



# Transforming *Future* for a *Sustainable* Tomorrow

**Morgan Stanley Virtual Asia ESG Seminar**

**19<sup>th</sup> January 2021**

Lighting up Lives!



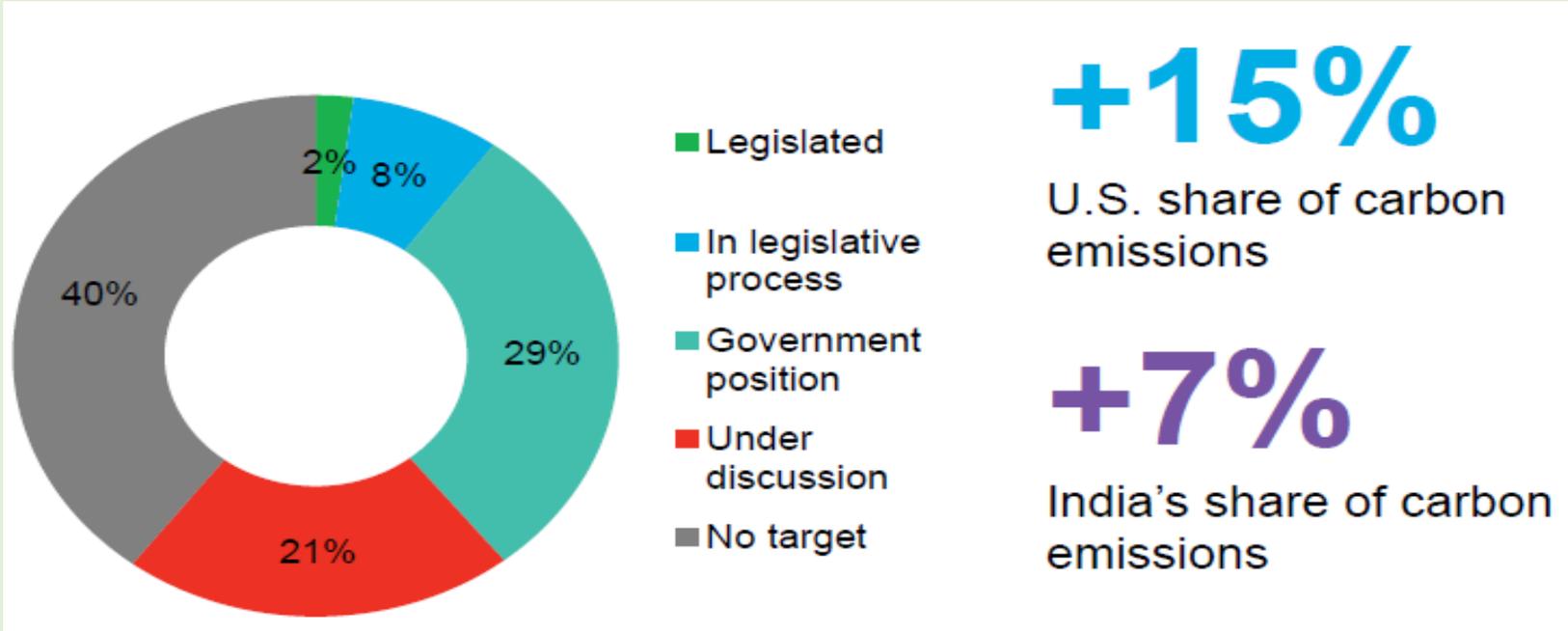
1. The Global ESG Context
2. Tata Power's ESG Footprint
3. Redrawing our Strategy with Sustainability at the core
4. Our journey towards a **Sustainable** Tomorrow
5. TATA POWER 2.0 - Lead Utility Sector ESG practices



# The Global ESG Context

---

# Global Movement to achieve Net Zero Emissions



## +15%

U.S. share of carbon emissions

## +7%

India's share of carbon emissions



**Carbon neutrality targets now cover 60% of the world's emissions**

~BNEF report



SUSTAINABLE BUSINESS | OCTOBER 20, 2020 / 4:42 PM / UPDATED 3 MONTHS AGO

### EU ministers to agree to make climate neutrality by 2050 binding



### Japan Pledges Net-Zero Emissions by 2050 Without Clear Roadmap

By Isabel Reynolds, Masumi Suga, and Stephen Stanczynski  
October 26, 2020, 8:24 AM GMT+9 Updated on October 26, 2020, 7:33 PM GMT+9

### South Korea Beefs Up Climate Goal Amid Mounting Global Pressure

By Heesu Lee  
October 28, 2020, 12:41 PM GMT+9 Updated on October 28, 2020, 2:35 PM GMT+9



### China Vows Carbon Neutrality by 2060 in Major Climate Pledge

By Jess Shankleman and Akshat Rathi  
September 23, 2020, 1:22 AM GMT+9 Updated on September 23, 2020, 10:56 AM GMT+9





Accounts for:

- **17.7%** of the world's population
- **7%** of the world's greenhouse gas emissions.

## Nationally Determined Contribution (NDCs)

- **India, only country** among **G20 nations** on **track** to achieve targets under the Paris Agreement - achieved through largescale adoption of renewable electricity.
- An **apex panel is set up to oversee India's climate change goals**, 13 ministries involved.
- India has **3 quantitative goals for 2030**;
  - reducing emission intensity of GDP by 33-35%;
  - achieving 40% cumulative electric power installed capacity from non-fossil fuel-based resources;
  - creating carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub> equivalent through forest and tree cover.

