



**EMPOWERING LIVES**

2021-22

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**Sustainability Report**

GRI Standard Core

# OPG Power Ventures Plc

0.1

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 has 332 employees and provides quality reliable power to Industrial Captive units.



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# Empowering Lives

“Our approach to Sustainability is empowering lives, whether it is our employees, workers or neighbouring communities.”

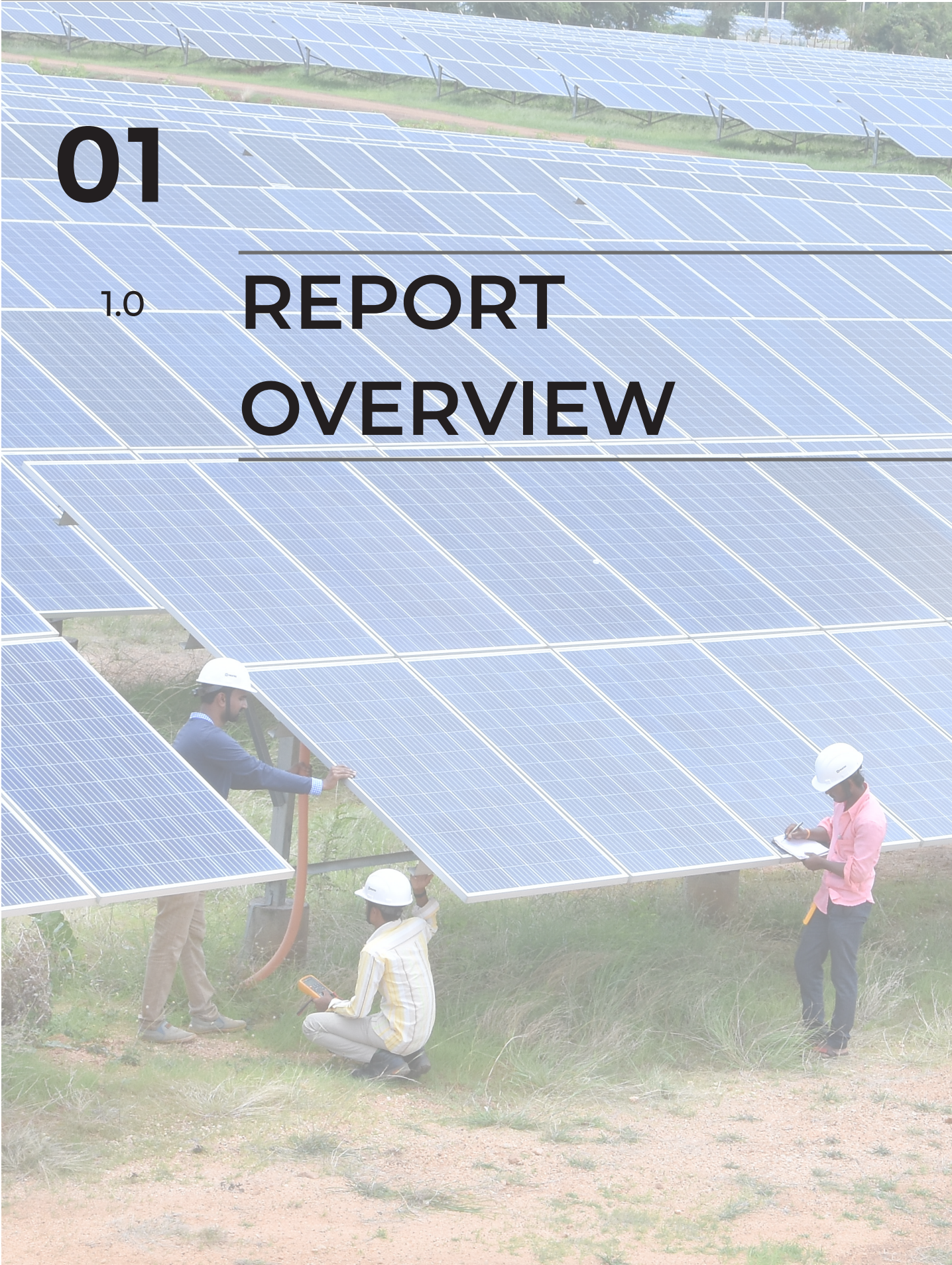
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# REPORT OVERVIEW

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***“You must be the change you wish to see in the world.”***

**– Mahatma Gandhi**

## 1.1 Reporting Framework

This is our second Sustainability Report and provides disclosures on all relevant material indicators. This report has been prepared in accordance with the ‘GRI (Global Reporting Initiative) Standards: Core option’. **As per GRI criteria, material areas with a high bearing on business are disclosed for management approach and progress.**

The report follows guiding principles for defining report quality and content. The principles followed for report quality are accuracy, balance, clarity, comparability, reliability and timeliness. For report content, stakeholder inclusiveness, context, materiality and completeness are considered. To complement the GRI framework, other reporting frameworks are being explored that may be reflected in future disclosures. These are IR Framework (Integrated Reporting) and SASB (Sustainability Accounting Standards Board). Additionally, we have been able to map our report content to the Sustainable Development Goals (SDGs) aligning the current report to the targeted SDGs.



414 MW Thermal power plant at Gummidipoondi, Tamil Nadu



62 MW Solar Power Plant, Karnataka

## 1.2 Scope and Boundary

**This report covers information for the period 1<sup>st</sup> April 2021 to 31<sup>st</sup> March 2022. The baseline year is the previous year for most indicators but in certain cases the baseline is 2015-2016.**

In terms of operational boundary, the data for all significant operations is covered, which includes data from Gummidipoondi Thermal Plant and Karnataka Solar Plant, and for social indicators such as employee data, data from the Chennai office is also included. The footprint for our Head Quarters in the Isle of Man is negligible, hence not considered. Relative to the previous year, there are no changes in our capacity, organizational structure or supply chain.

**OPG has an installed capacity of 476 MW; 414 MW of Thermal in Tamil Nadu and 62 MW of Solar in Karnataka.**

For the coal fired thermal power plant at Gummidipoondi, Chennai, there are two units of 77 MW, and one unit of 80 MW and 180 MW. The 62 MW solar unit in Karnataka is with 31% equity interest.

OPG's registered office is at IOMA House, Hope Street, Douglas, Isle of Man, IM 1 AP, UK. The Group's Indian office is located at No.6, Sardar Patel Road, Guindy, Chennai-600032.



 Report Boundary

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

1.3

# Our Business Operations

## INDIA LOCATIONS



GRI 102 – 3, 4

**OPERATING ENTITIES**

<b>Plant Name</b>	<b>Address</b>	<b>MW</b>	<b>Geographic Coordinates</b>
<b>OPG Power Generation Pvt. Ltd.</b>	OPG Nagar, Madharpakkam Road, Gummidipoondi, Thiruvallur District, Tamil Nadu-601201	414	13.440494°N/ 80.100347°E
<b>Aavanti Renewable Energy Pvt. Ltd. (AREPL)</b>	Survey No 105/2, Hothragondahalli Village, Mathodu Hubbli,Kerehalli Post, Chitradurga District, Karnataka - 577533	20	13.754425°N/ 76.400605°E
<b>Aavanti Solar Energy Pvt. Ltd. (ASEPL)</b>	Survey No 25/2,Bisitikoppa Village,Shiggon Taluk, Haveri District, Karnataka - 581205.	20	15.028290°N/ 75.193230°E
<b>Brics Renewable Energy Pvt. Ltd. (BREPL)</b>	S.No.3A, Bennihalli Village, Chigateri Hubli, Harpanahalli Taluk, Devangree District, Devangere, Karnataka - 583127	2	14.808001°N/ 76.101524°E
<b>Mayfair Renewable Energy (I) Pvt. Ltd. (MREPL)</b>	Survey No 277/1B Hirehal Village,Ron Hubbli, Ron Taluk,Gadag District, Karnataka-582209	20	15.79° N/ 75.76° E

## 1.4 Message from the Chairman



**“It is clear that our responsibility is towards our internal & external stakeholders and towards our planet.”**

Dear Stakeholders,

I am delighted to present our ESG report for FY 21-22, which draws out key highlights of our financial and non-financial progress.



OPG Power Ventures, started its journey in 2008 with a 20 MW thermal plant. In the reporting year, our capacity is 476 MW of which 414 MW is thermal and 62 MW is solar. Our primary business model is Group Captive. The foundation for our business growth and success is our focus on using cutting-edge technologies, choosing strategic locations, a stream of dedicated buyers, and a capable and well trained team that executes the business model.

OPG hopes to become one of the leaders in the energy sector. We strive to create value for our customers and shareholders, while keeping our workforce, communities and environment safe. We are confident that with the help of all our stakeholders, we will raise the bar for sustainable prosperity along with environmental and social value creation.

The Group deploys a fourfold strategy: maximizing the performance of its existing power generation assets, deleveraging, pursuing responsible growth, and delivering accretive growth projects within our area of expertise. It is clear that our responsibility is towards our internal and external stakeholders and towards our planet.

I want to take this opportunity to thank all stakeholders, our investors, employees, customers and the Government for this wonderful opportunity to serve. We look forward to an exciting year contributing to India's ambitious energy plans along with all our stakeholders.

*N Kumar*

**Non-Executive Chairman**

1.5

## Message from the CEO



**“Our business vision is to create value for our stakeholders, while being diligent on compliance norms, and respecting natural resources”**

Dear Stakeholders,

I am pleased to share our second sustainability report for FY 2021-22, with enhanced ESG disclosures that demonstrate our commitment to Sustainability. The disclosures reflect our informed sustainability strategy, which includes the perspective of our stakeholders.

Our business vision is to create value for our stakeholders, while being diligent on compliance norms and respecting natural resources. Our sustainability strategy is to choose areas of strategic interest and systematically work on these areas to create impact within and outside the organization.

Some of the high priority areas identified during FY 22 are business growth, profitability, ethics & integrity, water, waste, energy & emissions, employee health & safety, training and development, environmental compliance, and community service. We have made disclosures on these material areas and certain tactical areas that are significant for the organization.

We have been diligent on all compliance matters, be it social, governance or environmental, and have served the local communities based on their needs and requirements. Safety is a core value for us underpinned by robust management systems adhering to global standards such as ISO 45001: 2018. Another incident-free year indicates our rigorous processes and well-embedded safety culture.

It is a delight to have employees interested in conserving and enhancing biodiversity at our Gummidipoondi campus. The efforts of the last decade have resulted in 64 floral and 102 faunal species.

As an organization driven by purpose, we strive to pursue the path of creating long-term value for all stakeholders. I invite you to read the Sustainability Report and provide us feedback at [feedbackesg@opgpower.com](mailto:feedbackesg@opgpower.com).

The complete ESG Report is enclosed herewith and forms part of the Annual Report. The complete ESG Report is also available on our website [www.opgpower.com](http://www.opgpower.com)

*Arantika Gupta*  
**Chief Executive Officer**

# 02

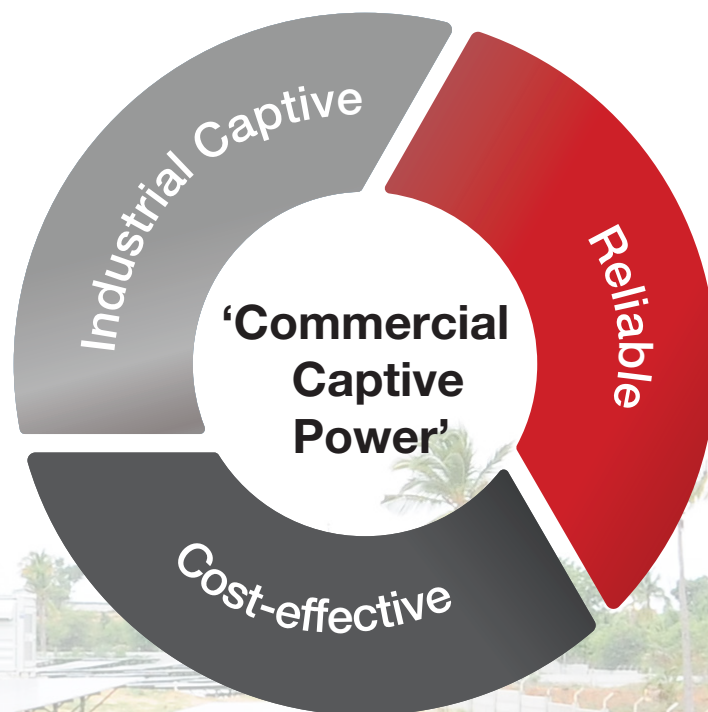
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# BUSINESS HIGHLIGHTS

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***“The wise work for the welfare of the world, without thought for themselves.”***

**– The Bhagavad Gita**

## 2.1 Business Highlights

Our business model caters to power directly sold to public sector undertakings, state electricity boards and heavy industrial organizations. It is driven by supplying cost-effective and reliable power to our customers.

OPG has an established track record of engineering, operations and financial management and is well placed to play a leading role in India's energy sector. At the end of reporting period, we have an installed capacity of 476 MW Power and 332 employees.

The power mix of over ten percent renewables is aligned to India's national energy mix. In FY 22, total power generation at the Thermal plant, Tamil Nadu (TN) was 1.87 billion units, which is 11.3 percent less than the power generated in FY 21 (includes deemed generation). This decrease in generation was primarily due to the spike in coal prices and freight costs in international markets, recently exacerbated by the crisis in Ukraine. The average tariff realised during FY 22 was INR 5.81 (FY 21: Rs 5.63). The increase in tariff realisation is primarily due to the rise in raw material prices.

**Average tariff realised during FY 22 was  
INR 5.81 (FY 21: INR 5.63).**

On the environmental front, managing technological leadership, implementing standards, such as ISO 14001:2015 help us remain sustainable. On health and safety, implementing ISO 45001:2018 and providing state-of-the-art safety equipment and implementing protective technology to avoid adverse effects of power generation remains our focus and priority. OPG owns a 31 percent equity interest in the 62 MW Karnataka solar projects. For the solar projects, a Capacity Utilization Factor (“CUF”) of 19.9 percent was achieved in FY 22 (FY 21: 19.2 percent).

<b>GENERAL</b>	<b>FY22</b>	<b>FY21</b>
Total Number of Operations*	2	2
Total Number of Employees	332	313
Total Number of Contract Employees	241	274
<b>FINANCIAL</b>		
Net Revenues (GBP)	80,067,032	93,823,933
Total capitalization (debt) (GBP)	43,285,777	46,610,653
Total capitalization (equity) (GBP)	170,066,254	161,567,070
<b>POWER OPERATIONS</b>		
Thermal Generation (MU) including auxillary power - Installed Capacity 414 MW	1,330	1,701
Additional “deemed” offtake- Chennai Plant	538	406
Total Generation (MUE)**- Chennai Plant	1,868	2,107
Reported Average PLF (%)- Chennai Plant	52%	58%
Karnataka Solar Net Export Power (MUE)	108	104
<b>CUSTOMERS</b>		
Total Number of Customers	198	194
Average Tariff for the year (/kWh)	5.81	5.63

\* Chennai and Karnataka sites

\*\* Million Units or kWh Mue million units or kWh of equivalent power. Reported average PLF based on MUE

## 2.2 Financial Highlights

India's per capita energy demand increased by more than 60 percent in 2020 from 2000 levels, although the per capita consumption is 1/3rd of global per capita average (India Energy Outlook, 2021). Therefore, demand for energy services is bound to rise with an increase in population and rapid urbanization and coal is expected to play a major role in delivering energy services.

In the last decade, coal supply has been an issue in India; however, at OPG, we have successfully mitigated the risk of supply disruption by careful planning. Our power plants are equipped to handle Indian and imported Coal, which has always been an advantage.

In the reporting year, our revenue was 80 million GBP.



