POS-HYUNDAI STEEL MANUFACTURING (INDIA) PVT. LTD.

F.70, SIPCOT Industrial Park, Irungattukottai, NH-4 Bangalore Highway, Sriperumbudur,
Kanchipuram District – 602105. Tamil Nadu, India.

GHG EMISSION REPORT

For the Year April 2024 – March 2025

Form No : PHI/ESG/F-52

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1. EXECUTIVE SUMMARY

1.1 Overview of Organization and Reporting Period

PHI is engaged in slitting and shearing operations of steel coils for industrial applications in India. The organization integrates Environmental, Social, and Governance (ESG) principles into its operations and sustainability management systems. This Greenhouse Gas (GHG) Emission Report has been prepared in accordance with the requirements of ISO 14064-1 and the GHG Protocol Corporate Accounting and Reporting Standard. The report quantifies direct and indirect greenhouse gas emissions arising from PHI's operational activities during the reporting period from 1st April 2024 to 31st March 2025. The total organizational GHG emissions for the reporting period were calculated as 1,240.11 tCO_2e, comprising Scope 1, Scope 2, and Scope 3 emissions.

1.2 Key Emission Results

Organizational Boundary

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Calculation period: 1st April 2024 to 31st March 2025

All values are in MT CO2 e

GHG Emission Reporting Frequency: Annually

Scope	Emissions (tCO_2e)
Scope 1	5.04
Scope 2	1063.34
Scope 3	171.73
Scope 3 Upstream	128.80
Scope 3 Downstream	42.93
Total	**1240.11**

1.3 Highlights & Reduction Achievements

PHI has implemented several sustainability initiatives during the reporting period:

- Optimization of power utilization in slitting lines.
- Preventive maintenance implemented for electrical motors and hydraulic systems.
- Reduction of diesel usage through minimized DG operation.
- Awareness programs conducted for energy conservation.
- Segregation and recycling of metal scrap enhanced.
- Monitoring system established for monthly GHG tracking.

The organization plans to strengthen renewable energy adoption and optimize operational efficiency in future years.

2. INTRODUCTION

2.1 Purpose of the Report

The purpose of this report is to quantify, monitor, and disclose greenhouse gas emissions associated with PHI's operations and to establish a structured carbon management framework.

2.2 Intended Users

- Customers
- Regulatory authorities
- ESG rating agencies
- Investors
- Employees
- Supply chain partners
- Certification bodies

2.3 Reporting Objectives

The objectives of the report include:

- Compliance with ISO 14064-1 requirements.
- Alignment with GHG Protocol principles.
- Voluntary ESG disclosure.
- Customer sustainability requirements.
- Identification of emission reduction opportunities.
- Establishment of emission baseline for future targets.

3. ORGANIZATION DESCRIPTION

3.1 Company Profile

PHI operates in the steel processing sector and specializes in slitting and shearing of steel coils for industrial and manufacturing customers. Operations include coil handling, slitting, shearing, packaging, storage, and dispatch activities.

3.2 Organizational Structure

The organization consists of:

- Management & Administration
- Production Department
- Quality Department
- Maintenance Department
- Stores & Dispatch
- ESG & Compliance Team

3.3 Operations, Facilities and Boundaries

The operational facility includes:

- Slitting machines
- Shearing lines
- Hydraulic systems
- Material handling equipment
- Warehouse and storage areas
- Utility infrastructure
- Office operations

4. REPORTING BOUNDARY

4.1 Organizational Boundary

PHI has adopted the **Operational Control Approach** for defining organizational boundaries.

4.2 Operational Boundary

The inventory includes:

- Direct fuel consumption
- Refrigerant leakage
- Purchased electricity
- Transportation activities
- Waste disposal
- Employee commuting
- Business travel

4.3 Entities and Locations Covered

The report covers all operational activities under PHI's controlled facility in India.

5. REPORTING PERIOD

- **Start Date:** 01 April 2024
- **End Date:** 31 March 2025
- **Frequency:** Annual

6. GHG ACCOUNTING METHODOLOGY

6.1 Standards Followed

The report follows:

- ISO 14064-1:2018
- GHG Protocol Corporate Standard
- IPCC Guidelines
- DEFRA Emission Factors
- India Grid Emission Factor Database

6.2 Calculation Approach

GHG emissions were calculated using:

GHG Emissions=Activity Data×Emission Factor₩text{GHG Emissions} = ₩text{Activity Data} ₩times ₩text{Emission Factor}GHG Emissions=Activity Data×Emission Factor

6.3 Tools or Software Used

- Microsoft Excel based emission calculator
- Utility bills
- Fuel consumption logs
- Internal operational records

7. EMISSION SOURCES IDENTIFICATION

7.1 Direct and Indirect Sources

Direct Sources

- Diesel consumption in DG sets
- Fuel use in company vehicles
- Refrigerant leakage

Indirect Sources

- Purchased electricity
- Employee transportation
- Waste disposal
- Raw material transportation
- Logistics activities

7.2 Mapping of Emission Sources

Facility Area	Emission Source
Production Area	Electricity consumption
DG Area	Diesel combustion
Warehouse	Forklift movement
Offices	Electricity usage
Logistics	Transportation emissions

7.3 Scope Categorization

Scope	Category
Scope 1	Direct emissions
Scope 2	Purchased electricity
Scope 3	Other indirect emissions

8. GHG SCOPE CLASSIFICATION

8.1 Scope 1 – Direct Emissions

Stationary Combustion

Diesel Generator (DG) operations

Mobile Combustion

Company-owned vehicles.

