CLASSIC PAINTS

GHG INVENTORY OF CLASSIC PAINTS

IN LINE WITH ISO 14064-1:2018 REQUIREMENTS

FOR THE FINANCIAL YEAR 2023-2024

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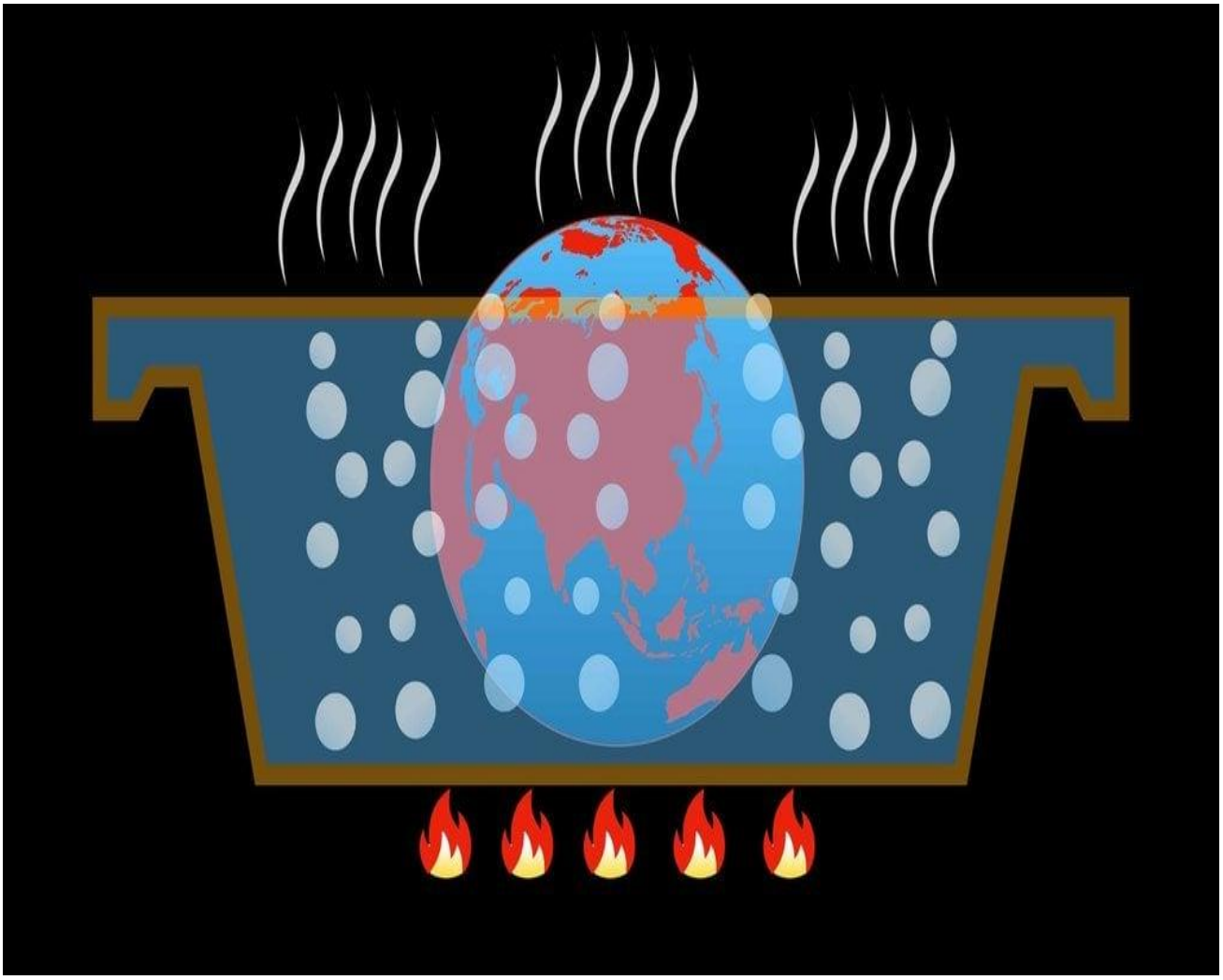
Carbon Footprint

The pace of global warming is growing at an alarming rate with visible impacts on climate and in every corner of the environment we are living in. Time for action is limited – as we are approaching a tipping point of irreversibility of CO2 emissions. Therefore, it has become real essence for every individual, every organization to be accountable for environmental burdens/concerns associated with our actions, in conducting our day-to-day activities, businesses and whatever we do on this earth.



"The era of global warming has ended; the era of global boiling has arrived. Leaders must lead. No more hesitancy. No more excuses. No more waiting for others to move first. There is simply no more time for that. It is still possible to limit global temperature rise to 1.5 degrees Celsius and avoid the very worst of climate change. But only with dramatic, immediate climate action."

Antonio Guterres
Secretary-General
United Nations

Narendra Modi
Prime Minister of India

MESSAGE FROM DIRECTOR

As the Director of Classic Paints, the premier paint manufacturer based in Aroor, Alappuzha, I am proud to address a topic of paramount importance to our company and the wider community—our commitment to environmental stewardship and sustainable development.

At Classic Paints, we recognize that our operations, spanning from the use of chemical and allied products, bear a significant responsibility not only towards our stakeholders but also towards the planet. It is with this acute awareness that we have embarked on a strategic journey to measure, manage, and ultimately reduce our carbon footprint, in alignment with the ISO 14064-1:2018 standard for Greenhouse Gas Reporting.

Our 'Green Vision' is not just a policy; it is an actionable blueprint that guides our daily operations and long-term strategic decisions. We are dedicated to implementing the principles of Reduce, Reuse, and Recycle across all levels of our organization. This holistic approach not only aims at minimizing our carbon footprint but also at fostering a culture of sustainability within our ranks.

Furthermore, we are committed to enhancing the green cover within our premises, despite the constraints of limited space. Our goal is to create a bio-capacity capable of absorbing the emissions we cannot eliminate. This initiative is a testament to our belief that every effort counts when it comes to preserving our environment.

This message is not merely a declaration of intent but a call to action for every member of the Classic Paints family. Our journey towards a more sustainable and greener future is ongoing, and each year, we pledge to make tangible strides in reducing our environmental impact. Together, we are working not just for the betterment of our organization but for the well-being of our planet and future generations.

I am excited about the path that lies ahead and am confident that with our collective efforts, Classic Paints will continue to lead by example in environmental stewardship and sustainable business practices

(Sidharthan K K)

Director

Date – 1st June 2024

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Disclaimer:

BIZIPRO has exercised all reasonable skill, care and diligence in compiling this report. The information presented in this report is based on parameters observed at site, discussions held with officials at the facility, and data provided to us subsequently by CLASSIC PAINTS, which has not been independently verified. This report is not deemed to be any undertaking, warranty, or certificate.

Acknowledgements:

We acknowledge with gratitude, the invaluable assistance and co-operation extended by Mr. Sidharthan K K and his team for providing us with the data required for this report.

Objectives and Principals

The voluntary Greenhouse Gas (GHG) Emissions Report describes the emissions and details the verification of the inventory of greenhouse gas (GHG) for Classic Paints., hereinafter referred to as "CLASSIC PAINTS", or "the Company".

The company publishes this report annually in order to transparently disclose to its stakeholders its GHG emissions in accordance with the commitments made in the Company's environmental policy and strategy. Further, the report supports in measuring, monitoring and managing the environmental performance of CLASSIC PAINTS.

The information contained in this report discloses the inventory of GHGs and associated emissions during financial year 2023-24 April 1, 2023 to March 31, 2024. The report covers all the activities are performed under the scope of CLASSIC PAINTS.

The GHG emissions report has been restructured in accordance to the requirements described in ISO 14064-1:2018 "Greenhouse gases - Part 1: "Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals". It includes all required information, except those details that the standard does not consider mandatory and has not been considered relevant following the principle of relevance.

This report is carried out in accordance with the GHG Accounting and Reporting Principles found within the ISO 14064-1:2018 Standard.

This is the first time that CLASSIC PAINTS publishes a GHG report that includes the three scopes, and that includes the six categories described in the ISO 14064-1:2018. The report presents the targets certified by the Science Based Targets initiative (SBTi) to reduce Scope 1 and 2 emissions by 2025 that are aligned on the path to a complete decarbonization by 2040. This report also includes an overview of the direct actions performed based on internal targets and strategies to manage and reduce GHG emissions. As Head of Administration, Ms. Akhila is the person responsible for CLASSIC PAINTS's GHG report.

This report is subject to external review by the accredited verifier, M/s. Carbon Check India Pvt Ltd.

It is considered that the CLASSIC PAINTS GREENHOUSE GAS EMISSIONS REPORT FISCAL YEAR 2023-24, as of June 2024 and ratified by the Management of the organization, is substantially correct and corresponds to a faithful representation of the emissions of the activities for the scope defined by the company; in conformity requirements of standard ISO 14064-1:2018 for a reasonable level of assurance.

About CLASSIC PAINTS

With over 33 years of experience in the paint manufacturing industry, we take pride in our exceptional track record and unwavering commitment to customer satisfaction. As a leading paint manufacturing company, we understand the transformative power of colour and strive to provide our customers with top-quality paints that exceed their expectations.