<b>Economic Growth</b>	<b>FY 2022 (GBP)</b>	<b>FY 2021 (GBP)</b>
Revenue	80,067,032	93,823,933
Operating Cost	56,500,964	56,893,065
Employee Wage and Benefit	2,660,490	2,902,662
Payment to Providers of Capital	5,356,089	6,803,137
Community Investments	109,114	92,441
Payments to Government (Taxes)	4,353,408	8,447,669

## 2.3 Economic Highlights

### **Direct Economic Value Generated**

Economic performance of a company is key to its short and long-term viability. Sharing information on assets and liabilities, revenues, profits, and operating costs in a constantly changing economic environment is valuable information for our shareholders and other stakeholders. Financial information is published every year in the Company's annual reports available on our website. We also publish the Company's half yearly results on our website.

### **Economic Impacts in the local area**

It has been our endeavour to create and nurture local economies. For our Chennai office and Thermal Plant, Tamil Nadu is local. One of the main economic advantages of our plant is the job opportunities to a diverse group of people from diverse professional fields such as engineering, safety, finance, accounts, human resource, legal, facilities etc.

We have a standard entry level wage for both men and women in our organization and minimum wage standards as prescribed by the State Government are followed across the organization.

OPG offers opportunities to workers in the local area in operations. Regular pay and wage is a tremendous economic uplifter. There is a high demand for workers in our company office and plants.

There are many indirect economic impacts of our work in and near our plant. Some of our educational, health, infrastructure, and environment related initiatives have worked well for the communities, and we are in the process of measuring the impact of our work. By creating an ecosystem of education and by contributing to school uniforms, bags, books etc; we have been able to push for the cause of children going to school. Similarly, access to healthcare 'near your doorstep' is an initiative that we have taken around our villages and that is a positive impact for the locals. The availability of a health care practitioner in the village implies timely referrals in case of illness. Improved accessibility to market through an improvement in transportation is a subtle yet powerful impact for the local communities. The roads and the infrastructure around the factory become better with growing economic opportunities. Staff staying in nearby areas also bring in market opportunities for local vendors. There are in kind and pro bono help that OPG has been able to provide in terms of offering shelter to the local villagers, as well as providing them with the necessities, when required.

## 2.4 Sustainability Highlights

### CAPITALS

### HIGHLIGHTS

<p><b>MANUFACTURED</b></p>	<ul style="list-style-type: none"> <li>• 414 MW (2*77; 1* 80 MW; 1* 180MW)</li> <li>• 62 MW Solar power plant (31% equity interest)</li> <li>• Best technology Low NOx burner with Over Fired Air (OFA)</li> <li>• Improving Heat rate</li> <li>• 1868 million units generated</li> <li>• 1215.703 MU Sold</li> </ul>
<p><b>NATURAL</b></p>	<ul style="list-style-type: none"> <li>• 0.471 MT/MWh Specific Coal consumption</li> <li>• 0.113 m<sup>3</sup>/MWh Specific Water consumption</li> <li>• 1.34 kg CO<sub>2</sub>e/kWh, GHG emissions intensity</li> </ul>
<p><b>HUMAN</b></p>	<ul style="list-style-type: none"> <li>• 332 Company employees</li> <li>• 241 Contractual workforce</li> <li>• 12.37/employee -average hours of training</li> <li>• Zero TRIR (Total Recordable Incident Rate)</li> </ul>

**CAPITALS**

**HIGHLIGHTS**

**FINANCIAL**

- Revenue- GBP 80 Mn
- Operating Cost- GBP 56.5 Mn
- Taxes- GBP 4.3 Mn
- Employee Wages & Benefits- GBP 2.6 Mn

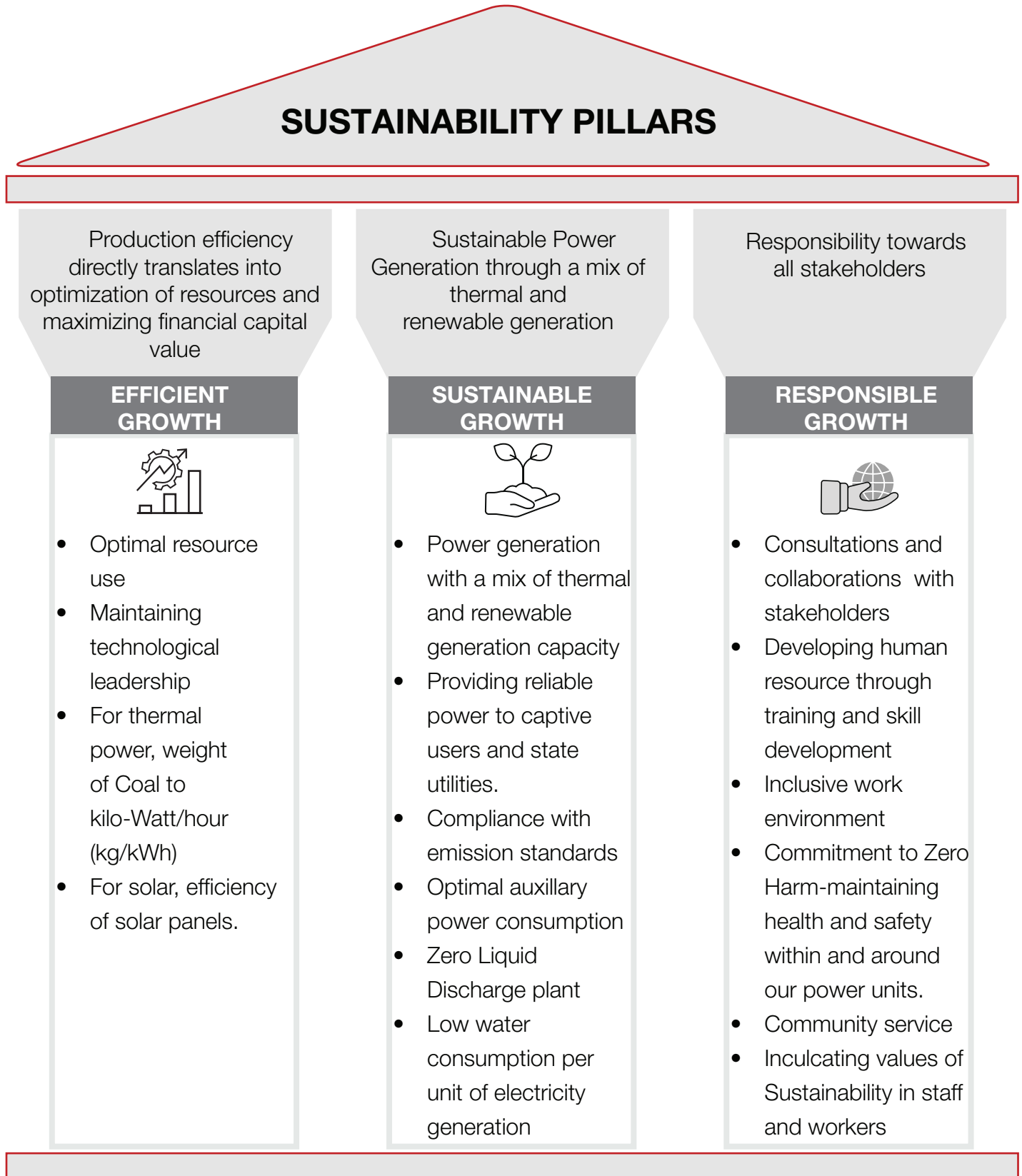
**INTELLECTUAL**

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

**SOCIAL**

- CSR Spending GBP 109,114

## 2.5 Sustainability Pillars





2.6

# Sustainability and SDGs







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# MATERIALITY





***“When deeds speak, words are nothing.”***

**- African wisdom**

## 3.1 Materiality Assessment

For the Company's ESG strategy, the concurrence of our stakeholders and also mapping the priority areas from the point of view of our peers is of utmost importance. A step wise stakeholder engagement helped in identifying material priorities.

### **Step 1: Peer review**

While there are many organizations in the sector and in the geography, there are not many direct peers for the right point of comparison as the size of our organization and business model is distinct. However, to arrive at the list of material topics, comparison was made with leading thermal and renewable power generation companies; as also with international standards and frameworks.

### **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 stakeholders. Our employees and our investors closely interact with us. Some of the other stakeholders such as suppliers, customers, government and communities regularly interact with us and we are responsive to their needs. A formal need analysis was carried out in

Consulted Stakeholders during the reporting year



the nearby communities for the right interventions and better impact before starting our CSR Programme.

**Step 3: Develop Consultation Framework**

Material topics were categorized as Economic, Governance, Social and Environmental. Questions were shared with selected stakeholders - management, customers, suppliers and employees.

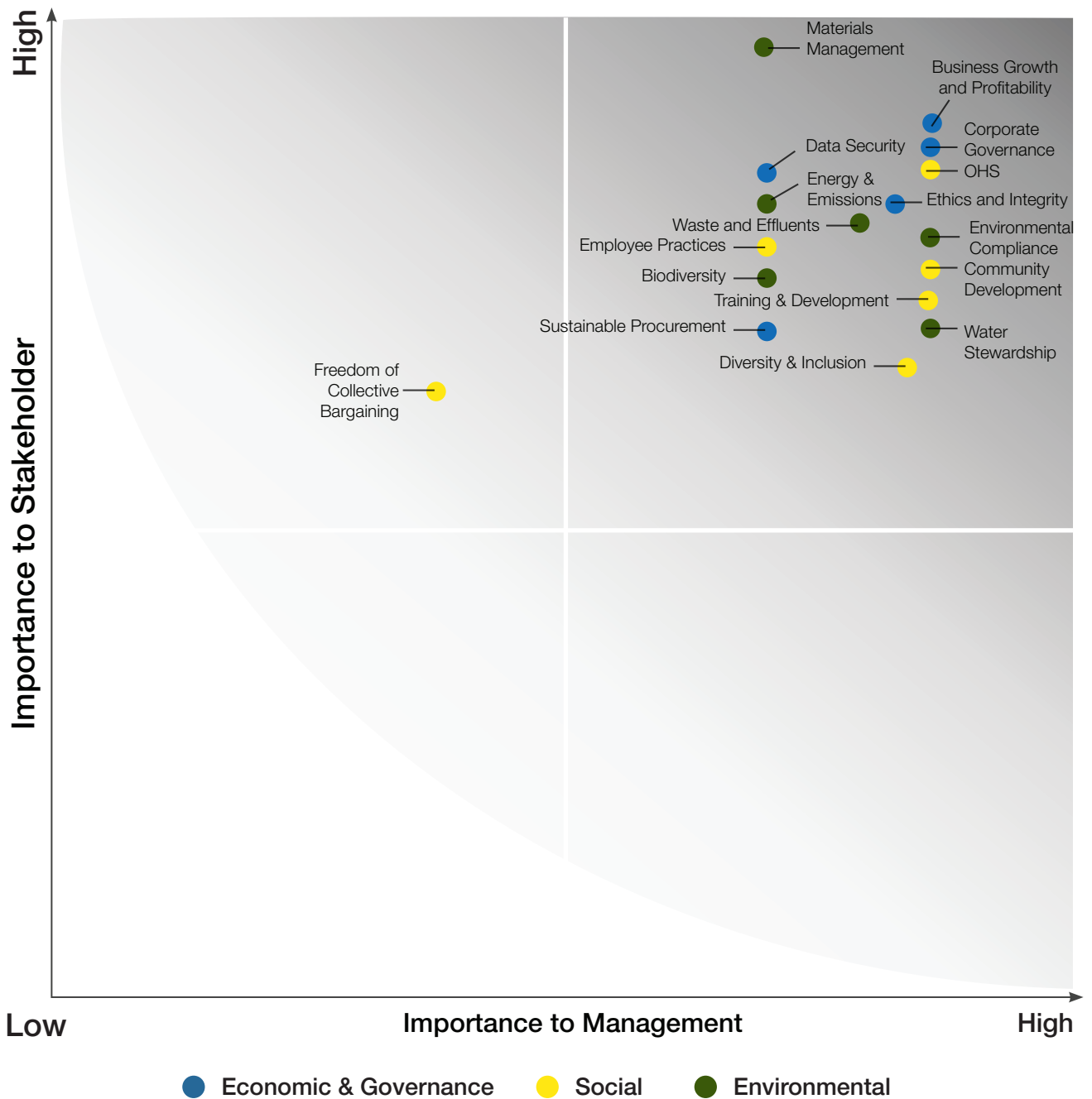
**Step 4: Analyzing inputs and developing Materiality Matrix**

On the X-axis, management priorities were mapped. On the Y-axis, stakeholder priorities were collated and plotted. About ten areas emerged as high priority from management as well as stakeholder point of view.

**Step 5: Consultations with Management for disclosing management approach**

Consultations were carried out to map management priorities.

## 3.2 Materiality Matrix



GRI 102 – 44, 47; 103 - 1



Energy & Emissions



Waste & Effluents



Biodiversity



Water Stewardship



Materials Management



Environmental Compliance



Employment



Diversity & Inclusion



OHS (Occupational Health & Safety)



Training & Development



Human Rights Assessment



Freedom of Collective Bargaining



Community Development



Sustainable Procurement



Corporate Governance



Ethics & Integrity



Business growth & Profitability



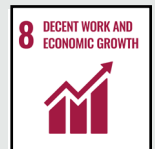
Data Security

# 3.3 Disclosures on management approach

## Business Growth and Profitability



One of the main goals of the organization is to maximize profits for shareholders which squarely is linked to efficient capital, technology and operational management. We will continue to leverage our expertise in optimizing the cost of the capital, and maximizing value for our shareholders.



## Corporate Governance



Strive to be one of the best governed organizations; achieve it through distribution of power, clearly laid out roles and responsibilities, board level and organization level committees, policies and support through internationally recognized systems. Implemented the Quoted Company's Alliance Corporate Governance Code and will continue to map and measure non-compliance if any, in the organization and supply chain.



## Ethics and Integrity

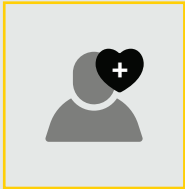


Implementation of Quoted Company's Alliance Corporate Governance Code; Anti-bribery Policy and clearly laid our responsibilities for executives. Board level traction on various important issues and independent committees for Audits, Remuneration and Nomination support ethical conduct at every level.





**OHS:  
Occupational  
Health &  
Safety**



'Zero Harm' is our Mantra, implementation of ISO 45001:2018, and a proactive approach are crucial to success of the programme. Striving for a zero incident culture comes through a rigorous approach and continual improvement. The participation of workers in setting EHS goals and involving them at every stage is one of the most significant aspects of the successful implementation of our Health & Safety Plan.



**Community  
Development**



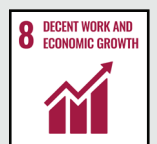
OPG is determined to positively impact neighbouring communities. In the first year of operations, the need analysis was carried out that helped us with devising interventions; all CSR programmes were implemented in consultation or direction of the District Collectorate or Panchayat Presidents. A detailed proposal is sent by the team which sets out the responsibilities, execution, timelines and liabilities of the parties involved. The Management screens the project executors based on internal screening criteria, credibility and ability to execute the project. The projects that OPG funds are for community development, education, healthcare and reducing inequalities.



**Employee  
training and  
development**



Employee training and development is carried out in a systematic way. The employee skill requirement and need assessment for the organization helps in identifying trainees and the types of training that are required. Training resources are sourced both from within the organization and externally. Training is conducted on soft skills, regulatory and technical areas.



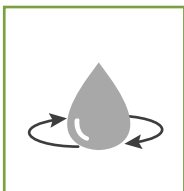
**Materials Management**



Planning and controlling material flow efficiently is a fundamental requirement for resource optimisation. Rigorous planning for the selection of raw material (Coal) and supply assurance at all times brings in cost efficiency and environmental benefits. Our approach is to use technology and persistent due diligence for material management.



