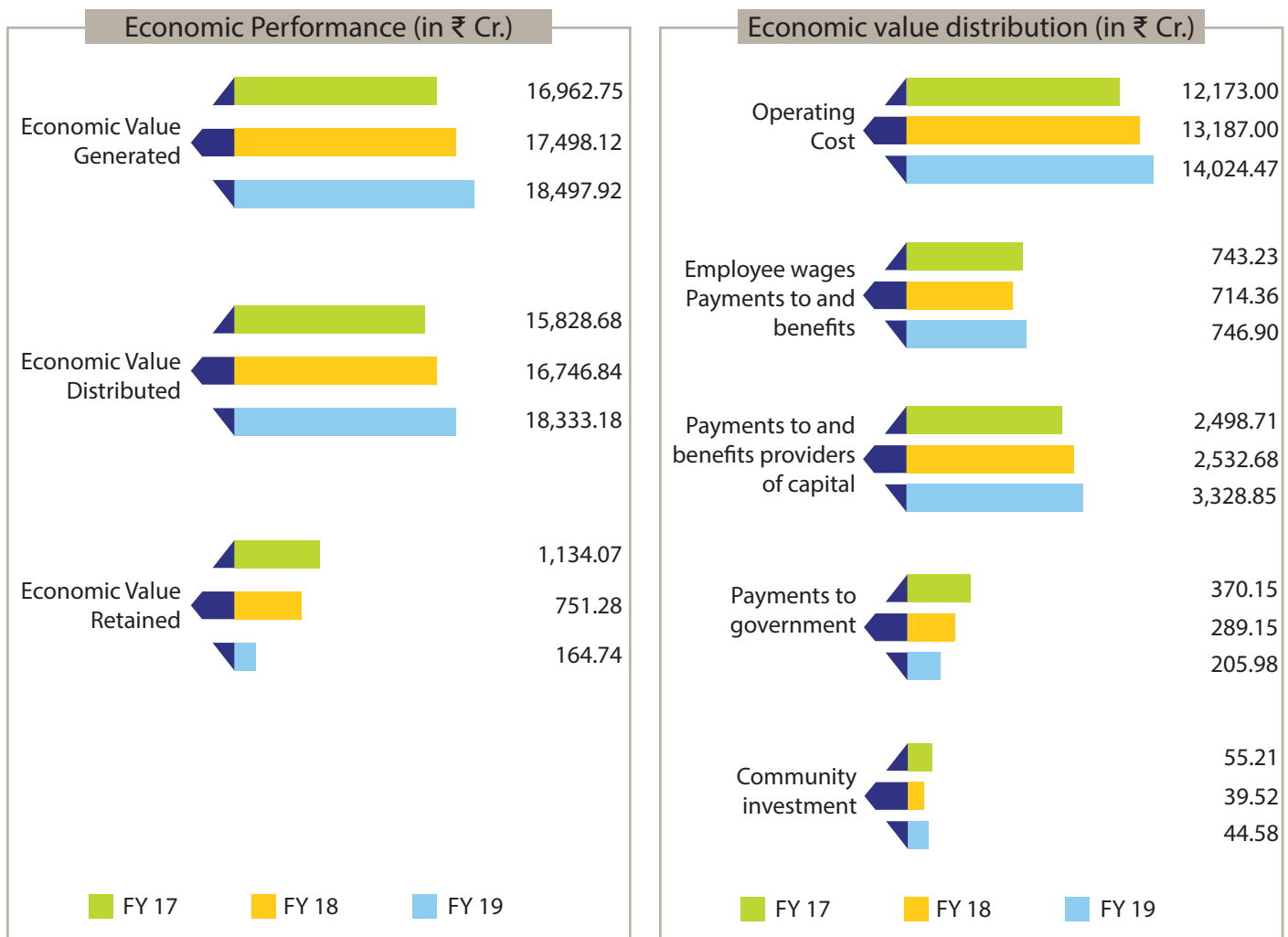
Financial Capital

Sustainable return to providers of capital and delivering net positive (added value) to the economy, Tata Power is committed to reinforce the long-term relationship with all stakeholders especially its investors and strives to maintain optimal capital structure and prudent risk management framework to deliver long-term shareholder returns.

BEST PPA brings earnings visibility for Tata Power

Year 2019 began on a positive note for Tata Power Co. Ltd. The Maharashtra Electricity Regulatory Commission (MERC) has allowed the Brihan-Mumbai Electric Supply and Transport Undertaking (BEST), provider of electricity in Mumbai, to extend its existing power purchase agreement (PPA) with Tata Power. The current agreement for 677 MW expired in March this year. The extension lets the company supply the stipulated power for another five years, providing earnings visibility. – Power market capsule issue 118.

Tata Power Consolidated



	FY 17			FY 18			FY 19		
Economic Value Generated and Distributed (EVG&D)	CGPL	MPL	IEL	CGPL	MPL	IEL	CGPL	MPL	IEL
Economic value generated									
a) Revenues	6,072	2,423	549	6,358	2,289	385	7,137	2,841	316
Economic value distributed									
Economic value distributed	6,489	1,974	456	7,335	1,912	290	8,124	2,377	290
b) Operating costs	5,586	1,602	312	6,455	1,625	164	7,279	1,998	72
c) Employee wages and benefits	56	40	16	56	44	18	51	41	17
d) Payments to providers of capital	0	258	89	823	204	74	788	268	159
e) Payments to government	0	69	37	0	34	31	0	65	40
f) Community investments	14.41	4.06	2.22	0.83	5.63	2.48	6.47	5.32	2.53
Economic value retained (calculated as Economic value generated less economic value distributed)									
Economic value retained (calculated as Economic value generated less economic value distributed)	417	449	93	977	377	95	988	464	25
Total capitalization broken down in terms of debt	77	8	28	56	16	136	53	31	2
Total capitalization broken down in terms of equity	33	3	12	24	7	58	23	13	1

	FY 17				FY 18				FY 19			
Economic Value Generated & Distributed	TPSSL	TPREL	TPDDL	TPADL	TPSSL	TPREL	TPDDL	TPADL	TPSSL	TPREL	TPDDL	TPADL
Economic value generated												
a) Revenues	2,263	1,490	6,652	0	2,752	1,905	6,988	246	3,198	2,098	7,872	382
Economic value distributed												
Economic value distributed	2,114	983	6,554	0	2,607	1,207	6,728	249	3,070	1,186	7,658	381
b) Operating costs	1,956	118	5,555	0	2,375	145	5,743	233	2,853	175	6,622	358
c) Employee wages and benefits	94	23	373	0	116	25	473	11	110	28	470	13.91
d) Payments to providers of capital	48	774	521	0	86	905	367	5.1	62	822	425	10
e) Payments to government	16	68	96	0	29	127	136	0	43	155	133	0
f) Community investments	0	0	8	0	0	4	8	0	1	5	8	0



Manufactured Capital

Tata Power's Mission, "Competitive by operating the businesses at benchmark level" drives operations of the company and draws focus on adequate management of the manufactured capital. This is also embedded in Tata Power's Strategic Intent 2025 targeting 22,500 MW of generation capacity with presence across geographies & technologies and include organic and inorganic opportunities. The production capacity for Tata Power during the year 2019 has been 10,957 MW with 187 MW assets under construction in Georgia & 100 MW of assets in Ananthapuram. This activity showcases the importance of manufactured capital to the overall sustainability of the business which leads to maximizing stakeholder returns.

Initiatives/ Highlights

Param Sankalp

Tata Power has taken up an initiative called Param Sankalp or Reliability Centred Maintenance (RCM) to transform O&M process. During the first year (phase A), Param Sankalp has laid down a foundation to adopt the RCM way of working on the ground. As a part of this exercise, multiple processes were standardized, for example,

- Codification and classification, affecting over 32,000 equipment across 7 sites at Tata Power
- 65 equipment failure mode and effect analysis (FMEAs) were created as a proactive measure to improve equipment reliability
- 7 process FMEAs were created to minimize process losses including coal management, SHR, APC, Water management, Ash management, Start-up management and billing

Based on outcomes of codification / classification and FMEAs maintenance tasks were optimized for top 10 equipment's out of 65. Data management and cleansing remained a continuous enabler during Phase A to accelerate the changes through IT systems like SAP. The focus of ongoing phase B is to sustainably adopt the newly defined RCM ways of working while capturing defined value targets. Changing the operating model from Phase A, Phase B has an increasing role being played by the respective sites which have been defined in the site handover documents. Tata Power continued its cost-saving activities under the cost-saving initiatives under Business Excellence. The cost – saving initiatives saved an amount of nearly Rs. 112.92 crore during the year.





Intellectual Capital

The company aims at becoming the most admirable Power Company and its mission “Being the lead adopter of technology with a spirit of pioneering and calculated-risk taking” enables adoption of advanced and disruptive technologies.

It also supports the development of some products and technological processes through a structured short, medium and long-term technological roadmap. The company has a dedicated clean technology & applied research department to develop solutions that provide a competitive advantage over peers.

Steps taken: PV module cleaning Bot

Technology/ Uniqueness:

- Dust reduces PV module efficiency leading to generation loss (5-20%)
- Installation of Solar PV on bus roof for harnessing Solar energy
- Retrofit - no disturbance to the parent circuitry of the vehicles.





Initiatives:





- Tata Power has launched IoT based Smart Consumer Sub Station enabled by Tata Communication.
- Tata Power empowered 0.80 million customers with its new digital push ~ Digital initiatives enable 32% of its overall customers going completely digital.
- TPADL went live on SAP-ISU covering entire revenue cycle for all categories of consumers - TP Ajmer Distribution Limited (TPADL), a Special Purpose Vehicle formed by Tata Power Company Ltd announced the go-live of SAP-ISU covering entire revenue cycle for all categories of consumers. The solution is integrated with many peripheral systems and gateways including customer portal, offline cash collection module, payment gateways (Paytm, Bill desk, eMitra), SMRD integration through PI, SMS gateway and single window service for Call Centre. A total of 51 (standard & customized) reports have also been made available to ensure smooth functioning of business operation.
- Tata Power has launched Electric Vehicle charging stations in Hyderabad / Expands mobility infra structure network to make India EV ready
- Tata Power launched its VoiceBOT TINA ~Becomes the India’s first power utility company to offer VoiceBOT service to its customers~ TINA, now powered by Google Assistant allows the Company to address all the customer queries using any compatible Android or iOS mobile devices and Google Home devices, without downloading the app or visiting the company website.
- Tata Power became the first Power utility to automate bill payments using e-NACH; partners IDFC Bank for digitized solution in Mumbai.
- Tata Power and HPCL, through a landmark MoU, have agreed to collaborate in planning, development and operation of charging infrastructure for electric vehicles (e-cars, e-rickshaws, ebikes, e-buses, etc.), at suitable locations across India.
- Tata Power has partnered with Tata Motors to make Maharashtra EV ready to support Maharashtra Government’s vision to promote e-mobility in the State ~Launches 9 new EV charging stations today in Mumbai to mark the World Environment Day Celebrations
- Tata Power Launches ‘Know Your Electricity Consumption’, daily energy management tool for consumers.
- Smart meter installation & communication of consumption to customers – phase 1 completed by March 2019.











Human Capital





Total Workforce - GRI 102-7, 102-8, GRI 404-1

Tata Power	FY 18						FY 19					
	 Male		<30	30-50	>50	Total	 Male		<30	30-50	>50	Total
Senior management	202	11	0	72	141	213	216	10	0	83	143	226
Middle management	379	18	0	289	108	397	429	24	0	340	113	453
Junior management	1,701	191	378	1,349	165	1,892	1,535	181	280	1,276	160	1,716
Workmen	901	13	9	339	566	914	846	12	5	317	536	858
FDA	69	34	17	81	5	103	59	20	7	64	8	79
Total	3,252	267	404	2,130	985	3,519	3,085	247	292	2,080	960	3,332





TPSSL	FY 18						FY 19					
	 Male		<30	30-50	>50	Total	 Male		<30	30-50	>50	Total
Senior management	16	1	0	10	7	17	16	1	0	8	9	17
Middle management	26	1	0	23	4	27	33	1	0	30	4	34
Junior management	207	28	37	193	5	235	214	28	39	192	11	242
Workmen	414	4	2	403	13	418	411	4	1	397	17	415
FDA	29	1	18	11	1	30	26	1	14	12	1	27
Total	692	35	57	640	30	727	700	35	54	639	42	735





TPREL	FY 18						FY 19					
	 Male	 Female	<30	30-50	>50	Total	 Male	 Female	<30	30-50	>50	Total
Senior management	6	0	0	3	3	6	5	0	0	3	2	5
Middle management	6	0	0	4	2	6	18	1	0	13	6	19
Junior management	11	7	1	15	2	18	84	9	15	74	4	93
Workmen	75	0	9	66	0	75	64	0	6	58	0	64
FDA	0	1	0	1	0	1	29	4	21	12	0	33
Total	98	8	10	89	7	106	200	14	42	160	12	214





TPDDL	FY 18						FY 19					
	 Male	 Female	<30	30-50	>50	Total	 Male	 Female	<30	30-50	>50	Total
Senior management	42	2	0	16	28	44	49	2	0	16	35	51
Middle management	234	7	0	135	106	241	278	14	0	155	137	292
Junior management	917	195	268	694	150	1,112	934	206	278	692	170	1,140
Workmen	873	179	394	433	225	1,052	969	224	454	487	252	1,193
FDA	765	102	97	496	274	867	626	63	110	394	185	689
Total	2,831	485	759	1,774	783	3,316	2,856	509	842	1,744	779	3,365





TPADL	FY 18						FY 19					
	 Male	 Female	<30	30-50	>50	Total	 Male	 Female	<30	30-50	>50	Total
Senior management	1	0	0	0	1	1	1	0	0	1	0	1
Middle management	5	0	0	5	0	5	8	0	8	0	0	8
Junior management	53	4	25	28	4	57	72	8	45	33	2	80
Workmen	22	0	3	18	1	22	19	0	2	17	0	19
FDA	44	3	36	7	4	47	25	1	13	8	5	26
Total	125	7	64	58	10	132	125	9	68	59	7	134





Employees Hired - GRI 401-1

Tata Power	FY 18						FY 19					
Employee Category	 Male	 Female	<30	30-50	>50	Total	 Male	 Female	<30	30-50	>50	Total
Senior management	5	0	0	1	4	5	10	0	0	5	5	10
Middle management	8	1	0	7	2	9	5	1	0	5	1	6
Junior management	23	6	19	7	3	29	67	22	54	35	0	89
Workmen	23	0	4	10	9	23	1	0	0	1	0	1
FDA	7	3	1	9	0	10	5	0	2	3	0	5
Total	66	10	24	34	18	76	88	23	56	49	6	111

TPSSL	FY 18						FY 19					
Employee Category	 Male	 Female	<30	30-50	>50	Total	 Male	 Female	<30	30-50	>50	Total
Senior management	0	0	0	0	0	0	0	0	0	0	0	0
Middle management	0	0	0	0	0	0	0	0	0	0	0	0
Junior management	4	1	2	3	0	5	23	3	16	10	0	26
Workmen	0	0	0	0	0	0	0	0	0	0	0	0
FDA	2	0	2	0	0	2	3	0	2	1	0	3
Total	6	1	4	3	0	7	26	3	18	11	0	29

TPREL	FY 18						FY 19					
Employee Category	 Male	 Female	<30	30-50	>50	Total	 Male	 Female	<30	30-50	>50	Total
Senior management	0	0	0	0	0	0	0	0	0	0	0	0
Middle management	0	0	0	0	0	0	0	0	0	0	0	0
Junior management	0	0	0	0	0	0	0	0	0	0	0	0
Workmen	0	0	0	0	0	0	0	0	0	0	0	0
FDA	0	0	0	0	0	0	7	0	6	1	0	7
Total	0	0	0	0	0	0	7	0	6	1	0	7

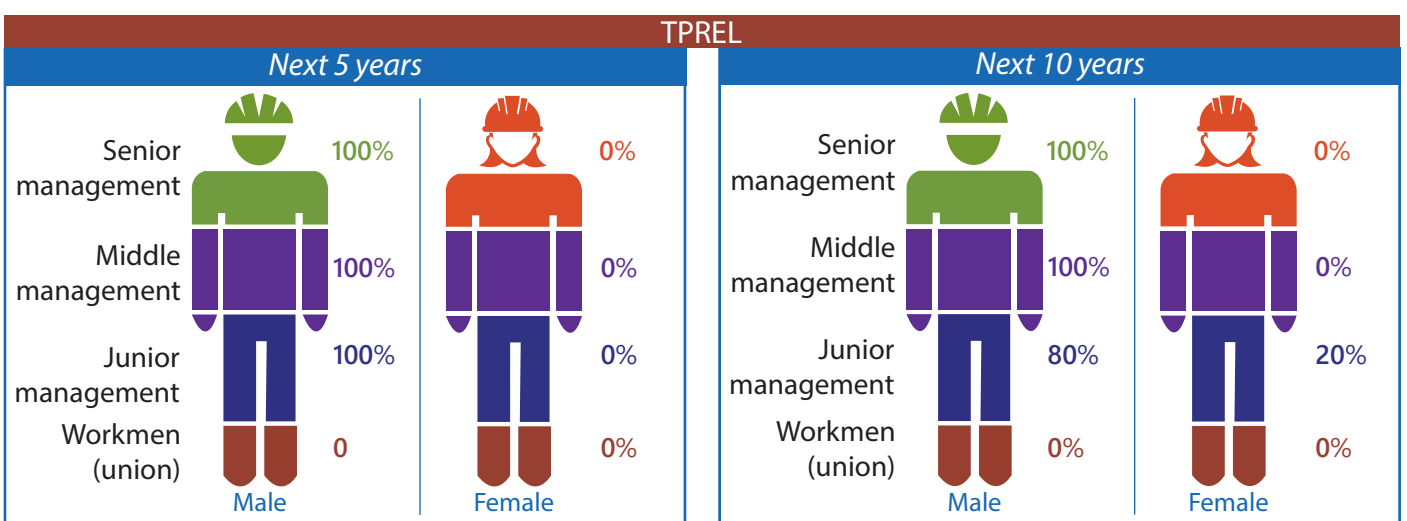
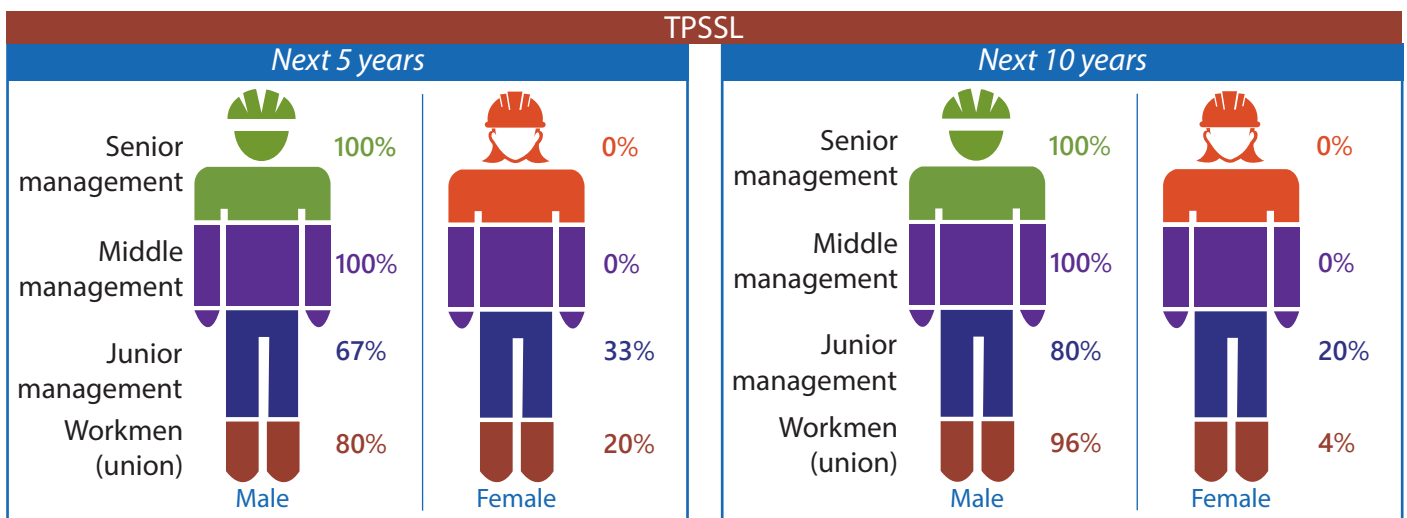
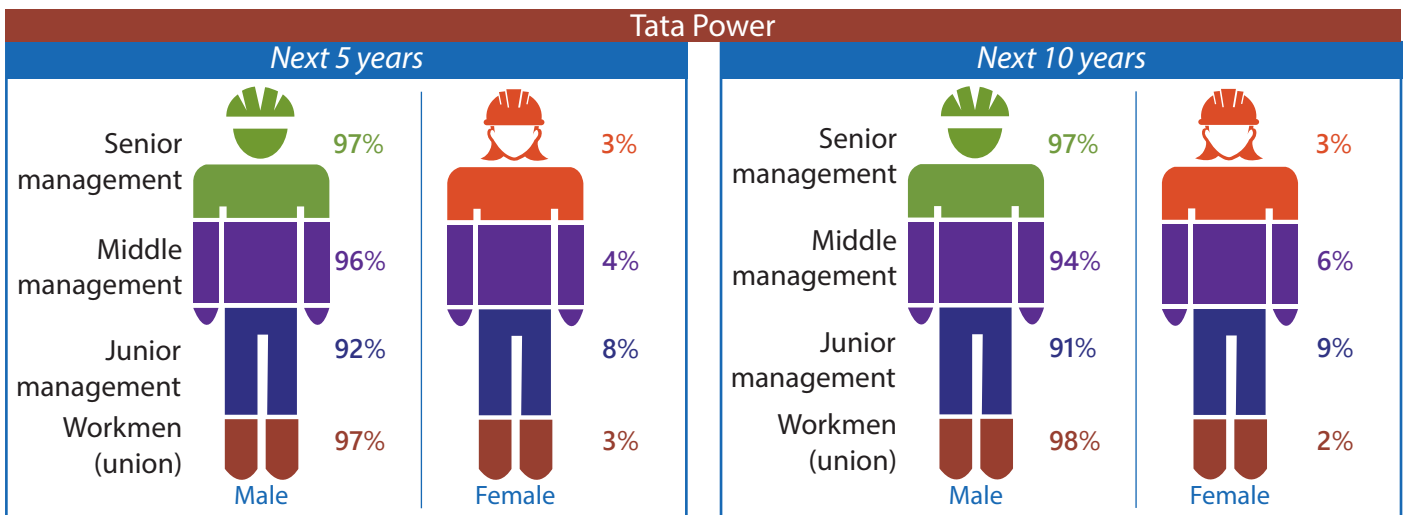
TPDDL	FY 18						FY 19					
Employee Category	 Male	 Female	<30	30-50	>50	Total	 Male	 Female	<30	30-50	>50	Total
Senior management	0	0	0	0	0	0	2	0	0	0	2	2
Middle management	1	0	0	1	0	1	0	0	0	0	0	0
Junior management	56	31	68	19	0	87	66	30	78	18	0	96
Workmen	77	44	114	7	0	121	85	44	125	4	0	129
FDA	18	1	19	0	0	19	29	0	21	8	0	29
Total	152	76	201	27	0	228	182	74	224	30	2	256

