

Reporting through global frameworks

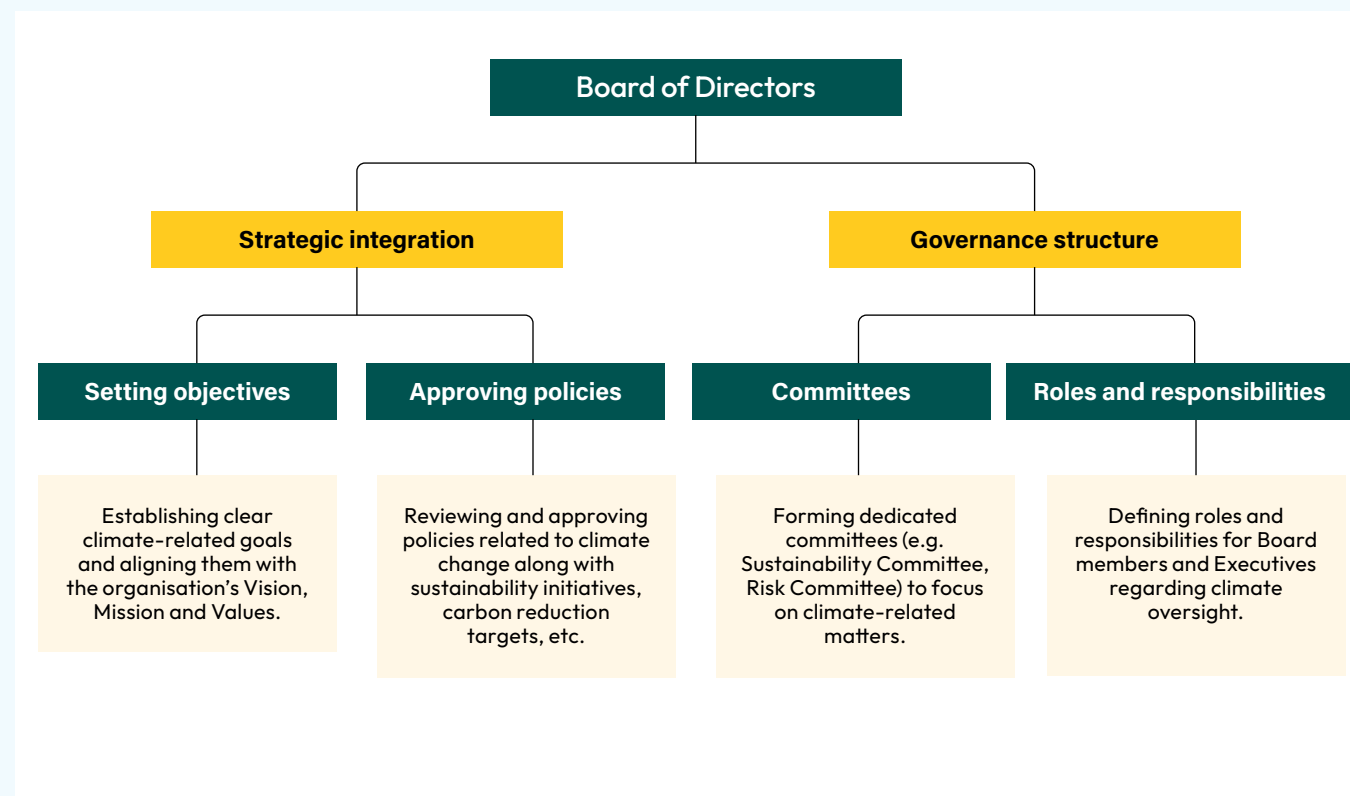
As one of India's largest integrated power companies, we gained a leadership position in the sector by committing to Net Zero by 2045, aligned with India's ambition to attain Net Zero by 2070. By implementing TCFD recommendations into our operations, we are well-positioned to navigate climate-related challenges and capitalise on opportunities, driving progress towards a low-carbon economy.

Governance of climate-related risks and opportunities

Our governance around climate-related risks and opportunities involves a combination of policies, procedures and oversight mechanisms that enable us to address the potential impacts of climate change on our business.