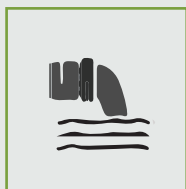
**Water Stewardship**



Managing water in a manner that specific water consumption is reduced per unit electricity generated by implementing a closed loop water system. Every drop of water that we can save is done, along with enormous efforts on rain water harvesting and recharging, including through developing the green belt. The approach is to reduce the fresh water consumption. Additionally, continual monitoring of borewells, recharge pits and ponds is carried out. We are maintaining our plant as a Zero Liquid Discharge Unit.



**Waste & Effluents**

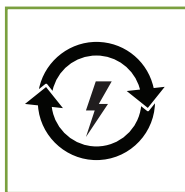


Our approach for managing waste and effluents is to become a zero waste organization. Comply with all statutory requirements concerning Waste Management such as disposal of ash, e-waste, battery, hazardous and bio-medical waste. Implement proper guidelines and procedures for collection, segregation, handling and storage of generated waste arising out of process cycle; Take appropriate measures to maximize recycle to reduce waste; Utilize energy resources in a responsible and



efficient manner so as to minimise waste of energy; Deploy efficient and clean technologies towards realizing minimal impact on environment; Develop and Implement good practices for minimizing waste generation at source; Educate and sensitise employees and workers on the importance of proper management of waste; Making business decisions that aim towards reduction of waste generation.

**Energy & Emissions**



Our approach to energy and emissions is to replicate India's energy mix. Having a thermal plant with subcritical technology makes it an efficient power generation system. The aim is to reduce the Auxillary Power Consumption close to the benchmark and multiple projects are taken every year to reduce the power consumption. We pay coal cess which is akin to Carbon Tax helps in funding green projects taken up by the Government of India. Our 62 MW Solar Energy Plant in Karnataka helps in contributing to India's renewable energy mix.



**Environmental Compliance**



Environmental compliance is very important be it for water, energy, emissions or waste. All the necessary permissions and required interventions are carried out as per the legal register maintained by the company.



## 3.4 Stakeholder engagement

Engagement with all stakeholders are detailed as follows:

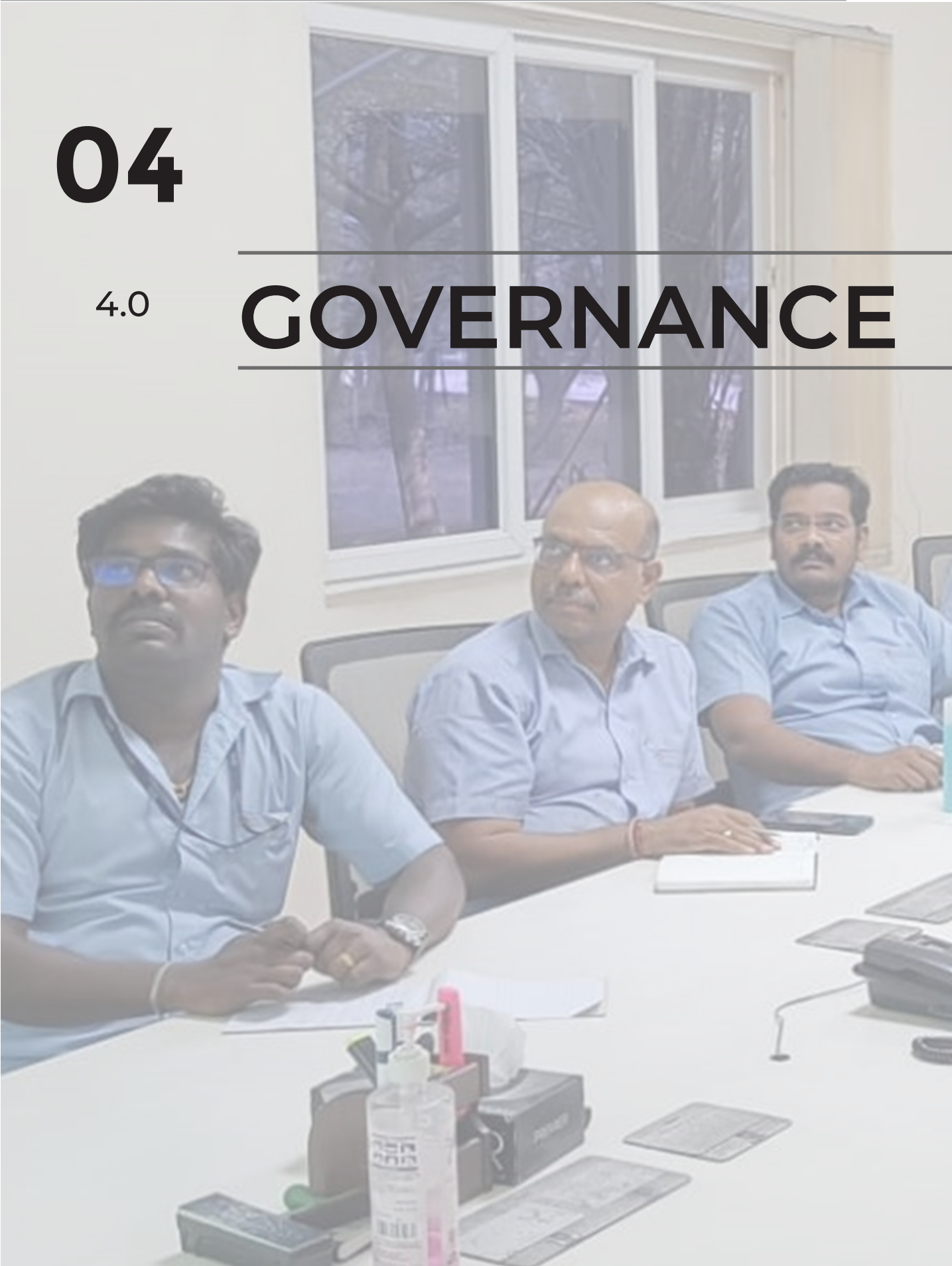
Stakeholder Group	Concerns raised	OPGs response
Employees	Health and safety, energy efficiency, training & development	Initiatives taken to improve work environment, health and safety, energy-efficiency, and employee capacity building measures
Contractual Workforce	Occupational health & safety, training, and skill development	Actions taken to improve health and safety, work environment, skill development and training, promotional events, and a grievance redressal mechanism
Local Communities	Education, infrastructure, community healthcare, vocational skill development, support during natural calamities	Education programs support through PTA; community health programs; skill development programs, provisions given during natural calamities
Government/ Regulators	Compliance with applicable laws, taxes, Verification audits and CSR implementation	Timely compliance of statutory requirements, payment of taxes & levies, submission of reports and other related information, and CSR initiatives
Investors	The Company's performance, growth opportunities and compliances.	Prudent financial management system and reporting, listing compliance audits
Customers	Plant availability, transmission availability, forced outages	Power generation planning and scheduling
Vendors	Timelines for payments	Clearance of payments due to supplier

Engagement method	Engagement Frequency
Direct interaction, emails, and correspondence, events, employee grievance mechanism and management training	Regular and specific engagement
Direct interactions, training sessions, open forums, toolbox talks, events	Regular and time specific engagement
Direct interaction with CSR project beneficiaries, government bodies and community-based organizations	Regular as well as need based engagement
Response to information sought, timely filing of reports, regulatory audits, and inspections. Visits by regulatory bodies and meeting with officials	Regular as well as time bound engagement
Investor meets, AGMs, meeting with bankers and other financial institutions, and periodic declaration of results	Bi-annual basis and event based engagement /disclosures
Direct communication with existing and new customers through binding agreements such as PPAs	Regular and need based engagement
On-boarding process, supplier meets, supplier site visits etc.	Regular engagement

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# GOVERNANCE

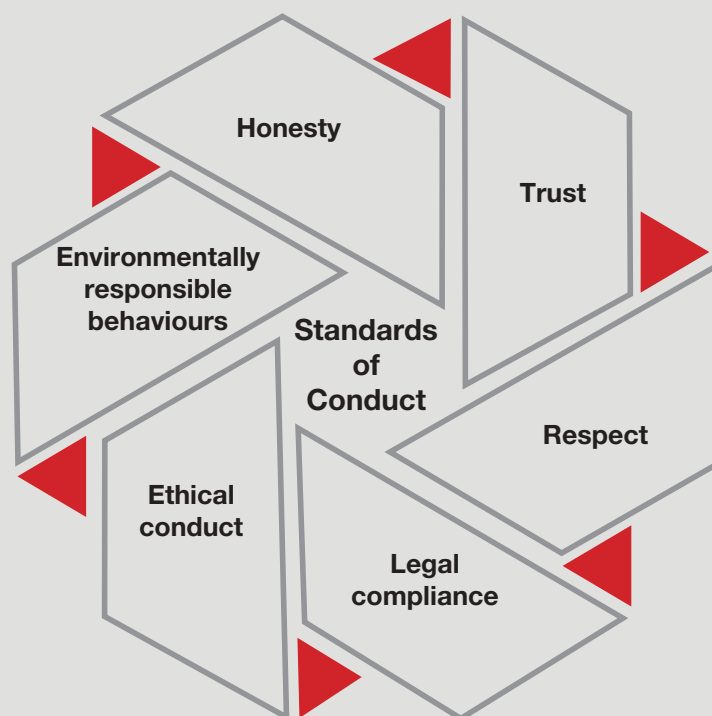




***“It is in your hands, to make a better world for all who live in it.”***

**- Nelson Mandela**

## 4.1 Corporate Governance



We believe that a strong foundation of transparency, accountability and compliance are essential for practicing good governance. The company has adopted the Quoted Companies Alliance “QCA” Corporate Governance Code (“the code”) in line with requirements of the AIM rules for companies. This code provides a Corporate Governance Framework to support the business and its success in the long term (Ten Corporate Governance Principles). A three-tiered corporate governance structure helps keep a vigil on timely and precise functions of all important matters. The Chairman and the Directors of OPG follow the UK Corporate Governance Code.



It is important for us to understand and meet shareholders' needs and expectations. Senior leadership met with a number of institutional shareholders in the reporting year. The AGM notice was sent at least 21 clear days before the meeting. The voting results were made available on the website. Copies of annual and half year financial reports are available on our website. All issues raised by stakeholders are factored in the aligned strategy.

### **Principles of Good Corporate Governance**

- ▶ **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 organization**
- ▶ **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 and is performing by maintaining a dialogue with shareholders and other relevant stakeholders.**

## 4.2 Board of Directors

The operating team, with a Chief Executive Officer at the helm, manages all aspects of operations. It is the responsibility of the OPG Board to model Corporate Governance practices and set up high standards for the interest of all stakeholders especially the shareholders. The Board of OPG meets atleast four times a year. The Non-Executive Directors have access to the same information as Executive Directors. External advice is available to the Non-Executive Directors, if required, at the expense of the Group. Matters relating to strategy including new and expansionary capital items, operating budgets, management committees, progress of all other committees are dealt with by the Board during these meetings.

Position	Name
Chairman	Mr. Arvind Gupta <sup>+</sup>
Non-Executive Chairman	Mr. N Kumar <sup>++</sup>
Non-Executive Deputy Chairman	Mr. Jeremy Warner Allen
Chief Executive Officer (Director)	Ms. Avantika Gupta
Chief Financial Officer (Director)	Mr. Dmitri Tsvetkov* Mr. Ajit Pratap Singh**
Non-Executive Director	Mr. P Michael Grasby

Nationality	Number	Gender	Number
Indian	2	Male	4
British/ International	3	Female	1

<sup>+</sup> upto 4<sup>th</sup> April 2022; <sup>++</sup> from 4<sup>th</sup> April 2022; \* Outgoing and \*\*Incoming- joining with effect from 31<sup>st</sup> May 2022

The board comprises a balance of Executive Directors and Non-Executive Directors, out of which, three are Independent Directors. Details of the background and qualifications of the Group's Directors are set out on the website and in the Group Annual Report. The Board is diverse and has a rich collective experience that complements each other. Detailed profiles of the Board members are available on our website.



**Mr. Arvind Gupta,**  
**CHAIRMAN**  
upto 4<sup>th</sup> April 2022



**Mr. N Kumar,**  
**NON-EXECUTIVE**  
**CHAIRMAN**  
from 4<sup>th</sup> April 2022



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



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



**Mr. Dmitri Tsvetkov,  
CHIEF FINANCIAL OFFICER,  
DIRECTOR  
(upto 31<sup>st</sup> May 2022)**

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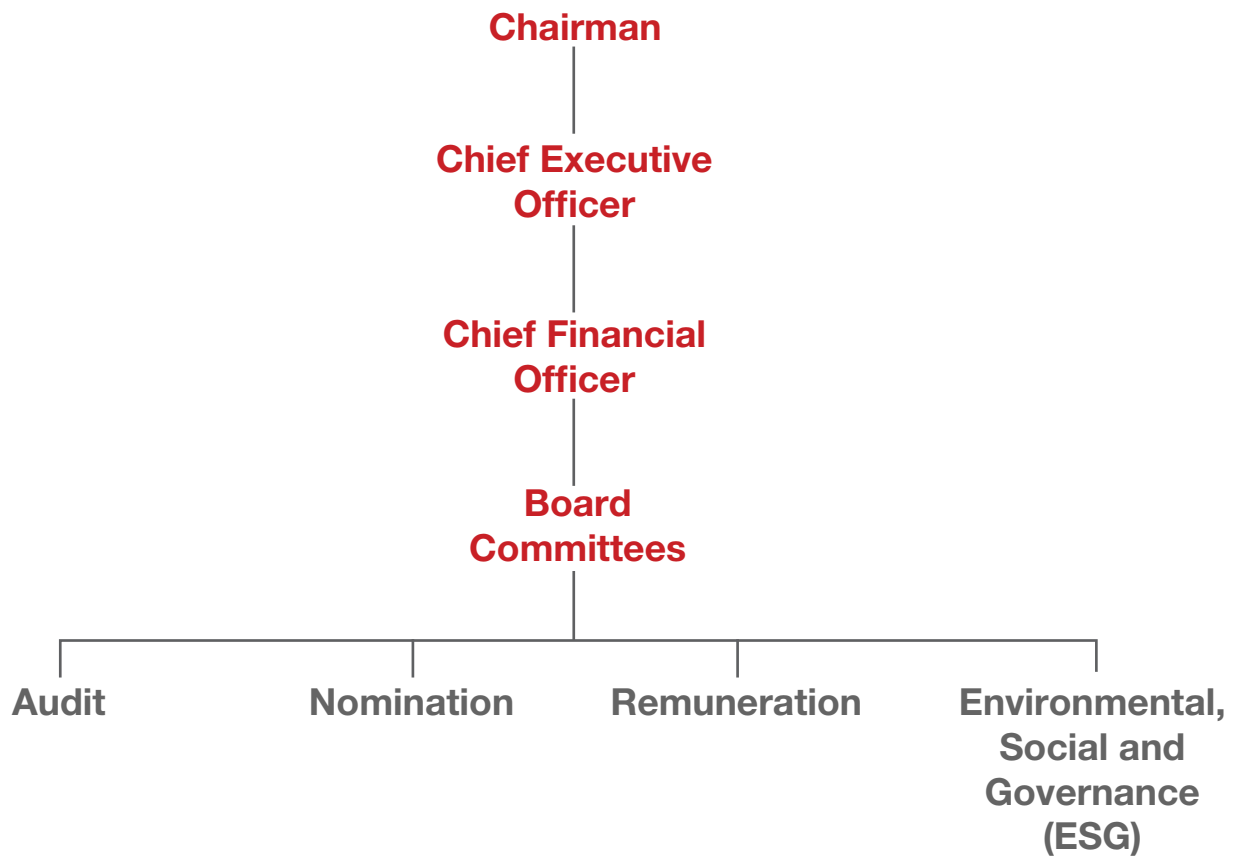