Fugitive Emissions

Refrigerant leakage from air-conditioning systems

Process Emissions

No significant process emissions identified

Scope 1 Total Emissions

Source	Emissions (tCO_2e)
DG Diesel Consumption	3.22
Company Vehicles	1.12
Refrigerant Leakage	0.70
Total Scope 1	**5.04**

8.2 Scope 2 – Indirect Energy Emissions

Purchased Electricity

Electricity consumption from the regional electricity grid contributes significantly to PHI's overall emissions profile due to energy-intensive steel processing operations.

Source	tCO_2e
Purchased Electricity	1063.34

Purchased Steam/Heat/Cooling

No purchased steam, heat, or cooling was used during the reporting period.

8.3 Scope 3 – Other Indirect Emissions

Category	Emissions (tCO_2e)
Purchased Materials & Services	58.40
Transportation & Logistics	40.15
Waste Disposal	12.25
Employee Commuting	9.80
Business Travel	8.20
Downstream Distribution	42.93
Total Scope 3	**171.73**

9. GHG DATA COLLECTION & QUALITY

9.1 Data Sources & Collection Method

Data sources included:

- Electricity invoices
- Diesel purchase records

- Vehicle fuel logs
- Scrap disposal records
- Transportation bills
- Attendance records

9.2 Accuracy, Completeness and Reliability

The organization ensured:

- Complete annual data coverage
- Cross-functional verification
- Monthly review of utility data
- Validation against invoices

9.3 Data Management Procedure & Controls

- Controlled spreadsheets maintained
- ESG team validation process
- Management review and approval
- Record retention procedures implemented

10. EMISSION FACTORS

10.1 Sources of Emission Factors

Source	Reference
Electricity	India Grid Emission Factor
Diesel	IPCC & DEFRA
Refrigerants	IPCC AR6
Transport	DEFRA Transport Factors
Waste	GHG Protocol

10.2 Units and Justification

Emission factors were selected based on:

- Geographic relevance
- Industry applicability
- Latest available databases
- Regulatory acceptance

11. CALCULATION RESULTS

11.1 Total GHG Emissions

Scope	Emissions (tCO_2e)
Scope 1	5.04
Scope 2	1063.34
Scope 3	171.73
Scope 3 Upstream	128.80
Scope 3 Downstream	42.93
Total	**1240.11**

Gas-wise Breakup for Scope 1

Gas	Emissions (tCO_2e)
CO_2	4.30
CH_4	0.18
N_2O	0.09
HFCs	0.47

11.2 Emission Breakdown by Source

Emission Source	tCO_2e	Percentage
Electricity	1063.34	85.75%
Scope 3 Activities	171.73	13.85%
Direct Fuel Use	5.04	0.40%

Interpretation

Purchased electricity is the dominant contributor to PHI's carbon footprint, indicating significant opportunities for energy efficiency and renewable energy adoption.

11.3 Emission Intensity Indicators

(Assumed operational figures for reporting purposes)

Indicator	Value
Total Employees	250
Annual Production	18,500 MT
tCO_2e per Employee	13.05
tCO_2e per MT Processed Steel	0.067

12. BASE YEAR & TREND ANALYSIS

12.1 Base Year Selection & Justification

FY 2025 has been selected as the baseline year because:

- Reliable operational data is available.
- Organizational structure remained stable.
- Complete emission inventory established.

12.2 Historical Comparison

This is the organization's first consolidated GHG inventory prepared under ISO 14064-1.

12.3 Adjustments for Organizational Changes

No significant mergers, acquisitions, or operational changes occurred during the reporting period.

13. UNCERTAINTY ASSESSMENT

13.1 Sources of Uncertainty

Potential uncertainties include:

- Estimation of refrigerant leakage
- Transportation distance assumptions
- Employee commuting assumptions
- Emission factor updates

13.2 Method Used

A qualitative uncertainty assessment methodology was used considering:

- Data source reliability
- Measurement frequency
- Estimation techniques

13.3 Confidence Level

The organization estimates an overall confidence level of approximately 90–95% for reported emissions:

14. DATA QUALITY ASSESSMENT

14.1 Quality Rating

Data Type	Quality Rating
Electricity Data	High
Fuel Consumption Data	High
Transport Data	Medium
Commuting Data	Medium
Waste Data	Medium

14.2 Cross-Checks and Validation

- Invoice reconciliation performed
- Consumption trends analysed
- Department verification conducted
- ESG review completed

15. GHG REDUCTION INITIATIVES

Energy Efficiency Programs

- LED lighting installation
- Preventive maintenance of motors
- Idle running reduction
- Power factor optimization

Waste & Water Reduction Measures

- Scrap metal recycling
- Waste segregation
- Water conservation awareness
- Reuse of packaging materials

Future Sustainability Goals

- Reduce Scope 2 emissions by improving energy efficiency
- Explore rooftop solar installation
- Enhance logistics optimization
- Increase recycling rates
- Develop supplier ESG engagement program

16. CONCLUSIONS

PHI has established a comprehensive greenhouse gas inventory aligned with ISO 14064-1 and the GHG Protocol, providing a reliable baseline for future sustainability initiatives. The assessment identified purchased electricity as the primary emission source, contributing over 85% of total emissions. PHI continues strengthening ESG integration through energy conservation, waste recycling, and emission monitoring practices. Future improvement opportunities include renewable energy adoption, energy-efficient equipment upgrades, and electrification of material handling systems, low-carbon logistics, and employee awareness programs. For the next reporting period, PHI plans monthly energy tracking, enhanced Scope 3 data management, supplier sustainability assessments, renewable energy feasibility studies, and carbon reduction target implementation.