



# **Sustainability Report**

## **2023-24**

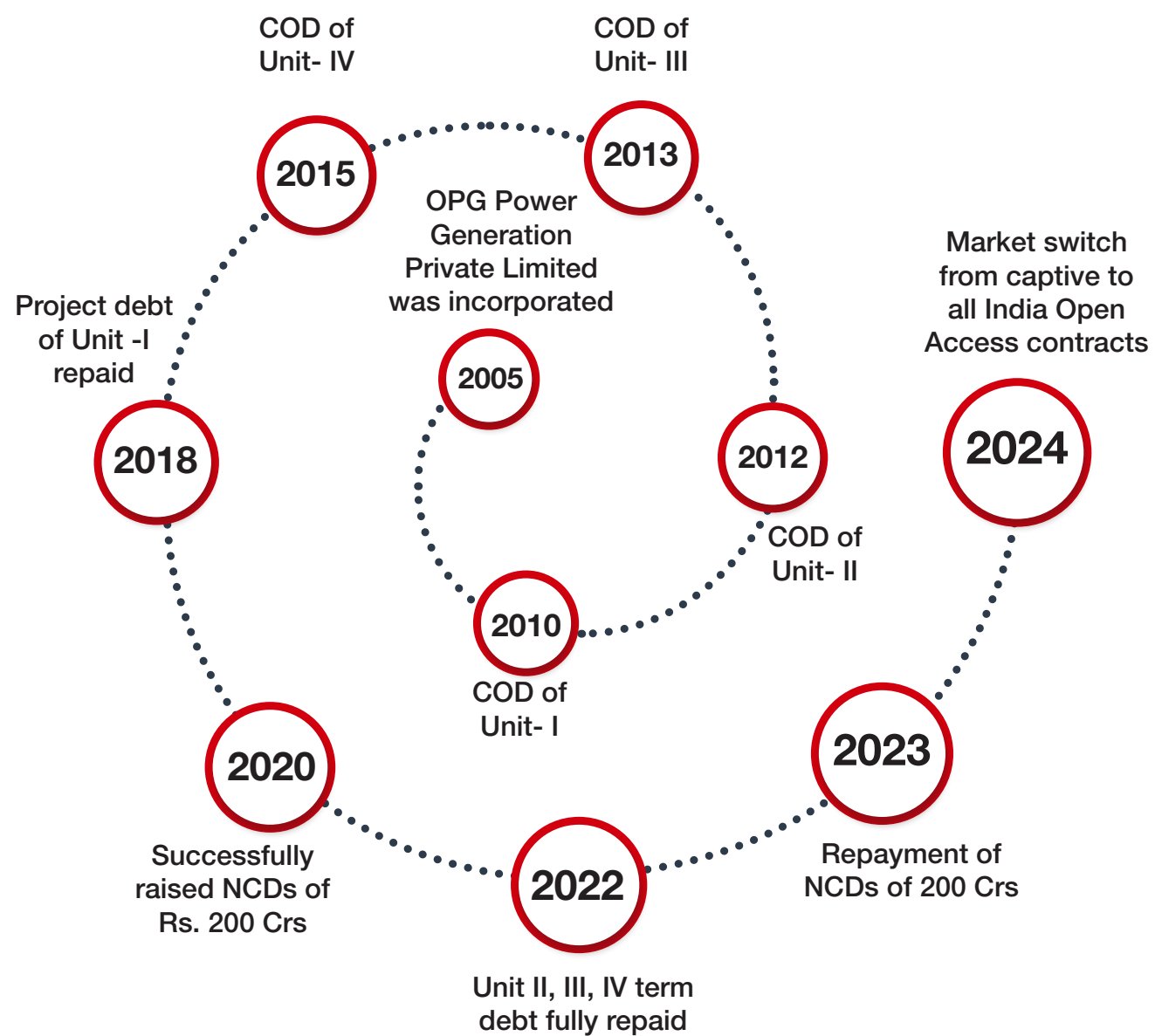


**SHAPING TOMORROW,  
NURTURING TODAY**



## OPG Power Ventures Plc.

OPG Power Ventures Plc (AIM:OPG), is the developer, owner and operator of power plants through its operating subsidiary and associates. It is a public limited company incorporated and headquartered in the Isle of Man, UK with operations in India. The Company has been admitted to trading on the AIM Market of the London Stock Exchange since 2008. The Group employs 339 people in India operations. So far, the Group has provided quality reliable power to industrial captive units, and in 2024, this has become all India open access contracts.



GRI 2- 1, 2, 7



Actual shot of Thermal Power Plant, Tamil Nadu





# CONTENTS

---

Report Overview	02
Business Highlights	14
Materiality	26
Governance	48
Environmental Stewardship	76
People	126
GRI Index	156
Abbreviations	164
Units	166







Bamboo plantation near Gummidipoondi site



# Report Overview

- Reporting Framework
- Scope & Boundary
- Message from the Chairman
- Message from the CEO



Closed Coal Storage shed



REPORT OVERVIEW

Reporting Framework

- Scope & Boundary
- Message from the Chairman
- Message from the CEO
- Business Highlights
- Materiality
- Governance
- Environmental Stewardship
- People
- GRI Index

# Reporting Framework

As we embark on another year of our sustainability journey, we are proud to present our fourth Sustainability Report, building upon the foundation laid in previous years. Aligned with the Global Reporting Initiative (GRI) Standards, this report serves as a comprehensive reflection of our commitment to sustainability, detailing our progress, challenges, and strategies in navigating the complex landscape of environmental, social, and governance (ESG) considerations.

Guided by the principles of transparency, accountability, and integrity, this report encapsulates our efforts to address material issues relevant to our business operations and stakeholders. We strive to uphold the highest standards of reporting, ensuring that our stakeholders can trust the information presented in this report. Incorporating feedback from stakeholders and insights gained from ongoing dialogue, this report not only fulfills our disclosure obligations but also serves as a platform for meaningful engagement and collaboration.

By aligning our reporting with the Sustainable Development Goals (SDGs), we reaffirm our commitment to contributing to a more sustainable and equitable future for all. As we navigate the ever-evolving landscape of sustainability, we recognize the importance of continuous improvement and innovation.





## REPORT OVERVIEW

Reporting Framework

### Scope & Boundary

Message from the Chairman

Message from the CEO

Business Highlights

Materiality

Governance

Environmental Stewardship

People

GRI Index

# Scope & Boundary

The period under review in this report is from 1<sup>st</sup> April 2023 to 31<sup>st</sup> March 2024.

In terms of operational scope, this report encompasses data from the Gummidipoondi Thermal Plant. The solar assets in Karnataka are not a part of the reporting boundary for the current year. Furthermore, social metrics, including employee statistics, also incorporates data from our Chennai office. It's worth noting that our headquarters in the Isle of Man maintain a minimal footprint and therefore is not included in the report boundary.

Despite external challenges, such as market fluctuations and regulatory changes, our capacity, organisational layout, and supply chain have remained consistent with the previous year, reflecting our resilience and stability amidst evolving landscapes.



Report Boundary

**OPG has an installed capacity of 414 MW of thermal in Tamil Nadu.**

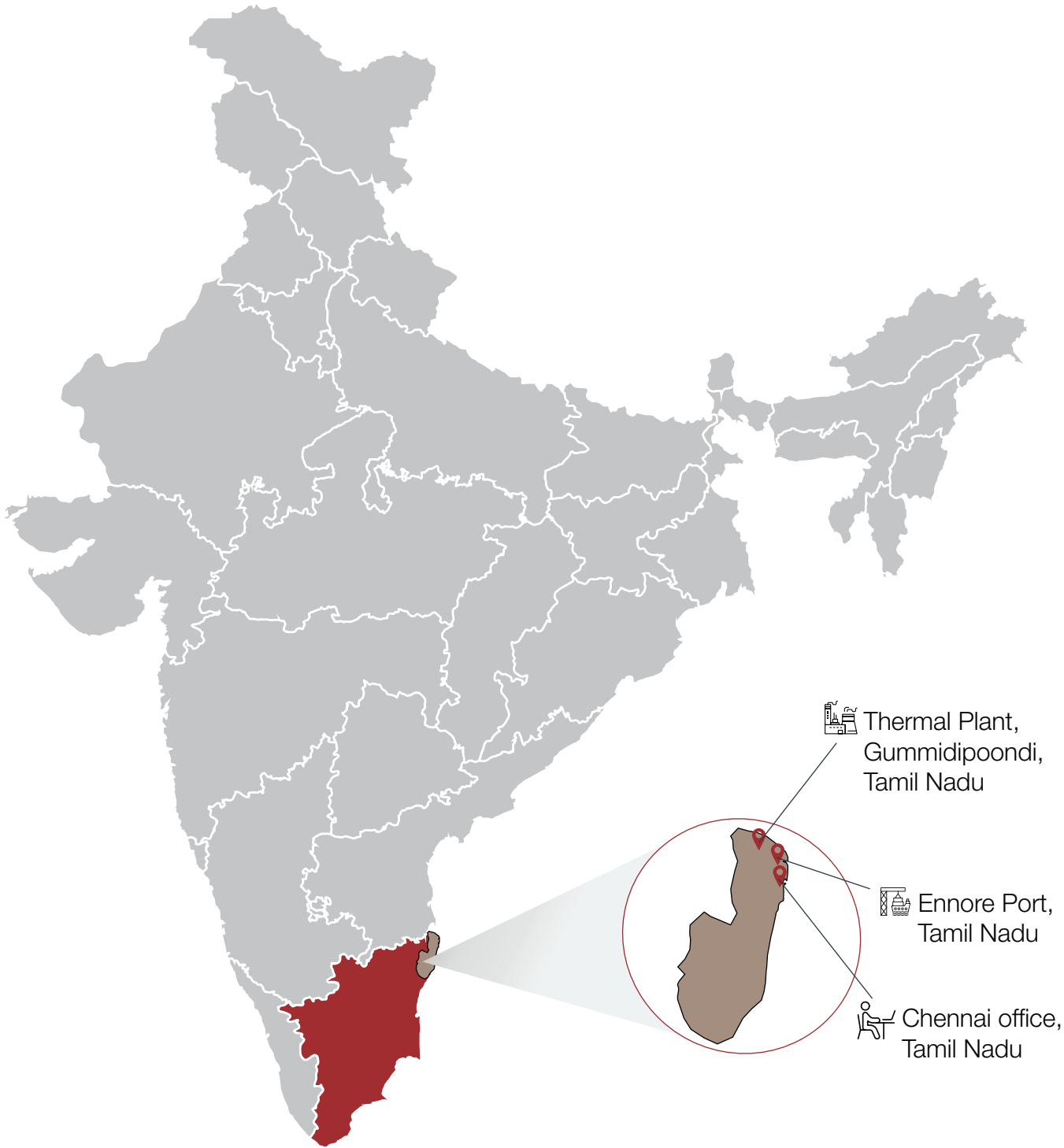
For the coal fired thermal power plant at Gummidipoondi, Chennai, there are two units of 77 MW, one unit of 80 MW and 180 MW respectively.

OPG's registered office is at 55 Athol Street, Douglas, Isle of Man IM1 1LA, UK. The Group's Indian Corporate Office is located at No.6, Sardar Patel Road, Guindy, Chennai-600032.

For any feedback, comments, or suggestions, please reach out to [feedbackesg@opgpowers.com](mailto:feedbackesg@opgpowers.com)



Plant Locations



GRI 2- 1, 2

OPERATING ENTITIES

Entity	Address	MW	Geographic Coordinates
OPG Power Generation Pvt. Ltd. - TPP	OPG Nagar, Madharpakkam Road, Gummidipoondi, Thiruvallur District, Tamil Nadu- 601201	414	13.440494°N/ 80.100347°E
Chennai Office	6, Sardar Patel Rd, Little Mount, Guindy, Chennai, Tamil Nadu- 600032	None	13.01258°N/ 80.22193°E





## REPORT OVERVIEW

Reporting Framework

Scope & Boundary

**Message from the Chairman**

Message from the CEO

Business Highlights

Materiality

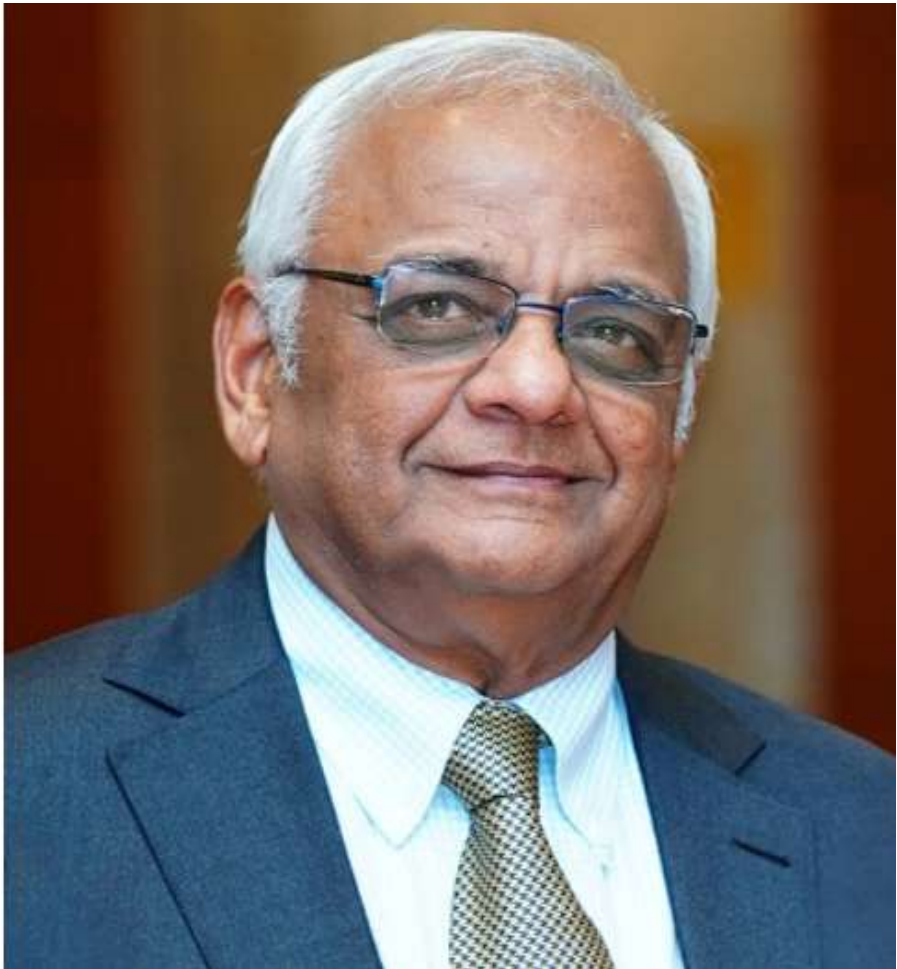
Governance

Environmental Stewardship

People

GRI Index

# Message from the Chairman



**“We have completed 14 years of service to the Indian subcontinent through grit and dedication of our employees and workers along with dedicated support from our investors, suppliers and customers.”**

Dear Valued Stakeholders,

I am elated to present the sustainability report for the fiscal year 23-24 sharing progress we have made as a group towards a more sustainable future i.e. shaping tomorrow, nurturing today.

We have completed 14 years of service to the Indian subcontinent through grit and dedication of our employees and workers along with dedicated support from our investors, suppliers and customers. We started with a 20MW thermal power plant in 2008 and now boast a state of the art 414 MW TPP.

Our business focuses on a healthy mix of short term, merchant, group captive and long-term supplies. Further our ability to fire different grades of coal provide flexibility in plant operations.

The international coal prices have stabilized after a long time being volatile from the COVID induced supply chain issues and Russia-Ukraine war, marking a return to normalcy. This reduction and stabilizing of prices have led to an increase in volume and profitability even under lower tariffs.

The Indian power sector has shown tremendous growth in the recent years due to rapid urbanization, industrialization, population growth and increased comfort levels. Further, favorable government policies with vision of “24 x 7 Power for All” and higher budget allocations to green and renewable electricity will provide the power sector with robust demand growth.

With the significant opportunities that arise in the years ahead, we continue to prioritise profitable operations, value creation through growth projects, scaling innovation and digitalisation, and progressing towards ESG objectives. We strive to create value for our customers and shareholders, while keeping our workforce, communities and environment safe.

I thank all the stakeholders for providing OPG the platform to serve the nation and its people. We look forward to your continuous support in the future to be a catalyst in India’s growth story.

**N Kumar**

**Non-Executive Chairman**



## REPORT OVERVIEW

Reporting Framework

Scope & Boundary

Message from the Chairman

**Message from the CEO**

Business Highlights

Materiality

Governance

Environmental Stewardship

People

GRI Index

# Message from the CEO



**“I am pleased to report that our Chennai TPP generated an impressive 2.5 billion units of power at a PLF of 69.6%, representing a remarkable 65% increase over FY 23.”**

Dear Stakeholders,

I am pleased to share our fourth sustainability report for FY 2023-24, with enhanced ESG disclosures that demonstrate our commitment to Sustainability. The disclosures reflect our informed sustainability strategy, which includes the perspective of our stakeholders.

I want to congratulate everyone on a highly productive year of operations. I am pleased to report that our Chennai TPP generated an impressive 2.5 billion units of power at a PLF of 69.6%, representing a remarkable 65% increase over FY 23. Looking ahead, we are optimistic that the softening and stabilizing of coal prices, which began in the latter half of the year, will continue without any headwinds. This favorable trend will allow us to better plan and navigate our operations in this competitive environment. Thank you all for your hard work and dedication.

We dedicate our success of operation for 14 years to the talented team at OPG, many of whom have completed more than 10 years with the firm. All employees from the shop floor to the board room have played a vital role in our success. We recognize their efforts and remain committed to their well-being and growth in the firm.

Our vision is to create long term value for all our stakeholders, while being diligent on compliance norms and respecting our natural resources and our surroundings. We have successfully commissioned De-NOx projects at Unit-I & II of Chennai plant to keep emissions within compliance. We strategically used our CSR to create maximum impact on the lives in and around our operations.

We have yet again maintained an incident free year. Our robust management systems and strict adherence to policies by all, added to the core value of no harm has been a rewarding year from health and safety point of view.

The complete ESG Report is also available on our website [www.opgpower.com](http://www.opgpower.com)

I invite you to read the Sustainability Report and provide us feedback at [feedbackesg@opgpower.com](mailto:feedbackesg@opgpower.com).

**Avantika Gupta**

**Chief Executive Officer**



# Business Highlights

Business Highlights

Financial Highlights

Economic Highlights

Sustainability Highlights

Sustainability Pillars





BUSINESS HIGHLIGHTS

Business Highlights

Financial Highlights

Economic Highlights

Sustainability highlights

Sustainability pillars

Materiality

Governance

Environmental Stewardship

People

GRI Index

Business Highlights

Our power solutions are tailored to meet the diverse needs of our clients. In line with our core business proposition of delivering cost effective high quality power to clients, we have served our customers from public enterprises to state electricity companies, apart from captive units. We have demonstrated”

- ⚡ Engineering Proficiency
- ⚡ Fiscal Oversight
- ⚡ Meticulously run operations

By the close of the reporting time frame, our established capacity stands at 414 MW of power with a team of 339 employees.

In FY 24, total power generation at the Thermal plant, Tamil Nadu (TN) was 2.5 billion units, which is a 65.6% growth over power generated in FY 23 (includes deemed generation). This growth in generation mainly stemmed from the softening in coal prices in the 2<sup>nd</sup> half of the year and the policy support to supply to open access market pan India. For FY 24, the average tariff recognized was 7.5 Pence/ Unit, compared to 8.6 Pence /Unit in FY 23.

Average tariff realised during FY 24 was 7.5 Pence per Unit (FY23: 8.6 Pence per Unit).

OPG’s pivot towards zero harm underscores its commitment to environmental stewardship and social responsibility. For the environment, our major focus is in and around our plant premises. Adhering to standards such as ISO 14001:2015 for environmental management and ISO 45001:2018 for health and safety provides a framework for continual development. These standards ensure our path towards sustainability and equip our team with the latest safety apparatus and protective methods. Our dedication to reducing our environmental footprint through innovative practices and rigorous compliance with international standards fosters a safe and secure working environment.

GENERAL	FY24	FY23
Total Number of Operations	1	2*
Total Number of Employees	339	363
Total Number of Contract Employees	501	255
FINANCIAL		
Net Revenues (M GBP)	155.69	58.68
Gross Debt (M GBP)	28.63	32.6
Market Cap (M GBP)	40.47	36.47
POWER OPERATIONS		
Thermal Generation (MU) including auxiliary power - Installed Capacity 414 MW	2,323	587
Additional “deemed” offtake- Gummidipoondi Plant	208	941
Total Generation (MUe)**- Gummidipoondi Plant	2,531	1,528
Reported deemed PLF (%) - Gummidipoondi Plant	69.6%	42.13%
CUSTOMERS		
Average Tariff for the year (Pence/Unit)	7.5	8.6

\* In FY 2022-23, Karnataka solar plants were included. \*\* Million Units of kWh or kWh of equivalent power. Reported average PLF based on MUe.



BUSINESS HIGHLIGHTS

Business Highlights

Financial Highlights

Economic Highlights

Sustainability highlights

Sustainability pillars

Materiality

Governance

Environmental Stewardship

People

GRI Index

# Financial Highlights

This year marks a significant milestone for us as we have successfully transitioned from serving captive customers to supplying power across India via open access, thanks to the favourable policy changes. Despite a lower tariff, we expanded our customer base nationwide and maintained robust supplies through our proven energy mix.

Key Achievements:

**Power Generation:** Chennai TPP generated 2.5 billion deemed units at a PLF of 69.6%, a 65% increase over FY 23.

**Market Expansion:** Transitioned to all-India open access, gaining new customers and enhancing supply stability.

**Coal Strategy:** Implemented proactive measures to mitigate coal availability risks, ensuring our facilities can efficiently process both local and imported coal.

**Future Outlook:** As urbanisation and population growth drive higher energy demands, coal will play a crucial role in meeting India’s energy needs.

Our strategic initiatives have positioned us to thrive in the evolving energy landscape, guaranteeing a steady and consistent supply of power to our customers across India.

Total revenue generated in FY24 155.69 million GBP.

Economic Growth	FY 2024 Million GBP	FY 2023 Million GBP
Revenue	155.69	58.68
Operating Cost	128.02	42.26
Employee Wage and Benefit	2.98	2.84
Payment to Providers of Capital	5.57	5.93
Community Investments	0.06	0.10
Payments to Government (Taxes)	3.44	3.16



**BUSINESS HIGHLIGHTS**

Business Highlights

Financial Highlights

**Economic Highlights**

Sustainability highlights

Sustainability pillars

Materiality

Governance

Environmental Stewardship

People

GRI Index

# Economic Highlights

## Direct Economic Value Generated

The economic performance of OPG is vital for both short-term sustainability and long-term viability. Key financial indicators such as assets, liabilities, revenues, profits, and operating costs are disclosed annually in our Company’s comprehensive reports, readily accessible on our website. Additionally, stakeholders can access our half-yearly results online, providing an up-to-date insight into our financial health.

**Economic Impacts in the Local Area:** At OPG, fostering local economies is a core principle of our operations. For our Chennai office and Thermal Plant, Tamil Nadu represents our local community. A significant economic benefit of our operations is the creation of job opportunities across various professional fields such as engineering, safety, finance, human resources, and legal sectors.

We adhere to standard wages for both men and women, in compliance with minimum wage standards mandated by the State Government. OPG provides employment opportunities in operations to local workers, contributing to economic upliftment through regular pay and wages.

Furthermore, our presence has indirect economic impacts on the surrounding communities. Initiatives focusing on education, healthcare, infrastructure, and environmental stewardship have yielded positive outcomes, with ongoing efforts to measure their effectiveness. By investing in education through contributions towards school uniforms, bags, and books, we promote the importance of schooling and empower children in nearby communities.

Similarly, our healthcare initiatives ensure access to medical services within proximity, leading to timely referrals and improved health outcomes for locals. Investments in transportation infrastructure enhance market accessibility, fostering economic growth and creating opportunities for local vendors. The development of roads and infrastructure around our facilities further stimulates economic activity, benefitting nearby residents and businesses.

In addition to these initiatives, OPG extends support to the local community through in-kind assistance and pro bono services, including shelter provision and essential supplies when needed. Through these collective efforts, we strive to make a meaningful and lasting impact on the economic well-being of our local communities.

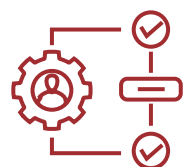




## Sustainability Highlights

### OPERATIONS

- 414 MW Thermal Power Plant
- Best in class –NOx emission control
- Improving Heat rate
- Awarded with “Best Efficient Fuel Utilisation within Private Sector” in the Southern Region and “Best Practices and New Initiatives” in IPP Coal Plants below 250 MW category



### NATURAL

- 0.456 MT/MWh specific coal consumption (Normalized for 6000 NAR)
- 0.099 m<sup>3</sup>/MWh Specific Water consumption
- 1.278 tCO<sub>2</sub>/MWh, GHG emissions intensity



### HUMAN

- 339 Company employees
- 501 Contractual workforce
- Total 4.63 man days of training person.
- Zero TRIR (Total Recordable Incident Rate)



### FINANCIAL

- Revenue- 155.69 million GBP
- Operating Cost- 127.99 million GBP
- Taxes- 3.48 million GBP
- Employee Wages & Benefits- 2.98 million GBP



### INTELLECTUAL

- ISO 14001:2015
- ISO 45001:2018
- NABL accredited in accordance with ISO/IEC 17025:2005 Standard



### SOCIAL

- CSR Spending 0.06 Million GBP





**BUSINESS HIGHLIGHTS**

Business Highlights

Financial Highlights

Economic Highlights

Sustainability highlights

**Sustainability pillars**

Materiality

Governance

Environmental Stewardship

People

GRI Index

# Sustainability Pillars

## EFFICIENT GROWTH

Generation efficiency directly translates into optimisation of resources and maximising financial capital value.