**Mr. P Michael Grasby,  
NON-EXECUTIVE DIRECTOR**



**Mr. Ajit Pratap Singh,  
CHIEF FINANCIAL OFFICER,  
EXECUTIVE DIRECTOR  
(from 31<sup>st</sup> May 2022)**

## Corporate Governance Structure : ESG (with effect from June 2021)



**OPG Board**

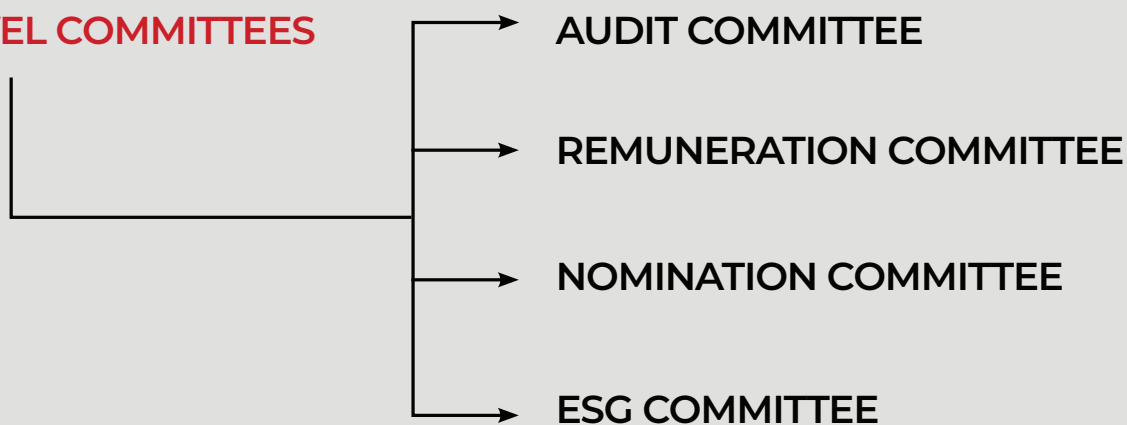
Overall responsibility for adopting and implementing sustainability measures covering the entire company

**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

## 4.3 Committees

### BOARD LEVEL COMMITTEES



## **AUDIT COMMITTEE**

The Audit Committee is primarily responsible for ensuring that the financial performance of the Group is properly monitored and reported on. It scrutinises the half year and full year financial announcements before their approval by the Board. The Chief Executive Officer and Chief Financial Officer attend meetings by invitation.

## **REMUNERATION COMMITTEE**

The Remuneration Committee is primarily responsible for reviewing the performance of the Group's Executive Directors and Senior Management, and setting their remuneration and other terms of employment. The Remuneration Committee is also responsible for the creation and administration of share option schemes.

## **NOMINATION COMMITTEE**

The primary duty of the Nomination Committee is to lead the process for Board appointments and make recommendations to the Board.

## **ESG COMMITTEE**

The OPG Board is responsible for adopting and implementing the Group's sustainability strategy. The ESG Committee's primary duties is to implement the ten principles and achieve short-, mid- and long-term ESG Goals. Other responsibilities include tracking strategic and tactical issues, reporting to the Board, understanding the wider context of ESG; setting goals and targets; identifying KPIs and monitoring performance in terms of ESG parameters.

## ORGANIZATION LEVEL COMMITTEES

The Board approved a three-tiered governance structure for the effective management of the organization. The goal of this governance structure is to clarify the roles and responsibilities at executive and steering committee levels, and for providing a structure for strategic planning, decision making, performance management and for institution building.

Through the Central Committee Policy, the Board has empowered the executive committee and steering committees to take the organization forward. The policy emphasizes a culture of transparency amongst and across the committees for enhancing accountability. Strategic supervision is carried out by the Board members. Strategic Management is carried out by the Executive Committee, comprising the CEO, CFO, COO and heads of the key business functions. Functional responsibility of each function is carried out by the Steering Committees.

## ORGANIZATION LEVEL COMMITTEES

**Executive Committee**

**Steering Committee Coal Management**

**Steering Committee Operations**

**Steering Committee Finance and Accounts**

**Steering Committee Human Resources**

**Internal Complaints Committee**

**Steering Committee EHS**

**Risk management Committee**



**ESG related Policies (select list)**

- ▶ Biodiversity Policy
- ▶ Policy on Modern Slavery
- ▶ Climate Risk Policy
- ▶ CSR Policy
- ▶ EHS Policy
- ▶ Energy Management Policy
- ▶ Rainwater Harvesting Policy
- ▶ Waste Management Policy
- ▶ Anti-Bribery Policy
- ▶ Modern Slavery Policy

**Modern Slavery Policy**

Our policy on Modern Slavery is pursuant to section 54 of the Modern Slavery Act 2015. OPG is committed to zero tolerance for Modern Slavery in its business or supply chain. The focus is on human rights, working standards, environmental protection, and social responsibilities.

There is a growing consensus that organizations have a role to play in protecting human rights. Starting with Universal Declaration of Human Rights in 1948, augmented through International Covenant on Civil and Political Rights, 1966 and International Covenant on Economic, Social and Cultural Rights, 1966, the framework for protection of human rights covers all grounds.

All our Board Members are seasoned professionals who have had the privilege of guiding organizations before and understand the value of human rights very well. Remuneration of men and women is balanced for all grade levels as we do not discriminate against women, religious or ethnic minorities or economic background etc. We have not received any complaint regarding discrimination at any of our operations.

One of the major tenets of human rights is the prohibition of child labour and we do not allow children inside our operational site. The terms and conditions with contractors specify non-employment of anyone under the age of 18 years. We also have pre-employment medical to ensure that no child is employed with OPG. There are compulsory day off after a week's work for all those working with contractors.

For all employees there are all holidays available as required under the legal provisions. We do not have forced or compulsory labour. This reflects in formal contracts with our contractors as well. The contracts specify that the contractor should comply fully to the norms. We do not have any review going on by any Country regulatory authority as we have not violated any rights. There have been no grievances regarding human rights violations at our premises. We do not have any CBAs in place so far but workers are at liberty to join any State Union.

## 4.4 Memberships & Associations

We are members of the Tamil Nadu Power Producers Association. The range of issues discussed through the forum are about energy security, power sales, environmental, financing and regulations, fiscal and legal. The Senior Executives and Management participated in discussions for the industry with 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.

## 4.5 Certificates & Awards



Best Large Energy Project Award from FICCI's TANENERGY

ZERTIFIKAT ♦ CERTIFICATE ♦ 認証証書 ♦ CERTIFICADO ♦ CERTIFICAT



# CERTIFICATE

The Certification Body  
of TÜV SÜD South Asia Private Limited  
certifies that



**OPG Power Generation Pvt Ltd**  
OPG Nagar, Madharpakkam Rd, Periaibulapuram Village  
Gummidipoondi, Thiruvallur Dt. - 601 201, Tamilnadu, INDIA

has implemented Occupational Health and Safety Management System  
in accordance with ISO 45001:2018  
for the scope of

Generation of Electricity Using Coal

The certificate is valid from 2021-05-25 until 2024-05-24  
Subject to successful completion of annual periodic audits  
The present status of this Certificate can be obtained on [www.tuv.sud.com/in/en](http://www.tuv.sud.com/in/en)  
Further clarifications regarding the scope of this certificate may be obtained by consulting the certification body

Certificate Registration No. 99 117 00697

Date of Initial certification : 2021-05-25

Issue Date: 2021-05-25 Rev. 00

*Rahul Kale*

Rahul Kale  
Head of Certification Body  
of TÜV SÜD South Asia Private Limited, Mumbai  
Member of TÜV SÜD Group



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# CERTIFICATE

The Certification Body  
of TÜV SÜD South Asia Private Limited  
certifies that



**OPG Power Generation Pvt Ltd**  
OPG Nagar, Madharpakkam Rd, Periaibulapuram Village  
Gummidipoondi, Thiruvallur Dt. - 601 201, Tamilnadu, INDIA

has implemented Environmental Management System  
in accordance with ISO 14001:2015  
for the scope of

Generation of Electricity Using Coal

The certificate is valid from 2021-05-25 until 2024-05-24  
Subject to successful completion of annual periodic audits  
The present status of this Certificate can be obtained on [www.tuv.sud.com/in/en](http://www.tuv.sud.com/in/en)  
Further clarifications regarding the scope of this certificate may be obtained by consulting the certification body

Certificate Registration No. 99 104 01212

Date of Initial certification : 2021-05-25

Issue Date: 2021-05-25 Rev. 00

*Rahul Kale*

Rahul Kale  
Head of Certification Body  
of TÜV SÜD South Asia Private Limited, Mumbai  
Member of TÜV SÜD Group



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Best fly ash utilization award

## 4.6 Risks and Opportunities

Risks are mapped systematically at OPG. For risk management, the Executive Committee reports to the Board and the three-tiered governance structure helps in creating quick awareness of any issue that can be a potential risk. The Board strives to maintain the right balance that is required for growth of the organization as well as hedging against any possible short- and long-term risks. Some of the risks can be classified as financial, operational (safety), market & strategic (foreign exchange, coal supply, coal prices) and environmental (climate change). At the same time, opportunities are also mapped. Some of the identified opportunities and risks are mentioned as follows:

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>

Identified Risks	Potential Impact	Action Plan
<b>Economic</b>		
<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 domestic 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 exchange 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>
<b>Environmental</b>		
<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>
<b>Social</b>		
<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>

## Climate Change Risks and Opportunities

Current global energy consumption is heavily dependent on fossil fuels. Whether it is advanced economies or economically growing developing world, the dependence on coal for power generation is a common thread for all economies, big or small. However, there is a growing consensus on the reality of the threat of the climate change and its consequences, which cannot be ignored.

Taking full responsibility for its contribution to GHG emissions, India has ratified the Paris Climate Agreement in October 2016. To keep the global average temperatures from rising above 1.5 degrees, as compared to pre-industrial average temperatures, India has made binding commitments. As the economies transition and adapt, OPG has both risks and opportunities.

### **Transitional/Legal Risks**

Coal cess is imposed at the rate of INR 400 per tonne of coal. This cess translates into a carbon tax equivalent for the coal industry. The tax accumulated forms the corpus for National Clean Energy and Environment fund for financing clean energy projects. By 2018, the Indian Government has collected upward of GBP 9 billion approx (86,440 crores); (Department of Expenditures NCEF brief 2017-18) and is funding several initiatives such as the National Clean Energy Fund, Cleaning Rivers and River Development, and Biodiversity Preservation.

It may be relevant to mention that OPG sailed through the generic industry risk of interrupted coal supply owing to restricted Indian coal supply. As OPG Power Plants can utilize both imported and Indian coal in any proportion, it did not impact OPG. Historically, our plants were never shut for non-availability of Coal.

### **Physical Risk**

Physical risks owing to climate change may have implications as extreme climate events pose a potential risk for any industry. We are not immune from those events. Chennai floods in 2015-16 created havoc in many communities. We would like to share that the TN plant has been designed and drainage planned to accommodate extreme rainfall events. Throughout this extreme weather event, our plant remained available for production and did not suffer any damage. We had coal stocks available in our onsite sheds. We could drain excess water to an extent that we could help neighbouring communities with it. We were in a good position to cater to all employees and staff, and could also accommodate people from five neighbouring villages providing them shelter, food and other provisions required for their basic needs.

### **Opportunities**

The risks that are mentioned above offer us a clarity on our resolve to continue to contribute to the power story of India. We also see renewable energy as part of our portfolio diversification plan to mitigate risks.

## 4.8 Procurement Practices and Suppliers

We like our values to be shared by our suppliers and contractors. To enforce the values with contractors, the contracts specify about prohibition of child labour, health and safety practices, timely wages, compliance on ESI, EPF & Miscellaneous Provisions Act, The Minimum Wages Act, The Factories Act, The Payment of Wages Act, and Maternity Benefit Act. Similarly, suppliers are scrutinized for their credibility and their reputation, for all significant supply contracts, strong values for prohibiting child labour, discrimination, local mining related regulations and compliances and adhering to local labour laws and regulations are communicated.

Coal is primarily sourced from central India and imported from South Africa and Indonesia. We do not have a formal policy to prefer suppliers based on local vs non local, as the main focus is to optimize the costs as well as supply surety. All the office supplies are sourced from local vendors that includes computer supplies, furnishings and all miscellaneous items.

**During the reporting year and in the baseline year, 100% of the products and service vendors were local for Chennai office and Karnataka Plant. In Tamil Nadu Power plant, other than coal 85% products purchased were local compared to 75% in the baseline year.**





**05**

5.0

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# ENVIRONMENTAL STEWARDSHIP

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***“The question is not what you look at, but what you see.”***

**- Henry David Thoreau**

5.1

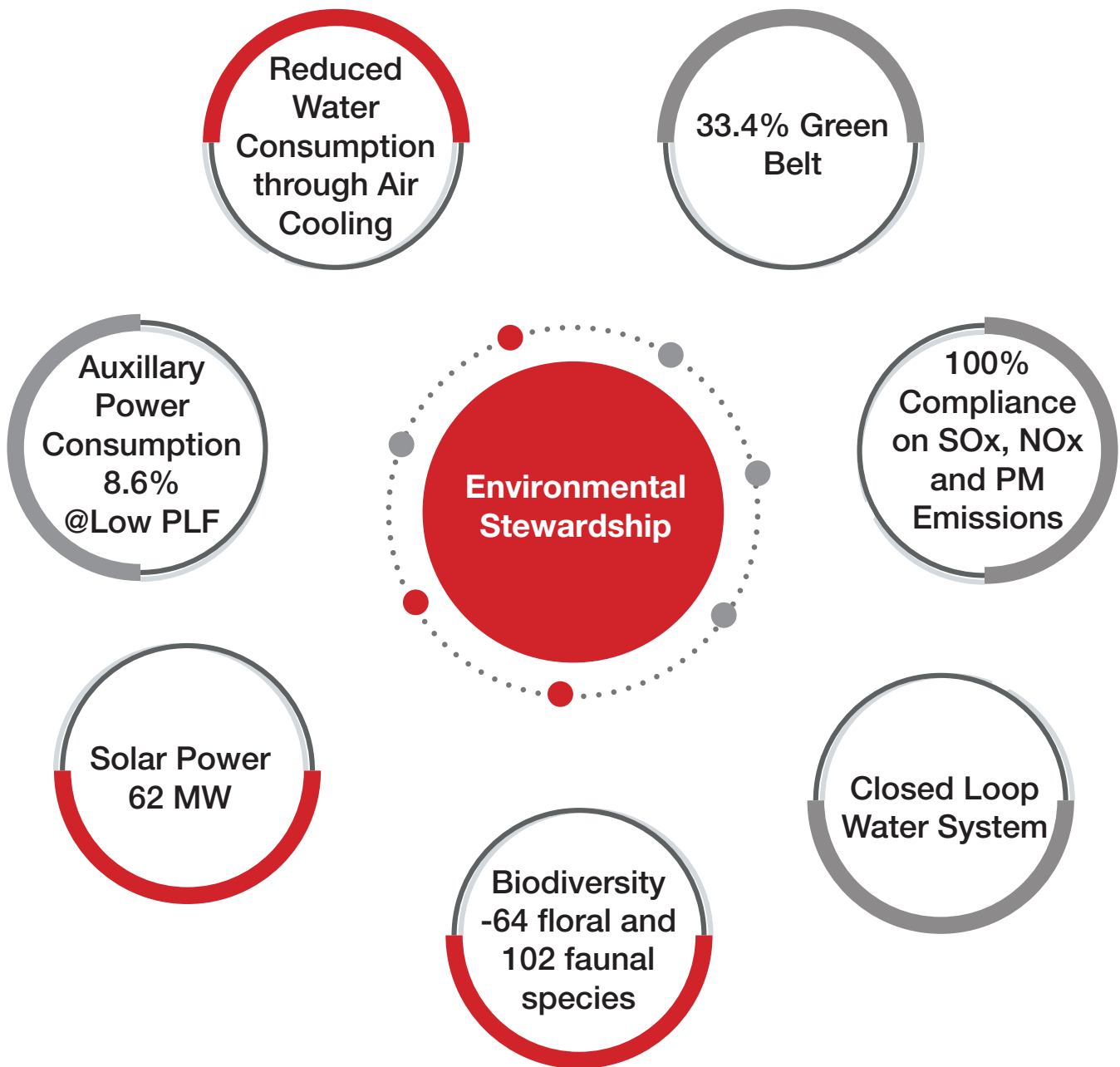
## Environmental Performance and Compliance

Continual improvement in environmental performance through responsible operations is one of the key pillars of our corporate strategy. We submit timely reports to the regulatory agencies such as Tamil Nadu Pollution Control Board and these are available on our website as well. Some of the main legislations that are relevant to us are Water (Prevention & Control of Pollution) Act 1974 and subsequent rules, Air Prevention & Control of Pollution Act 1981 and subsequent rules, Environmental Protection Act, 1986; Hazardous Waste Management Handling and Transboundary Movement Rules 2016, Tamil Nadu factories Rules, Petroleum Act, Factories Act, Tamil Nadu Fire Services Act no.40 and Tamil Nadu Fire Service Rules 1990 and Indian Boilers Act, 1923. We are compliant on these Acts and Rules. We keep a close watch on any new requirement and promptly make efforts to adhere to the same. Our plant has all the necessary wastewater treatment as well as air pollution control equipment. In addition to that, noise levels and light levels are also being monitored and reported regularly. We had no incidence of any fine or monetary sanctions imposed on us for non-compliance.