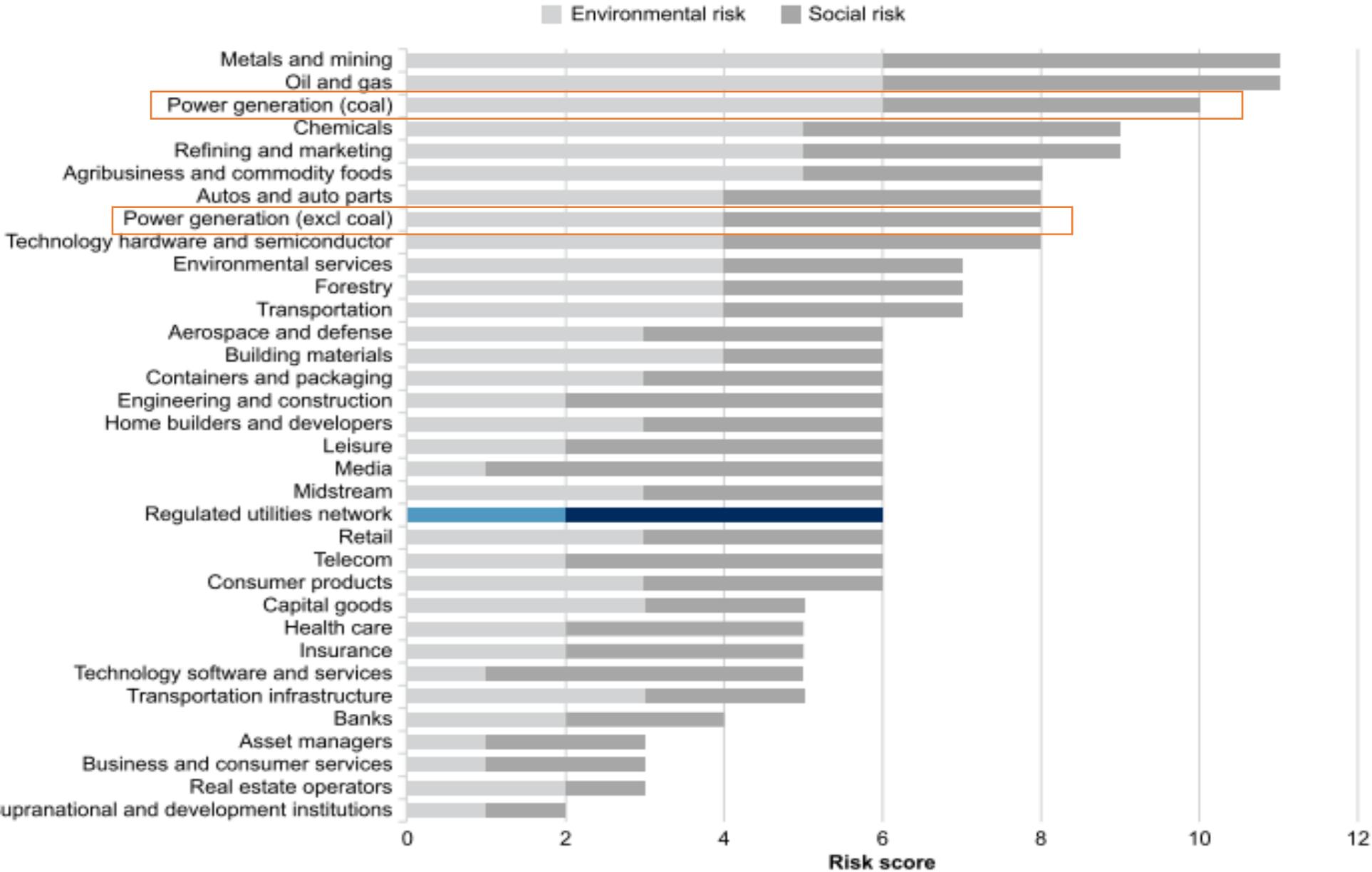
## India among top 10 performers in global climate change index

### Climate Change Performance Index (CCPI) Ranking 2020



\*No country performs well enough in all four categories to achieve perfect score on performance index

# Globally power utilities are high on ESG risk exposure



The Power generation (coal based) ranks third highest on the ESG risk exposure.

The chart shows sector's exposure to ESG risks on a scale of 1 -6.

Score closer to 1 represents a relatively low exposure, while 6 indicates a high-risk exposure

**-ESG Sector Risk Atlas, S&P Global ratings, 2019**

# Investors now increasingly focused on ESG strategy of their investments



Increased public scrutiny of environmentally damaging practices and products across sectors

Banks and Investors are actively focusing on "Clean, Green" investments  
**Out of USD 85 trillion of Asset Managed Funds, USD 35 trillion is ESG focused**

New methodologies are being established or proposed for nature/ climate- focused target setting and disclosure

**Los Angeles Times**  
**Group sues Coca-Cola, Pepsi and others over plastics pollution**  
 ... order for Coca-Cola, Pepsi, Nestle USA, Procter & Gamble and six other companies to clean up plastic waste that the group says has created ...  
 Feb 26, 2020

**Forbes**  
**BlackRock Heats Up Climate Change Pressure On Boards**  
 The prominent asset manager BlackRock is taking steps to hold corporate governance accountable for failing to address the risks associated ...  
 Jul 19, 2020

Science Based targets and methodologies for carbon.  
*SBT for freshwater, biodiversity- under development*

Task Force on Climate-related Financial Disclosures (TCFD)

# **Tata Power's ESG Footprint**

---



CDP disclosure	2020	2019
Climate Change	C	D
Water Security	C	F (non- disclosure)

Rating done on A to F basis with A being best and F being worst

MSCI	Apr 2020	Dec 2018
MSCI Rating	BB	BB

MSCI has updated its rating methodology and weightages pursuant to which the underlying scores for individual elements have changed

FTSE Russell	Jun 2020	Jun 2019
ESG Rating	3.6	3.5
Environment	3.1	3.4
Social	3.7	3.3
Governance	4.3	4.0

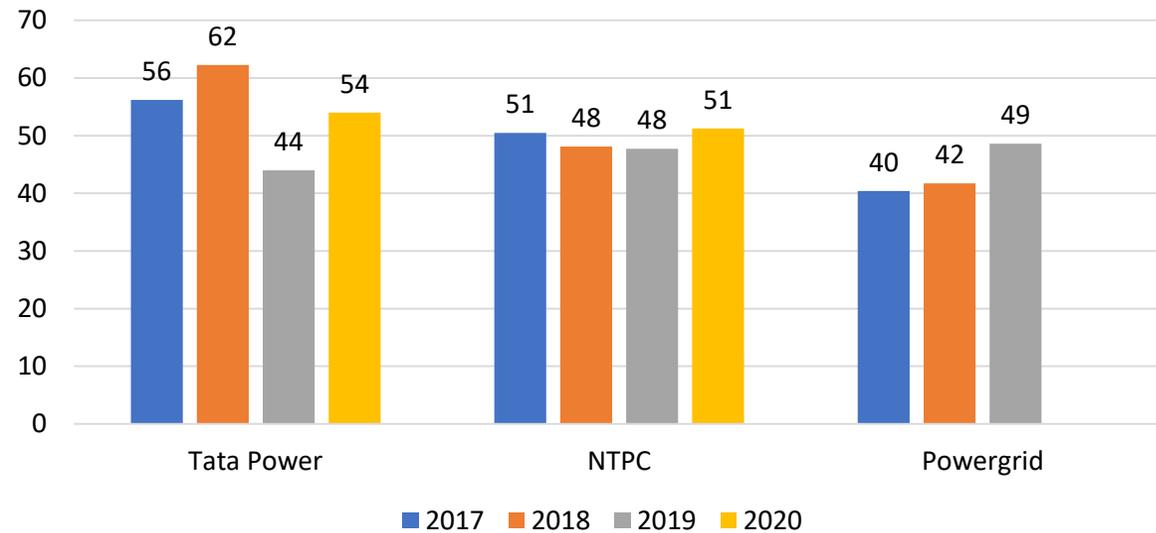
Rating done on score of 1 to 5 with 5 being best

- Sustainability report for 2019 was not issued and was rolled into an Integrated Report issued in late June 2020 covering holistic sustainability disclosures.
- While FTSE & MSCI rating reports pre-date the Integrated Report, Tata Power has been working on increased disclosures on areas identified by these agencies.
- Looking beyond emissions, the Company is also focusing on waste and water management.
- Pursuant to this a detailed disclosure on water was made to CDP leading to a rating of "C" on water security.

