

GHG EMISSION REPORT

20
24



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1. INTRODUCTION

1.1 ABOUT THE REPORT

This report details **CEV Engineering Pvt Ltd (CEV)** carbon emissions inventory for the Current Year 2024 (January 2024 to December 2024). The report has been prepared in accordance with the GHG Protocol. Its goal is to assess CEV's GHG emissions from its activities and manufacturing units to measure and enhance the company's sustainability performance. The identification of areas for improvement and future emission reductions will be made possible by evaluating the major sources of GHG emissions. CEV manufacturing unit is located in Chennai, Tamil Nadu, India.

1.2 REPORTING PERIOD

The Carbon emissions inventory detailed in this report covers for one year, starting from January 1, 2024, to December 31, 2024. Referred to as Fiscal Year "CY 2024".

1.3 ABOUT THE ORGANIZATION

CEV Engineering Pvt Ltd (CEV) is established in 2007 having a unit in Chennai, India. CEV is majorly known for development of CNG/LNG/LPG System, Supply of CNG/LPG parts (OEM). CEV is recognized for its quality products, meeting all the safety standards along with consistent improvement in functionality and design as per the customer's requirements. CEV's CNG Kits are engineered to meet strict standards of the automotive industry, thus satisfying the needs of an increasingly demanding market. The in-house design and development team is committed to constantly upgrade the manufacturing facilities through advanced technology and clean energy sources allowing the creation and development of modern fuel conversion systems.

CEV is certified under ISO 9001:2015. It's products have been certified as per ECE R67, ECE R110 and ISO 15500.

CEV works in alliance with major car manufacturer Hyundai Motor India Ltd for installation of CNG kits in factory fitted Cars.

2. OBJECTIVES

This report aims at assessing and measuring CEV's GHG emissions. It will not only ensure transparent accounting of the organization's emissions but will also elaborate on existing strategies and potential reduction plans and targets.

The Carbon Accounting Report aims to:

- Quantify GHG emissions over the period Jan' 2024 – Dec' 2024
- Identify gaps and emissions reduction opportunities.
- Communicate results to the customer's sustainability assessment process.

2.1 ROLES AND RESPONSIBILITIES

The quantification of CEV's carbon emissions was led by the Managing Director. There is a team appointed by management for maintaining data and corresponding evidence for carbon emission sources.

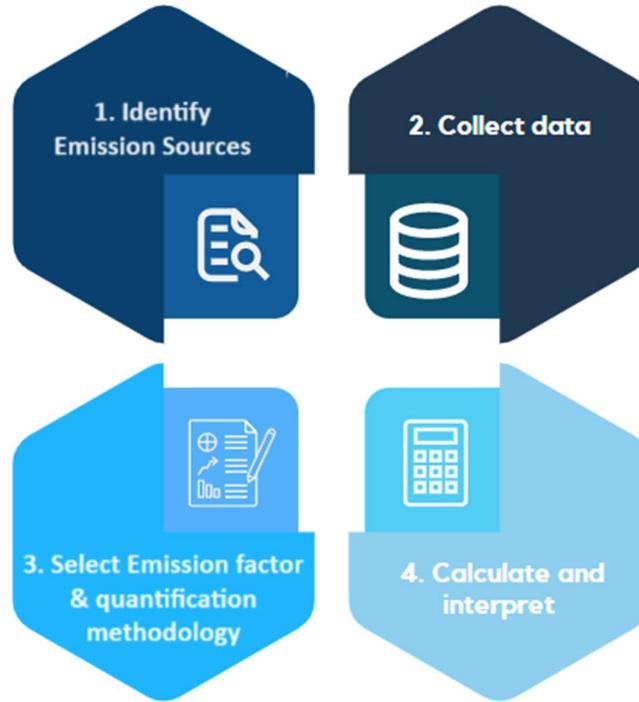
The team is responsible for data collection in the organization with help of support functions for data collection and validation. The team met periodically to discuss data collection and how it could be quantified and documented, to put forward and/or implement strategies that will reduce overall emissions.

This data was then provided to the independent third-party verification body, who analyzed, accounted for, calculated, forecasted, and reported CEV's emissions for the CY of 2024.

2.2 METHODOLOGY USED

This report follows the GHG protocol and specifications for quantification of GHG Emissions.

The methodology can be summarized as follows:



2.3 PRINCIPLES OF CARBON ACCOUNTING

Carbon accounting and reporting practices are constantly evolving alongside advancements in the science of climate change. **The GHG Protocol advises that GHG emissions inventories be carried out in accordance with the following principles:**



RELEVANCE:

For an organization’s carbon emissions inventory to contain information that users might need for making “informed” decisions. Accordingly, CEV has identified the appropriate boundaries that reflect its business operations.