**We have spent a total amount of 2,297,895 GBP for environmental protection in FY 2021-22. This includes De-NOx OFA project for NOx emission control, filter for emission control ESP system, Silo Bag filters, rainwater harvesting, wind shield for dust control and other expenses for experts & consultants and for certifications.**

**GRI 307-1**

Environmental Highlights



## 5.2 Material and Waste

Power generation requires some form of fuel as raw material. Applying the resource conservation approach to the concept of materials implies using less material for a higher yield of electrical output. Keeping this as a foremost goal towards efficiency, the Tamil Nadu plant uses the subcritical technology which allows us to achieve the objective of producing power efficiently. For the thermal power plant, Tamil Nadu, the materials consumed are non renewable and renewable. Non renewable materials are coal, light diesel oil and heavy speed diesel.

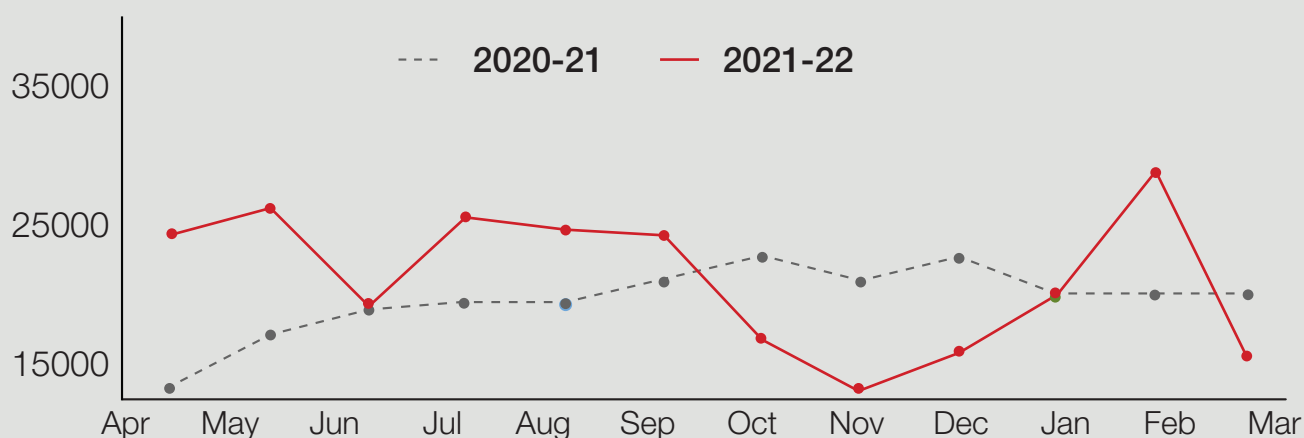
Renewable resources used in the production process are Wood (97.6 MT) and Water (80099 m<sup>3</sup>). Some oils are used in very insignificant quantities and hence are not reported here. There is no consumption of POPs (Persistent Organic Pollutants) in any of our operations. For measuring coal, a monthly volumetric survey using a topography meter is carried out and a weighing scale balance is used for cross verification. Oil is measured using an instrument called a flow totalizer, along with verifying physical stock. Water quantity is measured using a flowmeter.

Our core policy on waste is reducing, reusing and recycling, wherever possible. Anything hazardous is disposed as per the norms. Non-hazardous waste is disposed of with reuse and recycle ethos.

Material	Unit	Quantity
Coal Consumption	MT	999,411
LDO Consumption	kL	563.0
HSD Consumption	kL	504.0
HFO Consumption	MT	0.0
Wood Consumption	MT	97.6
DM Water	m <sup>3</sup>	80,099

One of the major hazardous wastes is ash which is supplied to the cement industry where it is used as a raw material for producing clinker and cement. Oil-soaked cotton waste, batteries etc. are some of the other wastes that are generated and disposed of through an authorized agency with details posted on our website. When it comes to liquid waste, ETP, STP and a closed loop system ensures that maximum water is recovered. Non recoverable water is discharged to the solar pond for evaporation. None of the waste that we generate is shipped anywhere internationally. Spent oil that is recovered from the system during the process of power generation is recycled but not within the system. It is given to authorized recyclers. Fly ash and bottom ash generated in the reporting year is 102,957 tonnes. 100% of fly ash and bottom ash generated are disposed to cement and brick industries.

**Fly Ash Generation TN Thermal Power Plant in tonne**



## 5.3 Water Stewardship

The water cycle is a closed loop system at OPG. STP water is used for irrigation within the campus and no water leaves the premises, leaving it a ZERO LIQUID DISCHARGE PLANT (ZLD).

Water Saving **Air Cooling**: Air Cooled Condensers (ACC) is a type of Direct dry cooling system to cool the turbine exhaust steam. In ACC, the exhaust steam from the turbine is directly cooled in a system of finned tubes by ambient air using fans. The heat rejection of the power cycle from the condenser to the atmosphere takes place by sensible cooling in finned tubes and no evaporative cooling of water is involved. Thus it is a Zero water cooling system”

- **Specific Water Consumption 0.113 m<sup>3</sup>/MWh compared to the norm which is 3.5 m<sup>3</sup>/MWh**
- **Low water consumption due to air cooling instead of water cooling for condensing process**





Biodiversity: Natural Pond- OPG Plant, Gummidiipoondi

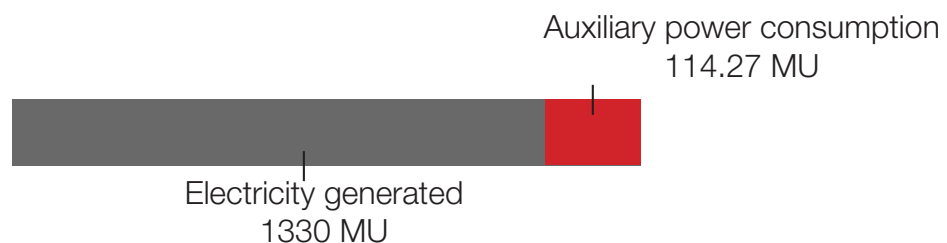
## 5.4 Energy

### Electricity Generated; Energy Consumed within the Organization

OPG generates power for other consumers. The end users for most of the power generated are consumers of industrial and commercial establishments and state utilities. The Energy that is consumed within the plant is to maintain facilities, air conditioning, systems and all the power that is consumed to convert fuel into electricity. Auxiliary power consumption (APC) for OPG usually oscillates between 7.22% and 7.94%. This year the APC is 8.63% because of part load operation (low PLF @ 52%).

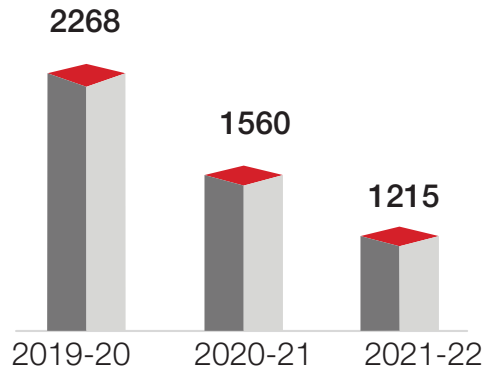
In the financial year 2021-22, total electricity generation for the thermal plant Tamil Nadu was 1329.98 MU; auxiliary power consumption was 114.27 MU. The Net generation in thermal plant, Tamil Nadu is lower than 2019-20 because of low schedule.

#### Energy Scenario FY 2021-22

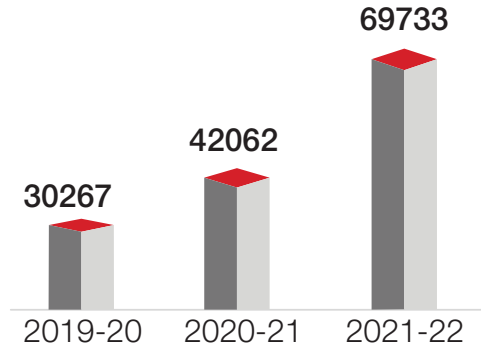


The purchased electricity for the Chennai office was 0.069 MU (69733 kWh). Electricity consumption at our Chennai office has increased from the year 2020-21 because of the Covid 19 lockdown.

**Energy sold (MU) TN thermal power plant**

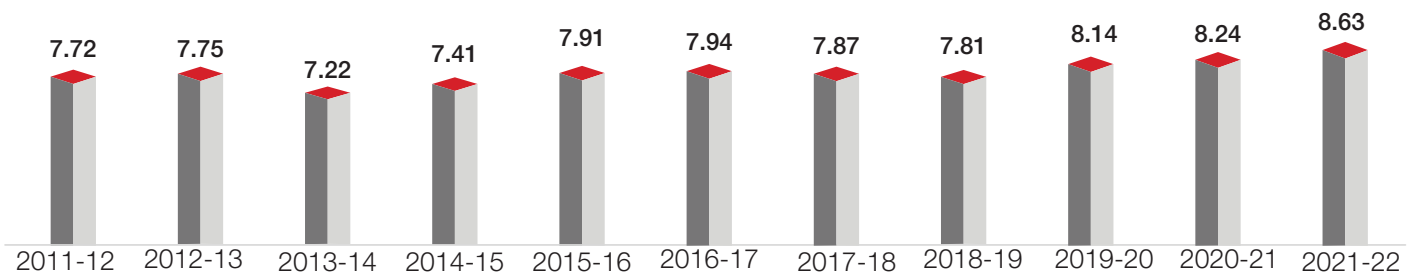


**Electricity Consumed (kWh) Chennai office**



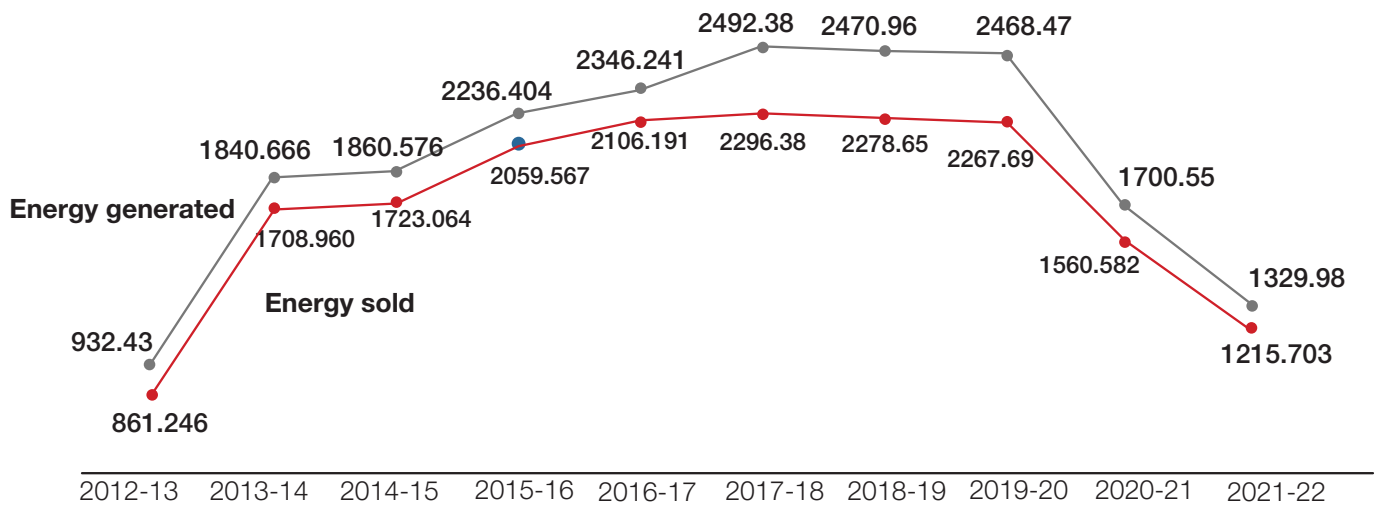
Internal energy audits are carried out by Energy Efficiency Team to ensure efficient plant operations.

**Trends in Auxiliary Power Consumption in % TN Thermal Power Plant**



In Karnataka Solar Plant the net export of power is 107968.118 MWh with a PLF export of 19.88% for the reporting year 2021-22.

### Trends in Energy Generated vs Energy Sold (MU) TN Thermal Power Plant



# Emissions

Emissions that come out of electricity generation vary based on the type of fuel, technology used and safeguards deployed to contain emissions. It can be considered as an essential negative outcome of the process of burning fuel.

Emissions can be categorized into two types based on human concern; one category is SO<sub>2</sub>, NO<sub>2</sub>, and PM, which if not contained and filtered can impact human health in the vicinity. The others are Ozone-depleting and GHG emissions. Ozone-depleting substances have the potential to impact at the global level. GHG emissions are expressed as tonnes of CO<sub>2</sub> and its equivalents. Similarly, green house gases may have long term consequences on our planet's significant climate systems, ultimately impacting human systems.

India is a signatory to the Paris Climate Agreement which has already come into effect. The Indian Government has imposed coal cess for the power industry that is aimed at building a corpus fund to mitigate the impact of emissions generated by our industry. Coal cess which can be read as Carbon tax is imposed at INR 400 (4.01 GBP) a tonne. We are contributing to decarbonizing our economy through this taxation as the corpus funds green ideas and green projects. Apart from that, to reduce the overall emissions, we are diversifying our portfolio to replicate India's energy mix. The total cess paid in 2021-22 was 3,697,125 GBP (4.01 GBP per tonne)

To control the dust emissions, we use an electrostatic precipitator which works at 99.9% efficiency. The efficient precipitator helps in controlling the emissions well within the prescribed limits. Our stack emission monitoring analyser has been linked with Tamil Nadu Pollution Control Board (TNPCB) server to get the real-time pollutant data. An LED display board has been fixed at our main gate that displays the pollution levels. Even in coal unloading areas, a dust suppression system is in place. In coal crushing areas, dust filters are installed to avoid the dust generation.