- Maintaining technological leadership
- Continuous optimisation of Heat Rate
- Sustainable automation for operational efficiencies.

## SUSTAINABLE GROWTH

Sustainable Power Generation through a mix of wide varieties of coal quality

- Providing reliable power to captive users and state utilities.
- Compliance with emission standards
- Optimal Auxiliary power consumption
- Zero Liquid Discharge
- Lowest water consumption per unit of electricity generation

## RESPONSIBLE GROWTH

Responsibility towards all stakeholders.

- Consultations and collaborations with stakeholders
- Developing human resource through training and skill development
- Inclusive work environment
- Commitment to Zero Harm-maintaining health and safety within and around our power units.
- Community service
- Inculcating values of Sustainability in staff and workers





# Materiality

Materiality Assessment

Stakeholder Engagement

Material Topics

Management Approach on Prioritised List





# Materiality Assessment

The voice of the stakeholder forms the bed rock on which we at OPG Power Ventures PLC rely on for informed decision making. The stakeholder engagements carried out over the financial year provide us with area of concern and significance to our stakeholders and enable us to communicate our actions for the same. A step wise stakeholder engagement helped in identifying material priorities.

## Step 1: Analysis of sectoral material topics and peer benchmarking.

Although the sector and geography are populated by numerous power generation companies., there are few direct peers to serve as a valid point of comparison due to our organisation’s size and business model. Nevertheless, in order to compile the list of material topics, comparisons were conducted with the most prominent thermal and renewable power generation companies, as well as with international standards and frameworks, chiefly among them was SASB.

## Our Internal and External Stakeholders



SASB standards (a part of IFRS Foundation) aim to provide investors with sustainability disclosures that are relevant, reliable and comparable across companies on a global basis. Most of the SASB metrics are relevant for companies and investors globally, and the remaining are being reviewed to enhance their global applicability. SASB Standards identify the sustainability-related issues most relevant to investor, developed using a rigorous and transparent standard-setting process that includes:

- o evidence-based research;
- o broad and balanced participation from companies, investors and subject-matter experts; and
- o oversight and approval from the independent SASB Standards Board.



# Materiality Assessment

The long list of possible material topics are:

- o Occupational health and safety
- o Climate Change
- o Biodiversity
- o Waste Management
- o Innovation Management
- o Economic Value Creation
- o Digital Transformation
- o Responsible supply chain
- o Energy & Emissions
- o Employment
- o Community Development
- o Diversity & Inclusion
- o Sustainable Procurement
- o Corporate Governance
- o Water Stewardship
- o Training & Development
- o Ethics & Integrity
- o Materials Management
- o Human Rights Assessment
- o Business growth & Profitability
- o Environmental Compliance
- o Freedom of Collective Bargaining
- o Data Security

## Step 2: Identify Stakeholders

- ◇ We believe that all the groups of people who directly work or deal with us, in relation to our main business, Power Generation, are our stakeholders. We conducted an internal exercise to identify our main stakeholders. The company management was tasked with identifying the relevant stakeholders based on the following attributes.
- ◇ Power: The ability of the stakeholder to influence the organisation.
- ◇ Legitimacy: The perceived validity of the stakeholder’s relationship with the organisation.
- ◇ Urgency: The degree to which stakeholder claims require immediate attention

Our Stakeholders: Employees, Customers, Suppliers, Government, Communities, Investors.

Our employees and our investors closely interact with us and are the essential to the long-term success of the firm. Some of the other stakeholders such as suppliers, customers and government regularly interact with us and we are responsive to their needs. Further, the communities we serve through our CSR program also need careful intervention for maximum impact.





### Step 3: Stakeholder Engagement

#### EMPLOYEES

Engagement Method	Frequency of engagement	Topics Discussed / Concerns raised	Outcome
Leadership Talk	Annually	Key to leadership	Leadership development
Review Meetings	Annually	Company's vision, mission, and goals	Goal orientation
Annual Performance Appraisal	Annually	Individual performance & Organisation Performance - FY2023-24	Employee evaluation Feedback for improvement
Talent Management Systems	Quarterly	Regular training	In-house and external training programs
Learning, Training and Development Programmes	Regular Basis	O&M practices and Green Environment	Employee Knowledge enrichment & exposure
Physical & mental health discussion	Regular Basis	Conducting Health Check up Camp & Sports program	Proactive health risk assessment; Mental health awareness; Employee physical fitness
Festival Activities	Regular Basis	Celebration of Festival in Company & Company Township	Celebrating Indian festivals such as Pongal and Diwali; Indian National Days such as Independence day and Republic day; Cultural days such as Tamil and English new year; Celebration with employees' and their families
Employees Celebration	Regular Basis	Celebration with Employees	Birthday Celebration, Employees farewell party
News Letter	Regular Basis	OPG Connect Newsletters	Regular updates to employees; new thoughts and ideas; status report

GRI 2- 29

Annual Day celebration	Annually	14 <sup>th</sup> year OPG Annual day celebration in company	Employees and their family connect with top management
Rewards & recognition	Monthly/ Quarterly/ Case to case	Employee's involvement appreciation	Improvement in motivation among employees, workplace culture, team work & productivity leading to higher retention and lower turnover.

#### REGULATORY GOVERNMENT

Engagement Method	Frequency of engagement	Topics Discussed / Concerns raised	Outcome
Government Regulators	Regular	Government Mandatory Norms	Compliance
Annual report			
State Government			
Industry Association			

#### COMMUNITY

Engagement Method	Frequency of engagement	Topics Discussed / Concerns raised	Outcome
CSR activities	Need basis	Assess the need for each community and area	Required project to be implemented as per Annual Action Plan and CSR Policy
Communication with Admin team	Need basis	Any issues	Resolution of the issue



### SUPPLY CHAIN

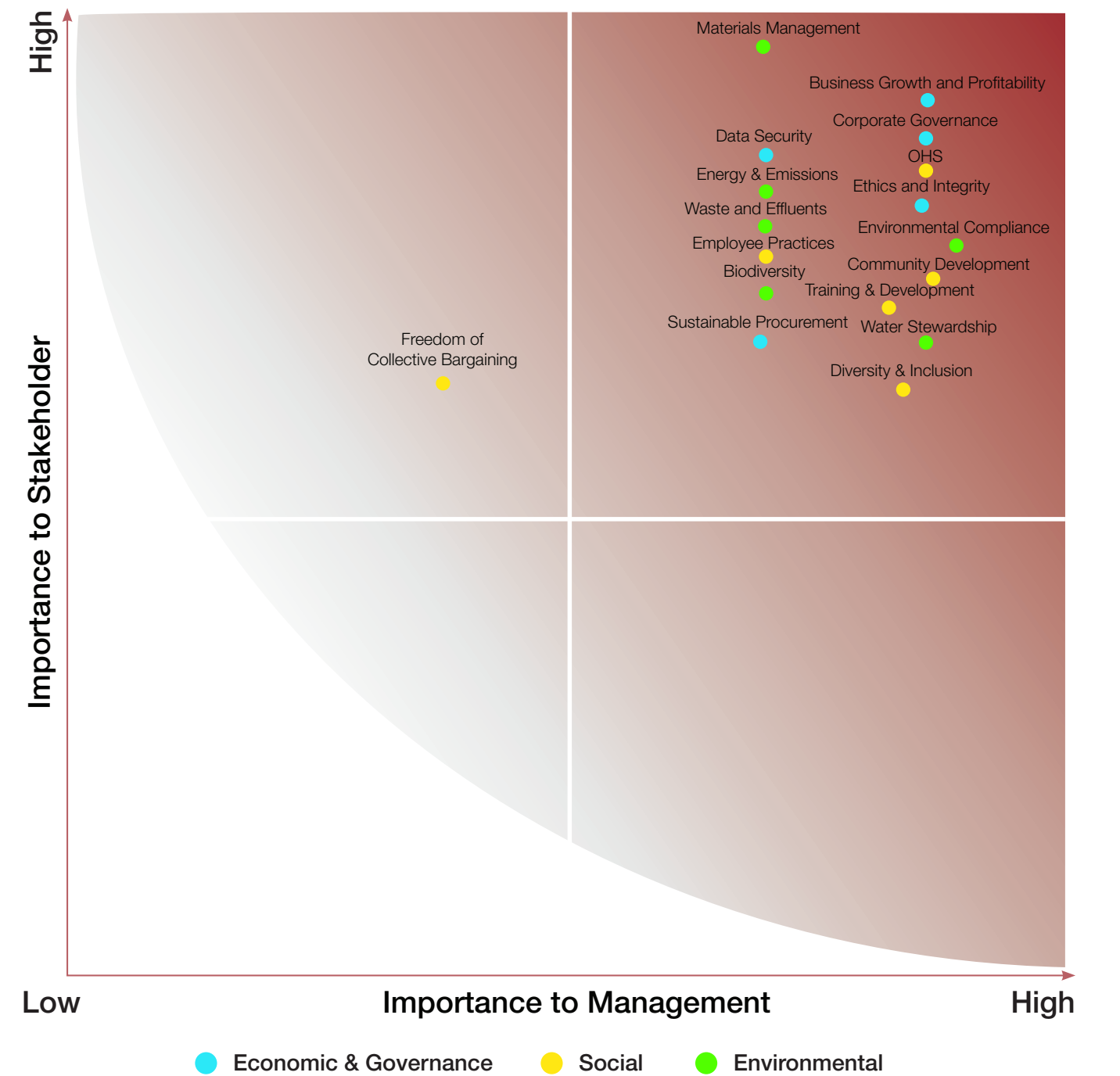
Engagement Method	Frequency of engagement	Topics Discussed / Concerns raised	Outcome
Supplier Contract	Need basis	Quality, Price, Delivery compliance as per Laws and Regulations	Supply of desired and Quality raw material

### INVESTOR

Engagement Method	Frequency of engagement	Topics Discussed / Concerns raised	Outcome
Pre Due-Diligence	Annually	Environment Social Performance review	Sustainability progress
Engagement- in person meeting	Need Basis	Detailed review of ESG & Legal compliance	Sustainability progress
Mail Communication	Need Basis	Any Specific Queries	Queries closed
Updates on the website	Need Basis	Group Objectives and Strategies, Business Model, Market Review, Corporate governance	Published

### Step 4: Monitoring Impact of all stakeholders and clustering impact into broader material topics

We categorised the material topics under Economic & Governance, Social and Environmental based on the stakeholder impact and clubbed into 10 priority topics for management monitoring and regulation.



\* As per materiality analysis conducted in 2022.



Materiality Topic		Stakeholders Impacted
Economic & Governance	Business Growth & Profitability	Employees, Investors, Supply Chain, Customers
	Corporate Governance	Regulators, Investors, Employees
	Ethics & Integrity	Investors, Government, Supply Chain, Community
Social	Occupational Health & Safety	Regulators, Employees, Community
	Community Development	Community, Regulators
	Employee Training and Development	Employee, Community
Environment	Materials Management	Investors, Supply Chain
	Waste and Effluents	Regulators, Investors, Community, Employees
	Energy & Emissions	Investors, Supply Chain, Employee, Community
	Environmental Compliance	Regulators, Investors





Material Topic	Negative Impacts	
	Current	Potential
<b>Business Growth &amp; Profitability</b>	None	No negative impacts potentially for business growth and profitability directly; however, there can be additional regulations such as coal cess, which can enhance expenditures.
<b>Corporate Governance</b>	None	A well defined governance structure, with board traction on all key areas, will ensure there is no negative potential impact.
<b>Ethics &amp; Integrity</b>	None	A well defined governance structure with board oversight, a robust policy framework that safeguards interest of all stakeholders ensures there is no compromise on ethics and integrity.
<b>Occupational Health &amp; Safety</b>	None	We have a three tiered OHS governance structure with clear roles and responsibilities for all, ISO 45001, meticulously implemented, hence no negative potential, however, at any point any lapse on this account can have a potential negative in terms of injury or accidents.
<b>Community Development</b>	None	Communication channels need to be open with communities, whom we are serving. If the impact is not as per the intended action, it can have negative impact on organisational reputation.

Positive Impacts		Impact Significance
Current	Potential	
This year we have made considerable progress from the previous one, in terms of open access power sales. This has enhanced our revenues and profits from operations.	With increasing energy demand and business focussed policies, we expect a healthy order book going ahead.	High
We have had no corporate governance issue raised or any complaint or NC from any regulatory body	The strict governance structure enforced by the senior management ensures no negative impact and we shall maintain the same going forward.	Medium
All stakeholder interactions internally and externally governed by clear policies, roles and responsibilities. There are no complaints or NCs received by any stakeholder	The OPG culture of ethics inculcated over the years will guide us in making ethical and right decisions which will be beneficial for our organisation in the future.	Medium
We maintain the highest standards of workplace safety and continue to achieve zero TRIR over our operations.	Going forward, we will focus on maintaining the zero TRIR record and work on employee work environment betterment.	Medium
Our current CSR and community interactions have had favorable impacts on education, livelihood and women empowerment.	We are at a very fortunate position to serve the nearby communities. We shall be continuing our existing programme and need based additional programmes for the nearby communities.	Medium



Material Topic	Negative Impacts	
	Current	Potential
<b>Employee Training and Development</b>	None	There is no potential negative impact for employee training and development
<b>Materials Management</b>	None	Potential negative can be minimised because of our diverse supply channels, however, if there were to be any major supply disruption, there can be a potential negative impact
<b>Waste and Effluents</b>	We have generated 4.575 tonnes of hazardous waste 0.122 million MT of Fly Ash and 0.03 million MT of Bottom Ash. Some of these wastes may be going to landfills.	The group aims to continue the Zero Liquid Discharge for water. Hence, we do not see any negative impact of our operations. We have the best in class specific water consumption levels.
<b>Energy &amp; Emissions</b>	We are contributing to GHG emissions for power generation, hence we have high Scope 1 emissions	GHG emissions may increase if the power generation goes up.
<b>Environmental Compliance</b>	We have no current Non-Compliance (NC) on environment.	Failure to comply with the norms will adversely affect our operations. We undertake strict environmental compliance register and will strive to maintain a no NC status

GRI 2- 29

Positive Impacts		Impact Significance
Current	Potential	
Employee training leads to growth of our workforce and prepares them for senior roles and doing their work more efficiently.	Employee training and development will motivate and enrich knowledge of employee preping them for senior roles. This will enhance employee retention.	Medium
Our coal management and materials flow suited our requirement for power generation. We have included biomass along with coal for power generation to reduce emissions from fossil fuels.	We will be optimising the materials to ensure we move towards reduced emissions and manage our material supplies well.	Medium
We effectively use 100% of fly ash by recycling, effluents are not released outside the plant limits using a zero liquid discharge facility. We are one of the leading companies in specific water consumption levels.	We shall continue to improve or maintain our progress on waste and effluent release metrics. Our goal to not harm the community near our operations drive our actions on effluent handling.	High
We have an auxillary power consumption at 8.42%.	Going forward we will focus on optimising APC, and optimising power generation from a good mix of coal grades for maximising output.	High
We comply with the all the applicable compliance criterias.	We shall continue to comply with the environmental requirements.	Medium



Step 5: Management Approach on Prioritised List



BUSINESS GROWTH & PROFITABILITY

Business growth and profitability hinge on several key factors, including strategic direction, regulatory compliance, technological advancements, operational efficiency, and stakeholder engagement. We are exploring opportunities for growth in alignment to our stakeholders. We are currently in the process of setting up a 2.9 MW Solar plant at our Gummidipoondi site. Further, we are exploring options of captive mines to streamline our upward supply chain.



CORPORATE GOVERNANCE

Sound corporate governance ensures accountability, transparency, and ethical management, fostering trust among stakeholders. It involves a robust framework of policies, procedures, and practices to guide decision-making and operations. Our board has a healthy mix of experience and dynamism in operating power plants. We are listed on the AIM market and are required to have disclosures on Quoted Companies Alliance Corporate governance code.



ETHICS & INTEGRITY

Ethics in management is not just about adhering to legal standards but about fostering a culture of integrity and respect within an organisation. It is the backbone for decision-making processes, influencing how objectives are achieved and stakeholders are treated.

The top down decision making approach along with committees set up with the board members as chairman of the committees ensure that the ethics first philosophy flows from the top. This structure also enables everyone to not only deal ethically but also get feedback and recognition for the same.



OCCUPATIONAL HEALTH & SAFETY

A strong OHS culture promotes a safe work environment, enhances productivity, and boosts employee morale.

We have put in place the best in class OHS standards and systems so that we are able to provide the safest work environment to our employees. The Zero TRIR is a metric reflection of the absolute focus we have on compliance and the safety processes put in place.





### COMMUNITY DEVELOPMENT

Communities are the entities who are directly and indirectly affected by business decisions. Community development is essential for a company's sustainable growth and positive societal impact. By investing in local communities, companies can enhance their social license to operate and build strong, supportive relationships. Engaging with community leaders and stakeholders ensures that these efforts address real needs and create shared value. Our CSR spend has been strategically deployed to increase our impact to the maximum beneficiaries. We hire locally which not only helps us in giving employment to local youth but also get a positive light within the community.



### EMPLOYEE TRAINING AND DEVELOPMENT

Employee training and development are crucial for a power generating company to ensure operational excellence and safety. T&D is not only beneficial for the employee but also promotes productivity, reduces operational risks, and fosters a culture of continuous improvement. We are proud to have employees working with us for more than 10 years over the firm's 14 years of existence. This cannot be achieved solely by incentives without job enrichment, professional growth and development.



### MATERIALS MANAGEMENT

Robust materials management strategies are pivotal in maintaining operational continuity and supporting the company's objectives. Strategic sourcing practices secure high-quality materials at competitive prices, supporting cost-efficiency and project timelines. Strong supplier relationships and performance monitoring ensure consistent supply chain reliability.

We focus on cost leadership for raw materials and local first policy for procurement. This seamless material management is not only helped by the plant technology but also the ecosystem where immediate price discovery and future prices help forecast supply conditions.



### WASTE AND EFFLUENTS

Waste and effluent management is critical to uphold environmental compliance, public health standards, and operational efficiency. Proper handling of ash and emissions mitigates ecological impact, ensuring regulatory adherence and community trust.

We have been operating a ZLD plant over the years. We have started implementing the De-NOx projects on the boilers with satisfactory results. Further, our SOx emissions are well within line for emissions. We believe that our operations should not cause harm to anything interacting with us.





## ENERGY & EMISSIONS

Energy and emissions management is crucial to mitigate environmental impact and comply with regulatory standards. We are optimising our energy efficiency through modern technologies and operational practices that reduce carbon footprint and operational costs. Monitoring and reporting emissions enables a dialogue for cleaner footprint. Working towards a cleaner energy mix aligns with sustainable development goals.



## ENVIRONMENTAL COMPLIANCE

Environmental compliance is paramount for a power generating company to uphold legal standards, mitigate risks, and maintain public trust. Adhering to regulations governing air quality, water discharge, and waste management ensures operational continuity and avoids costly penalties. Implementing robust environmental management systems and monitoring processes demonstrates commitment to sustainability and community welfare.





# Governance

Corporate Governance

Committees

Memberships & Associations

Certificates & Awards

Risks & Opportunities





# Corporate Governance



QCA Corporate Governance Code: The code is followed through a framework of ten principles that enables an organization to focus on long term success, which indicates a strategic approach that builds confidence with shareholders, as well as creates operational resilience.

Tri-level Governance Structure: This structure enables effective oversight by the board and allows decisions to be made with accountability and accuracy in a timely manner at different governance levels.

The Code reinforces our commitment to transparency, accountability and compliance. The Board conducts an annual review to ensure ongoing compliance with the QCA Code, demonstrating a commitment to continuous improvement and alignment with best practices.

GRI 2-9, 29

The Board believes that the QCA Code provides a robust framework that supports the company’s long-term success, indicating a strategic approach to governance that enhances shareholder confidence and operational resilience. We keep our shareholders informed through established communication protocols, such as sending AGM notice well in advance; voting results are published on the website, annual and financial results are in the public domain. Feedback and concerns of the stakeholders are responded to in time and also integrated in our strategy, where possible.

## Principles of Good Corporate Governance followed at OPG

- Establish a strategy and business model which promotes long-term value for shareholders
- Seek to understand and meet shareholder needs and expectations
- Consider wider stakeholder and social responsibilities and other implications for long-term success.
- Embed effective risk management, considering both opportunities and threats, throughout the organisation
- Maintain the Board as a well-functioning, balanced team led by the Chairman
- Ensure that between them the Directors have the necessary up-to-date experience, skills and capabilities
- Evaluate Board performance based on clear relevant objectives, seeking continuous improvement
- Promote a corporate culture that is based on ethical values and behaviour
- Maintain governance structures and processes that are fit for purpose and support good decision making by the Board
- Communicate how the Group is governed to all stakeholders



GOVERNANCE

Corporate Governance

Committees

Memberships & Associations

Certificates & Awards

Risks & Opportunities

Environmental Stewardship

People

GRI Index

# Corporate Governance

Sound corporate governance is the cornerstone of any successful and responsible corporation. It involves the establishment of clear and transparent policies that guide the company’s operations, ethics, and compliance with laws and regulations. A key element of sound governance is the effectiveness of the board of directors. A diverse, independent and experienced board can provide robust oversight and strategic guidance, ensuring that the company’s management acts in the best interests of shareholders and other stakeholders.

The three level governance structure at the company enables the management to accurately and promptly monitor important matters. OPG’s Board of Directors

shoulders the responsibility of exemplifying best practices in Corporate Governance and establishing elevated standards, primarily for the shareholders and all other stakeholders. The CEO leads the operations and along with the board members, presides over various board committees which allow for more effective and efficient governance by delegating specific responsibilities to the senior management. This allows for a detailed oversight and specialised attention on various aspects of the firm operations.

In alignment with the AIM rules for companies, we have adopted the Quoted Companies Alliance (QCA) Corporate Governance Code. The board of directors is of the opinion that the QCA Code offers the company a stringent corporate governance framework that not only supports the company’s operations for long term success but is also provides a yardstick for annual review.

GRI 2- 11,12; 405- 1

Nationality	Name
Non-Executive Chairman	Mr. N Kumar
Non-Executive Deputy Chairman	Mr. Jeremy Warner Allen
Chief Executive Officer (Executive Director)	Ms. Avantika Gupta
Chief Financial Officer (Executive Director)	Mr Ajit Pratap Singh
Non-Executive Director	Mr. P Michael Grasby

Nationality	Name
Indian	3
British	2

Gender	Number
Male	4
Female	1

The board maintains a harmonious mix of Executive and Non-Executive Directors, among which three are Independent Directors. Our website has detailed information regarding the background and credentials of the Group’s Directors. The Board stands out for its diversity and boasts a wealth of combined experience that is mutually complementary.



Mr. N Kumar,  
NON-EXECUTIVE  
CHAIRMAN



Mr. Jeremy Warner Allen,  
NON-EXECUTIVE  
DEPUTY CHAIRMAN





**Ms. Avantika Gupta,**  
CHIEF EXECUTIVE  
OFFICER,  
EXECUTIVE DIRECTOR



**Mr. P Michael Grasby,**  
NON-EXECUTIVE  
DIRECTOR

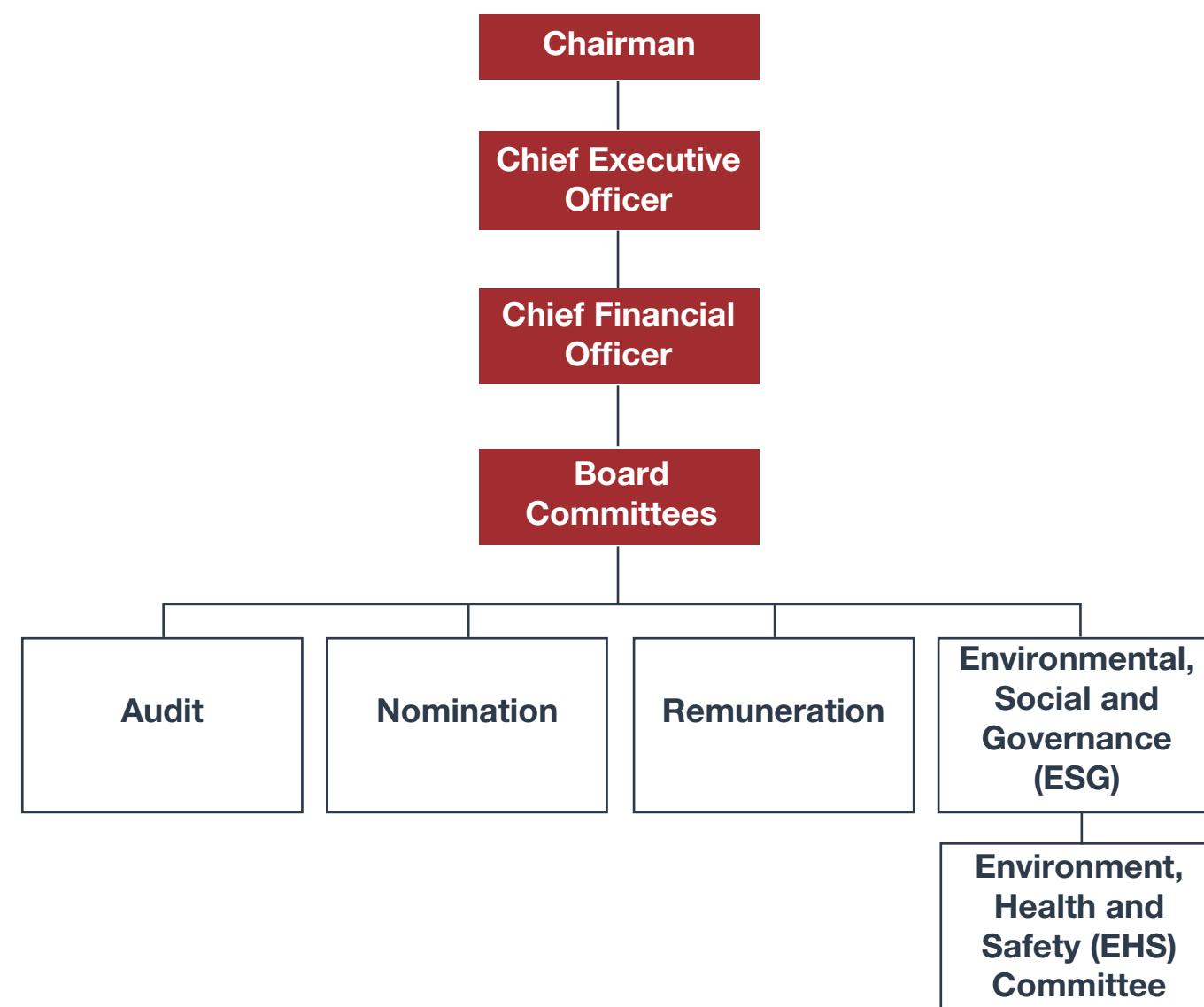


**Mr. Ajit Pratap Singh,**  
CHIEF FINANCIAL OFFICER,  
EXECUTIVE DIRECTOR



GRI 2- 9, 11, 14

## Corporate Governance Structure : ESG



### OPG Board

Overall responsibility for adopting and implementing sustainability measures encompassing the entire company

### ESG Committee

Develops, implements and oversees the ESG performance in the company and assists the management in driving industry leading practices. Sets wide targets and KPIs and identifies the sustainability related risks and emerging issues that could affect the company



**GOVERNANCE**

**Committees**

# Committees



## AUDIT COMMITTEE

The Audit Committee oversees the accurate monitoring and reporting of the Group’s financial performance. It reviews both half-yearly and annual financial declarations prior to board approval. Both the Chief Executive Officer and Chief Financial Officer participate in these meetings upon invitation.

