



Transforming
for a
***Sustainable* Tomorrow**

12th January 2022

Lighting up Lives!

The Global ESG Context

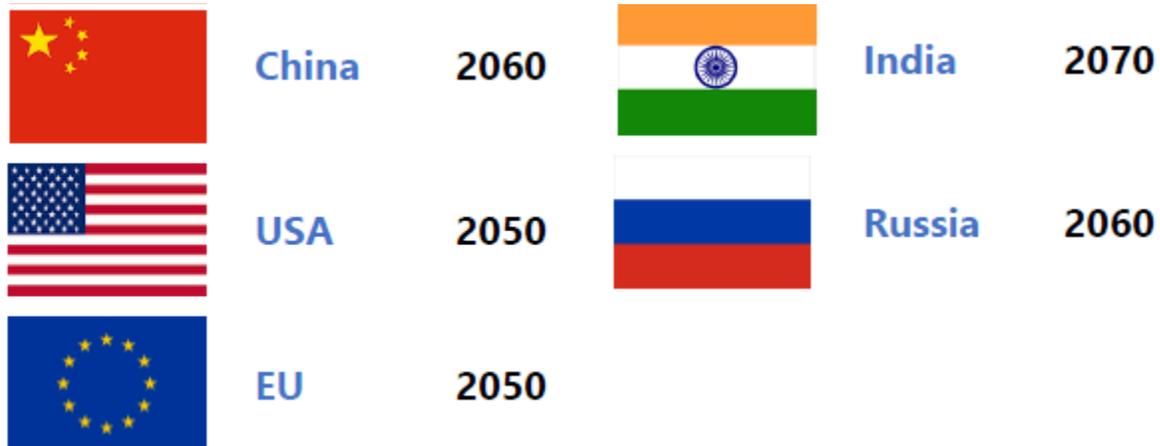


The World is coming together: BUT IS IT ENOUGH?

Global Leaders commit to clean energy at COP26

- At least **23 nations** made new **commitments to phase out coal**
- **25 countries together with public finance institutions**, signed a joint statement on **ending international public support** for unabated fossil fuel energy by **2022**
- The Glasgow Financial Alliance for Net Zero has mobilized over **450 firms from 45 countries** to **commit to transforming economies towards net-zero emissions.**

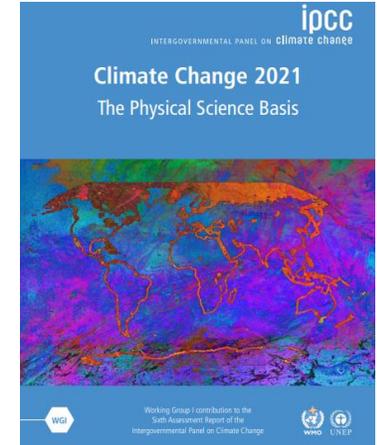
Net-zero targets of top 5 emitters



IPCC report - 'Code red' for human driven global warming

First instalment of the Intergovernmental Panel on Climate Change's (IPCC) **Sixth Assessment Report** was released on **9th Aug**

Approved by **195 member governments**



The report outlines that climate change is:

- **Intensifying the water cycle**
- **Affecting rainfall patterns**
- Coastal areas will see **continued sea level rise**
- Amplify **permafrost thawing**
- Affect **ocean ecosystems**
- Amplified **climate change impact in cities**

Unless there are immediate, rapid & large-scale reductions in greenhouse gas emissions, limiting warming to close to 1.5°C or even 2°C will be beyond reach.

India's 5-point agenda

- To take non-fossil energy capacity to **500 GW** by 2030.
- To meet **50 percent of energy requirements** from renewable energy by 2030.
- To reduce the total projected **carbon emissions** by **1bn tonnes** from now till 2030.
- To reduce India's **carbon intensity** by less than **45 percent** by 2030



COP 26: Implications for business

- Net zero as the new norm
- Investment in clean technology
- From pledges to plan
- Securing finances
- Digitally enables transparency for stakeholders
- Resilience investments to mitigate supply chain disruption



ESG: emergence of a new world order

- ESG is **value protective** and now a commercial issue in addition to regulatory and social license to operate concerns
- Capital markets, regulators & investors are **demanding greater management and disclosures** of ESG issues
- Driving value creation- growing **understanding of strong performance across non-financial indicators** being correlated to strong financial performance.
- **Converge with strategy** and stakeholder driven