At Classic Paints, we believe that every space has a story to tell, and our wide range of premium paints is designed to help you create the perfect backdrop for your story. Whether you're renovating your home, redecorating your office, or embarking on a large-scale commercial project, our paints are crafted to meet the highest standards of quality, durability, and aesthetics.

What sets us apart is our relentless pursuit of excellence. We combine decades of industry expertise with cutting-edge technology and the finest raw materials to create paints that stand the test of time. Our manufacturing processes adhere to stringent quality control measures, ensuring that every can of Classic Paints that leaves our facility is nothing short of perfection.

But our commitment to our customers goes beyond just superior products. We understand that choosing the right paint can be overwhelming, which is why our knowledgeable team of experts is always ready to assist you. Whether you need advice on colour selection, surface preparation, or application techniques, we are here to guide you every step of the way.

We take great pride in the trust our customers place in us, and their satisfaction is at the core of everything we do. We value their feedback and continually strive to improve our products and services to meet and exceed their expectations. Our loyal customer base is a testament to our dedication and the trust we have built over the years.

The considerable technological investments and the design of innovative products have allowed the company to obtain excellent standards of quality and productivity, without ever forgetting environmental sustainability, as demonstrated by the use of 100% recycled materials and the quality management system certified to ISO 9001: 2015.

Our Team

We are fostered by a team of efficient and experienced professionals which enables us to successfully cater a widespread market. Our team is highly dedicated and hardworking which strives to obtain a range of quality product. They are well acquainted with the latest trends and market developments.

Our Commitments has been awarded into different certifications,

a) **YEAR 2000:** Certified for Quality Management System - ISO 9001
b) **YEAR 2002:** Certified for Environmental Management System - ISO 14001

c) **YEAR 2003:** Kerala State Small Scale Industries Award
d) **YEAR 2004:** MKK Nair Memorial Best Productivity Performance Award
e) **YEAR 2008:** Entrepreneurship Appreciation Award
f) **YEAR 2012:** Certified for Social Accountability - SA 8000
g) **YEAR 2012:** Kerala State Safety Award
h) **YEAR 2013:** Certified for Occupational Health & Safety and Safety Management System - OHSAS-18001
i) **YEAR 2014:** Kerala State Pollution Control Board Award - 3rd Prize
j) **YEAR 2015:** Kerala State Pollution Control Board Award - 2nd Prize
k) **YEAR 2016:** Kerala State Pollution Control Board Award - 1st Prize
l) **YEAR 2017:** Kerala State Pollution Control Board Award - Excellence Award
m) **YEAR 2018:** Kerala State Pollution Control Board Award - Excellence Award
n) **YEAR 2018:** Certified for Carbon Neutral Company - ISO 14064-1
o) **YEAR 2018:** CH-SR-EHS Excellence Award
p) **YEAR 2019:** ZED SILVER - Zero Detect Zero Effect Certificate under Ministry of Micro, Small & Medium Enterprises (MSME) and Quality Control Council of India Award
q) **YEAR 2022:** CII-SR EHS Excellence Awards 2022 - "Motivation to EHS Implementation" in the Small-Scale Category
r) **YEAR 2022:** CII-SR EHS Excellence Awards 2022 - Special Award 3rd Place in the Category of Water Management
s) **YEAR 2023:** ZED GOLD - Zero Detect Zero Effect Certificate under Ministry of Micro, Small & Medium Enterprises (MSME) Sustainable Certification Scheme
t) **YEAR 2023:** Great Place to Work

Product Portfolio

Located in Ernakulam, Kerala, we have around 33 years of experience in manufacturing residential, wall paints, metal paints, interior & exterior paints, glass paints and undercoats, Classic Paints is a well-accepted name in South India. It is seen as a reliable and trustworthy partner by its customers. It serves multiple market segments, ranging from large scale manufacturers and exporters to small scale distributors and dealers. Classic Paints ensures direct and personal interaction with the customers, thereby eliminating the high cost involved in multi- layered distribution channels.

Executive Summary & Scope

The calculation of the carbon footprint is more than GHG emissions data; it allows to identify the main GHG emission sources of an organization and to have a global image of its impact on climate change. CLASSIC PAINTS, aims to lead by example in managing its environmental performance and disclosing the impact of operations. In this regard, the organization has decided to initiate the practice of Carbon Footprint accounting for the recent year of 2023-24 to become a carbon neutral organization.

The organization has its operational boundary limited to AP1/114, Industrial Development Area, Aroor, in the Alappuzha district in India. The manufacturing facility maintained by the CLASSIC PAINTS; therefore, with the growing business footprints it is also important to understand its environmental parameters, especially carbon emissions from operation within the project boundary.

The assessment year for the carbon footprint accounting was considered as the calendar year 2023-24. Fiscal Year 2023-2024 has been chosen as base year as this is the year in which the emissions related to all the three scopes has been complied and reported. The same is now included the GHG inventory report. Further the base line year re calculation procedure has been defined. The project boundary has been defined under the 'Operational Control' approach. All direct sources of emissions owned and controlled by the organization have been identified and reported under the 'scope 1' emission. These include all stationary and mobile sources under the operational boundary of the assessment. The Electricity and indirect emissions are covered under 'scope 2' emissions; whereas for 'scope 3' all travel related emissions have been accounted for which are directly and indirectly associated with the identified project boundary. Additionally, all other possible emission sources such as solid waste, mixed scraps etc. were also considered for reporting.

The carbon inventory development and calculation of footprints have been performed based on primary data collected at the shop floor level, taking conservative values and factors and followed by cross checks from the departmental and accounts data recorded at different systems. The overall assessment was performed by the technical team of Bizipro. The total calculated footprint is 1,904.32 tCO2e. This is the total result across all three scopes of emissions.

Total Footprint **1,904.32 tCO2e**

Scope 1	**Scope 2**	**Scope 3**
0.78%	**3.55%**	**95.67%**

CARBON FOOTPRINT - CALCULATION & REPORTING

What is Carbon Footprint?

"A carbon footprint measures the total Greenhouse Gas (GHG) emissions caused directly and indirectly by a person, organization, event or product; expressed in equivalence of global warming potential of carbon dioxide". It is a subset of the ecological footprint and of the more comprehensive Life Cycle Assessment. The 'Carbon Footprint' encompasses all possible causes that contributes to GHG emissions, namely: direct (on-site, internal) and indirect emissions (off-site, external, embodied, upstream, and downstream). A Carbon Footprint is expressed in terms of Carbon Dioxide equivalent, generally 1 Carbon footprint = 1 tCO2e.

What is Greenhouse Gas (GHG) Accounting?

A corporate or organizational greenhouse gas (GHG) emissions assessment quantifies the total greenhouse gases produced directly and indirectly from a business or organisation's activities. Also known as a carbon footprint, it is an essential tool, providing your business with a basis for understanding and managing its climate change impacts.

Scope of Work:

The scope of work is preparation of a greenhouse gas (GHG) inventory and report for CLASSIC PAINTS covering a period of April 2023 to March 2024. The work carried out by following international standards, guidelines and reports viz. GHG Protocol, ISO 14064-1:2018 standard, IPCC reports.

The work carried out involved the following activities:

- Site-visit to facility for understanding organizational and operational boundaries, collection of activity data.
- Literature review for selection of appropriate GHG emission factors or emission quantification methodologies.
- Quantification of GHG emissions.
- Analysis of facility's GHG inventory.
- Preparation of GHG inventory report for the facility.

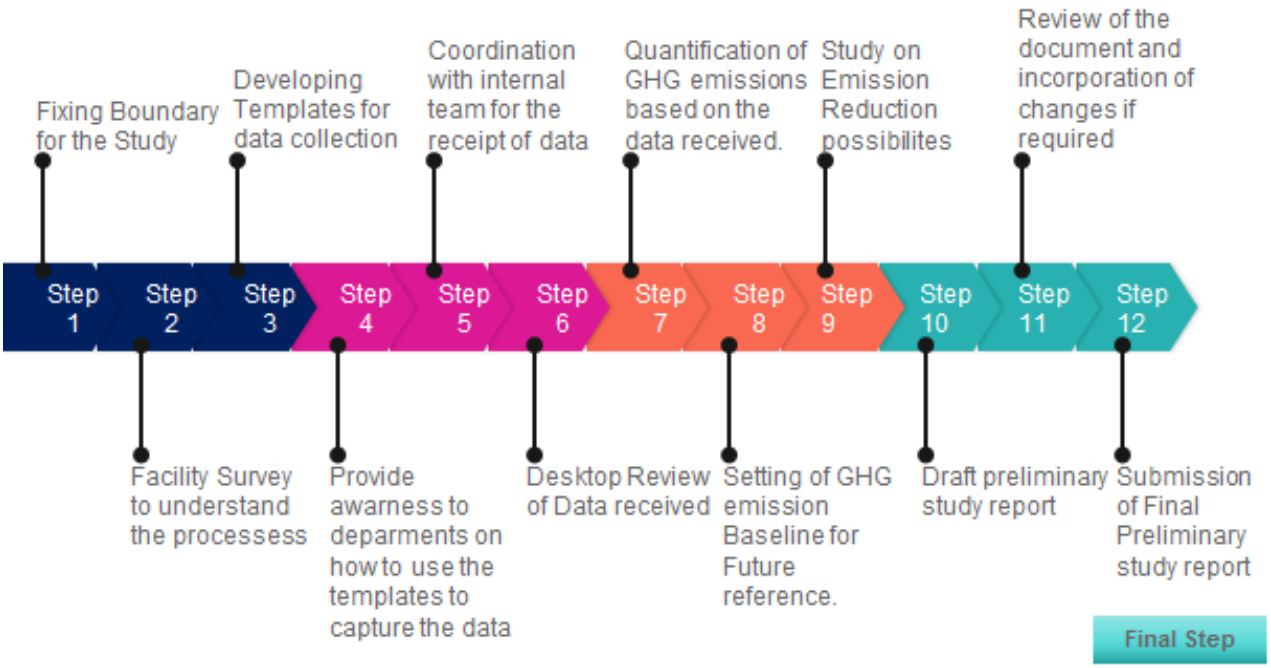


Figure 1: Scope of work

Project boundary & Approach:

Gases Covered:

The GHG protocol requires organizations to include the emissions of the following gases in its GHG emissions inventory: Carbon dioxide (CO2), Methane (CH4).