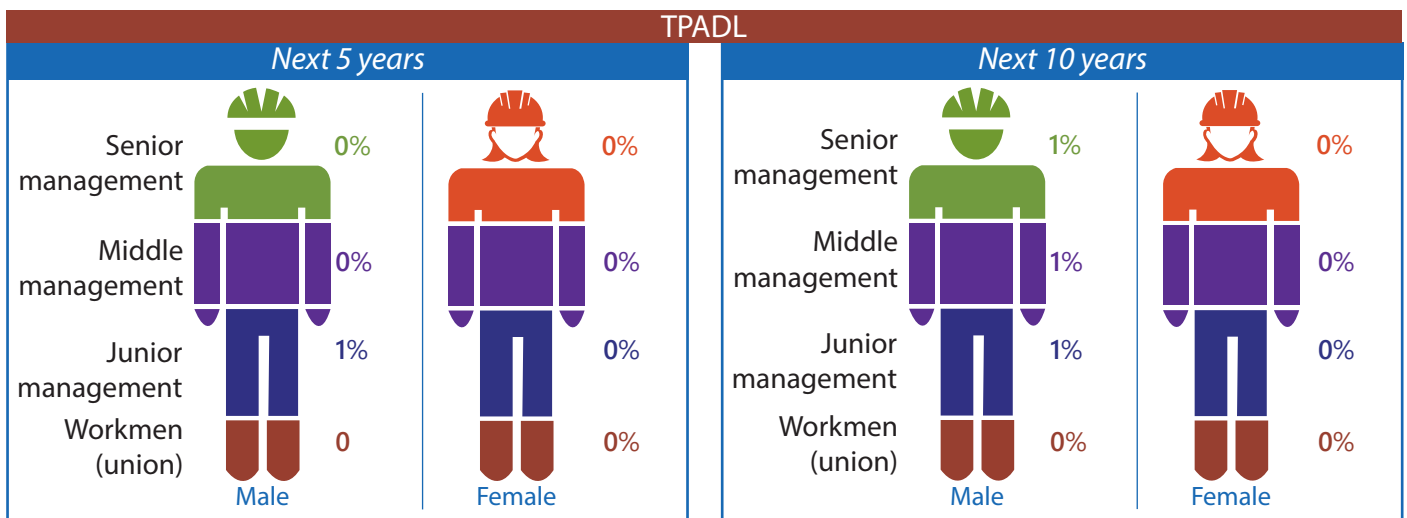
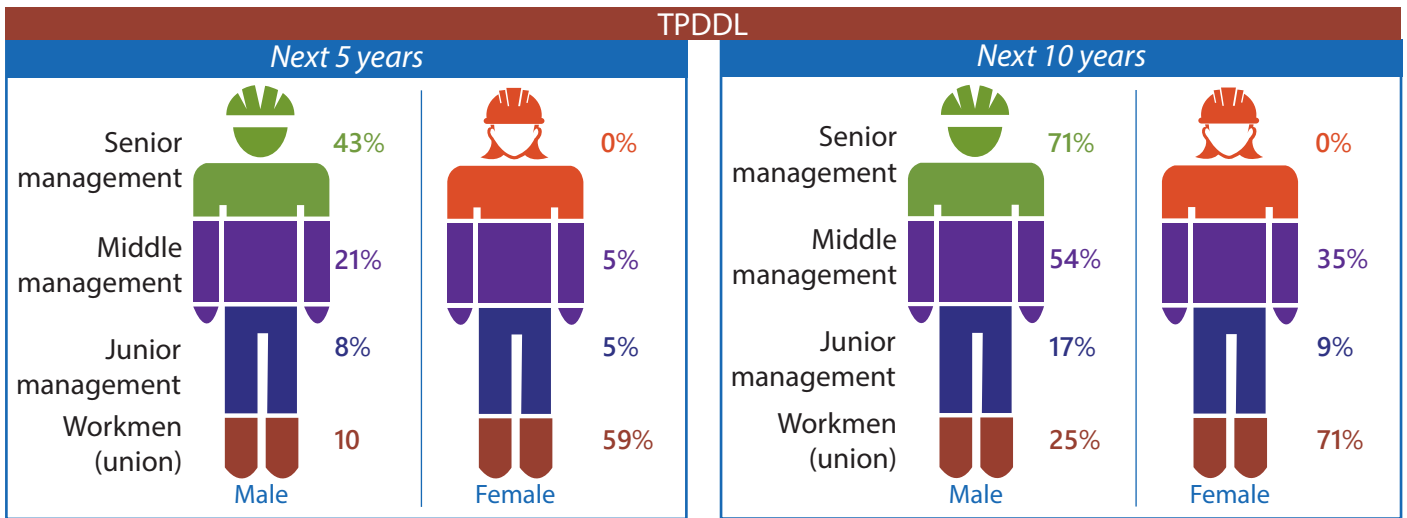
TPADL	FY 18						FY 19					
Employee Category	 Male	 Female	<30	30-50	>50	Total	 Male	 Female	<30	30-50	>50	Total
Senior management	0	0	0	0	0	0	0	0	0	0	0	0
Middle management	0	0	0	0	0	0	0	0	0	0	0	0
Junior management	12	3	14	1	0	15	1	1	2	0	0	2
Workmen	0	0	0	0	0	0	0	0	0	0	0	6
FDA	7	0	4	3	0	7	6	0	6	0	0	0
Total	19	3	18	4	0	22	7	1	8	0	0	8







Employee Retirements - EU 15





Percentage of employees eligible to retire in the next 5 and 10 years

















Employee Turnover - GRI 202; 401-1; 405-1, 2

Tata Power		FY 18						FY 19							
Parameter	Workforce level	Senior	Middle	Junior	Workmen	FDA	Total	Senior	Middle	Junior	Workmen	FDA	Total		
Turnover	Gender	 Male	7	9	79	2	14	111	6	12	83	0	6	107	
		 Female	0	2	18	0	2	22	0	1	22	0	2	25	
	Age	<30	0	0	45	0	5	50	0	0	43	0	2	45	
		31-50	4	9	49	1	9	72	3	13	62	0	6	84	
		>50	3	2	3	1	2	11	3	0	0	0	0	3	
		Overall	7	11	97	2	16	133	6	13	105	0	8	132	
	Turnover %	Gender	 Male	3.3 %	2.3 %	4.5 %	0.2 %	18.7 %	3.3 %	2.87 %	2.97 %	5.13 %	0.00 %	9.38 %	3.38 %
			 Female	0.00 %	11.1 %	8.9 %	0.00 %	5.8 %	7.8 %	0.00 %	4.76 %	11.83 %	0.00 %	7.41 %	9.73 %
		Age	<30	0.00 %	0.00 %	9.4 %	0.00 %	19.2 %	9.8 %	0.00 %	0.00 %	13.07 %	0.00 %	16.67 %	12.93 %
			31-50	4.7 %	03 %	3.7 %	0.3 %	11.5 %	3.3 %	3.87 %	4.13 %	4.72 %	0.00 %	8.28 %	3.99 %
>50			2.1 %	1.9 %	1.8 %	0.2 %	36.4 %	1.1 %	2.11 %	0.00 %	0.00 %	0.00 %	0.00 %	0.31 %	
		Overall	3.1 %	2.7 %	4.9 %	0.2 %	14.6 %	3.7 %	2.73 %	3.06 %	5.82 %	0.00 %	8.79 %	3.85 %	
Average Tenure of employees leaving (years)		4.67	7.81	6.18	18.39	3.34	6.08	9.76	11.73	6.15	0.00	3.26	6.69		

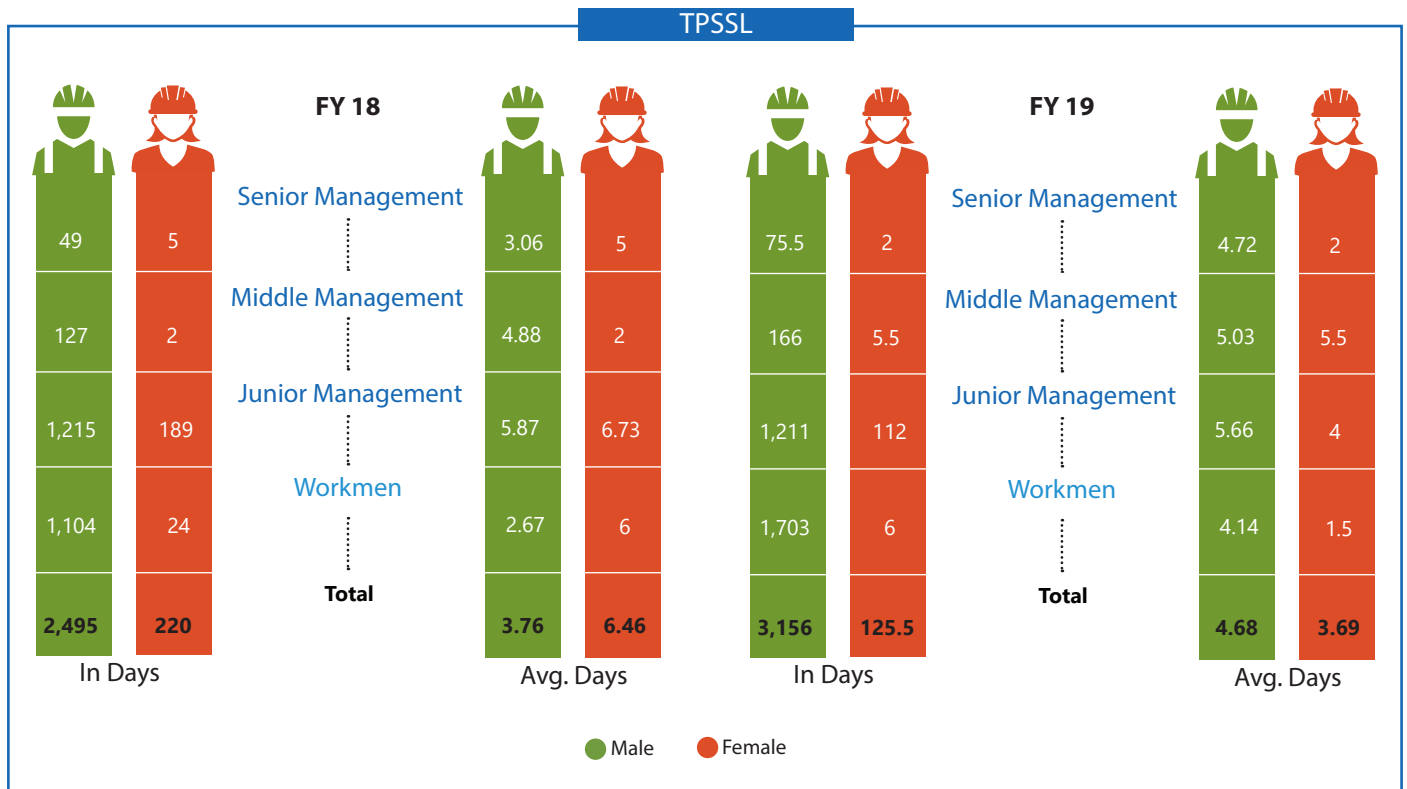
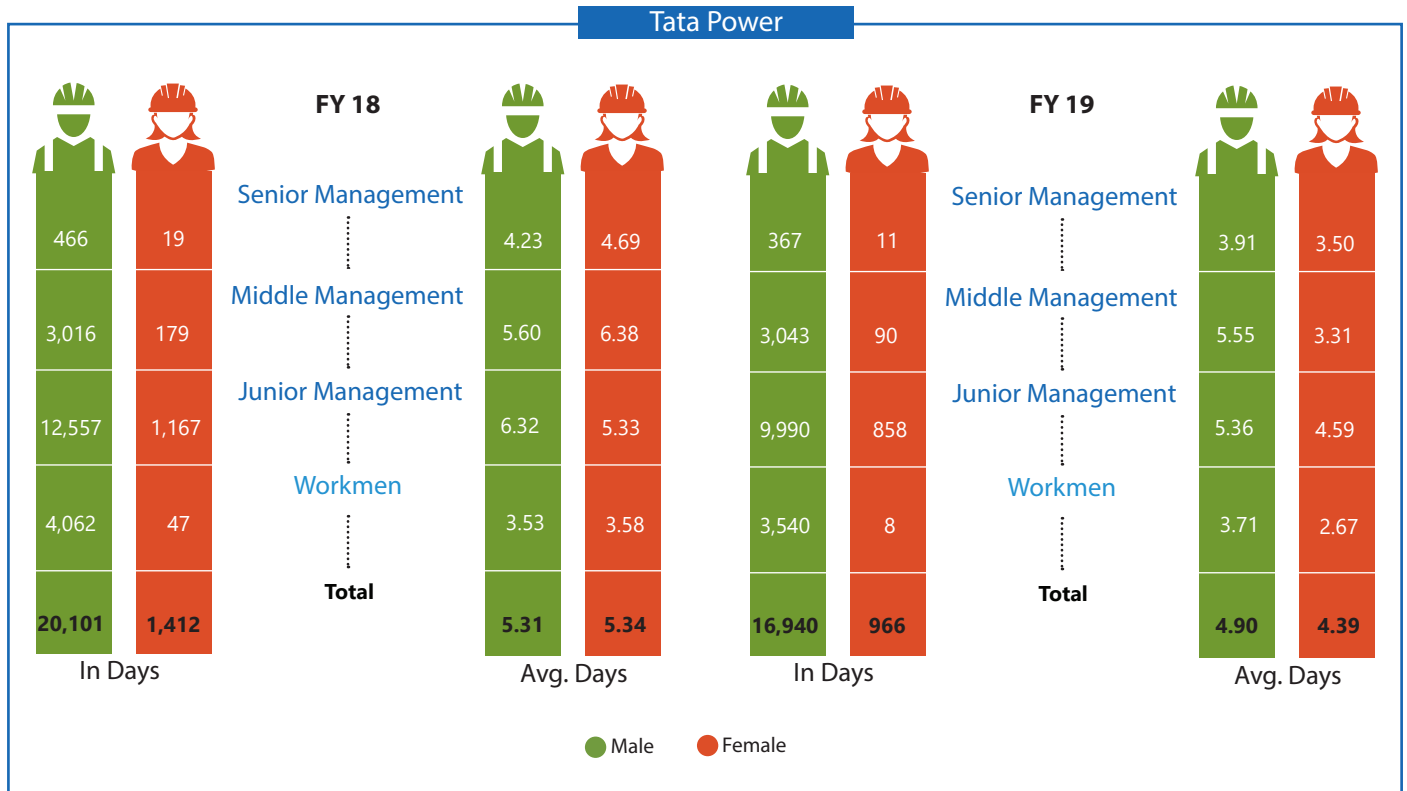
TPSSL		FY 18						FY 19							
Parameter	Workforce level	Senior	Middle	Junior	Workmen	FDA	Total	Senior	Middle	Junior	Workmen	FDA	Total		
Turnover	Gender	 Male	3	2	27	1	3	36	0	3	26	1	6	36	
		 Female	0	0	4	0	0	4	0	1	3	0	0	4	
	Age	<30	0	0	8	0	2	10	0	0	6	0	5	11	
		31-50	3	2	22	1	1	29	0	3	23	1	1	28	
		>50	0	0	1	0	0	1	0	1	0	0	0	1	
	Overall	3	2	31	1	3	40	0	4	29	1	6	40		
	Turnover %	Gender	 Male	18.75 %	7.69 %	13.04 %	0.24 %	10.34 %	5.20 %	0.00 %	10.17 %	12.35 %	0.24 %	21.82 %	5.17 %
			 Female	0.00 %	0.00 %	14.29 %	0.00 %	0.00 %	11.43 %	0.00 %	100.00 %	10.71 %	0.00 %	0.00 %	11.43 %
		Age	<30	0.00 %	0.00 %	04 %	0.00 %	18 %	02 %	0.00 %	0.00 %	15.79 %	0.00 %	31.25 %	19.82 %
			31-50	43 %	50 %	440 %	08 %	100 %	97 %	0.00 %	11.32 %	11.95 %	0.25 %	8.70 %	4.38 %
>50			0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	25.00 %	0.00 %	0.00 %	0.00 %	2.78 %	
Overall		19 %	06 %	14 %	0.00 %	12 %	06 %	0.00 %	13.11 %	12.16 %	0.24 %	21.05 %	5.47 %		
Average Tenure of employees leaving (years)		2.72	3.30	4.44	12.18	0.76	4.17	2.72	3.30	4.44	12.18	0.76	4.17		