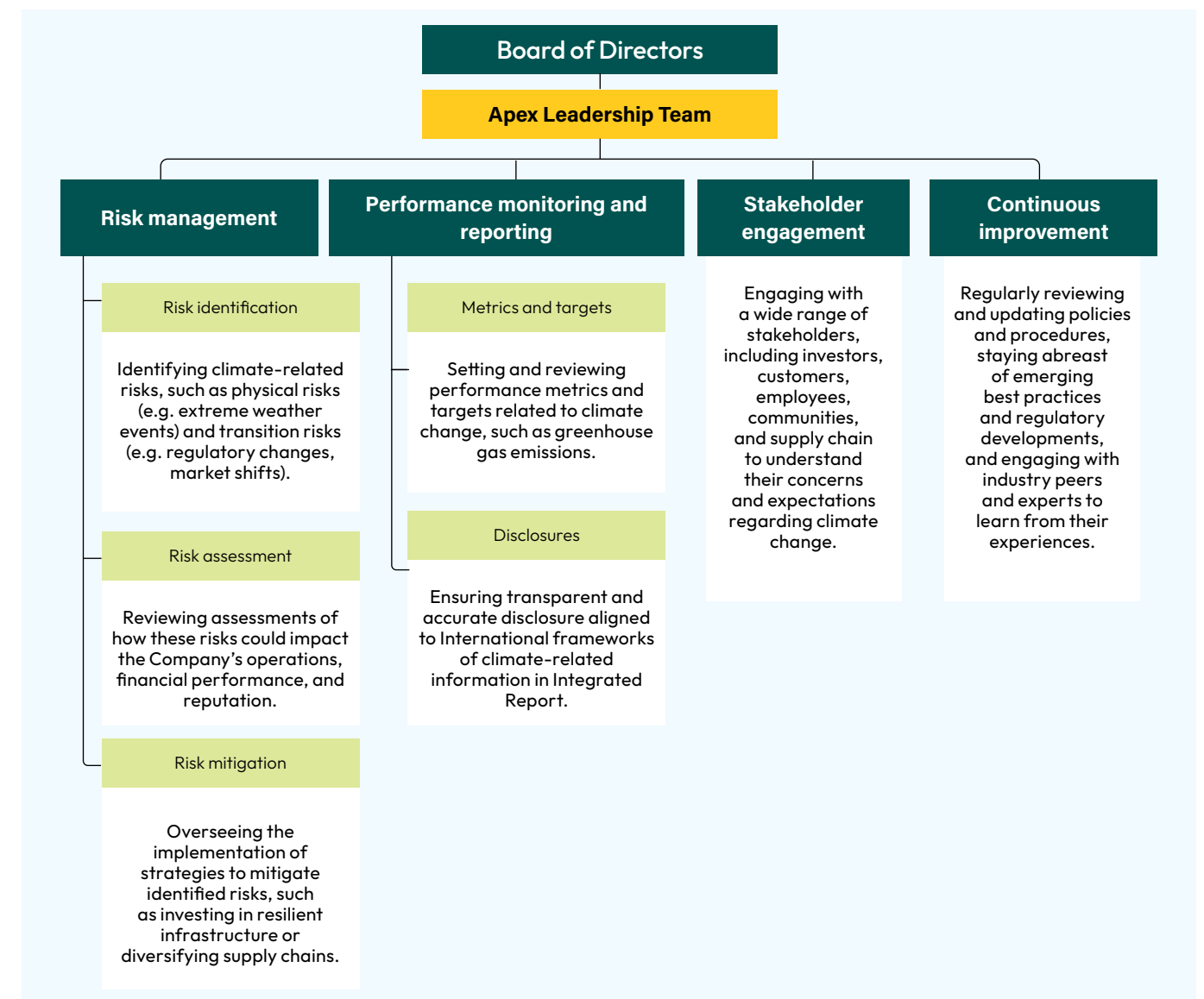
Board oversight

Our governance framework for climate-related risks and opportunities involves rigorous oversight by the Board of Directors. Through semi-annual and quarterly meetings respectively, the Risk Management Committee and the CSR and Sustainability Board Committee, assess and oversee these risks and opportunities, ensuring that climate considerations are integrated into our strategic direction.