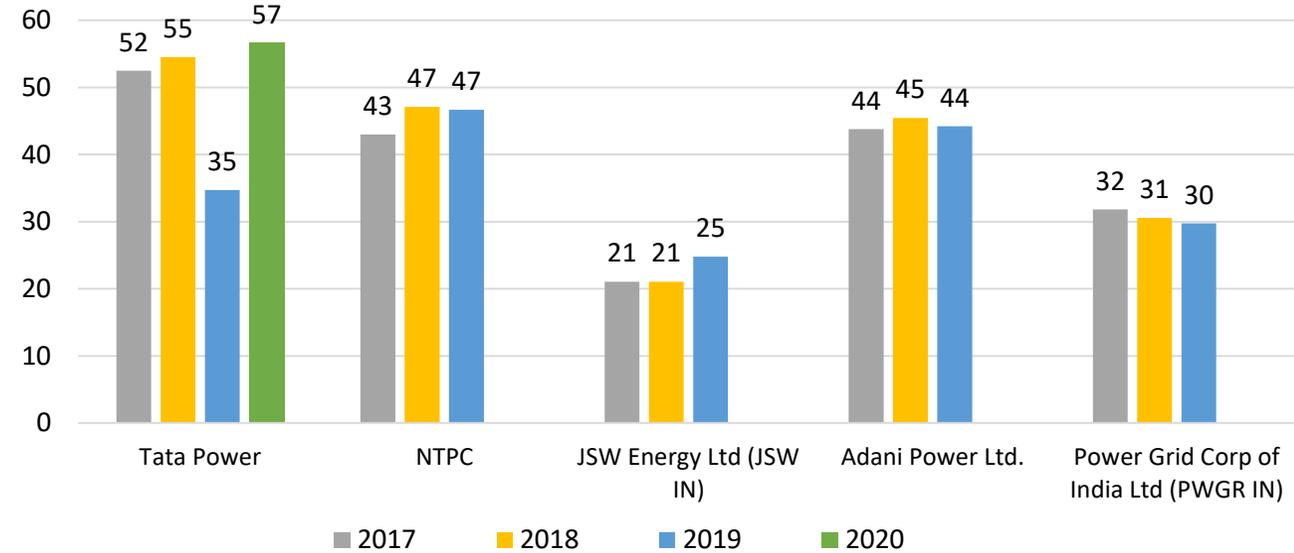
# Tata Power competitively placed in ESG Ratings



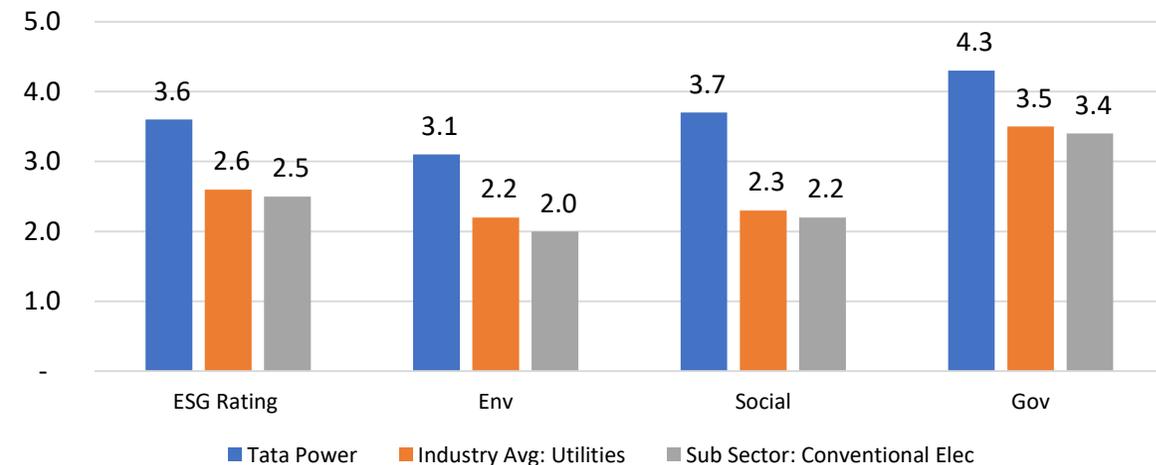
ESG Score-Reuters



ESG Score-Bloomberg



FTSE Global Comparison



- Tata Power ESG scores are better than domestic peers
- ✓ **Environment:** Total Energy consumption, NOx emissions, SO2 emissions lower among peers
- ✓ **Social:** Workforce results/Human rights practices
- ✓ **Governance:** Stakeholder management / CSR strategy
- While Tata Power's global ESG rating ranks are above the average of utilities' universe, we are striving for excellence benchmarking ourselves with the leaders

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

---

# Re-visited key material issues focusing on a "Sustainable Future"



## Material & Stakeholder Engagement Study for Tata Power - 2020



**Increase in Renewable portfolio**



**Resource Availability (Coal & Water)**



**Waste Management**



**Carbon emission management**



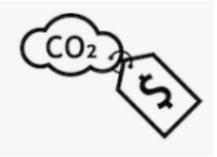
**Operational Efficiency**



**Sustainable investment**



**Biodiversity**



**Impact on business due to change in Coal tax or coal pricing**



**Strategy review**



**Compliance**

# And benchmarking Climate Strategy with the leaders



	<b>27 GW</b>	<b>50 GW</b>	<b>83 GW</b>	<b>104 GW</b>	<b>51 GW</b>	<b>23 GW</b>
<b>Present generation</b>						
<b>Focus on renewables</b>	+700 MW renewable till 2020	15 coal & oil based power stations closed Growth thru Renewables	-7 GW of thermal, +11.6 GW Renewable	Growth thru Renewables, low carbon energy; Green Bonds	Innovation, new technologies and a mix of clean sources of energy	SBTi endorsed Carbon targets (2015) for GHG reduction
<b>Targets on Carbon</b>	75% reduction by 2030 and Carbon Neutral by 2050	50% reduction by 2030 and Carbon Neutral by 2050	100% de-carbonization of energy mix by 2050	100% low carbon gas by 2050	Net Zero Carbon by 2050	90% reduction in GHG, Net Zero Emissions