S&P Global



67/100

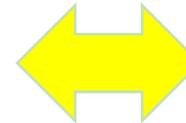
- **Top ranked** Indian Energy Utility
- **2nd** in the **Tata Group**
- **80th** percentile globally
- Score **increase by 40%**

CRISIL



67/100

- First time rating
- **Top ranked** Indian Energy Utility
- **2nd** in the **Tata Group**



CO₂ C

- **SBTi** WIP

Water B

- **Score improvement** from C

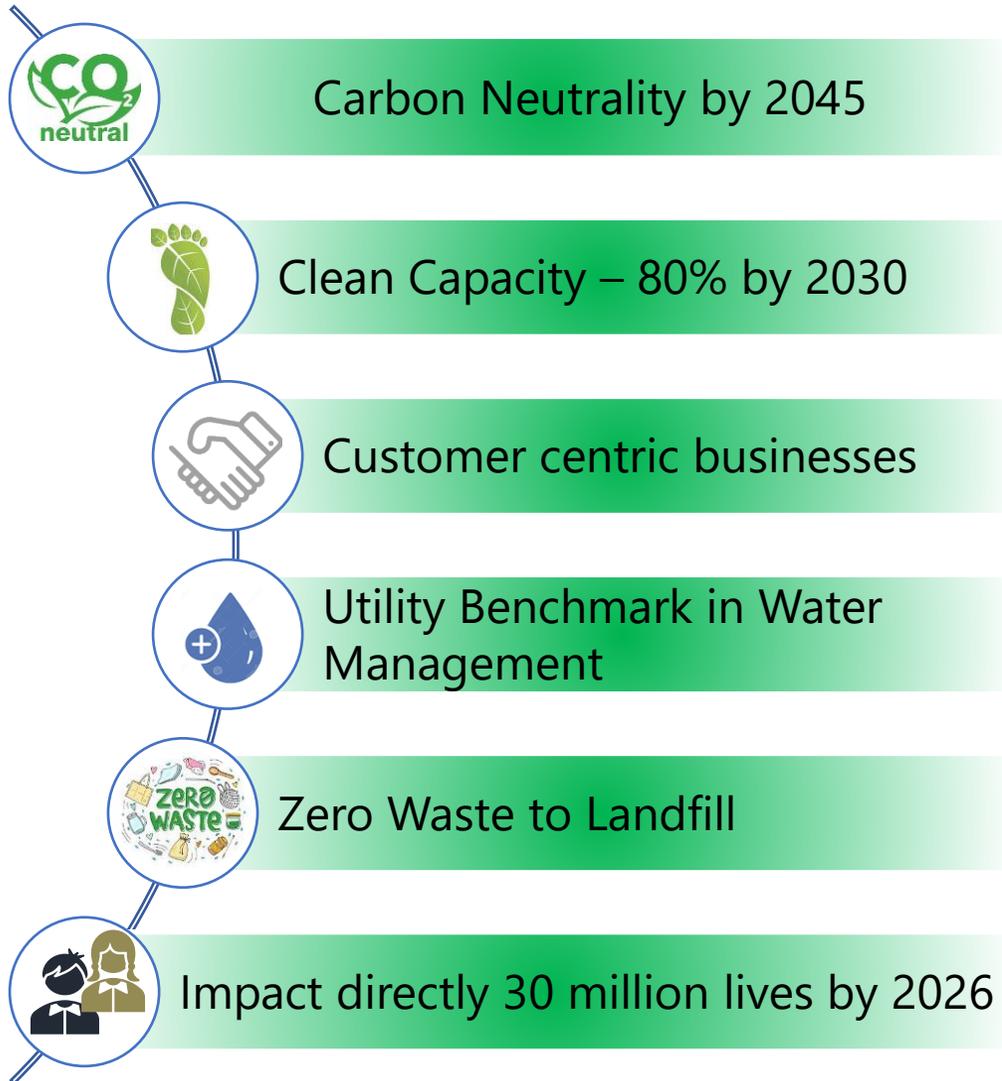


B+ (66.7/100)

- **16% Score improvement** from B- (FY20)



Our journey towards a Sustainable Tomorrow



- **No new coal-based capacity**; phase out by 2045 with the closure of contractual obligations (PPA)
- Pursue 2 GW of solar and hybrid capacities annually to grow from 4.2 GW to **15 GW by 2025** & >25 GW by FY 30
- Promote mass adoption of rooftop solar & solar pumps, microgrids & home automation
- Lead EV charging infrastructure to spur ecosystem
- Adopt practices to become **100% water neutral before 2030**
- Benchmark waste & fly-ash management (100% utilization)
- **100% Zero waste to landfill before 2030**
- Train 10,000 trainers to deliver blended training to 4 lac+ youth
- Build capabilities of 25,000+ SHGs
- **30% of outreach to affirmative action-based disadvantaged groups**