The gases relevant for the operations of CLASSIC PAINTS and included in its GHG inventory are CO2, CH4 and HFCs.

Reporting Period:

The GHG inventory report comprises annual GHG inventory for the year 2023-24, with reporting period from April 2023 to March 2024. The data for 2023 & 24 financial year were available. For a conservative approach values for each inventory items were reviewed for the financial years 2023 and 2024, and the higher inventory value is used for the estimation of GHG emissions.

Inventory Boundary:

The GHG emissions for an organization are the aggregate of the emissions from various facilities/workshops either partially, jointly or wholly managed by CLASSIC PAINTS. The organization may also have varying levels of influences over the operations within these facilities.

The inventory boundary defines the scope of GHG emissions attributable to an organization. The guidance provided in the ISO 14064-1: 2018/GHG protocol has been used in determining the inventory boundary for CLASSIC PAINTS.

Defining Organizational Boundary:

As described in the ISO 14064-1: 2018/GHG Protocol, the organization must consolidate its facility-level GHG emissions by one of the following approaches:

- Control: The organization accounts for all GHG emissions from facilities over which it has financial or operational control; or
- Equity Share: The organization accounts for a portion of GHG emissions from facilities in proportion to its respective share of equity in the facilities.

As the management of CLASSIC PAINTS has full operational and financial control of the factories. However, the management has opted for operational control approach for defining the organizational boundary in this case, and 100% of the Scope 1 & 2 GHG inventory emissions would be attributable to CLASSIC PAINTS; further the same operational control approach has been opted for the accounting of Scope 3 emissions as well.

Defining Operational Boundary:

As described in the GHG Protocol, the establishment of operational boundary includes identifying sources of GHG emissions associated with the organization's operations and categorizing each source into one of the following three categories:

- Scope-1 or direct GHG emissions, which result directly from activities within the organization's control;
- Scope-2 or energy indirect GHG emissions, which result from any electricity, heat or steam purchased by the organization;
- Scope-3 or other Indirect GHG emissions, which result from activities that are a consequence of the activities of the organization but occurs from sources not owned or controlled by the organization. Reporting emissions from this category is optional.

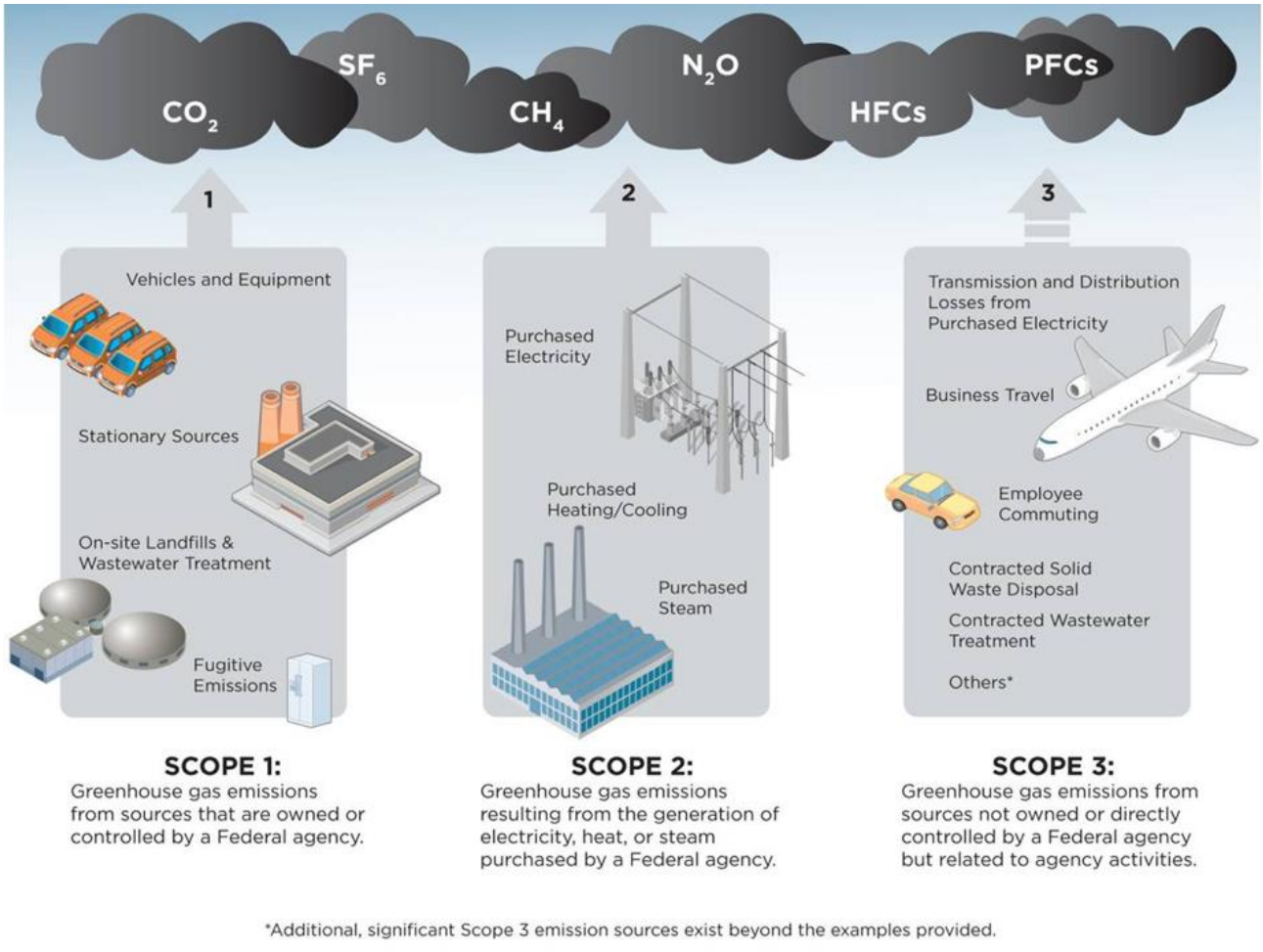


Figure 2: GHG emission sources as per GHG protocol

Sources of GHG emissions associated with CLASSIC PAINTS operations were identified and categorized as per the above classification, as shown in Table-1 below.

List of Emission Sources: Direct Emission

Source 1	Diesel consumption in DG Set
Source 2	Diesel consumption for Vehicles
Source 3	Petrol consumption for Vehicles
List of Emission Sources: Indirect Emission (Energy)	
Source 4	Electricity consumption at CLASSIC PAINTS
Source 5	Chemical consumption
Source 6	Paper and paper waste
Source 7	Plastic Containers
Source 8	Metal Containers
Source 9	Metal Scrap
Source 10	Plastic Scrap
Source 11	Employee Commutation

Table 1: List of emission sources

Exclusions:

- The outsourced activities are not considered for this reporting/assessment period since the data collection with respect to the same is not available. However, the same would be considered for future assessment. During the assessment period, the business travels were very negligible. Hence, the same is also not considered for GHG inventory calculation.

- The material consumption which is less than 100 kg/year, 100 litres/year is also excluded. As the emissions from the same is negligible and the emission reduction opportunities would not be significant and effective.

- Some of the purchase raw materials have been excluded due to the non-availability of the emission factor.