Management's role

Our management team plays a crucial role in identifying, assessing, and managing climate-related risks and opportunities. It is responsible for implementing strategies that align with our commitment to sustainability and climate resilience. This involves integrating climate considerations into operational practices, financial planning, and long-term strategic goals.



Strategy and business planning

At Tata Power, we are committed to energy efficiency, renewable technology, and enabling electric mobility aligning with our strategy to transition to 100% Clean and Green generation by 2045. Our strategy includes robust risk assessments and mitigation plans to address climate-related risks and seize opportunities, promoting sustainable business practices. Our comprehensive approach ensures that all upstream and downstream activities in the value chain contribute to decarbonisation.

In the Business Planning process, due consideration is taken to identify targets as per material issues for enterprise value creation and this is tracked through a comprehensive review mechanism along with inclusion into Key Responsibility Areas of the Executives.

Our march towards 100% Clean and Green energy by 2045

- ♦ Emphasising energy efficiency and renewable technology advancements
- ♦ Reducing reliance on thermal power operations and focusing investments on renewable and pumped hydro projects
- ♦ Developing smart grid solutions and energy management services within the Transmission and Distribution cluster
- ♦ Achieving Net Zero for emissions and managing water and waste judiciously

Identified climate-related opportunities and risks for short, medium and long-term

We identified various climate-related risks and opportunities across short-, medium-, and long-term horizons.

- Short-term: 3-5 years
- Medium-term: 6-10 years
- Long-term: >10 years

Opportunities

Energy efficiency initiatives

Implementing energy-saving measures

Impact

Short-term, Positive financial impact, Renewables and New-age Energy Solutions, Thermal and Hydro

Markets – green financing

Accessing green bonds and sustainable finance instruments for growth

Impact

Medium-term, Positive financial impact, Renewables and New-age Energy Solutions, Thermal and Hydro

Energy source

Providing Round-the-Clock Green Energy

Impact

Medium-term, Positive financial impact, Renewables and New-age Energy Solutions, Thermal and Hydro

Resilience

Developing resilient infrastructure and operations

Impact

Long-term, Positive financial impact, Renewables and New-age Energy Solutions, Thermal and Hydro

Products/services

Launching green solutions like rooftop solar and EV charging

Impact

Short-term, Positive financial impact, Renewables and New-age Energy Solutions

Physical risks

Acute

Cyclones, hurricanes, or floods

Impact

Short-term, Negative financial impact, Renewables and New-age Energy Solutions, Thermal and Hydro

Scenario Sensitivity: Tata Power has carried out Scenario Sensitivity for water risks for Pessimistic, Business-As-Usual and Optimistic Scenarios.

Chronic

Heatwaves

Impact

Long-term, Negative financial impact, Renewables and New-age Energy Solutions, Thermal and Hydro

Scenario Sensitivity: Tata Power has carried out Scenario Sensitivity for water risks for Pessimistic, Business-As-Usual and Optimistic Scenarios.

Transition risks

Policy and legal

Regulatory changes and increased GHG emissions pricing

Impact

Short-term, Medium-term, Negative financial impact, Renewables and New-age Energy Solutions, Thermal and Hydro

Technology

Advancements in solar PV technology and battery energy storage systems

Impact

Medium-term, Negative financial impact, Renewables and New-age Energy Solutions, Thermal and Hydro

Market

Shifts in customer behaviour and energy costs

Impact

Medium-term, Negative financial impact, Renewables and New-age Energy Solutions, Thermal and Hydro

Reputation

Changes in consumer preferences, stigmatisation of conventional generation, and stakeholder concerns

Impact

Short-term, Medium-term, Negative financial impact, Renewables and New-age Energy Solutions, Thermal and Hydro

- Negative financial impact + Positive financial impact
- Short-term Medium-term Long-term Renewables and New-age Energy Solutions Transmission and Distribution Thermal and Hydro

Risk management

Climate-related risks are integrated into our overall risk management framework through the Enterprise Risk Management process, influencing strategy formulation at the Annual Strategy Workshop.

Identification and assessment of climate-related risks

Check the indentation Board-level Risk Management Committee at Tata Power evaluates climate-related risks annually, with quarterly reviews by cluster-wise committees. Risk owners and champions develop mitigation strategies aligned with our renewable energy goals and Science-Based Targets initiative (SBTi) commitments.