## REMUNERATION COMMITTEE

The Remuneration Committee is tasked with evaluating the performance of the Group’s Executive Directors and Senior Management, determining their compensation, and establishing their employment terms. Additionally, the committee oversees the formulation and management of share option programs.

## NOMINATION COMMITTEE

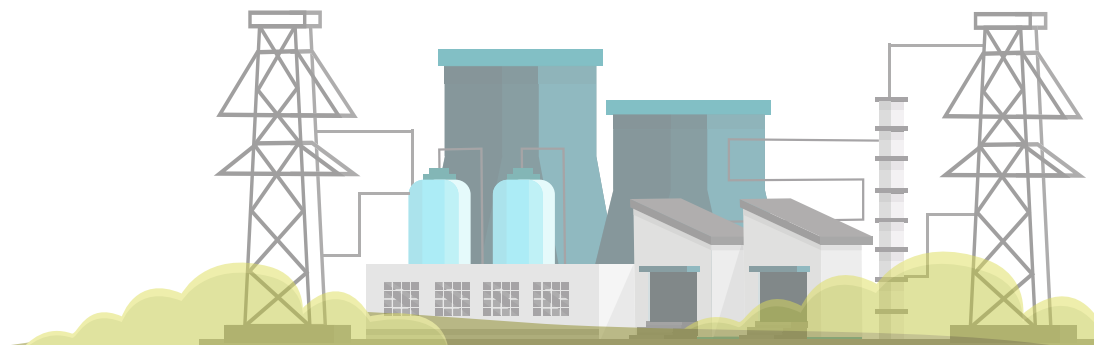
The Nomination Committee’s main responsibility is to spearhead the process for Board nominations and offer recommendations to the Board.

## ESG COMMITTEE

The OPG Board takes on the duty of formulating and executing the Group’s sustainability approach. The core function of the ESG Committee is to enforce the ten principles and attain ESG objectives in the short, medium, and long term. Their additional roles encompass monitoring both strategic and operational challenges, updating the Board, grasping the broader ESG context, defining objectives and milestones, assigning KPIs, and assessing performance based on ESG metrics.

## SHE COMMITTEE

In line with the Factories Act, 1948, we have set up Safety committee to advise the management in improving the safe working environment of workplace. The safety committee has equal number of representatives of Employees/Contract Employees and management with the plant head being the chairman of the committee.





**GOVERNANCE**

**Committees**

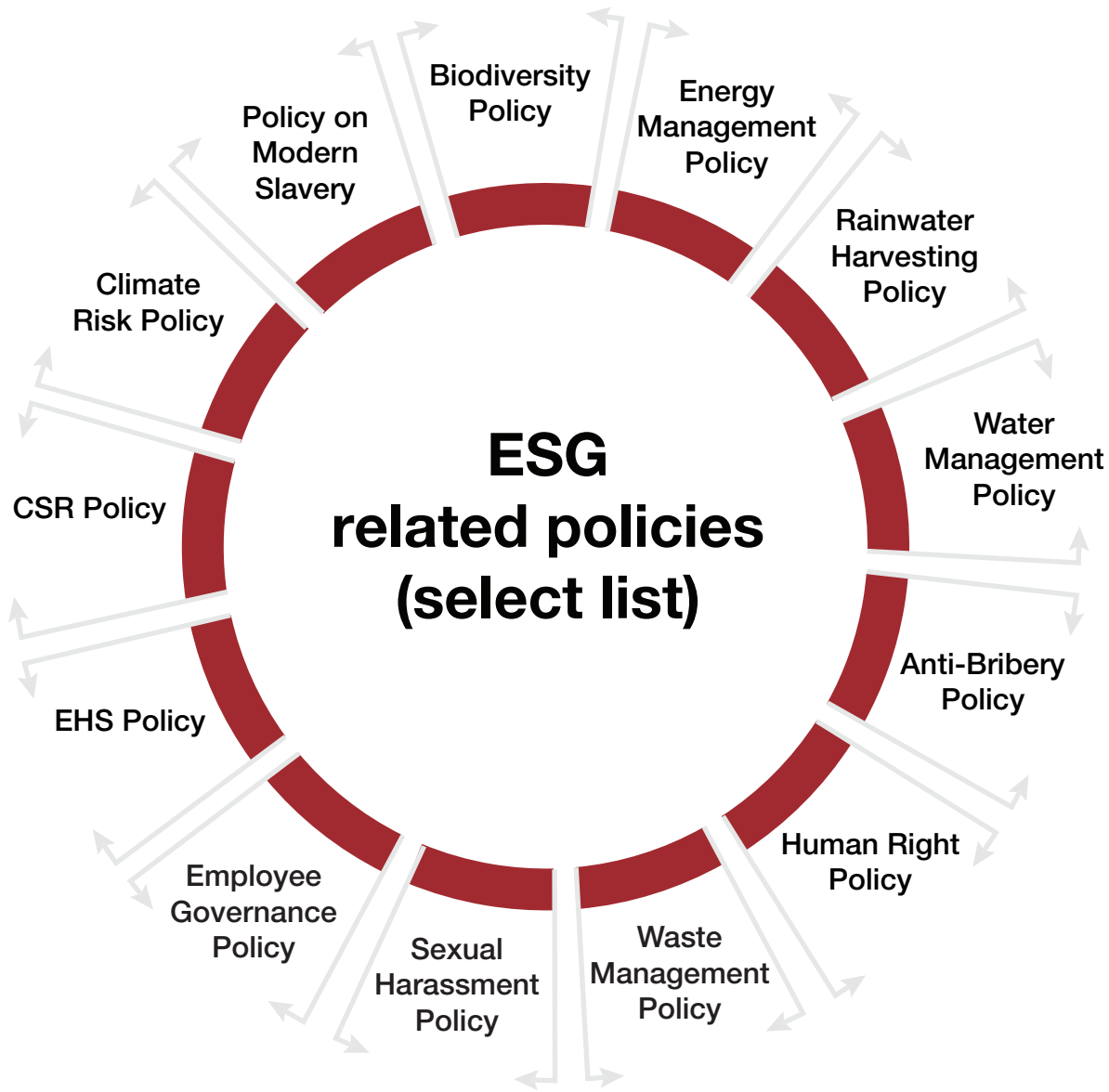
# Organisation Level Committees

The Board sanctioned a tri-level governance framework to efficiently oversee the organisation. This governance model aims to delineate roles and duties at both executive and steering committee tiers, offering a foundation for strategic planning, decision-making, performance oversight, and organisational development.

Via the Central Committee Policy, the Board has endowed the executive and steering committees with the authority to manage and advance the organisation. This policy enable a transparent culture within and among committees and heightening accountability. The Board members undertake strategic oversight, while strategic administration is executed by the Executive Committee, which includes the CEO, CFO, COO, and leaders of primary business units. The Steering Committees shoulder the functional responsibilities of each respective domain. The organisation level committees are:



OPG has implemented policies on the Prevention of Sexual Harassment (PoSH) in the Workplace and Human Rights. Should any individual feel aggrieved, they can lodge a complaint with the Internal committee (IC) team and Central Committee (CC) Team respectively.





**GOVERNANCE**

**Committees**

# Modern Slavery Policy

Our policy on Modern Slavery, as per section 54 of the Modern Slavery Act 2015, ensures OPG maintains zero tolerance for Modern Slavery in our operations and supply chain. Emphasizing human rights, working standards, environmental protection, and social responsibilities, we uphold principles established in the Universal Declaration of Human Rights (1948) and subsequent International Covenants.

Our Board members, seasoned leaders in their fields, prioritize human rights. We ensure fair pay across all levels, oppose discrimination based on gender, religion, ethnicity, or economic status, and strictly prohibit child and forced labor. Our rigorous contractor agreements and pre-employment screenings enforce these standards.

With no reports of discrimination or human rights violations, OPG maintains an impeccable record. While Collective Bargaining Agreements (CBAs) are not currently in place, our workforce has the freedom to join state unions if they choose.





# Memberships & Associations

We hold membership with the Tamil Nadu Power Producers Association. Through this forum, we engage in discussions on various topics, including energy security, power sales, environmental concerns, financing, regulations, and fiscal and legal issues. Our Senior Executives and Management team actively participate in dialogues with entities such as the Government of Tamil Nadu, Ministry of Power, Ministry of Finance, Ministry of Environment, Forests and Climate Change, Central Pollution Control Board, Central Electricity Authority, and Coal India Limited.

# Associations of Board of Directors



**Mr. N Kumar,**  
NON-EXECUTIVE  
CHAIRMAN

Mr. Kumar is a former President of the Confederation of Indian Industry and is currently Chairman of the Indo-Japan Chamber of Commerce & Industry. He is the Honorary Consul General of Greece in Chennai. He is the President of Bala Mandir Kamaraj Trust and Managing Trustee of The Indian Education Trust. He is also a trustee of the World Wildlife Fund for Nature, India and is a former member of the Institute for Financial Management and Research.



## Associations of Board of Directors



**Ms. Avantika Gupta,**  
CHIEF EXECUTIVE OFFICER,  
EXECUTIVE DIRECTOR

Ms. Gupta is a Barrister-at-law, England and Wales from Grays Inn, London. She completed her LLB, Bachelor of Laws from University College London and Bar Vocational Course from Inns of Court School of Law.

She has a vast experience in developing, commissioning and operating power projects and has formed strategic collaborations through continuous stakeholder engagement in the process.



**Mr. P Michael Grasby,**  
NON-EXECUTIVE  
DIRECTOR

Mr Grasby has been a long time Non-Executive Director at OPG Power Ventures. He held directorships at Drax Group Plc. and International Power. He has experience of being a director of power companies in Portugal, Turkey and Pakistan. He was a founder director of Strategic Dimensions, an executive recruitment business for technical, general and financial management roles in the energy, process and engineering sectors.

## Associations of Board of Directors



**Mr. Jeremy Warner Allen,**  
NON-EXECUTIVE  
DEPUTY CHAIRMAN

Mr. Allen is currently a Non-Executive Director of TP Group Plc. Prior to that he was an Executive Director, Board Member and Head of the Growth Companies Team at Cenkos Securities Plc., where he advised a number of AIM companies over a period of 11 years. He was a founding member of Beeson Gregory Limited and responsible for the UK sales desk, a role he retained when Beeson Gregory merged with Evolution Securities in 2002.



**Mr. Ajit Pratap Singh,**  
CHIEF FINANCIAL OFFICER,  
EXECUTIVE DIRECTOR

Mr Singh has over 24 years of experience across mergers & acquisitions, structured finance, corporate finance, corporate commercial, corporate governance, treasury management and investor relations. Prior to joining OPG Power, Ajit has worked with leading corporate houses in India and internationally like JSW, Vedanta, Jaypee, Lohia and Ghazanfar Group in leadership roles. He has also worked with USAID, ADB and IFC (World Bank). He is also members of many illustrious accountancy professional bodies.



GOVERNANCE

Certificates & Awards

# Certificates & Awards

Our dedication to occupational safety and environmental management has been re-validated by the prestigious ISO 45001: 2018 and ISO 14001: 2015 by TÜV SÜD South Asia.

Additionally, continuing with our tradition of taking part in the CEE National Environment Excellence Awards, it is with great pride that we share our victory in two distinct categories-

- **Best Efficient Fuel Utilisation within Private Sector** in the Southern Region
- **Best Practices and New Initiatives** in IPP Coal Plants below 250 MW category.



2024 - Best Efficient Fuel Utilisation Plant Award for Southern Region of India



ISO 45001:2018 Award



ISO 14001:2015 Award



2024 - Best Energy Efficient Unit Private sector under 250 MW category



# Risks & Opportunities

At OPG, we have a systematic approach to risk mapping.

Executive Committee: Risk Liaison with the Board:

The Executive Committee serves as a bridge between operational management and the Board, ensuring effective communication and coordination on risk management strategies.

**Operational Oversight:**

It oversees day-to-day operations and ensures that operational risks, including safety concerns and operational efficiencies, are identified and addressed promptly.

**Strategic Risk Management:**

The Executive Committee focuses on strategic risks such as market fluctuations (e.g., foreign exchange rates, coal supply and pricing) and environmental challenges (e.g., climate change impacts), developing strategies to mitigate these risks while seizing potential opportunities.

**Opportunity Identification:**

It collaborates with management to identify and capitalize on emerging opportunities that align with organisational goals and growth strategies.

# Board:

**Governance and Oversight:**

The Board provides governance oversight, ensuring that the organisation adheres to legal and ethical standards while pursuing its strategic objectives.

**Strategic Direction:**

It sets the strategic direction of the organization, balancing growth objectives with risk mitigation strategies across short-term and long-term horizons.

**Risk Oversight:**

The Board reviews and approves risk management frameworks and policies proposed by the Executive Committee, ensuring alignment with organisational objectives and shareholder interests.

**Stakeholder Communication:**

It communicates with stakeholders, including shareholders and regulatory bodies, regarding the organisation’s risk exposure, mitigation efforts, and performance in managing risks and opportunities.



## Opportunities & Impact:

Identified Opportunities	Potential Impact
<ul style="list-style-type: none"> <li>Increased focus on renewable capacity addition</li> <li>Increase in energy demand due to improved living standard</li> <li>Power demand for electric mobility in the future</li> <li>Focus on enhancing energy efficiency and initiatives to reduce GHG emissions</li> <li>Use of IoT for energy savings</li> </ul>	<ul style="list-style-type: none"> <li>Increase in product portfolio</li> <li>Alignment to changing global preferences (transition towards low carbon economy)</li> <li>Greener operations leading to reduced cost of operations</li> <li>Increased social acceptance due to greener portfolio for power generation</li> <li>Enhanced overall ESG performance</li> </ul>



GRI 201- 2

Identified Risks	Potential Impact	Action Plan
------------------	------------------	-------------

### Economic

<ul style="list-style-type: none"> <li>Availability of quality coal at optimal cost</li> <li>Forex variation</li> <li>Credit risk</li> </ul>	<ul style="list-style-type: none"> <li>Increased operational cost</li> <li>Business continuity risk</li> </ul>	<ul style="list-style-type: none"> <li>Due to the plant’s proximity to a port and design of the boilers, the Company has flexibility of procuring coal from various international and domestics sources and blending different types of coal</li> <li>From time to time the Company enters into fixed price coal supply contracts and/or uses financial hedging instruments</li> <li>When appropriate, forex forward contracts are used to mitigate forex volatility and exposure</li> <li>Negotiate with financial institutions to get favourable credit terms &amp; conditions to reduce credit risk</li> <li>Plant has flexibility to use various grades</li> </ul>
--	--	--

### Environmental

<ul style="list-style-type: none"> <li>Compliance with new laws and regulations</li> <li>Cyclones and other natural calamities</li> <li>Epidemics and Pandemics</li> <li>Irradiance and erratic weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>Increased operational cost</li> <li>Disruption in business due to violation of regulations/norms</li> <li>Business continuity risk</li> <li>Project cost and time overruns</li> </ul>	<ul style="list-style-type: none"> <li>A dedicated compliance monitoring team to monitor compliance with ESG regulations as well</li> <li>Anticipate changes in regulations especially around GHG emissions and set an emissions reduction target</li> <li>Insurance of assets to cover extreme weather-related events as well</li> <li>Inclusion of epidemics &amp; pandemics in the emergency response plan</li> </ul>
---	--	--

### Social

<ul style="list-style-type: none"> <li>Social activism</li> <li>Labor unrest</li> </ul>	<ul style="list-style-type: none"> <li>Business disruption due to labor unrest</li> </ul>	<ul style="list-style-type: none"> <li>Regular engagement with stakeholders are conducted to understand and act upon their concerns</li> </ul>
---	---	--



## GOVERNANCE

## Risks & Opportunities

# Climate Change Risks and Opportunities

Global energy consumption largely hinges on fossil fuels. From developed nations to emerging economies, the reliance on coal for electricity generation is a universal trend regardless of the size of the economy. Yet, there's an increasing agreement about the undeniable threat of climate change and its impending repercussions that must be addressed.

Acknowledging its role in GHG emissions, India formally endorsed the Paris Climate Agreement in October 2016. Committed to preventing global average temperatures from increasing beyond 1.5 degrees compared to pre-industrial levels, India has set mandatory targets. In this evolving landscape, OPG faces both challenges and prospects.

## Transitional / Legal Risks

Some of the transition risks relevant for OPG are regulatory, technological, market, policy and legal risks.

- ♦ **Regulatory Changes:** Coal cess of INR 400 per tonne is levied, effectively serving as a carbon tax for the coal sector. The cess has increased from an initial INR 50 to INR 400 over the years which show the increased costs of environment mitigation. This fund was utilized in the past on National Clean Energy Projects, River cleaning and Development and Biodiversity Conservation. Presently, the fund is used for GST compensation shortfall to the states.

- ♦ **Technological Advances:** Rapid advancements in renewable energy technologies, such as solar and wind power, pose competitive pressures and require adaptation to maintain market competitiveness.
- ♦ **Market Shifts:** Energy markets are changing and this can have potential impact on power consumption patterns from fossil fuels vs renewable energy sources.
- ♦ **Policy and Legal Risks:** Legal challenges or changes in government policies, including carbon pricing mechanisms or subsidies favoring renewable energy, can significantly impact operational planning. OPG Thermal power plant as a going concern depends on coal availability and coal prices both in Indian and International markets. With the price fluctuation due to Russia-Ukraine war now behind us, we look to shield us from such scenarios through a blend of long term PPAs and short term contracts. In the hindsight, we can confirm that the risk impact were reduced due to the foresight of setting up power plants capable of using all grades of coal that can be sourced from Indian and International coal.

## Physical Risk

Some of the major climate-related physical risks are cyclones, thunderstorms, extreme heat, flooding, sea water intrusion etc. Water scarcity is not a risk for this region as water availability depicts that it is not a high water stress area. Some of the earlier flooding events in Chennai and around could demonstrate what extreme weather events could bring. however at OPG Thermal Power Plant, adequate drainage ensured no risk. Disaster preparedness could allow us to extend help to nearby villages.

## Opportunities

Some of the significant opportunities that we have are exploration of renewable sources, hybrid, and energy storage; Similarly, there are opportunities for energy optimisation and energy trading.



# Procurement Practices and Suppliers

## Supplier and Contractor Standards:

- Prohibit child labor.
- Adhere to health and safety standards.
- Ensure timely payment of wages.

## Comply with various regulations, including:

- ESI, EPF & Miscellaneous Provisions Act
- The Minimum Wages Act
- The Factories Act
- The Payment of Wages Act
- The Maternity Benefit Act

## Supplier Evaluation:

- Assess credibility and reputation.
- Emphasise commitments against child labor and discrimination.
- Ensure adherence to local mining and labor laws.

## Coal Sourcing:

- Predominantly source from central India.
- Additional imports from South Africa and Indonesia.
- Prioritise cost-effectiveness and supply reliability over local versus non-local sourcing.

## Office Supplies:

- Source computer equipment, furnishings, and miscellaneous items exclusively from local vendors.

Coal is predominantly obtained from central India, as well as imports from South Africa and Indonesia. We don't adhere to a specific policy favoring local versus non-local suppliers; our primary concern is ensuring cost-effectiveness and supply reliability. For office needs, such as computer equipment, furnishings, and other miscellaneous items, we source exclusively from local vendors.

**In the reporting period, 100% of the products and service providers were local for the Chennai office, however in Tamil Nadu plant, other than coal, around 81.30% of the purchases were local.**



# ENVIRONMENTAL STEWARDSHIP

Environmental Performance and Compliance

Environmental Highlights

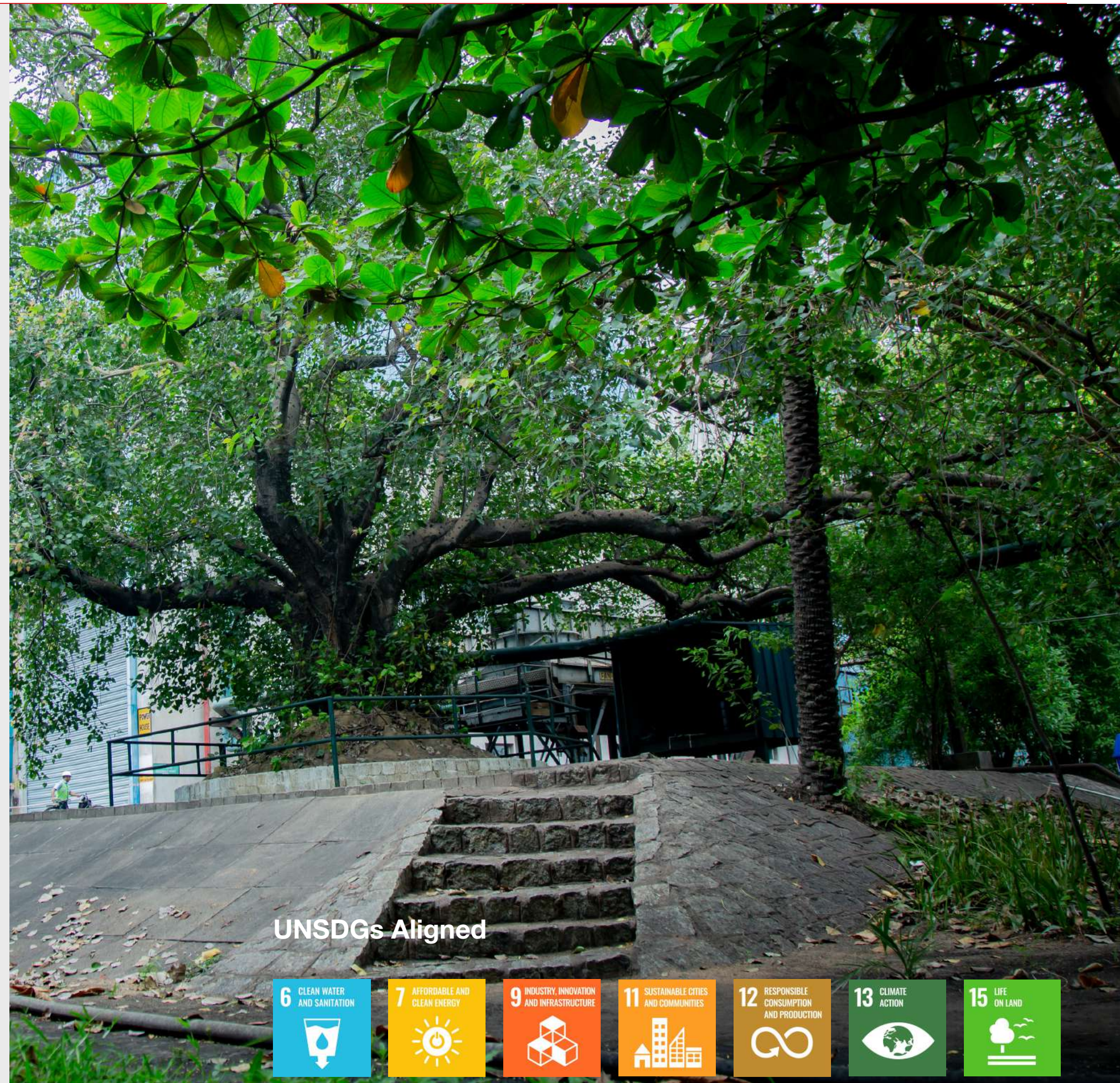
Material and Waste

Water Stewardship

Energy

Emissions

Biodiversity



UNSDGs Aligned





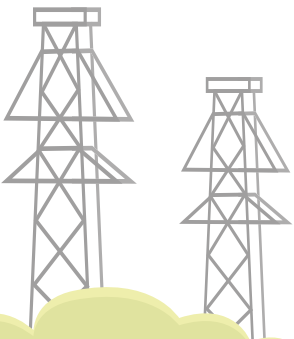
# Environmental Performance and Compliance

At OPG, we understand that the energy sector plays a pivotal role in shaping the environmental landscape. As a responsible corporate citizen, we are deeply committed to ensuring that our growth aligns with the ecological balance of the regions we operate in. We recognize that our operations have a direct and indirect impact on the environment, and we are dedicated to minimising this impact through continuous improvement in our environmental performance and strict adherence to compliance standards.