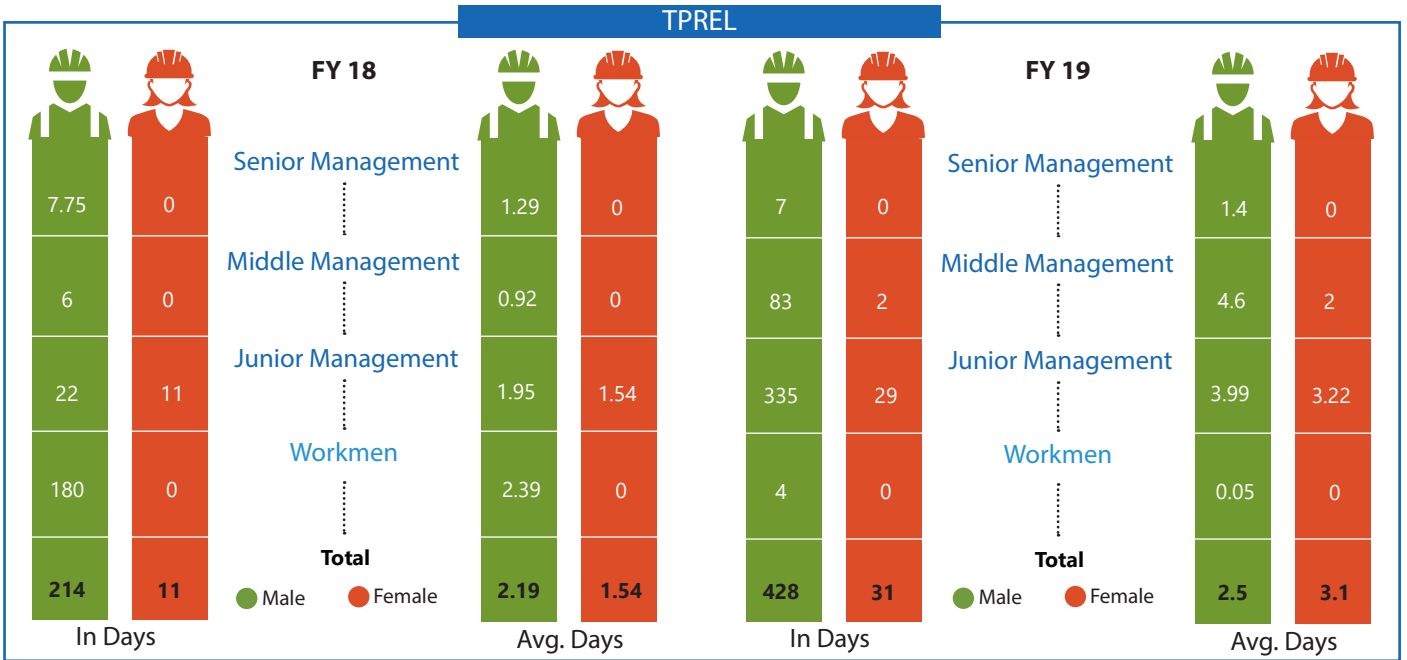
TPREL		FY 18						FY 19						
Parameter	Workforce level	Senior	Middle	Junior	Workmen	FDA	Total	Senior	Middle	Junior	Workmen	FDA	Total	
Turnover	Gender	 Male	0	0	1	0	0	1	1	2	13	0	4	20
		 Female	0	0	0	0	0	0	0	1	1	0	1	3
	Age	<30	0	0	0	0	0	0	0	0	3	0	3	6
		31-50	0	0	1	0	0	1	0	3	10	0	2	15
		>50	0	0	0	0	0	0	1	0	1	0	0	2
		Overall	0	0	1	0	0	1	1	3	14	0	5	23
	Turnover %	Gender	 Male	0.00 %	0.00 %	9.09 %	0.00 %	0.00 %	1.02 %	11.76 %	13.33 %	24.53 %	0.00 %	27.59 %
 Female			0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	200.00 %	8.70 %	0.00 %	33.33 %	20.00 %
Age		<30	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	35.29 %	0.00 %	28.57 %	19.35 %
		31-50	0.00 %	0.00 %	50 %	0.00 %	0.00 %	14 %	0.00 %	28.57 %	19.23 %	0.00 %	28.57 %	8.88 %
		>50	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	25.00 %	0.00 %	25.00 %	0.00 %	0.00 %	15.38 %
		Overall	0.00 %	0.00 %	01 %	0.00 %	0.00 %	01 %	11.76 %	19.35 %	21.71 %	0.00 %	28.57 %	10.80 %
Average Tenure of employees leaving (years)		0	0	0	0	5.89	5.89	2.22	5.27	2.60	0	1.50	2.69	

TPDDL		FY 18						FY 19							
Parameter	Workforce level	Senior	Middle	Junior	Workmen	FDA	Total	Senior	Middle	Junior	Workmen	FDA	Total		
Turnover	Gender	 Male	0	0	35	13	3	51	0	0	37	8	2	47	
		 Female	0	0	15	4	0	19	0	0	16	11	0	27	
	Age	<30	0	0	32	13	1	46	0	0	40	16	1	57	
		31-50	0	0	16	4	2	22	0	0	13	3	1	17	
		>50	0	0	2	0	0	2	0	0	0	0	0	0	
		Overall	0	0	50	17	3	70	0	0	53	19	2	74	
	Turnover %	Gender	 Male	0.00 %	0.00 %	1.11 %	0.41 %	0.10 %	1.62 %	0.00 %	0.00 %	1.18 %	0.22 %	0.06 %	1.47 %
			 Female	0.00 %	0.00 %	0.48 %	0.13 %	0.00 %	0.60 %	0.00 %	0.00 %	0.51 %	0.35 %	0.00 %	0.86 %
		Age	<30	0.00 %	0.00 %	1.02 %	0.41 %	0.03 %	1.46 %	0.00 %	0.00 %	1.28 %	0.51 %	0.03 %	1.82 %
			31-50	0.00 %	0.00 %	0.51 %	0.13 %	0.06 %	0.70 %	0.00 %	0.00 %	0.41 %	0.06 %	0.03 %	0.51 %
>50			0.00 %	0.00 %	0.06 %	0.00 %	0.00 %	0.06 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	
		Overall	0.00 %	0.00 %	1.59 %	0.54 %	0.10 %	2.22 %	0.00 %	0.00 %	1.69 %	0.57 %	0.06 %	2.33 %	
Average Tenure of employees leaving (years)		0	0	4.6	4.5	8.1	4.7	0	0	3.7	2.9	11.5	3.7		

TPADL		FY 18						FY 19						
Parameter	Workforce level	Senior	Middle	Junior	Workmen	FDA	Total	Senior	Middle	Junior	Workmen	FDA	Total	
Turnover	Gender	 Male	0	0	1	0	0	1	1	2	13	0	4	20
		 Female	0	0	0	0	0	0	0	1	1	0	1	3
	Age	<30	0	0	0	0	0	0	0	0	3	0	3	6
		31-50	0	0	1	0	0	1	0	3	10	0	2	15
		>50	0	0	0	0	0	0	1	0	1	0	0	2
		Overall	0	0	1	0	0	1	1	3	14	0	5	23
	Turnover %	Gender	 Male	0.00 %	0.00 %	9.09 %	0.00 %	0.00 %	1.02 %	11.76 %	13.33 %	24.53 %	0.00 %	27.59 %
 Female			0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0 %	200.00 %	8.70 %	0 %	33.33 %	20.00 %
Age		<30	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	35.29 %	0.00 %	28.57 %	19.35 %
		31-50	0.00 %	0.00 %	50 %	0.00 %	0.00 %	14 %	0.00 %	28.57 %	19.23 %	0.00 %	28.57 %	8.88 %
		>50	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	25.00 %	0.00 %	25.00 %	0.00 %	0.00 %	15.38 %
		Overall	0.00 %	0.00 %	01 %	0.00 %	0.00 %	01 %	11.76 %	19.35 %	21.71 %	0.00 %	28.57 %	10.80 %
Average Tenure of employees leaving (years)		0	0	0	0	5.89	5.89	2.22	5.27	2.60	0	1.50	2.69	

Employee Training - GRI 404-1, 2





Employee Benefits - GRI 401-2

Tata Power lays great emphasis on its Human Capital. Tata Power's engagement in this sphere is structured to impact the seven major dimensions of human capital viz. talent acquisition and retention, employee engagement, health and safety, employee welfare, diversity, succession planning, diversity and human rights. Human capital management at Tata Power is geared to enable employees to realize their full human potential while contributing to the company to generate value. Human capital and concomitant intellectual and manufactured capital are critical to the sustainability of Tata Power's business.

Tata Power's policy framework addresses the aspects of diversity amongst others in gender, age, life-stage, child rearing preference or career orientation. Integrated leave policy for employees addresses leave requirements in various segments, for example, marriage, paternity, adoption, surrogacy, higher education, compassionate circumstances, and sabbatical. For women employees, the life stage requirement is provided for a 6-month maternity leave along with a provision for an extended maternity leave even before it became a law.

Under medical facilities, the health and wellness policy embodies the value of care by providing benefits like medicine disbursement for chronic illness for family members too which includes parents and ensuring the needs of the older and younger workforce are taken care of. Further, provision to include parents-in-law in the Mediclaim scheme, thereby, catering to family wellbeing. The medical fund scheme which provides unlimited coverage of medical expenses over and above of the eligibility under Mediclaim scheme is an industry benchmark retained in the employee benefit category.

Human Rights Policy - GRI (407-1) (409-1) (410-1) (411-1) (412-1, 3)

Tata Power respects and supports the dignity, well being and human rights of all stakeholders. Tata Power is committed to developing a culture which inculcate respect and support for Human Rights and seeks to avoid connivance in Human Rights abuses. This policy is in accordance to the principles of International Labor Organization and United Nations Global Compact.

Tata Power would ensure conformance to fundamental labor principles including the prohibition of child labor, forced labour, freedom of association and right to collective bargaining and protection from discrimination (based on age, gender, material status, differently abled, race, national / regional origin, ancestry, indigenous status, personal beliefs, religion & spiritual practice, political affiliation, sexual orientation and HIV/AIDS) in all its operations by imparting relevant training and aligning and conduct of its employees.

Employee engagement and Srijan

Tata Power encourages its employees to actively participate in the forums created at the Tata Group level like Tata Innoverse and Tata Innovista (an annual celebration of the innovation effort in the Tata group). Tata Power was one of the early companies to join Tata Innoverse and leveraged the resource available by consistently posting some of its critical challenges in this group forum.

Tata Power encouraged employee volunteering through its Arpan initiative. Various volunteering programs were also organized at Jawhar (a district in Maharashtra), where Tata Power runs Affirmative Action (AA) programs. These include several initiatives for Employment, Entrepreneurship, Employability, Education and Essential Amenities for the communities around its operating sites.

Tata Power Policies are co-created to embody the core values of the company. Srijan - An organisation wide initiative where employees are involved in redrafting and co-creating all HR policies. It enables employees to understand, co-create and co-own HR policies resulting in better acceptance and dissemination. Srijan 2.0 is live as an online platform on Xpressions for officers to provide ongoing suggestions, feedback and rating on any policy at any time. The suggestions and feedback are monitored and responded to, through the portal itself, thus enabling an open channel for a two-way communication.

Diversity and equal opportunity - GRI 202-1, 2; 405-1,2

People are at the center of Tata Power's pursuits. Nurturing the talent and caring for people is a principled commitment at Tata Power. It involves attracting, training, rewarding, recognising and growing. Fair, Safe, Healthy and Lively work place is furthering such commitment. As the sector is likely to face significant disruptions and challenges, it is imperative that our people are motivated, committed, agile and innovative to enable the company to navigate through turbulent trends and harness opportunities.

Embracing diversity & inclusivity, Tata Power has always prioritized and given importance to equal opportunity for its employees. In Tata Power, employees ranges from diverse backgrounds with vast variety of experience, skills and knowledge. The skill set of this diverse workforce has enabled Tata Power to retain its competitive advantage and tap new markets.

With an unbiased attitude and regardless of gender, female employees are paid the same as male employees across various employee categories and roles. The ratio of entry level wage offered to all employees is 1:1 and in-line as per Government regulations.

Through various fair evaluations and promotion programs, employees are evaluated at a regular basis. With the help of such initiatives, Tata Power & its employees are growing gradually.

Parental leave & return to work - GRI (401-2, 3) (402-1) (404-3)

Tata Power	FY 18		FY 19	
	Male	Female	Male	Female
Employees entitled to parental leave	0	0	0	0
Parental leave availed	147	12	119	25
Employees returning to work after end of parental leave	147	10	119	20
Employees returning from parental leave taken in the prior reporting period	0	9	119	10
Employees retained for 12 months after resuming from parental leave	0	8	140	11
Employees yet due to return to work after taking parental leave	0	0	119	20

TPSSL	FY 18		FY 19	
	Male	Female	Male	Female
Employees entitled to parental leave	692	35	700	35
Parental leave availed	17	2	12	1
Employees returning to work after end of parental leave	17	2	12	1
Employees returning from parental leave taken in the prior reporting period	0	0	0	0
Employees retained for 12 months after resuming from parental leave	0	0	3	0
Employees yet due to return to work after taking parental leave	0	0	0	0

TPREL	FY 18		FY 19	
	Male	Female	Male	Female
Employees entitled to parental leave	98	8	200	14
Parental leave availed	0	0	0	0
Employees returning to work after end of parental leave	0	0	0	0
Employees returning from parental leave taken in the prior reporting period	0	0	0	0
Employees retained for 12 months after resuming from parental leave	0	0	0	0
Employees yet due to return to work after taking parental leave	0	0	0	0

TPDDL	FY 18		FY 19	
	Male	Female	Male	Female
Employees entitled to parental leave	0	0	0	0
Parental leave availed	112	20	67	20
Employees returning to work after end of parental leave	112	20	67	20
Employees returning from parental leave taken in the prior reporting period	112	20	67	20
Employees retained for 12 months after resuming from parental leave	112	20	67	20
Employees yet due to return to work after taking parental leave	0	0	0	0

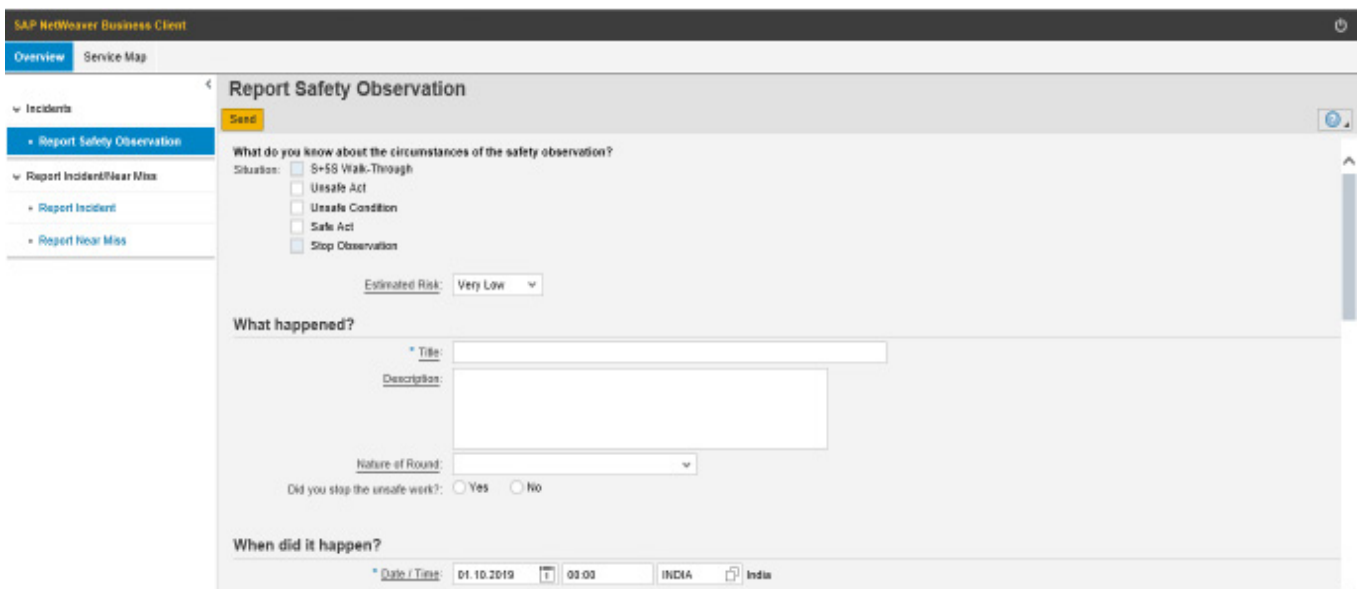
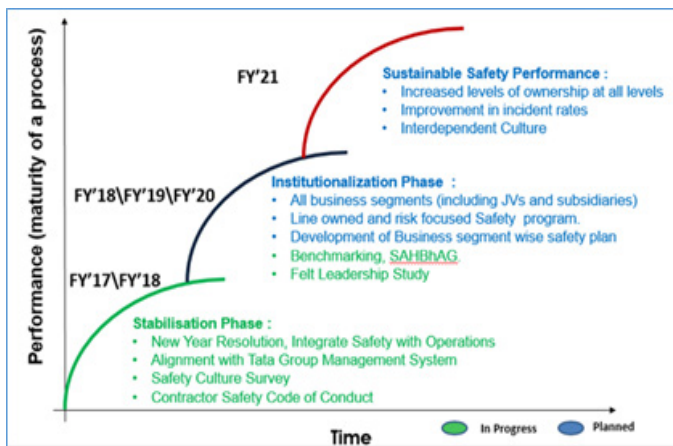
TPADL	FY 18		FY 19	
	Male	Female	Male	Female
Employees entitled to parental leave	125	7	125	9
Parental leave availed	0	0	0	0
Employees returning to work after end of parental leave	NA	NA	NA	NA
Employees returning from parental leave taken in the prior reporting period	NA	NA	NA	NA
Employees retained for 12 months after resuming from parental leave	NA	NA	NA	NA
Employees yet due to return to work after taking parental leave	NA	NA	NA	NA