GHG emissions category as per GHG protocol
and
ISO 14064-1: 2018

Scope – 1
Direct Emission

- Diesel consumption in DG Set
- Diesel consumption for Vehicles
- Petrol consumption for Vehicles

Scope – 2
In Direct Emission - Energy

Electricity from the Grid

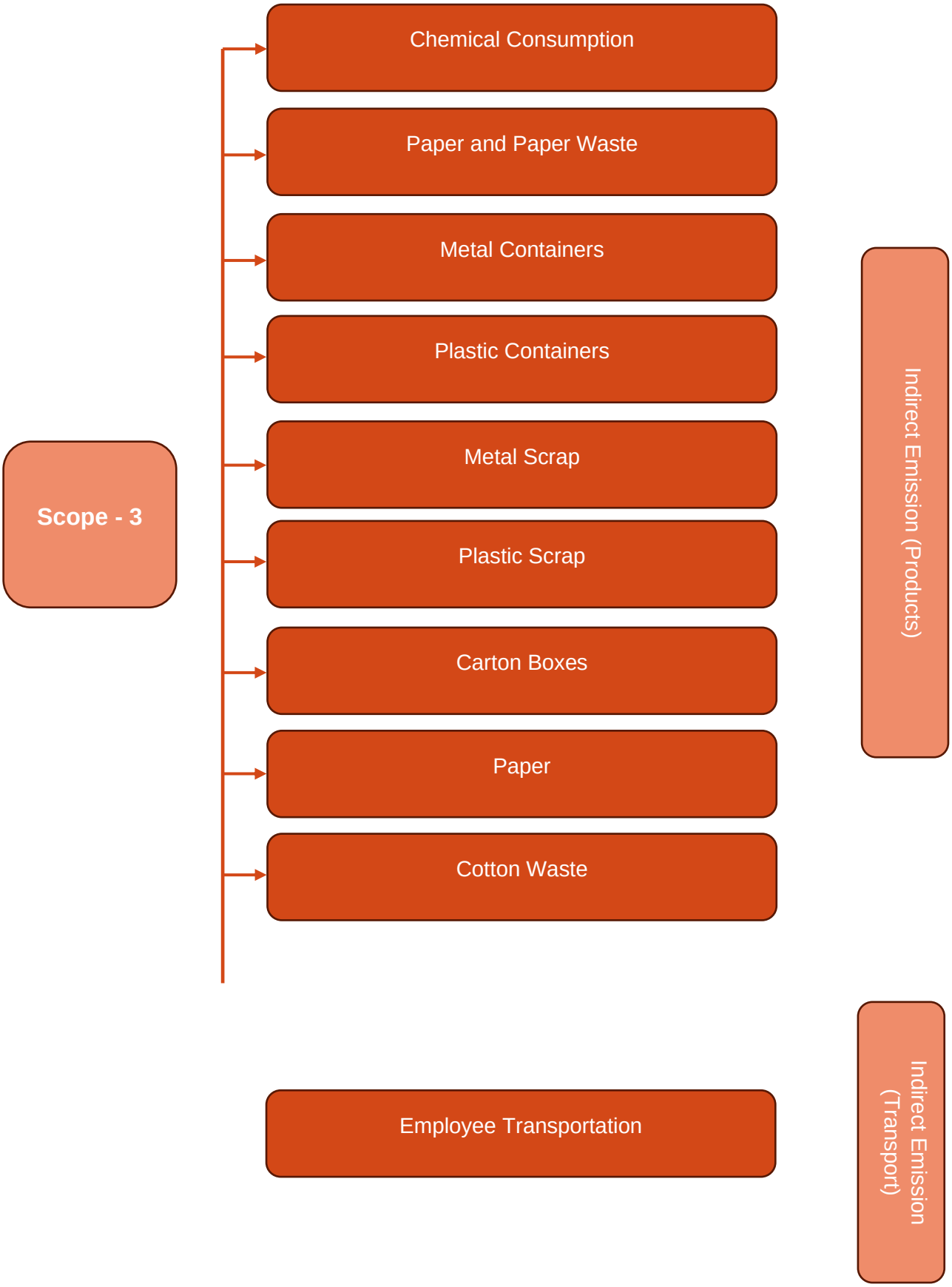


Figure 3: GHG emissions category as per GHG protocol and ISO 14064-1: 2018

Assessment & Reporting Methodology:

ISO 14064

The entire assessment and reporting is aligned with the key prescriptions of ISO14064 standard. This standard is divided into three Parts that provides framework and guidance for Designing & Developing GHG inventories, outlines requirements for quantification, monitoring & reporting of GHG, provides guidance for validation and verification. In the case of current assessment and reporting phase, first and second parts of the standard have been followed, whereas validation and verification part is excluded. However, in order to ascertain correctness and robustness of data, assumptions and estimation an internal review and verification has been conducted.

ISO 14064 has three Parts.

ISO 14064 – Part 1: enables organizations around the world to quantify greenhouse gas (GHG) emissions and removals,

ISO 14064 – Part 2: enables project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements,

ISO 14064 – Part 3: enables specification with guidance for the validation and verification of greenhouse gas assertions.

GHG Protocol

This standard defines scope of emission sources and also provides guidance for corporate accounting & reporting of GHG emissions. The consideration of scope of emissions across three different scopes has been considered based on this GHG Protocol.

During this study, the entire inventory process, assessment, and reporting is followed based on all these standards to bring maximum relevancy and standardization in reporting. However, the primary design and development of the Carbon Inventory has been referred in line with the ISO 14064 – Part 1.

The Part – 1 allows organization to quantify GHG emissions at organizational level.

Selection of Emission Factors and Global warming potential (GWP) Factors:

The assessment of footprints has been conducted based on standard factors and parameters as per national and international standards. Nationally published values such as CEA database, National GHG account factors, research papers, reports on emission factors etc. are used. Also, relevant values and conversion factors from IPCC, USEPA, GHG protocol tools and other international inventory are considered.

Global warming potential (GWP) of Greenhouse gas values used are as per the IPCC fifth assessment report (AR5);

Data availability and assumptions:

In line with the designed working framework, the assignment has been started with data collection process. As per the defined project boundary and emission scopes, proper data-checklist and questionnaires have been designed and coordinated with the central team of CLASSIC PAINTS. Proper training and awareness workshops were conducted to the CLASSIC PAINTS team for data collection. There were two rounds of data collection and assessments; first round was the initial data collection which was reviewed and data gaps were identified. The pending and additional data have been collected as per the identified data gaps. Then based on the final set of data collection, the inventory has been prepared and further assessment has been performed.

During the data collection and review, emphasis was given to collect the best accurate data, followed by their source and reference documents. Following are the key important parameters emphasized during the data

Quantification Methodology

Quantification Methodology

The methodology adopted for the quantification of GHG emissions is calculation-based, i.e. GHG activity data over the inventory period multiplied by appropriate GHG emission factors, in accordance with the ISO 14064-1/GHG Protocol.

Detailed calculation of emissions, including values of yearly activity data, emission factors, and parameters used for developing appropriate emission factors, along with corresponding literature sources wherever applicable, is used in this report.

The quantification methodology for each emission source is described below.

Scope-1 Emissions

a. *Emissions from liquid Fuel Combustion Activities*: This includes emissions from stationary and mobile combustion of fuels. The gas emitted from these activities is CO2. Emissions of CO2 emissions in tons of CO2 are calculated by multiplying emissions of the gas in tone with the corresponding Global Warming Potential (GWP) of the gas.

   The liquid fuels used in stationary combustion are diesel usage for Vehicles, Diesel Generators. In the case of liquid fuels, the mass of fuel consumed was calculated as:

   Mass (T) = Volume of fuel consumed (L) x Average fuel density (kg/L) / 1000.
   The following equations were used in quantifying emissions:

CO_2 emissions (T) = Mass of fuel consumed (T) x Net calorific value of fuel (TJ/T) x Emission factor of fuel (TCO_2/TJ)

Scope-2 Emissions:

Scope-2 GHG emissions for the Classic Paints facility comprise emissions due to electricity purchased from the grid. They are calculated by multiplying the quantity of grid electricity purchased by the facility with the grid emission factor. CO2 emissions have been accounted in this category using the following equation:

CO_2 emissions (T) = Quantity of Electricity consumed (MWh) x Grid emission factor (MT CO_2/MWh)

Scope-3 Emissions

Emissions calculated in this category include CO2 emissions due to travel and commute of employees as well as due to consumption of materials (other than scope 1). The following equations were used in quantifying emissions:

a. *Employee Commute/Travel*: Employee commutes by road and business travel by air have been considered in this category.

CO_2 emissions, Employee Road Travel (T) = Distance travelled (passenger-Km) x Emission factor passenger travel by car/two-wheeler/bus (Kg CO2/ passenger-Km) / 1000

CO_2 emissions, Train Travel (T) = Distance travelled (passenger-Km) x Emission factor train travel (Kg CO2/ passenger-Km) / 1000

b. *Material consumption other than chemicals*: Internal material consumption for day-to-day operations are considered under this category.

CO_2 emissions (T) = Total yearly consumption of materials (T) x emission factor [tCO_2/T]

c. *Material consumption (Chemicals)*: Internal material consumptions (chemicals) for the production of Paints for day-to-day productions are considered under this category.