## **Energy saving and emission reduction initiatives:**

In the reporting year, eight projects were carried out, that helped in energy and emission savings.

**De-nox Project- Over Fired Air Control System installed for combustion control in Unit 2. This work is continuing for Unit 1 and Unit 3. Turbine Major Overhaul Project in Unit IV to reduce the turbine heat rate.**

- ◇ **Turbine seal replacement was carried out in Unit II to reduce the turbine heat rate**
- ◇ **ACC Fan blade replacement to reduce auxillary power consumption**
- ◇ **LED replacement for reduction of electricity use**
- ◇ **Cofired Biomass for reducing coal consumption**
- ◇ **Solar water heater for hot water requirement**
- ◇ **BFP & CEP pump de-staging for energy saving**
- ◇ **Turbine revamping Energy BFP & CEP pump de-staging for energy saving**

## **Scope 1 and Scope 2 Emissions**

In this report we have disclosed our Scope 1 and Scope 2 emissions. Our Scope 1 emissions are primarily due to combustion of primary, secondary and biomass fuels for power generation; fugitive emissions from coal handling and storage. The green house gases accounted are for CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O for calculating Scope 1 emissions.

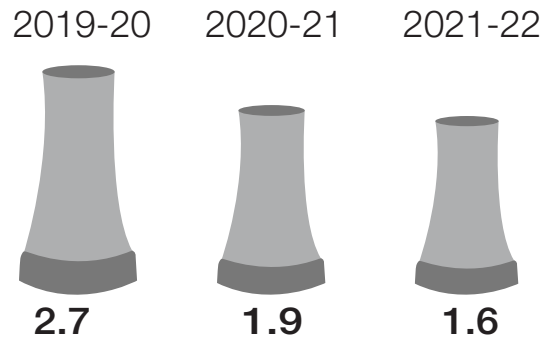
In 2021- 22, the primary fuel used in the plant is coal and it is responsible for 97% of the CO<sub>2</sub>e emissions. The coal handling and storage (fugitive emissions) account for 2.8% and the secondary fuel consisting High Speed Diesel (HSD) and Light Diesel Oil (LDO), and biomass briquettes account for the remaining 0.2% of CO<sub>2</sub> emissions.

**GRI 302- 5; 305- 1, 2**

### Scope 1 and Scope 2 Emissions

Our scope 1 emissions have decreased over the three years. We have observed a decrease of 27% in scope 1 emissions in 2020-21 relative to 2019-20 and an 18% decrease in 2021-22 relative to 2020-21. Our scope 2 emissions due to electricity consumption at our Chennai office have increased from 2019-20 to 2021-22.

#### Scope 1 Emissions in Million tonne of CO<sub>2</sub>e



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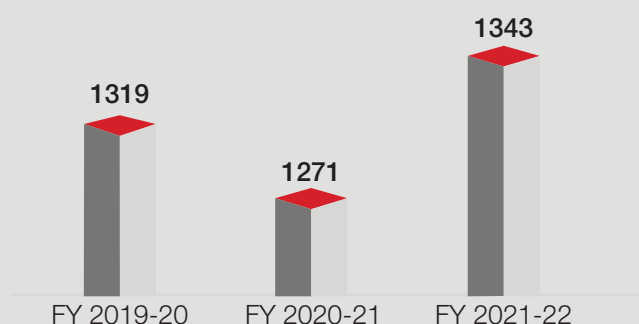
#### Scope 2 Emissions in Million tonne of CO<sub>2</sub>e



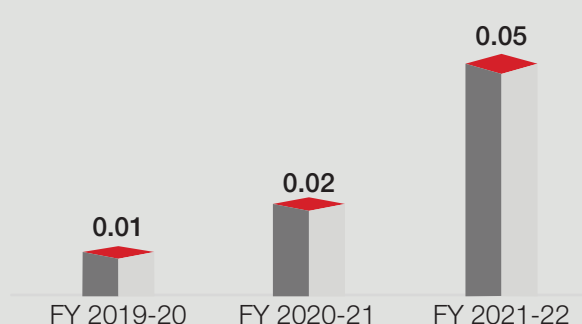
## Emission Intensity

Emission intensity is calculated in kgCO<sub>2</sub>e per MWh of net electricity generation. Since, net generation reduced from the previous years, scope 1 emission intensity increased in spite of less scope 1 emissions in FY 2021-22

**Scope 1 Emission Intensity (kg CO<sub>2</sub>e/MWh)  
TN thermal power plant**



**Scope 2 Emission Intensity (kgCO<sub>2</sub>e/MWh)  
TN thermal power plant**



### Emission Intensity Tamil Nadu Plant

Details	UOM	FY 2021-22
Power Generated	MU	1,329.98
Net power generated	MU	1,215.703
Scope-1	tCO <sub>2</sub> e	1,628,942
Scope-2	tCO <sub>2</sub> e	57
Scope-3	tCO <sub>2</sub> e	4,469
Total	tCO <sub>2</sub> e	1,633,468
Total Emission Intensity	tCO <sub>2</sub> e/MU	1,343.64
Total Emission Intensity	gCO <sub>2</sub> e/kWh	1,343.64



**Emissions by GHG**

Sr. No	GHG	2021-22 tCO <sub>2</sub> e
1	CO <sub>2</sub>	1,580,029
2	CH <sub>4</sub>	47,323
3	N <sub>2</sub> O	6,286
Total Emissions		1,633,638

**Emissions by Scope**

Sr. No.	Details	Category	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	tCO <sub>2</sub> e
1.	Direct Emissions (Scope-1)	Stationary combustion	1,574,815	16	24	1,581,526
		Mobile combustion	703	0.04	0.04	714
		Fugitive emissions	-	1,674	0	46,872
2.	Indirect emissions (Scope-2)	Purchased Electricity consumption	57	-	-	57
3.	Other indirect emissions (Scope-3)	Coal transport (contracted vehicles)	4,454	0.180	0.036	4,469
4.	Total Emission		1,580,029	1,690	24	1,633,638

## Energy efficiency initiatives (LED lighting and solar thermal)



GRI 302-4; 305- 3

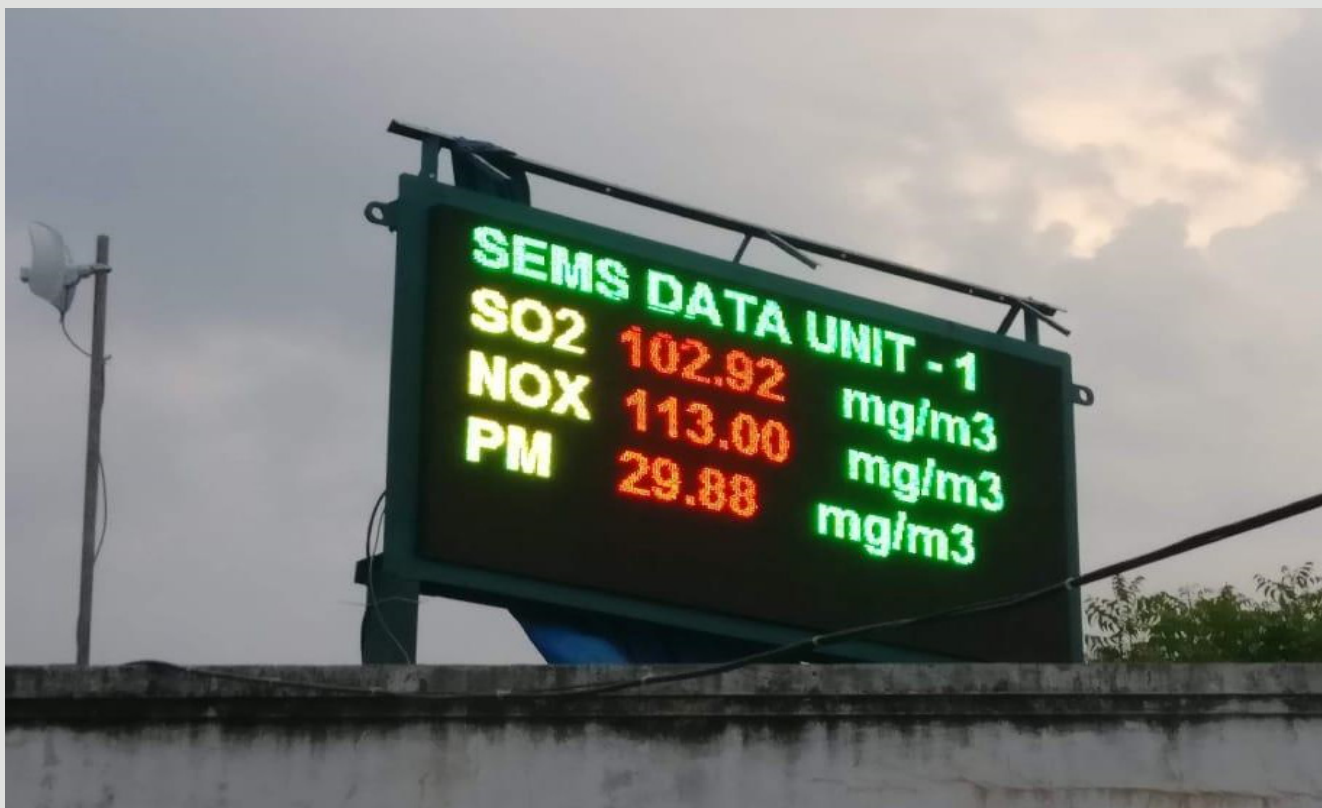
<b>Initiative</b>	<b>Type of initiative</b>	<b>Savings /Year (GBP*)</b>
Replacement of lights to LED	High Energy Conventional lights has been replaced with LED	19,825
High Energy Efficiency blades	ACC fan blades has been replaced with Energy Efficiency blades	31,082
Pump Destaging	Destaging has been carried out in the high energy pumps(BFP and CEP)	145,849
High Energy valve leaking	Leaking valves has been replaced with new valves	65,851

### Scope III emissions

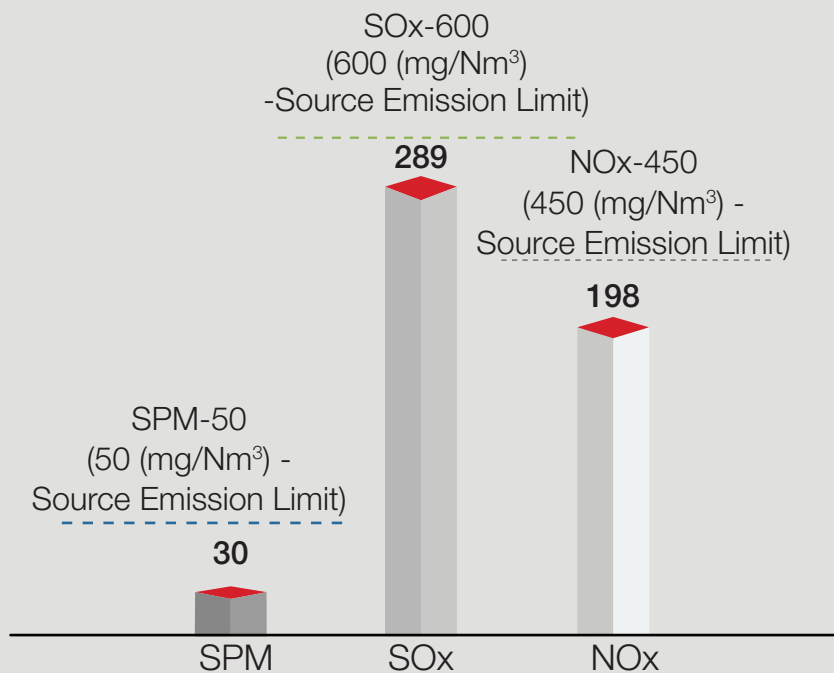
For the Tamil Nadu Thermal plant, staff buses bring our staff to the plant. We do not have a similar arrangement at our Chennai office as most of our staff use existing public transport systems including buses and metro rail. Our office is two minutes' walk from the metro station.

Transport of materials from Indonesia to Port Ennore and from Port Paradip in India to Ennore is via ship. From Ennore to Gummidipoondi is a short distance and so far, lorries are used for the purpose. However, with the rail network expanding, we would be glad to make a shift to train freight for transporting our materials in due course.

Our primary energy consumption comes from direct consumption of fuel for generation. We do not purchase any electricity to run our plant. Various initiatives have been taken to conserve power, some of these have led to substantial savings approx. GBP 2,62,607.

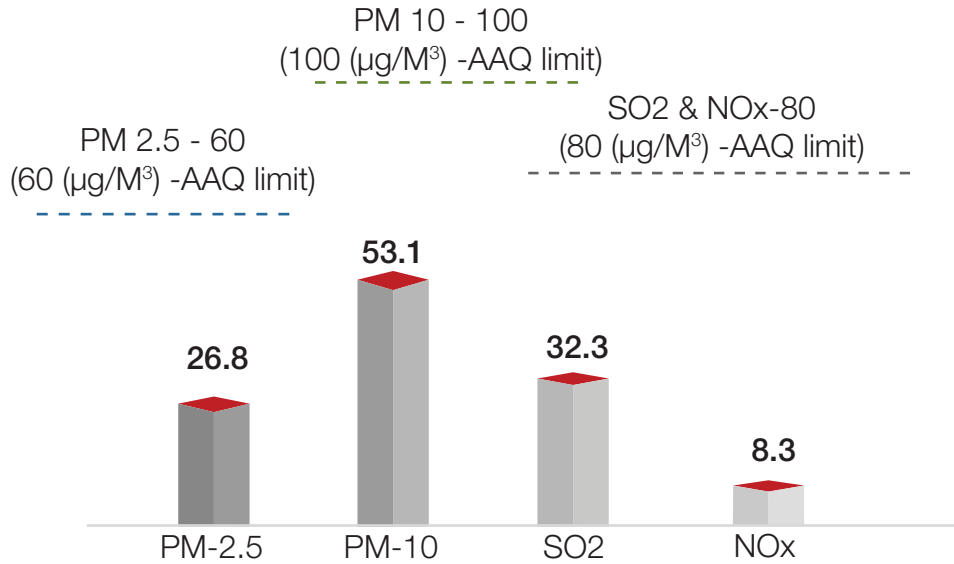


**Pollutant Emissions from Stack in TN Thermal Power Plant (mg/Nm<sup>3</sup>)**

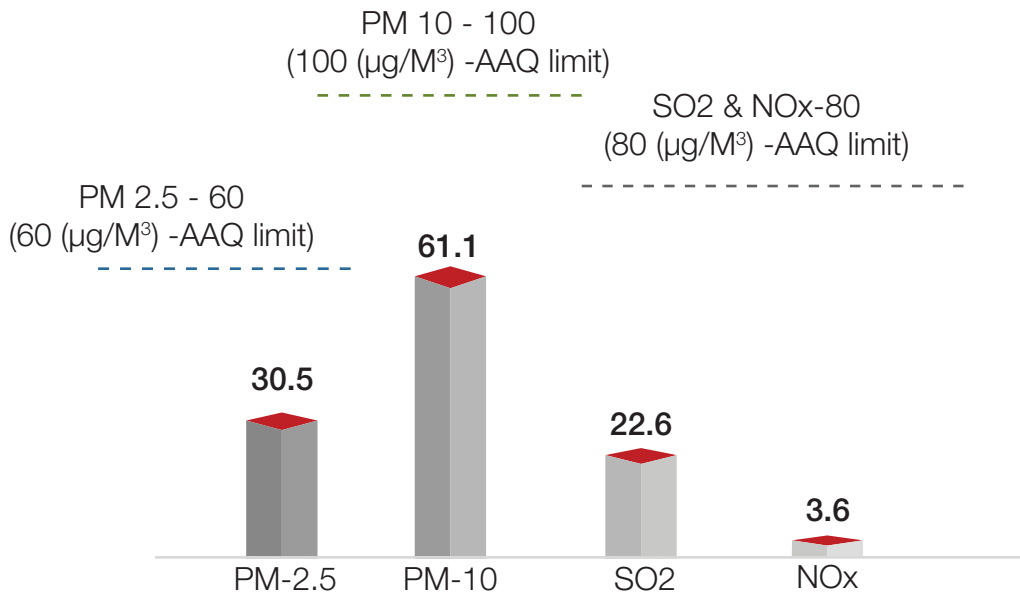


Air Emissions

**Pollutant Emission Observed at Ambient Air Quality Measuring Station-1 ( $\mu\text{g}/\text{M}^3$ )**



**Pollutant Emission Observed at Ambient Air Quality Measuring Station - 2 ( $\mu\text{g}/\text{M}^3$ )**



# Biodiversity

Our belief is that we humans are the primary beneficiaries of biodiversity. Even in the geological past, only a unique blend of plants could lead to formation of Coal belts and similarly only certain organisms could form oil over millions of years and that too only under certain conditions.