- We consistently meet and often exceed regulatory requirements.
- We have reduced our specific water consumption to **0.099 m³/MWh** which is a reduction of 47% from FY 2022-23.

# Environmental Performance

- For FY 2023-24, expenditure towards environmental conservation measures amounted to 409,816 GBP
- Maintaining ISO 14001:2015 certification.
- Increase in Rainwater Harvesting collection by increasing roof area.
- Increase in Recharge Pits- cleaning of existing harvesting structures.
- Emission and pollution control device implementation in De-NOx projects, ESPs and bag filters.
- 100% compliance on emission standards.
- Auxiliary Power optimization by fan replacement on existing ACCs with FRP material.
- Continual tracking of noise and light Lux level.
- No instances of fines or financial penalties for non-compliance.
- Plantation to increase green cover within plant boundary as well as increasing biodiversity by planting various local flora species. 102 faunas (terrestrial - 23, aquatic – 46 and aerial – 33) spotted in one year.





ENVIRONMENTAL  
STEWARDSHIP

Environmental Performance  
and Compliance

Environmental Performance and  
Compliance

As good Corporate citizens, we duly comply with all regulations.. Key regulations we adhere to include:

- ◇ The Water (Prevention & Control of Pollution) Act 1974 (and its amendments)
- ◇ The Air (Prevention & Control of Pollution) Act 1981 (and its modifications)
- ◇ The Environmental Protection Act 1986
- ◇ Hazardous Waste Management Handling and Transboundary Movement Rules 2016
- ◇ The Tamil Nadu Factories Rules
- ◇ The Petroleum Act
- ◇ The Factories Act
- ◇ The Tamil Nadu Fire Services Act No. 40
- ◇ The Tamil Nadu Fire Service Rules 1990
- ◇ The Indian Boilers Act 1923

We diligently report to regulatory bodies such as the Tamil Nadu Pollution Control Board, with these reports accessible on our website. We closely monitor any new requirements and promptly work to comply with them.

We recycle 100% of the fly ash produced, supplying it to cement and ash brick industries. We also ensure that used oil and cotton wastes are properly recycled or incinerated through appropriate government approved vendors.





# Environmental Highlights

- Green Belt increased to 37.02% from 33.4% recorded in FY22
- Closed loop water system
- Reduced water consumption through air cooling condenser
- Auxiliary power consumption 8.42%
- 100% compliance on SOx, NOx and PM emissions
- Drought-tolerant plant species planted

## Theme of LiFE Mission: Save Energy

- Save Energy
- Save Water
- Say No to Single Use Plastic
- Adopt Sustainable Lifestyle
- Reduce Waste
- Adopt Healthy Lifestyles
- Reduce E-Waste



# Lifestyle for Environment

Environmental degradation and climate change are global phenomena that even though can occur locally, have an effect on the global population and ecosystems. Several macro measures have been implemented globally over the past two decades to address environmental degradation and climate change, including policy reforms, economic incentives, and regulations but with limited successes. The actions that are necessary at the level of individuals, communities, and institutions have received limited attention, despite their immense potential. The environmental and climate crises can be significantly mitigated by altering the behaviour of individuals and communities.

Prime Minister of India, Mr Narendra Modi introduced the concept of “Lifestyle for the Environment (LiFE)” at COP26 in Glasgow on November 1, 2021. He urged the global community of individuals and institutions to promote LiFE as an international mass movement that prioritises “mindful and deliberate utilisation, rather than mindless and destructive consumption” in order to safeguard and preserve the environment.

Emphasising the significance of individual actions in the pursuit of environmental change, our oraganisation’s sustainability strategy incorporates a “Lifestyle for Environment” (LiFE) approach. The LiFE pledge promotes the adoption of daily habits that minimise the environmental impact of each member of our community. This encompasses straightforward yet significant measures, including the selection of sustainable products, the reduction of water consumption, the conservation of energy, and the reduction of waste. Our objective is to collectively contribute to a healthier planet by cultivating a culture of environmental responsibility and mindfulness.





*Taking pledge for LiFE Mission*

**Pledge:** I pledge to make all possible changes in my daily life to protect the environment. I also commit to continuously motivate my family, friends and others about the importance of environmentally friendly habits.





# Material and Waste

## Material

Coal is the primary fuel source for power generation at our thermal power facility. Secondary fuels such as HSD, and PPF are also utilized to supplement the coal. Understanding the potential negative impact on the environment caused by extracting resources, we are actively transitioning to more sustainable energy sources such as biomass and solar power. This shift demonstrates our commitment to decreasing reliance on limited resources and embracing more environmentally-friendly energy alternatives.

Our production process incorporates a significant increase in the use of renewable resources. For instance, we have doubled our utilisation of wood compared to the previous fiscal year, reaching a total of 1,052.3 MT. Additionally, we have efficiently utilised 105,601 m³ of the RO reject water in various plant processes. We do not consume POPs (Persistent Organic Pollutants) in our operations. Our monthly survey involves using topographic metres to measure coal usage and cross-checking with a weighing scale balance. A physical stock verification is done in addition to employing a flow totaliser to determine the amount of oil. Water usage is measured using a flowmeter.

Material	Unit	Quantity
Coal Consumption	MT	1,751,688
Wood Consumption	MT	1,052.3
HSD Consumption	kL	199.8
PPF Consumption	kL	894.6
DM Water	m³	105,601





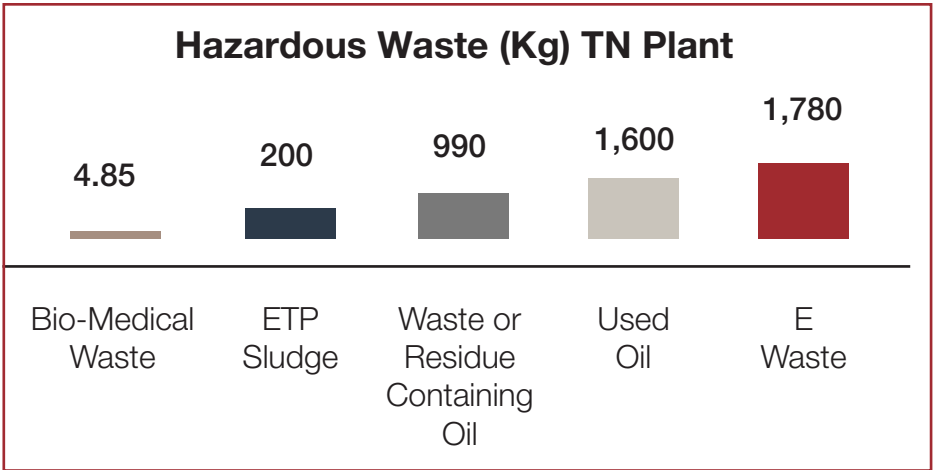
Material and Waste

Waste

Effective waste management is crucial in the energy generation industry. Through our waste management policy, we have stated our commitment to eliminating and reducing wastes and dispose waste properly. We have two categories of wastes generated: Hazardous waste and Non-Hazardous waste.

Waste Category	Quantity (MT)	Percentage (%)
Hazardous waste	4.575	0.003
Non- Hazardous waste	152,428	99.997

**Hazardous Waste Management:** Our focus is to eliminate hazardous wastes from the supply chain; however, if there is any hazardous waste generated it is stored and disposed as per the government norms through government approved agencies. Some of the hazardous waste generated are biomedical, ETP, oil containing residue, used oil and e waste.



Our processes generate a significant amount of ash, which is highly valued by the cement industry for its use in producing clinker and cement. In FY 2023-24, our generation of fly ash reached 121,942 MT, while bottom ash generation amounted to 30,486 MT. Both varieties were fully distributed to industries in the cement and brick sector. It is important to note that we have avoided any international shipments of our waste. We continue ban on single-use plastics within the plant area. In addition, burnable waste like cardboard is used alongside biomass fuel for generation, while wet waste is provided to nearby villagers as cattle feed. We organised educational sessions for our employees and contractors to highlight the significance of reducing hazardous waste.





## Water Stewardship

Although Gummidipondi is well endowed with water, but as at regional level there is water scarcity, there is considerable awareness on water security. Two major areas of intervention that underpins our water management approach are Closed-loop Water System:

**Water Management:** OPG has implemented a closed-loop water system across its operations.

**Efficiency Measures:** Our Effluent Treatment Plant (ETP), Sewage Treatment Plant (STP), and closed-loop system facilitate efficient water recovery from liquid waste.

**Zero Liquid Discharge (ZLD):** Any non-recoverable water is directed to a solar pond for evaporation, ensuring our facility operates as a Zero Liquid Discharge Plant (ZLD), underscoring our commitment to sustainability.

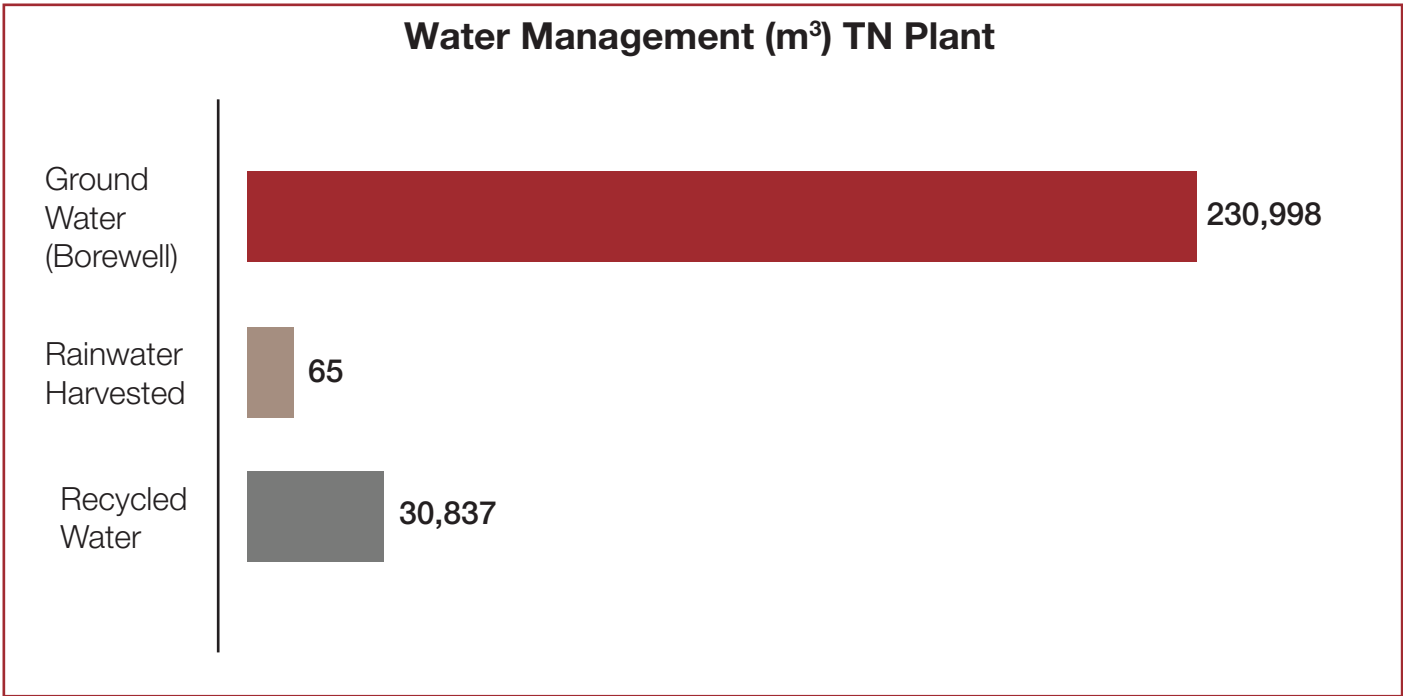
The second approach is to avoid water usage where possible by using alternative technologies. Air Cooled Condensers (ACC) System:

**Technology:** OPG utilizes Air Cooled Condensers (ACC), a direct dry cooling system designed to efficiently cool exhaust steam from turbines, thus conserving water resources.

**Mechanism:** ACC cools exhaust steam by circulating it through finned tubes with fans, releasing heat directly into the atmosphere. This eliminates the need for evaporative water cooling, effectively functioning as a “Zero water cooling system

We primarily source our water from borewells. In addition, water from the first and second stages of both ETP-1 and ETP-2 is recycled. We also utilise rainwater directly for our needs. Out of the total amount, 30,837 m<sup>3</sup> of water is reclaimed from the ETP, while 1,529 m<sup>3</sup> of treated water from the STP is used for the development of the Green Belt.

The facility features a rooftop rainwater harvesting system, which includes eight storage recharge pits and desilting chambers. In addition, there are 21 standalone recharge pits, 26 in stormwater trenches and runoff zones, and one percolation pond.

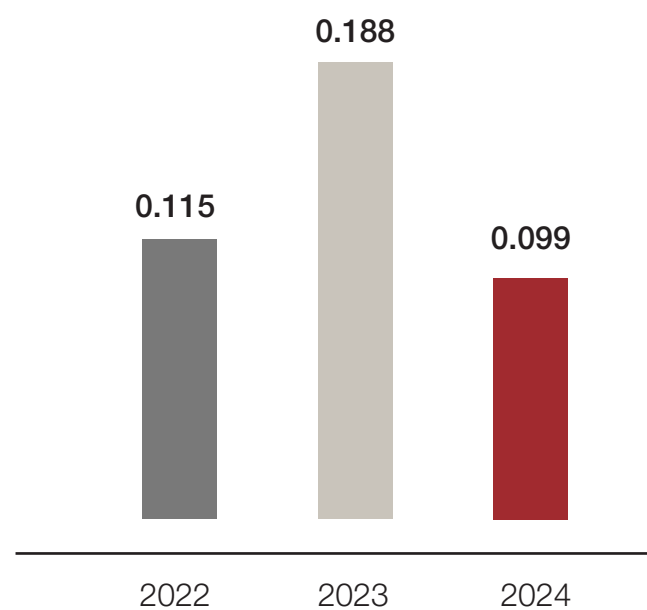


Water usage in our facility is spread out among various areas. We utilise demineralised water specifically for steam generation. Water is used for personal purposes in our canteen facilities and restrooms. We utilise water from our sewage treatment plant for landscaping purposes. In addition, we utilise ETP reject water for dust suppression controls.

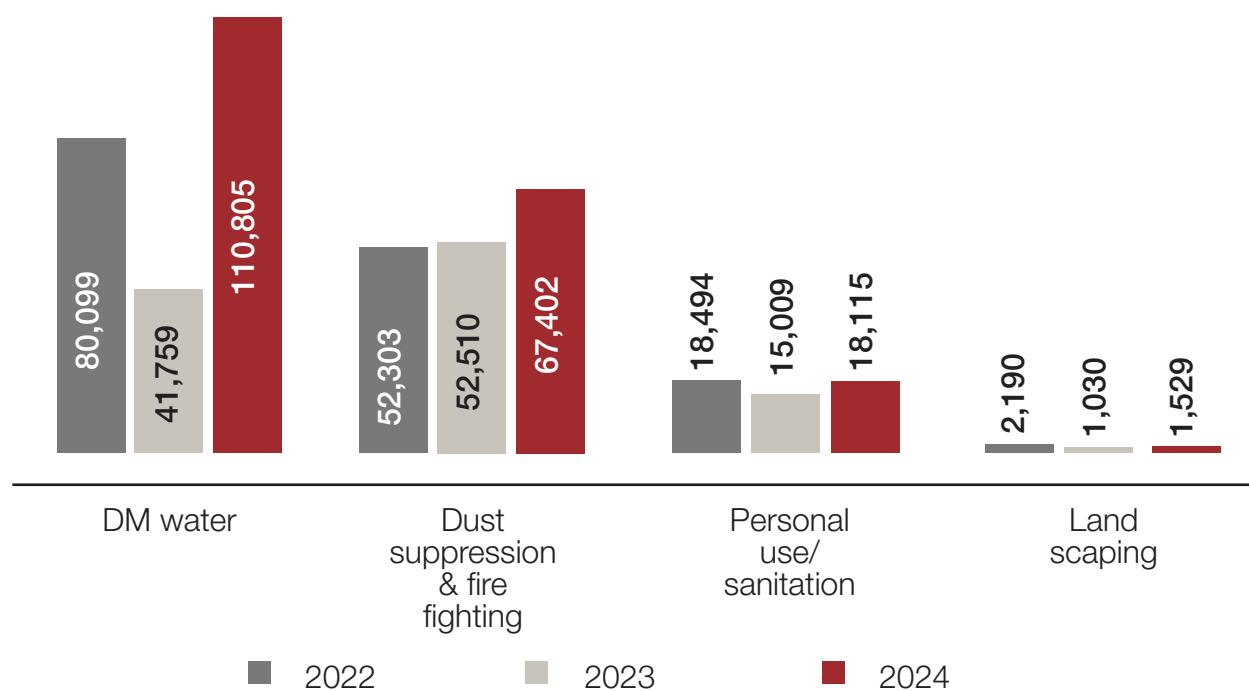
**Total borewell water withdrawal at TN Plant is 230,998 m<sup>3</sup>**



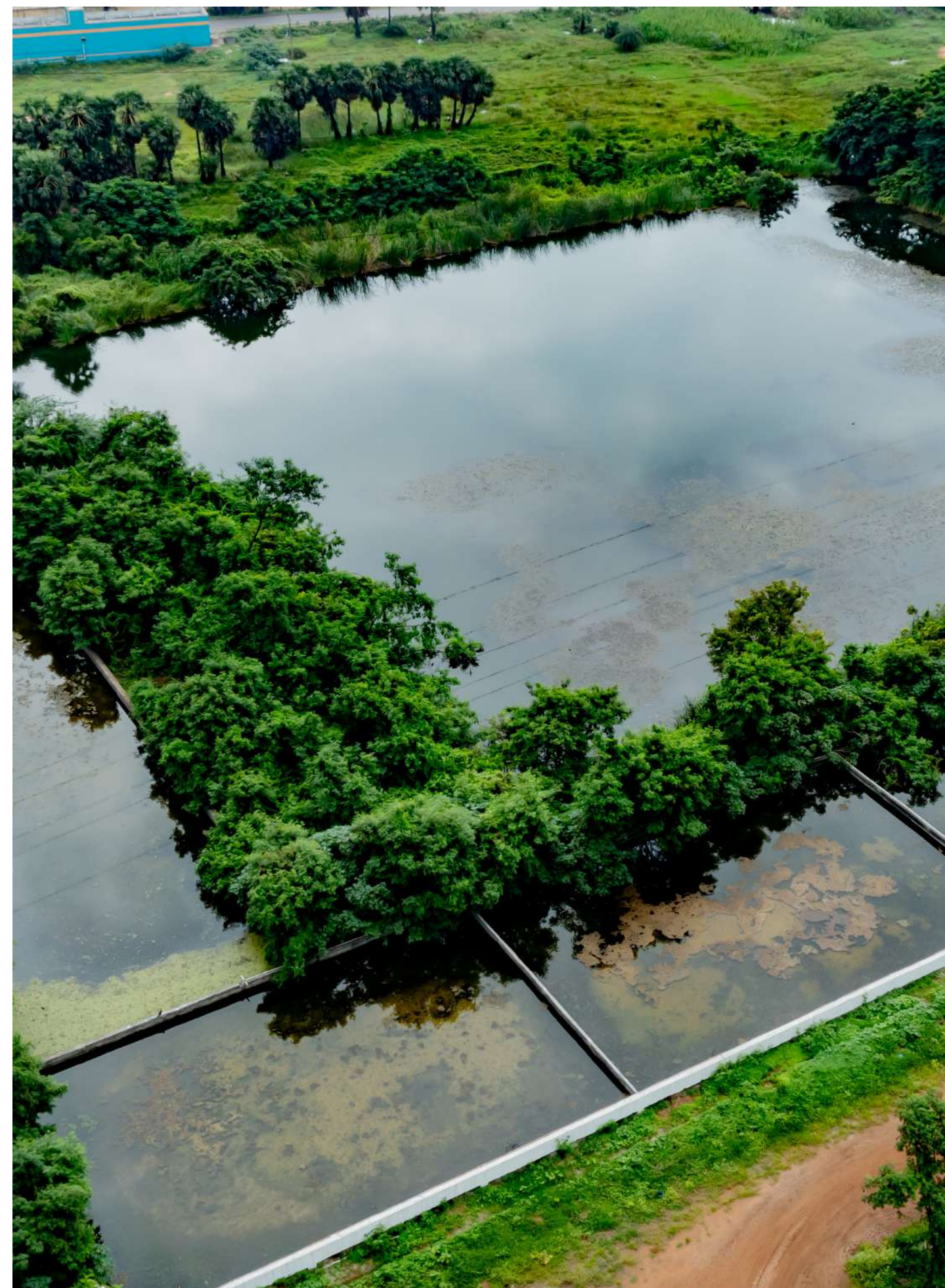
**Specific Borewell Water Consumption (m<sup>3</sup>/MWh)**



**Water Use by TN Plant (m<sup>3</sup>)**



Specific water consumption by power generation (m<sup>3</sup>/MWh) has reduced by 47% from 0.188 in 2022-23 to 0.099 in 2023-24.





The plant has undertaken the following water conservation efforts for the year 23-24:

**Rainwater and Roof Top Harvesting:**

- » Roof top rainwater is harvested and stored in the raw water storage tank.
- » Pre-monsoon activities included cleaning all 19 rainwater harvesting pits and 26 recharge pits in storm water trenches and runoff areas.
- » Two additional recharge pits were constructed in FY 23-24.
- » Implemented contour trenches and gully block arrangements to manage runoff rainwater.

**Ground Water Study:**

Conducted an independent hydrological study with a Ground Water Consultant (accredited by the Central Ground Water Authority, Govt. of India and a former Regional Director, CGWB, Govt. of India) to evaluate current ground water conditions in terms of quantity and quality.

**Awareness Programs:**

Frequently conducted awareness programs on water conservation (such as World Water Day, Earth Day, World Environment Day, World Biodiversity Day, etc.) for contractors and employees.

**Tree Plantation:**

1,028 saplings were planted within the premises over the past year.

**ETP Efficiency:**

Conducted a chemical assessment to explore ways to increase the recovery percentage of the Effluent Treatment Plant (ETP).

