



Greenhouse Gas Protocol At Nashik Autotech Pvt Ltd.

A Review Report by VSQC

About this document

This document reviews the GHG Protocols, methodologies, calculations, & key references used in the preparation of the inventory of Scope 1, Scope 2, Scope 3 greenhouse gas (GHG) emissions in NAPL's value chain.

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1.0 Introduction

1.1 About this document

Nashik Autotech Pvt Ltd committed to a “Net Zero” emission target by 2050. As a part of this initiative, it has initiated monitoring of GHG. This document reviews and reports on the GHG Protocols, methodologies, calculations, & key references used in the preparation of the inventory of Scope 1, Scope 2, Scope 3 greenhouse gas (GHG) emissions in NAPL’s activities.

1.2 Greenhouse Gas Protocol

The Greenhouse Gas Protocol Initiative is a multi-stakeholder partnership of businesses, non-governmental organizations (NGOs), governments, and others convened by the World Resources Institute (WRI), a U.S.-based environmental NGO, and the World Business Council for Sustainable Development (WBCSD), a Geneva-based coalition of 170 international companies. Launched in 1998, the Initiative’s mission is to develop internationally accepted greenhouse gas (GHG) accounting and reporting standards for business and to promote their broad adoption.

The GHG Protocol Initiative comprises two separate but linked standards:

- GHG Protocol Corporate Accounting and Reporting Standard (this document, which provides a step-by-step guide for companies to use in quantifying and reporting their GHG emissions)
- GHG Protocol Project Quantification Standard (forthcoming; a guide for quantifying reductions from GHG mitigation projects)
- This GHG Protocol Corporate Standard provides standards and guidance for companies and other types of organizations to prepare a GHG emissions inventory. It covers the accounting and reporting of the six greenhouse gases regulated under the Kyoto Protocol — carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and Sulphur hexafluoride (SF₆). The standard and guidance were designed with the following objectives in mind:
 - i. To help companies prepare a GHG inventory that represents a true and fair account of their emissions, using standardized approaches and principles.
 - ii. To simplify and reduce the costs of compiling a GHG inventory.
 - iii. To provide businesses with information that can be used to build an effective strategy to manage and reduce GHG emissions.
 - iv. To provide information that facilitates participation in voluntary and mandatory GHG programs.
 - v. To increase consistency and transparency in GHG accounting and reporting among various companies and GHG programs.

The Business Value of A GHG Inventory

Global warming and climate change have come to the fore as a key sustainable development issue. Many governments are taking steps to reduce GHG emissions through national policies that include the introduction of emissions trading programs, voluntary programs, carbon or energy taxes, and regulations and standards on energy efficiency and emissions. As a result, companies must be able to understand and manage their GHG risks if they are to ensure long-term success in a competitive business environment, and to be prepared for future national climate policies.

A well-designed and maintained corporate GHG inventory can serve several business goals, including:

- Managing GHG risks and identifying reduction opportunities.
- Public reporting and participation in voluntary GHG programs.
- Participating in mandatory reporting programs.
- Participating in GHG markets.
- Recognition for early voluntary action

1.3 GHG accounting and reporting principles

As with financial accounting and reporting, accepted GHG accounting principles are intended to underpin and guide GHG accounting and reporting to ensure that the reported information represents a faithful, true, and fair account of a company's GHG emissions.

GHG accounting and reporting practices are evolving and are new to many businesses; however, the principles listed below are derived in part from accepted financial accounting and reporting principles. They also reflect the outcome of a collaborative process involving stakeholders from a wide range of technical, environmental, and accounting disciplines.

