



ANNUAL GHG EMISSIONS REPORT

JAN 2025 TO DEC 2025

Head Office: 24 - 39, Second floor, Maruti Complex, Chhani Road, Baroda 390002, India

Site 1: A-2/237-238, GIDC, Nandesari, Baroda 391340, India

Site 2: Block 579, Manjusar, Savli, Baroda 391775, India

Phone: +91 265 2775217 / 2774884

Website: www.hariorgo.com



Approval Matrix		Role	Date	Signature
Approved By:	Bhavesh Shah	Director	10/02/2026	

Table of Contents

Sl. No.	Content Details	Page No.
A.	Introduction of the Organization	3
B.	Purpose of the Report	4
C.	Organizational Boundaries	4
D.	Operational Boundaries	4
E.	Reporting Period & Frequency	5
F.	Methodology	5
G.	Standard and References	5
H.	Limitations	5
I.	Data Selection and Collection Used for the Quantification	5
J.	Conversion Factors Used for the Calculation	6
K.	Scope 1 Direct GHG Emissions	6
L.	Scope 2 Indirect GHG Emissions	6
M.	Overall Summary of GHG Emissions	7
N.	Objectives	7
O.	Renewable Energy Contribution	7
P.	Mitigation Measure	8
Q.	Management Commitment	8
R.	Conclusion	8

A. Introduction of the Organization:

Established in 1983, we have grown from a single product manufacturer into a leading producer of chemical intermediates, serving diverse applications in agrochemicals, pharmaceuticals, textiles and specialty chemicals. Today, our multi-product portfolio reaches customers across key global markets, including the US, Europe and Asia.

Located just outside Vadodara, Gujarat, our two state-of-the-art manufacturing facilities are built to handle the production of hazardous chemicals with precision. Using cutting-edge, environmentally friendly technologies, we prioritize both safety and sustainability in every step of our operations.

Vision

Our vision is to sustain the continual growth of the organization with high quality products, and to be recognized as a leading manufacturer of chemical intermediates for agrochemicals, pharmaceuticals and textiles. We are committed to delivering high quality products with care, ensuring they are securely packaged and safely transported to our customers.

Mission

Our mission is to offer best quality products at competitive prices with timely delivery to the satisfaction of the customer. We ensure this by adhering to our core values of putting quality first in every aspect of our operations; being ethical and doing the right things at all the times. We are committed to continuous improvement to ensure total customer satisfaction. Our unwavering commitment extends to meticulous packaging and safe transportation protocols, ensuring the integrity of our goods upon arrival.

Environment Friendly:

The management of Hari Orgochem Pvt. Ltd. is committed to environment protection. Substantial resources have been committed to environmental impact assessment and environmental protection management. Proper controls and disposal systems ensure the surrounding from getting polluted.

Commitment to Its People:

Hari Orgochem Pvt. Ltd. is a strong believer of the saying "The success of a company depends on its workplace". Dedication and sincerity comes only with the feeling that the company cares for you. Keeping this in view, Hari Orgochem Pvt. Ltd. takes utmost care of its employees enabling them to perform better with each passing day.

Health & Safety Consciousness:

We are committed to creating a safe and healthy workplace through prioritizing our employee's wellbeing, reducing risks, and fostering a culture of continuous safety improvement.

Manufacturing Initiatives:

We believe that a sustainable philosophy for manufacturing revolves around creating products and processes that meet present needs without compromising the ability of future generations to meet theirs. It integrates environmental, social and economic considerations into every stage of manufacturing, emphasizing resource efficiency, waste reduction, and ethical responsibility.

Certifications:

Our sites have the following certifications:

ISO 9001:2015 - reflecting our commitment to quality management

ISO 14001:2015 - reflecting our commitment to environmental management

ISO 45001:2018 - prioritizing our employee's wellbeing, reducing risks, and fostering a culture of safety

B. Purpose of the Report

The objective of this Greenhouse Gases (GHG) Report is to quantify and report the greenhouse gas emissions generated from the operations of Hari Orgochem Pvt. Ltd. at its Manjusar Unit, Nandesari Unit, and Head Office. The inventory has been developed to establish a baseline of GHG emissions, identify major emission sources, and support the organization's commitment to reducing its environmental impact. This inventory establishes 2024 as the Base Year against which future GHG performance will be monitored and reduction targets measured.