**Business-wise targets** have been set for the **prioritized SDGs** to create a **Roadmap for Strategy horizon 2025**



## Vision- To empower a billion lives through sustainable, affordable and innovative energy solutions.

### 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



**Our journey towards a Sustainable Tomorrow**

---

# **ENVIRONMENT PILLAR**

# Mission FY25 - To be a Global leader on Sustainability practices in Utility sector



## Low Carbon Business Portfolio

**15 GW** capacity addition through renewables

**10,000** microgrids

**Green Power Supply** and VAS for Customers

Renewable energy share **~60%**



## Innovative solutions

**Utility Scale Storage** solutions to support renewables

Benchmark reduction in **SHR, APC AT&C losses**

**Large scale EV Charging Infrastructure deployment**

Low carbon **Innovative solutions** for customers



## Smaller Environmental footprint

**40%** Reduction of Specific water consumption, ZLD

**100% compliance to** SOx, NOx and PM

**Zero** Waste to Landfill

To be the **benchmark on water management in the Power Industry**



## Carbon Management

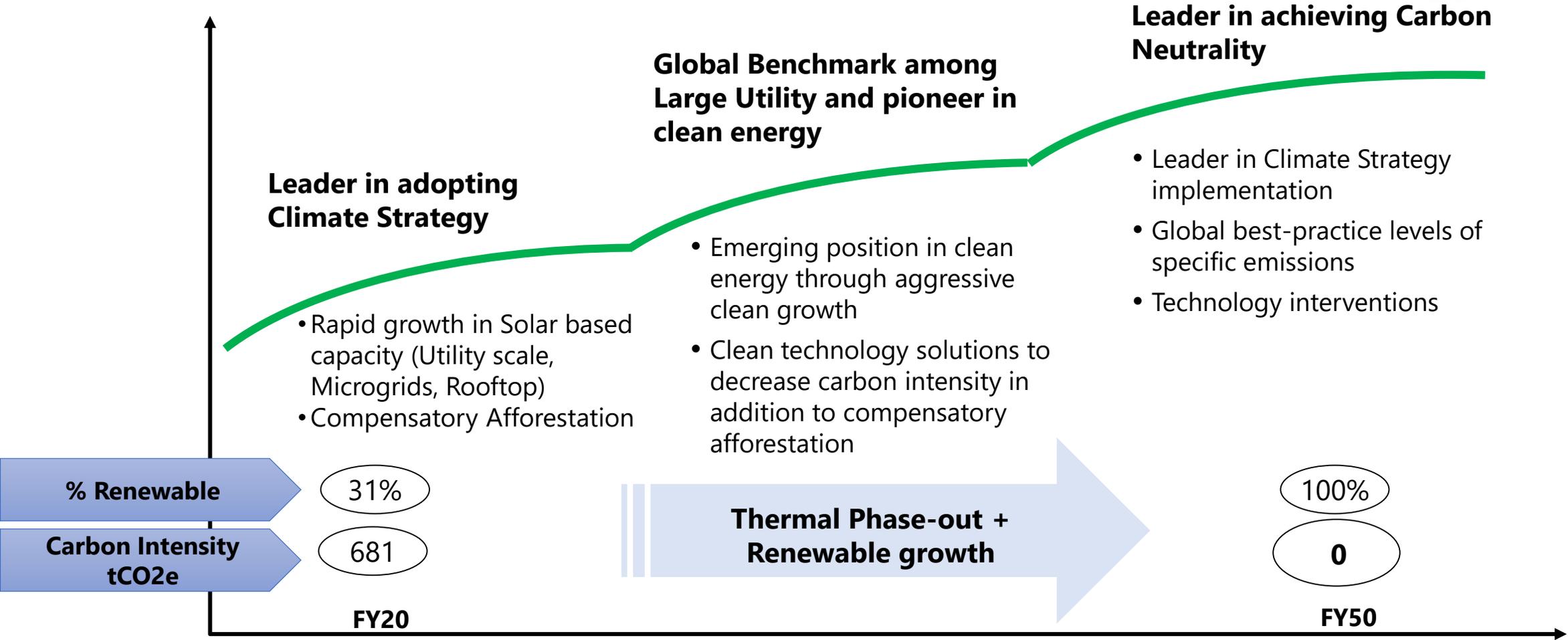
**33%** reduction in GHG emission intensity over baseline (2015)

**0.67 Mn** citizens sensitized through Club Enerji

**Large scale afforestation- 3.5 Mn** Trees planted

**Carbon Intensity reduction** through avoidance and offsetting

# Tata Power's Carbon Neutrality horizons



*Aspire to reduce Thermal & Coal Mine Revenue contribution from around 50% to less than 30% and Profit contribution from around 30% to less than 5% (FY 20 Actual to FY 25 Estimate)*



## TATA POWER CLIMATE COMMITMENT

### OBJECTIVE :

Achieve carbon neutrality in 2050 by growing through renewable generation and targeting carbon intensity reduction scientifically and also to align ourselves to the global goals of SDG #7 and SDG #13

#### Decarbonization



- Zero coal-based growth
- Thermal phase-out upon end-of-life
- Thermal operation at benchmark efficiency
- Afforestation

#### Innovation



- Distributed Generation
- Storage solutions
- Home Automation
- Smart Meters
- Carbon removal



#### Renewable Growth

- Rooftop Solar
- Solar Pumps
- Solar RO
- Microgrids
- EV charging infrastructure



#### Stakeholders

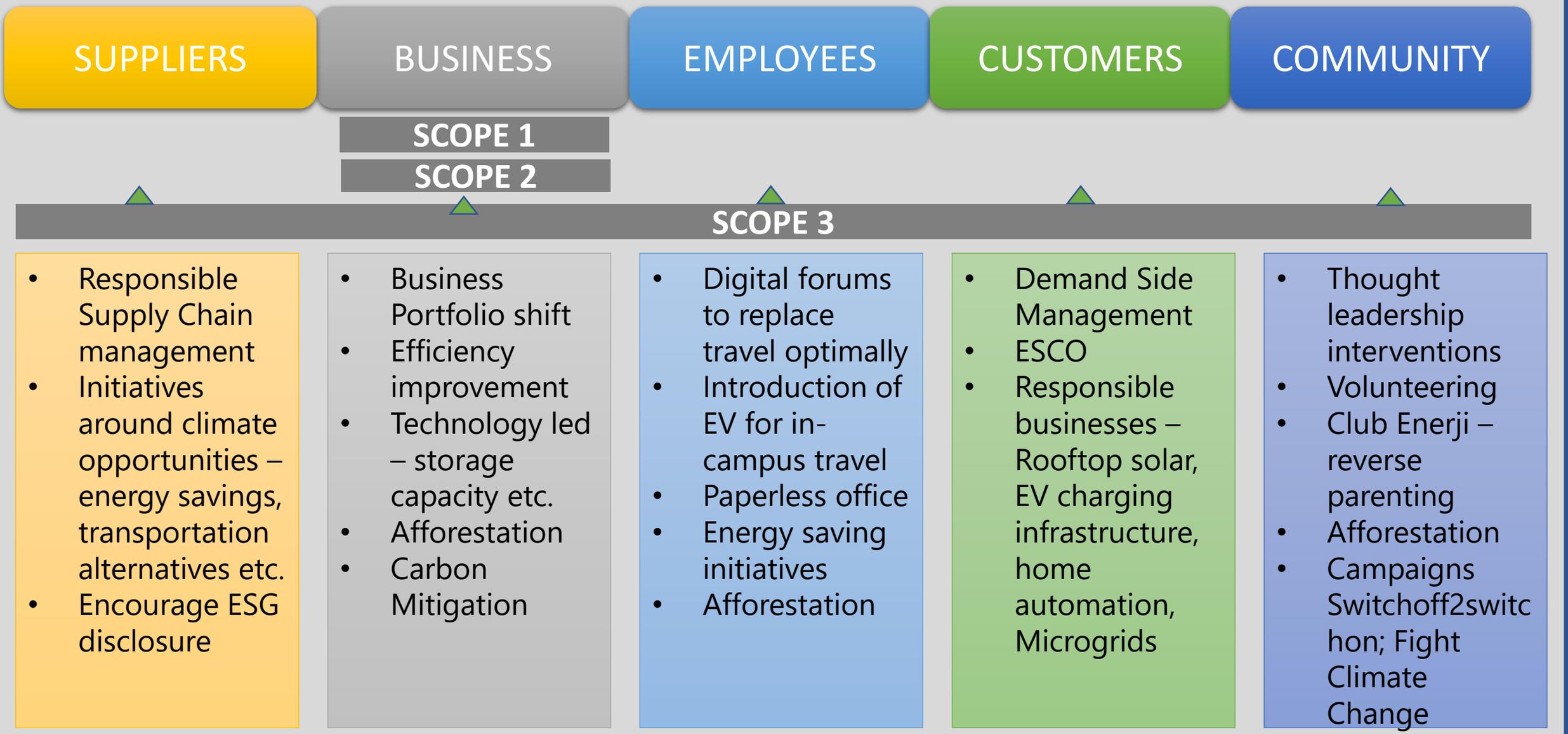
- Demand Side Management
- KYEC
- Club Enerji
- Be Green
- Greenolution
- Low carbon lifestyle guide
- Responsible Sourcing

