GREENHOUSE GAS EMISSIONS REPORT

FOR APRIL 2024 TO MARCH 2025

BHARAT PRECISION INDUSTREIS

Reporting Period:	April 1, 2024 – March 31, 2025
Consolidation Boundary	Plot No. 249-252, 257, GIDC Dared, Phase-II, Dared, Jamnagar, Gujarat, India, Pincode-361004
Reporting Boundaries	Direct (Scope 1) and Energy Indirect (Scope 2)
Document No.	F/EHS/34
Reporting On	20/04/2025
Report Prepared By	Mr. Santosh Chopade (System Coordinator) & Energy Team

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CHAPTER 1: GENERAL DESCRIPTION OF THE ORGANISATION, GOALS AND INVENTORY OBJECTIVES

1.1 Introduction

This report provides the Scope 1 and 2 greenhouse gas (GHG) emissions inventory under operational control for Bharat Precision Industries for the reporting period between April 1, 2024 - March 31, 2025

The purpose of this GHG Report is to demonstrate conformity with ISO 14064-1:2018 and to facilitate GHG inventory verification.

1.2 Description of the reporting organisation

Bharat Precision Industries is reporting of GHG emission. BPI is manufacturing of metal machined components. We are manufacturing of Brass parts, Aluminium Parts, Mild Steel Parts, S.S. Parts etc.

1.3 Persons or entity responsible for the report

This report has been prepared by Mr. Santosh Chopade- System Coordinator and Energy Team in Bharat Precision Industries

1.4 Reporting Period Covered

The report covers the following reporting period: April 1, 2024 - March 31, 2025.

1.5 GHG Inventory Verification Status

Direct GHG emissions (Scope 1) and Indirect GHG emissions from imported energy (Scope 2) inventory included in this report were verified by Energy Team of Bharat Precision Industries to a limited level of assurance. The assurance statement is posted here: https://www.bharatprecision.com/sustanibility

Bharat Precision Industries targets and ambition: -

Our target to become a net-zero emissions energy business by 2070 is transforming our operations and energy products. We believe this target supports the more ambitious goal of the Climate Agreement, to limit the rise in the global average temperature this century to 1.5°C above pre-industrial levels.

Our net-zero target includes emissions from our operations, as well as from the end-use of all the energy products we sell. The metrics we use to track progress against our energy transition targets and ambition include;

Halving Scope 1 and 2 emissions under our operational control by 2035, on a net basis, compared with 2025. Scope 1 emissions come directly from our operations, and Scope 2 from the energy we buy to run our operations.

Reducing the net carbon intensity (NCI) of the products we sell by 15-20% by 2035. BPI we Measures emission associated with each unit of energy we sell. It reflects changes in sales of our products and changes in sales of low and zero carbon products such as renewable electricity. By Reducing the BPI we support of government and policymakers to create the right conditions for change..

CHAPTER 2: ORGANISATIONAL BOUNDARIES

The emissions in this report are consolidated using the operational control approach. Under this approach, we reported 100% of emissions from assets and activities under our operational control irrespective of our percent ownership.

GHG emissions are aggregated using a bottom-up approach: emission source -> asset -> operating unit -> business -> Group. GHG emissions in this Report include emissions from Upstream, Integrated Gas, Renewables and Energy Services, Downstream, Projects & Technologies businesses and Functions (mainly offices). There were no operated assets excluded from the GHG inventory in the reporting period.

Bharat Precision Industries

Plot No. 249-252, 257, GIDC Dared, Phase-II, Dared, Jamnagar, Gujarat, India, Pincode-361004.

CHAPTER 3: REPORTING BOUNDARIES

This report includes the following GHG emissions:

- Category 1: Direct GHG emissions (thereafter referred to as Scope 1)
- Category 2: Indirect GHG emissions from imported energy (thereafter referred to Scope 2)

3.1 Scope 1 emissions

Sources included in Scope 1 emissions comprised:

1. Combustion of carbon-containing fuels in stationary equipment (e.g., boilers, gas turbines) for energy generation.

   Its applicable as Diesel consumes to generate electricity,

   CO2 Emission is 0.65 Tons/ Reporting year

2. Combustion of carbon-containing fuels in mobile equipment (e.g., trucks, vessels, mobile rigs);

   It's not applicable

3. Flares;

   It's not applicable

4. Venting and emissions from industrial processes (e.g., hydrogen plants, catalytic cracking units)

   It's not applicable

5. fugitive emissions, including piping and equipment leaks and non-routine events

   Its not applicable

3.2 Scope 2 emissions

Sources included in Scope 2 emissions comprised indirect emissions from purchased and consumed electricity, steam and heat.