- ◇ Specific water consumption in FY 2023-24 was 0.099 m³/MWh compared to the MoEF & CC set limit which is 3.5 m³/MWh for plants installed prior to Jan 1, 2017
- ◇ Low water consumption, 0.099 m³/ MWh compared to Indian average of 4.0 m³/ MWh, due to air cooled condensers instead of Cooling Towers or ‘Once Through Cooling’ (OTC) for condensing process

Specific Water Consumption	Units	2023-24	2022-23
Power Generated - TPP	MWh	2,322,589	586,940
Total Water Consumption	m³	197,491	110,308
Specific Water Consumption	m³/MWh	0.099	0.188





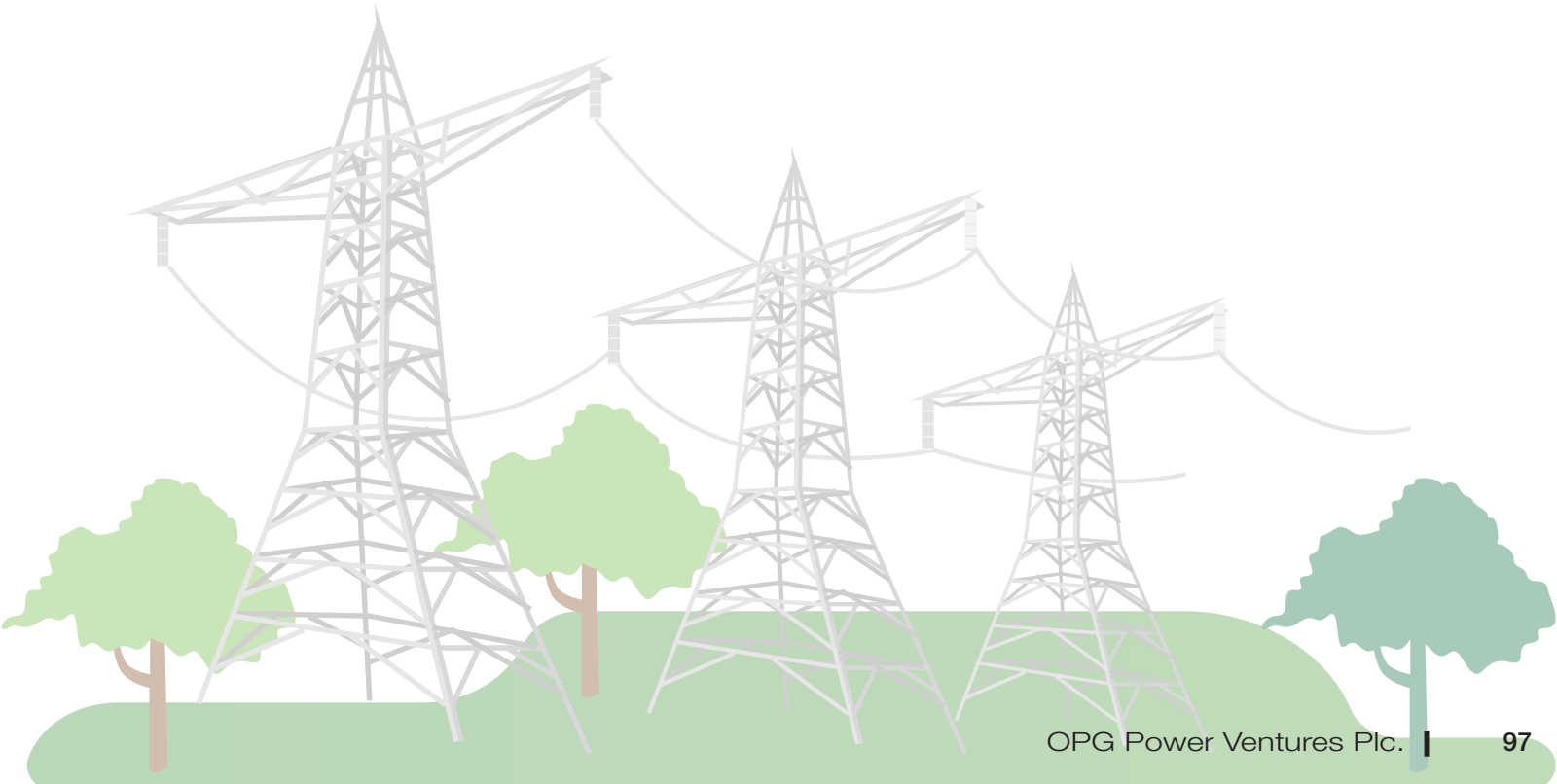
# Rainwater Harvesting



# Social Scheme Implementation

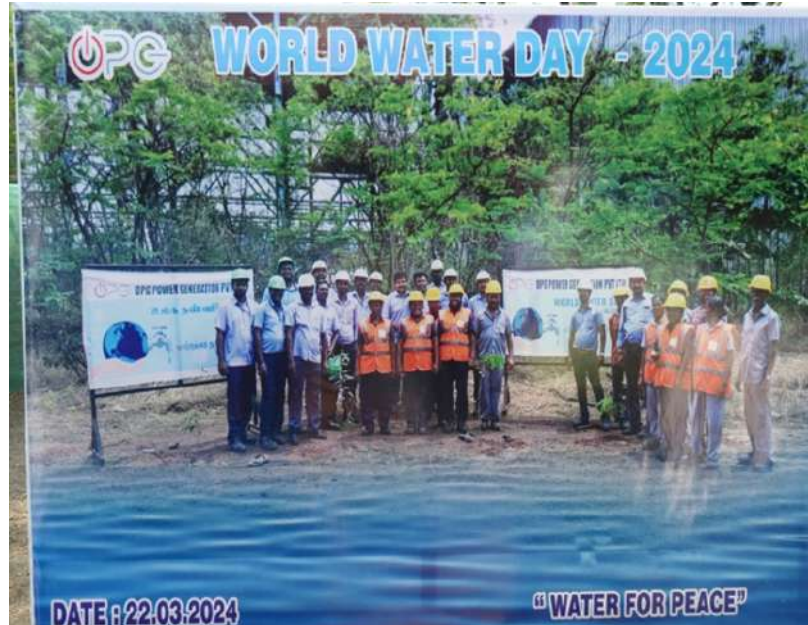


» Restoration of Water Bodies- Pethikuppam Pond Desilting





## World Water Day Celebration



### World Water Day – 22<sup>nd</sup> Jun 2023

The program began with the unveiling of a banner by the Environment Team, emphasizing the importance of preserving this precious resource. Attendees paid homage to Tamil (as mother) through the traditional Tamizh Thaaai Vaazhthu.

Our esteemed chief guest Mr. Vasudevan (Joint Chief Environmental Engineer – TNPCB), delivered an insightful speech on water awareness.



Team building activities & drawing competitions among employees and contractors towards water savings initiatives.



Participants collectively pledged to adopt water-saving practices, and the event concluded with the National Anthem along with distribution of mementos.

We aim to continue our efforts beyond this event, ensuring that every drop counts in our journey toward a water-conscious future.



# Sustainability Day Celebrations – FY 24



World biodiversity day celebrated on 22<sup>nd</sup> May, 2023



World ozone day celebrated on 16<sup>th</sup> September, 2023



World environment day celebrated on 5<sup>th</sup> June, 2023



National pollution control day, celebrated on 2<sup>nd</sup> December, 2023



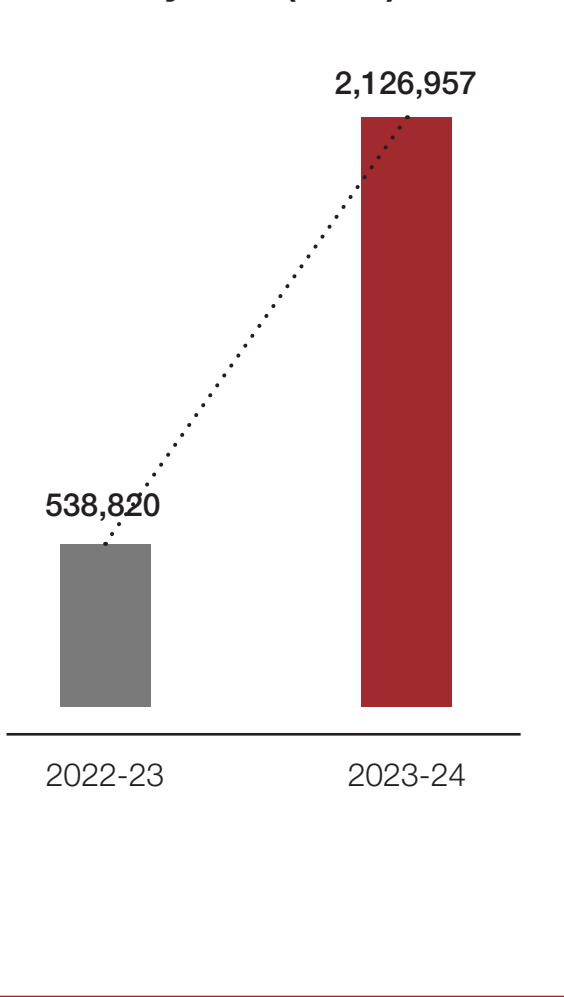
Energy

During the fiscal year 2023-24, the Tamil Nadu thermal plant generated an impressive 2,322,589 MWh of electricity. From this, 195,632 MWh was used as auxiliary power, while the remaining 2,126,957 MWh was exported.

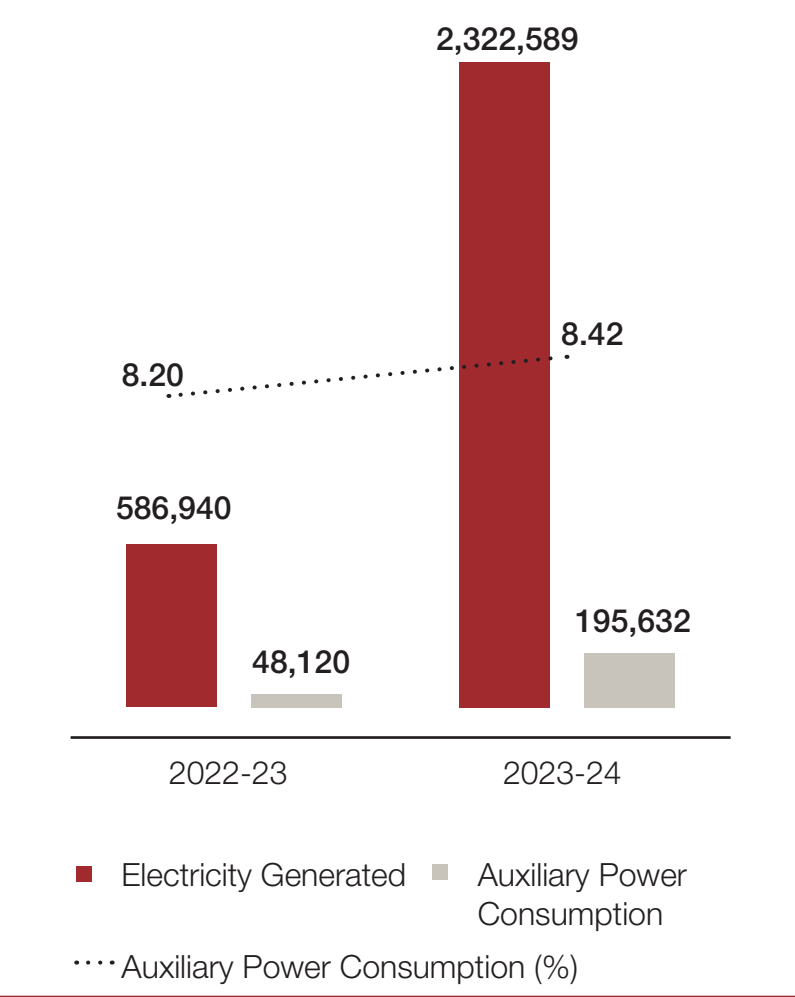
Generation of 2.32 billion units of electricity has led to significant increase of 42.1% from previous year. Deemed plant load factor (PLF) stood at an impressive 69.6%.

OPG increased its Plant Load Factor (PLF) by effectively utilising its generating capacity as more profitable electricity supply contracts became available. The company supplied energy to the Tamil Nadu state grid, other Indian states, and facilitated power exchanges. Additionally, OPG’s strong trading performance enabled a 12.18% reduction in debt over the year, bringing it down to ₹28.63m. This ongoing effort to improve the balance sheet demonstrates OPG’s commitment to financial stability.

Electricity Sold (MWh) TN Plant

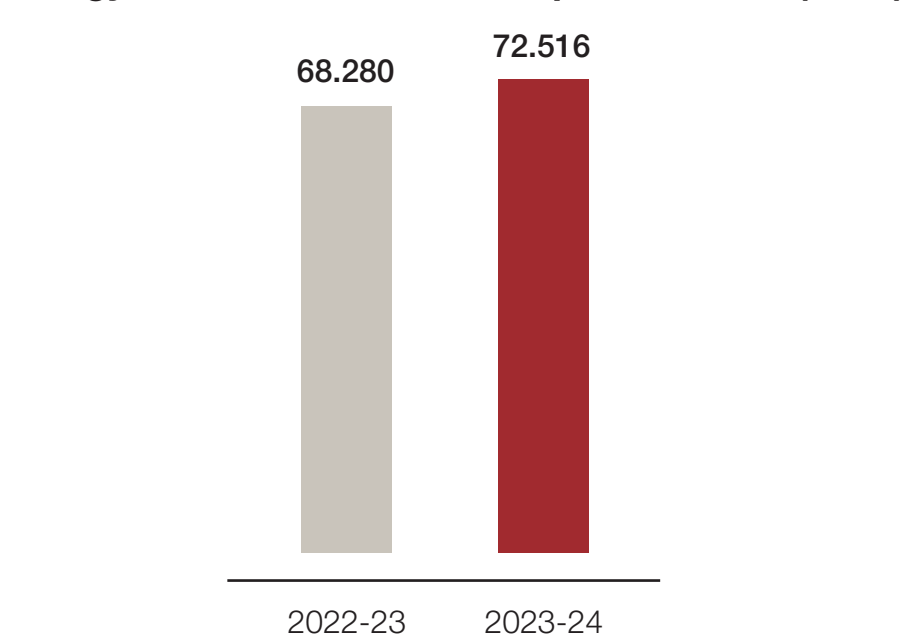


Electricity & Auxiliary Power (MWh) TN Plant



The Chennai office’s electricity consumption for the year was 72.516 MWh, marking an increase from the previous fiscal year, FY 2022-23.

Energy Consumed MWh at Corporate Office (India)



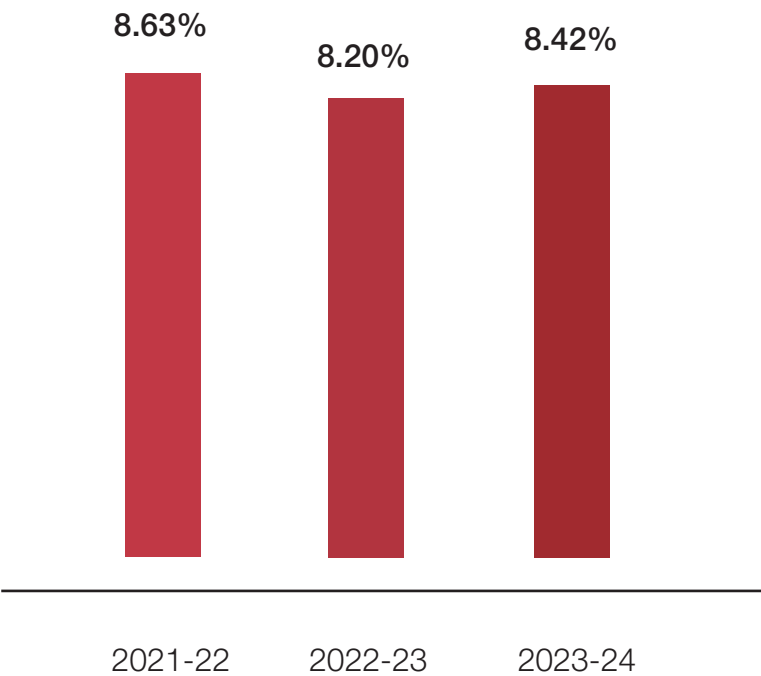


## Energy

### Auxiliary Power Consumption

For a power producing company, auxiliary power consumption refers to the energy consumed by various supporting systems and equipment required to operate the plant. Key auxiliary systems include the feedwater pumps, boiler feed pumps, cooling water pumps, air compressors, and fans used for air and flue gas handling. Therefore, reducing auxiliary power consumption is crucial for improving the plant’s overall efficiency and reducing per unit operating costs.

Trends in Auxiliary Power Consumption in % TN Plant

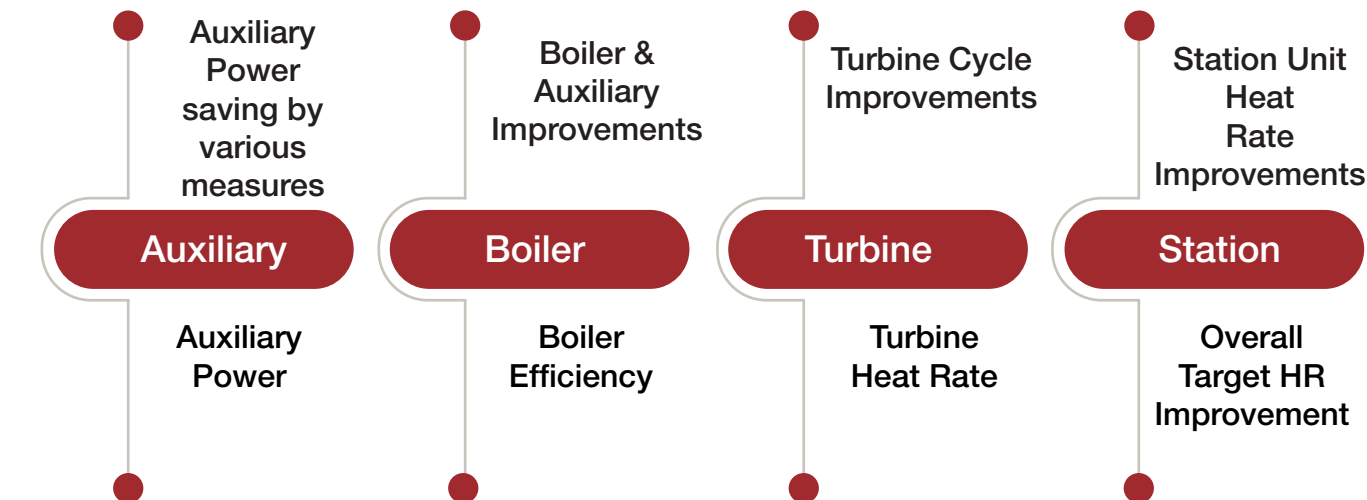


OPG started construction of 2.9 MWdc Ground mounted Solar Power Plant at the Gummidipoondi site. The Solar Power Plant is expected to be commissioned by the end of August 2024, with an estimated annual reduction in CO<sub>2</sub> emissions around 5,837 MT of CO<sub>2</sub>.

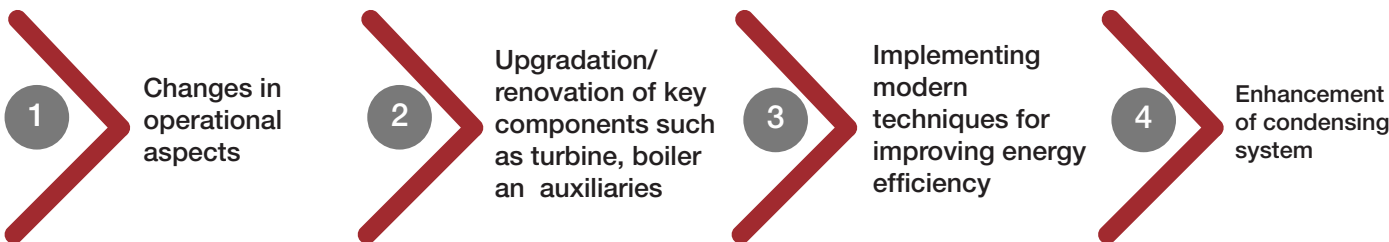


## Energy Savings Initiatives

### HEAT RATE IMPROVEMENTS- TARGET



### ACTION PLAN FOR STATION OPERATING HEAT RATE (SOHR) REDUCTION



	Units	Achieved Savings		Equivalent Coal Savings	CO <sub>2</sub> Emission Abated (MT)
		Boiler Efficiency Improvement	kWh	MT	
CEP Impeller Trimming	III	-	23	85.24	136.97
LED Lighting	Station	-	43	62.27	100.06
Insulation replacement	I	0.02%	-	62.93	57.52
Burner Internal replacement	I	0.24%	-	757.15	692.10





## Emissions

Traditional thermal power plants, which rely on fossil fuels like coal, oil, or natural gas, are known to emit a range of harmful pollutants into the atmosphere. The extent and type of these emissions can vary depending on the fuel used, the technology employed, and the protective measures implemented. Pollutants are typically classified into different categories:

**Greenhouse Gas Emissions:** These gases significantly contribute to the greenhouse effect, accelerating global warming. Key emissions from power plants include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and fluorinated gases, with their impact measured in carbon dioxide equivalents (CO<sub>2</sub>e).

**Airborne Pollutants:** Particulate matter, nitrogen oxides (NOx), sulphur dioxide (SO<sub>2</sub>), and carbon monoxide (CO) directly affect air quality and public health. The release of heavy metals can also have detrimental health effects.

At OPG, we are committed to reducing greenhouse gas emissions through advanced technologies, a shift towards biofuels, and solar energy utilization. Following the policy update on December 22<sup>nd</sup>, 2022, we have integrated 5% biomass pellets, primarily from agro-residue, with coal in thermal energy generation to minimise our carbon footprint. For this, 120 MT of Biomass residue (Excess from farmers) is procured to eliminate stubble burning.

## Regulatory Compliance and Emission Standards

In December 2015, the Ministry of Environment, Forest and Climate Change (MoEF&CC) set new emission standards, capping Oxides of Nitrogen (NOx) at 300 mg/Nm<sup>3</sup> and Sulphur Dioxide (SO<sub>2</sub>) at 600 mg/Nm<sup>3</sup> for OPG Power. On October 22<sup>nd</sup>, 2020, the NOx emission limit was revised to 450 mg/Nm<sup>3</sup> for Thermal Power.

Plants (TPPs) installed between January 1<sup>st</sup>, 2003, and December 31<sup>st</sup>, 2016. Following stakeholder representations, timeline relaxations were granted for various plant types as per the directive issued on April 1<sup>st</sup>, 2021, under sections 3, 6, and 25 of the Environmental Protection Act, 1986. For OPG Power Generation Pvt Ltd, the deadline for NOx reduction project implementation is extended to December 31<sup>st</sup>, 2024, and for SO<sub>2</sub> emission reduction to December 31<sup>st</sup>, 2026.

## De-NOx OFA Project Implementation

To align NOx emissions with regulatory limits during part-load operations and when using off-specification coals, we conducted a detailed technical feasibility study. The decision was made to implement a combustion modification system with Over Fired Air (OFA) technology and secondary air damper replacement.

In FY23, the De-NOx OFA project was successfully implemented in Unit-2. For FY24, the project was implemented and commissioned in Unit-1, with the following performance results:

Unit-1 De NOx Performance				
Load (%)	Mill Combustion	NOx Without De-NOx System	NOx with OFA System	% Reduction
70%	Mill - A & C	319	249	22
55%	Mill - A & C	440	363	18
60%	Mill - B & C	518	421	19

For FY25, the De-NOx project implementation is planned for Unit-3. The De-SOx (Sulphur Oxides reduction) Project is currently underway, with a dry technology approach and the target date of December 2026 for all four units.



GHG Scope Emissions

In this section, we delve into the critical aspect of greenhouse gas (GHG) emissions within our power generation operations. By transparently reporting our emissions, we demonstrate our commitment to sustainability and responsible energy generation. Let's explore the data, trends, and strategies that shape our environmental impact.

Scope 1 emissions

For the fiscal year 2023-24, the overall Scope 1 emissions amount to 27,11,811.8 tonne of CO<sub>2</sub>e. These emissions primarily stem from the burning of primary, secondary, and biomass fuels for power generation as well as fugitive emissions from the handling and storage of coal. Approximately 96.98% of the Scope 1 emissions are attributable to coal combustion, our primary fuel source, 3% from fugitive emissions and some negligible emissions from mobile combustion.

Emission by Scope		
	tCO <sub>2</sub> e	%
Scope-1	2,711,811.8	99.72
Scope-2	730.7	0.03
Scope-3	6,788.7	0.25
Total	2,719,331.2	100.00

Emission by Gases		
	tonne	tCO <sub>2</sub> e
CO <sub>2</sub>	2,633,863.2	2,633,863.2
CH <sub>4</sub>	2,927.6	81,972.5
N <sub>2</sub> O	13.2	3,495.6
Total		2,719,331.3

The breakdown of GHG gases under Scope 1 emissions includes 2,626,365.9 tonne of CO<sub>2</sub>, 2,927.3 tonne of CH<sub>4</sub>, and 13.14 tonne of N<sub>2</sub>O.

Scope 2 emissions

For the fiscal year 2023-24, our Scope 2 emissions amounted to 730.7 tonne of CO<sub>2</sub>e. The primary contributors to these emissions are electricity imported from the grid-TPP, accounting for 667.9 tonne of CO<sub>2</sub>e, and the power usage at our corporate office in India, contributing 62.8 tonne of CO<sub>2</sub>e.

Scope 3 emissions

For Scope 3 emissions, we have tracked the diesel usage in our contracted vehicles for coal transportation. The total emissions under Scope 3 come to 6,788.7 tonne of CO<sub>2</sub>e. This consists of 6,766.5 tonne of CO<sub>2</sub>, 0.274 tonne of CH<sub>4</sub>, and 0.055 tonne of N<sub>2</sub>O.

For our Tamil Nadu Thermal plant, we provide bus transportation for our employees. In contrast, at our Chennai office, most staff members utilize the available public transport, including buses and the metro. Conveniently, our office is just a two- minute walk from the metro station. Regarding primary raw material transportation, we ship from Indonesia to Port Paradip and then from Port Paradip in India to Ennore. For the short journey from Ennore to Gummidipoondi, we currently use trucks. However, as the railway network grows, we are keen on transitioning to rail freight for our material transportation in the future.



Emission by Scope						
S.No	Details	Catagory	CO <sub>2</sub> tonne	CH <sub>4</sub> tonne	N <sub>2</sub> O tonne	tonne CO <sub>2</sub> e
1.	Direct Emissions (Scope-1)	Stationary Combustion	2,626,102	18.08	13.14	2,630,089
		Mobile Combustion	0.00	0.00	0.00	0.00
		Fugitive Emissions	264.3	2,909.24	0	81,723
2.	Indirect Emissions (Scope-2)	Purchased Electricity Consumption	730.66	0	0	731
3.	Other Indirect Emissions (Scope-3)	Coal transport (contracted vehicles)	6766.5	0.274	0.055	6789
4.	Total Emission		2,633,863.2	2,928.5	13.2	2,719,331

Emission Intensity Tamil Nadu Plant			
Details	UOM	FY 2023-24	FY 2022-23
Scope-1	tCO <sub>2</sub> e	2,711,811.8	707,008
Scope-2	tCO <sub>2</sub>	730.7	1,635
Scope-3	tCO <sub>2</sub> e	6788.7	2,142
Total	tCO <sub>2</sub> e	2,719,331	710,785
Total Emission Intensity	tCO <sub>2</sub> e/MWh	1.278**	1.09*

\*In FY23, Karnataka solar plants have been included. Calculation as per equity-based approach.

\*\*The calculations are as per operational basis approach as carried out in FY 24 and Karnataka solar plants are not included.

GRI 305- 1, 2, 3, 4, 5





## Goals



“Do your little bit of good where you are; it’s those little bits of good put together that overwhelm the world.”