Sustainability leadership through UNSDGs

Business SDG

Decarbonization



To become
CARBON NEUTRAL by 2050

Thought Leadership



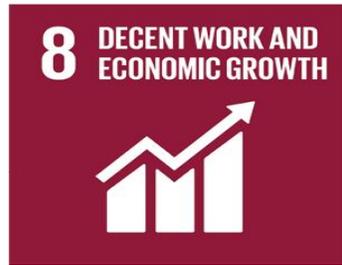
Become a **GLOBAL SUSTAINABILITY BENCHMARK**

Circular Economy



Move towards **WATER NEUTRALITY/POSITIVITY & ZERO WASTE TO LANDFILL**

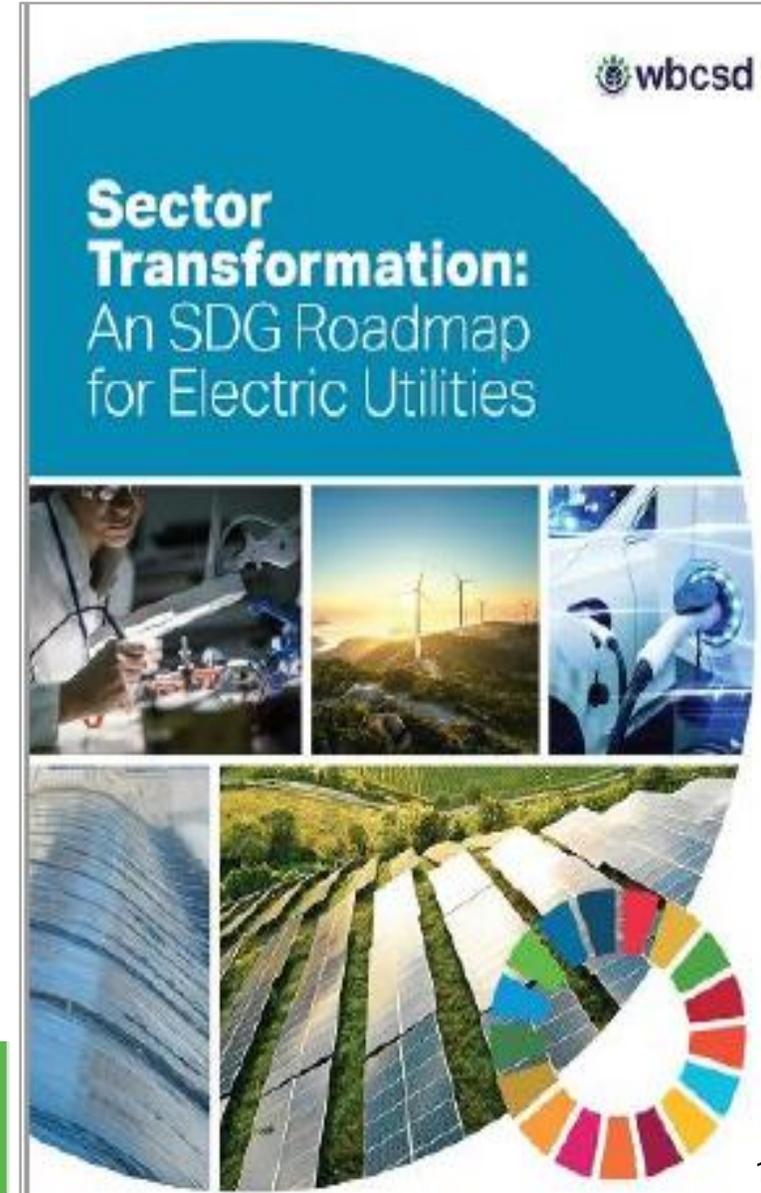
CSR SDG



Business-wise targets have been set for the **prioritized SDGs** to create a **Roadmap**

Sector Transformation: An SDG Roadmap for Electric Utilities

- Hosted webinar on Accelerating Business Action in line with SDGs - Focus on Electric Utilities for evangelizing SDGs.
- Tata Power, the **only Indian utility**, co-created the **first SDG roadmap with 10 other global power companies** over 18 months.