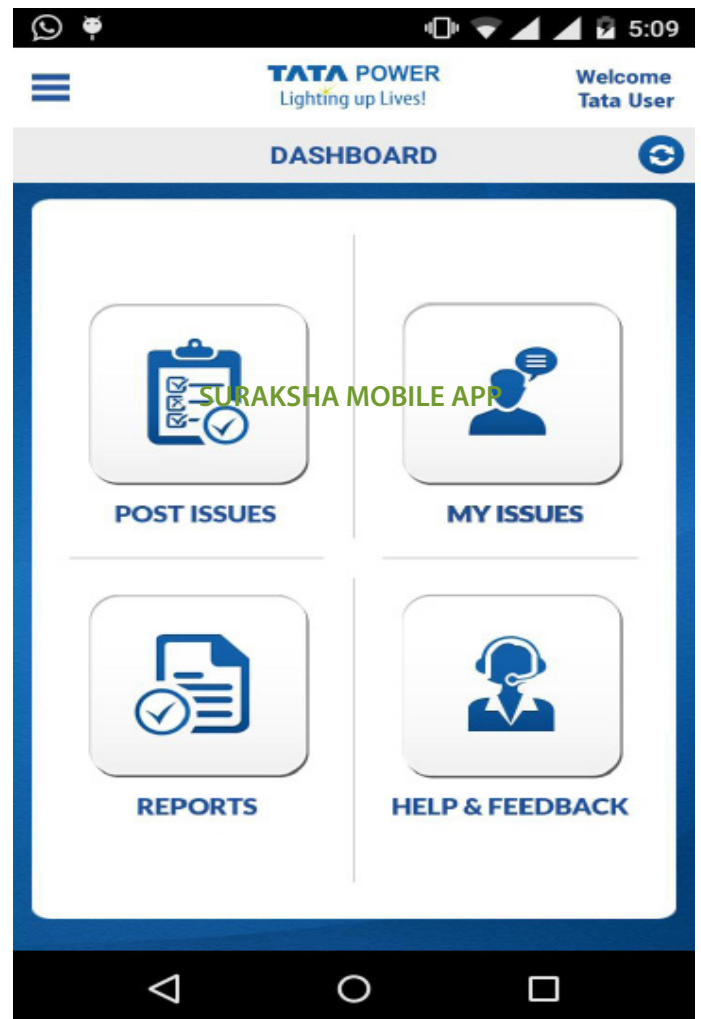
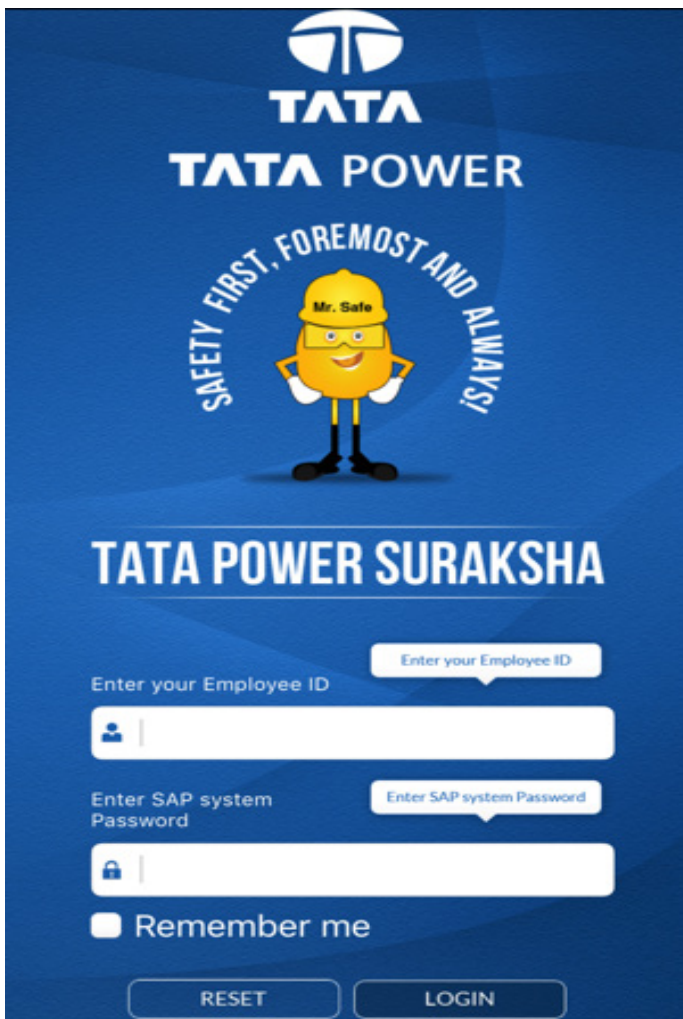
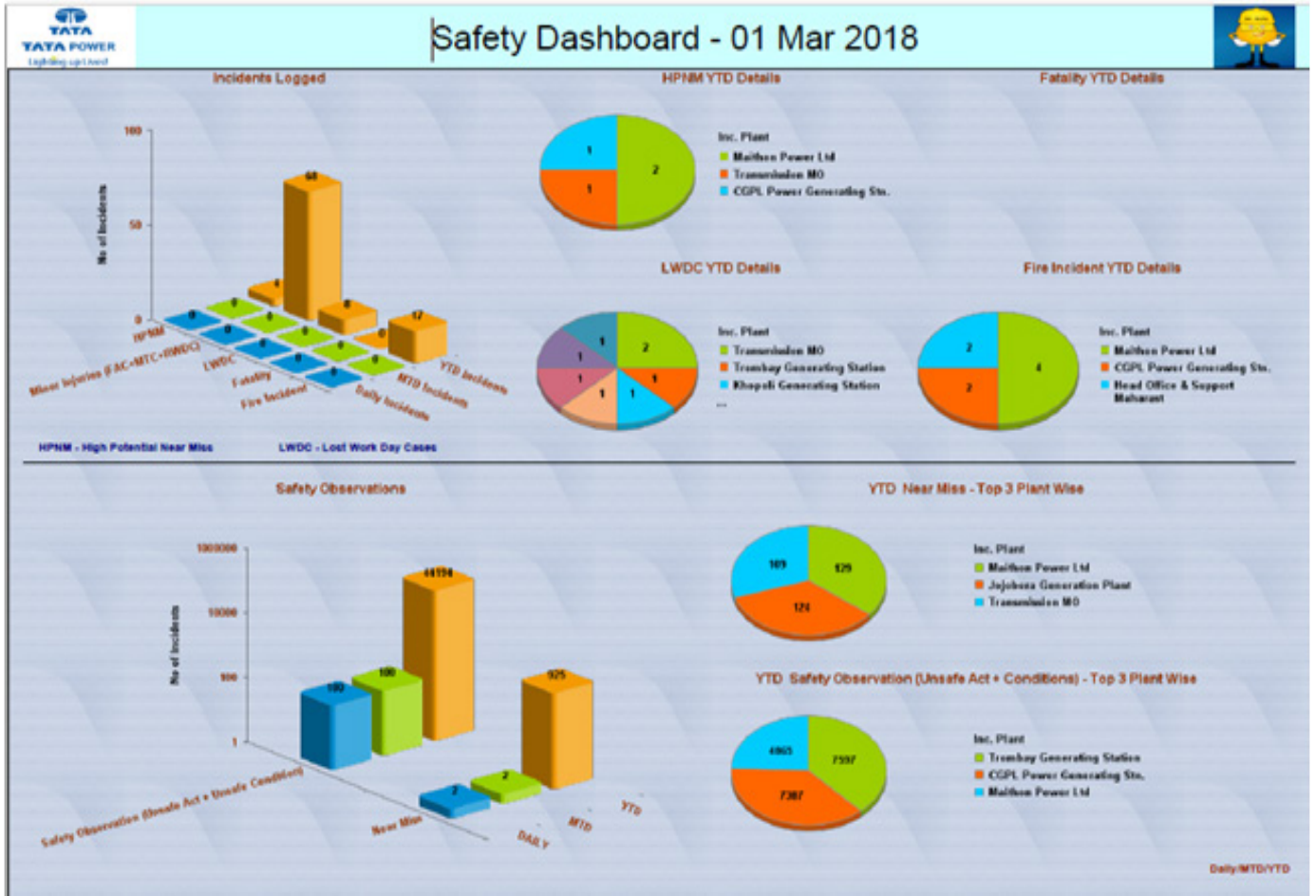
Health and Safety - GRI (403-1, 2, 3) (416-1,2)

Safety is one of the core values at Tata Power. The company believes, health and safety of all the stakeholders is of utmost importance and takes precedence in all business decisions. Tata Power sincerely commits to achieve the safety vision 'To be a leader in Safety Excellence in the global power and energy business'. In pursuit of this belief and commitment, Tata Power has adopted a structured approach towards implementing safety policies and programs in the last couple of years. These interventions are categorized in four focus areas: 1) Organization and culture 2) Systems and processes 3) Equipment and facilities. Safety is propagated to the entire workforce as everyone's responsibility by adhering to Safety Code of Conduct (SCoC) 'Be PROACTIVE - Be SAFE' and empowering all categories of employees and partners for stopping unsafe work at sites.

Tata Power has a "No Harm/ No Injuries" philosophy across its operations. To achieve this, world-class safety standards and procedures have been implemented for establishing safety culture and inculcating safe behaviour among the employees. The contract workers and employees of the suppliers in its site are also required to follow all safety practices during their presence on the sites. Each site has identified safety officers, first aid personnel and emergency response teams and maintains safety training records, as well as the incident dashboards which are reviewed regularly at the cluster level and by the corporate EHS team every month. Tata Power has undertaken various Digital projects for its employee's health & safety and is the first company in Tata Group Company, to adopt SAP-EHSM platform for Incident reporting and detailed investigation, capturing safety observation, recording inspection and audits, etc.

Tata Power has launched 'Suraksha mobile app' to make reporting more user-friendly and synchronised it with SAP platform. This empowers all employees and stakeholders actively participate in identifying unsafe conditions/unsafe acts. As part of the digitalisation initiative, Tata Power has developed a centralised safety communication system, safety dashboard with key KPIs and online Fire Preparedness Index (FPI) for communicating, monitoring, reviewing and decision making.





Maithon Power Ltd		Max Score - Month	Final Score - Month	Max Score - YTD	Final Score - YTD
Key Performance Indicator (KPI)					
Safety Management Index (Target >= 90)	100	95.71	100	94.24	
Implementation of Site Safety Improvement Plan	20	20.00	20	20.00	
Reporting of Safety Observations (Unsafe Acts / unsafe Conditions/ Safe Acts)	10	10.00	10	10.00	
Closure of action items (very high, high and medium risk)	20	19.64	20	19.64	
% Compliance to Safety Capability Plan for employees	20	20.00	20	20.00	
% compliance to Certification Plan (L1, L2, L3) for Contractor's workforce	20	20.00	20	20.00	
Severity Index of Field Safety Audits	10	6.07	10	4.59	
Work Environment Index (Target >= 90)	100	99.87	100	98.41	
Implement 5S for Division / Function	50	50.00	50	48.53	
Fire Index	50	49.87	50	49.88	
Safety Performance Index (Target >= 90)	100	100.00	100	100.00	
Total Injury Frequency Rate (TIFR)	10	10	10	10	
Vehicle Incident Frequency Rate (VIFR) -	10	10	10	10	
Lost Time Injury Frequency Rate (LTIFR)	30	30.00	30	30.00	
Fatality	50	50.00	50	50.00	
New Parameter (Target >= 100)	100	100	100	100	

At Tata Power, a healthy workforce is an important contributor to its competitiveness and Sustainability. All stations maintain conducive work environments meeting Indian/ International standards on hygiene, lighting, ventilation and effective controls on noise and dust. Stations are provided with occupational health centres with adequate medical staff to monitor occupational health and provide immediate relief when required. Adequate numbers of first aiders are trained in various in-house sessions; such sessions are conducted periodically by well-known specialists/ medical practitioners on the occupation related health hazards.

Each power plant has a central safety committee with representation from the major departments/ work areas. These departments / work areas further have divisional sub-committees and represented by workers as well. All workers are covered in formal joint management-worker health safety committees. The contract workers are also trained in safety in their induction training and undergo specific trainings based on area of work and duration of their stay etc. Identified medical examinations, as per statute, are conducted for various categories of employees based on age-groups as well as exposure to occupational hazards. These statutory medical examinations take place annually or as applicable. In the reporting year, no employees were found suffering from any occupation related illness/diseases.

At Tata Power, maintaining high safety standards at all its stations is significant, as it is committed to protecting the health and safety of each of its employees, contractors, customers and the communities in which it operates. A Safety Management System (SMS) is in place to ensure that both employees and contractors always adhere to good safety practices and procedures. The risks are assessed; incidents tracked, and corrective and preventative action plans are developed through SMS. Further, to handle unforeseen events or disasters, Business continuity and Disaster Management Plan (BCDMP) is in place at all generating stations. These BCDMPs are location specific and are reviewed on a regular basis.

In recent years, Tata Power has been raising greater awareness among its employees on the importance of safety in efforts to keep the operations accident-free. This is done through setting annual Safety Targets as well as on-going initiatives that seek to engage both employees and contractors on safety issues. The Safety Targets are communicated to all its employees by its highest decision-making authority. It is the responsibility of the senior management at respective locations to make sure that the safety targets are met.

The performance against safety targets of the reporting year as provided below.

Sr. No.	Main KPI	Derived KPI	FY 19	
			Target	Actual
1	Safety Performance Management Index (Target ≥ 90 %)		≥ 90 %	89.2%
	1.1	Implementation of Site Safety Improvement Plan	100%	98%
	1.2	Reporting of Safety Obs (Unsafe Acts / Conditions/ Safe Acts)	5,114 / month 61,368 (YTD)	1,40,828
	1.3	Closure of action items	100%	88%
	1.4	% Compliance to Safety Capability Plan for employees	100%	100%
	1.5	% compliance to Certification Plan (L1, L2, L3) for Contractor's workforce (L1= 100%, L2=50%, L3=100%)	100%	100%
	1.6	Severity Index of Field Safety Audits	≤2 to 3.5	3.2
2	Work Environment Index (Target ≥ 90 %)		≥ 90 %	99%
	2.1	Implement 5S philosophy for Division / Function (100% Gembas should achieve 3S)	100%	99%
	2.2	Fire Index	100%	99.5%
3	Safety Performance Index (Target ≥ 90 %)		≥ 90 %	50%
	3.1	Total Injury Frequency Rate (TIFR)	3.42	1.79
	3.2	Vehicle Incident Frequency Rate (VIFR)	3.45	0.10
	3.3	Lost Time Injury Frequency Rate (LTIFR)	0.30	0.26
	3.4	Fatality	0	2

Tata Power relies on a sizeable number of contractors/vendors (on term contracts) to perform regular tasks at the generating stations, under the supervision of employees throughout the year. To ensure that Tata Power continues to uphold its good safety performance, contractors' safety is taken seriously. Contractors are not only required to take part in the regular safety briefings at daily toolbox meetings, they also participate in safety initiatives and emergency drills organised by the company. Various Health and Safety topics are covered in the formal agreements with Trade Unions. The entire Contractor Safety Management has been revised and a new code is now in place w.e.f. Dec 2015.

Tata Power also has a Consequence Management Policy which sets out the general approach to managing the safety deviations and establishes processes for corrective counselling. It discusses the disciplinary actions in response to safety misconducts or violations as described in the Industrial Employment Standing Orders Act 1946 or such other Acts/Rules applicable to the Company. This Policy also ensures that while laying down an approach, it does not overlook the intent behind any safety deviation or malpractice. The objective of the policy is to ensure that each employee is committed to Safety and at the same time, gives them independence to take appropriate decision as per the necessary process and operation.

Safety Statistics

Injury Statistics	Permanent employees	Contractor and subcontractor workforce	Permanent employees	Contractor and subcontractor workforce
	FY 18		FY 19	
Total Days Worked	6,171,175		8,719,097	
Total Hours Worked	22,113,497	27,255,908	17,119,136	52,633,642
Lost Days (Man-days Lost)	259		12,847	0
Fatalities	0	1	1	1
Total recordable injuries	5	3	39 cases (Fatality: 2, LTI: 18, RWC: 2, MTC:17)	

Note: The data pertains to the entire workforce and is not segregated as per gender. However, there were 0 injuries to female employees.

Total 2 fatalities were reported in FY-19, one was caused by fall from height while trimming tree at Powerlinks on 5th May 2018 and other was due to Electrocutation at TPDDL on 20th Aug 2018.

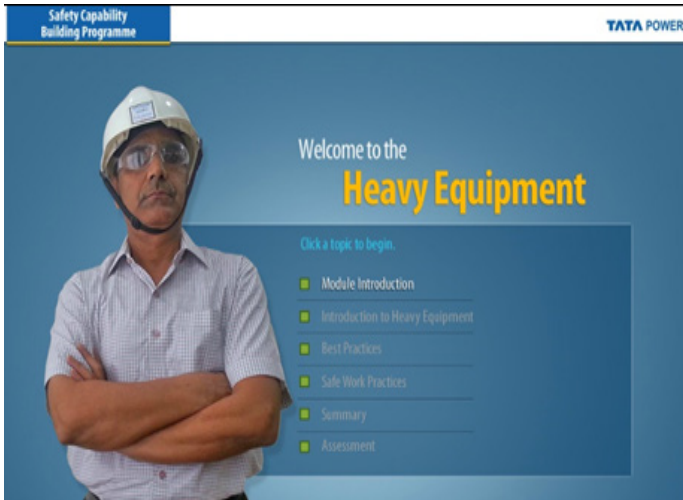
Tata Power has a structured process for incidents reporting & investigating and always take appropriate corrective & preventive actions to prevent recurrence at site. Incidents are reported through SAP-EHSM, directly or through Tata Power Suraksha mobile app. Incidents are immediately notified to all respective divisional incident manager to initiate necessary action. Daily Hazard and Incident report (DHIR) is generated from system and sent to all senior management team and divisions. Divisional Chief gives feedback on DHIR to Senior Management within a working day. All incidents are investigated using standard root cause analysis checklists to establish the root causes. For high potential/ high severity incidents and near misses, a cross-functional team is formed to thoroughly investigate causes and identify suitable corrective and preventive actions to avoid recurrence. Implementation of the recommendations is verified for close out through online system and the Divisional Chief (where the incident has occurred) is responsible for ensuring timely close out. Red Stripe Bulletin is shared for fatality & high potential incidents with causes & key learnings. In addition to that, a detailed 'Lesson Learnt' presentation is shared across for horizontal deployment of CAPA to prevent recurrence.

Safety Trainings

FY 18		FY 19	
86,300	1.97	46,241	0.53
Safety Training Man days (employees & contractors)	Safety Training Index	Safety Training Man days (employees & contractors)	Safety Training Index

Safety Training Initiatives

People are the assets of the organization and Tata Power has a milestone to maintain their competencies at par with the magnitude of risks that they encounter while performing their assigned jobs. So the safety capability of the workforce has been enhanced by training and certifying them through Tata Power Skill Development Institute (TPSDI) and also providing online safety training modules for self-learn on safety standards and procedures.



Safety Key Initiatives

Leadership focus:

- ISO 45001:2018 certification drive for latest Occupational Health and Safety management system.
- Deployment of Tata Power Safety Management System in Joint Ventures and Subsidiaries

Workplace Risk Management:

- Risk Management through Engineering Improvements as using drones, replacing hazardous chemicals, installing warning systems etc.
- Initiated a campaign on Life Changing Injuries and Fatality Elimination Program (LIFE) has been launched across Tata Power.
- Focus approach on unsafe work stoppage to eliminate the hazard at source

Safety Capability Building:

- Micro behaviour and simplifying safety session are conducted
- Competency building and site safety enhancement of renewable sites

Incident Learnings:

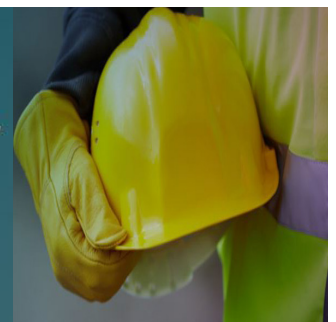
- Organizing Best Safety Practices Conclaves for horizontal sharing
- Mega Seek session (learning from the incidents) has been conducted

Audit & Reviews:

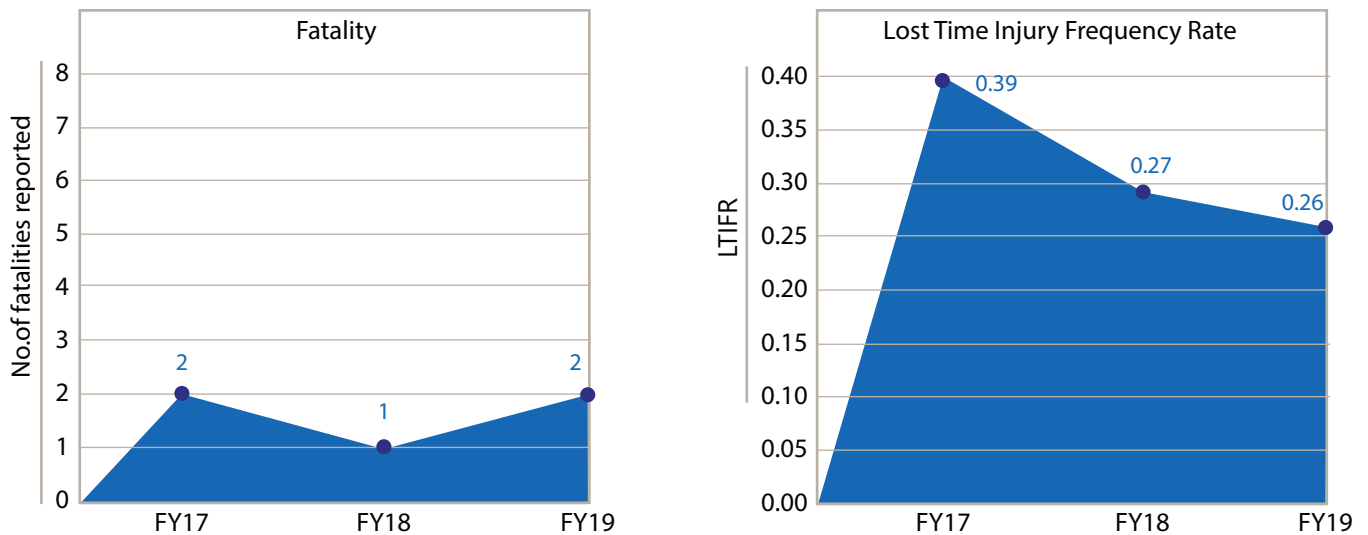
- Combined Assurance for Safety and Fire Management across the organization and review of outcome by audit committee, monitoring of audit finding closure through Internal Audit Tracking System.
- Developed Analytics for safety indices to enhance safety performance through evolved in sights

Health & Safety : Putting People First

When it comes to achieving world-class health and safety performance, there's no room for compromise at Tata Power. And it's not about statistics; it's about keeping people safe. It applies to every employee everywhere, whether walking down an office hallway or working in a power plant.