Air Emissions

Air Emission Reduction Initiatives:

Awareness and Targets:

- » OPG recognises the harmful effects of air pollutants such as particulate matter, NOx, and SOx.
- » Targets have been set for air emission reduction under
- » De-NOx and De-SOx projects.
- » Electrostatic Precipitators (ESP) have been installed to address particulate emissions.

Government Compliance:

In accordance with Government Gazette notification G.S.R. 682(E) dated 5<sup>th</sup> September 2022, OPG has specific deadlines for project implementation.

De-NOx Projects:

NOx reduction projects have been completed for units 1 and 2.

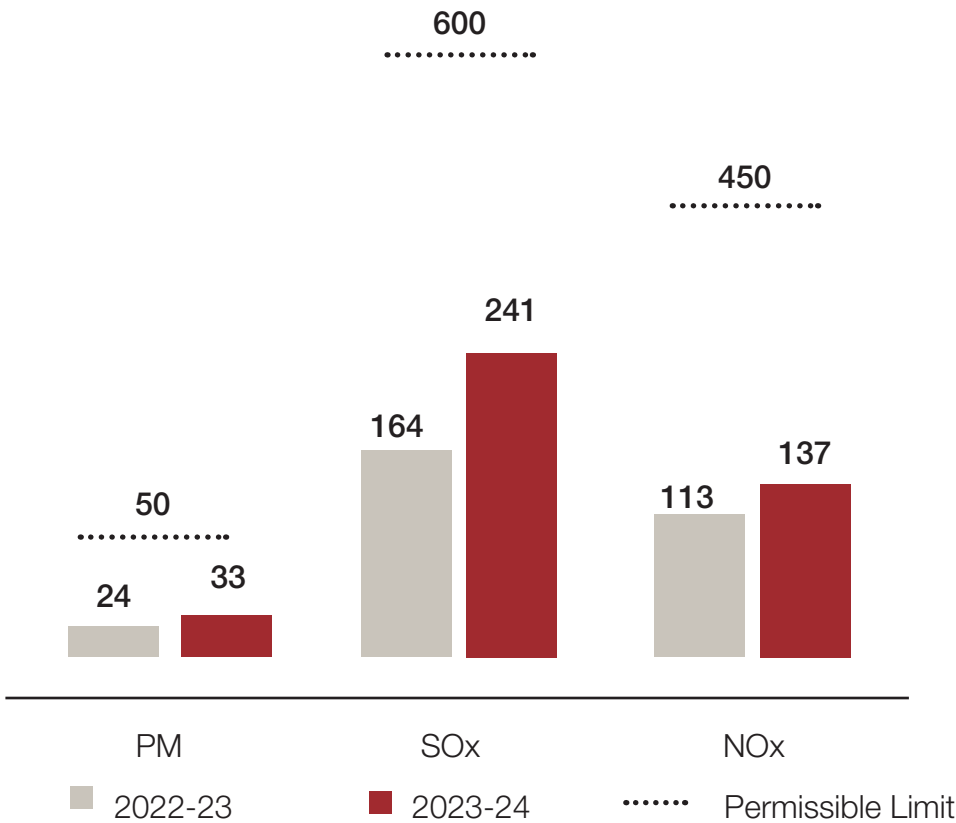
The project for unit 3 is currently in progress.

For unit 4, NOx values are within the norms, so a De-NOx system is not required.

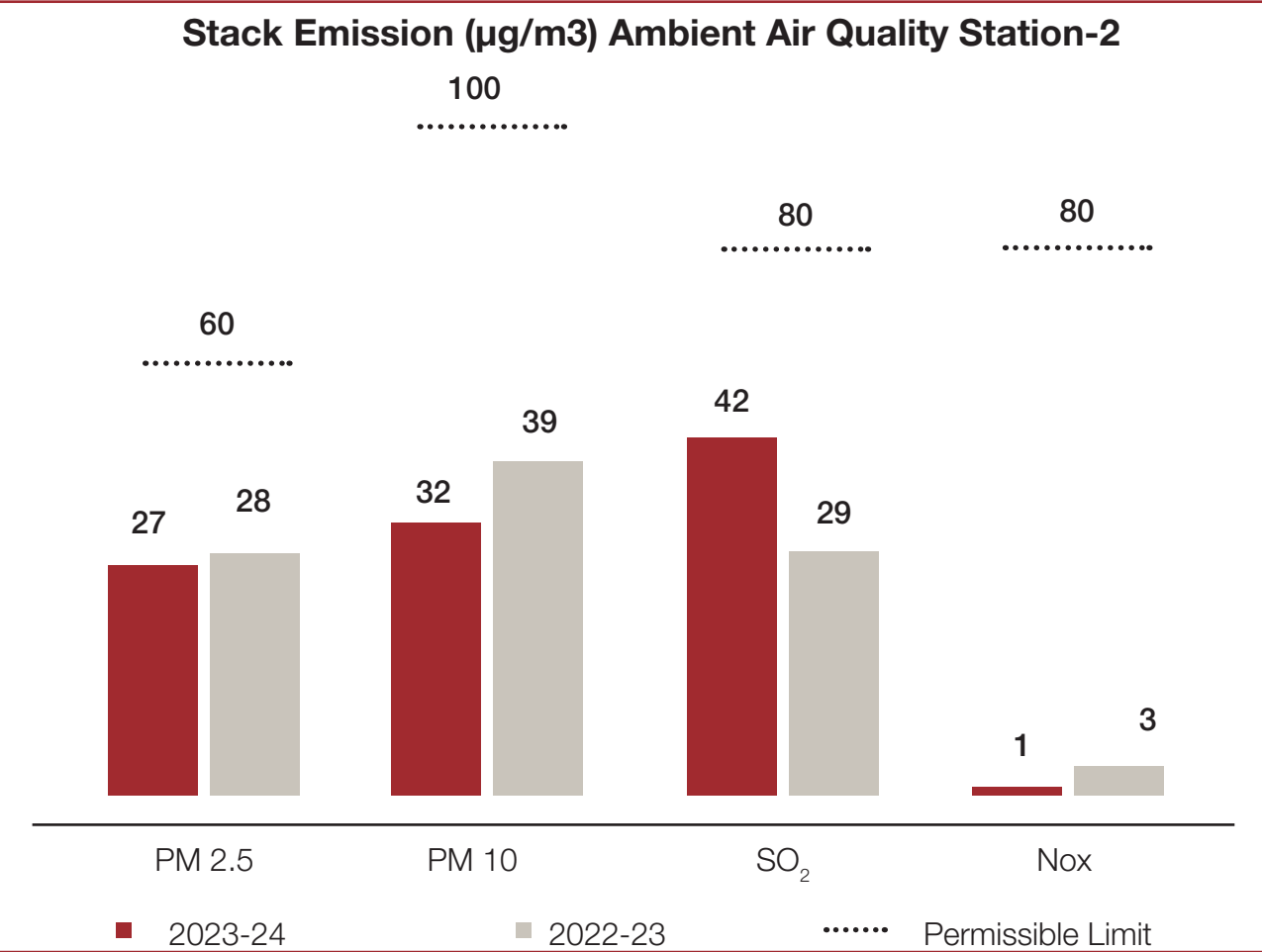
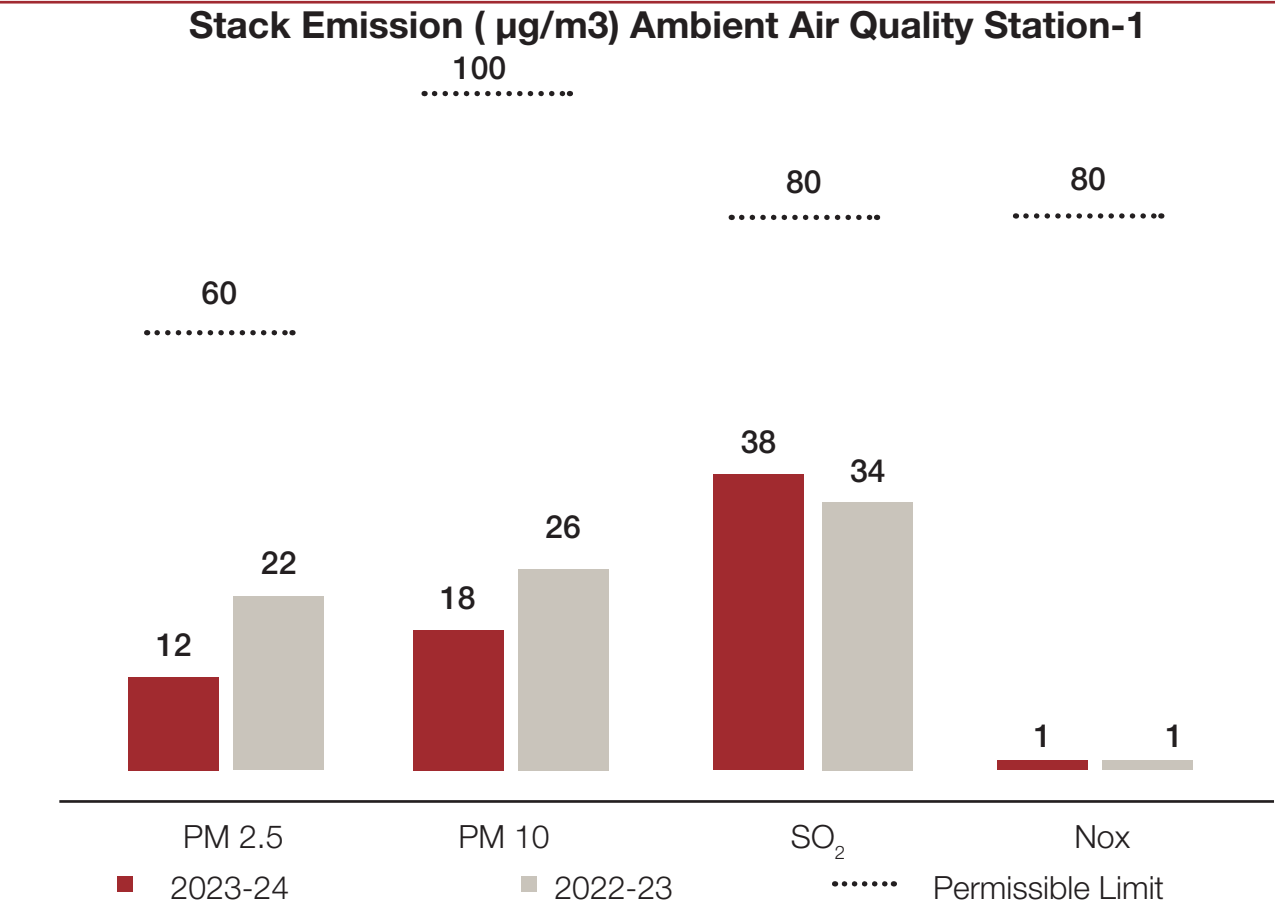
SOx Emission Reduction:

- » The SO<sub>2</sub> emission reduction project has a target completion date of 31<sup>st</sup> December 2026.
- » For parameters other than SO<sub>2</sub>, the deadline is 31<sup>st</sup> December 2024.
- » The dry De-SOx project is in progress, with a target to complete all four units by 2026.

Stack Emission (µg/m3) TN Plant







GRI 305- 7

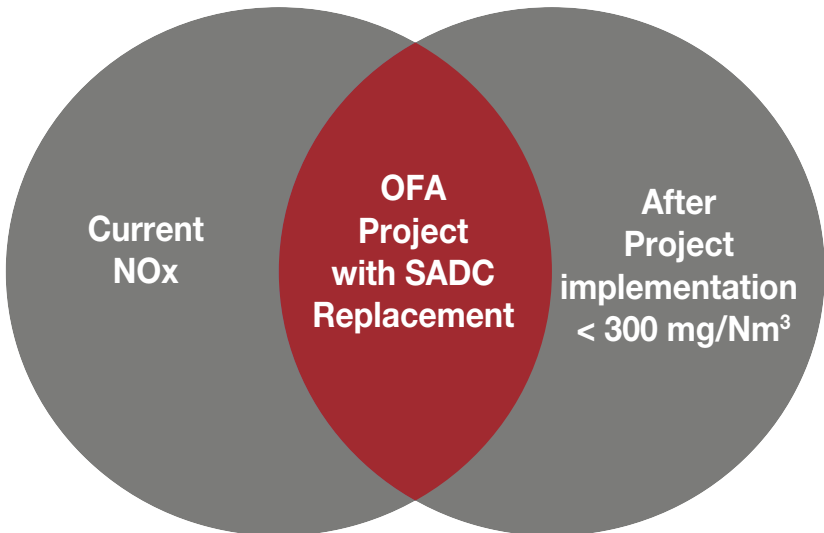




Case Study: De-NOx project

Unit-II De-NOx Over Fired Air System (OFA) Project

To meet emission norms declared by Ministry of Environment, Forest and Climate Change (MoEF) and Climate Change (MoEF), OPG planned to implement De-NOx OFA project with replacement of secondary air damper replacement.



Environment (Protection) Second Amendment Rules, 2022  
As per MoEF Gazette Notification dated 5<sup>th</sup> Sep 2022,  
OPG falls under Category C.

Post the successful completeion of De-Nox project implementation last year at our Unit-II, We have executed and commissioned a similar project at our Unit-I facility.

Based on technical feasibility study it was decided to go with Combustion modification system (Primary control measure) with Over Fired Air system (OFA) technology and Secondary air damper replacement.. Detailed CFD analysis was done to design the system to increase air inflow promoting turbulence and thereby better mixing of the volatile particles. The additional air helps in reducing the NOx emission by decreasing flame temperature and complete combustion..

The NOx OFA system will also be installed in Unit-III in FY 25. Unit-IV already complies with the emission norms and hence will not require the modification.





## Biodiversity

The earth supports myriad forms of life making it a vibrant and interconnected home. Biodiversity underpins critical ecosystem services, bees, butterflies, and birds which ensures food production. Forests and oceans absorb and store carbon dioxide, contributing to climate regulation. While wetlands and mangroves filter pollutants from water, enhancing water quality. However, - human activities like deforestation, pollution, overfishing, and habitat destruction—jeopardise the delicate balance. Climate change exacerbates these challenges, altering habitats and migration patterns.

There are two approaches to conserve biodiversity, one is conserving resources, especially water and reducing eco-footprint. The other is actively engaging to enhance biodiversity and enable life to prosper around our premises.

Our thermal power plant is not situated in vicinity of any protected area or national park.

Our region is home to a diverse range of local flora and fauna. An Environmental Impact Assessment conducted around the OPG plant identified 64 different plant species. To promote and protect the local biodiversity, we have designated 30% of our site for a green belt. This green belt is dedicated to supporting and nurturing the local ecosystem. Over the past year, we have planted 1,208 saplings, increasing our green cover to 37.02%. We are excited about these developments and committed to further enhancing our environmental stewardship.

Our region boasts a rich diversity of local fauna, including scorpions, spiders, field rats, mabuya, and calotes. A wide variety of insects such as ants, bees, beetles, butterflies, and many others thrive here. The area is also home to diverse bird species like the Babbler, Barbet, Bee-eater, and more.

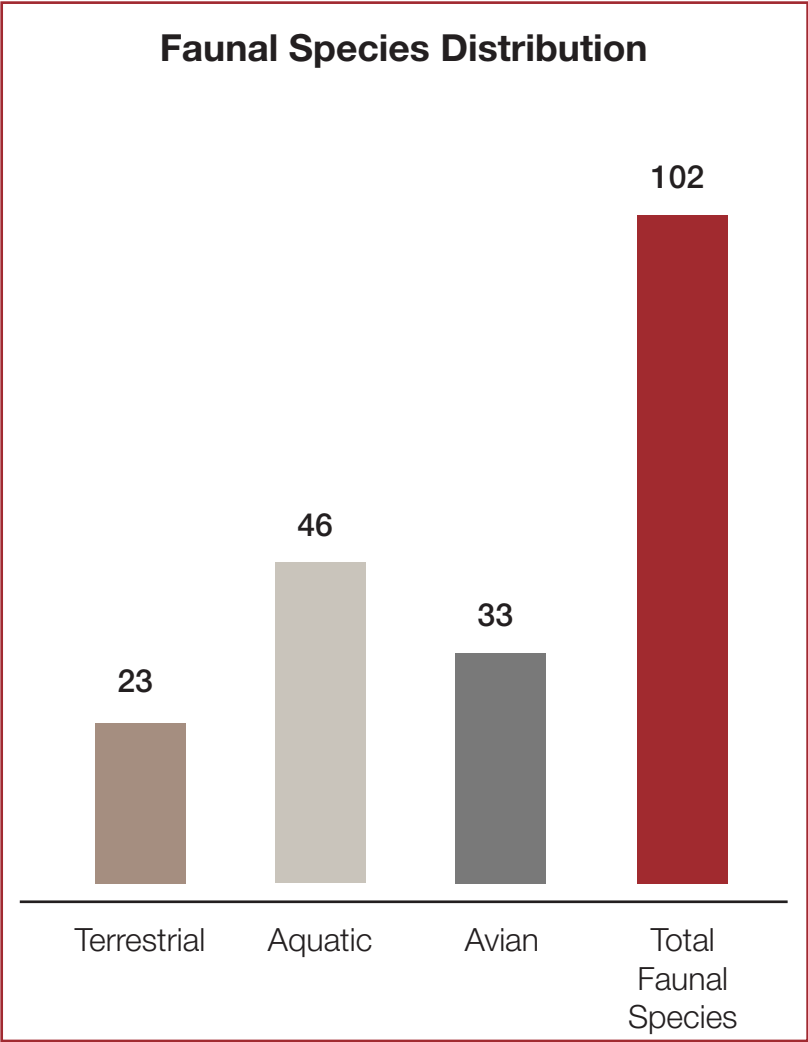
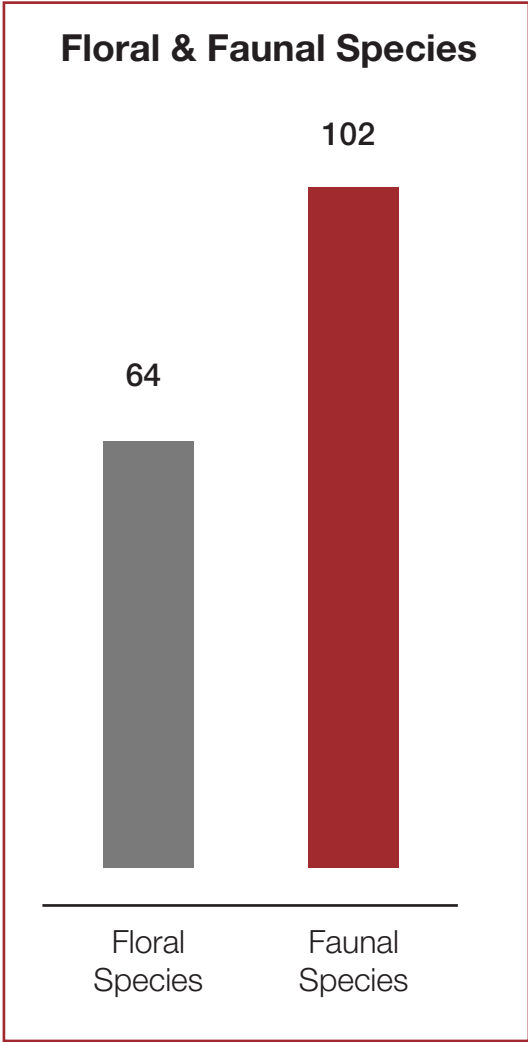
We are committed to safeguarding species classified as critically endangered, endangered, vulnerable, or near threatened by the IUCN. Through our biodiversity promotion efforts, we aim to foster a harmonious relationship between human activities and the natural world, promoting equilibrium and tranquility.

To further enhance biodiversity, we have planted suitable trees around the recharge pond perimeter to create resting areas for birds. Additionally, we maintain trees over 50 years old, including species like the Ficus Religiosa and Palm Tree, on our premises.

Is Plant in the Vacinity of a National Park or Protected reserve	No
No. of Species (Flora)	64
No. of Species (Fauna) Spotted in last one year.	102 (Terrestrial Fauna-23, Aquatic Fauna-46, Avi Fauna-33)



# Biodiversity





# PEOPLE

Employees

Training

Occupational Health & Safety

Community Engagements

CSR Activities



UNSDGs Aligned





PEOPLE

Employees

Training

Occupational Health & Safety

Community Engagements

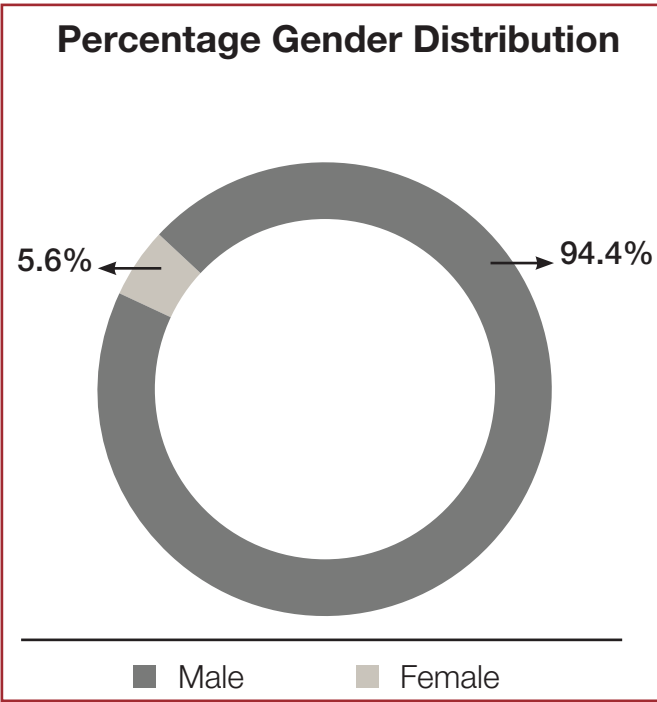
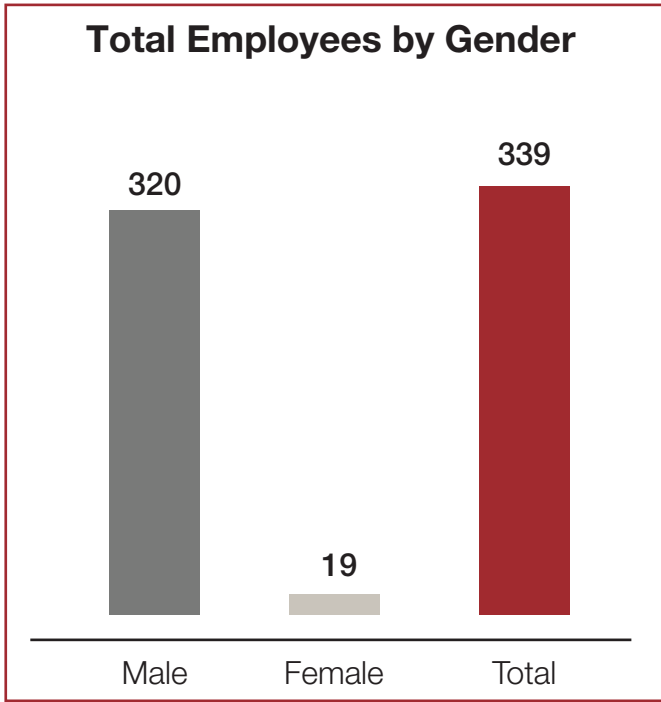
CSR Activities

GRI Index

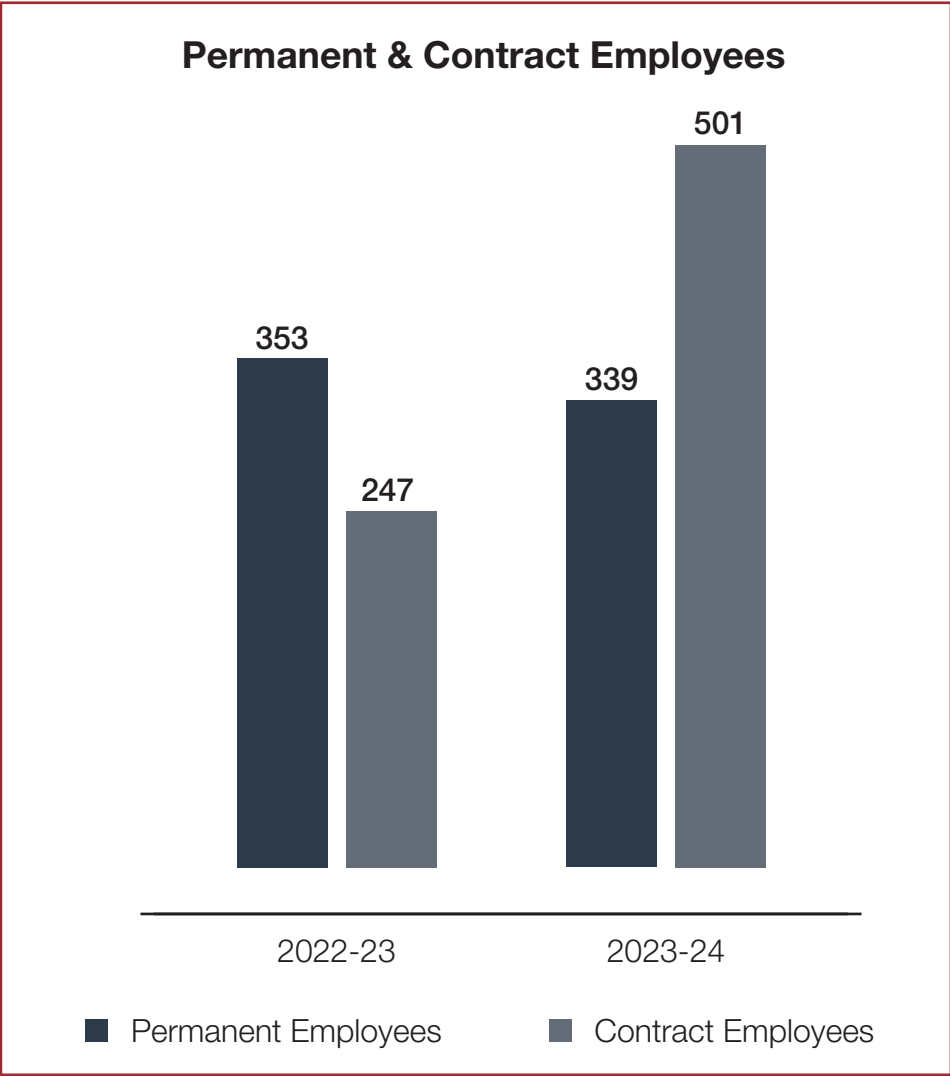
# Employees

The operation of a thermal power plant is strongly dependent on its workforce. Currently, our workforce consists of 339 full time employees, with 320 male and 19 female. These employees are spread among our headquarters and factory in Tamil Nadu. In addition, we have a 501 workers who are employed on a contractual basis, mainly in Tamil Nadu Plant.

