PROTECK METALICS PRIVATE LIMITED

Register Office : No.15, Medavakkam Road, Sholinganallur, Chennai-600119, Tamil Nadu, India.

Unit I : Plot No.K-20 & 21, South Avenue Road, SIPCOT Industrial Park, Irungattukottai, Sriperumbudur, Mevalurkuppam, Kancheepuram-602117, Tamil Nadu, India.

Unit II : Plot No: A-8, SIPCOT Industrial Growth Center, Vallam B Village, Oragadam, Kancheepuram-602105, Tamil Nadu, India.

GHG EMISSION REPORT

Form No : **PMPL/ESG/430**
Issue No : **01**
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Date : **16th April, 2025**

PROTECK METALICS PRIVATE LIMITED ORAGADAM 602 105

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GHG EMISSION REPORT			
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1. Executive Summary

1.1 Overview of Organization and Reporting Period

PMPL is an India-based manufacturing organization engaged in sheet metal fabrication, laser cutting, bending, pressed components, and welded assemblies. The company integrates Environmental, Social, and Governance (ESG) principles across its operations. This GHG Emissions Inventory Report quantifies PMPL's greenhouse gas (GHG) emissions for a single reporting year based on available operational data.

1.2 Key Emission Results

Organizational Boundary

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Calculation period: April 2024 to March 2025

All values are in MT CO2 e

GHG Emission Reporting Frequency: Annually

EMISSIONS	CURRENT YEAR APRIL 2024 – MARCH 2025
Scope 1	6.43
Scope 2	132.00
Scope 3	79.85
Scope 3 Upstream	62.23
Scope 3 Downstream	17.62
Total GHG Emission	**218.28**

1.3 Highlights & Reduction Achievements

- Low Scope 1 emissions due to limited fossil fuel combustion
- Centralized manufacturing operations reducing logistics complexity
- Baseline established for future reduction targets and decarbonization planning

2. Introduction

Below is refined, ISO 14064-1 and GHG Protocol–aligned content developed for PMPL (India), a sheet metal and welded assemblies manufacturer integrating ESG principles. Each section is structured to meet audit-ready requirements, regulatory expectations, and stakeholder disclosure needs. The content ensures methodological consistency, transparent boundary definition, accurate emissions calculation, and alignment with global best practices, making it suitable for ESG reporting, third-party verification, and sustainability performance communication.

2.1 Purpose of the Report

The purpose of this GHG Emissions Report is to systematically quantify and document PMPL's greenhouse gas (GHG) emissions arising from its manufacturing operations, including sheet metal fabrication, laser cutting, bending, pressing, and welded assemblies. This report establishes PMPL's organizational carbon footprint and serves as a verified baseline year for future emissions comparison. It supports PMPL's ESG strategy by enhancing transparency, enabling data-driven decision-making, and identifying emission-intensive activities. The report also provides credible emissions data to meet customer sustainability requirements, support regulatory preparedness, and guide future GHG reduction, energy efficiency, and decarbonization initiatives.

2.2 Intended Users

This report is intended for both internal and external stakeholders who require reliable and standardized GHG emissions information. Internal users include PMPL's top management, ESG committee, sustainability team, and operational leaders, who will use the findings for performance monitoring, strategic planning, and emissions reduction initiatives. External users include ESG auditors, ISO 14064-1 verification bodies, and certification agencies assessing compliance and accuracy. Customers and supply chain partners may use this report to evaluate PMPL's environmental performance. Additionally, the report supports disclosures to regulatory authorities and voluntary sustainability reporting platforms.

2.3 Reporting Objectives

The primary objective of this report is to support PMPL's voluntary ESG reporting by providing transparent, consistent, and verifiable GHG emissions data. The report aligns with the principles and requirements of ISO 14064-1 and the GHG Protocol, ensuring relevance, completeness, consistency, accuracy, and transparency. It aims to meet customer and stakeholder sustainability expectations by demonstrating PMPL's commitment to climate accountability. The report also establishes a measurable emissions baseline, enabling PMPL to track progress, set science-based or intensity-based reduction targets, and integrate climate considerations into long-term business and operational strategies.

3. Organization Description

3.1 Company Profile

PMPL is an India-based metal fabrication and manufacturing company specializing in sheet metal parts, laser-cut components, bent items, and welded assemblies. The company supports diverse industrial customers and integrates ESG principles into its operations, focusing on efficient resource use, environmental responsibility, and continuous improvement in manufacturing performance.

3.2 Organizational Structure

PMPL operates as a single legal entity with a centralized management structure. Core functions including production, procurement, logistics, quality, ESG, and administration are managed under unified leadership, enabling consistent operational control, standardized data collection, and effective implementation of environmental and sustainability initiatives.

3.3 Operations, Facilities, and Boundaries

PMPL operates one primary manufacturing facility in India, supported by administrative offices and shared utilities. Operations include metal processing, cutting, bending, welding, and finishing activities. The organizational boundary includes all direct operations, with diesel-based backup power generation and material handling equipment considered within Scope 1 emissions.

4. Reporting Boundary

4.1 Organizational Boundary

PMPL has defined its organizational boundary using the Operational Control Approach, in accordance with ISO 14064-1 and the GHG Protocol. Under this approach, PMPL accounts for 100% of GHG emissions from operations where it has full authority to introduce and implement operating policies, procedures, and environmental management practices.

4.2 Operational Boundary

PMPL's operational boundary includes the identification and classification of GHG emissions into Scope 1, Scope 2, and selected Scope 3 categories. Scope 1 covers direct emissions from owned or controlled sources, Scope 2 includes indirect emissions from purchased electricity, and Scope 3 includes relevant value-chain emissions where data is available.