Safety Performance Trends



Contractor Safety Management

As a part of new initiatives, The Company is focussing on Contractor Safety Management and Workforce Skill Development in FY19. Dupont Six Step Contractor's Safety Management process has been renewed and simplified and named to Contractors Safety Code of Conduct (CSCC).

This is a three-step process which comprehensively takes care of the various aspects of safety at the time of Registration, bid evaluation and Post Contract Award stages. The Service contractors are classified into various categories (high, medium and low risk) based on their past safety performance and ability to handle a magnitude of safety risk. To enable a supplier to qualify to undertake high and medium risk jobs they would need to fulfil stringent criteria. To understand the level of compliance of Tata Power's major and critical suppliers, the suppliers were screened on various criteria including Environment Management, Health & Safety, Human Rights and Ethics. No violation has been found on these counts. Tata Power has already incorporated vendor evaluation/screening based on a skilled workforce, safety qualification and other parameters like commercial and statutory obligations as a part of vendor registration on the ERP platform.





Social and Relationship Capital

Tata Power's business involves operations that are land, water and ecology intensive and is intertwined with many livelihoods. Tata Power considers the nature of its operations, as an opportunity to touch many lives and contribute. Tata Power's partnership with communities enables us to deploy projects on time, manage assets efficiently and provides us with broader social license to operate.

The Company practices its mission statement, "Practicing Leadership with Care" by pursuing the best practices on Care for the environment, community, customers, shareholders, people. Tata Power aims to create a culture that will enforce the values lays down the fundamentals for its approach to enhancing the relationship with the key stakeholders.

Tata Power Group Companies undertook CSR initiatives, which are align to the Thrust areas as outlines in their respective CSR Policy. The entities include Tata Power Company Ltd, Tata Power – Delhi Distribution Ltd, Coastal Gujarat Company Ltd, Tata Power Solar Systems Ltd, Tata Power Renewable Energy Ltd, Walwhan Renewable Energy Ltd, Tata Power Trading Company Ltd, NDPL (Infra), Powerlinks Transmission Ltd, Aftaab Investment Ltd, Industrial Energy Ltd and Maithon Power Ltd.

The geographical coverage included 348 villages and 220 clusters across 15 states of the country.

- At Tata Power Group Level, against annual CSR obligation of ₹ 36.75 Crores, ₹ 44.58 Crores was spent in FY 19.
- 24.67 Lakhs Beneficiaries were covered in the year 2019 against the target of 20.30 lakhs.
- 121% beneficiaries and 121% CSR Spent achieved against Annual Target FY 19 at Tata Power Group Level in FY 19.
- 82,867 hours of volunteering undertaken by employees of Tata Power Group which is 3 times higher than previous year.
- **Key Flagship Initiatives Scaled across all Locations in FY 19**
 - Financial Inclusivity scaled across all major locations. 3.43 lakhs beneficiaries covered with resources accessed under various Govt Schemes by communities.
 - Dhaaga (Women Micro-Enterprise) scaled from 15 members to 1050 members and scaled from 1 location to 16 locations. 12 Exhibition cum sale organized with order value exceeding Rs 37 Lakhs during the year. 2 Tata Group Companies (Tata AIA and Indian Hotels) also invited Dhaaga Members for organizing exhibition cum sale.
 - Abha (Women Empowerment) scaled to cover 1341 members for vocational training in Delhi and Mumbai. The Abha concept rolled out in Tata Power Skill Development Institute (Mumbai) covering 300 women trainee's batch for power sector skilling.
 - TCS Employability-Kalinganagar has trained more than 1880 youths with 50% placed in TCS ranked as best performers by TCS. Replicated in Maithon.
 - PGWM-Water Management- Mundra replicated in Maithon and Wind Locations. Resources worth Rs 1.34 Crores mobilized from NABARD and Rs 75 Lakhs from IIT-Gandhinagar respectively.
 - Maval Dairy- Women centre dairy based enterprise comprising 1100 members from 26 villages of Maval undertaken. The Dairy Plant construction and machinery installation completed.
 - Usage of Technology in CSR in Volunteering Portal, MIS Software and Financial Inclusivity App (Haqdarshak) for enhancing efficiency.

Tata Power believes that delivering value to society is the purpose of its business.

Social relationships and interactions with the stakeholders and others, helps Tata Power to achieve its objectives. "Social capital" includes human relationship, partnership and co-operation e.g., networks, communication channels, families, communities, businesses, trade unions, schools and voluntary organizations as well as cultural and social norms, values and trust.

In Tata Power, social capital takes the form of shared values, trust, and communication and shared cultural norms that help people to work cohesively and operate effectively. Externally, social structures helps to create a climate of consent and understanding, or a license to operate, create a stable society to work, operate and develop e.g. government and public services, effective legal systems and security arrangements, trade unions, schools and other organizations. Tata Power enhances social capital by:

- Supporting the communities in which the organization operates, including economic opportunities
- Ensuring the ethical sourcing of materials and fair treatment of suppliers, customers and citizens.
- Respecting and complying with the local, national and international law.
- Offering reasonable pricing, accessibility of products and services, and fair and accurate claims in promotional material.
- Minimizing the negative social impacts of products and services and maximizing the positive.
- Contributing to policy formulation and strengthening of public institutions.

Care for Community - GRI 203-1, 2, 413-1, 2

Tata Power strives to preserve its CSR legacy towards 'Sustained Inclusiveness' and being a 'Neighbour of Choice'. To bring in sharp focus, integration and to focus on augmenting household income, Tata Power revised its CSR interventions in FY18 to include 5 thrust areas for community development initiatives across its locations.

While Financial Inclusivity was based on mobilizing resources under various Government schemes, to ensure entitlements of marginalized community without any resource requirement, rest focus areas had budget allocation. In FY19, The Company's community development initiatives covered 24.67 lakh beneficiaries across 348 villages and 220 urban clusters in 15 states of the country, under the 5 thrust areas of Education, Health and Sanitation, Livelihood and Skill Building, Water and Financial Inclusivity.

Details of some of Tata Power's CSR initiatives undertaken

Education

- In total, 1.6 lakh students covered under Education Excellence Initiative.
- In locations where education programs are ongoing, learning levels are showing positive trends amongst primary schools.
- Special focus for improvements is being provided through remedial classes, e-learning and teacher training programs.
- 69% improvement in academic performance along with enrolment and reduction of dropout rate.
- Teachers training, and innovative learning methodologies adopted including STEM learning.

Livelihood and Skill Building

- 2.51 lakh farmers, fishermen, women and youth were covered under livelihood and skill building with focus on women micro enterprise development.
- Focus on integrated agriculture initiative through vermicompost, SRI techniques, low water consuming cropping pattern and micro-irrigation promotion.
- Dhaaga (Women SHG based micro-enterprise) scaled to cover 1,050 women in this year with average monthly income of ₹ 2,000 for the members.
- Abha (Women Empowerment) scaled to cover 500 women in this year with average monthly income of ₹ 2,000 for the members. In total 1,341 women engaged under Abha Initiative. TPSDI also rolled out Abha Skill Building Training Module for power sector skilling with focus on women exclusively this year. Abha (Women empowerment) Initiative of TPDDL, Delhi replicated to Mumbai to cover additional 500 women.

Financial Inclusivity:

3.43 lakh community beneficiaries were enabled to access various government and external schemes under Financial Inclusivity in which facilitation and awareness building was done by Tata Power which facilitated access to various state and Government.

Health:

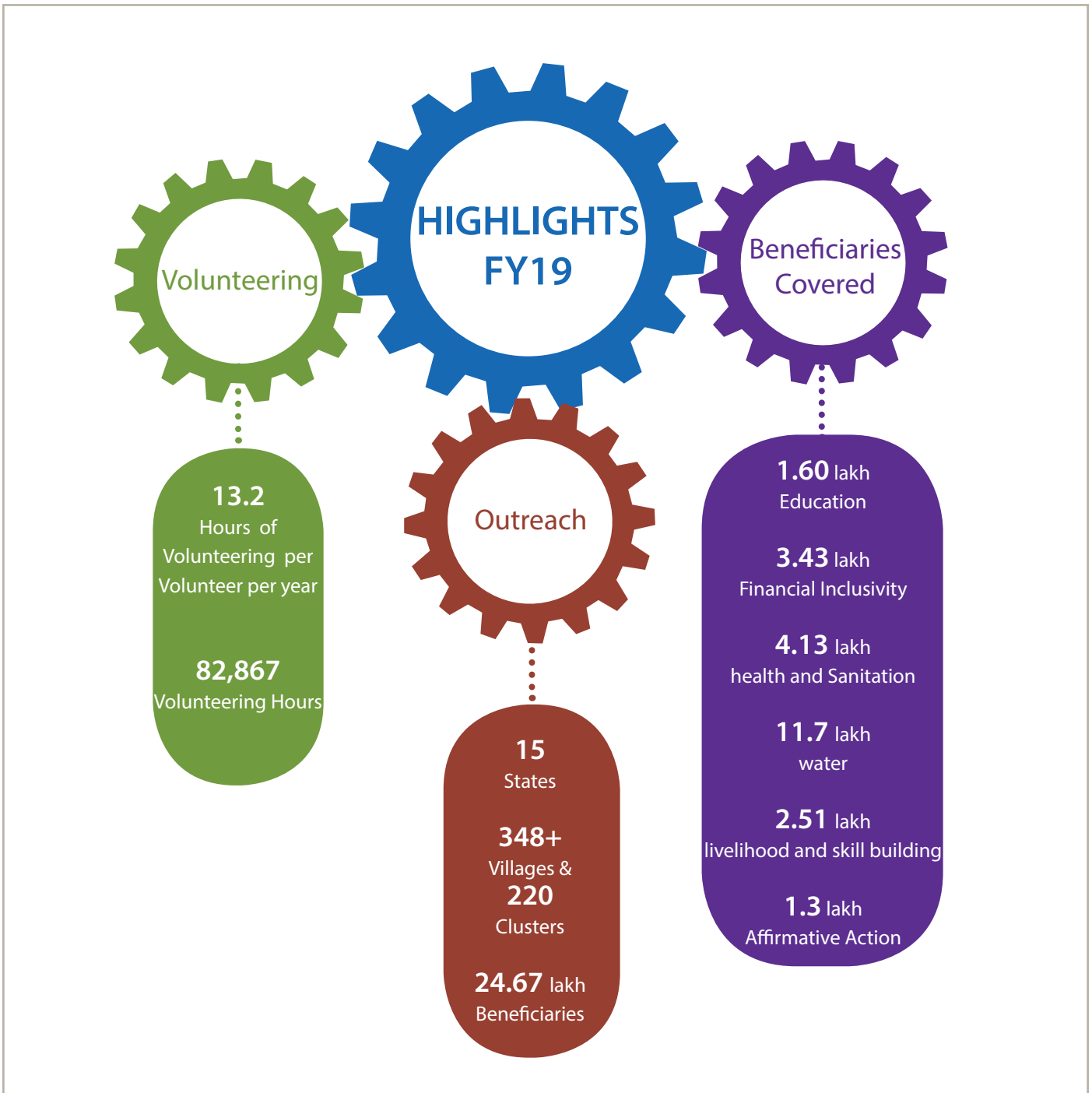
- The focus on behavioural change to adopt safe health and sanitation practices was ensured to cover 4.13 lakh beneficiaries.
- Focus on adolescent girls and youth to enhance awareness on life skill education and anaemia control.
- Collaboration with stakeholders and Government to promote sanitation has resulted in improvement in adoption of best sanitation practices by the community. The community led sanitation project was undertaken in which community was trained and convergence with Swachh Bharat was undertaken to enable construction and usage of toilets resulting on making nearby villages open defecation free. The concept of behaviour change communication undertaken by Tata Power was the key to enhance the access and usage of toilets by 27% at household level and keeping the local areas clean.

Water:

- 11.7 lakh beneficiaries covered under Integrated Water Resource Management and Drinking Water Initiatives
- Focus on Drinking Water at schools and village household level through RO plant installation and recharging of bore wells
- Participatory Ground Water Management of Mundra replicated at Maithon and Wind Locations which includes water harvesting structures and water conservation (Demand and Supply Side Management)
- MOU signed with NABARD for Collaborative Water Management in remote locations of Maharashtra covering 100 hectares of area

As part of Affirmative Action Policy, Tata Power worked with the marginalized and disadvantaged communities which include, tribal villages, vulnerable children who need care, protection & improvement in quality of life. The initiatives focus on 5Es - Education, Employability, Employment, Entrepreneurship & Essential amenities. The initiatives are in addition to the initiatives under the 5 thrust areas of CSR program. Some major AA program details are below:

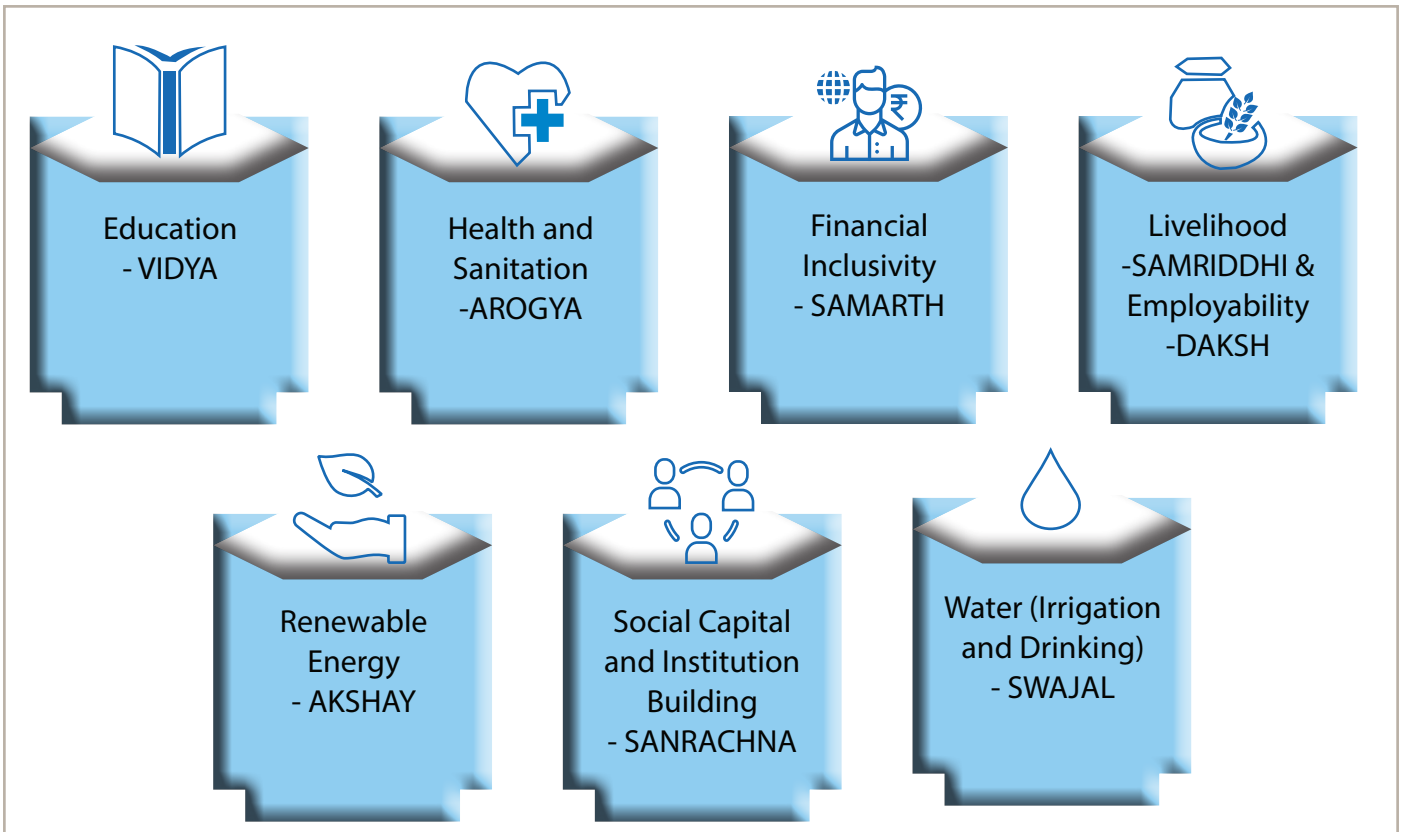
- Out of 1.5 lakh SHG members, 20% from SC/ST communities were supported for income generation activities including garment making, herbal products, traditional handicraft, mushroom cultivation, vermicomposting.
- More than 8000 youths from SC/ST trained by TPSDI under various power sector skilling courses.
- Out of 27,493, 20% students covered under education program across all locations who were from SC/ST communities and their overall academic performance improvement was 69% more than previous year and enrolment rate improved, and dropout rates were reduced. Extra coaching classes, Spoken English, sports promotion programs are conducted in schools to improve interpersonal skills and personalities of the students.
- Supported 5,000 SC/ST farmers in systemic rice intensification, improved varieties of seeds, advanced technology and integrated watershed management practices.
- Sponsoring high performing students through scholarships like FAEA at Tata group level for X and XIIth standard students. Supporting Kalinga Institute of Social Sciences, Bhubaneswar for catering educational services to Tribal students
- Collaboration with local administration for Water, Sanitation and Hygiene issues were undertaken to make Open Defecation Free (ODF) Villages as a part of Swaccha Bharat Abhiyan by sensitizing through Community Lead Total Sanitation (CLTS) campaigns.
- Company also undertook women enterprise development under Dhaaga Initiative in which 1,050 women have been trained and linked to market for their products with income of Rs 2,140 on monthly basis.
- Under Water Initiative, focus was on drinking water and integrated ground water management which was implemented in various locations
- Sports was introduced to enhance and channelize youth energy and some of the youth have been selected in national and regional level camps in football, kabaddi and cricket.



Community Engagement Interventions (Life Cycle Based Approach) initiated in key locations (Maithon, Mundra, Hydros and Mumbai). Against the annual additional target of 1.1 lakh beneficiaries, 1.96 lakhs beneficiaries covered during the year which helped to achieve overall beneficiaries of 24:67 lakhs with focus on:

- Women Empowerment through SHGs.
- Employability for Youth.
- Sports for Youth.
- Farmer and Fishermen for Livelihood

Under Sports initiative, 2 youth from Mundra and Maithon identified for national level cricket and football camps respectively.



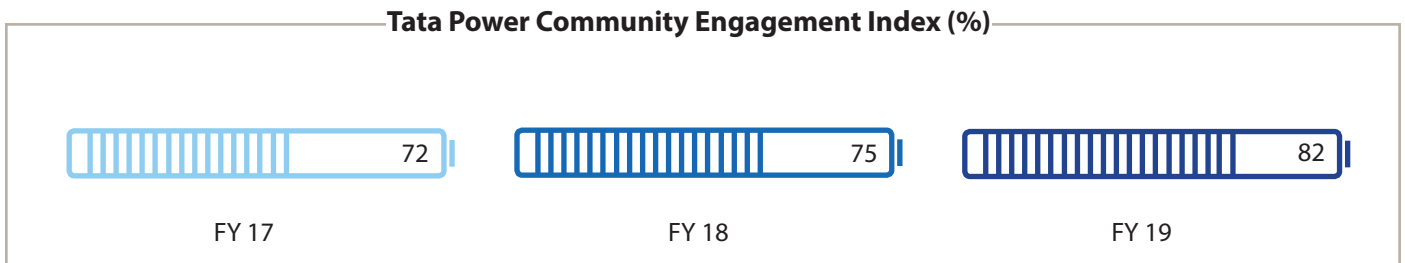
The CSR initiatives were extended to the geographies where the new solar and wind plants are located. The standalone CSR spend for FY19 stood at ₹ 12.66 crore against the Companies Act, 2013 requirement of ₹12.65 crore. At Tata Power Group Level, against annual CSR obligation of ₹ 36.75 Crores, ₹ 44.58 Crores was spent in FY 19.