Priority SDGs for Electric Utilities



Tata Power Commits to Science based target initiative (SBTi)



Currently evaluating different scenarios aligned to 'below 2 degree' celsius and fixing reduction targets and mid-century target year basis, the Sectoral Decarbonization Approach (SDA)

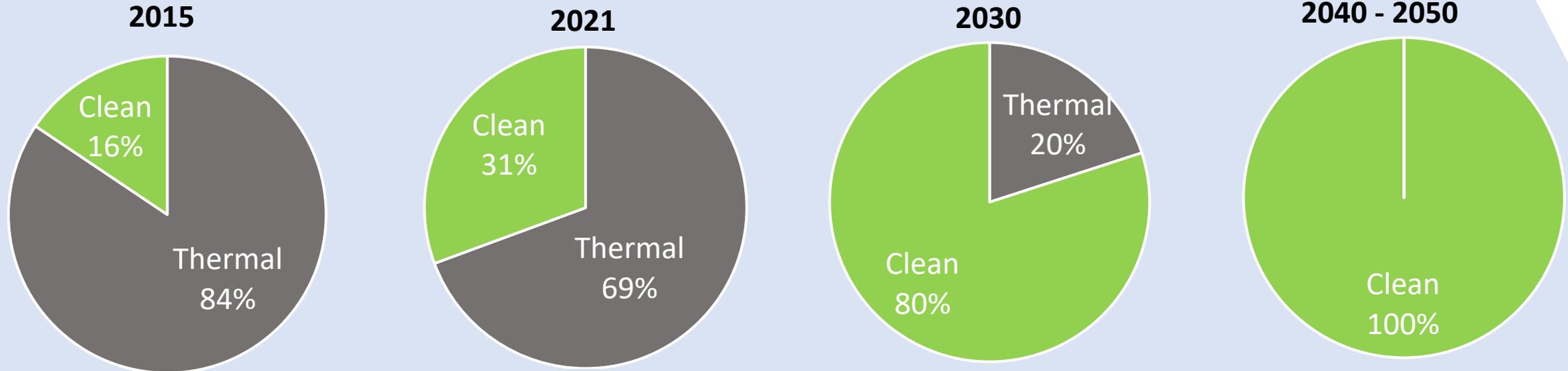


Benchmark in utility sector

An aerial photograph showing several rows of blue solar panels installed on a lush green field. The panels are arranged in a grid pattern, with white lines separating the individual cells. The perspective is from a high angle, looking down at the panels. The text "Redrawing our Strategy with Sustainability at the core" is overlaid in the center of the image, with a thin blue horizontal line underneath it.

**Redrawing our Strategy with
Sustainability at the core**

Lead Utility transition to Clean Energy



Evolving Generation Mix

- Largely Coal based capacity expansion to meet growing energy demand in India

- Major capacity expansion of green field solar capacity
- Inorganic growth through acquisition of Welspun portfolio

- Phase-out of 930 MW of Trombay coal-based generation
- 2 GW p.a. renewable growth plans plus M&As

- Phase-out of all coal-based generation
- **Carbon Neutrality before 2050**

Carbon Mitigation Framework to include the CO2 savings across stakeholder groups

SUPPLIERS



- Encourage **ESG disclosure** for Tier-I suppliers
- **Responsible Supply Chain** management – ethics, environment, human rights, safety

BUSINESS



- **Stringent targets for Carbon Intensity reduction** (5-7%)
- Focus on **viable technologies**
 - ✓ Storage technology (hydrogen)
 - ✓ Carbon capture/mitigation

EMPLOYEES



- **Zero emissions campus** - EV for in-campus
- **Mobile app** to reduce travel emissions
- **Paperless office**

CUSTOMERS



- **Quantification of Carbon Savings** (DSM, ESCO, New Businesses)
- **Green Power Supply** for customers
- **Digitalize customer processes** (paperless billing, Chatbot)

COMMUNITY



- **Scaling up Club Enerji** as a Brand property
- **Quantification of volunteering** impact
- **E-Platform to increase afforestation** numbers manifold

Bringing together Smart, Green choices for retail customers

#DoGreen

EZ Home | Creating Smart Homes of tomorrow

EZ Charge | Empowering Smart mobility solutions of tomorrow

Smart Meter | Creating energy Management solutions

Green Power | Enabling Sustainable energy consumption



Do Little things Today, to make a **Greener Tomorrow**



Microgrids

TP Renewable Microgrid Ltd. launched on 4th Nov 19



Tata Power has already installed 165 Microgrid sites in UP & Bihar

10,000
Microgrids by FY27

Solar Pumps

Transition from diesel to solar powered agricultural supply



Solar power pumps supports field irrigation and supplying potable water for communities, while drawing water from underground multiple water sources