CO_2 emissions is calculated based on the below details

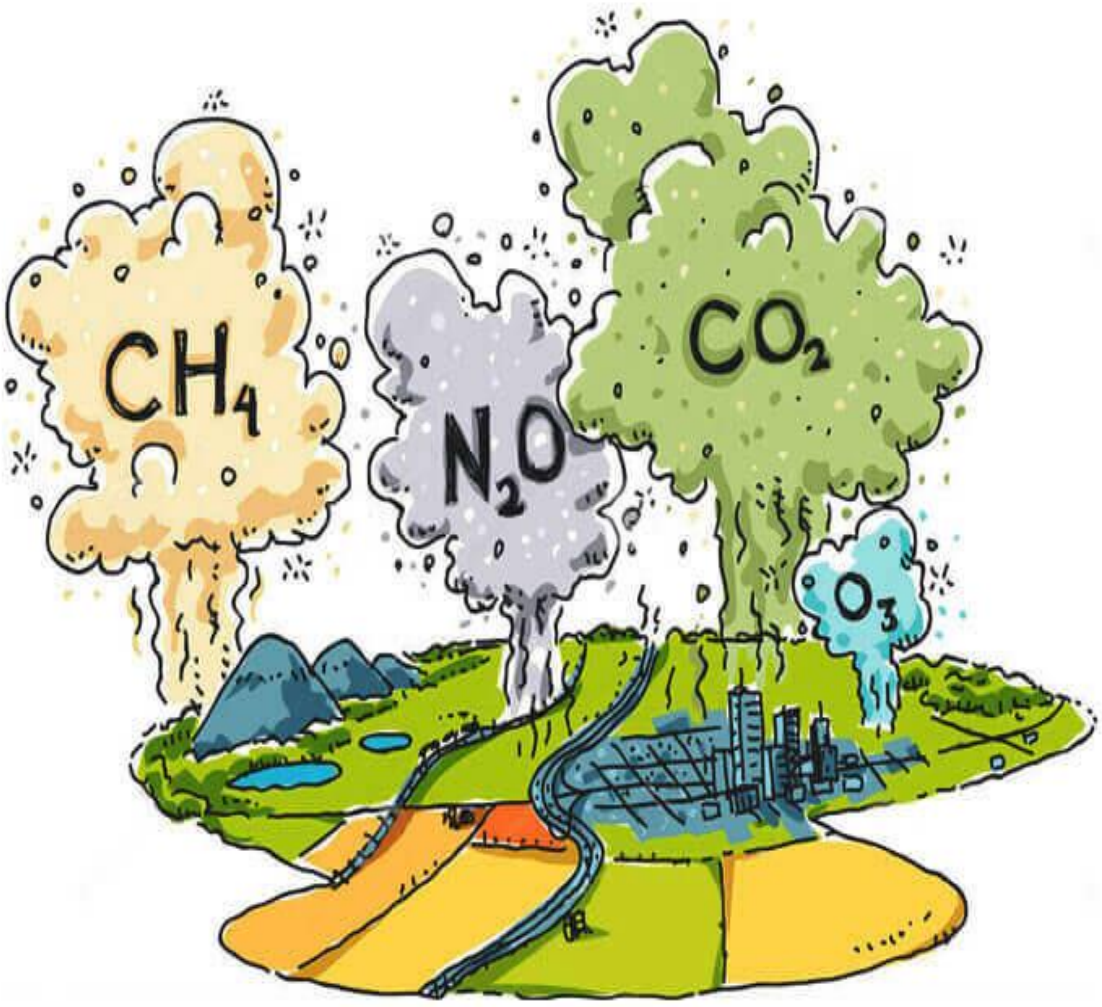
(X) = Total value of the consumption of materials in INR

(Y) = Conversion of INR (X) into USD as on 31.03.2024 value

(Z) = Highest inflation rate between the year 2016 and 2024 is the year 2022 and the inflation rate was 6.70% multiplied by "Y" (Ref https://www.forbesindia.com/article/explainers/inflation-rate-india/85983/1)

(A) = Emission Factor of Chemical and Chemical Products as per (https://www.climatiq.io/data/emission-factor/f53a9e9d-8245-4ef7-a618-dee4d2477904) is 1.116 kgCO2e per USD as on Year 2016

Calculations is as follows – (Z*A)/1000



GHG EMISSION ANALYSIS

TOTAL CARBON FOOTPRINT FOR THE YEAR 2023-24

1,810.16 tCO_2e

GHG Emission Analysis- CLASSIC PAINTS

Total scope-1, scope-2 and scope-3 GHG emissions for the year 2023-24 are summarized in Table-03. The unit used for reporting these figures is tons of CO2equilant (tCO2e). In terms of relative contribution of each category to the total emissions, scope-3 emissions comprise the largest share of around 95.67% of total emissions, followed by scope-2, which contributes around 3.55%. Scope-1 contribution is around 0.78%.

Table 03: Absolute Emissions (2023-24)

Scope	Emissions (tCO_2e)
Scope 1	14.71
Scope 2	67.66
Scope 3	1,821.95
Total Emissions	**1,904.32 tCO_2e**

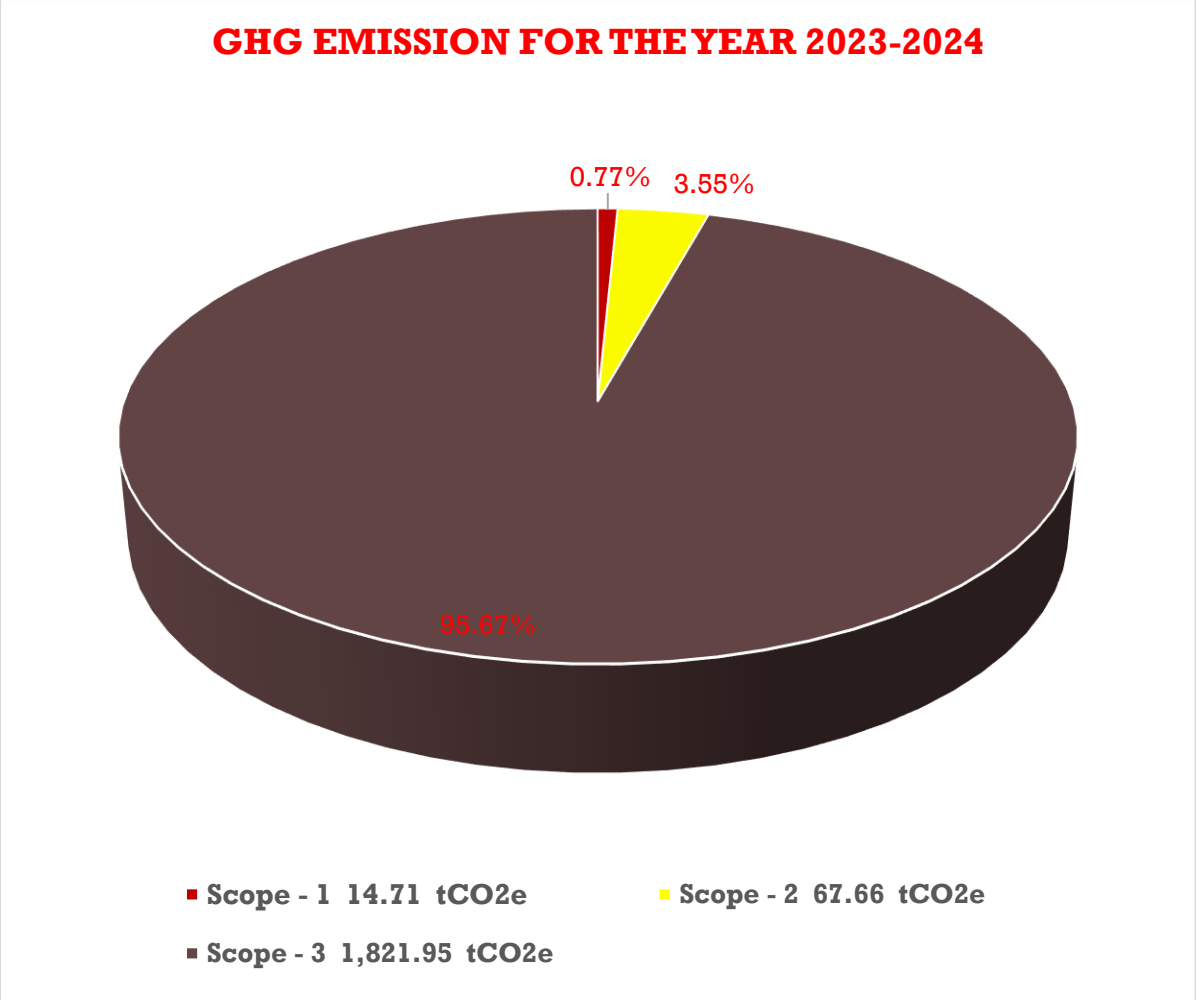


Figure 4: Total GHG emission of CLASSIC PAINTS in percentage

Breakup Emission: Scope-1

By Source: The GHG emission figures for each source category in scope-1 for the year 2023-24 are depicted in Table-04. Figures are reported in tCO_2e. The relative contribution (in percentage) of each of these sources to the scope-1 total for 2023-24 is also shown in figure 5.