This process includes creating risk maps and presenting them to the CEO & MD and the Risk Management Committee.

Managing climate-related risks

The Board-level Risk Management Committee conducts thorough reviews of high-impact risks, developing and overseeing mitigation strategies. An internal audit department ensures the sustained effectiveness of these strategies. Sub-committees focus on sustainability initiatives, aiming to achieve carbon neutrality, enhance sustainability efforts and promote circularity in business practices.

Integration into overall risk management

Climate-related risks are integrated into our overall risk management framework through the Enterprise Risk Management process. The Risk Management team ensures regular reviews with the risk owners from the business and functional aspect and is reported to Board-level Risk Management Committee.



Metrics for assessing risks and opportunities

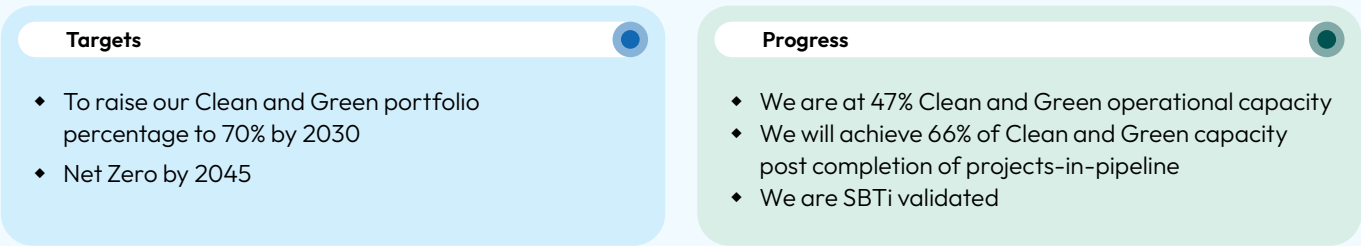
Greenhouse Gas (GHG) emissions			
Metric	Unit	FY26	FY25
Scope 1, 2, and 3 emissions	Million tCO ₂ e	26.067	41.352
		Scope 1 emissions	Scope 1 emissions
		2.587	3.202
		Scope 2 emissions	Scope 2 emissions
		26.569	26.677
		Scope 3 emissions	Scope 3 emissions
Carbon intensity			
Total Scope 1 and Scope 2 emission intensity per rupee of turnover	Metric tonnes of CO ₂ equivalent/Revenue (₹)	0.0000450	0.0000691
Total Scope 1 and Scope 2 emission intensity in terms of physical output (Total Scope 1 and Scope 2 GHG emissions/ Total Power Generation Units (kWh)*	Metric tonnes of CO ₂ equivalent/kWh	0.0007902	0.0008410**
Energy usage			
Total energy consumption	GJ	36,12,22,833	51,22,59,954
Energy intensity			
Energy intensity per rupee of turnover	Total energy consumed (GJ)/ Revenue from operations (₹)	0.000567	0.000794
Energy intensity in terms of physical output	Total energy consumed (GJ)/ Total Power Generation Units (kWh)*	0.0071565	0.0076196**
Water usage and management			
Total water withdrawal	Kl	3,70,45,63,485	6,62,57,27,051**
Waste management			
Total waste generated	Metric tonnes	55,85,113	62,32,871

*Generation units exclude units from international assets as submitted for exclusions during BRSR to maintain conformity with regulatory disclosure.

**FY25 numbers have been restated.



Targets and progress



Nature-related disclosures

We are aligned to the Taskforce on Nature-related Financial Disclosures (TNFD), a global framework guiding organisations to identify, assess, manage, and disclose nature-related risks and opportunities. This initiative supports the transition towards nature-positive outcomes by integrating environmental considerations into business and financial decision-making processes. By adopting the TNFD framework, we ensure that our operations align with global biodiversity goals and contribute to a sustainable future. The alignment to the TNFD underscores our dedication to environmental stewardship and sustainable development. The findings from this approach will help integrate nature considerations into our broader sustainability strategy, supporting our commitments to water, waste and emissions.