OPG is dedicated to promoting an inclusive and just approach to expansion, with a focus on ensuring equal pay, unbiased recruitment practices, and the elimination of prejudice based on gender, caste, age, or religion. We actively encourage disabled individuals to apply for appropriate roles, with the goal of fostering an inclusive and varied workplace environment.



GRI 2- 7; 405- 1

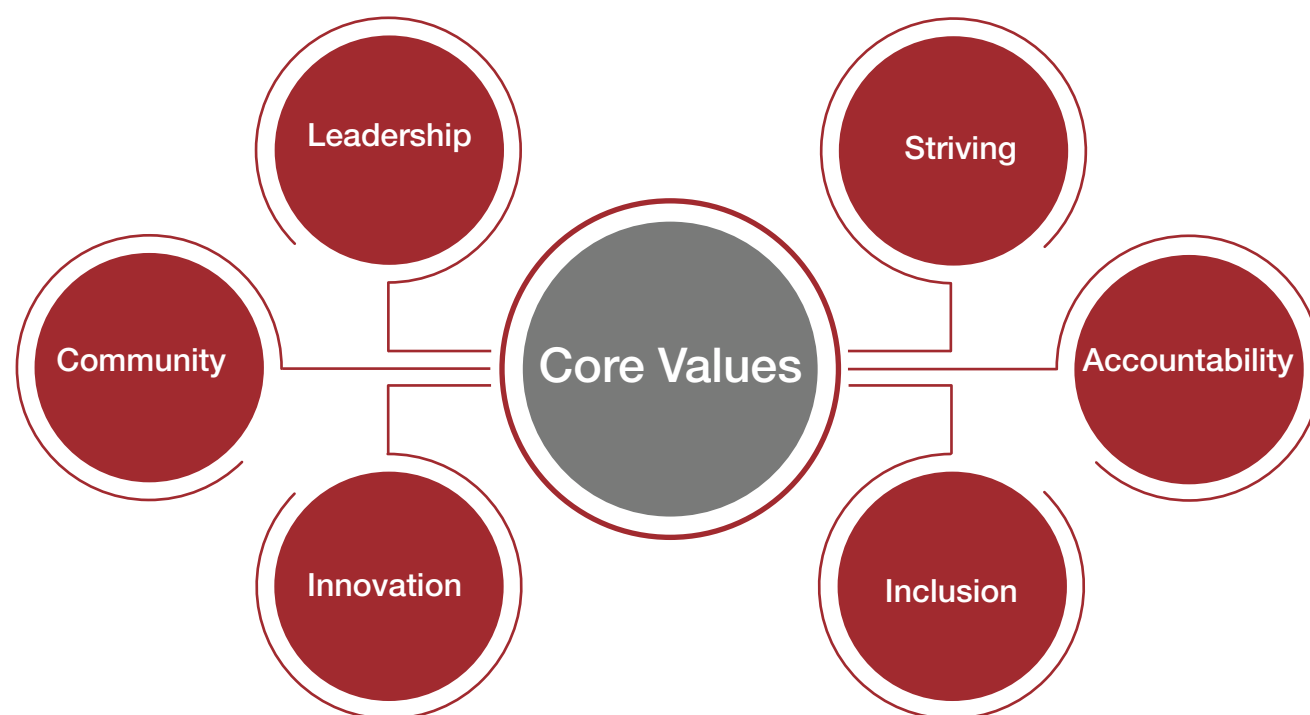


The effective operation of the facility is heavily dependent on the expertise, capabilities, and commitment of our workforce. Our top priorities are to guarantee fair employment, promote economic development, and give utmost importance to the well-being and safety of our employees. Our dedication lies in ensuring that all our employees and workers have access to vital amenities, including potable water, a fully-equipped cafeteria, and easily accessible medical services. In addition, we are committed to fulfilling all legal, legislative, and industrial obligations in order to protect the rights and welfare of our employees.

Creating a motivated workforce requires certain essential conditions to be met. These conditions include complying with minimum wage regulations, ensuring equal pay for both genders, offering social benefits, and providing adequate leave and holidays.



## Core Values



None of the employees/workers have experienced discrimination on any mentioned grounds.

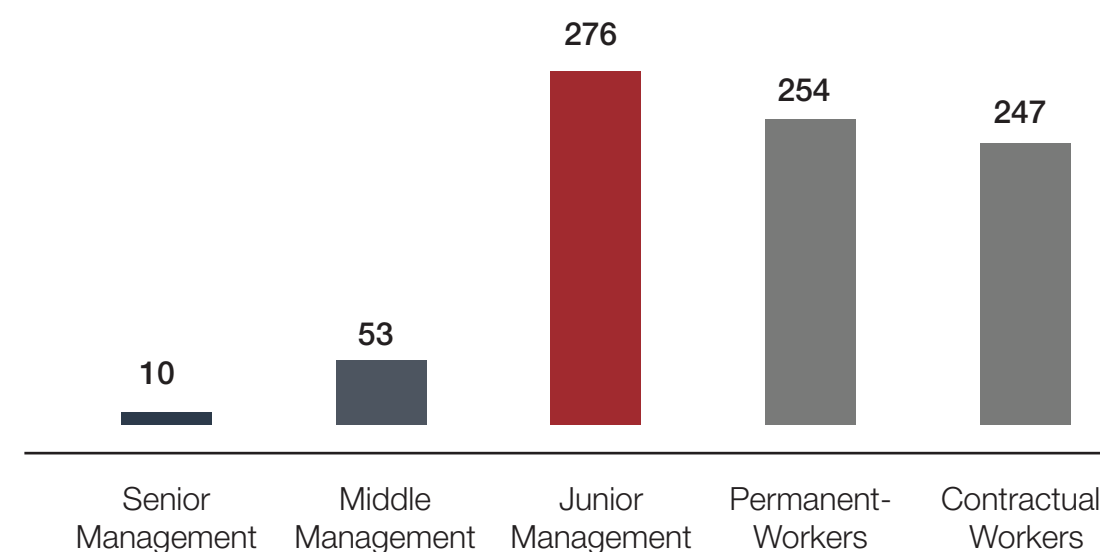
OPG is aligned to SDG 3: Health and well-being, SDG 5: Gender Equity, SDG 8: Decent work and economic growth.



We maintain a diverse age-appropriate workforce operating across various levels within the organisation. Our hiring process includes three distinct levels:

Senior Management	Middle Management	Junior Management
	President	Assistant Manager
	Vice President	Senior Engineer
	Directors (not part of Board)	Senior Executive
	General Manager	Senior Analyst
	Deputy General Manager	Safety Officer
Directors	Assistant General Manager	Engineer
	Senior Manager	Executive
	Manager	Secretary
	Deputy Manager	Assistant Engineer
		Analyst

Employees by Category



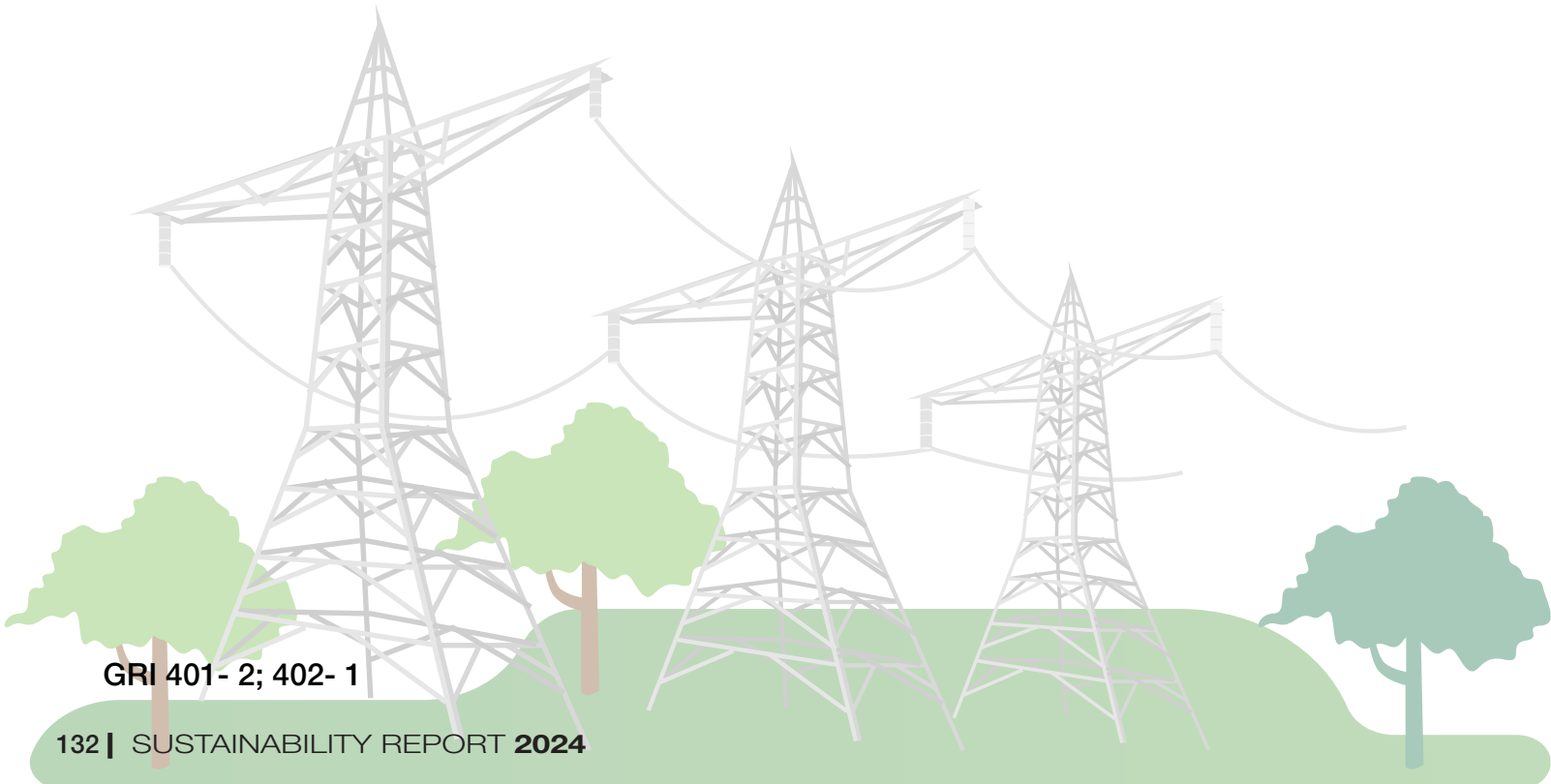


Our commitment to fairness extends to all stakeholders, including employees, contractors, consultants, and trainees. To uphold this principle, we adhere to standardised processes. For permanent employees or those on probation/trainees, the minimum notice period for operational changes or other notices is one to three months. Contract employees and consultants, on the other hand, have a notice period of 15 days.

S. NO	Employment Type	Notice Period
1.	Permanent	One month to Three months
2.	Probation	One month
3.	Trainee	One month
4.	Contract (Consultancy)	15 days

We have provided a comprehensive overview of the advantages available to both permanent and temporary employees. Employees are entitled to holidays and leaves as per the applicable regulations. Employees at the Tamil Nadu Plant are provided with convenient access to canteen and housing facilities.

Benefits	Permanent Employees	Contract Employees
Life Insurance	✓	x
Housing facility	✓	x
ESI	✓	✓
Attire allowance	✓	✓
Canteen facility	✓	x
Retirement provisions	✓	x
Provident fund	✓	✓
Gratuity	✓	x
Earned Leave encashment	✓	x
Maternity leave with wage for 6 months	✓	✓
Trousers & shirts (3 sets) for men	✓	✓
Trousers, shirts & overcoats (3 sets) for women	✓	✓
Transportation facility	✓	x
Raincoat	✓	✓
Safety shoe, Helmets, Goggles, Ear plugs, Nose mask, Cover all, Hand Gloves, reflection jackets	✓	✓





PEOPLE

Employees

Training

Occupational Health & Safety

Community Engagements

CSR Activities

GRI Index

The extended OPG family

OPG has always focusses on the well-being of its extended family (the family of the employees) through appreciation and celebration of occasions with them. The following are some of the occasions where we were able to engage with the families in FY 2023-24:

14<sup>th</sup> Annual Day

At OPG, we have celebrated the completion of 14 years of operation. All the employees, their families were invited and were addressed by the CEO. The celebrations that were a part of the event were:

- ◆ Tree Plantation
- ◆ Song & Dance
- ◆ Benefit to Employee's children for Government Schemes like Sukanya Samridhi Account Scheme (SSA) and Kisan Vikas Patra (KVP). The total beneficiaries were:

No. of Employees Covered	No. of Employee's Children Covered
99	165

At the employee quarters, we celebrate New Years, Pongal, Environment Day, Independence Day and Krishna Jayanti. These are some of the occasions where OPG is able to interact with our extended family. Further, we celebrate employee birthdays at our plant.



14<sup>th</sup> year celebration at TN plant



New year and Independence day celebrations at employee quarters



Krishna Jayanti celebration at employee quarters





*Long Service Awards for 10 years with the firm*



PEOPLE

Employees

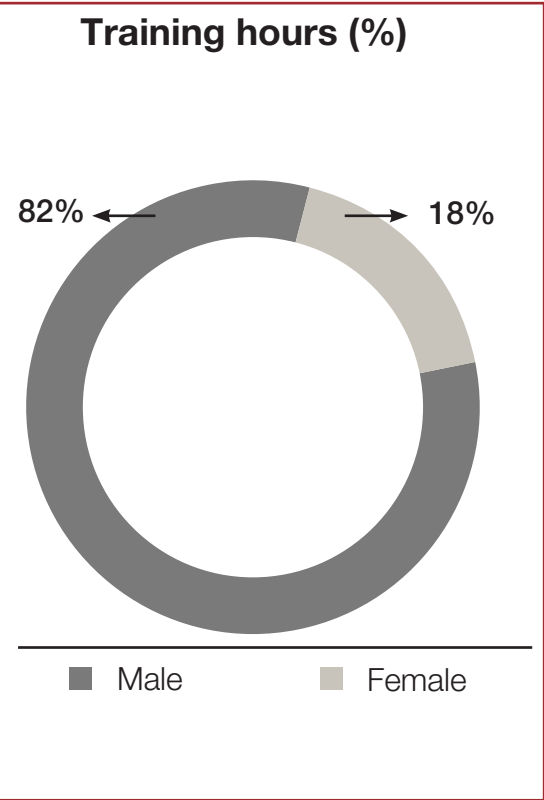
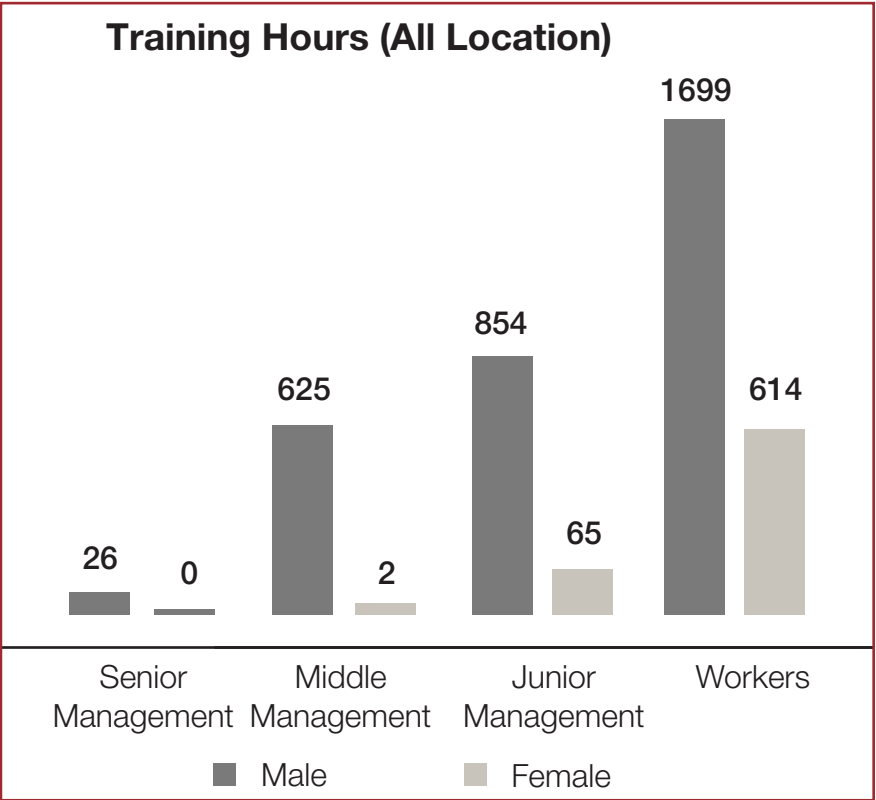
Training

Occupational Health & Safety

Community Engagements

CSR Activities

GRI Index



GRI 404- 1, 2

Training

Training is essential for every organization as it facilitates personal growth, satisfaction, skill enhancement, and the establishment of consistent standards. During the fiscal year 2023-24, a substantial number of training hours were conducted, excluding Occupational Health and Safety (OHS) training. Every employee on an average received 4.63 hours of training annually, while males received 4.24, females received 7.24 hours respectively.

For the fiscal year 2023-24, our employees received a total of 3,885 hours of training, in addition to the 6,296 hours of OHS training.



Some of the important areas for training are health and safety, skills upgradation and internal audit. Some of the skill development focuses on operational efficiency, and complying with regulations. In addition, we have implemented a Performance Management System (PMS) to regularly assess the performance of our staff members.

Types of Trainings	Employees & Contract Employees		Types of Safety Training	Hours
	Female	Male		
Health & Safety	234	884	Safety Training	1,672
Skills Upgradation	2	2,321	Fire Safety	14.31
Internal Audit	1	294	Toolbox meetings	4,610



PEOPLE

Occupational Health & Safety

Occupational Health & Safety

The objective of OPG Power Ventures is to achieve “Zero Harm” by continuing to prioritise health and safety. All employees, whether permanent or contractual, are safeguarded by our comprehensive health and safety policy, which continues to be a fundamental component. In an ongoing effort to strengthen our dedication, we have not only incorporated but also improved the ISO 45001 health and safety protocols into our operational framework. Our daily operations, strategic planning, and decision-making processes are all indicative of this integration. Autonomy at the sites enables local teams to establish committees, which are essential for the development and execution of annual advancement strategies that are customised to the specific goals and metrics of each site.

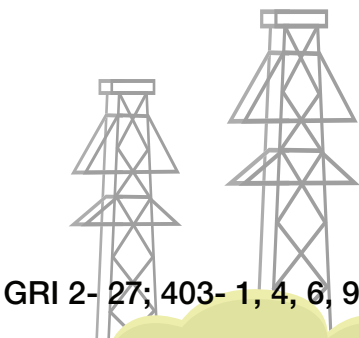
With the TRIR maintaining a ‘Zero’ status, our safety record is a testament to our diligent practices.

Our dedication to environmental stewardship is further demonstrated by the routine implementation of proactive measures, including coal compacting, in our yards to reduce the risk of spontaneous combustion and dust emissions.

At the governance level, OPG’s Board has reinforced its oversight of health, safety, and environmental (HSE) matters by appointing a dedicated Health, Safety, and Environmental Committee. This committee, led by a Non-Executive Director, ensures that HSE activities across all operations are conducted under the highest standards, aligning with our vision of a safe and sustainable work environment for all.

For OHS, we have implemented several best practices at OPG, such as:

- Workers are equally represented in the safety committee, fostering collaborative management and ensuring that management, employees, and workers collectively share responsibility.
- Clear role definition for every member and representative within the committee.
- Regular quarterly meetings that are in line with our goals and comply with the regulatory mandates, specifically as per Factories Act 1948 Section 41-G and in conjunction with Tamil Nadu factories rule 61 M.



GRI 2- 27; 403- 1, 4, 6, 9



## PEOPLE

## Occupational Health & Safety

## Safety Standard Implementation: ISO 45001:2018

We have implemented the international standard on Occupational health and safety ISO 45001: 2018. We have retained the ISO certification post surveillance audits by third party auditors.

Some of the highlights of ISO 45001:

- ◊ Identifying hazards on a routine and non-routine basis through a rigorous Hazard Identification and Risk Assessment (HIRA) procedure. Accessibility of risk registers are ensured for reporting all incidents.
- ◊ Worker participation & consultation in toolbox meetings.
- ◊ Defining a hierarchy of controls.
- ◊ Building competence on safety through skills, knowledge and practice.
- ◊ Assessing effectiveness of safety process periodically.
- ◊ Assuring worker protection against reprisals. Workers can escalate to their heads or HSE officer.
- ◊ Safety protection systems and equipments.

## ISO Recertification Audit



GRI 2- 27; 403- 2, 3, 4, 5, 7

## Emergency Response and Reporting: Highlights

Workplace health and safety is a top priority for OPG, which implements numerous safeguards. They have a conveniently situated Occupational Health Centre (OHC) on the plant premises, complete with a 24/7 ambulance service. There is always a full-time doctor or male nurse available on-site. Emergency drills are essential for mapping the most efficient routes to the dispensary. Incidents are reported in a timely manner using a designated format and discussed during safety committee meetings. First aid boxes are strategically positioned in twenty locations within a 200-metre radius of any point, with each one being overseen by a designated individual.

OPG ensures a hospital connection is in place to provide prompt assistance if necessary. These efforts guarantee a work environment that prioritises safety and security.

## Mock drill conducted by Tamil Nadu Fire and Rescue Services (TNFRS).





## Celebrating Women's Day



## Health Check-up of Employees



GRI 403- 5

## Emergency Preparedness Training- FY24



◀ Fire Fighting Training

First Aid Training ▶



◀ Mock Drill Practice



National Safety Week ▶



## Pongal Celebration



## Birthday Gifts to Employees





PEOPLE

Occupational Health & Safety

Occupational Safety Report (2023-24)				
Safety Parameters	Permanent Workforce (Men)	Permanent Workforce (Women)	Contractual Workforce (Men)	Contractual Workforce (Women)
No. of Fatalities	0	0	0	0
Fatality Rate	0	0	0	0
No. of high Consequence Injury	0	0	0	0
Rate of high Consequence Injury	0	0	0	0
No. of work-related Injuries	1	0	7	0
Rate of Work related Injuries				
TRIR			0	
No. of hours worked			983,488	

GRI 403-1, 3, 4, 5, 6, 9

Safety Track Record

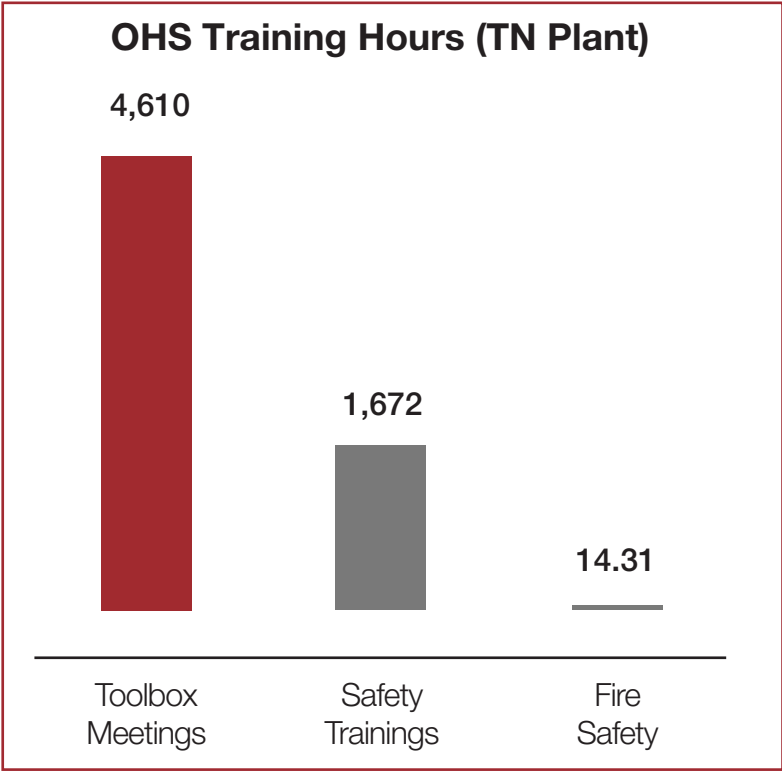
Occupational Safety- We have successfully reported ‘Zero’ for fatalities, fatality rate, and high-consequence injuries. Even though we aim to achieve no work incident, for FY 2023-24 we had 1 (one) injury to permanent employee and 7 (seven) to our contractual workers. No women either permanent or on contract were injured. Further, there have been no reported cases of work-related ill health among our permanent staff, whether male or female. Annual health check-up has revealed no occupational health-related issues (checked by a certified surgeon from the Inspectorate of factories).