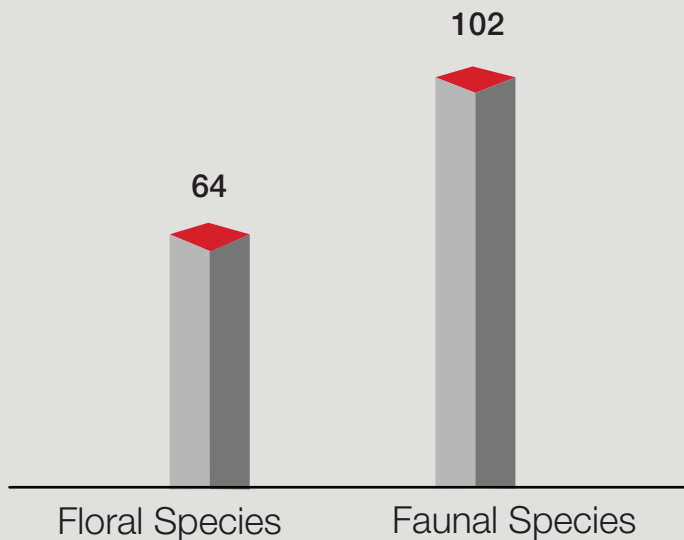
Existing biodiversity is crucial for our planet's well-being. We would like to share with our stakeholders that all our operational sites are not within close vicinity of any protected area. We do not pose any threat to any IUCN critically endangered, endangered species, vulnerable and near threatened species. Moreover, with great enthusiasm, we have dedicated 30% of the area at our premises as green belt to promote local biodiversity in the area. An EIA conducted around the area including OPG site revealed 64 plant species in the area. The OPG site had thorny bushes, a few trees, and abundant grasses. There was no species found that was either endangered or rare. Amongst faunal species scorpions, spiders, field rats, mabuya, calotes were observed. Ants, bees, beetles, butterfly, centipedes, crickets, damsel fly, dragon fly, flies, grasshopper, lizard, mabuya, mantis, millipedes, rats, scorpions, snakes, spiders, termites, thelyphonus, and wasps. Some of the birds spotted in the area are Babbler, Barbet, Bee eater, Bulbul-red vented, House Crow, Jungle Crow, Spotted Dover, Black Drongo, Egret, Hoopoe, Sand piper, Stilt, Sun Board, Tree pie, Kite, Kite brahmini, King fisher, Koel, Myna, Owlet, Palm Swift, Parakeet, Partridge, Pond Heron, Robin, Roller, Sparrow, Shrike and Warbler.

We would like to put this on record that no biodiversity has been affected adversely by any of our operations and we have not received any environmental grievance. We have not assessed our suppliers for their environmental impact so far.

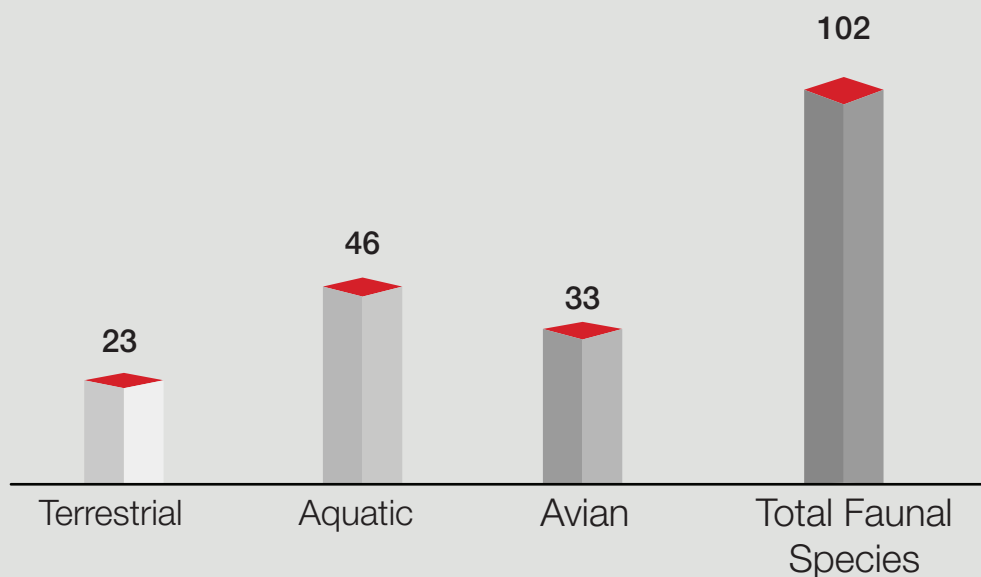


- The rainwater recharge pond is surrounded by suitable trees to facilitate resting areas for birds.
- More than 50 year old Trees (Ficus and Palm) are well maintained.

### Floral and Faunal Species



### Faunal Species Distribution



### Species Categories





06

6.0

# PEOPLE





***“Alone we can do so little;  
together we can do so much.”  
- Helen Keller***

# Employees

For employee practices, we align to decent work and economic growth, SDG 8; health and well-being, SDG 3 and gender equity, SDG 5 for our employee practices. Our resolve is to meet all legal, statutory and industry requirements for our employees and workers. Health and safety for our employees and workers is of foremost importance to us and we take it very seriously. We also assure the provision of safe drinking water, canteen and medical service access for everyone working at our premises.

Meeting minimum wage standards, equal remuneration for men and women, social benefits, provision of leave and holidays are all basic conditions which are required to have a motivated work force.

We have age appropriate workforce working at various levels in the organization. Three levels of hiring are carried out; Senior Management including Managing Director, Director, Executive Director, Chief Financial Officer, Chief Operating Officer, VP and President; Middle Management includes Managers, Senior Managers, AGMs, DGMs and GMs; Junior Management are Safety Officers, Chemist, DM Plant Operator, Assistant Engineers, Engineers, Executives, Port Staff, Assistant, Tech Supervisors, Secretaries, Junior Executives, Store Head and Security Officer.



We are a growing organization and added 114 new people to our workforce in the reporting year. There are no minority groups identified in the organization but we are open to hiring anyone who has the right skills. The salary or remuneration of all employees be it men and women are equal. We have inclusive recruitment policies and there is no discrimination based on gender, caste, age or religion. We encourage disabled people to apply for positions wherever appropriate. There is no discrimination reported by any employee or worker on any of the above mentioned grounds.

Diversity in an organization indicates organizational openness to society. Our organization is headquartered in the Isle of Man and admitted to trading on the AIM market of the London Stock Exchange. All the organizational operations are in India. We have diversity with respect to gender and nationality in our board, amongst our employees and workers.

Benefits are available for our full time and temporary employees, some of these are life insurance, housing facility, ESI, attire allowance and canteen facility. Benefits available to only permanent employees are Retirement provisions, Provident Fund, Gratuity and Earned leave encashment. Canteen facility and housing facility is available to Tamil Nadu Plant employees. Holidays and leaves are provided as per the regulatory norms to all the employees.

To be fair to all stakeholders, particularly employees, contractors including consultants and trainees, the processes are standardised. Minimum notice period for operational changes or other notices for permanent employees or employees on probation/trainee is one month to three month while for contract employees and consultants, it is 15 days.

<b>S.No.</b>	<b>Benefits</b>	<b>Full-time (permanent) employees</b>
1.	Maternity leave with wage for six months	Yes
2.	Trousers and shirts (three sets each) for men	Yes
3.	Trousers, shirts and overcoat (three sets each) for women	Yes
4.	Transportation facility	Yes
5.	Raincoat once in two years	Yes
6.	Safety shoes	Yes
7.	Canteen facilities	Yes
8.	Accomodation	Yes

<b>S.No</b>	<b>Employment Type</b>	<b>Notice Period</b>
1	Permanent	One Month to three month
2	Probation	One Month
3	Trainee	One Month
4	Contract (Consultancy)	15 days

## Regular Training & Awareness Programmes







## Occupational Health & Safety

Health & Safety is one of the highest social priorities for us, from both management and stakeholder point of view. At OPG, 'Zero Harm' is the Safety Mantra. It is our endeavour to assure that the incidents are reduced year on year. Focus on all aspects of safety helped us achieve **zero total recordable incident rate** as well as **zero loss time injury frequency** for the **past six years**. We are now focused on improving trends in incident rate and always striving for no incident. We also pay a lot of emphasis on zero repeating of any incident. Some of the highlights of our safety programme are:

- Health and Safety policy covering 100% of permanent and contractual employees.
- Integrated health and safety standards ISO 45001 into operational planning, business decisions and daily process activities.
- Site specific steering committee have independence of designing their own annual improvement plans, which include targets and improvement measures.
- Continual improvement



GRI 403-1, 3, 6, 8, 9

Equal representation of workers in safety committee helps in joint management and makes management, employees and workers to take responsibility. Roles are clearly defined for all committee members and representatives. Quarterly meetings are aligned to our objectives as well as regulatory requirements (Factories Act 1948 Section 41-G, Conjunction of Tamil Nadu factories rule 61 M).



Management's approach to prevent negative OHS impacts is creating a safety culture, forming a safety committee, participation of workers, investigating all near-misses and incidents through a 'WHY WHY' analysis, providing CAPA for avoiding re occurrence. SOP, OCPs developed for all activities to prevent work related hazards. Fine is imposed for safety violation. Organization's approach to mitigating significant negative OHS impacts are ensuring that the SOP, OCP procedures are implemented in the day to day work activities.

**'Zero Harm' mission and the  
reward is safety for all**

## Safety Standard Implementation: ISO 45001:2018

Implementation of ISO 45001 Management Systems was carried out and surveillance audits in Thermal plant was completed. Four external audits were conducted. For two units, we have received third party certifications.

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.



GRI 403-2, 3, 4, 5, 6

## Emergency Response and Reporting: Highlights

- Centrally located and accessible Occupational Health Centre (OHC) is located in the plant premises.
- Availability of an ambulance 24/7 at the Occupational Health Centre.
- At least one full time Doctor /male nurse is available at the plant premises.
- Shortest routes to reach the dispensary is mapped through Emergency drills.
- Incident Reporting Format is specified and it is presented in monthly safety report and safety committee meetings. Reporting within prescribed time.
- Twenty locations for first aid boxes (within 200 m of any point).
- A responsible person is given charge of the first aid box.
- Hospital connect for timely assistance if required.

**During COVID pandemic period, COVID PPEs- mask (49,480 numbers), face shield (483 numbers), hand sanitizers (365 litres), coverall- (25 numbers) and wages for quarantine period provided for employees.**



## Safety Track Record

Occupational Safety - 'Achieved Zero' on Number of fatalities, fatality rate, number of high consequence injury. Number of work-related injuries are zero whether for permanent workforce (men or women) or contractual workforce (men and women). Similarly, for all staff and workers there are no reportable work-related ill health for permanent workforce, men or women.

Annual health check-up has revealed no occupational health related issues (checked by certified surgeon from Inspectorate of factories). There has been no report of any woman being injured or hurt at OPG.

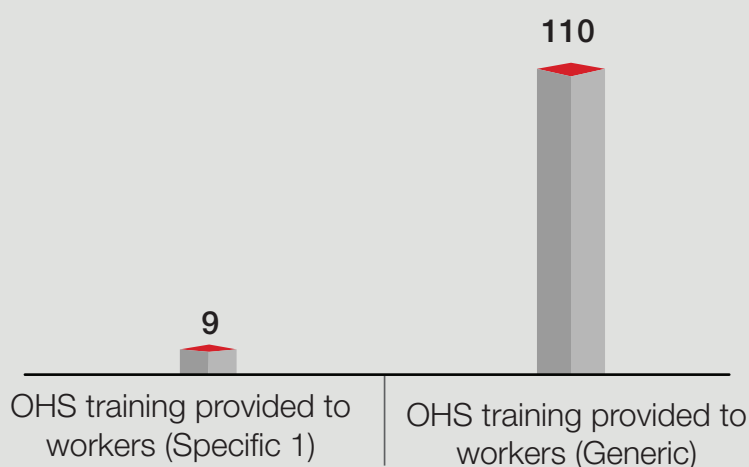
### Occupational Safety Report (2021-22)

Safety Parameters	TN Plant			
	Permanent Workforce (Men)	Permanent Workforce (Women)	Contractual Workforce (Men)	Contractual Workforce (Women)
Number of Fatalities	0	0	0	0
Fatality Rate	0	0	0	0
Number of high consequence Injury	0	0	0	0
Rate of high consequence Injury	0	0	0	0
Number of work related injuries	0	0	0	0
Rate of work related injuries	0	0	0	0
Number of hours worked	4,59,968	12,480	5,40,168	89,856

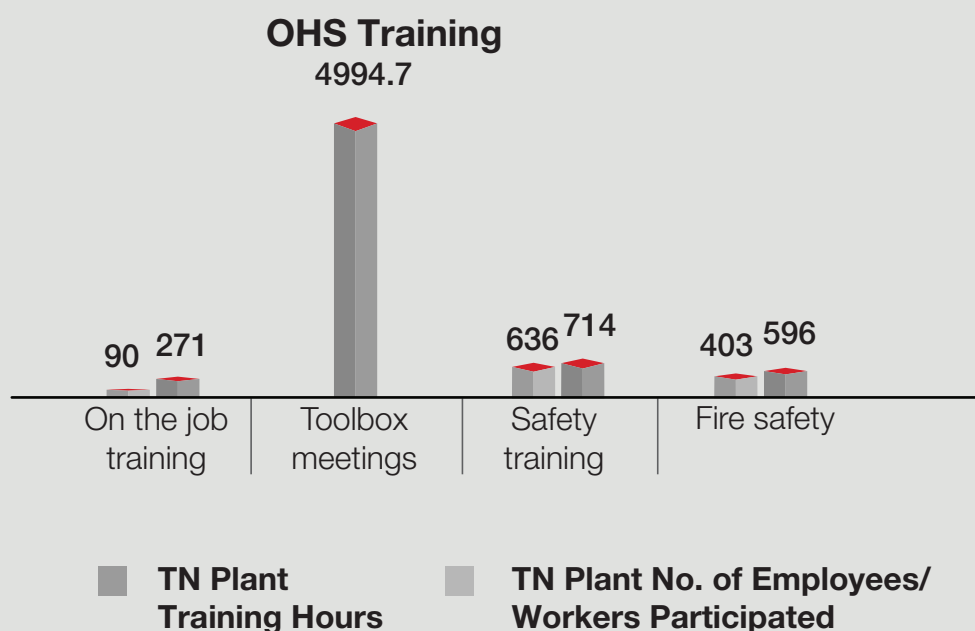
## Proactive safety culture

In the reporting year, OPG organized a First Aid Training session with St. Johns Ambulance Association and ALERT First Aid for employees & workers. We also provide an in-house health training program conducted by medical personnel. Medical examinations are carried out by Standard health care services for Employees & workers.