Tata Power  
Decarbonization  
Aspiration



Lower Carbon footprint by 33% by 2025  
and move towards Carbon Neutrality by 2050

# Involving stakeholders in the Carbon Mitigation journey





## Demand Side Management (DSM) & Energy efficiency programs

## Digitalization – Towards 100% paperless processes

## Green Power solutions

- 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



70% customers use digital mode of payment



45000+ NACH consumers making e-payment

GO DIGI LUCKY DRAW

Zone	Winners	Consumer name	Consumer ID number
North -Delhi	Pratik Prasad	Arjun Kumar Bhatia & Rishabh Anand Kumar	900000028114
	Rishabh Prasad	Chaitanya Sharma & Anshu	900000000488
	Pratik Prasad	Sushant Singh	900000000491
West-Bombay	Rishabh Prasad	Chaitanya Sharma	900000000491
	Rishabh Prasad	Chaitanya Sharma	900000000491
	Rishabh Prasad	Chaitanya Sharma	900000000491
Mumbai	Rishabh Prasad	Chaitanya Sharma	900000000491
	Rishabh Prasad	Chaitanya Sharma	900000000491
	Rishabh Prasad	Chaitanya Sharma	900000000491
Lucknow	Rishabh Prasad	Chaitanya Sharma	900000000491
	Rishabh Prasad	Chaitanya Sharma	900000000491
	Rishabh Prasad	Chaitanya Sharma	900000000491
East-Bombay	Rishabh Prasad	Chaitanya Sharma	900000000491
	Rishabh Prasad	Chaitanya Sharma	900000000491
	Rishabh Prasad	Chaitanya Sharma	900000000491
City-South	Rishabh Prasad	Chaitanya Sharma	900000000491
	Rishabh Prasad	Chaitanya Sharma	900000000491
	Rishabh Prasad	Chaitanya Sharma	900000000491

50 tonnes 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

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



Energy efficiency programs for industries, commercial complexes and large societies

## EV Charging

Installed 203 EV charging points in 23 cities



Presence in cities like Mumbai, Delhi, Pune, Kolkata, Hyderabad, Bengaluru, Chennai, Ahmedabad and Lucknow.

1 lakh EV charging stations by FY25

## Rooftop Solar

Installed 421 MW of Rooftop capacity touching 30,000+ customers across 100 cities



Tata Power Solar being ranked # 1 Solar Roof player for last six years by Bridge to India

Recorded highest ever order input of Rs 860 Crores+ (~239MWp) in FY20

Rs 5000 Cr revenue from Rooftop Solar by FY25

## Microgrids

TP Renewable Microgrid Ltd. launched on 4<sup>th</sup> Nov 19



Tata Power has already installed 71 Micro-grid sites in UP & Bihar

Another 60 sites for microgrid are in pipeline.