Targeted installation of ~2.5 lakh pumps in FY26

Rooftop Solar

Installed 750+ MW of Rooftop capacity



Tata Power Solar being ranked # 1 Solar Roof player for last seven years (Bridge to India)

30,000+ customers across 150+ cities

EV Charging

Installed 1000+ public EV charging points in 102 cities; 8000+ home



EV Charging, driving innovative and seamless Electric Vehicle (EV) charging experiences for its customers across Home, Offices, Malls, Hotels, Retail Outlets and places of public access, enabling green mobility. ~1 lakh chargers by FY25.

Estimated 2 million tons CO2 savings per year by FY25

Home Automation

Smart solutions for residential customers to monitor and control devices remotely and enable energy and cost savings

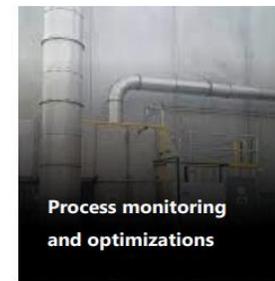


Home automation solutions, to drive energy efficiency, through innovative home automation solutions for all consumers, enabling the convenient and remote use of home appliances

IoT solution to operate, schedule, monitor appliances remotely

ESCO

360-degree smart energy solutions for large commercial & Industrial clients



Energy Services encouraging clients to embrace digitalization and monitor energy savings to substantially reduce carbon footprint and lower the energy consumption.

Integrated Energy as a Service (EaaS) offerings

~ 3 million customer base in FY' 20 has already grown to 12.5 million customer base in FY'21

Smart Grid Technologies

Smart Grid Technologies such as Smart Meters, Sensors, IOTs, grid-scale storage



FIRST Distribution Utility in Mumbai & Delhi to initiate Smart metering for its consumers with more than 65000 smart meters installed already for its customers.

Promoting energy savings and displacing emissions

Green Power Supply

Supporting customers to become RE100 compliant by offering 100% green energy



Pioneered this concept for Maharashtra, enabling customers to source 100% RE power

Green Energy certificates to customers to support Net Zero effort

Clean Energy Incubation Centre

Joint initiative of Tata Power, Tata Trusts & GoI



India's **first-of-its kind Clean Energy lab** for start-ups, entrepreneurs and innovators offering complete "lab to market" incubation support to clean energy enterprises

Net-Zero Framework Assessment by RISE for avoiding emissions by 2030

Demand Side Management (DSM) & Energy efficiency programs

- 1 Consumption Pattern**
Identifying the consumption pattern of various consumer categories
- 2 Technology**
Analyzing various energy efficiency technologies available in the market
- 3 Expectations**
Understanding expectations of consumers from the DSM Program
- 4 Programs**
Developing wide range of options for stakeholders to choose from

16554 MWH saved through DSM in 3 years; ~25000 appliances exchanged



Savings of ~4000 MWh for customers and shifted load of 2 MW in FY 21

Digitalization – Towards 100% paperless processes



70% customers use digital mode of payment



45000+ NACH consumers making e-payment

Zone	Winners	Consumer name	Consumer ID number
Mumbai - Suburb	Pratik Patil	Arjunesh Karthik Kumar & Ratish Anirudhan Kumar	400000028114
	Rishabh Patil	Chaitanya Shrinivas Deshpande	400000000488
	Pratik Patil	Sudhakar Singh Goyal	300000000491
Mumbai - Suburb	Pratik Patil	Prashant Deshpande	400000000111
	Pratik Patil	Prashant E. Maheshwar-Sharma	400000000453
	Pratik Patil	Pratik Kumar / Pratik Anand	400000000099
Mumbai - Suburb	Pratik Patil	Uday Kumar / Uday Kumar	400000000000
	Pratik Patil	Uday Kumar / Uday Kumar	400000000000
	Pratik Patil	Uday Kumar / Uday Kumar	400000000000
Mumbai - Suburb	Pratik Patil	Uday Kumar / Uday Kumar	400000000000
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Mumbai - Suburb	Pratik Patil	Uday Kumar / Uday Kumar	400000000000
	Pratik Patil	Uday Kumar / Uday Kumar	400000000000
	Pratik Patil	Uday Kumar / Uday Kumar	400000000000

50 tons of CO2 avoided per annum

Green Power solutions



Developing 225 MW hybrid renewables



Solar Powered call centre at Powai



World's largest solar powered cricket stadium at Brabourne Stadium, Mumbai

Ecosystem Conservation efforts

TREE MITTRA:

Large scale afforestation drive



ADOPT A TREE.....