CLASSIC PAINTS								
SCOPE - 1 - MONITORING YEAR - 2023-24								
Sl. No.	**Data Required**	**UOM**	**Value**	**Conversion**	**UOM**	**Emission Factor in kg**	**GHG Emission**	**UOM**
1	Internal Diesel Usage	Ltr	500.00	0.50	Tonne	2.64	1.32	tCO2e
2	Diesel for Vehicles	Ltr	4,901.15	4.90	Tonne	2.64	12.94	tCO2e
3	Petrol for Vehicles	Ltr	200.00	0.20	Tonne	2.27	0.45	tCO2e
TOTAL							**14.71**	**tCO2e**

Table 04: Scope 1emission breakup

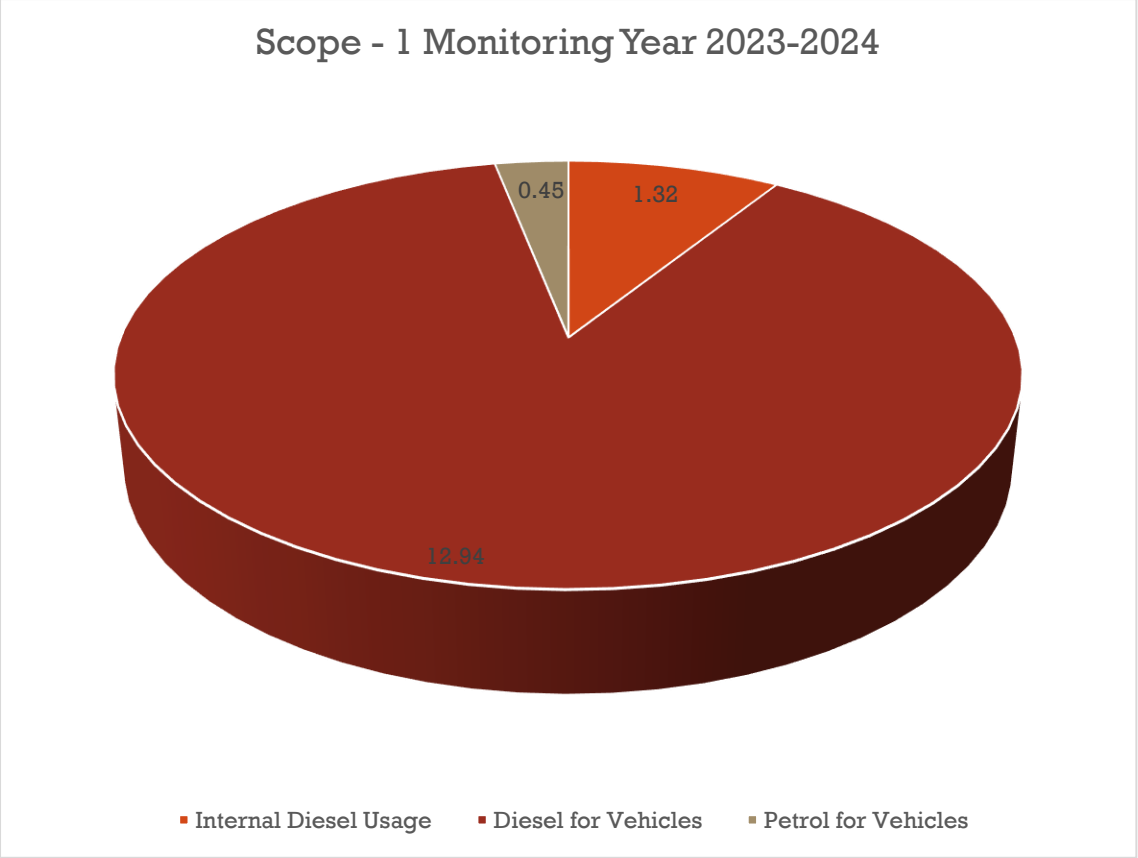


Figure 5: Scope 1 Emissions in tCO2e

In the scope 1 emission the major share is from the diesel usage for transportation which is around is 87%.

Emission: Scope-2

The GHG emissions for the Scope 2. These are the emissions due to the electricity consumption by the CLASSIC PAINTS. The total electricity consumption for the year 2023-2024 is around 69,540 units (69.54 Mwh), which corresponds to a total of GHG emission 67.66 tCO2e. Electricity consumption from the grid contributes to 3.65 % of the total GHG emissions.

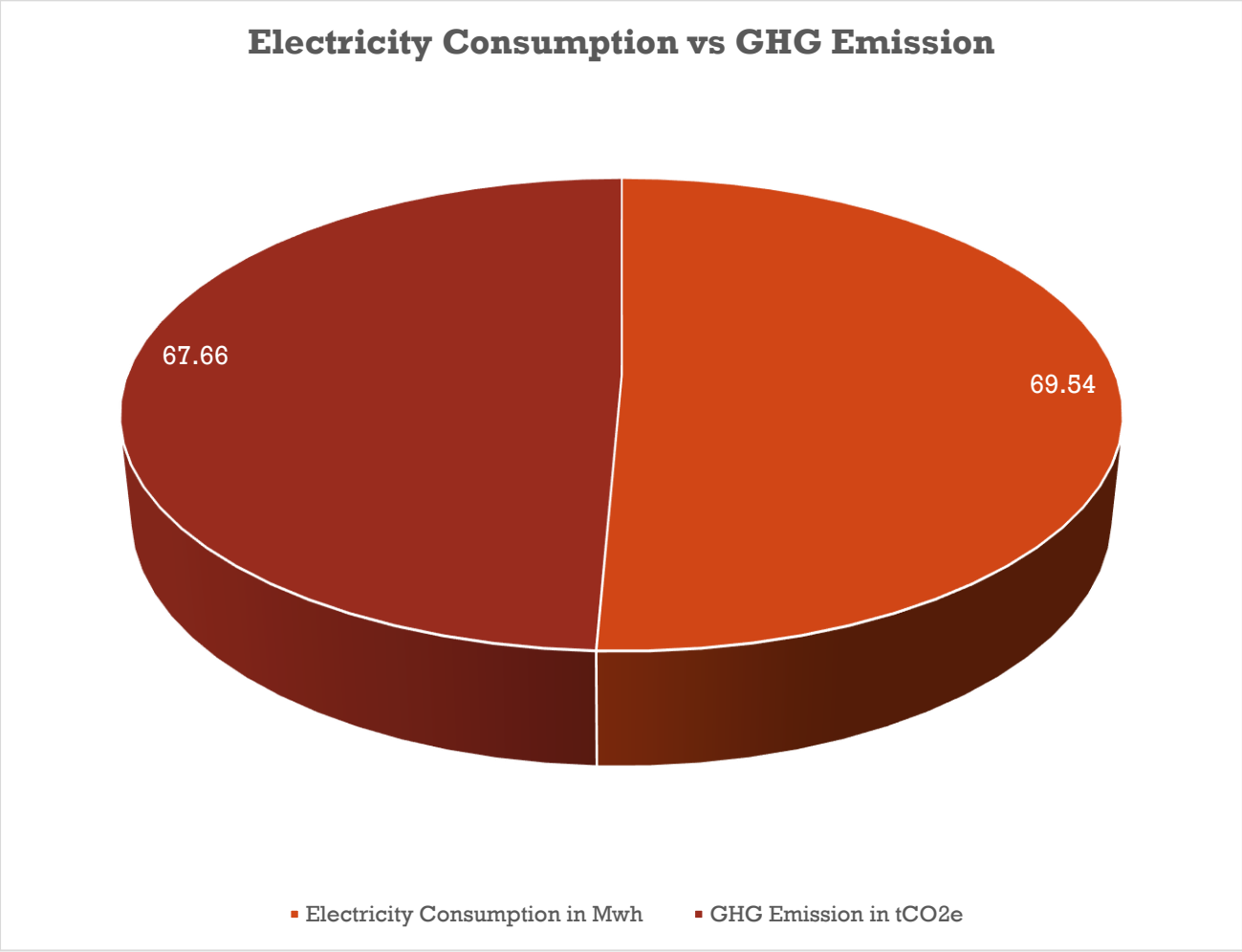


Figure 6: Electricity consumption Vs GHG emission

Breakup Emission: Scope-3

By Source: The GHG emission figures for each source category in scope-3 for the year 2023-2024 are depicted in Table-05. Figures are reported in tCO_2e. The relative contribution (in percentage) of each of these sources to the scope-3 total for 2023-2024 is also shown in Figure 7.