Biodiversity and nature conservation at Tata Power

At Tata Power, biodiversity is recognised as a critical enabler for long-term sustainable economic growth and environmental responsibility. As part of our commitment to the Tata Code of Conduct, we ensure that in the production and sale of our products and services, we strive for environmental sustainability and comply with all applicable laws and regulations. As part of Tata Group's Project Aalingana, Tata Power is actively working towards achieving No Net Loss of Biodiversity by 2030 and integrating nature considerations into financial planning, operations, and corporate strategy.

Our Biodiversity Policy is guided by the mitigation hierarchy laid upon the framework: Avoid, Minimise, Remediate and Offset, ensuring that biodiversity and nature-based risks are addressed across the entire project lifecycle—from land acquisition and design to construction, operation, and end-of-life.

Governance framework for biodiversity

We have a strong governance structure to oversee and implement biodiversity initiatives across our operations. The CSR and Sustainability Board Committee provides strategic guidance by meeting quarterly, while the Apex Leadership Team reviews to ensure effective delivery. Corporate Sustainability function is the standard keeper and ensures alignment with business priorities as well as Global and National frameworks. At each location, the initiatives are executed by SPOCs and through business partners.

Biodiversity Commitment is fully integrated into the organisation's decision-making process and is supported by all of its operational and functional units. It is monitored through governance tools like Business Reviews (Integrated Review Management System, IRMS), Annual Business Plan (ABP) integration, Risk Mapping (Enterprise Risk Management, ERM) and KRA linkage in Performance Management Systems (PMS).

Global and national commitments

United Nations Sustainable Development Goals (UN SDGs)

- Our commitment is aligned with all UN SDGs relevant to Biodiversity with focus on:
- SDG 13** - To take immediate actions to combat climate change and its impacts by promoting nature-based solutions, afforestation and other mitigation strategies
 - SDG 14** - To protect and promote sustainable use of the oceans, seas and marine resources for sustainable development
 - SDG 15** - To protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
 - SDG 17** - To strengthen and revitalise partnership for sustainable biodiversity conservation by mobilising resources, sharing knowledge and encouraging multi-stakeholder collaborations

Task Force on Nature-related Financial Disclosures (TNFD)

We took the leadership w.r.t Biodiversity Commitment in the Energy Utility sector during TNFD launch in India, by participating in a pilot assessment for the Task Force for Nature-related Financial Disclosures in 2023 to identify ecosystem service interdependencies and create a risk plan.

National Biodiversity Strategy and Action Plan (NBSAP) 2024

India has developed National Biodiversity Strategy and Action Plan (NBSAP), which outlines the implementation of the Convention on Biological Diversity's Global Biodiversity Framework at the country level. The objectives of NBSAP are aligned with the GBF.

Tata Power is committed to the NBSAP 2024 through implementation of Biodiversity Action Plans across locations.

CII India Business & Biodiversity Initiative (IBBI) 2.0

We were a key stakeholder in the development of CII IBBI 2.0 framework. This framework represents the alignment of business operations with the Global Biodiversity Framework (GBF) and endeavours to operate in harmony with nature through a series of actionable steps.

Our approach to human rights and engagement with indigenous people, local communities, and stakeholders in nature-related risks and opportunities

We recognise that respecting human rights is fundamental to achieving sustainable and inclusive growth. Our human rights policy and stakeholder engagement processes are closely aligned with our environmental and social goals, particularly as they relate to nature-related dependencies, impacts, risks, and opportunities.

Human rights policy and governance

We have institutionalised a robust human rights commitment framework, rooted in globally recognised standards such as the UN Global Compact (UNGC) and the International Labour Organisation (ILO) conventions.

We maintain a zero-tolerance policy on child labour, forced labour, workplace harassment, and discrimination across all operations and value chains.

Key features of Tata Power’s policy and governance framework

- Adherence to the UN Guiding Principles Reporting Framework, which guides due diligence, assessments, and corrective actions
- Strategic guidance by CSR & Sustainability Board Committee and the Apex Leadership Team, ensuring alignment of human rights with environmental and social risk management

Stakeholder engagement and inclusion of indigenous people and local communities

We identify stakeholders—including Indigenous Peoples (IPs), Local Communities (LCs), and affected individuals—through business divisions and functional teams. These groups are mapped based on the actual and perceived impacts of Tata Power’s activities on their environment, livelihoods, and cultural resources.