GHG accounting and reporting shall be based on the following principles:

RELEVANCE:	Ensure the GHG inventory appropriately reflects the GHG emissions of the company and serves the decision-making needs of users – both internal and external to the company.
COMPLETENESS:	Account for and report on all GHG emission sources and activities within the chosen inventory boundary. Disclose and justify any specific exclusions.
CONSISTENCY:	Use consistent methodologies to allow for meaningful comparisons of emissions over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.
TRANSPARENCY:	Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.
ACCURACY:	Ensure that the quantification of GHG emissions systematically is neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

A credible GHG emissions report presents relevant information that is complete, consistent, accurate and transparent. While it takes time to develop a rigorous and complete corporate inventory of GHG emissions, knowledge will improve with experience in calculating and reporting data. It is therefore recommended that a public GHG report is:

- Be based on the best data available at the time of publication, while being transparent about its limitations
- Communicate any material discrepancies identified in previous years.
- Include the company's gross emissions for its chosen inventory boundary separate from and independent of any GHG trades it might engage in.

1.4 ISO 14064

ISO 14064 is an international standard that provides a robust framework for the quantification, monitoring, reporting, and verification of greenhouse gas (GHG) emissions and removals. It supports organizations in developing transparent and consistent GHG inventories, enabling them to assess their climate impact and demonstrate accountability in environmental performance.

The standard promotes best practices in GHG accounting and aligns with global climate initiatives, helping organizations meet regulatory requirements, participate in carbon markets, and support sustainability goals. By following ISO 14064, this assessment ensures credibility, accuracy, and comparability of reported emissions data. ISO 14064 also encourages continual improvement by enabling organizations to identify emission hotspots, evaluate mitigation strategies, and track progress over time. Its adoption reflects a commitment to environmental responsibility and provides stakeholders with confidence in the integrity of the reported data. NAPL adopts 14064 requirements as a part of its GHG accounting and reporting.

This GHG assessment has been conducted in accordance with ISO 14064-3 to ensure an important level of transparency, consistency, and reliability in emissions reporting.

2.1 Strategy for GHG implementation

NAPL has adopted a science-based approach to implement its GHG program. The key objective is to reduce the GHG emissions from its operations. NAPL Management is committed to ensuring that this is done with all statistical, scientific, and innovative approaches.

2.2 Goal

NAPL has established net zero target by 2050. Based on this goal the entire GHG framework has been established at NAPL, and the aim is to continuously monitor, reduce and create a positive impact on the environment.

2.3 Responsibility & Authority

- Mr. Umesh Kardile (umesh.kardile@naplgroup.com)
- Mr. Bhushan Kulkarni (bhushan.kulkarni@naplgroup.com)

2.4 Organizational boundary

For the Purpose of this Report, the focus is only on the Ambad Plant activities.

2.5 Operational boundary

Figure 2 depicts the Operational boundary



Figure 2: Overview of Scope and Activities

2.6 Process Flow Diagram

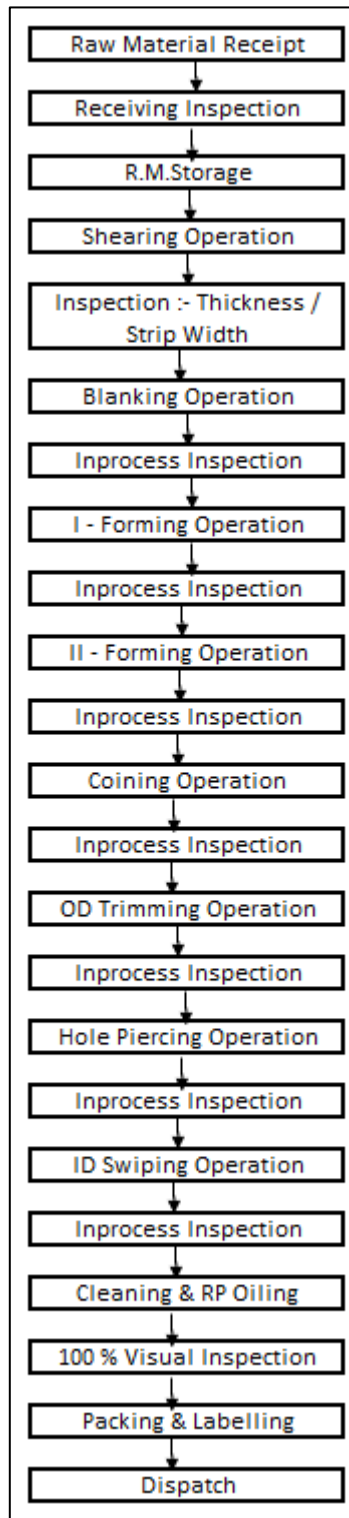


Figure 3: Process Flow Diagram for Press Component

2.7 Any specific exclusions of sources, facilities, and / or operations.

All facilities and activities within the Ambad Plant are considered in scope.