## Worker Training on Occupational Health and Safety TN Thermal Power Plant



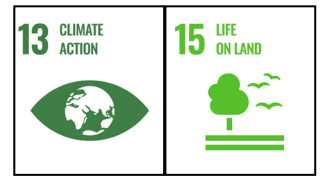
A total of 110 hours of occupational health and safety training were given to the workers (Generic) and nine hours of training for workers in Specific categories.







# Community Engagements



## 1.0 Afforestation: Climate Mitigation

Periyaobulapuram village is one of our neighbouring communities. In consultation with the village counsel for long term resilience building, we engaged in preparing the land for planting 500 saplings. The work was carried out in the month of September just ahead of the winter rains. This aligns with SDG Climate Action and Life on Land. While this endeavour goes a long way in creating community green area, it also helps in building resilience and safeguarding against climate risk of droughts and dust storms.



## 2.0 Dust Suppression

Water Sprinkler & Spray arrangement in nearby communities to suppress dust (Using Neutralizing- Bit Water)



**GRI 413-1**

### 3.0 Community Development: Access to water

#### Bore Well and pipeline for site nearby villages



Piped water is a dream that is one of the assurances for clean drinking water supply, available and accessible to everyone. With “water for all” as a theme, borewells were dug and pipes were laid, which helped nearly 1000 beneficiaries. This project aligns with SDG 6, clean water and sanitation.



## 4.0 Community development: Zero Hunger

Food distribution at nearby villages during heavy rainfall.



Food distribution at nearby villages.

**GRI 413-1**



Food distribution at nearby villages.

## 5.0 Reducing Inequalities: Promoting Education and Sports



Promoting Education- Mission 'Build a progressive and Skilled Society'



Promoting sports



Conducting Women Kabaddi Sports Program - Promoting Gender Equality



Women's Day Celebrations



**GRI 413-1**



## 6.0 Good Health and Well-Being

Our Commitments towards Community Health Development- Inauguration of Wellness Centre at SRK Village



Oxygen Concentrator donated to Gummidipoondi Government Hospital – 13th May 2021 during COVID-19 second wave



Oxygen cylinder imported from Singapore during COVID crisis and supplied to nearby Hospitals

**ஆக்சிஜன் செறிவுட்டு இயந்திரங்கள் ஒப்படைப்பு**

■ குமியிப்புள்ளி அரசு பொது மருத்துவமனையில் ஆய்வு மேற்கொண்ட. எம்.எ.ஏ. கோவிந்தராஜன், ஆக்சிஜன் செறிவுட்டு இயந்திரங்களை, திருவள்ளூர் மாவட்ட சுகாதார பணிகள் இணை இயக்குனர் ராணிமீடம் ஒப்படைத்தார்.

குமியிப்புள்ளி, மே 15- தாராபணிகள் இணை இயக்குனர் ராணிமீடம், எம். சண்முகம் பொது மருத்துவமனையை, எம்.எல்.ஏ. எல்.ஏ., டி.ஜே. கோவிந்தராஜன் நேற்று ஆய்வு மேற்கொண்டார். குமியிப்புள்ளி, மே 15- 14.எம்.பி., ரிபிள், மருத்துவமனையில் தலைமை மருத்துவ அளித்த ஆடிமேயர் உடல் இருந்தனர். தனியார் மின் உற்பத்தி தொழிற்சாலை வழங்கிய, எட்டு ஆக்சிஜன் செறிவுட்டு இயந்திரங்களை,

திருவள்ளூர் மாவட்ட சுகாதார பணிகள் இணை இயக்குனர் ராணிமீடம் ஒப்படைத்தார். ஒரு கொடுமான சிகிச்சை வையம் ஒற்படுத்த ஆலோசனை நடைபெற்றது. குமியிப்புள்ளி அடுத்த ஊழலில் உள்ள சேதமடைந்த கட்டடங்களில் கொடுமான சிகிச்சை வையம் ஒப்படைத்து குறித்து ஆலோசனை சிகிச்சை வையம் இயங்கி வருகிறது. அந்நகர உத்தரவு களை, அரசிடம் கேட்டு பெற முயற்சிப்பதாக எம்.எல்.ஏ. தெரிவித்தார்.

## Testimonials

From:  
Headmaster  
Panchayat Union Middle School,  
Chinna Obulapuram.

To:  
OPG Power Generation Pvt., Ltd.,

To whomsoever it may concerned.

Sir / Madam

This is to bring to your kind consideration during the pandemic period our school strength raised significantly. Considering the students well-being two teachers (A. Glory and B. Keerthi) were appointed and the salary for the teachers was provided by OPG Power-plant. From April 2021 to March 2022 the company has sponsored Rs 1,20,000 for the purpose of payment of salary to the above said teachers. I express my deep gratitude and thanks for the financial support rendered by the organisation.

From  
Headmaster,  
P.U. Middle School,  
Periya Obulapuram,  
Gummidipoondi

To  
OPG Power Generation Private Limited  
Gummidipoondi

TO WHOMSOEVER IT MAY CONCERN

Sub: Thanking letter

Sir

We hereby express our sincere thanks and gratitude for the Financial support rendered by you for our P.U. Middle School, Periya Obulapuram. For the salaries of two teachers (S. Kanaka - I std, S. Saraswathi - VI std) from April 2021 to March 2022 for Rs 1,20,000/- Kind information that more students were admitted in our school during that period, Totally 188 Students were studied in our school in the academic year 2021-2022.

On behalf of our school, We once again thank for the valuable support rendered by you.



Date: 30/06/2022

From  
Headmaster  
P.U. Middle school  
Pethikuppam  
Gummidipoondi

To  
OPG Power Generation Private Limited  
Gummidipoondi

TO WHOMSOEVER IT MAY CONCERN

Sub: Thanking letter

Sir,

We hereby express our sincere thanks and gratitude for the Financial Support rendered by you for our P.U. Middle School, Pethikuppam. For the salaries of two teachers (K. Preetha - V std, M. Vasuki - VI Std) from April 2021 to March 2022 for Rs 1,20,000/- Kind information that More students were admitted in our school during that period, Totally 417 students were studied in our school in the academic year 2021-2022.

On behalf of our school, We once again thank for the valuable support rendered by you.







From  
The Headmaster,  
KLK Govt., BHS School,  
Gummidipoondi

To  
M/s. OPG Power Plant Pvt Ltd.,  
NagarajaKandigai,  
Gummidipoondi.

**TO WHOMSOEVER IT MAY CONCERN**

Dear Sir,

**Sub: Reg – Teachers’ remuneration.**

We are extremely happy in acknowledging our gratitude and huge indebtedness in the first place towards your inexhaustible kindness by extending your generous support by providing the following two teachers:

- Mr. K.G. Sadagopan - English (PGT)
- Mr. R. Mariappan - Tamil (PGT)

With honorarium from (01-04-2013) till (31-03-2022) and supporting to create an outstanding infrastructure and an excellent learning environment for our students. Each of them is drawing Rs.7000/ every month. We are very proud to share that this year they have given 94% in Tamil and 91% in English in the XI and XII Public Examination.

We are very happy to inform you that there is an increase in the admission this year. All the credit goes only to you. It happened because of your magnificent support and we will always be boundlessly thankful for your magnanimous support, unwavering commitment and sincere compassion towards the betterment of our school children and the development of our school.



From  
Gayathri K.R  
D/o Late M. Ravi K.  
Melpakkam(V).  
Egumvayalayam(P).  
Gummidipoondi.

To  
The plant head,  
OPG power generation Pvt Ltd,  
Gummidipoondi.

Respected Sir/Madam,

Being in a Middle class family, after my father's demise, it was very difficult for me to continue my Bachelor's degree. OPG power generation Pvt Ltd has paid my college fees, hostel fees throughout this four years. Now I completed my BE, ECE in College of Engineering Guindy Anna University and got placed in Vietcon. Thank you so much for this support.

Thanking you.

Yours faithfully  
Gayathri K.R

விருது

திருமதி ராஜ்மா (w/o late K ரவி),  
செல்பாக்கம் கிராமம்,  
நெல்வாடிபாளையம்,  
கும்மிடிப்பூண்டி.

வழங்கி:

நெல்வாடி,  
OPG power generation Pvt Ltd,  
கும்மிடிப்பூண்டி.

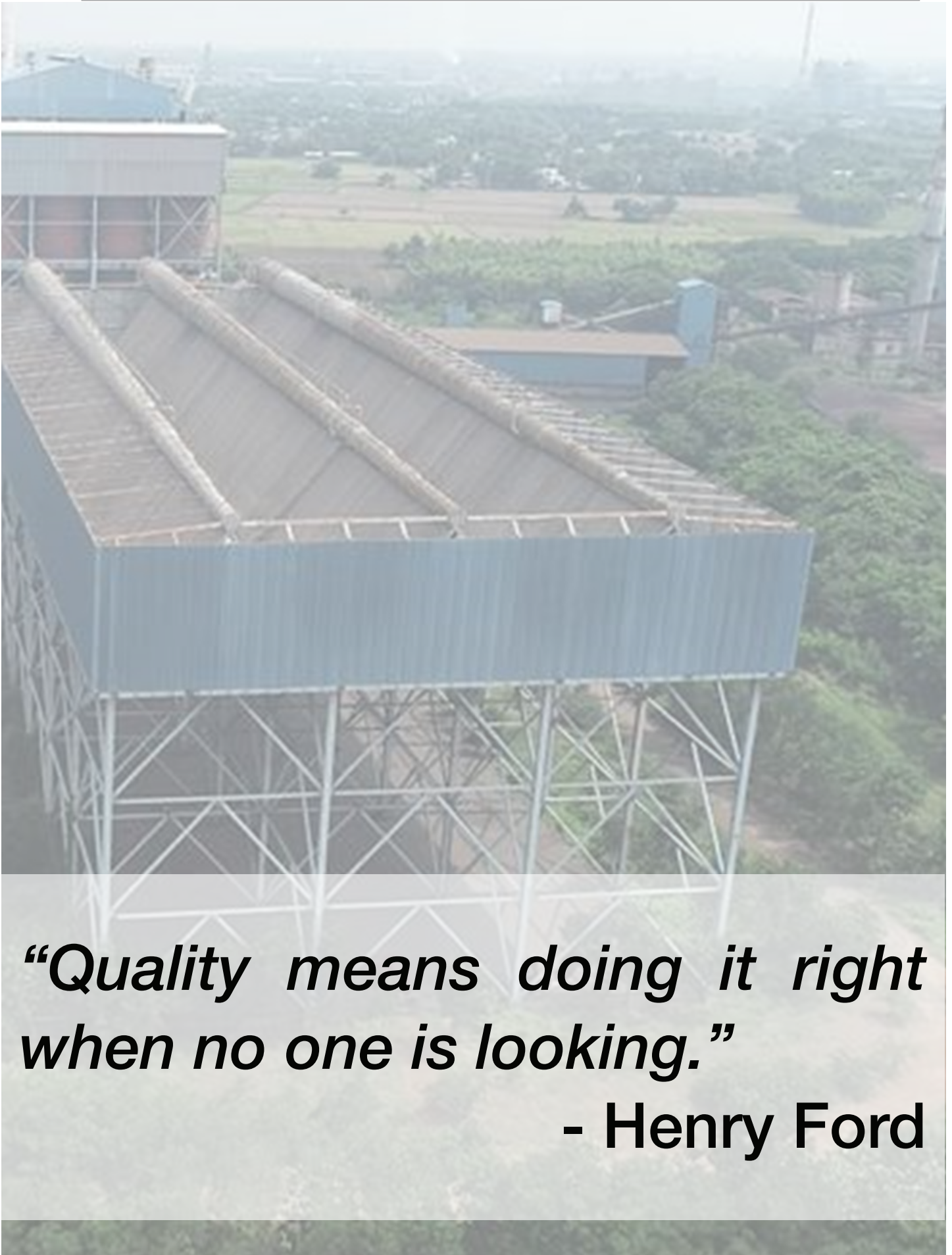
மேலும்,

நான் எனது கனமான கிரேடு எனது அனைத்து வளர்ச்சிகளை  
- கனமும் மனமும் கிட்டத்தட்ட வளர்ந்தன. சாதிக்க மாட்டேன் யாருக்கும்  
பிரதானமாக உயர்வாகியிருக்க நான் திரும்புகின்றேன் நான்  
நிர்வாகியும் என்மைய தலைமைய உணர்ச்சி சார்சனின் உயர்வாகியிரு  
உருவிகள். எனது பெற்ற மனை BE (ECE) அளித்த பரிசேய்தான்  
நான் அளித்தேன், கனமும் மனை BSL (Bio Chemistry) JNN  
செல்பாக்கம் சேர்ந்த அனைத்தும் யுத்தத்தில் கிடைக்காத சிவசூரி  
மட்டும், அனைத்து மனமும் உயர்வாகியிருக்க மட்டும் கிரேடு  
உருவியுள்ளார்.  
அனைத்தும் உயர்வாகியிருக்க campus interview மீது  
நல்ல உணர்வு கிடைத்த அனைத்து வளர்ச்சிகளை சார்சனின்  
உருவியுள்ளார். கனமும் மனை நல்ல மனமும் உருவிக் கிரேடு  
மேலும் கிரேடு கிடைத்தன என்மைய சார்சனின் உயர்வாகியிரு  
கிரேடுகளை நான் நிர்வாகியுள்ள உருவியும் என் கனமும்  
மனைமனை சார்சனின் கிரேடு கிடைத்த அனைத்தும் மனை  
கிரேடுகளை மனை என்மைய நிர்வாகியும் சார்சனின் உயர்வாகியிரு

**07**

7.0

# GRI INDEX



***“Quality means doing it right when no one is looking.”***

**- Henry Ford**

## GRI INDEX

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## Abbreviations

ACC	Air Cooled Condensers
AGMs	Assistant General Manager
AIM	Alternative Investment Market
BFP	Boiler Feed Pump
CAPA	Corrective Actions Preventive Actions
CBAs	Collective Bargaining Agreements
CEP	Condensate Extraction Pump
CH <sub>4</sub>	Methane
CO <sub>2</sub>	Carbon-di-oxide
COP	Conference of Parties
CSR	Corporate Social Responsibility
CUF	Capacity Utilization Factor
DGMs	Deputy General Manager
DM Plant	DeMineralized Water Plant
EHS	Environment, Health & Safety
EIA	Environmental Impact Assessment
ESG	Environment Social & Governance
ETP	Effluent Treatment Plant
FY	Financial Year
GBP	Great Britain Pound
GDP	Gross Domestic Product
GHG	GreenHouse Gases
GMs	General Manager
HQ	Headquarter
HSE	Health, Safety & Environment
IEC	Importer-Exporter Code
IR	Integrated Report
ISO	International Organization for Standardization
LED	Light Emitting Diode
MW	MegaWatt
N <sub>2</sub> O	Nitrous Oxide

NABL	National Accreditation Board for Testing & Calibration
NOx	Nitrous Oxide
OCPs	Operational Control Procedures
OFA	Over Fired Air
PLF	Plant Load Factor
PPAs	Power Purchase Agreements
PTA	Parent Teacher Association
SDG	Sustainable Development Goals
SOP	Standard Operating Procedures
SOx	Sulphur Oxides
STP	Sewage Treatment Plant
TN	Tamil Nadu
TRIR	Total Recordable Incident Rate
UK	United Kingdom
USD	US Dollar

## Units

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
sqm	Square Metre
tCO <sub>2</sub> e	Tonne Carbon-di-oxide
tCO <sub>2</sub> e/MU	Tonne Carbon-di-oxide per Million Unit





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