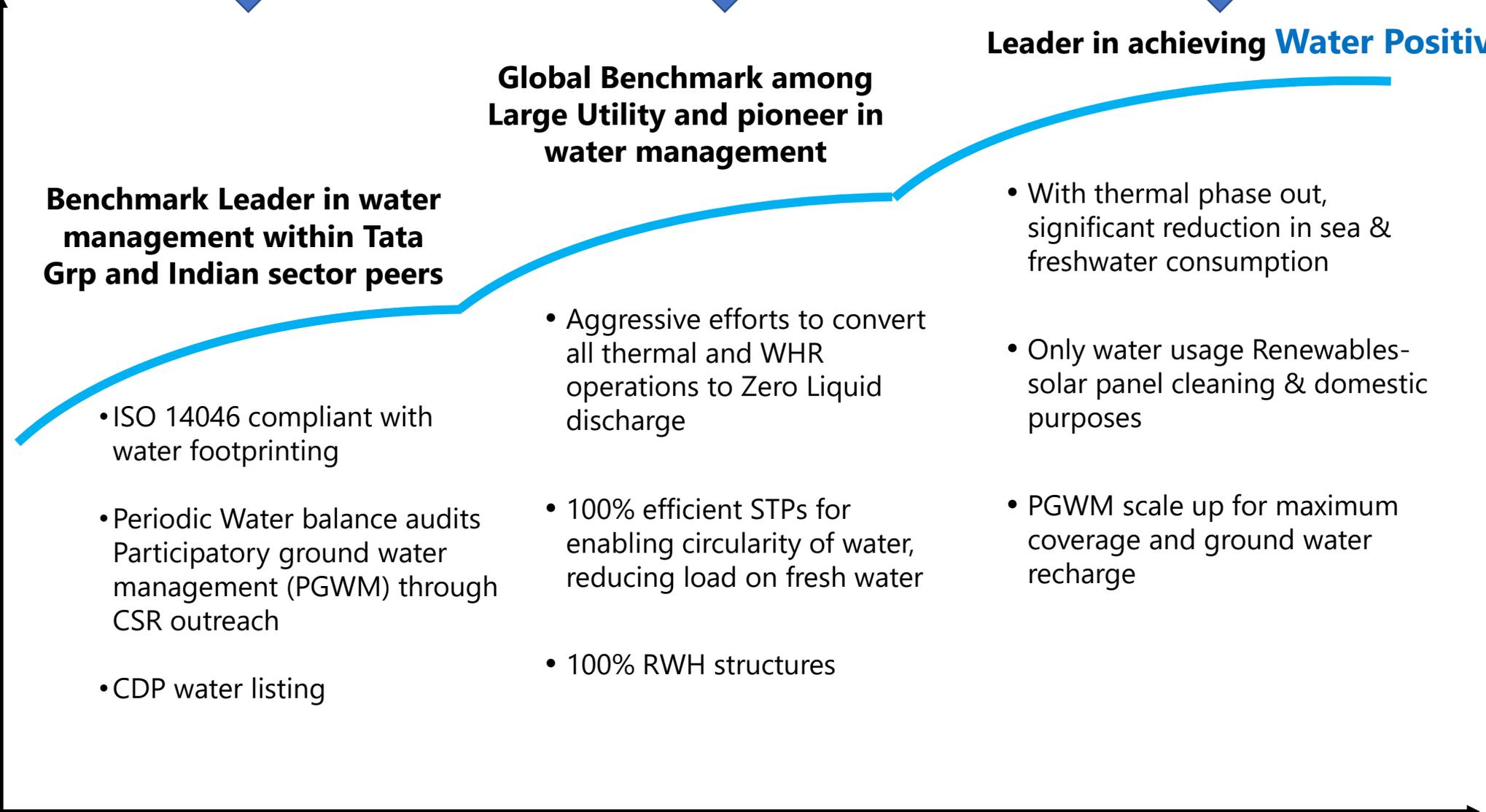
10,000 Microgrids by FY27

# Tata Power's Circular Economy horizons FY20-FY50

## Enablers



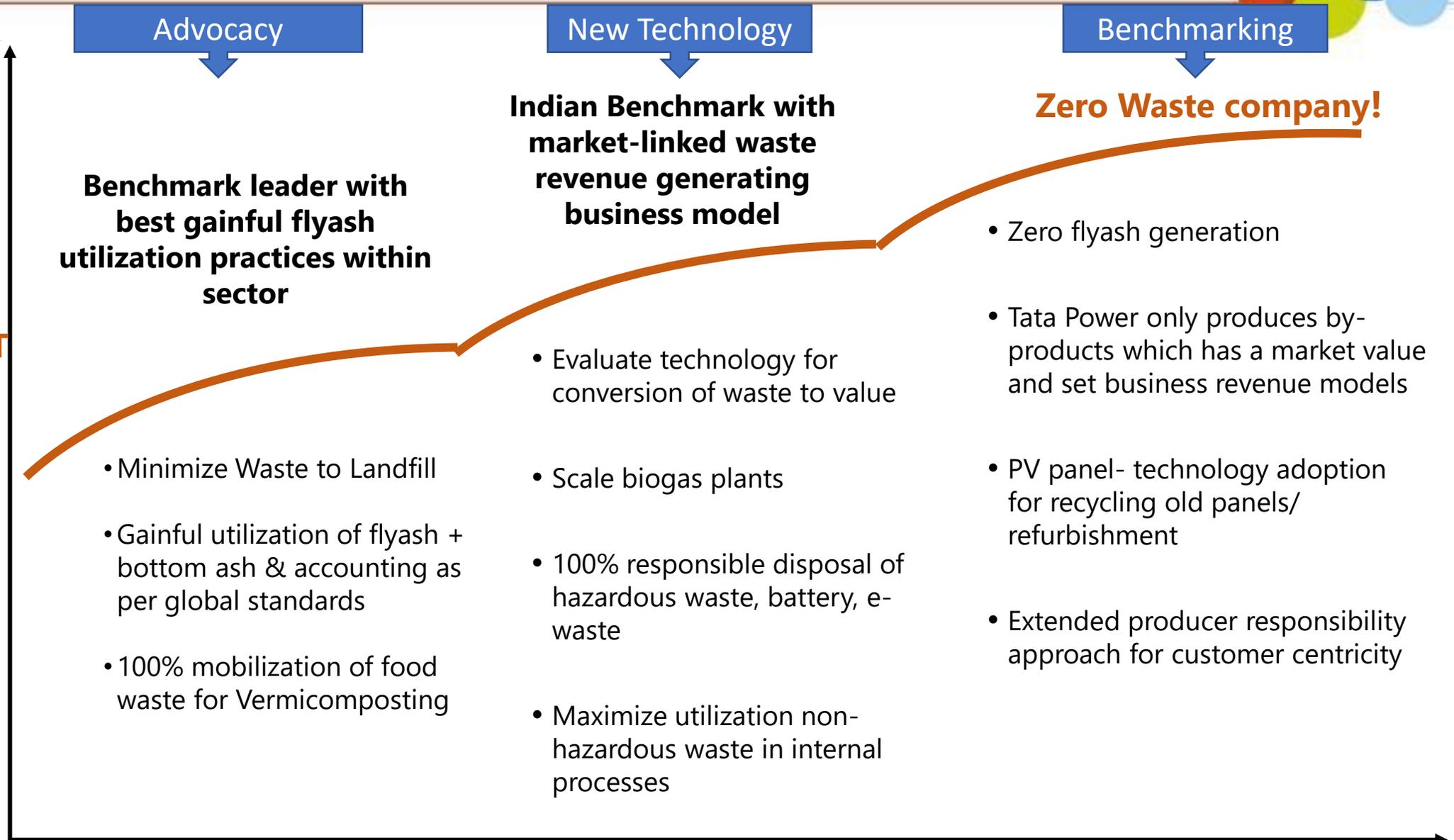
## WATER MANAGEMENT



# Tata Power's Circular Economy horizons FY20-FY50

## Enablers

## WASTE MANAGEMENT



**Benchmark leader with best gainful flyash utilization practices within sector**

**Indian Benchmark with market-linked waste revenue generating business model**

**Zero Waste company!**

- Minimize Waste to Landfill
- Gainful utilization of flyash + bottom ash & accounting as per global standards
- 100% mobilization of food waste for Vermicomposting

- Evaluate technology for conversion of waste to value
- Scale biogas plants
- 100% responsible disposal of hazardous waste, battery, e-waste
- Maximize utilization non-hazardous waste in internal processes

- Zero flyash generation
- Tata Power only produces by-products which has a market value and set business revenue models
- PV panel- technology adoption for recycling old panels/ refurbishment
- Extended producer responsibility approach for customer centricity

FY20

FY25

FY30

FY50

# **SOCIAL PILLAR**

# CSR thrust areas & alignment to UNSDGs



## Financial Inclusivity

## Livelihood & Skill Building

## Health & Sanitation

## Education

## Water

- **312.85 Cr** resources mobilized under various Govt Schemes
- **100%** coverage of marginalized & deprived communities to access Government entitlements Schemes

- **18000+** women SHG members covered under Micro Enterprise
- Empowered **1.75 lakhs** women, youth & farmers
- **70000** youth skilled with 70% Placement

- **100%** Villages open defecation free with access to basic sanitation
- **100%** Immunization and institutional delivery
- Sensitized **6 lakhs** people

- **100%** Enrolment and Zero Dropout up to Secondary level
- **80%** academic performance
- Educated nearly **2.70 lakhs** children

- **100%** access to safe drinking water
- **32.68** Lakhs cu mtrs water recharged
- Water security provided **13.35 Lakhs** people

“To make **Tata Power the Neighbor of Choice** of communities and earning the right to co-exist and co-create by working jointly for social well-being and improvement in quality of life”