CSR Investment	% Spent		
	FY 17	FY 18	FY 19
Education	11.85	12.31	9.88
Health and Sanitation	13.47	6.27	10.03
Livelihood-SAMRIDDHI & Skill Building	29.34	45.09	43.44
Renewable Energy	35.59	0.75	NA
Social Capital and Institution Building	9.75	8.48	NA
Water (Irrigation and Drinking)	0	0.89	11.14
Affirmative Action and Others	0	26.21	19.66

Additionally, as a part of disaster relief operations, the Company has contributed towards relief efforts in Kerala and Karnataka.

To get feedback and to refine and realign the CSR programs, independent monitoring and evaluation framework has been adopted. To know the effectiveness of the initiatives, impact assessment was done for the CSR programs. Such measures can improve the standard of the implementation of the CSR initiatives.

The overall impact of CSR initiatives was measured through the Community Engagement Index (CEI) tool which was used to determine engagement levels of the various stakeholders across the stages of the CSR intervention. In the reporting year RASCI Model (Responsible, Approve, Support, Consulted and Informed) was customized to determine engagement levels of the various stakeholders across stages of CSR intervention.



Independent Social Return on Investment Study was conducted for the first time ever which offered insights and the actions were implemented with SROI scores exceeding other Corporate Benchmarks in Women Empowerment and Sanitation by 500%. This methodology was based on global framework of Social Value – The SROI Network, UK.



CSR Communication:

- CSR Communication campaigns like Power Her Up for Women Empowerment (Dhaaga, Abha, Sneha and Adhikaar) and International Girl Child Day to promote Girl Child Education were used to create awareness and communicate with external and internal stakeholders.
- As part of CSR Communication, common Branding of 15 Interventions.
- Launch of Quarterly CSR Newsletter-SAATHI to communicate internal stakeholders about CSR progress.
- CSR Films/Documentary undertaken for 6 Flagship Initiatives.

Volunteering:

- Employee Volunteering Portal ARPAN was launched which resulted in 300% increase in volunteering hours the against previous year. Total volunteers' hours were 82,867 in FY 19 The ARPAN Portal was a maiden effort undertaken for the first time in Tata Power which provided avenues for employees to actively participate and contribute for social causes across all locations.
- Tata Power ARPAN Volunteering Awards were constituted in which Best Performing Location are recognized annually. This year, the overall award was won by Trombay Location with Kalinganagar, TPDDL and Maval appreciated and provided special recognition.

Initiatives

TPSDI Introduces Maintenance Skills Courses in Mechanical and Electrical, a 12-week course to train, test, and certify Mechanical and Electrical Engineers in Maithon & Jojobera.

Care for Customers

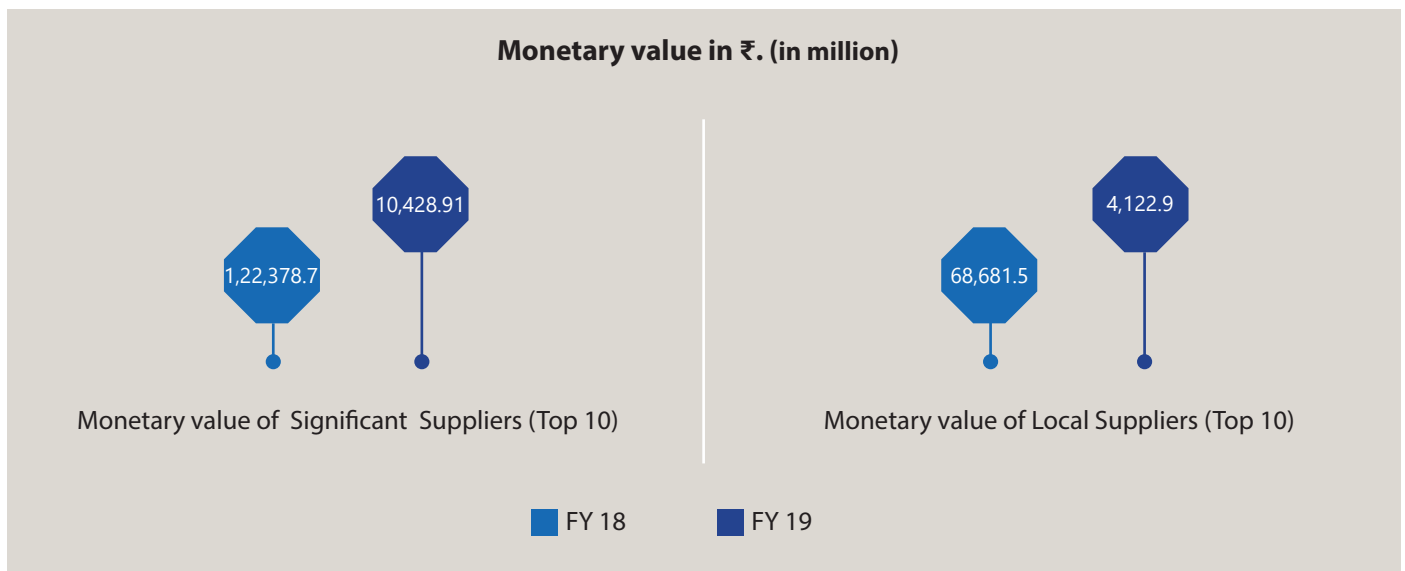
Tata Power's customer affection statement, "To earn the affection of customers by delivering superior value and superior experience thereby making them our ambassadors" is immensely focused in the routine operations.

The 3Ds that comprise of the 'Customer Promise' are detailed below

- Develop insights into customer needs
- Deliver quality products and services
- Delight customer with great experience

Tata Power has improved its customer services to reduce the carbon footprint of the customers as it will significantly reduce travel time for Customer Relationship Centres to get assistance on complaints/ queries. Some of the initiatives are as stated below:

- Enabling utility bill payments through digital initiatives Dynamic UPI (1st utility in the power sector to implement), QR & BBPS, E-NACH, ECS, wallets. The launch of ATPM for bill payments
- Introduction of Chatbot (TINA) for consumer services.
- Introduction of push-pull SMS services for customer services (power failure).
- Social media Platform for 24x7 WhatsApp and Twitter services for handling complaints / queries. Incentive plans for E-bill and NACH registration.
- Online applications roll out for various customer services like name change load enhancement, load reduction, etc. customer portal for LEC/ Developer.
- Launch of mobile application.



Tata Power

Transmission Length - EU 12

Tata Power	FY 17	FY 18	FY 19
Length and efficiency of transmission			
Length overhead (km) (220 kV and 110kV)	1,036 CKT km	1,038 CKT km	1,045 CKT km
Length underground (km) (220 kV and 110kV)	150 CKT km	150 CKT km	160 CKT Km
Transmission loss (%)	1.62	1.23	1.26
Length and efficiency of Distribution			
Length overhead (km)	102.4	102.4	81.81
Length underground (km)	HT – 2,400 km approx. LT – 1,900 km approx.	HT – 2,500 km approx. LT – 2,100 km approx.	4,438.46
Aggregated Technical & Commercial loss (% energy loss)	1.20%	0.90%	0.63%

Power Outages - EU 28 EU 29

Power outage frequency and average power outage duration	FY 17	FY 18	FY 19
Average number of interruptions that a customer would experience, measured in units of interruptions per customer. SAIFI	0.7 times	0.7 times	0.895 times
Average outage duration for each customer served, measured in units of time, often minutes or hours. SAIDI	13.3 minutes	13.3 minutes	21.09 minutes
Average time taken for power supply measured in terms of minutes per affected customer. This is a benchmark for this parameter. CAIDI	18.2 minutes	18.7 minutes	23.554 minutes
Length underground (km)	HT – 2,400 km approx. LT – 1,900 km approx.	HT – 2,500 km approx. LT – 2,100 km approx.	4,438.46
Aggregated Technical & Commercial loss (% energy loss)	1.20%	0.90%	0.63%

Residential disconnections for non-payment (no.)	FY 18	FY 19
Paid up to 48 h after disconnection	2,695	4,485
Paid between 48 h and one week after disconnection	3,073	1,190
Paid between one week and one month after disconnection	997	1,647
Paid between one month and one year	1,500	2,973
Paid after more than one year	14	31

TPDDL

Transmission Length - EU 12

TPDDL	FY 17	FY 18	FY 19
Length and efficiency of Distribution			
Length overhead (km) (11kV and below)	10,772	10,887	11,122
Length underground (km) (11kV and below)	4,123	4,298	4,612
Aggregated Technical & Commercial loss (% energy loss)	8.6%	8.4%	7.9%

Power Outages - EU 28 EU 29

Power outage frequency and average power outage duration	FY 16-17	FY 17-18	FY 18-19
Average number of interruptions that a customer would experience, measured in units of interruptions per customer. SAIFI	51.4	37.1	37.9
Average outage duration for each customer served, measured in units of time, often minutes or hours. SAIDI	43.1	29.2	34.2
Average time taken for power supply measured in terms of minutes per affected customer. This is a benchmark for this parameter. CAIDI	0.8	0.8	0.9

TPADL

Transmission Length - EU 12

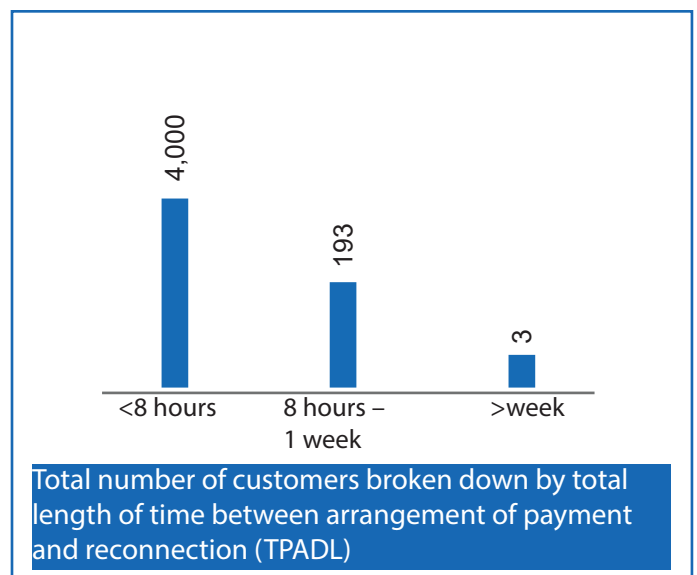
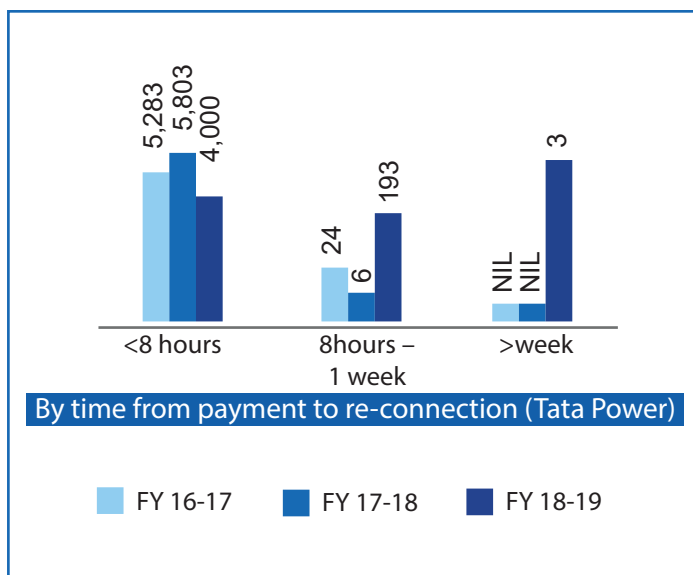
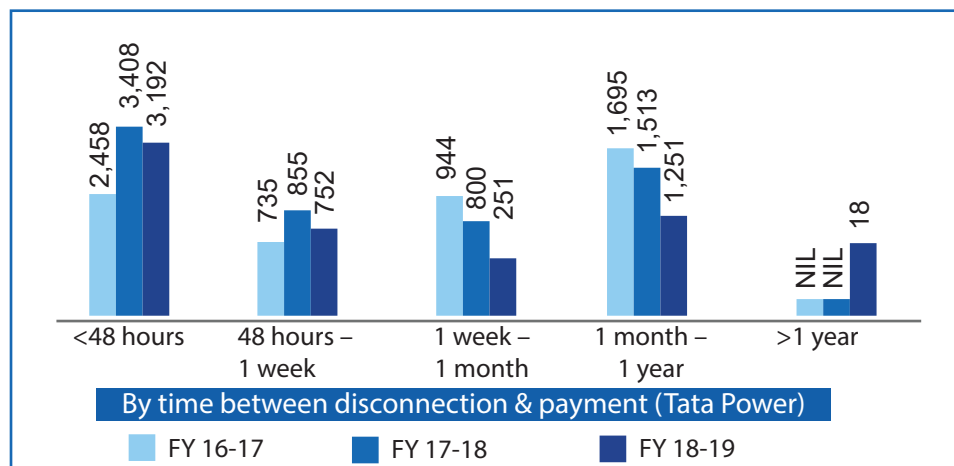
TPADL	FY 17	FY 18	FY 19
Length and efficiency of transmission			
Length overhead (km) (220 kV and 110kV) 33 KV	0	145	145
Length underground (km) (220 kV and 110kV) 33 KV	0	59	65
Transmission loss (%)		1.01	1.01
Length and efficiency of Distribution			
Length overhead (km) (11 KV & LT)	0	2,374	2,390
Length underground (km) (11 KV & LT)	0	451.06	454.1
Aggregated Technical & Commercial loss (% energy loss)	21.98%	17.25%	11.21%

Power Outages - EU 28 EU 29

Power outage frequency and average power outage duration	FY 17	FY 18	FY 19
Average number of interruptions that a customer would experience, measured in units of interruptions per customer. SAIFI	0	143	118
Average outage duration for each customer served, measured in units of time, often minutes or hours. SAIDI	0	138	61.7
Average time taken for power supply measured in terms of minutes per affected customer. This is a benchmark for this parameter. CAIDI	NA	NA	NA
Momentary Average Interruption Frequency Index. MAIFI	NA	NA	NA
MAIFI = (Total number of momentary interruptions in a year) / (Total number of consumers)	NA	NA	NA

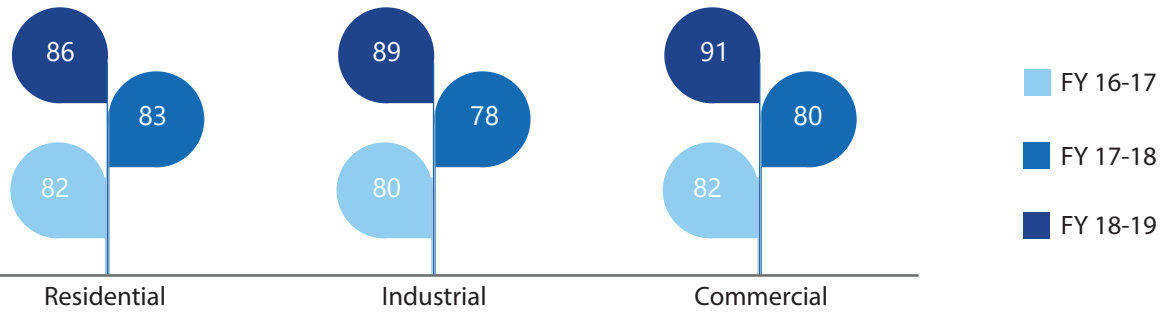
Care for Suppliers - GRI 102-9, 202-1, 204, 308-1, 2, 408, 414, 419

Disconnection and Re-Connection of Power Supply (EU 26, 27)



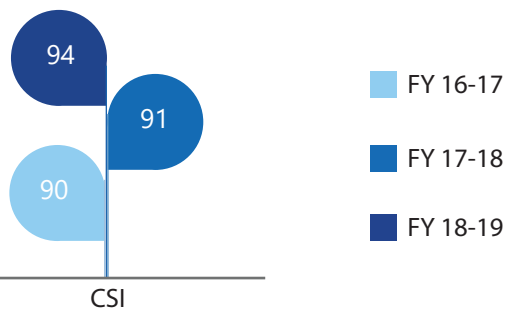
Customer Satisfaction Assessment (CSAT) Tata Power

(score in percentage)



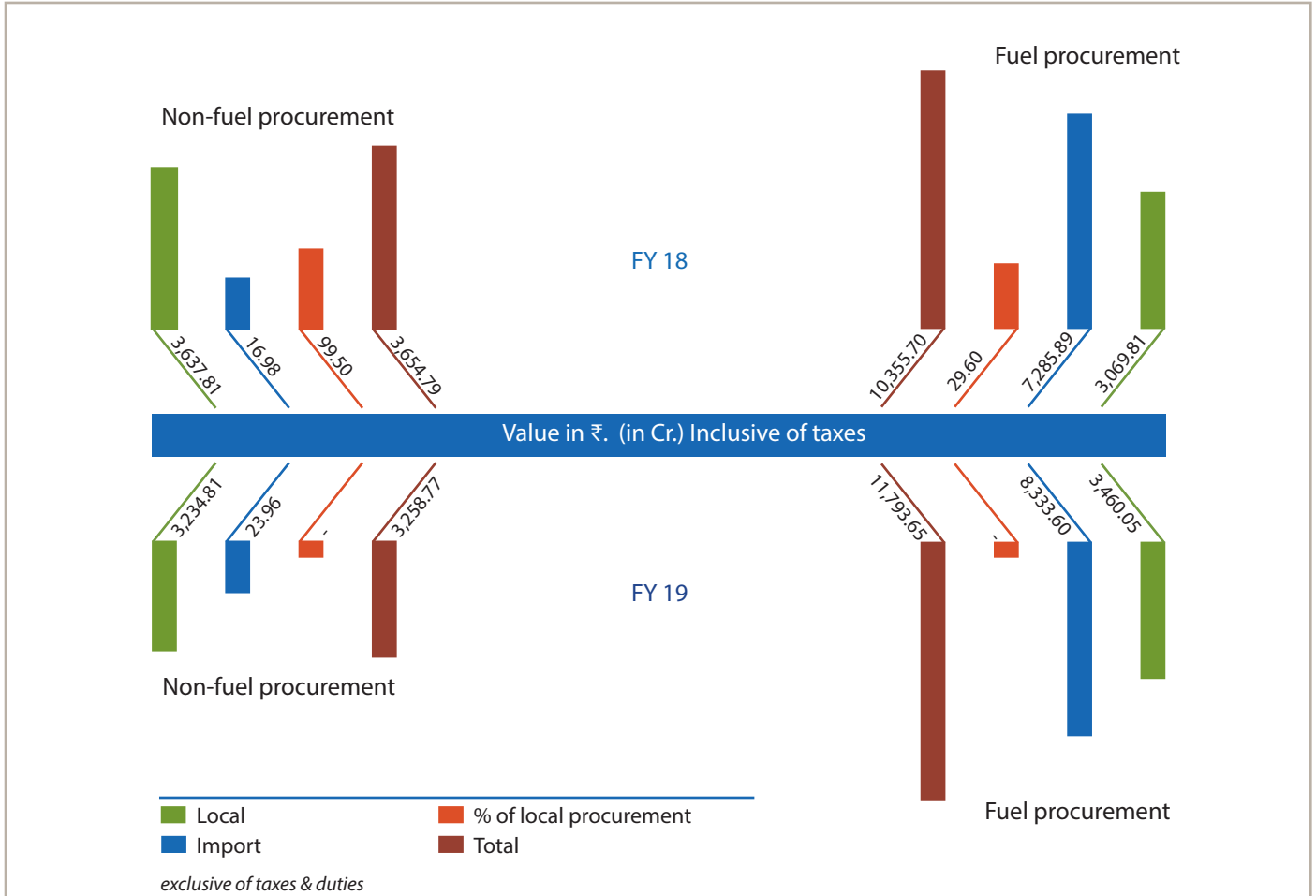
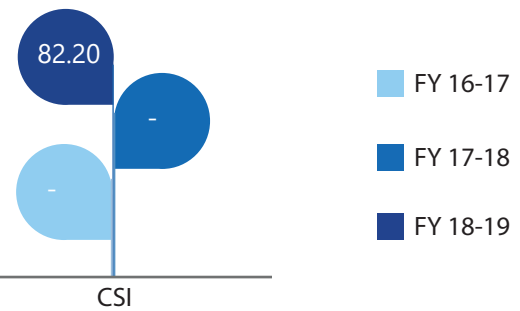
Customer Satisfaction Assessment (CSAT) TPDDL