Proactive safety culture

We provide an in-house health training program conducted by medical personnel. Medical examinations are carried out by standard health care services for employees & workers.



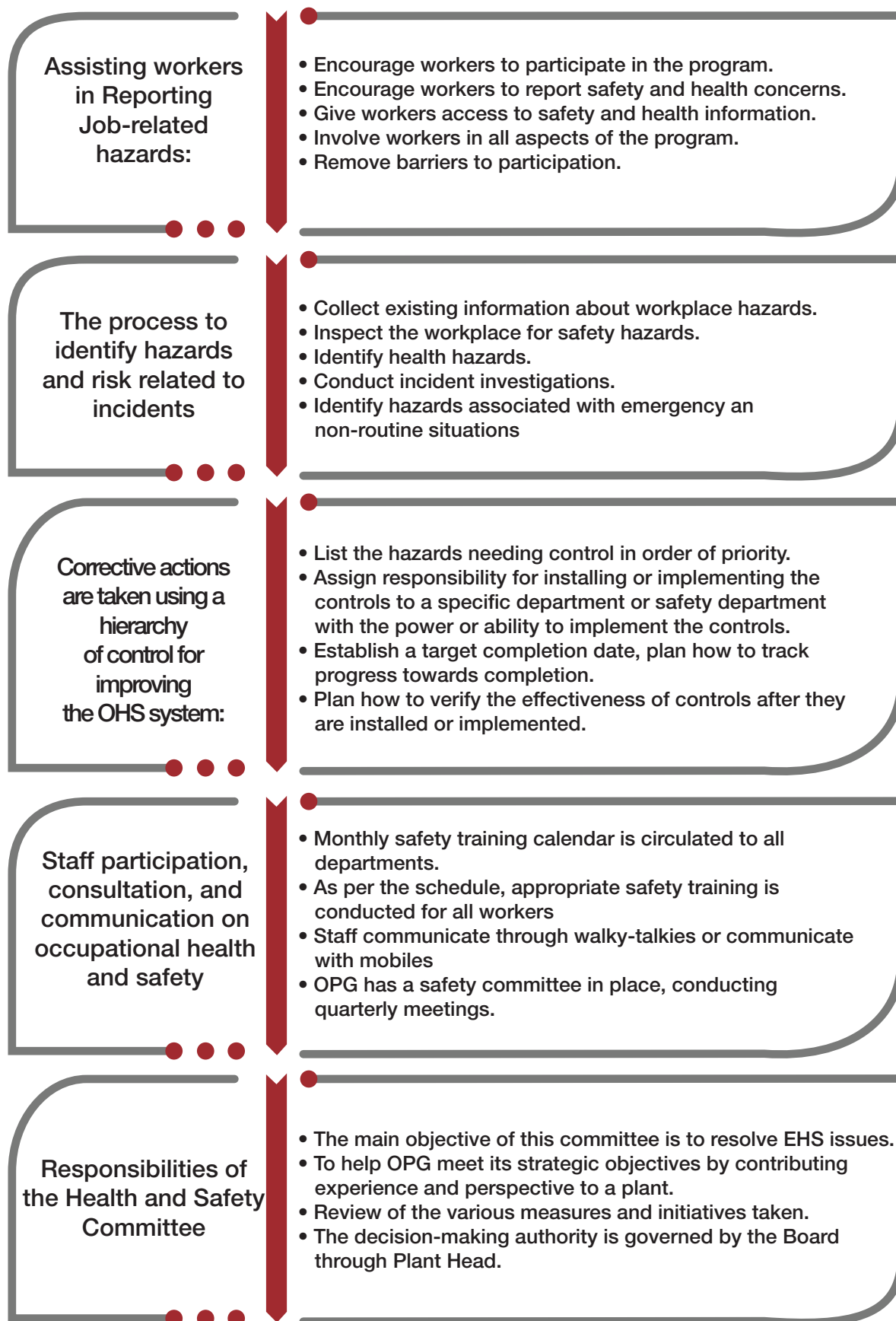
Workers Training on Occupational Health and Safety TN Thermal Power Plant



Other than Tool box meeting, 6,296 hours of Occupational Health and Safety related training were given to the workers on tool box, safety and fire safety.



## Health & Safety Process



GRI 403- 1, 2, 4, 6





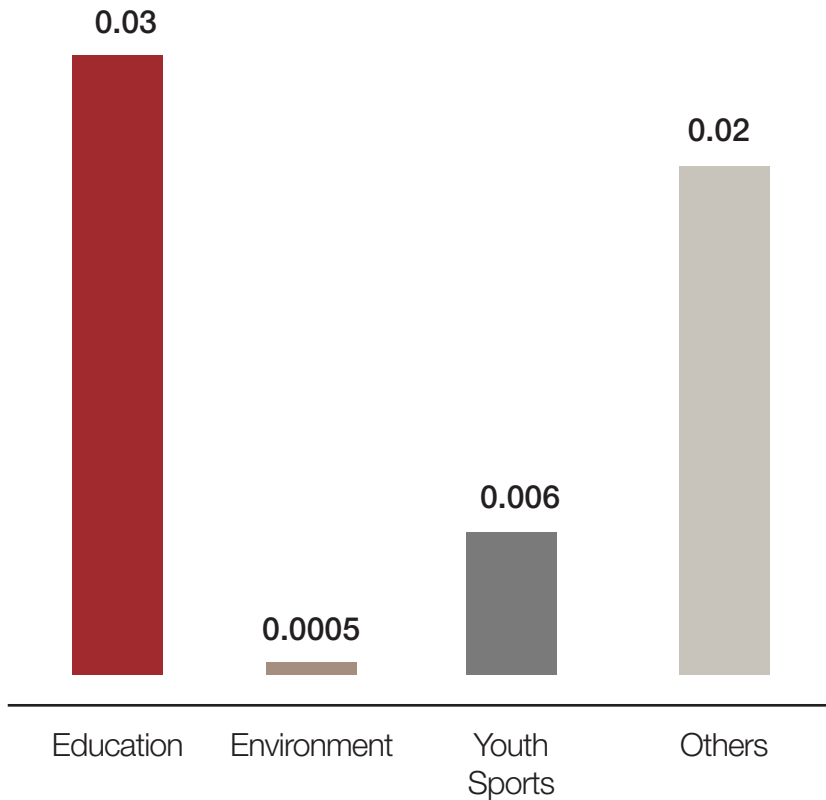
## Community Engagements

Throughout our journey, we have strived to make a meaningful and lasting impact on the communities we serve. Guided by our corporate social responsibility (CSR) commitment, we have undertaken numerous initiatives to address pressing social needs. Our dedicated efforts have focused on improving education, improving ecological balance, enhancing healthcare access, and eradicating hunger. Additionally, we provided critical relief during times of disaster.

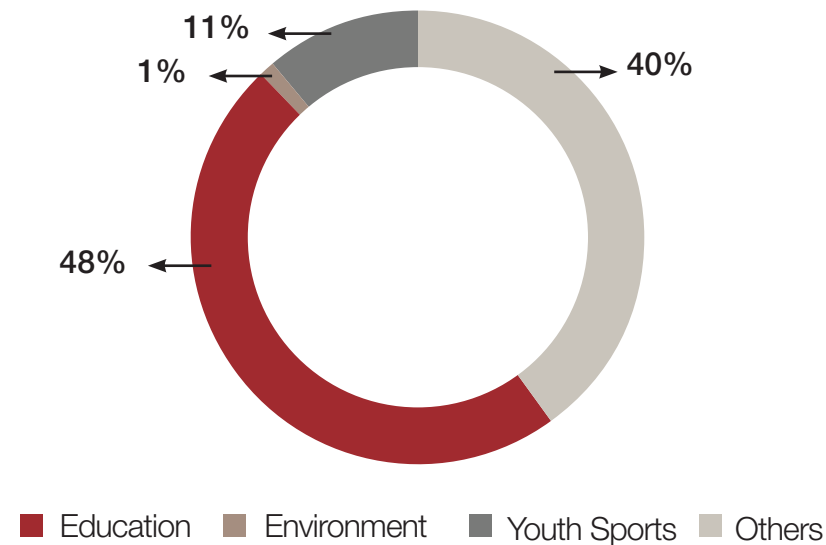
This year, the major contributions of the company’s CSR expenditure include significant funding for an nutrition programme (Annadhanam) Center, extensive distribution of food packets during cyclone time, repair and renovation works at schools and Primary (anganwadis), sponsorship of local sports events, and support for educational initiatives such as providing school bags and salaries for PTA teachers. The total CSR expenditure for FY 2023-24 is 0.06 Million GBP.

During FY24, we have also completed the infrastructural facilities required for commencing free food distribution to local people towards eradication of hunger in nearby villages.

Amount (Million GBP) Spent for CSR Projects & Programme (2023-24)



CSR expenditure by programme category FY 2023-24







School Bag Distribution



Rural sports development



Pethikuppam Pond De-Silting





PEOPLE

CSR Activities

CSR Activities

Doing our part for a hunger & poverty free nation

Hunger and poverty are deeply intertwined, creating a vicious cycle that affects millions globally. Poverty limits access to nutritious food, leading to chronic hunger and malnutrition. This in turn impairs physical and cognitive development, reducing individuals’ ability to work and learn, thereby perpetuating poverty. Addressing hunger requires comprehensive strategies to improve food security, enhance education, and create economic opportunities. Sustainable solutions are crucial to breaking this cycle and fostering healthier, more prosperous communities worldwide.

OPG being a responsible oraganisation, always takes care of its local communities via CSR projects.

Project Details	Number of Beneficiaries
Environmental Projects	
Pethikuppam Pond De-Silting	1500
Social Projects	
PTA Teachers Salary	11
School bag distribution	1,174
Annadhanam Centre (Plant & Periya Obulapuram)	27,477
Food Packets Distribution during Cyclobe Time (Mischaung)	2,195
Renovation / Repair Work Periya Obulapuram Anganwadi & Ladies Toilet Bathroom	1,000
Pongal Sports Periyaobulapuram Sponsorship	600
TN Champions Foundation	500
Magalir urimai thogai scheme 2023 camp arrangements	300
Construction of Bus Shelter	2000 / day

GRI 413- 1

Some of the measures taken were:

- Magalir Urimai Thogai Scheme 2023
- Annadhanam (Inside Plant)
- Annadhanam (Periya Obulapuram)
- Food Sponsor for Students (Zonal Sports Competetion)





# GRI Index

GRI Index





GRI 2 - General Disclosures		
GRI No.	GRI Standard & Disclosure - Description	Page Number/Reference Link
<b>1. The organisation and its reporting practices</b>		
2-1	Organisation details	B, 6, 8
2-2	Entities included in the organisation's sustainability reporting	B, 6, 8
2-3	Reporting period, frequency and contact point	4, 6
2-4	Restatements of information	-
2-5	External assurance	-
<b>2. Activities and workers</b>		
2-6	Activities, value chain and other business relationships	74
2-7	Employees	B, 16, 22, 128 - 131
2-8	Workers who are not employees	16, 22
<b>3. Governance</b>		
2-9	Governance structure and composition	50, 54, 56
2-10	Nomination and selection of the highest governance body	-
2-11	Chair of the highest governance body	52, 54
2-12	Role of the highest governance body in overseeing the management of impacts	52
2-13	Delegation of responsibility for managing impacts	-
2-14	Role of the highest governance body in sustainability reporting	54
2-15	Conflicts of interest	-
2-16	Communication of critical concerns	-
2-17	Collective knowledge of the highest governance body	-
2-18	Evaluation of the performance of the highest governance body	-
2-19	Remuneration policies	-
2-20	Process to determine remuneration	-
2-21	Annual total compensation ratio	-
<b>4. Strategy, policies and practices</b>		
2-22	Statement on sustainable development strategy	10 - 13
2-23	Policy commitments	58, 60
2-24	Embedding policy commitments	-
2-25	Processes to remediate negative impacts	-

2-26	Mechanisms for seeking advice and raising concerns	-
2-27	Compliance with laws and regulations	140, 142
2-28	Membership associations	62 - 67
<b>5. Stakeholder engagement</b>		
2-29	Approach to stakeholder engagement	28 - 41, 50
2-30	Collective bargaining agreements	-
<b>Disclosures on Material Topics</b>		
3-1	Process to determine material topics	28
3-2	List of material topics	42 -47
3-3	Management of material topics	42 -47
<b>GRI 201: Economic Performance</b>		
201-1	Direct economic value generated and distributed	16, 18, 22, 150
201-2	Financial implications and other risks and opportunities due to climate change	20, 68 - 73
201-3	Defined benefit plan obligations and other retirement plans	-
201-4	Financial assistance received from government	-
<b>GRI 202: Market Presence</b>		
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	20
202-2	Proportion of senior management hired from the local community	-
<b>GRI 203: Indirect Economic Impacts</b>		
203-1	Infrastructure investments and services supported	20
203-2	Significant indirect economic impacts	18
<b>GRI 204: Procurement Practices</b>		
204-1	Proportion of spending on local suppliers	74
<b>GRI 205: Anti-corruption</b>		
205-1	Operations assessed for risks related to corruption	-
205-2	Communication and training about anti-corruption policies and procedures	-
205-3	Confirmed incidents of corruption and actions taken	-
<b>GRI 206: Anti-competitive Behaviour</b>		
206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	-



GRI 207: Tax		
207-1	Approach to tax	-
207-2	Tax governance, control, and risk management	-
207-3	Stakeholder engagement and management of concerns related to tax	-
207-4	Country-by-country reporting	-
GRI 301: Materials		
301-1	Materials used by weight or volume	22, 86, 88
301-2	Recycled input materials used	-
301-3	Reclaimed products and their packaging materials	-
GRI 302: Energy		
302-1	Energy consumption within the organisation	102 - 105
302-2	Energy consumption outside of the organisation	-
302-3	Energy intensity	-
302-4	Reduction of energy consumption	102 - 105
302-5	Reductions in energy requirements of products and services	106
GRI 303: Water and Effluents		
303-1	Interactions with water as a shared resource	90
303-2	Management of water discharge related impacts	90
303-3	Water withdrawal	90
303-4	Water discharge	90
303-5	Water consumption	22, 90 - 95
GRI 304: Biodiversity		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	122
304-2	Significant impacts of activities, products and services on biodiversity	122, 124, 125
304-3	Habitats protected or restored	-
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	122
GRI 305: Emissions		
305-1	Direct (Scope 1) GHG	110 - 112
305-2	Energy indirect (Scope 2) GHG emissions	110 -112

305-3	Other indirect (Scope 3) GHG emissions	110 -112
305-4	GHG emissions intensity	22, 112
305-5	Reduction of GHG emissions	112
305-6	Emissions of ozone-depleting substances (ODS)	-
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	108, 109, 116 -118
GRI 306: Waste		
306-1	Waste generation and significant waste-related impacts	
306-2	Management of significant waste-related impacts	86, 88
306-3	Waste generated	86, 88
306-4	Waste diverted from disposal	-
306-5	Waste directed to disposal	-
GRI 308: Supplier Environmental Assessment		
308-1	New suppliers that were screened using environmental criteria	-
308-2	Negative environmental impacts in the supply chain and actions taken	-
Social Disclosures		
GRI 401: Employment		
401-1	New employee hires and employee turnover	-
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	132
401-3	Parental leave	-
GRI 402: Labor/Management Relations		
402-1	Minimum notice periods regarding operational changes	132
GRI 403: Occupational Health and Safety		
403-1	Occupational health and safety management system	140, 146 - 148
403-2	Hazard identification, risk assessment, and incident investigation	142, 148
403-3	Occupational health services	142, 146
403-4	Worker participation, consultation, and communication on occupational health and safety	140, 142, 146 - 148
403-5	Worker training on occupational health and safety	142, 144, 146
403-6	Promotion of worker health	140, 146 - 148



403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	142
403-8	Workers covered by an occupational health and safety management system	-
403-9	Work-related injuries	140, 146
403-10	Work-related ill health	-
<b>GRI 404: Training and Education</b>		
404-1	Average hours of training per year per employee	22, 138
404-2	Programs for upgrading employee skills and transition assistance programs	138
404-3	Percentage of employees receiving regular performance and career development reviews	-
<b>GRI 405: Diversity</b>		
405-1	Diversity of governance bodies and employees	52, 128 - 131
405-2	Ratio of basic salary and remuneration of women to men	58, 60
<b>GRI 406: Non-discrimination</b>		
406-1	Incidents of discrimination and corrective actions taken	58, 60
<b>GRI 407: Freedom of Association and Collective Bargaining</b>		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	58, 60
<b>GRI 408: Child Labor</b>		
408-1	Operations and suppliers at significant risk for incidents of child labor	58, 60
<b>GRI 409: Forced or Compulsory</b>		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	58, 60
<b>GRI 410: Security Practices</b>		
410-1	Security personnel trained in human rights policies or procedures	-
<b>GRI 411: Rights of Indigenous</b>		
411-1	Incidents of violations involving rights of indigenous peoples	-
<b>GRI 413: Local Communities</b>		
413-1	Operations with local community engagement, impact assessments, and development programs	154
413-2	Operations with significant actual and potential negative impacts on local communities	20

<b>GRI 414: Supplier Social Assessment</b>		
414-1	New suppliers that were screened using social criteria	-
414-2	Negative social impacts in the supply chain and actions taken	-
<b>GRI 415: Public Policy</b>		
415-1	Political contributions	-
<b>GRI 416: Customer Health and Safety</b>		
416-1	Assessment of the health and safety impacts of product and service categories	-
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	-
<b>GRI 417: Marketing and Labelling</b>		
417-1	Requirements for product and service information and labelling	-
417-2	Incidents of non-compliance concerning product and service information and labelling	-
417-3	Incidents of non-compliance concerning marketing communications	-
<b>GRI 418: Customer Privacy</b>		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	-



# Abbreviations

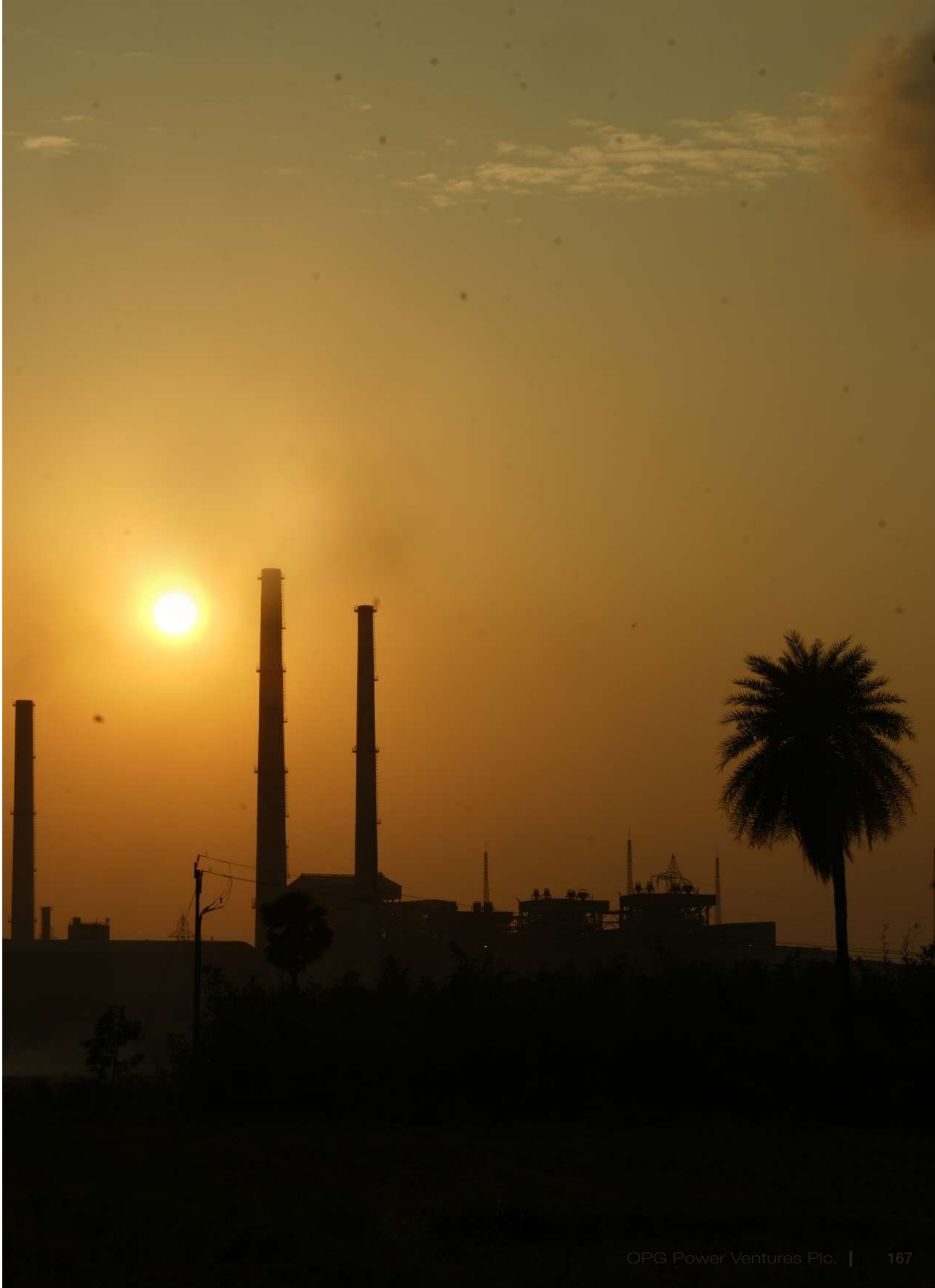
ACC	Air Cooled Condensers
AGMs	Assistant General Manager
AIM	Alternative Investment Market
AP	Auxiliary Power
APC	Auxiliary Power Consumption
BFP	Boiler Feed Pump
CAPA	Corrective Actions Preventive Actions
CBAs	Collective Bargaining Agreements
CC	Central Committee
CEE	International Commission on Rules for the Approval of Electrical Equipment.
CEO	Chief Executive Officer
CEP	Condensate Extraction Pump
CFO	Chief Financial Officer
CGWA	Central Ground Water Authority
COD	Commercial Operation Date
COO	Chief Operating Officer
CSR	Corporate Social Responsibility
CUF	Capacity Utilization Factor
DM Plant	DeMineralized Water Plant
EHS	Environment, Health & Safety
EIA	Environmental Impact Assessment
EPF	Employees' Provident Fund
ESG	Environment Social & Governance
ESI	Employees' State Insurance
ETP	Effluent Treatment Plant
FY	Financial Year
GBP	Great Britain Pound
GHG	GreenHouse Gases
GPD	Gummidipoondi
GRI	Global Reporting Initiative
HFO	Heavy Fuel oil
HIRA	Hazard Identification and Risk Assessment

HR	Heat Rate
HSD	High Speed Diesel
HSE	Health, Safety & Environment
IC	Internal committee
IEC	Importer-Exporter Code
ISO	International Organization for Standardization
IUCN	International Union for Conservation of Nature
LDO	Light Diesel Oil
LED	Light Emitting Diode
MoEF	Ministry of Environment and Forest
NABL	National Accreditation Board for Testing & Calibration
NC	Non Compliance
NCD	Non-convertible debenture
NCEF	National Clean Energy Fund
O&M	Operations & Maintenance
OFA	Over Fired Air
OHC	Occupational Health Centre
PMS	Performance Management System
POP	Persistent Organic Pollutants
PoSH	Prevention of Sexual Harassment
PPF	Petro Polymer Fuel
QCA	Quoted Companies Alliance
SDG	Sustainable Development Goals
SOP	Standard Operating Procedures
STP	Sewage Treatment Plant
TN	Tamil Nadu
TPP	Thermal Power Plant
TRIR	Total Recordable Incident Rate
UK	United Kingdom
ZLD	Zero Liquid Discharge



Units

CH <sub>4</sub>	Methane
CO <sub>2</sub>	Carbon-di-oxide
gCO <sub>2</sub> e/kWh	gram of Carbon-di-oxide per KiloWatt-hour
GW	GigaWatt
kg CO <sub>2</sub> e/kWh	kilogram of Carbon-di-oxide per KiloWatt-hour
kg CO <sub>2</sub> e/MWh	kilogram of Carbon-di-oxide per MegaWatt-hour
kL	Kilo Litre
km	Kilo Metre
kWh	KiloWatt-hour
m <sup>3</sup> /MWh	Cubic Metre per MegaWatt-hour
MT	Metric Tonne
MT/MWh	Metric Tonne per MegaWatt-hour
MU/MUe	Million Units
MW	MegaWatt
N <sub>2</sub> O	Nitrous Oxide
NAR	Net as Received GCV
NOx	Nitrous Oxide
PLF	Plant Load Factor
PM	Particulate Matter
SOx	Sulphur Oxides
sqm	Square Metre
tCO <sub>2</sub> e	Tonne Carbon-di-oxide equivalent
tCO <sub>2</sub> e/MU	Tonne Carbon-di-oxide equivalent per Million Unit







**55 Athol Street  
Douglas, Isle of Man  
IM1 1LA**

Tel: +44 (0) 1624 681250  
[www.opgpower.com](http://www.opgpower.com)



Concept, content and design by SAGE Sustainability ([sagesustainability.in](http://sagesustainability.in))