COMPLETENESS:

All relevant emission sources within the chosen inventory boundary have been accounted for in the carbon inventory so that a comprehensive and meaningful inventory of total emissions is compiled.

CONSISTENCY:

The carbon inventory has been compiled in a manner that ensures that the overall emissions estimates are consistent and comparable over time.

TRANSPARENCY:

All necessary information has been recorded, compiled, and analyzed in a manner that enables internal reviewers and external verifiers to attest to its credibility.

ACCURACY:

Data reported is sufficiently precise to enable us to make decisions with reasonable assurance and the reported information is credible. Uncertainties in measurements, recording, and calculations have been reduced as far as possible and practicable.

3. BOUNDARIES

3.1 ORGANIZATIONAL BOUNDARIES

According to the GHG Protocol – Corporate Standard, the reporting company must set the scope and boundary for the calculation of emissions by deciding the approach. CEV adopts the control approach for carbon accounting and exercises operational control over its manufacturing unit located as **CEV Engineering Pvt Ltd, Plot No,151/3, Sriperumbudur Taluk, Pennalur, Tamil Nadu 602105**

3.2 OPERATIONAL BOUNDARIES

CEV has included its operational boundaries, including energy and fuel consumption, and Employee Commuting. Operational boundaries are defined under three different scopes:

Scope 1 emissions include all direct carbon emissions emitted from its operational activities. These emissions include owned or controlled by CEV, such as energy and fuel consumption.

Scope 2 emissions include indirect emissions from the energy emitted from the consumption of purchased electricity by CEV. This emission occurs at the source where electricity is produced.

Scope 3 emissions include indirect emissions that occur from sources not owned or controlled by CEV. These emissions occur as a consequence of the activities of the company. CEV has identified and has reported only its employee commuting.

4. DATA COLLECTION & QUANTIFICATION

METHODOLOGY

4.1 DATA COLLECTION AND MONITORING METHODOLOGY

CEV collected activity data from various sources through data owners. For example, data on energy usage is monitored and collected every month, diesel consumption is collected depending on consumption, and employee commuting data is acquired based on the number of trips and distance travelled. This data is then provided, analyzed, accounted for, calculated, forecasted, and reported as CEV's emissions for the CY of 2024.

4.2 QUANTIFICATION METHODOLOGY

The process of identifying carbon emission sources is the first step involved in the quantification of GHG emissions. The GHG sources are then classified following the GHG Protocol – Corporate Standard. This is followed by gathering accurate activity data. Selection of nationally or internationally accepted emission factors is a crucial step, and these are available through DEFRA, IPCC and National GHG Inventories for the calculation of GHG emissions. CEV's CY 2024 GHG inventory is based on the activity data and the use of appropriate emission factors to arrive at a total emission value or carbon footprint.

4.3 GHG EMISSION ACTIVITY DATA SOURCES

The following table shows the sources of emissions for which activity data has been collected along with the sources of data:

Emission Source	Data Source
Direct Emission – Diesel Consumption for Generator	Bills/ Invoices/Consumption Record
Energy Indirect emissions - Grid electricity consumption	Bills/ Invoices/ Meter information
Other indirect emissions from Employee Commuting	Based on the distance travelled/ number of trips.

Other Indirect Emission from Upstream transportation	Based on the distance travelled/ number of trips/Vehicle type.
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4.4 EXCLUDED SOURCES

The following sources of emissions have been excluded from the calculation of CEV’s total emissions:

CATEGORY NUMBER	CATEGORY NAME
Category 1	Purchased goods & Services
Category 2	Capital goods
Category 3	Fuel & Energy Related
Category 5	Waste generated in operations
Category 6	Business Travel
Category 8	Upstream Leased Assets
Category 9	Downstream Transportation
Category 10	Processing of sold products
Category 11	Use of sold products
Category 12	End-of-life treatment of sold products
Category 13	Downstream leased assets
Category 14	Franchises
Category 15	Investments

4.5 QUANTIFICATION OF DIRECT & INDIRECT EMISSIONS

The following are the direct and indirect emissions from CEV's operations during CY 2024.

DIRECT EMISSION: SCOPE 1

The GHG emissions from CO₂ based Diesel Consumption for Generator & company owned vehicles. This is considered as a direct emission (Scope 1).

SCOPE 1	CARBON EMISSIONS CY 2024 (tCO₂E)
a. Direct emissions from stationary combustion	13.77
b. Direct emissions from mobile combustion	91.60
c. Fugitive direct emissions	0.04
d. Direct Emission from Process	0.00
Total Scope 1 Emission	105.41

The total Scope 1 emissions from CEV' Unit was 105.41 tCO₂e for CY 2024.