The GHG inventory will enable us to:

- Establish a reliable baseline for greenhouse gas emissions.
- Quantify Scope 1 and Scope 2 emissions associated with our business operations.
- Identify significant emission sources and opportunities for emission reduction.
- Monitor year-on-year GHG performance.
- Support the development of emission reduction targets and climate action initiatives.
- Improve energy efficiency and promote the use of renewable energy.
- Meet customer, regulatory, and stakeholder sustainability expectations.
- Support ESG reporting and sustainability initiatives.

C. Organizational Boundaries

This GHG Inventory covers the operational activities of Hari Orgochem Pvt. Ltd. at the following locations:

- Manjusar Manufacturing Unit
- Nandesari Manufacturing Unit
- Vadodara Head Office

The inventory includes only:

- Scope 1 – Direct Greenhouse Gas Emissions
- Scope 2 – Indirect Greenhouse Gas Emissions from Purchased Electricity

Scope 3 emissions are currently excluded from this inventory and may be incorporated in future reporting as the organizations carbon management programme matures.

D. Operational Boundaries

The operational boundary includes the following emission sources.

Scope 1 – Direct GHG Emissions

Direct emissions arising from sources owned or controlled by Hari Orgochem Pvt. Ltd., including:

- Diesel consumption in DG sets
- Briquette/Agro Waste consumption in boilers
- LPG consumption (Not applicable in this reporting period)
- Petrol consumption in company-owned vehicles (Not considered in this reporting period)
- Refrigerant leakage from air conditioning and refrigeration systems (No refrigerant gas was recharged during the reporting period; therefore, no fugitive refrigerant emissions have been reported)

Scope 2 – Indirect GHG Emissions

Indirect emissions associated with purchased electricity consumed at:

- Manjusar Unit
- Nandesari Unit
- Head Office

Electricity generated from on-site solar photovoltaic systems is considered zero operational GHG emissions during electricity generation and is reported separately for information purposes.

Carbon Footprint Report (GHG Emission)

Feb 2026

E. Reporting Period & Frequency

The period covered in this report is from **1st Jan 2025 to 31st Dec 2025** and will be updated annually. Greenhouse gases considered include Carbon Dioxide (CO₂), Methane (CH₄) and Nitrous Oxide (N₂O). All emissions are reported as Tonnes of Carbon Dioxide Equivalent (tCO₂e).

F. Methodology

The GHG inventory has been prepared by collecting activity data from all applicable facilities and converting the activity data into Carbon Dioxide Equivalent (CO₂e) emissions using recognized emission factors.

The methodology includes:

- Identification of emission sources
- Collection and verification of activity data
- Selection of appropriate emission factors
- Calculation of greenhouse gas emissions
- Consolidation of emissions by scope
- Review and validation of calculation results

G. Standard and References

This inventory has been prepared in accordance with internationally recognized principles and guidance, including:

- ISO 14064-1:2018 – Greenhouse Gases – Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.
- GHG Protocol Corporate Accounting and Reporting Standard.
- IPCC Guidelines for National Greenhouse Gas Inventories.
- Central Electricity Authority (CEA) of India Grid Emission Factor (latest available version applicable to the reporting period).
- Ministry of Environment, Forest & Climate Change (MoEFCC), Government of India, where applicable.

H. Limitations

This inventory is based on the information and records available during the reporting period.

The following limitations apply:

- Scope 3 emissions are excluded from this inventory.
- Only those Scope 2 emissions data is included where reliable data is available.
- Fugitive emissions are included only where reliable activity data is available.
- Emission factors are based on nationally and internationally accepted references available during the reporting period.
- The accuracy of the inventory depends upon the completeness and quality of the activity data provided by the respective departments.