(score in percentage)



Customer Satisfaction Assessment (CSAT) TPADL

(score in percentage)





Tata Power harnesses energy from both renewable and non-renewable sources of energy. Tata Power is aware of its limitations and also recognizes the impact of over usage it can have on the long and short run. Tata Power maintained a good reputation for maintenance and enhancement of its natural capital through the following measures:

Material Consumption - GRI 301-1, 302-1

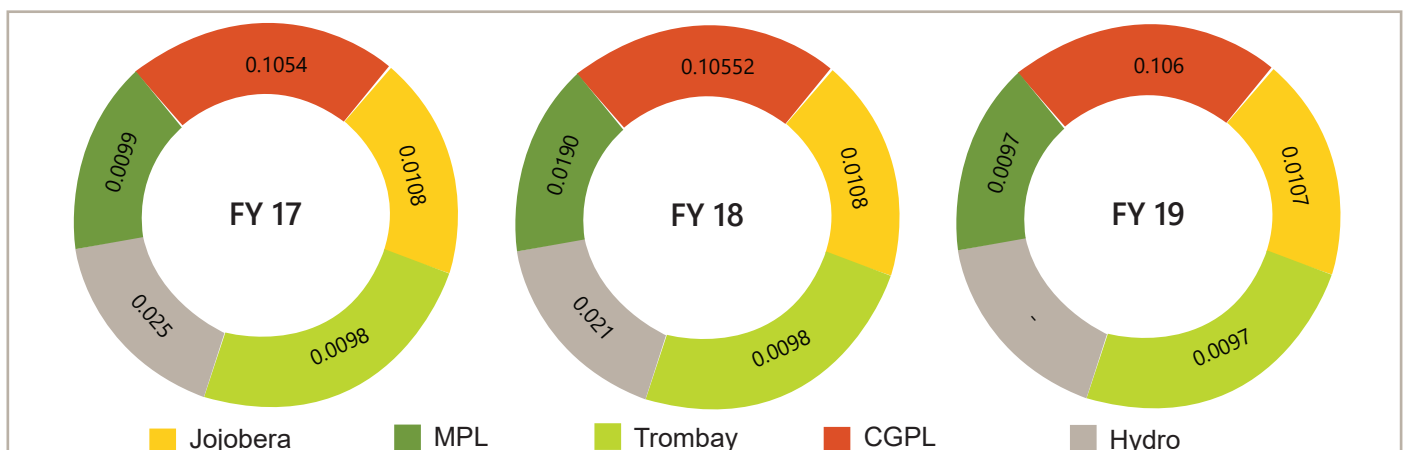
Generating Station	Raw material	UoM	FY 17	FY 18	FY 19
Trombay	Coal	Tonnes	24,92,710	24,52,206	22,94,388
	Low Sulphur Heavy Stock (LSHS)	Tonnes	415	1,474	864
	Gas	Tonnes	2,23,498	2,33,401	3,06,990
Jojobera	Coal	Tonnes	25,41,411	25,05,848	25,18,187
CGPL	Coal	Tonnes	10,803,979	10,799,102	11,273,331
MPL	Coal	Tonnes	42,88,939	42,40,175	42,90,647
PH #6	Blast Furnace gas	MNm3	2,386	2,209	2,427

Auxiliary Energy Consumption (MWh)

Plant Locations	FY 17	FY 18	FY 19
Trombay	3,60,820	3,44,823	3,37,119
Jojobera	3,32,806	3,45,028	3,36,793
CGPL	21,58,000	20,87,000	20,86,920
MPL	40,000	40,800	41,000
PH #6	59,584	54,754	63,130
Haldia	61,980	62,816	64,588
Kalinganagar	79,082	85,629	97,884
Hydro	36,614	31,461	29,132
Total	9,33,444	9,27,006	9,31,143

	FY 17	FY 18	FY 19
TPSSL	22,690.21	27,069.56	20,189.12
TPREL	10,433.9	12,028.7	14,802

Energy Intensity Ratio (GJ/KWh) - GRI 302-3



Air Emissions - GRI 305-1, 7

To ensure that Tata Power complies with all stipulated environment norms all the time, various state-of-the-art pollution control systems/devices have been installed to control air pollution:

- Electrostatic Precipitators
- Tall Stacks
- Use of low Sulphur low ash coal
- Flue Gas Desulphurisation
- Low-NOX Burners
- DE and DS Systems

Air pollution is controlled by selection of an efficient generation technology, generating minimal pollutants, efficient controller (control at source) and then releasing in the atmosphere through tall stacks for wider dispersal (control in release). This is achieved by following abatement measures:

- Efficient boiler technology – Sub-critical technology used in Trombay, Jojobera and Maithon units while super-critical technology is used in Mundra UMPP plants
- Bag filters to minimise dust at coal junction towers and bunker galleries
- Environmentally friendly diesel generator sets
- PM10 & PM2.5 control by choice of low ash coal for burning efficient operations of combustion and Electro Static Precipitators (ESP).

Initiatives

- Tata Power's Trombay unit has adopted sea water-based FGD technology for SO₂ control well ahead of the Gol stipulation.
- Other units are at various stages of adoption of SO₂ emission control.
- Low NO_x burners are installed on unit 7 of Trombay to control NO_x emissions.

Air Emissions by Weight (tonnes)

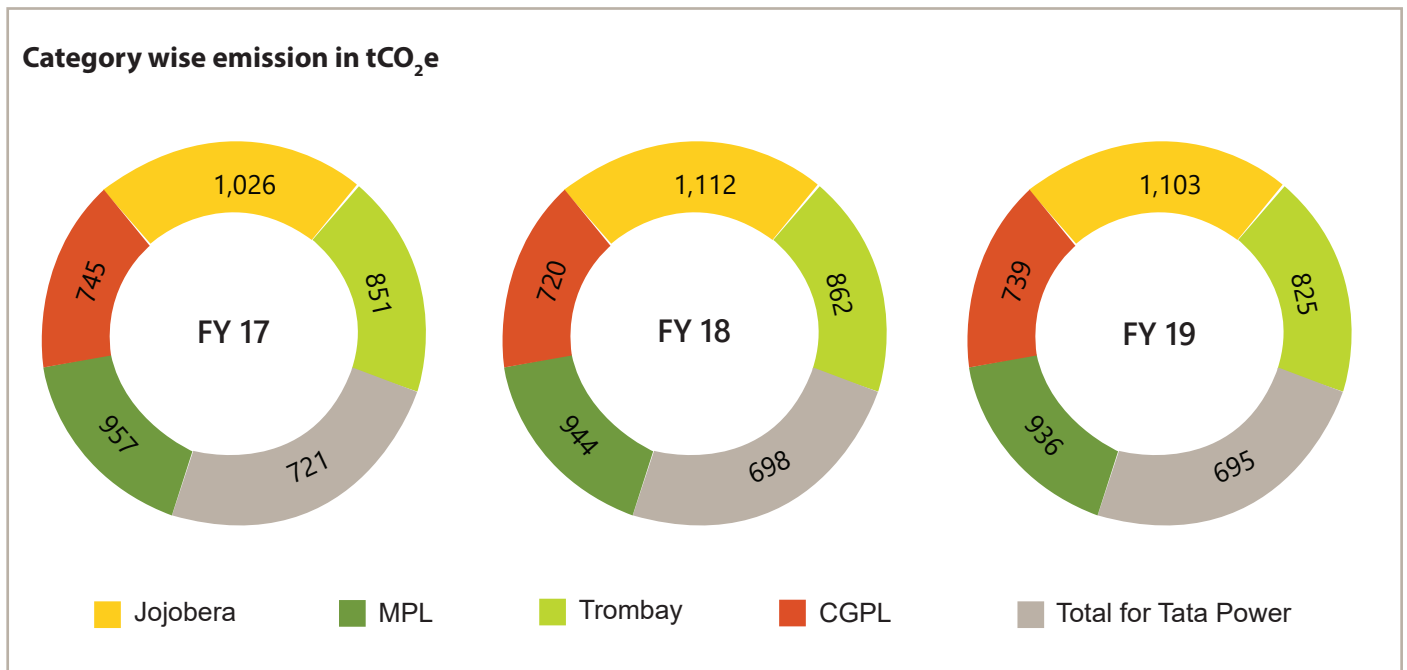
Parameter	Year	Trombay	Jojobera	CGPL	MPL	Total for Tata Power
SO ₂	FY 17	5,315	18,667	1,29,552	21,962	1,75,496
	FY 18	5,896	22,838	1,29,589	20,794	1,79,117
	FY 19	4,994	22,251	1,20,000	24,682	1,71,927
NO _x	FY 17	4,885	6,798	3,042	20,164	34,889
	FY 18	3,808	10,275	4,150	22,673	40,906
	FY 19	3,611	10,349	7,556	19,694	4,1210
PM	FY 17	1,269	1,388	308	974	3,939
	FY 18	1,222	1,629	292	1,253	4,395
	FY 19	780	1,680	709	1,514	4,683

CO₂ Emissions - GRI 305-1 to 7

Tata Power conserve energy through utilizing the energy from alternate sources such as wind and solar which contribute to reduction in air emissions. Total CO₂ emissions intensity at the company level has reduced due to an increased share of renewables in the total energy generation portfolio.

The category wise (Scope 1, 2, 3) GHG emission are shown in the table below:

Category wise emission in tCO ₂ e	Scope 1	Scope 2	Scope 3	Total
FY 17	36,754,936	14,049	2,579	36,771,564
FY 18	35,723,397	14,936	1,948	35,740,281
FY 19	36,053,864	13,609	2,473	36,069,947



Water Management

GRI 303-1,2,3 GRI 306-1,2,3,4,5

Various state-of-the-art pollution control systems/devices have been installed to control water pollution:

- Neutralisation Pits
- Coal Settling Pits/Oil Settling Pits
- Cooling Systems
- Ash Dykes and Ash Disposal Systems
- Ash Water Recycling System
- Dry Ash Extraction System (DAES)
- Sewage Treatment Plants and Facilities

Sustainable Water management and its implementation is important for Tata Power. Best Management practices across stations are followed for minimization of specific water consumptions and maximizing the reuse & recycle of water used and addressing site-specific water related issues at each of operating site.

All major effluents (service water effluents, coal handling plant effluents, ash pond overflow etc.) are being treated as per statutory norms of the respective State Pollution Control Boards before recycling/disposing. The Cooling tower blowdown is cooled further and used as make-up for the service water system, coal handling

plant water system, ash water system, fire-fighting, etc.

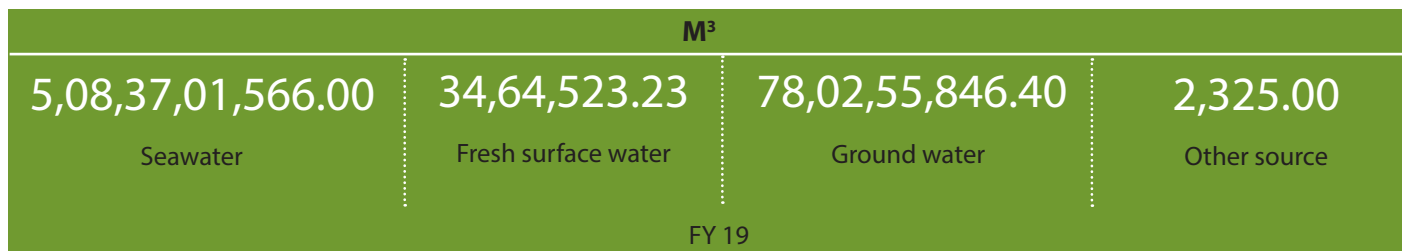
The treated Water is reused internally, for horticulture/plantation/greenbelt development, as well as used for control of fugitive emissions from coal yards. Thus, all power plants are operating with a “minimum water requirement and minimum effluent generation” system.

Sources of water used - GRI 303-2

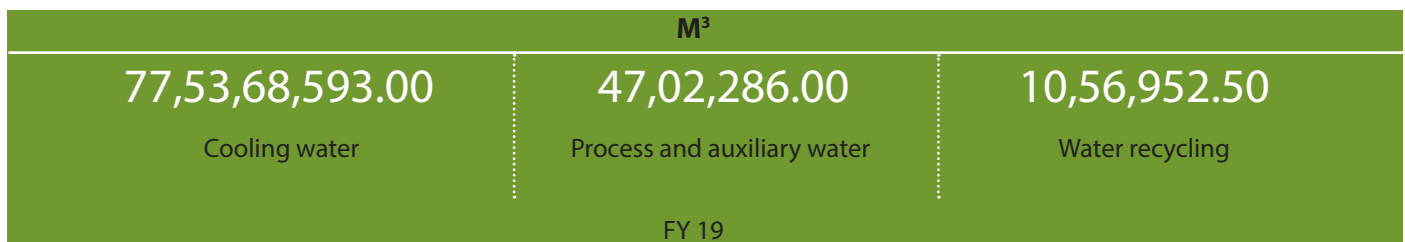
- Tata Power’s Trombay thermal Power Station (TTPS) uses fresh water (i.e. supply from Municipal Corporation for processes and services, while seawater is used for cooling processes
- CGPL uses seawater for the process as well as for cooling. It has installed desalination plants and uses desalinated water for processes and services. It is the only TPP in India which generates fresh water for itself. Haldia gets water from the Hoogly River and the source of water for Kalinganagar is the Kharsua river
- Maithon withdraws water from the dam, whereas the source for Jojobera is the Subarnarekha River.
- All TPPs of Tata Power have cooling towers except TTPS and CGPL where they have the sea water based once-through cooling system.

All the plants have implemented various water saving initiatives resulting in a significant decrease in the specific water consumption. Further, all the effluents along with the boiler blowdown are treated in ETP, all the water is treated in ETP and is being reused. Along with these initiatives, many plants and few of the receiving stations have initiated rainwater harvesting as their biodiversity value from the company’s water discharge and runoff.

Water withdrawal in operations - GRI 303-1



Water use in operations - GRI 303-1



Water Consumption - GRI 303-1, 306-1

Stations	Source & use	FY 17		FY 18		FY 19	
		Specific water consumption (m ³ /kWh)	Absolute water consumption (Mm ³)	Specific water consumption (m ³ /MWh)	Absolute water consumption (Mm ³)	Specific water consumption (m ³ /MWh)	Absolute water consumption (Mm ³)
Trombay	Municipal Water consumption (Process+ Domestic Water)	0.200	1.23	0.149	0.92	0.121	0.78
	Seawater consumption (Condenser Cooling water)	0.133	852.4	0.133	837.30	0.121	775.37
Jobbera	Surface water (wetlands, rivers, lakes)	0.0029	10.94	0.0029	10.95	0.0029	10.62
CGPL	Sea Water Withdrawal (Process & Domestic after RO treatment + Make up for Condenser Cooling)	0.1625	4,412	0.1628	4,308.33	0.193	4,308.33
MPL	Surface Water Withdrawal (Process + Domestic + Make up for Condenser Cooling)	0.002	16.89	0.002	16.79	0.002	16.32
Haldia	Municipal Water consumption (Process+ Domestic + Make up for Condenser Cooling)	0.0034	2.66	0.003	2.77	0.003	2.68
Kalin-ganagar	Surface water (wetlands, rivers, lakes)	0.025	0.55	0.18	2.72	0.02	2.64

	Source & use	FY 17	FY 18	FY 19
TPSSL	Water Consumption in production at TPSSL - m ³	1,25,070	1,40,826	86,183
	Water recycled and Reused (ETP & STP) at TPSSL in m ³	13,200	47,118	42,638
TPREL	Water Consumption use in production/ Maintenance operations - liters/ unit	0.06	0.05	0.05

Water Recycled and Reused - GRI 303-3

Tata Power in all its operations makes efforts to the extent feasible and practicable to recycle wastewater and use the same, as exemplified by our performance year on year

Stations →		Trombay	Jojobera	CGPL	MPL	Kalinganagar
FY 17	Total wastewater generated	33,157	2,73,070	0	83,212	46,376
	Water Reused	16,836	2,73,070	300	83,212	46,376
FY 18	Total wastewater generated	19,855	4,95,112	0	39,204	2,67,606
	Water Reused	19,870	4,95,112	300	39,204	2,67,606
FY 19	Total wastewater generated	15,168	5,12,562	54,089	37,290	3,55,811
	Water Reused	45,823	5,12,562	51,502	37,290	3,55,811

#all values in m3

Waste Management - GRI (306-2, 3, 4, 5) (307-1)

Managing waste in an environmentally friendly, socially responsible and a techno-economically viable manner is known as Sustainable Waste Management. Waste management comprises of a collective activity involving collection, segregation, transportation, reprocessing, recycling and disposal of various types of wastes.

The single largest form of solid waste generated from Tata Power's thermal power plants is coal ash (from the combustion of coal), besides other types of wastes such as Municipal or domestic wastes, hazardous wastes, bio-medical wastes and e-wastes. There are wastes like used oils and waste oils, grease, lead acid batteries, other lead bearing wastes (such as gaskets, etc.), oil and clarifier sludge, used resin, used asbestos packing, e-waste, metal scrap, C&I wastes, electrical scrap, empty cylinders (refillable), paper, rubber products, canteen (bio-degradable) wastes, coal ash, building material wastes, silica gel, glass wool, fused lamps and tubes, fire resistant fluids, etc.

With implementation of FGD/De-NOx systems at the coal-based thermal power plants the other form of waste shall be "scrubber" slurry and spent catalyst (from environmental controls at the plant). There are no significant solid wastes associated with generation of electricity from oil and gas-fired plants. Hydro-power, wind and solar power produce little, if any, solid waste during their operations. Tata Power ensures the best waste management practices to reduce, reuse and recycle the waste generated. In addition to recycling, a strong focus on identifying opportunities to prevent waste or bring new life to materials that might otherwise be discarded is practiced.

Hazardous wastes are small in quantity and are stored in properly identified locations. As per the regulations, hazardous wastes (non-recyclable) are to be sent to the State Pollution Control Board (SPCB)-approved common treatment, storage and disposal facility (TSDF), and is adhered to at Tata Power Stations.

Bio-Medical wastes are segregated and are placed in buckets of different colours as per the notification for Bio-Medical Waste (Management and Handling) Rules and are disposed of through authorised vendors, across all locations.

E-wastes are disposed through authorised vendors for reuse or reprocessing in a responsible manner.
Waste from the production process

Significant spills - GRI 306-2, 3, 4, 5

There were no incidents of significant spills in the reporting period. The significant spill is considered as one that have resulted in financial liability from regulatory or any other organisations. Tata Power does not transport any hazardous wastes categorised under the Basel Convention. There have been no discharges of untreated water to any water bodies and no water bodies have been affected by discharges and /or run-off.

Fly ash

Production and reuse of ash at Tata Power's thermal power plants	FY 19
Ash produced (tonnes)	36,49,229.321
Ash reused (tonnes)	35,08,741.018



Fly ash-based paint – manufacture of fly ash brick at Tata Power jobobera power plant



Manufacture of Permeable pavement (Pave Surf) through usage of spherical fly ash.