Strategy

We have leveraged globally recognised tools, such as the WWF Biodiversity Risk Filter (BRF) and ENCORE, to gain a comprehensive understanding of how its operations intersect with nature. These advanced tools enable us to assess our environmental dependencies and impacts, while also identifying potential risks and opportunities related to biodiversity.

The WWF Biodiversity Risk Filter (BRF) is an interactive, science-based tool developed by the World Wide Fund for Nature (WWF) to help businesses identify, assess, and respond to biodiversity-related risks across their operations and supply chains. It integrates global environmental datasets with business activity information to evaluate mainly physical and reputational risks linked to biodiversity and ecosystem services.

For this assessment, physical and reputational risks were evaluated across our key operating assets using the BRF tool.

- Physical risks include site-level exposure to ecosystem degradation and environmental hazards (e.g., water scarcity, soil and air degradation, extreme weather events)
- Reputational risks reflect potential stakeholder concerns or public scrutiny linked to biodiversity-sensitive areas, such as proximity to conservation zones or the presence of endangered species

We carried out assessment of risks (Physical and Reputational) along with impacts and dependencies for 11 operational assets across Thermal, Hydro, Solar and Wind sites which is representative of our operating portfolio.



Physical risks

Physical risks refer to the tangible and measurable environmental changes and hazards that arise from ecological degradation and climate change. These risks can directly impact business operations, supply chains, infrastructure, and community well-being.

Total physical risk

Asset	Total physical risk
Thermal	Medium → High
Hydro	Medium → High
Solar	Low → Medium
Wind	Medium

Provisional services

Asset	Water availability	Forest productivity and distance to markets
Thermal	High	Medium → High
Hydro	High	-
Solar	Medium	-
Wind	High	-

“–represents data “No Dependency or impact” as per output of WWF Biodiversity Risk Filter tool.

Regulating and supporting services – enabling

Asset	Water condition	Air condition
Thermal	Low	High
Hydro	Medium	Medium → High
Solar	Low	High
Wind	Low	High

Regulating services – mitigating

Asset	Landslides	Wildlife hazard	Extreme heat	Tropical cyclones
Thermal	Low → High	Medium → High	Very High	High
Hydro	Low → High	High	High	Medium → High
Solar	Low	Low → High	High	Low
Wind	Low	Medium	High	Low → Medium

Pressures on biodiversity

Asset	Land/sea use change	Forest canopy loss	Invasives	Pollution
Thermal	Very Low → Low	Low	-	Very High
Hydro	Medium → High	Low	Low	High
Solar	Medium → High	Very Low	-	High
Wind	Medium → High	Very Low	-	High

Reputational risks

Reputational risk refers to the potential for negative public perception, media attention, or stakeholder concern that can impact an organisation’s social license to operate.

The WWF Risk Filter tool was used to assess reputational risk at 11 operational assets. This assessment was broken down into three key dimensions:

- Environmental factors – Includes proximity to protected or key biodiversity areas, ecosystem condition, and range rarity
- Socioeconomic factors – Covers presence of indigenous communities, exposure to resource scarcity, labour/human rights concerns, and financial inequality
- Additional reputational factors – Considers media scrutiny, political context, sites of international interest, and the site’s risk preparedness

Total reputational risk

Asset	Overall reputational risk
Thermal	Medium → High
Hydro	Medium → High
Solar	Medium
Wind	Medium

Environmental factors

Asset	Protected/ conserved areas	Key biodiversity areas	Other important areas	Ecosystem condition	Range rarity
Thermal	Medium	Medium → High	High	High	Low → High
Hydro	Low	Medium	High	Medium → High	High
Solar	Low	Low → Medium	Very Low	Low	Low
Wind	Low	Low → High	Very Low → Low	Low	Low → High

Socioeconomic factors

Asset	IPs/LCs lands	Resource scarcity	Labour/ human rights	Financial inequality
Thermal	Medium	Low → Medium	Medium	Low
Hydro	High	Low → Medium	Medium	Low
Solar	Medium	-	Medium	Low
Wind	Medium	-	Medium	Low

Additional reputational factors

Asset	Ips/LCs lands	Resource scarcity	Labour/ human rights	Financial inequality
Thermal	High	Medium	Low → High	Very low
Hydro	High	Medium	Low → High	Very low
Solar	High	Low	Very low	Very low
Wind	High	Low	Very low	Very low