3.0 Methodology(ies) used.

The calculations were done using an Inhouse Tool developed by NAPL for the purpose of calculations. Although the tools use the Guidelines of the GHG Protocol & ISO 14064 (Part 1,2,3) and the Emission Factors provided in the IPCC Sixth Assessment for the purpose of calculation.

NAPL adopts a **simple Tier 1** Methodology as defined by IPCC.

Tier 1 Approach for GHG Inventory	
The most basic method, using general emission factors and activity data.	
Emission Factors (EFs):	These are values that quantify the amount of GHG emitted per unit of activity (e.g., emissions per ton of fuel burned).
Activity Data:	These are quantitative data on the magnitude of the activity that causes emissions (e.g., fuel consumption, agricultural production)

4.0 Equity shares for reporting for GHG

The **equity share approach** under the [GHG Protocol](#) requires a company to account for a proportional percentage of a joint operation's or investment's Greenhouse Gas (GHG) emissions, reflecting its [economic interest](#) and share of the risks and rewards, not just its ownership percentage

Since the scope of this report is purely for the Ambad Plant and being reported in isolation. NAPL is currently utilizing all GHG inventory data from direct calculations. No equity share approach is currently adopted.

5.0 Reporting Year(s)

NAPL adopts an annual reporting framework for GHG. As per the April to March Period is identified. Baseline Year for NAPL, Ambad will be 2025-2026 and will be used to demonstrate all reductions.

The data collection and review are conducted on a regular basis.

6.0 Base year

The base year was chosen as 2025-2026. The primary reason for that is that the entire GHG initiative across NAPL was initiated in 2025. Hence focused data collection and associated reduction plans were initiated around the same time. Although NAPL made certain improvements prior to 2025 also, the data for same was not available in a structured manner. NAPL eventually wants to make further improvements in the GHG emissions from this year onwards.

7.0 Recalculation Policy (Base year):

Following criteria for recalculation policy of base year are established. The base year choice will be reviewed in case of occurrence of the following criteria.

- Where significant changes to the inventory boundary arise due to alterations in organisational structure (such as mergers, acquisitions, divestments, outsourcing, or insourcing)
- Where improvements in calculation methods, emission factors, or data accuracy have a significant impact on reported values
- Should any significant errors be discovered in previously reported data.

8.0 Information on emissions

Total Scope 1, Scope 2 and Scope 3 emissions are independent of any GHG trades such as sales, purchases, transfers, or banking of allowances. The following section enumerates the details of the emissions considered.



Figure 4: Scope of Emissions

8.1 Scope 1 Emissions

The factors considered for Scope 1 emissions are as follows.

1. Stationary combustion of fuel – Use of Diesel Generators
2. Mobile combustion of fuel – Use of company owned passenger vehicles.
3. Fugitive Emissions – Refrigerant use in AC
4. Fugitive Emissions – Fire extinguisher use

8.2 Scope 2 Emissions

The factors considered for Scope 2 emissions are as follows.

1. Indirect Emission from Energy Consumption
2. Purchased Heating / Steam

8.3 Scope 3 Emissions

The factors considered for Scope 3 emissions are as follows.

1. Upstream Data
2. Downstream Data
3. Waste Disposal Data
4. Employee Travel
5. Outsourced Process GHG

9.0 Emissions data separately for each scope

The Emissions Data was collected for the entire year. Due care was taken to seek data from accurate, dependable, and relevant sources.