1 TREE MITTRA

Over 3.5 Million trees planted till date mitigating ~70k tCO₂e/annum. Indigenous species selected with MoEFCC to preserve ecosystems & improve survival rate. e-Platform under development to enable pledging for tree plantation during COVID19

Western Ghats Biodiversity Hotspot Conservation



- 50 years of Mahseer Conservation efforts
- 300 Fishery Scientists Trained
- 5 Endemic and endangered species of Orchids selected for multiplication
- 5 National Workshops held for Knowledge Exchange

Grassland Ecosystem Conservation

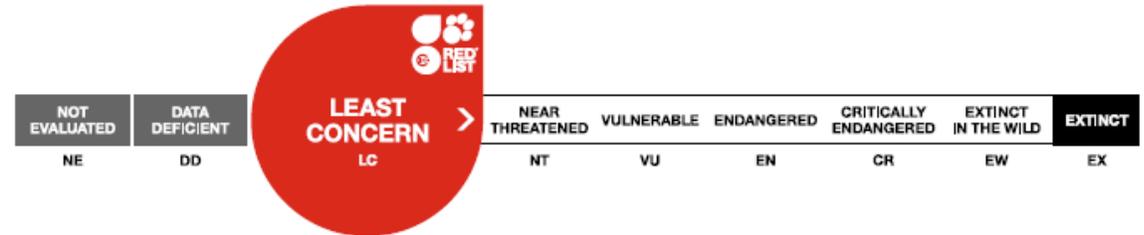


- Impact of grassland on physical parameters affecting solar generation
- Assessment of seasonal biodiversity (Flora & Fauna)
- Replicability across growing solar footprint
- Identification of IUCN critically endangered and endangered species and conservation efforts

Tata Power is probably the only company that has helped a fish species bounce back from extinction threats through judicious conservation efforts for 5 decades. Blue-finned mahseer is **no more under the endangered IUCN red list category.**

Tor khudree, Black Mahseer

Assessment by: de Alwis Goonatilake, S., Fernando, M. & Kotagama, O.



Blue-Fin Is Out Of The Red

Great News On Our 50th Anniversary Of Mahseer Conservation

Social Impact envisaged

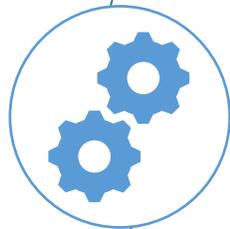
 Impact **30** million lives

Outcomes over FY21 to 26



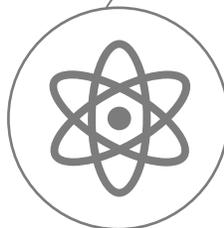
Education & Employability

1. Access to Govt. Schemes - coverage of **60% HHs** of addressable population in target regions
2. Train **10,000 Trainers/Community Leaders** to deliver blended learning through Govt. schools/panchayats
3. Benefit **4 Lakh+ youth** – directly & indirectly



Entrepreneurship & Empowerment

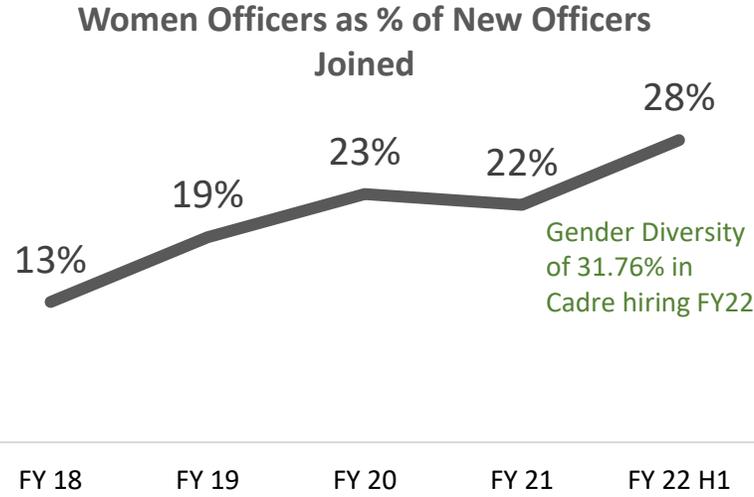
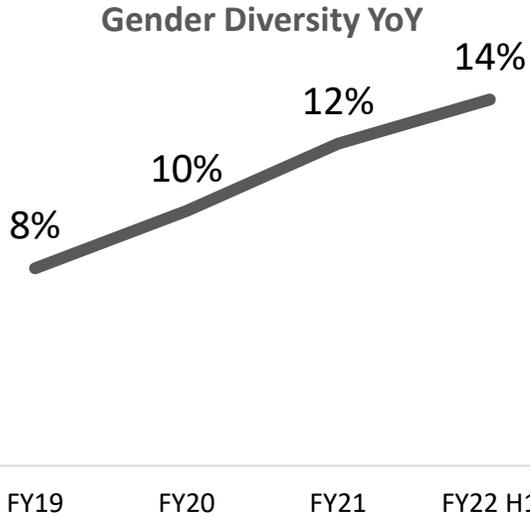
1. Build capacities of **25,000 SHGs** & co-develop 10 unique sustainable/ recycled products, services
2. Facilitate **scalability & regular business pipeline** for SHGs