# CSR Flagship Initiatives empowering communities



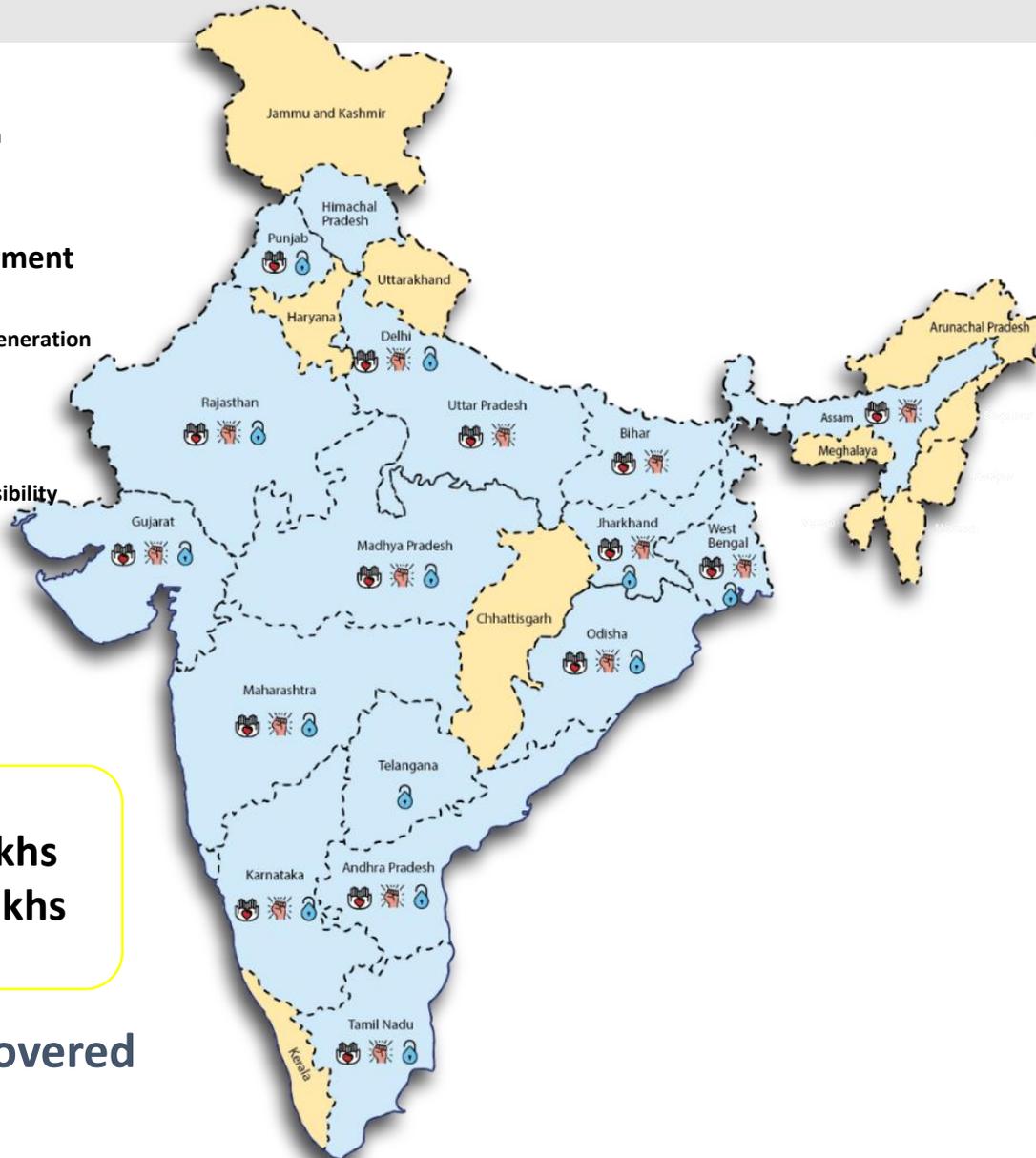
**Community Welfare**  
Education | Health & Nutrition  
Financial Inclusivity



**Community Empowerment**  
Skills | Livelihoods | Income Generation



**Water Security**  
Water Conservation and Accessibility



**Males : 19.51 lakhs**  
**Females : 7.58 lakhs**

**28 % Women's Covered**



Enabling **3.15 lakh** beneficiaries to access Govt. schemes



Dhaaga micro enterprise for garmenting, a supplier to national brands with **16 locations & 1170** members



Benefitting **14000+** SHG members & generated **Rs. 4+ Cr.** Order value.



Dairy microenterprise covering **1475 women** members



Livelihood & skill building catering to **0.7 lakh** youth today.



Integrated health care for **6 lakh** women & children



Livelihood for women with avg. income of **INR 8000-10,000** per person over **1341** Abhas



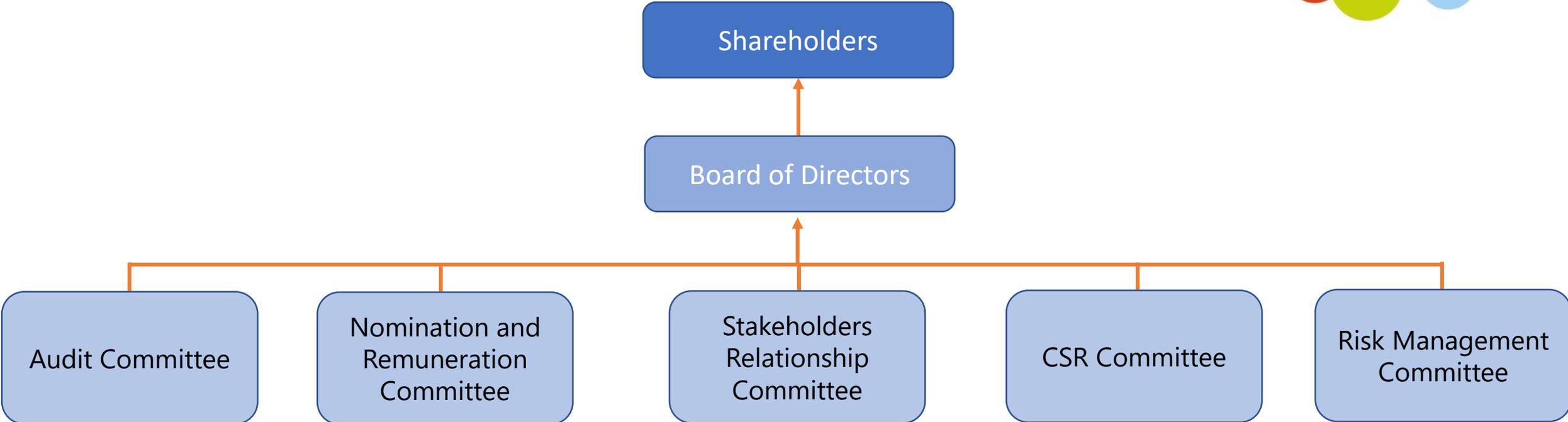
Water resource management for **11.3 lakh** beneficiaries



Covering **2 lakhs** children

# **GOVERNANCE PILLAR**

# 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)**.

# Copyrights



Tata Power has received copyright for its Risk Quantification Process as well as for the online Risk Management System.

Copyright Office  
http://copyright.gov.in/ApprovalProcess/theRegisterOfCopyrightsLet...