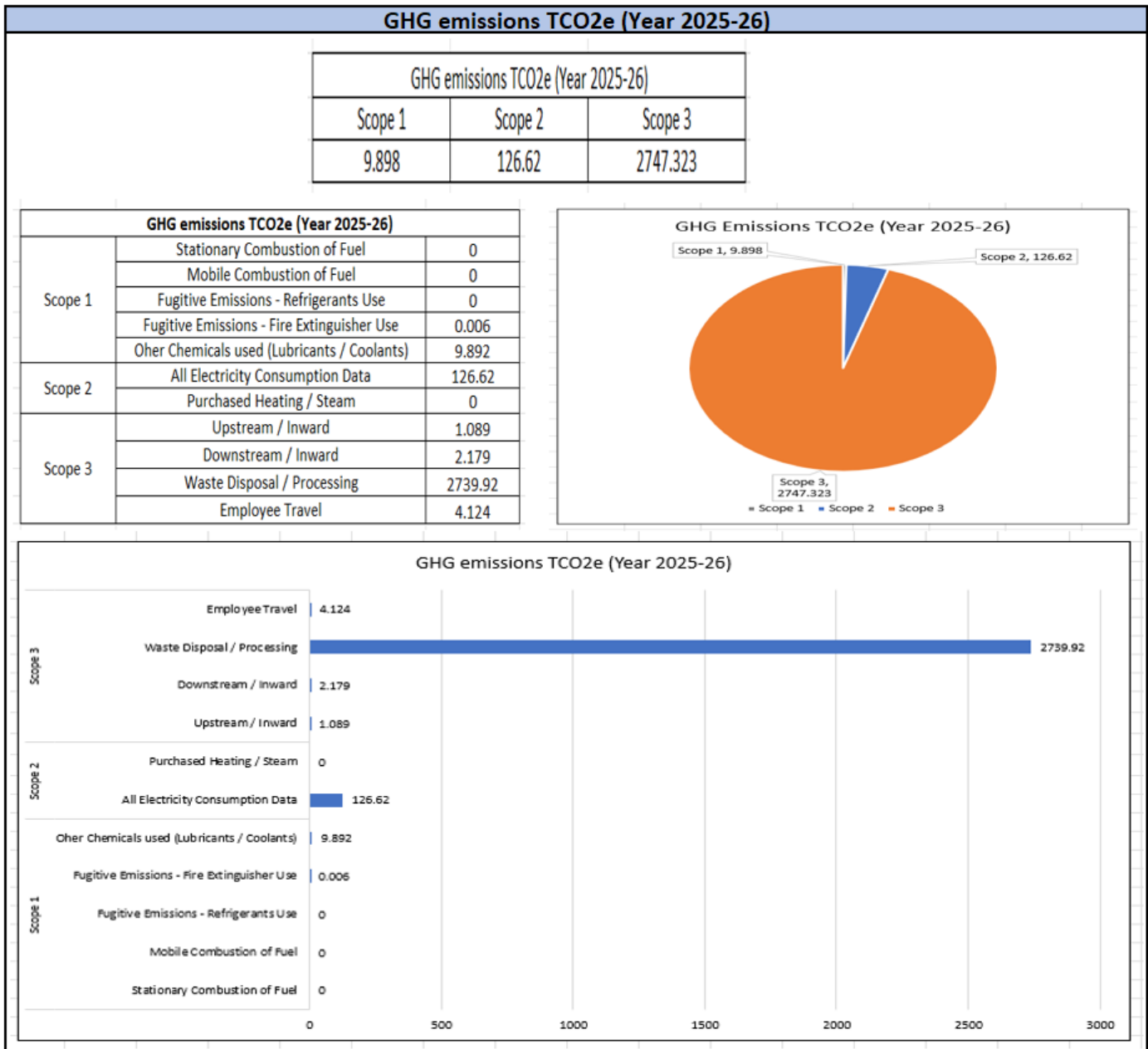


Figure 5: Scope Wise Data for Emissions

9.1 GHG Emissions Data (Considering All 6 GHGs)

For all six GHGs (CO₂, CH₄, N₂O, HFCS, PFCS, SF₆) cumulative In metric tons and in tons of CO₂ equivalent.