Provisioning services – water supply

Energy source	Materiality rating
Hydropower	Very High
Fossil Fuels	High
Solar	Medium
Wind	Very Low

REGULATING AND MAINTENANCE SERVICES

Ecosystem service	Energy source	Materiality rating
Global Climate Regulation Services	Solar	Very High
	Wind	Very High
	Fossil fuels	Medium
	Hydropower	Medium
Local Climate Regulation Services	Solar	Medium
	Wind	Medium
	Fossil fuels	Low
	Hydropower	Low
Air Filtration Services	Fossil fuels	Very Low
Soil Erosion Control Services	Hydropower	Very High
	Fossil fuels	Medium
	Solar	Medium
	Wind	Medium

Dependencies

ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) is a tool developed by the Natural Capital Finance Alliance to help businesses and financial institutions understand how environmental change can affect economic activities. It identifies the dependencies companies have on natural capital and the potential impacts their operations could have on ecosystems. ENCORE covers a wide range of risk types, including physical risks (such as water scarcity, soil degradation, and biodiversity loss and reputational risks arising from ecosystem damage. We have used the ENCORE tool to map the nature-related dependencies and impacts associated with its operations at various sites. This assessment provided insights into how site-specific environmental factors could influence business continuity, helping to prioritise actions for managing nature-related risks effectively.



Ecosystem service	Energy source	Materiality rating
Solid Waste Remediation	Fossil fuels	Medium
	Hydropower	Low
Water Purification	Fossil fuels	Medium
	Hydropower	Low
Water Flow Maintenance	Hydropower	Very High
	Fossil fuels	High
	Solar	Medium
	Wind	Medium
Flood Mitigation	Hydropower	Very High
	Wind	High
	Fossil fuels	Medium
	Solar	Medium
Storm Mitigation	Hydropower	Medium
	Solar	Medium
	Wind	Medium
	Fossil fuels	Low
Noise Attenuation	Wind	Medium
	Fossil fuels	Very Low
	Solar	Very Low

IMPACTS

Impact	Energy source	Materiality rating
Disturbances (Noise, Light, etc.)	Fossil fuels	Very High
	Hydropower	High
	Wind	Medium
	Solar	Very Low
Freshwater Use Impact	Hydropower	High
	Fossil fuels	Medium
GHG Emissions	Fossil fuels	Very High
	Hydropower	Low
Seabed Use Impact	Wind	Medium
Non-GHG Emissions	Fossil fuels	Very High
Solid Waste Generation	Fossil fuels	High
	Hydropower	Low
	Solar	Very Low
	Wind	Very Low

Impact	Energy source	Materiality rating
Land use impact	Wind	High
	Fossil fuels	Medium
	Hydropower	Medium
	Solar	Low
Toxic pollutant emissions to water and soil	Fossil fuels	Very High
	Solar	Low
	Wind	Very High
Water consumption	Fossil fuels	Medium
	Hydropower	Low
	Solar	Low
	Wind	Low

We adopted the LEAP approach—an acronym for Locate, Evaluate, Assess, and Prepare—to systematically manage our interactions with nature. This framework, developed by the Taskforce on Nature-related Financial Disclosures (TNFD), enables us to identify and evaluate nature-related risks and opportunities across its operations. By integrating the LEAP approach into its sustainability strategy, we ensure that our environmental impact is minimised, biodiversity is preserved, and its business decisions align with long-term ecological sustainability.

In 2024, we had carried out No Net Loss (NNL) study for 82 operation sites including solar and wind across the country. The study involved identification of relevant risks and their respective mitigation action plans.

In 2023, we had undertaken a pilot study at 11 of its sites in collaboration with the Confederation of Indian Industry’s India Business & Biodiversity Initiative (CII-IBBI), employing the LEAP approach. This methodology involves identifying and mapping ecological dependencies and impacts. We utilise various biodiversity mapping tools and datasets to assess risks and dependencies, ensuring that its strategies are informed by comprehensive ecological data. The LEAP assessment results are planned to be integrated into site-specific as well as broader Biodiversity Management Plans and policies to prioritise risks and define appropriate mitigation actions. This approach underscores our commitment to integrating environmental considerations into its business operations, aligning with global sustainability standards.