I. Data Selection and Collection Used for the Quantification

GHG Scope	Data Type	Unit	Data Source	Frequency of Collection
Direct emissions (Scope 1)	Agro Briquettes in Boiler	MT	Purchase Order	Monthly
	Diesel (HSD) in DG Sets	Litres	Consumption Record	Monthly
Indirect emission (Scope 2)	Purchased Electricity	kWh	Service Provider Bills (MGVCL)	Monthly

Carbon Footprint Report
(GHG Emission)

Feb 2026

J. Conversion Factors Used for the Calculation

Data Type	Input Unit	Output Unit CO2e	Conversion Factor	Reference
Scope 1				
Diesel in DG	Litre	MT	74.1	India GHG Program / IPCC Chart Rev.01 April 2022
Agro Briquettes in Boiler	MT	MT	57.6	
Scope 2				
Electricity	Kwh	MT	0.72	India GHG Program / IPCC Chart Rev.01 April 2022

K. Scope 1 Direct Emission CO₂ equivalent

Month	Type & Its Consumption		tCO ₂ Emission
	Diesel in L	Agro Briquettes in MT	
Jan-25	2352	1070	236
Feb-25	1740	928	182
Mar-25	1316	838	146
Apr-25	2342	909	226
May-25	6758	911	553
Jun-25	7560	916	613
Jul-25	6288	963	521
Aug-25	3920	1065	352
Sep-25	8574	1106	699
Oct-25	904	740	110
Nov-25	2018	888	201
Dec-25	732	356	75
Total	44504	10689	3913 tCO₂e

L. Scope 2 In Direct Emission Co₂ equivalent

Month	Electricity Consumption	Consumption Unit	tCO ₂ Emission
Jan-25	525308	KWH	378
Feb-25	475486	KWH	342
Mar-25	497926	KWH	359
Apr-25	507433	KWH	365
May-25	489670	KWH	353
Jun-25	512554	KWH	369
Jul-25	553194	KWH	398
Aug-25	537409	KWH	387
Sep-25	557186	KWH	401
Oct-25	481671	KWH	347
Nov-25	437980	KWH	315
Dec-25	404905	KWH	292
Total	5980722		4306

Carbon Footprint Report (GHG Emission)

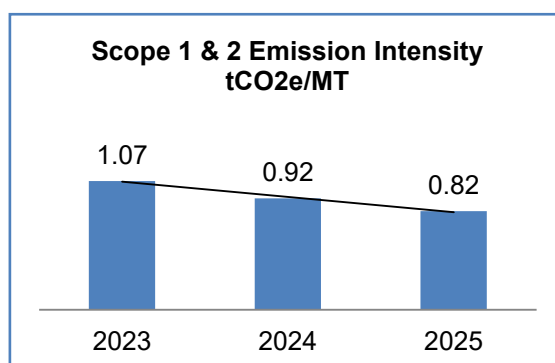
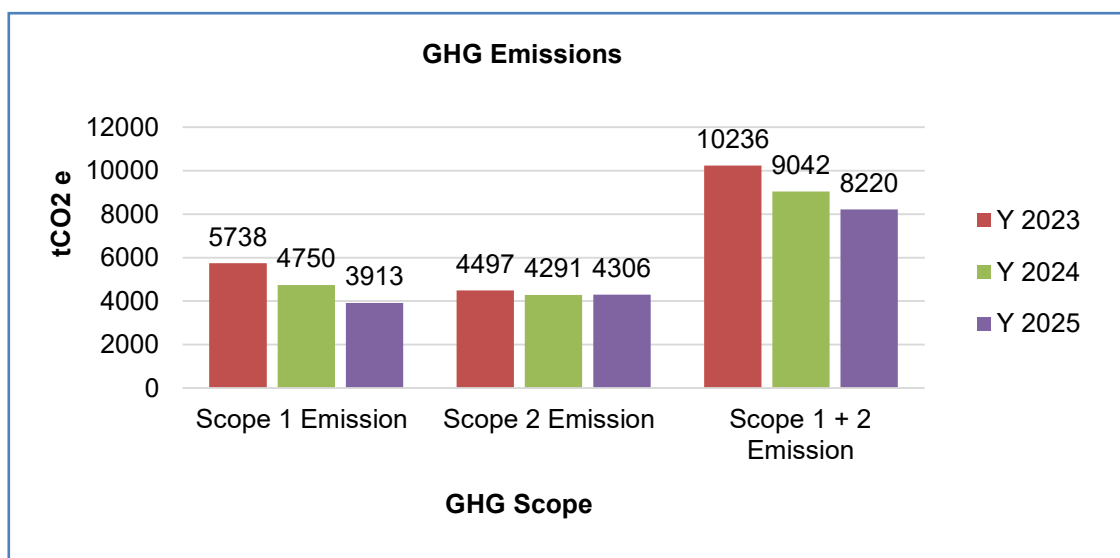
Feb 2026