Direct Process Emissions					
Year 2025-2026 (Stationary Combustion)					
Month	Diesel (KL)	CO ₂ Em.(Ton CO ₂ Eq./KL)	N ₂ O Em.(Ton CO ₂ Eq./KL)	CH ₄ Em.(Ton CO ₂ Eq./KL)	Total (Ton CO ₂ Eq./KL)
April	0.000	0.000	0.000	0.000	0.0000
May	0.000	0.000	0.000	0.000	0.0000
June	0.000	0.000	0.000	0.000	0.0000
July	0.000	0.000	0.000	0.000	0.0000
August	0.000	0.000	0.000	0.000	0.0000
September	0.000	0.000	0.000	0.000	0.0000
October	0.000	0.000	0.000	0.000	0.0000
November	0.000	0.000	0.000	0.000	0.0000
December	0.000	0.000	0.000	0.000	0.0000
January	0.000	0.000	0.000	0.000	0.0000
February	0.000	0.000	0.000	0.000	0.0000
March	0.000	0.000	0.000	0.000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000

Figure 6: Direct Process Emissions - Stationary Combustion

Direct Process Emissions					
Year 2025-2026 (Mobile Combustion)					
Month	Diesel (KL)	CO ₂ Em.(Ton CO ₂ Eq./KL)	N ₂ O Em.(Ton CO ₂ Eq./KL)	CH ₄ Em.(Ton CO ₂ Eq./KL)	Total (Ton CO ₂ Eq./KL)
April	0.000	0.000	0.000	0.000	0.0000
May	0.000	0.000	0.000	0.000	0.0000
June	0.000	0.000	0.000	0.000	0.0000
July	0.000	0.000	0.000	0.000	0.0000
August	0.000	0.000	0.000	0.000	0.0000
September	0.000	0.000	0.000	0.000	0.0000
October	0.000	0.000	0.000	0.000	0.0000
November	0.000	0.000	0.000	0.000	0.0000
December	0.000	0.000	0.000	0.000	0.0000
January	0.000	0.000	0.000	0.000	0.0000
February	0.000	0.000	0.000	0.000	0.0000
March	0.000	0.000	0.000	0.000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000

Figure 7: Direct Process Emissions - Mobile Combustion

Direct Process Emissions					
Year 2025-2026 (Total Combustion = Stationary Combustion + Mobile Combustion)					
Month	Diesel (KL)	CO2 Em.(Ton CO2 Eq./KL)	N2O Em.(Ton CO2 Eq./KL)	CH4 Em.(Ton CO2 Eq./KL)	Total (Ton CO2 Eq./KL)
April	0.000	0.0000	0.0000	0.0000	0.0000
May	0.000	0.0000	0.0000	0.0000	0.0000
June	0.000	0.0000	0.0000	0.0000	0.0000
July	0.000	0.0000	0.0000	0.0000	0.0000
August	0.000	0.0000	0.0000	0.0000	0.0000
September	0.000	0.0000	0.0000	0.0000	0.0000
October	0.000	0.0000	0.0000	0.0000	0.0000
November	0.000	0.0000	0.0000	0.0000	0.0000
December	0.000	0.0000	0.0000	0.0000	0.0000
January	0.000	0.0000	0.0000	0.0000	0.0000
February	0.000	0.0000	0.0000	0.0000	0.0000
March	0.000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000

Figure 8: Direct Process Emissions - Total Combustion

Fugitive Emissions - Refrigerant Use			
Year 2025-2026			
Sr no	Refrigerant Type	Quantity Filled (in Kgs)	CO2 emission
1	R22	0	0
2	R23	0	0
3	R407	0	0
4	R410A	0	0
Total			0

Figure 9: Fugitive Emissions - Refrigerant Use

Fire Extinguisher Use			
Year 2025-2026			
Sr no	Type of Fire extinguishers	Quantity Filled (in kgs)	CO2 emission
1	ABC Powder	30	0.006
2	CO2	0	0
3	Metal D	0	0
Total			0.006

Figure 10: Fugitive Emissions - Fire Extinguisher Use

Other Chemicals Used			
Year 2025-2026			
Sr no	Type of Fire extinguishers	Quantity Filled (in kgs)	CO2 emission
1	Cleaning Media	1160880	6.152664
2	R.P Oil	705600	3.73968
Total			9.892344