Scope 3 - GHG Emissions	**Emissions (tCO_2e)**	**Relative Contribution in Percentage**
Chemicals	1,531.62	84.60%
Paper used for printing	0.07	0.00%
Paper files used for filing	0.04	0.00%
Cartridges	0.02	0.00%
Labels	0.00	0.00%
Plastic Containers	111.60	6.13%
Metal Containers	97.65	5.36%
Paper Cartons	24.81	1.36%
CO2 fire extinguishers refilled	0.00	0.00%
Usage of Water	0.18	0.01%
Vehicle Tyre	2.52	0.14%

Metal Scrap	6.25	0.34%
Plastic Scrap	0.01	0.00%
Cotton Waste	20.30	1.11%
Employee Commutation	26.83	1.47%
TOTAL	1,821.90	100.00%

The Scope 3 emissions for CLASSIC PAINTS were computed to be approximately around 1,821.90 tCO_2e. The maximum emission is from Chemicals, which contributes to 84.60% of the total scope 3 emission. Then followed by Plastic Containers to 6.13%. Consumption of emission due to Metal Containers contributes to 5.36%

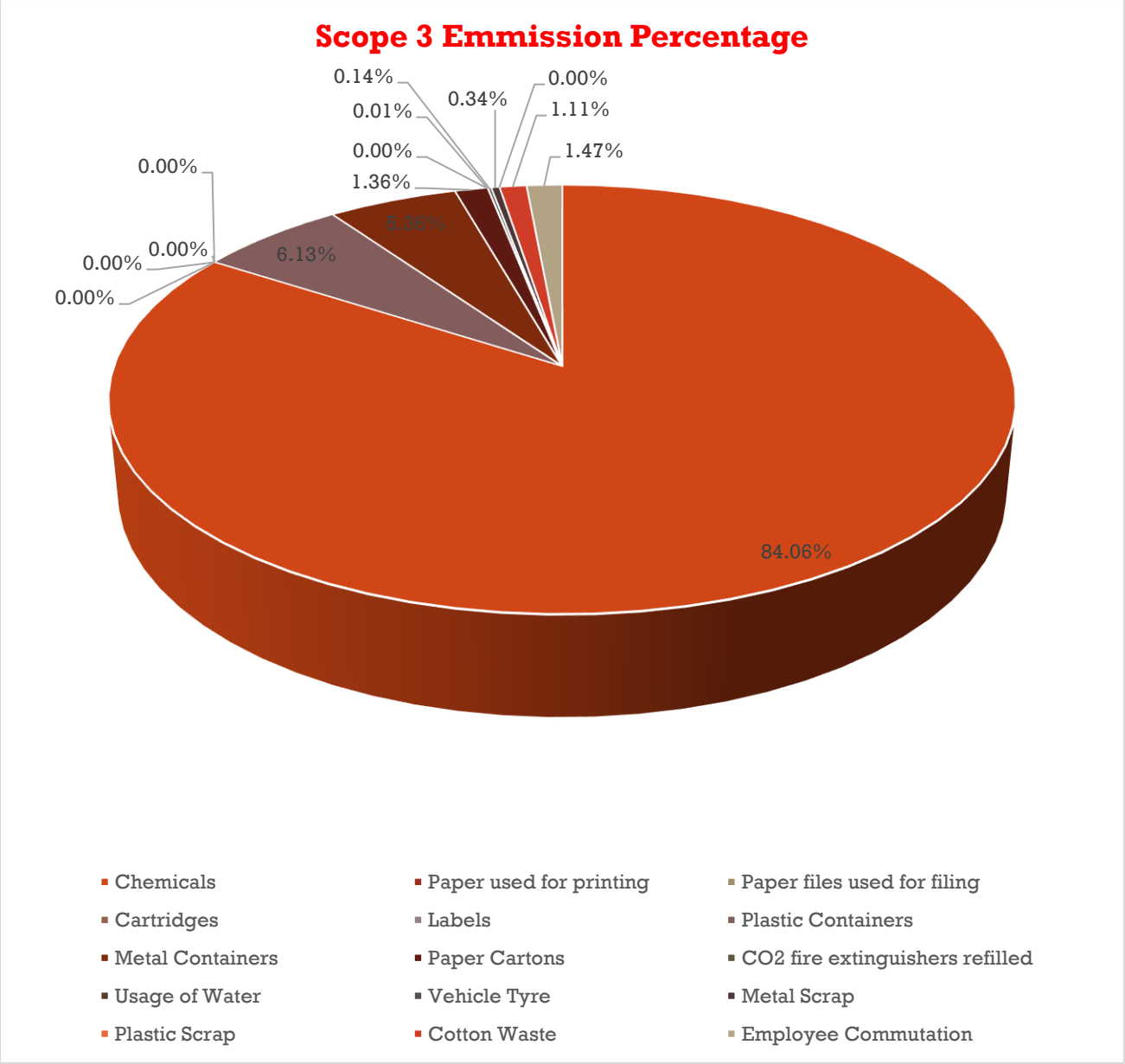


Figure 7: Scope 3 emission percentage

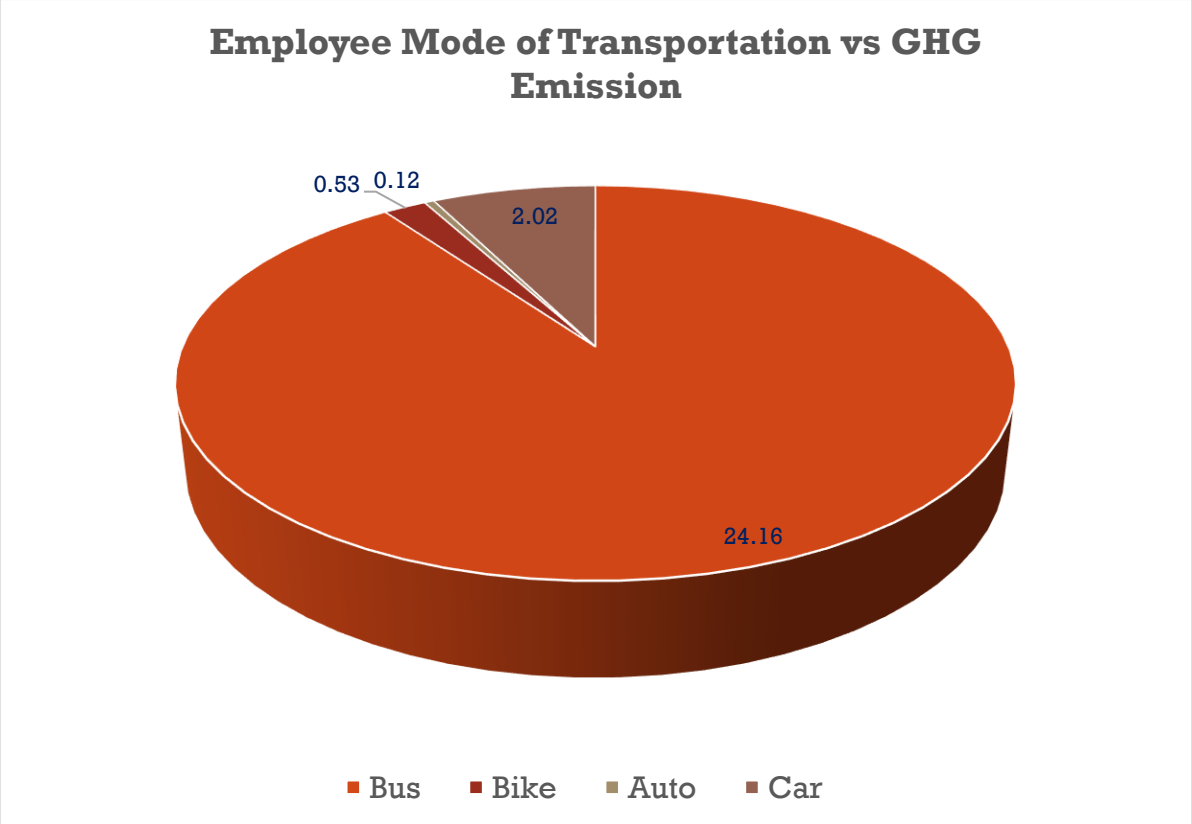


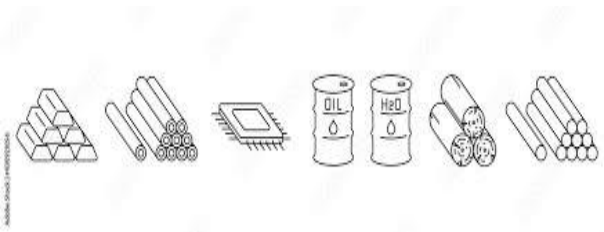
Figure 8: GHG emission from Employee commutation

GHG Emission Intensity:

Since CLASSIC PAINTS is a manufacturing organization, GHG emissions intensity can be defined as the quantity of GHG emissions per litre. **The total emission for the year 2023-24 is around 1,904.32 tCO2e.** The total volume of production is 9,37, 932 litres.

The emission intensity is calculated as **0.20tCO2e/Litre**.

Emission Hot Spot



Electricity Consumption	Raw Material Consumption
Scope – 2	Scope – 3

Emission hotspot – Sources which contributes more than 10% of each scope is considered as hotspot

Figure 9: GHG Emission Hot spot

CONCLUSIONS & RECOMMENDATIONS

Conclusions and recommendations

The 2023-2024 GHG footprint was estimated in accordance with the ISO 14064-1/GHG Protocol. Where activity data for the inventory was provided by CLASSIC PAINTS in the prescribed format, extrapolations and estimations were made and the choice of assumptions and emission factors followed a conservative approach.

The main emission category is Scope 3 where Raw Material consumption is around 95.67% and the second most relevant emission (3.55%) is the electricity used in CLASSIC PAINTS which is sourced from grid and the grid mix is still dominated by fossil fuels (mainly coal based power generation).

Improvement Requirement:

To improve the quality of accounting BIZIPRO recommends forming an internal team in a structured way for the collection of data and cross check with the evidence to ensure the reliability of the data. Further, the data's can be monitored through SAP or similar kind of software's.

Renewable Energy powered Electricity:

The scope 2 GHG emission for CLASSIC PAINTS is around 67.66 tco2e; which is around 3.55% of the total GHG emissions. The solar power generation with the objective of generating clean energy (electricity) by harnessing renewable energy (solar) resources and curbing emission of greenhouse gas, is an option for CLASSIC PAINTS. This will help to reduce the overall GHG footprint, thereby helps CLASSIC PAINTS to be self-reliant in terms of electricity usage. The dependence on grid connected electricity could reduce in stage wise. 100% of the total electricity consumption (with respect to 2023-24 consumption) could be sourced from solar energy. This will help to reduce 5% of the total scope 2 emissions.