INDIRECT EMISSION: SCOPE 2

The grid electricity purchased to run operations for the CEV's unit, is considered indirect emission (Scope 2) was considered.

SCOPE 2	CARBON EMISSIONS CY 2023 (tCO₂E)
Grid electricity consumption	196.71

The total Scope 2 emissions from CEV Unit was 196.71 tCO₂e for CY 2024.

OTHER INDIRECT EMISSION: SCOPE 3

Employee commute was considered under other indirect emissions (Scope 3).

SCOPE 3	CARBON EMISSIONS CY 2024 (tCO₂e)
Category 4 – Upstream Transportation	395.31
Category 7- Employee Commute	271.9

The total Scope 3 emissions from CEV's Unit is 667.21 tCO₂e for CY 2024.

4.6 REDUCING UNCERTAINTIES

The data for GHG emissions from CEV has been derived directly from electricity, logbook/invoices/meter information of DG & Electricity Board and then conversion factors are employed to convert into GHG reporting metrics.

The uncertainty lies in the conversion factors and data validation. It is assumed that there is +/- 5% to 10 % uncertainty associated with the calculation of the total emission of CEV each year. It is based on the following:

- Based on the accuracy of the activity data collected, the uncertainty associated can be approximately 5%.
- Uncertainty associated with estimating emission factors.
- Concerning Activity Data (AD), calculation methodology with less uncertainty has been prioritized.

5. RESULTS

CEV's total emissions for CY 2024 was **969.33 tCO₂e**. CEV's Scope 1, Scope 2 and Scope 3 emissions for the CY 2024 were 105.41, 196.71, and 667.21 tons of tCO₂e, respectively.

The majority of the emissions were from Scope 3, which accounted for 68.8% of the total emissions. The second highest emissions were from Scope 2 which accounted for 20.3% of the total emissions. The lowest share of emissions was from Scope 1, which were from Diesel consumption for Generator and company owned vehicle consumption for 10.9% of the total emissions.

CEV's Emissions Summary CY 2024 (tCO₂e)

SCOPE	EMISSIONS (tCO ₂ e)	PERCENTAGE
Scope 1	105.41	10.9%
Scope 2	196.71	20.3%
Scope 3	667.21	68.8%
TOTAL	969.33	100%

**Includes Scope 3 – Employee Commuting & Upstream Transportation.*

6. RECOMMENDATIONS

REDUCE UPSTREAM TRANSPORTATION & EMPLOYEE COMMUTING EMISSIONS

- Scope 3 emissions from upstream transportation and employee commuting accounted for 68% of the total Scope 3 footprint.
- Implementing low-carbon logistics solutions such as route optimization, multi-modal transport, and engaging suppliers with green fleets, along with sustainable employee mobility programs like carpooling, shuttle services, and EV incentives, will significantly reduce these emissions.

INCREASE ENERGY EFFICIENCY AND INCREASE THE SHARE OF RENEWABLE ENERGY

- Scope 2 emissions accounted for 20.3% of the total emissions. Investing in renewable sources of energy as well as increasing building energy efficiency will help reduce the company's Scope 2 emissions.

VOLUNTARY COMPENSATION SCHEMES (SHORT-TERM AND LONG-TERM PROJECTS)

- CEV should set science-aligned targets for emissions reduction in the short-, medium- and long- term to enhance emissions reductions efforts as well as have a clearly defined roadmap to achieve decarbonization on a larger scale.

OTHER RECOMMENDATIONS

- Utilize Energy Star – Energy Label certified products such as Energy Star lighting, heating, computers, printers and more to improve upon sustainability performance. For instance, Energy Star rated computers utilize 40-50% less electricity than the regular computers.
- Employee commute & Upstream generates majority of the emissions (68.8%) even though it is part of scope 3. Opting for green travel such as electric vehicles, renting hybrid cars, encouraging carpooling will help cutting down significant amount of CEV carbon footprint.
- Focus on “Green Building projects” for LEED certification, especially while building new office campuses. Investing in green projects to obtain high level of green building rating will effectively improve resource efficiency and reduced carbon footprint.

7. CONCLUSION

CEV's total emissions for the CY of 2024 from its operation was:

- Scope 1 (Direct Emissions) – 105.41 tCO₂e
- Scope 2 (Indirect Emissions) – 196.71 tCO₂e
- Scope 3 (Other Indirect Emissions) – 667.21 tCO₂e

CEV Engineering Pvt Ltd Organizational carbon footprint is **969.33 tCO₂e for CY 2024** and are determined to help industry-wide transition to a low-carbon economy; That is why CEV is planning to make a commitment in Carbon report CY 2024 to become carbon neutral in future by considering short term and long-term carbon reduction targets.