Figure 11: Emissions from Chemicals Used

Indirect Emissions		
Year 2025-26		
Month	MSEDCL Unit Consumption (in KWh)	CO2 Emissions
April	12569.00	8.924
May	14328.00	10.173
June	13952.00	9.906
July	15668.00	11.124
August	13499.00	9.584
September	14134.00	10.035
October	12754.00	9.055
November	15501.00	11.006
December	17725.00	12.585
January	16313.00	11.582
February	14973.00	10.631
March	16931.00	12.021
Total		126.62637

Figure 12: Indirect Emissions from Energy Consumption

10.0 QA/ QC

10.1 Information on the quality of the inventory

There is a risk of data accuracy & consistency, hence NAPL has established QA/QC controls for GHG data as follows:

- Assigned designated person for the plant who is responsible for data collection and verification.
- Templates provided to ensure consistency of the data.
- Training is provided to all concerned people in the chain of activities for GHG.

10.2 Uncertainty analysis

GHG Data is subject to standard uncertainties that may affect the accuracy of the reported data. Although a maximum limit of $\pm 1\%$ is considered acceptable. If any uncertainty is found below this range, suitable actions are to be taken.

Type of measurement	Uncertainty Estimated & 95% Confidence Interval	Remark
Electricity	$\pm 0.2\%$	Metering is in control of electricity provider and accurate estimation is not possible. Although since the consumption pattern remains consistent across production cycles, an approximate value can be derived using historical monthly averages.
Diesel	$\pm 0.3\%$	The uncertainty is related to the diesel quantity measurements which are done by the seller companies and bills provided.
Refrigerants	$\pm 0.5\%$	These are billed by quantity every time there is refilling.
Fire Extinguishers	$\pm 0.5\%$	These are billed by quantity every time there is refilling.

Note: The uncertainties are estimated based on best practices for measurement, technical data sheet, OEM Guidance.

11.0 Optional information

- **Strategy for Reduction**

NAPL has decided that it will monitor all emissions for the year 2025–2026 and then, based on comparison with 2025-2026 data using Ratio-Based Performance Indicators, establish measurable trends, identify efficiency gains or losses, and set corrective actions for continuous improvement in sustainability reporting.

- **Performance Indicators**

Scope	Type of Data	Performance Indicator
Scope 1	Stationary Combustion of Fuel	TCO2e / Kg Production
	Mobile Combustion of Fuel	TCO2e / Kg Production
	Fugitive Emissions - Refrigerants	TCO2e / Kg Production
	Fugitive Emissions - Fire Extinguisher (CO2)	TCO2e / Kg Production
Scope 2	All Electricity Consumption Data	TCO2e / Kg Production
	Purchased Steam / Heating	TCO2e / Kg Production
Scope 3	Upstream	TCO2e / Kg Production
	Downstream	TCO2e / Kg Production
	Waste Disposal	TCO2e / Kg Production
	Employee Travel	TCO2e / Kg Production

- **Energy available for sale to users and other organizations'**

NAPL has currently not arrived at a stage where it can trade in the Carbon Credits. Since this is the first year of the evaluations, it proposes to monitor the effectiveness of the system and then review its strategic decision to conduct any sale for the emissions.

- **Information on any contractual provisions addressing GHG-related risks and obligations.**

The data for Scope 1 & Scope 2 is not seen containing any major risks. Scope 3 data is highly dependent on External Interested Parties. Since the risks of engagement, communication & level of cooperation with such parties are currently being evaluated, the same is considered as an elevated risk from the context of collection of data, accuracy of time as well as timely receipt of data.

- **An outline of any external assurance provided and a copy of any verification statement, if applicable, of the reported emissions data**

NAPL has hired VSQC to assist in the setting up of the GHG framework, collection of data and preparation of the Baseline GHG Accounting Report.

- **Information on the causes of emissions changes that did not trigger a base year emissions recalculation (e.g., process changes, efficiency improvements, plant closures).**

This is the first year of calculation, hence the data is not sufficient to trigger a recalculation as of now.