M. Overall summary & Performance of GHG Emissions (CO₂ equivalent)

Emission Type	From 1 st Jan to 31 st Dec		
	2023	2024	2025
Scope 1 tCO ₂ e	5738	4750	3913
Scope 2 tCO ₂ e	4497	4291	4306
Total GHG Emissions (Scope 1 & 2)	10236	9042	8220
Total Production in MT	9579	9784	10050
GHG Intensity in tCO ₂ e/MT	1.07	0.92	0.82

N. Objective

Details of Objective	Base Year 2024	Target by Dec 2030
Scope 1 GHG emissions 25 % reduction	4750	3562
Scope 2 GHG emissions 10 % reduction	4291	3862
GHG intensity 15 % reduction	0.92	0.78



O. Renewable Energy Contribution

Hari Orgochem Pvt. Ltd. has installed on-site solar photovoltaic (PV) systems at its manufacturing facilities and Head Office to increase the use of renewable energy and reduce dependence on grid electricity. Electricity generated through these systems directly offsets purchased grid electricity, thereby reducing Scope 2 greenhouse gas emissions.

Installed solar capacity:

Manjusar Plant = 1127 KW

Nandesari Plant = 1500 KW

Head Office = 12 KW

Total Installed Capacity = 2639 KW

Scope 2 Emissions Reduction:

Electricity generated from the on-site solar PV systems replaces electricity that would otherwise be purchased from the grid. Since electricity generated from solar energy has negligible operational greenhouse gas emissions, the solar installations contribute directly to reducing Scope 2 emissions.

During the reporting period, the total solar electricity generated was 3,340,237 kWh.

Using the applicable grid emission factor (Grid Emission Factor = 0.72 kg CO₂e/kWh), Scope 2 emissions avoided is

$3340237 \times 0.72 = 2404971 \text{ Kg CO}_2\text{e} = 2405 \text{ tCO}_2\text{e}$

P. Mitigation Measures:**Short Term:**

- Conduct energy audit.
- Install variable frequency drives (VFDs).
- Replace conventional lighting with LEDs.
- Reduce process steam demand through heat recovery.

Long Term:

- Include Scope 3 emissions.
- Conduct supplier GHG assessments.
- Introduce internal carbon accounting.
- Work toward science-based reduction targets.
- Consider ISO 14068 (Carbon Neutrality) in the future.

Q. Management Commitment:

Hari Orgochem Pvt. Ltd. is committed to reducing greenhouse gas emissions through continual improvement in energy performance, increased use of renewable energy, efficient resource utilization, and implementation of best available technologies. The organization will review its GHG performance annually and monitor progress against the established reduction targets.

R. Conclusion:

During the reporting period, Hari Orgochem Pvt. Ltd. quantified its Scope 1 and Scope 2 greenhouse gas emissions, in accordance with ISO 14064-1:2018 and the GHG Protocol, with the limitations as described in Section H. The total GHG emissions for 2025 were 8,220 tCO₂e, with a GHG intensity of 0.82 tCO₂e per MT of production, demonstrating an improvement when compared with the base year 2024 values. Continued investment in renewable energy, energy efficiency, and operational improvements will support the organization's commitment to reducing greenhouse gas emissions and achieving its 2030 reduction targets.