Culture & Stakeholders

1. **Tata Affirmative Action** focus (SC, ST, differently abled, other disadvantaged groups – 30% within total outreach)
2. Gender diversity & Inclusion
3. 1 lakh+ **volunteering hours p.a.** across stakeholder groups
4. Safety as a core value

Promoting Gender Diversity

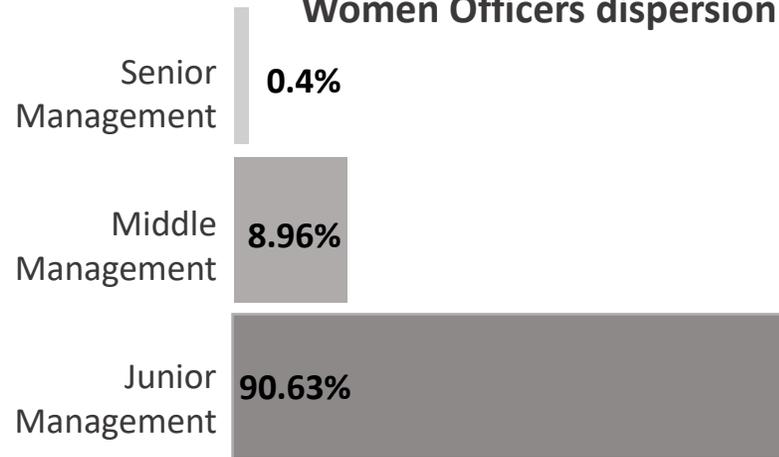


Tata Power FY25 outlook: Improve overall gender diversity ratio to 18%

Engagement Score of Women Officers



Women Officers dispersion



- **Enabling Policies**
- Selection & Recruitment: Target based hiring with >30% hiring of Women Trainees from campuses
- Second Career Inspiring Possibilities
- PMS protection during Maternity Leave
- Promotion analysis, check on the ratio of women officers being promoted