The electricity generated from project activity (operational solar power plant) is exported to the Indian grid, thus replaces the feeding of equivalent amount of electricity generated from the operation of existing grid connected power plants (mostly fossil fuel based). The project activity thus reduces the anthropogenic

emissions of greenhouse gases (GHGs) associated with equivalent amount of electricity generation from the existing grid connected power plants (mostly fossil fuel based) and from addition of new generation sources into the grid.

The average annual emission reduction from the project is estimated to be around 615 tCO2e/annum. The approximate lifetime of a solar project is 25 year; therefore a cumulative emission reduction of 15,375 tCO2e for the entire technical lifetime of the project activity.

Purchase of Carbon offsets:

Carbon offsets is an option for eliminate GHG emission (particularly scope 3). A carbon offset is a reduction in emissions of carbon dioxide or other greenhouse gases made to compensate for emissions made by the organization. Every ton of emissions reduced results in the creation of one carbon offset. When corporations purchase carbon offsets, the money are used to finance projects that otherwise wouldn't have been built without that investment. Examples of carbon offset projects include forest preservation, soil carbon, renewable energy projects, energy efficiency projects, landfill methane capture etc. There are a variety of brokers that will sell carbon offsets, but since the market is largely unregulated, it's important to do your due diligence before purchasing offsets.

Make sure that the projects are certified by independent, third-party GHG Project Certification Programs, which will ensure that the project results in real, verified, enforceable, and permanent reductions. Project Certification Programs include:

- Clean Development mechanism
- The Gold Standard
- Verra (the Verified Carbon Standard)
- The Climate Action Reserve
- Global carbon council
- International Carbon Register

Conclusion

Although greenhouse gases do occur naturally, human activity contributes a great deal to greenhouse gas emissions. Our carbon footprint — or our impact on the environment — measures the greenhouse gases that we are responsible for creating. Common activities like using electricity and driving a car emit those gases.

About three-quarters of greenhouse gas emissions that are attributed to humans come from burning fossil fuels. We burn fossil fuels — non-renewable energy sources — when we operate vehicles, heat our homes, and even use electricity. The greenhouse gas emissions have been on the rise since industrialization, suggesting that humans are to blame for much of the greenhouse gas production. Global warming can cause catastrophic weather events, flooding, water shortages and disturbed ecosystems.

Although reducing energy use is today's latest rage, a measure of our carbon footprint will also include recycling. According to Carbon Footprint, a carbon management business, when you don't recycle, you waste the energy that is used making and transporting new items. Recycling and reusing allow less energy to go into the process of creating new items. This means fewer fossil fuels are being used. In addition, Carbon Footprint points out that when you recycle, your garbage takes up less room in landfills. Thus, by not recycling, you increase your greenhouse gas emissions, contributing to climate change.

Reducing your carbon footprint

There are several ways to combat climate change by reducing carbon footprint. First, recycle, use less electricity, and use public transportation. In addition to these lifestyle changes, buy credits that neutralize carbon usage. A carbon credit is a dollar amount that will go toward offsetting emissions. Individuals and companies buy the credits through environmental improvement agencies, who dedicate them to carbon-offsetting projects. Many companies sell carbon credits online, but it is important to ensure you buy credits from reputable organizations in order to ensure that you are reducing your carbon footprint.

"It is important for everyone to understand his or her impact on the future and work to make that impact more positive."

"IGNORING CLIMATE CHANGE WILL BE THE COSTLIEST OF ALL POSSIBLE CHOICES, FOR US AND FOR GENERATIONS TO COME.

LET'S ACT GREEN AND GO SUSTAINABLE

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About BIZIPRO

We are a Partnership firm incorporated in India, having registered office in Kochi. We are primarily a consulting firm which deals in all types of management systems. Having associated with different activities in the field of management systems, energy saving, our inclination is also to serve our clients with GHG emission assessment and help quantifying their footprints. In this regard, we have a dedicated service segment that provides consulting services to clients in accounting Carbon Footprints for their operations and to help them offsetting their footprints through Carbon Offset and certification process. This assignment is taken up for CLASSIC PAINTS, KOCHI who is an environmentally responsible business entity based out of Kochi, Classic Paints and tries to embark into this journey of Carbon Footprint Accounting and Offsetting. Therefore, we have independently conducted this entire preliminary study through step-by-step procedure prescribed for such GHG accounting practices. We have deployed our technical team in designing and developing the entire carbon inventory. We strongly believe that this is just the beginning for the organization, the practice of footprint accounting and offsetting shall be imbibed into the business as an integral part. We hereby submit this report as an official version of the study conducted by us. All assessments, results and reported facts are reliable, conservative, and verifiable in all aspects.

For BIZIPRO,

Manoj V N D

CEO and Co-founder

Kochi, 2nd September 2024

Reference

Sl. No.	Energy Source	Parameters	Emission Factor	Unit	Source
1	Electricity	CO2 emission factor of electricity	0.9100	tCO_2/MWh	CEA CO2 baseline data base, version 17, October 2021. Combine margin emission factor for Indian grid, (Excluding cross boarder power transfers) https://cea.nic.in/wp-content/uploads/tpe cc/2022/02/User Guide ver 17 2021.pdf
2	Diesel	CO2 emission factor of diesel	74.1	tCO_2 / TJ	2006 IPCC guidelines for national green house gas inventories volume - 2, energy, default emission factors for stationery combulsion in manufacturing industries and construction, page no. 2.18
		Density of Diesel	0.832	kg / litre	https://www.bharatpetroleum.com/our-businesses/industrial-and-commercial/industrial-fuel-products/fuels.aspx
		Net calorific value of Diesel	43.3	TJ/Gg	2006 IPCC report, Energy Volume - Overview
		Emission Factor	0.002669497	tCO_2/Lit	Calculated
3	Gasoline /Petrol	CO2 emission factor of Gasoline	69.3	tCO_2 / TJ	2006 IPCC guidelines for national green house gas inventories volume - 2, energy, default emission factors for stationery combulsion in manufacturing industries and construction, page no. 2.18
		Density of Gasoline	0.747	kg / litre	https://www.bharatpetroleum.com/our-businesses/industrial-and-commercial/industrial-fuel-products/fuels.aspx
3	Gasoline /Petrol	Net calorific value of Gasoline	44.8	TJ/Gg	2006 IPCC report, Energy Volume - Overview
		Emission Factor	0.002319166	tCO_2/Lit	Calculated

Sl. No.	Energy Source	Parameters	Emission Factor	Unit	Source
4	Emission factors for road vehicles	Two wheelers	0.0000266	tCO_2/km	http://wgbis.ces.iisc.ernet.in/energy/paper/IISc_Emissions_from_Indias_Transport_sector/index.htm#:~:text=The%20country%20level%20emissions%20(CO,transport%20(2003%2D04).
		Cars and jeeps	0.0002236	tCO_2/km	
		Taxi	0.0002083	tCO_2/km	
		Trucks and lorries	0.0563	tCO_2/km	
		Bus	0.0563	tCO_2/km	
5	Emission from Paper consumption	One 80gsm A4 sheet of bond paper (210 mm x 297 mm)	0.005	kg	https://www.ezeep.com/co2-neutral-printing/
		Emission factor of paper producing units	0.0029	tCO_2 / kg	
6	Ink Cartridge	Emission Factor	1.21	$kgCO_2$/cartridge	https://www.researchgate.net/publication/348234910_Comparative_Carbon_Footprint_Analysis_of_New_and_Remanufactured_Inkjet_Cartridges
8	Effluent water	Emission Factor	0.00475	kgCH4/kg	Average of Swedish average (0.00247 kg CH4/kg) and STOWA 2010 (Max 0.007 kgCH4/kg)
9	Chemicals	Emission Factor	1.116	kgCO2e per USD	https://www.climatiq.io/data/emission-factor/f53a9e9d-8245-4ef7-a618-dee4d2477904
10	Paper Cartons	Emission Factor	1.53	tCO_2 / kg	https://consumerecology.com//carbon-footprint-of-a-cardboard-box/
11	Metal Containers	Emission Factor	6.63	tCO_2 / kg	LIFE CYCLE ASSESSMENT OF TIN PRODUCTION by International Tin Association
12	Plastic Containers	Emission Factor	3.10	tCO_2 / kg	https://8billiontrees.com/carbon-offsets-credits/carbon-ecological-footprint-calculators/plastic-carbon-footprint/#:~:text=Every%20ton%20of%20plastic%20waste,that%20contribute%20to%20climate%20change.
13	Cotton Waste	Emission Factor	14.5	tCO_2 / kg	https://www.openco2.net/en/emission-factors/product/cotton-clothing-fabric-production/127

Classic Paints Internal Procedures

a) CP-P-MR-02 Procedure for Control of Records
b) CP-P-GHG-01-Procedure for GHG Information Management
c) CP-P-GHG-02-Procedure for GHG base year calculation