We have already prepared Biodiversity Management Plans (BMPs) and Biodiversity Action Plans (BAPs) for operational thermal and hydro sites within the country. These plans are actively tracked and monitored for progress.

Risk and impact management

We ensure effective management of all nature-related risks and mitigation of negative impacts through our Risk Management framework. Nature-related considerations are integrated into our policies, aligning with our commitment to sustainability and nature-related resilience. The Apex leadership oversees these efforts, ensuring that nature-related risks are effectively managed and aligned with our commitment to sustainability.

Following is the Mitigation Hierarchy Table for Tata Power, prepared as per the TNFD-recommended A3RT approach (Avoid, Reduce, Restore and Regenerate, Transform).

The A3RT approach guides organisations to manage nature-related risks and impacts systematically. It prioritises actions in a sequence: first Avoid causing harm to nature wherever possible; then Reducing unavoidable impacts; next Restoring and Regenerating degraded ecosystems; and finally Transforming business models and operations to achieve long-term positive outcomes for nature. This hierarchy highlights that mitigation efforts are strategic, effective, and aligned with global best practices on nature-positive action.

Mitigation level	Actions taken	Potential impacts
Avoid	Tata Power ensures adherence to stringent design parameters to address climate and nature related risks while developing new projects	- Prevents biodiversity loss and ensures strict regulatory compliance - Minimises legal risks and environmental liabilities
Reduce	- Tata Power implements Nature-based Solutions (NbS), including watershed management, afforestation, and greenbelt expansion at thermal and renewable sites - Enhancing water conservation through Zero Liquid Discharge (ZLD) systems, rainwater harvesting ponds, and robotic cleaning for solar panels	- Reduces environmental footprint by lowering water dependency and emissions - Enhances long-term sustainability and operational efficiency
Regenerate	- Engaging employees in afforestation through the Tree Mittra initiative - Conducted GIS-based green cover mapping across five hydro locations to assess carbon footprint and improve biodiversity planning - Carried out plantation under “Project GhanVan” in collaboration with ICICI Foundation with high survival rate	Strengthens local ecosystems, enhances air and soil quality, and contributes to carbon sequestration
Restore	- In partnership with SNEHA Foundation and the Odisha forest department, Tata Power plans to reduce human-elephant conflicts with a comprehensive five-year action plan. Measures include installation of early warning systems, vaccination to prevent elephant diseases, and community capacity building - Conservation of Mahseer at the Walwhan hatchery in Lonavala through captive breeding in close association with government agencies and fisheries institute	- Supports habitat restoration, species conservation, and climate resilience - Strengthens ecosystem stability and biodiversity preservation - Blue-finned Mahseer removed from IUCN red list of Endangered species due to conservation efforts by Tata Power
Transform	- Committed to Net Zero by 2045, Water Neutrality and Zero Waste to Landfill by 2030, and No Net Loss of Biodiversity by 2030 under Project Aalingana - Accelerating renewable energy expansion across solar, wind, and hydro projects - Recognised as the only Indian integrated power entity with SBTi-validated decarbonisation targets, aligning with the well-below 2°C trajectory - Conducted a TNFD pilot study across selected sites with CII-IBBI to assess biodiversity risks and develop mitigation plans - Carried out NNL study for 82 operational solar and wind sites, in addition to BMPs and BAPs for thermal and hydro sites	- Positions Tata Power as a leader in sustainable energy and climate action - Strengthens biodiversity integration and long-term resilience

Metrics and targets

We are actively aligning our metrics and targets with TNFD's sector-specific guidance for the electric utilities and power generators sector. This guidance supplements the LEAP (Locate, Evaluate, Assess, Prepare) approach, providing tailored recommendations to help organisations in this sector assess and manage nature-related risks and opportunities. It includes sector-specific metrics and targets relevant to the sector for enhanced transparency in their disclosures.

We are integrating these sector-specific metrics into our reporting framework, ensuring that our strategies and disclosures align with the TNFD's recommendations. By doing so, we aim to enhance our understanding of nature-related dependencies and impacts, supporting our commitments to sustainability and responsible environmental stewardship by making framework coherent disclosures.