	Trombay		Jojobera		CGPL		MPL		Haldia		Kalinganagar	
Hazardous Waste disposed	FY18	FY19	FY18	FY19	FY18	FY19	FY18	FY19	FY18	FY19	FY18	FY19
Solid (oil-soaked cotton waste)	0	0	0	0	8.84	5.40	0	0	0	0	0	0
Liquid: Used/waste oil	29.22	34.35	2.2	47.74	2.24	21.89	15,010(kl)	13.40(kl)	1,890(l)	0	9.6	4.53
Total hazardous waste generated (Cotton waste + Used Oil)	0	34.35	0	0	28.50	26.01	0	1.8(kl)	0	0	26.06	0
Total Non-Hazardous Waste-Flyash generated	42,397	41,304	7,98,160	10,70,879	7,86,192	8,02,671	17,02,686	17,34,375	0	0	0	0
Non-Hazardous Waste Flyash disposed/Utilised	42,430	41,307	7,02,966	9,39,996	6,30,913	7,53,639	18,08,400	17,73,798	0	0	0	0
e-waste disposed	18.6	7.26	0	1.73	0	12.62	0	0	0	0	0.05	0.05

Waste Management			
TPSSL	FY 16-17	FY17-18	FY18-19
Hazardous Waste generated		3.83	11.49
Non- Hazardous Waste generated	425.03	804.90	920.23
e-waste Generated	0	6.67	1.52
Hazardous Waste disposed		3.83	11.49
Non- Hazardous Waste disposed	425.03	804.90	920.23
e-waste disposed	0	6.67	1.52

Note: UoM in MT

	TPREL		TPDDL		TPADL	
	FY18	FY19	FY18	FY19	FY18	FY19
Hazardous Waste disposed						
Liquid: Used/ waste oil	0	47.74	46.262(kL)	33.750(kL)	15,010(kL)	13.40(kL)
Scrap waste generated	1.5T	3T	0	0	0	0

Initiatives

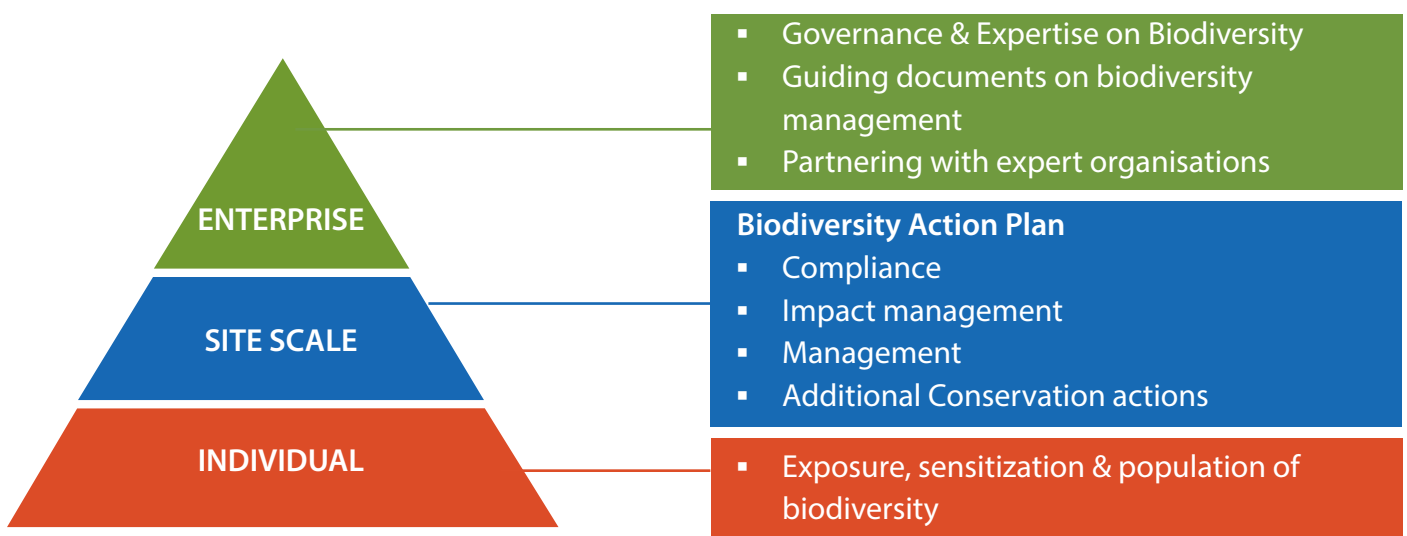
- Bio-Degradable Waste Converter at Maithon
 - A Bio-degradable waste converter has been installed at the plant and township to manage bio-degradable waste in an eco-friendly manner.
 - The equipment treats the bio-degradable waste and the final output is manure which can be used in horticulture.
- Ash Disposal at Jojobera
- Ash Disposal to Cement plants from main silo of Maithon
- Fly Ash-Based Paint
 - Fly ash-based paint is developed in-house by Tata Power. It is made by using fly ash and ingredients of cement paint. About 15-20% fly ash is used on overall composition of this paint.

Biodiversity Management

GRI 304-1, 2, 3, 4; EU 13

Conservation of biodiversity is not new to Tata Power. Tata Power is committed to nature preservation and has undertaken nature conservation projects of varying scales around its areas of operations. A formal governance structure is in place that allows for systematic biodiversity management across the organization. For its biodiversity management practices, the company is guided by its biodiversity strategy which works on 3 principles. Projects on biodiversity at Tata Power revolve around:

- Integrating Biodiversity into company operations
- "Beyond the Fence" projects i.e. biodiversity conservation projects outside our area of impact
- Creating a culture of care for biodiversity.



Conservation & Afforestation

Western Ghats are known for being a biodiversity hotspot, and preserving the catchments has become a national priority that Tata Power has extended its wholehearted support to.

Over the past four decades, Tata Power has planted saplings of fast-growing tree species, favourable and native to the Western Ghats on hill slopes of the lake catchments. The afforestation programme was intensified in 1991 and continues. Over the last decade, the focus has been on growing indigenous local tree species found in the Western Ghats. These plants are nurtured at the nurseries of Tata Power in Lonavala. This process is necessary to support the biological diversity in the eco-forest system and in turn restore the habitat for selected fauna.

The success of this initiative has therefore become imperative to the ecological improvement of the lakes and for the conservation of the flora, fauna and aquatic diversity therein. Tata Power plants around 9 to 10 lakh saplings annually at all its hydro catchment areas. The species selected for plantation are mostly indigenous forest species grown in the region and are also slowly decreasing in numbers and need to be planted on a large scale to ensure conservation.

Due to Tata Power's diligent efforts over 100 lakh saplings have been planted across different locations in the hydro catchments in Maval and Mulshi areas. Through this effort Tata Power aims to make the area green and picturesque, with the hope that this will attract several species of animals, birds and butterflies, thus ensuring that the Western Ghats continue to be known as a biodiversity hotspot across the globe.

As part of its efforts on afforestation, Tata Power has initiated development of nurseries for indigenous and endemic forest species, medicinal plants and giant creepers, gifting grafted mango plants to villagers, plantation in continuous trenches for conservation of water and reducing siltation. It has also taken up awareness drives about prevention of forest fires, teacher's training workshops in environment education environment education in schools, and organising environment fairs.

Conserving the Mahseer

Tata Power's flagship biodiversity conservation program, the Mahseer Conservation Project was initiated more than 4 decades ago. The Mahseer are a group of species of freshwater fish most of which face the threat of extinction in the wild. They are important cultural and biological icons of the rivers of India linking livelihoods and biodiversity conservation to each other. For over four decades Tata Power has strived to conserve these legendary fish. The program operates on three thematic areas – Captive breeding, Ecology, and awareness & sensitization.

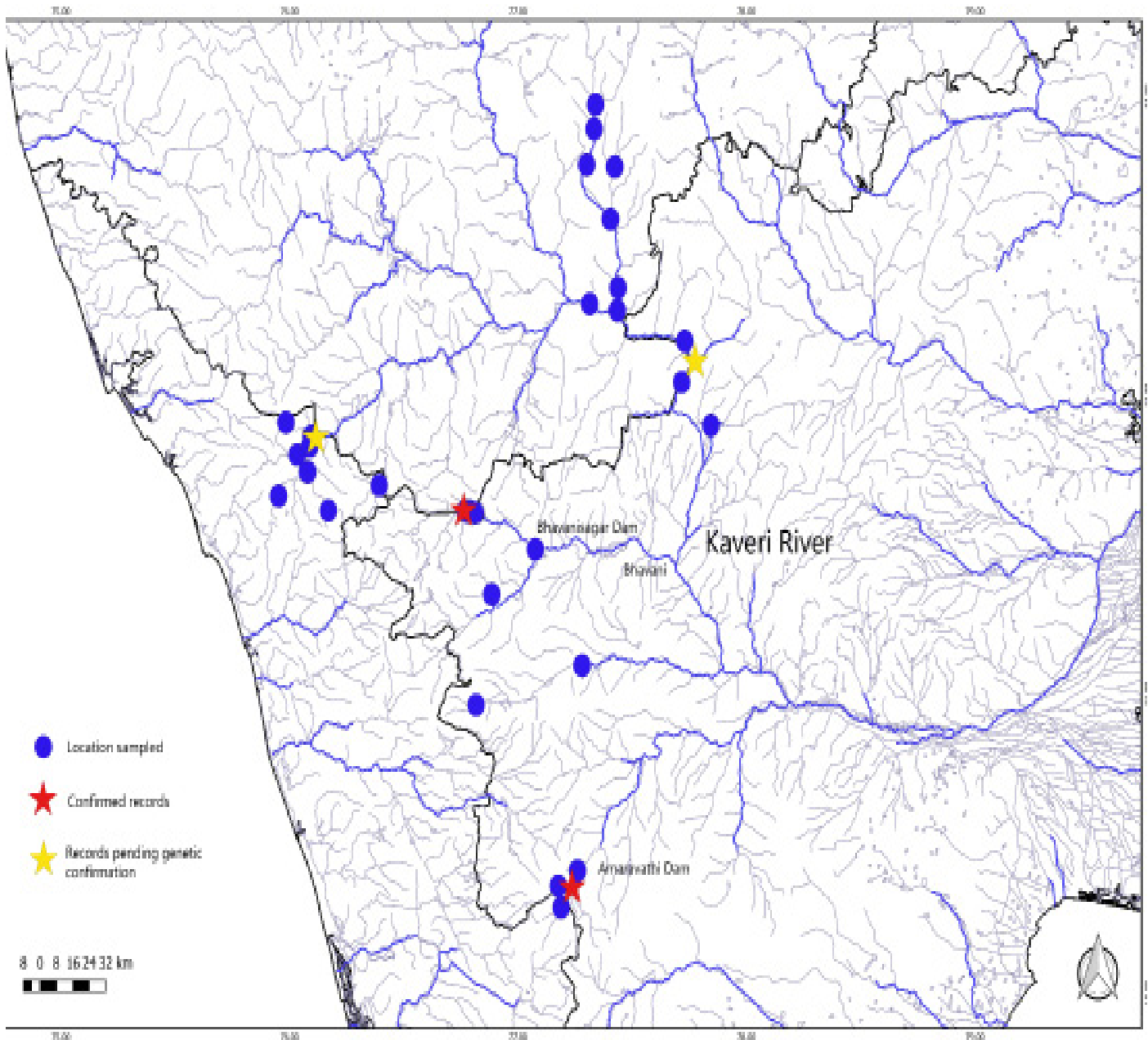
Tata Power launches Humpback Mahseer program

- Sensitises 800 students in Bengaluru and Mysore on Humpback Mahseer conservation
- Helps attain scientific name which will increase conservation efforts for this endangered species



Humpback Mahseer Conservation Study under the Kaveri Mission

Humpback Mahseer conservation study was conducted by Tata Power, Mahseer Trust, Bournemouth University Global Environmental Solutions (UK) and Kerala University of Fisheries and Ocean Studies (KUFOS). To date, there had been no comprehensive assessment of the distribution, threats or conservation-needs of this iconic fish species. The study was divided into the Ecology component of the inform future conservation and policy actions and Outreach Component to generate interest among both students and young adults, in schools and tribal villages throughout the river basin.



The objective of the study, the first of its kind on the hump-backed mahseer, was to understand the current status, threats and future conservation potential of this imperilled species, and also the current distribution and status of the invasive Mahseer species within the habitat. The study was based on extensive field work in the River Cauvery, its main tributaries and associated reservoirs. The survey design was based on a combination of biological sampling as well as local-knowledge based interview/questionnaire surveys. In addition to activities directly funded by Tata Power, during the course of the initial phase of Kaveri Mission, previous research conducted by the project team has culminated in a high profile publication which has fixed the taxonomy of the hump-backed mahseer as *Tor remadevii* (see Pinder et al. 2018) and in turn facilitated the first IUCN Red List assessment of *T. remadevii*, making this the first mahseer to be listed as Critically Endangered and, in doing so, placed this species on the global species conservation agenda.



You can also approach on our below website for more details:
www.tatapower.com

Awards and Recognition

Recognitions

The Company's efforts on sustainability were recognized at multiple platforms and recognised through various awards. The Company was ranked 6th in the Responsible Business Ranking for Sustainability and CSR released in November 2018 and won the ICSI CSR Excellence Award 2018 (in medium category) conducted by the Institute of Company Secretaries of India. Tata Power bagged the 2018 CSR Award for Education and Energy Conservation constituted by Indo-American Chamber of Commerce and Industry. Tata Power also got the Social Impact Award for CSR for promoting Best Sanitation Practices at Asia Level and Best Sustainable Green Initiative for the Mahseer conservation program by ACEF Forum 2018.

- Tata Power recognized by Indo-US Chamber of Commerce for CSR initiatives – CSR sathi newsletter.
- Tata Power wins Best CSR Community Initiative Award by Odisha CSR Forum in Bhubaneswar under the category of "Livelihood & Employability".
- Tata Power bags two awards at the '7th ACEF Asian Leadership Awards' - Recognises company's work in the areas of Environmental conservation and Public sanitation.
- CII National Energy conservation awards for Discoms
- Tata Power wins Sandvik India Gender Award (SIGA) 2018 - Bags the Corporate Organization - CSR category Award.
- Tata Power bags two awards at the Global CSR Excellence & Leadership Awards 2019 ~ Categories include 'Cause Branding' and 'Awareness Building'.
- Tata Power's environment and resource conservation programme 'Club Enerji' won the Cause Branding' category award hosted by the organizers of World.
- Tata Power's bio-diversity initiative 'Act for Mahseer' won the "Awareness Branding" category award hosted by the organizers of World CSR Day.

Safety Reward and Recognition

Tata Power has devised various R&R mechanisms to encourage positive safety behaviours across various levels. Safety Maestro awards on monthly basis, COO & ED award in every quarter, and the CEO & MD award once in a year, based on defined criteria to appreciate individual /team for their exemplary contribution in safety. The winners are appreciated, and achievements are displayed on intranet "Sangam" with their photographs.



S.No	Name of Award	Awarding Agency
1	"Suraksha Puraskar" to Maithon	National Safety Council of India
2	"Prashansa Patra" certificate to Haldia	National Safety Council of India
3	'Gold' Award to CGPL	APEX India Occupational Health & Safety Excellence Award 2018

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ABBREVIATIONS

₹	Indian Rupees	EPC	Engineering Procurement Contract
Cr	Crore	EPM	Enterprise Performance Management
<IR>	Integrated Report	ERDA	Electrical Research and Development Association
AA	Affirmative Action	EU	Electric Utilities
ABB	Asea Brown Boveri Limited	EUSS	Electric Utilities Sector Supplement
AC	Air Condition	EV	Electric Vehicles
ACE	Accelerated Career Enhancement	FDA	Fixed Duration Associates
AP	Andhra Pradesh	FMEAs	Failure Mode and Effect Analysis
APC	Auxiliary Power Consumption	FRMC	Functional Risk Management Committee
APP	Associate of Power Producers	FY	Financial Year
AT & C	Aggregate Technical and Commercial	GAIL	Gas Authority of India Limited
BARC	Bhabha Atomic Research Centre	GHG	Greenhouse Gas
BCCL	Bharat Coking Coal Limited	GIS	Gas Insulated Switchgear
BCP	Business Continuity Processes	GJ	Giga Joules
BHEL	Bharat Heavy Electricals Limited	Gol	Government of India
BPCL	Bharat Petroleum Corporation Limited	GRI	Global Reporting Initiative
BPO	Business Process Outsourcing	GW	Giga Watt
BRMC	Board Risk Management Committee	HR	Human Resources
BRR	Business Responsibility Report	HT	High Tension
BSI	British Standards Institution	HuR	Human Rights
BSSR	PT Baramulti Suksessarana Tbk	IBBI	India Business Biodiversity Initiative
BURMC	Business Unit Risk Management Committee	ICT	Interconnecting Transformers
CAGR	Compounded Annual Growth Rate	IEE	Institute of Electrical Engineering
CBIP	Central Board of Irrigation & Power	IEL	Industrial Energy Limited
CCGT	Combined Cycle Gas Turbine	IFC	International Finance Corporation
CCL	Central Coalfields Limited	IIA	Institute of Internal Auditors
CDP	Carbon Disclosure Project	IIRC	International Integrated Reporting Council
CEA	Central Electricity Authority	IPP	Independent Power Producers
CEO	Chief Executive Officer	ISO	International Organization for Standardization
CGL	Crompton Greaves Limited	IT	International Technologies
CGPL	Coastal Gujarat Power Limited	IUCN	International Union for Conservation of Nature
CII	Confederation of Indian Industries	JSA	Job Safety Analysis
CO ₂	Carbon Dioxide	JVs	Joint Ventures
COO	Chief Operational Officer	kg	Kilograms
CR	Community Relations	Kms	Kilometres
CSAT	Customer Satisfaction Score	KPC	PT. Kaltim Prima Coal
CSR	Corporate Social Responsibility	kV	kilo Volt
CTTL	Chemical Trombay Terminal Limited	LASER	Learn, Apply, Share, Enjoy, Reflect
DCR	Domestic Content Requirement	LIC	Life Insurance Company of India
DSM	Demand Side Management	LSHS	Low Sulphur Heavy Stock
EBITDA	Earnings before interest, tax, depreciation and amortization	LT	Low Tension
ECS	Electronic Clearing Service	LTIFR	Loss Time Injury Frequency Rate
EEPL	Energy Eastern Pte. Limited	MCA	Ministry of Corporate Affairs
MD	Managing Director	SHR	Station Heat Rate
MERC	Maharashtra Electricity Regulation Commission	SMS	Safety Management System
MMR	Mumbai Metro Region	SMS	Short Message Services

MMSCMD	Million Standard Cubic feet per day	SO ₂	Sulphur Dioxide
MNm3	Million Normal Meter Cube	SOP	Standard Operating Procedure
MoU	Memorandum of Understanding	T&D	Transmission and Distribution
MPL	Maithon Power Limited	TBEM	Tata Business Excellence Model
MTPA	Million Tons Per Annum	TBSS	Tata Business Support Services
MU	Million Unit	TCoC	Tata Code of Conduct
MVA	Mega Volt Amp	TERPL	Trust Energy Resources Pte Limited Singapore
MW	Megawatts	TPC	Tata Power Company
MWh	Megawatts hour	TPC-D	Tata Power Company - Distribution
NAPCC	National Action Plan on Climate Change	TPCDT	Tata Power Community Development Trust
NEDs	Non-Executive Directors	TPC-T	Tata Power Company Transmission
NGOs	Non-Government Organizations	TPDDL	Tata Power Delhi Distribution Limited
NOx	Nitrogen Dioxide	TPREL	Tata Power Renewable Energy Limited
NSC	National Safety Council	TPSDI	Tata Power Skill Development Institute
NTPC	National Thermal Power Corporation	TPSSL	Tata Power Solar Systems Limited
NVG	National Voluntary Guidelines	TPTCL	Tata Power Trading Company Limited
O&M	Operations and Maintenance	UN	United Nation
ODS	Ozone Depleting Substances	UNGC	United Nation's Global Compact
OEM	Original Equipment Manufacturer	UMPP	Ultra-Mega Power Plant
PAT	Perform Achieve and Trade	VMV	Vision, Mission, Values
PD	Power Distribution	VOICES	Voices of Internal Customer Engagement & Satisfaction
PESTLE	Political, Economic, Sociological, Technological, Legal, and Environmental	VDC	Village Development Committee
PTL	Powerlinks Transmission Limited	WREL	Welspun Renewables Energy Limited
PTMP	PT Mitratama Perkasa	WREL	Welspun Renewables Energy Limited
PM	Particulate Matter	YTD	Year To Date
PMS	Performance Management System		
POSH	Prevention of Sexual Harassment		
PSUs	Public Sector Undertaking		
PV	Photovoltaic		
R & R	Rehabilitation and Relocation		
R&D	Research & Development		
RE	Renewable Energy		
RMC	Risk Management Committee		
RO	Reverse Osmosis		
RSCM	Responsible Supply Chain Management		
SAC	Sustainability Advisory Committee		
SAP	System Application & Products		
SDGs	Sustainable Development Goals		
SEBI	Securities Exchange Bureau of India		
SED	Strategic Engineering Division		
SHGs	Self Help Groups		



Bombay House, 1st Floor, 24, Homi Mody Street, Mumbai 400
001 Tel: 91 22 6665 8282 Fax: 91 22 6665 8801
www.tatapower.com