- **GHG emissions data for all years between the base year and the reporting year (including details of and reasons for recalculations, if appropriate)**

This is the first year of calculation, hence the data is not sufficient to trigger a recalculation as of now.

- **Information on the quality of the inventory (e.g., information on the causes and magnitude of uncertainties in emission estimates) and an outline of policies in place to improve inventory quality.**

NAPL has taken due care to collect data from relevant sources such as collection of Electricity Bills, Invoices for Purchase of Gases to estimate the GHG.

12.0 Decarbonisation and carbon credits

At present, NAPL is not engaged in the purchase of carbon credits as part of its greenhouse gas (GHG) management strategy. Instead, our focus remains on direct decarbonisation initiatives within our operations and value chain. This approach prioritises measurable reductions in emissions through energy efficiency improvements, adoption of renewable energy sources, and process optimisation.

While carbon credits can serve as a mechanism to offset residual emissions, the company has chosen to concentrate on tangible, internal emission reduction measures that contribute to long-term sustainability and resilience. This strategy ensures that progress towards decarbonisation is achieved through operational improvements rather than reliance on external offsets.

The company continues to monitor developments in carbon markets and regulatory frameworks. In the future, participation in carbon credit schemes may be considered to complement internal decarbonisation efforts, particularly for hard-to-abate emissions.

13.0 Sources of Emission factors

Latest factors of emissions are adopted. Quality Head reviews the periodic factors regularly regarding any changes or updates.

URL of IPCC <https://www.ipcc-nggip.iges.or.jp/EFDB/main.php>

URL of CEA <https://cea.nic.in/cdm-co2-baseline-database/?lang=en> Version 20

1. IPCC Guidelines for National Greenhouse Gas Inventories

- Published by the Intergovernmental Panel on Climate Change (IPCC).
- Offers default emission factors for a wide range of activities and sectors.
- Widely used for national and corporate inventories.
- IPCC Guidelines

2. GHG Protocol Tools and Guidance

- Offers sector-specific tools and guidance documents that include recommended emission factors.
- Aligns with ISO 14064 and other international standards

3. Greenhouse Gas Management Institute (GHGMI)

- Provides educational resources and curated lists of emission factor databases.
- Highlights the importance of geographic and technological relevance when selecting emission factors.

Sr No	Energy Source/Fuel	Emission Type	Emission Factor		GWP	
			Value	Unit of Measurement	Value	Unit of Measurement
1	Diesel (Stationary Combustion)	CO2 Emission	2.91	Ton CO2 Eq./KL	-	-
		CH4 Emission	0.00039	Ton CH4 Eq./KL	29.8	Ton CO2 Eq.
		N2O Emission	0.00002	Ton N2O Eq./KL	273	Ton CO2 Eq.
2	Diesel (Mobile Combustion Passanger Car)	CO2 Emission	2.91	Ton CO2 Eq./KL	-	-
		CH4 Emission	0.00000	Ton CH4 Eq./KL	0	Ton CO2 Eq.
		N2O Emission	0.00000	Ton N2O Eq./KL	0	Ton CO2 Eq.
3	Petrol (Mobile Combustion Passanger Car)	CO2 Emission	2.29	Ton CO2 Eq./KL	-	-
		CH4 Emission	0.00000	Ton CH4 Eq./KL	0	Ton CO2 Eq.
		N2O Emission	0.00000	Ton N2O Eq./KL	0	Ton CO2 Eq.
As per CEA source:						
Sr No	Energy Source/Fuel	Emission Type	Emission Factor		GWP	
			Value	Unit of Measurement	Value	Ton CO2 Eq.
2	Electricity	CO2 Emission	0.81	Ton CO2 Eq./MWH	-	-
		CO2 Emission	0.727	Ton CO2 Eq./MWH	-	-

Figure 12: Key Emission Factors and GWP values used as per IPCC AR6 and other latest factors.

14.0 Calculations Tool

An Excel based tool is attached for 2025-2026 as an attachment to this report.

_____END OF REPORT_____