  **Extracts from the Register of Copyrights**

Order : 16/04/2016

1. Registration Number	L-74318/2016
2. Name, address and nationality of the applicant	THE TATA POWER CO. LTD., THE TATA POWER CO. LTD, CHAKRAK RECEIVING STATION, 34, SAHAY TILAKMARI ROAD, MUMBAI-400009 INDIA
3. Nature of the applicant's interest in the copyright of the work	OWNER
4. Class and description of the work	LITERARY/DIDACTIC WORK
5. Title of the work	RISK QUANTIFICATION METHODOLOGY
6. Language of the work	ENGLISH
7. Name, address and nationality of the author and if the author is deceased, date of his decease	PARULJAN S DAVE, THE TATA POWER CO. LTD, CHAKRAK RECEIVING STATION, 34, SAHAY TILAKMARI ROAD, MUMBAI-400009 INDIA
8. Whether the work is published or unpublished	UNPUBLISHED
9. Year and country of first publication and name, address and nationality of the publisher	N/A
10. Year and countries of subsequent publications, if any, and name, address and nationality of the publishers	N/A
11. Name, address and nationalities of the owners of various rights comprising the copyright in the work and the extent of rights held by each, together with particulars of assignments and licenses, if any	THE TATA POWER CO. LTD., THE TATA POWER CO. LTD, CHAKRAK RECEIVING STATION, 34, SAHAY TILAKMARI ROAD, MUMBAI-400009 INDIA
12. Name, address and nationalities of other persons, if any, authorized to assign or license a right comprising the copyright	N/A
13. If the work is an 'Artistic work', the location of the original work, including name, address and nationality of the person in possession of the work. (In the case of an architectural work, the year of completion of the work should also be shown)	N/A
14. If the work is an 'Artistic work', whether it is registered under the Designs Act 2000 if yes give details.	N/A
15. If the work is an 'Artistic work', capable of being registered as a design under the Designs Act 2000 whether it has been applied to an article through an industrial process and if yes, the number of times it is reproduced.	N/A
16. Remarks, if any	

Serial Number : 81952215-CDL  
Date of Application : 12/07/2016  
Date of Receipt : 12/07/2016

  
DEPUTY REGISTER OF COPYRIGHTS



1 of 1 08-04-2016, 12:37

Copyright Office  
http://copyright.gov.in/ApprovalProcess/theRegisterOfCopyrightsLet...

  **Extracts from the Register of Copyrights**

Order : 16/04/2016

1. Registration Number	L-72885/2016
2. Name, address and nationality of the applicant	THE TATA POWER CO. LTD., THE TATA POWER CO. LTD, CHAKRAK RECEIVING STATION, 34, SAHAY TILAKMARI ROAD, MUMBAI-400009 INDIA
3. Nature of the applicant's interest in the copyright of the work	OWNER
4. Class and description of the work	LITERARY/DIDACTIC WORK
5. Title of the work	ONLINE RISK MANAGEMENT SYSTEM
6. Language of the work	ENGLISH
7. Name, address and nationality of the author and if the author is deceased, date of his decease	PARULJAN S DAVE, THE TATA POWER CO. LTD, CHAKRAK RECEIVING STATION, 34, SAHAY TILAKMARI ROAD, MUMBAI-400009 INDIA
8. Whether the work is published or unpublished	UNPUBLISHED
9. Year and country of first publication and name, address and nationality of the publisher	N/A
10. Year and countries of subsequent publications, if any, and name, address and nationality of the publishers	N/A
11. Name, address and nationalities of the owners of various rights comprising the copyright in the work and the extent of rights held by each, together with particulars of assignments and licenses, if any	THE TATA POWER CO. LTD., THE TATA POWER CO. LTD, CHAKRAK RECEIVING STATION, 34, SAHAY TILAKMARI ROAD, MUMBAI-400009 INDIA
12. Name, address and nationalities of other persons, if any, authorized to assign or license a right comprising the copyright	N/A
13. If the work is an 'Artistic work', the location of the original work, including name, address and nationality of the person in possession of the work. (In the case of an architectural work, the year of completion of the work should also be shown)	N/A
14. If the work is an 'Artistic work', whether it is registered under the Designs Act 2000 if yes give details.	N/A
15. If the work is an 'Artistic work', capable of being registered as a design under the Designs Act 2000 whether it has been applied to an article through an industrial process and if yes, the number of times it is reproduced.	N/A
16. Remarks, if any	

Serial Number : 81952215-CDL  
Date of Application : 12/07/2016  
Date of Receipt : 12/07/2016

  
DEPUTY REGISTER OF COPYRIGHTS



FY-18

- Best Risk Management Framework & Systems – Power



FY-19

- Best Risk Management Framework & Systems – Power
- Business Continuity



FY-20

- Best Risk Management Framework & Systems – Power
- Risk Governance



Tata Power has been recognised amongst “World’s Most Ethical Companies” for three years in succession, 2014, 2015 & 2016 by the Ethisphere Institute, USA.

**2014**



**2015**



**2016**

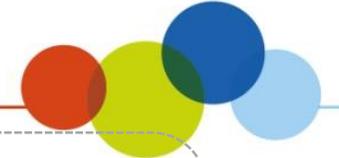


After winning for 3 consecutive years we have taken a voluntary break from participating in the process.

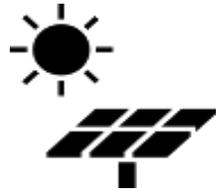
# **TATA POWER 2.0 - Lead Utility Sector ESG practices**

---

# ESG at core of Tata Power 2.0



- **No new coal-based capacity** to be developed by Tata Power; Resurgent not to participate in any further coal based stressed assets
- **Achieve Carbon Neutrality by 2050** with Phase out of coal-based generation completely, upon their end of life or expiry of existing PPAs.
- Selective waste heat based thermal generation through Group companies to be pursued



- Capacity growth driven by Renewable Energy – Solar as well as Hybrid assets to be the focus growth area
- **Clean & Green Capacity to grow to ~ 60% by FY 2025 and 80% by FY 2030**



- Benchmark in water management in Indian utility sector and move towards **water positivity**
- Scale Participatory Ground Water Management Program to Increase recharge of ground water level to ensure water availability for communities
- Benchmark in Waste Management and fly ash utilization in Indian Utility Sector and aim towards achieving **Zero Waste to Landfill**



- CSR Vision 2025- Impact 5.33 Million lives positively across 353 villages, 10000 Microgrid locations and 220 clusters across 16 states
- **Customer focused New & Service led business models**, focused on EV charging, Solar Rooftops, Solar pumps, Microgrids & Home Automation





# Thank You!

Website: [www.tatapower.com](http://www.tatapower.com)

Email Id: [investorrelations@tatapower.com](mailto:investorrelations@tatapower.com)

Contact: +91 (0) 22 6717 1305

***VOTE FOR TATA POWER AT 2021 INSTITUTIONAL INVESTOR'S ASIA (EX-JAPAN) EXECUTIVE TEAM POLL:***

***<https://voting.institutionalinvestor.com/welcome>***