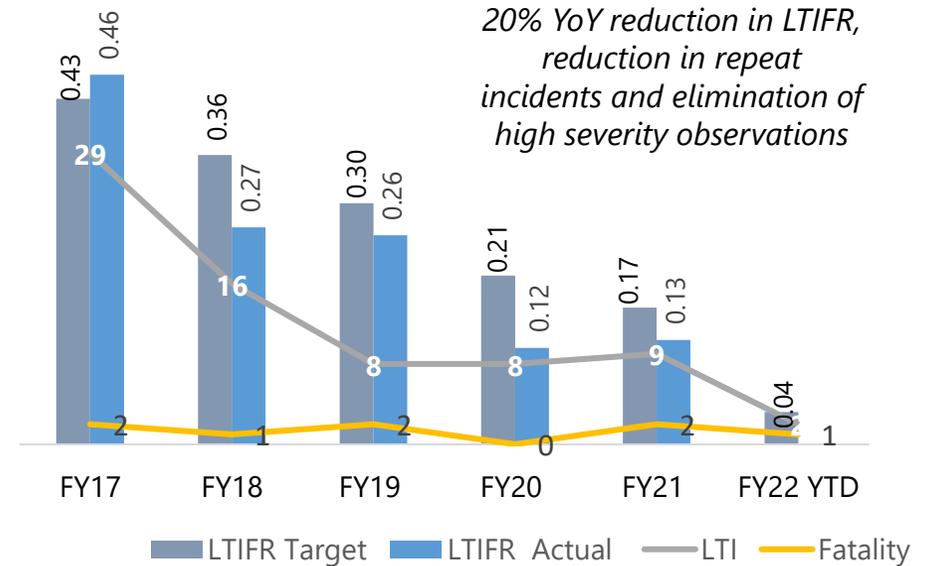
Enabling Development

- **Success, Growth & Managing Careers along with Life stage related enablement:**
 - Tata Power Women:**
 - ASPIRE Women Mentoring Program: One year
 - Tata group programs for women in middle and senior management to improve gender ratio at the leadership level
 - Tata Power Moms:** Extended maternity leaves (Surrogacy, Adoption, Sabbatical), Hello world hampers for the mother and child, Nanny facility, Flexible work timings till the child attains age of one. Coaching program for returning mothers post maternity, Mum's community
 - Learning program curated for Tata Power Women:**
 - Sensitization Trainings to Managers**
- **Safe & Secure workplace:**
 - Special travel provisions for women employees
 - POSH sensitization workshops
 - Self-defence programs

Safety Aspiration: To be a leader in Safe Work Practices in Global Power and Energy Business

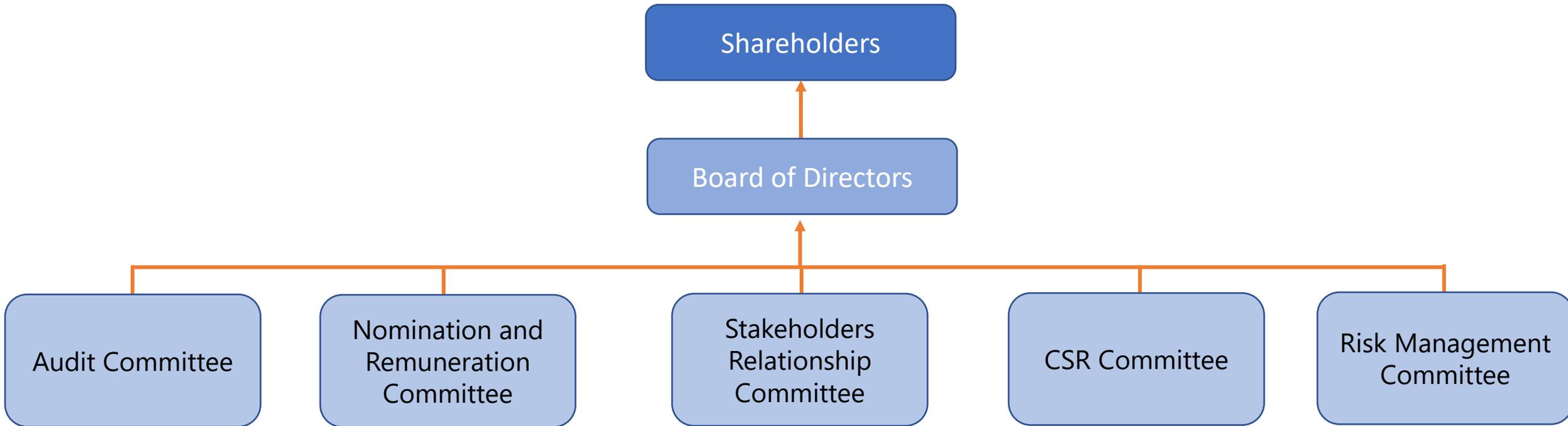


Improving Lost Time Injury Frequency Rate (LTIFR) target vs actual



“Safety is a core value over which no business objective can have higher priority”

Robust Governance Structure in place



GOVERNANCE POLICIES

- Tata Code of Conduct
- Code of Conduct for Independent Directors
- Code of Conduct for Non-Executive Directors
- Related Party Transactions Policy, Framework & Guidelines
- Whistle Blower Policy & Vigil Mechanism
- Risk Management Policy – ISO certified process
- CSR Policy
- Tata Code of Conduct for Insider Trading and Corporate Disclosure Policy
- Dividend Policy
- Policy for Determining Material Subsidiaries
- Policy for determining Materiality for Disclosures
- Remuneration Policy for Directors, Key Managerial Personnel and Other Employees
- Charters of various Board appointed Committees

Best in class risk management process



ISO 22301:2012- Tata Power has been awarded **ISO 22301:2012** for Societal Security and **Business Continuity Management System** from 2015 till date from **British Standards Institution (BSI)**.



Thank You!

Website: www.tatapower.com

Email Id: investorrelations@tatapower.com

Contact: +91 (0) 22 6717 1305