Scope 2 emissions are calculated using the location-based methods

Bharat Precision Industries purchase electricity from PGVCL, Gujarat and its month electricity consumption and its associated emission given in below table:

Date	Electrical consumption	Electricity consumption Unit	Tonne of CoCO2 equivalent
Apr-24	82,564.00	Kwh	62.50
May-24	85,457.40	Kwh	64.69
Jun-24	85,622.50	Kwh	64.82
Jul-24	78,652.40	Kwh	59.54
Aug-24	83,707.80	Kwh	63.37
Sep-24	70,615.60	Kwh	53.46
Oct-24	85,735.30	Kwh	64.90
Nov-24	73,996.00	Kwh	56.01
Dec-24	74,111.00	Kwh	56.10
Jan-25	76,736.80	Kwh	58.09
Feb-25	72,101.00	Kwh	54.58
Mar-25	83,405.40	Kwh	63.14
Yearly	9,52,705.20	kwh	721.20
Emission factor as per 0.757 kg CO2/kwh as per combined Margin methods			
Reference source: https://img.saurenergy.com/2025/01/cea-report.pdf			

CHAPTER 4: GHG EMISSIONS INVENTORY

4.1 Consolidated statement of GHG emissions:

Reporting Organisation:	Bharat Precision Industries			
Reporting Period Covered:	From April 1, 2024 to March 31, 2025			
EMISSIONS	**Unit**	**Total emissions**	**GWP used for converting emissions to CO_2e [B]**	**Total Emissions (in million tonnes CO_2e)**
Direct GHG Emissions (Scope 1) [A]	**tonnes CO_2e**			**0.66**
Carbon dioxide (CO_2)	million tonnes	0.65	1	0.66
Indirect GHG emissions from Imported energy (Scope 2)				
Scope 2 emissions – location-based method	tonnes CO2e	721.20	1	721.20

NOTES:

[A] GHG emissions are calculated using Global Warming Potential (GWP) factors from the IPCC's Fourth Assessment Report.

[B] GWP values shown in this column are in tonnes of CO_2 equivalent per tonne of individual greenhouse gas.

[C] CO_2 captured and transferred to another organisation (for example, sold or given for free) as product or feedstock.

4.2 Methodologies for quantification of Scope 1 and 2 GHG emissions inventory included in this report

Bharat Precision Industries operation process mainly based on electricity-based equipment and fuel consumption also to generate electricity while purchase electricity not available due to power cut.

4.2.1 Methods and Emission Factors

Not applicable as required emission factor is available and taken from India GHG programme.

4.3 : GHG EMISSIONS PRIFILE SUMMARY

- **Scope 1 (Direct Emissions):** 0.66 tCO_2e (minimal due to no fuel combustion)
- **Scope 2 (Indirect Emissions from Electricity Use):** 720.1 tCO_2e
  - 25% of electricity sourced from renewables (180.03 tCO_2e = zero emissions)
  - 75% from non-renewables (540.08 tCO_2e)

CHAPTER 5: GHG REDUCTION STRATERGIES & SUMMARY

A. Energy Efficiency Improvements BY 2026-2027

- Upgrade CNC machines and motors to high-efficiency models
- Install variable frequency drives (VFDs) on machinery
- Optimize compressed air systems (reduce leaks, pressure settings)
- Retrofit with LED lighting and optimize HVAC systems
- Estimated CO_2e Savings: 54–108 t/year (10–20% reduction in electricity use)

B. Transition to Renewable Energy

- Increase renewable electricity use from 25% to 50–100% through:
  - On-site solar PV installations
  - Power Purchase Agreements (PPAs) with green suppliers
  - Purchase of Renewable Energy Certificates (RECs)
- Estimated CO_2e Savings:
  - At 50% renewable energy: Scope 2 emissions reduce to 360.05 tCO_2e
  - At 100% renewable energy: Scope 2 emissions = 0 tCO_2e

C. Fleet Electrification

- Convert any company vehicles to electric vehicles (EVs)
- Install EV charging infrastructure (preferably solar-powered)
- **Estimated CO_2e Savings: ~0.66 t/year (small, but avoids future increase)**

D. Process Optimisation

- Implement lean manufacturing to reduce machine idle time
- Optimize machining operations to reduce energy consumption
- Utilize predictive maintenance and digital twin technology
- **Estimated CO_2e Savings**: 27–54 t/year (5–10% reduction in electricity use)

5.1. Summary Table of Potential CO_2e Reductions:

Strategy	Estimated CO_2e Reduction (t/year)
Energy Efficiency	54–108
100% Renewable Energy	Up to 720.1 (Scope 2 fully offset)
Fleet Electrification	~0.66
Process Optimisation	27–54

CHAPTER 6: RECOMMENDATIONS

Bharat Precision Industries to become a net-zero emissions energy business by 2070 is transforming our operations and energy products. We believe this target supports the more ambitious goal of the Climate Agreement, to limit the rise in the global average temperature this century to 1.5°C above pre-industrial levels.

Our net-zero target includes emissions from our operations, as well as from the end-use of all the energy products we sell. The metrics we use to track progress against our energy transition targets and ambition include;

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CHAPTER 7: OBJECTIVE AND TARGET

	Base Year April'2024 to March'2025 Co2Eq.	Target till 31st March 2030 Co2Eq.
Scope-1 2% Co2 emission reduction till 31st March 2030	0.65%	0.63%
Scope-2 2% Co2 emission reduction till 31st March 2030	721.20	707%

GHG Intensity: Total GHG Emission = 721.85 tCo2e in Year / Total Production = 401.24 MT in Year

GHG Intensity = 721.85 tCo2e / 401.24 MT = 1.79 tCo2e/MT

Report Approved By:
Mr.Raj Patel (CEO)