4.3 Entities and Locations Covered

This GHG inventory covers PMPL's primary manufacturing facility located in India, including all production activities, utilities, and on-site equipment. The boundary also considers upstream and downstream logistics activities that are under PMPL's operational control or significant influence, where relevant for Scope 3 emissions reporting.

5. Reporting Period

- **Start Date:** 01 April 2023
- **End Date:** 31 March 2024
- **Reporting Frequency:** Annual

6. GHG Accounting Methodology

6.1 Standards Followed

- ISO 14064-1:2018
- GHG Protocol – Corporate Accounting and Reporting Standard
- IPCC Guidelines (2006)

6.2 Calculation Approach

GHG emissions were calculated using the standard equation: GHG Emissions = Activity Data × Emission Factor. Activity data was collected from fuel consumption records, electricity bills, and operational logs. Appropriate emission factors were applied to convert activity data into CO_2e values, ensuring consistency, transparency, and accuracy in accordance with ISO 14064-1 and GHG Protocol methodologies.

6.3 Tools or Software Used

PMPL used MS Excel–based GHG calculation sheets to compile, calculate, and summarize emissions data across all applicable scopes. The spreadsheets include built-in formulas, unit conversions, and validation checks. Manual verification and cross-checks were conducted to ensure data completeness, eliminate calculation errors, and maintain reliability of reported emissions for ESG reporting and audit purposes.

7. Emission Sources Identification

7.1 Direct and Indirect Sources

- Fuel combustion (diesel)
- Purchased electricity
- Inbound and outbound transportation
- Business air travel

7.2 Mapping of Emission Sources

Emission sources were mapped to:

- Manufacturing operations
- Utilities
- Logistics and travel

7.3 Scope Categorization

GHG emission sources were systematically identified and categorized into Scope 1, Scope 2, and Scope 3 in accordance with the GHG Protocol. Scope 1 includes direct emissions from on-site fuel combustion and company-owned vehicles. Scope 2 covers indirect emissions from purchased electricity. Scope 3 comprises relevant indirect emissions such as employee commuting, business travel, upstream transportation, waste disposal, and purchased goods and services, ensuring comprehensive and transparent emissions accounting.

8. GHG Scope Classification

8.1 Scope 1 – Direct Emissions

Source Category	Activity	Emissions (tCO_2e)
Stationary Combustion	Diesel usage (2,400 L)	6.43

8.2 Scope 2 – Indirect Energy Emissions

Source Category	Activity	Emissions (tCO_2e)
Purchased Electricity	188,570 kWh	132.00

8.3 Scope 3 – Other Indirect Emissions

Category	Activity	Emissions (tCO_2e)
Upstream Transport	Supplier inbound logistics	60.00
Business Air Travel	Employee air travel	2.23
Downstream Transport	Product delivery to customers	17.62
Other Scope 3 Categories	Not included (data unavailable)	NA
Total Scope 3	**Emission**	**79.85**

9. GHG Data Collection & Quality

Sub-heading	Details
Data Sources	Fuel invoices, electricity bills, logistics records
Collection Method	Manual data compilation and verification
Data Accuracy & Completeness	Medium to High
Data Management Controls	Centralized review and annual update process

10. Emission Factors

Sub-heading	Details
Emission Factor Sources	IPCC 2006; GHG Protocol; India Grid EF
Electricity EF	0.70 kg CO_2e/kWh
Diesel EF	2.68 kg CO_2e/L
Transport EF	0.10 kg CO_2e/tonne-km
Units Used	kg CO_2e, tCO_2e

11. Calculation Results

11.1 Total GHG Emissions

Scope	Emissions (tCO_2e)
Scope 1	6.43
Scope 2	132.00
Scope 3	79.85
Total	**218.28**

11.2 Emission Breakdown by Source

Source	Emissions (tCO_2e)
Electricity Consumption	132.00
Inbound Logistics	60.00
Outbound Logistics	17.62
Diesel Combustion	6.43
Air Travel	2.23

11.3 Emission Intensity Indicators

Indicator	Value
CO_2e per Employee	2.18 tCO_2e/employee (170 employees)
CO_2e per Ton of Product	0.44 tCO_2e/ton (500 t output)

12. Base Year & Trend Analysis

12.1 Base Year Selection

- FY 2023–24 selected as base year due to data availability
- 12.2 Historical Comparison
- Not applicable (first inventory)

12.3 Adjustments

- Future recalculation planned if significant changes occur

13. Uncertainty Assessment

13.1 Sources of Uncertainty

- Emission factors
- Transport distance
- Load factor variations

13.2 Method Used

- Qualitative assessment
- Conservative applied

13.3 Confidence Level

- Overall confidence: **Medium**

14. Data Quality Assessment

Parameter	Rating
Activity data	Medium–High
Emission factors	High
Completeness	Medium
Transparency	High

15. GHG Reduction Initiatives

15.1 Existing & Planned Measures

- Energy-efficient machinery
- LED lighting conversion
- Preventive maintenance to reduce diesel usage
- Logistics route optimization

15.2 Future Sustainability Goals

- Reduce Scope 2 emissions via renewable electricity
- Improve Scope 3 data coverage
- Set science-aligned reduction targets

16. Conclusions

PMPL's first GHG inventory establishes a robust baseline of 218.28 tCO_2e**.** Electricity consumption and logistics dominate emissions, presenting clear reduction opportunities. The organization demonstrates strong readiness for ISO 14064-1 verification and ESG disclosures.