Greenhouse Gas Inventory Management Plan

HIKAL Ltd.

V1 – 28/07/2025

Prepared by: Schneider Electric

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FY 2024-25 Inventory Management Plan Overview	
Organization name	Hikal Limited
Organization address	Great Eastern Chambers, Sector 11, CBD Belapur, Navi Mumbai
Contact person	Mansukh Patel, Head - Sustainability & Corporate EHS (mansukh_patel@Hikal.com)
Industry	Pharmaceutical, Crop Protection and Animal Health
Organizational activities	Manufacturing, Research & Technology
Reporting Period	Financial Year (01 April 2024 – 31 March 2025)
Organizational Boundary	Operational Control Scope 1, 2 and Scope 3 sources from all the operating locations. It includes manufacturing facilities, research & technology centre, and offices. List of facilities covered are listed below: 1. Jigani unit 1 2. Jigani unit 2 3. Taloja unit 4. Panoli Pharma unit 5. Pharma Crop unit 6. Mahad unit 7. Pune R&T Centre 8. Head office (Navi Mumbai) 9. Sales office (Bangalore) 10. Chairman's office (Nariman Point)
Exclusions	No
Verification	No 3rd party verification

Out-of-scope emissions	
CO_2-related Biogenic emissions	61,027.02 tCO_2e [1]

In Scope Emissions	Location-Based	Market-Based
Scope 1	12,664.34 tCO_2e	12,664.34 tCO_2e
Scope 2	78,391.46 tCO_2e	45,655.89 tCO_2e
Scope 3	1,91,158.53 tCO_2e	1,91,158.53 tCO_2e
Total (in-scope) emissions	**2,82,214.33 tCO_2e**	**2,49,478.76 tCO_2e**

[1] tCO_2e = metric tons of CO_2 equivalent

Scope 3 emissions category	Emissions (tCO2e)	% contribution
Category 1 - Purchased Goods & Services	1,09,577.01	57.32%
Category 2 - Capital Goods	4,220.89	2.21%
Category 3 - Fuel and Energy Related Activities	18,023.34	9.43%
Category 4 - Upstream Transportation & Distribution	2,148.32	1.12%
Category 5 - Waste Generated in Operations	4,191.59	2.19%
Category 6 - Business Travel	224.03	0.12%
Category 7 - Employee Commuting	3,396.82	1.78%
Category 8 - Upstream Leased Assets	Not applicable	-
Category 9 - Downstream Transportation & Distribution	93.60	0.05%
Category 10 - Processing of Sold Products	48,942.11	25.60%
Category 11 - Use of sold products	Not applicable	-
Category 12 - End-of-Life Treatment of Sold Products	289.71	0.15%
Category 13 - Downstream leased assets	Not applicable	-
Category 14 - Franchises	Not applicable	-
Category 15 - Investments	50.98	0.03%
Total Scope 3 emissions	**1,91,158.53**	

Emissions category	Scope 3 Upstream	Scope 3 Downstream
Scope 3	141,782.12 tCO_2e	49,376.41 tCO_2e

Note 1: In the FY 2024-25, Hikal Limited procured 5,22,45,691 kWh of renewable electricity via an off-site power purchase agreement. Therefore, its market-based scope 2 emissions are lower than the location-based emissions.

Note 2: A **location-based method** reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data). A **market-based method** reflects emissions from the electricity that companies have purposefully chosen (or, in the case of a lack of choice, their emissions). It derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims.

The market-based method assigns an emission factor of 0, considering that the organization has chosen to purchase off-site renewable electricity, backed by a REC. The location-based method does not factor in instruments or contracts and assigns the local grid average emission factor to all offsite usage, regardless of where it comes from.

Content

1 Introduction

The purpose of the Greenhouse Gas (GHG) Inventory Management Plan (IMP) is to provide explanation and guidance for the calculation of Hikal Limited's (hereafter referred to as "Hikal") GHG emissions in accordance with the Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard. It contains organization-wide information, including reporting boundaries, emission sources, data management, quantification methods, emission factors, and base year. It is designed to account for and report on calculation methodologies. The content of this document will be used for both internal reference and, in part, to provide transparency for future external reporting and third-party validation of interest to Hikal.

The document is based on five (5) principles to ensure that the inventory has been prepared in accordance with industry accepted best practices. The accounting and reporting principles set forth below are in accordance with those outlined in the World Resource Institute (WRI) / World Business Council on Sustainable Development (WBCSD) Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard:

- **Relevance:** Ensure the inventory appropriately reflects impacts and emissions and serves the decision-making needs of users—both internal and external to the organization.
- **Completeness:** Account for and report all key environmental sources and activities within the defined inventory boundary.
- **Consistency:** Use consistent methodologies to allow for meaningful comparisons of emissions and usage 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 impacts and emissions is neither systematically over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practical. Achieve sufficient accuracy to enable users of your data to make decisions with reasonable assurance of the integrity of the reported information.

1.1 Environmental Reporting Protocols

Hikal's GHG Inventory follows the guidelines set forth in the Greenhouse Gas Protocol (GHG Protocol), which was developed by the World Business Council for Sustainable Development (WBCSD) in collaboration with the World Resources Institute (WRI).

1.2 Document Declaration

This document and its associated attachments were prepared based on data provided to Schneider Electric (hereafter referred to as "SE") by Hikal. It is a complete and accurate representation of Hikal's direct and indirect GHG emissions as defined by the information presented in this document. It is recommended that the IMP be reviewed and updated annually to reflect the most recent, relevant, complete, and accurate emissions data.

1.3 Roles and responsibilities

All information has been collected by Hikal from its six manufacturing facilities, one research & technology centre, and three offices and shared with SE, which is responsible for high-level data gap checks and calculation of the carbon footprint. Currently, SE has no insight into Hikal's internal data collection processes and whether / what roles and responsibilities are defined. However, it is recommended that these be defined for future reporting years.

2 Version Information

Item	Description			
A	**Reporting Period**	01 April 2024 – 31 March 2025		
B	**Version of IMP**	V1	Prepared by: Aditya Yadav	Date: 25/07/2025
			Reviewed by: Pragya Bamrara	Date: 28/07/2025
			Approved by: Alok Sharma	Date: 28/07/2025

3 Boundary Conditions

3.1 Organizational Boundaries

When establishing organizational boundaries, an entity selects an approach for consolidating its GHG emissions to define which activities are considered part of the organization. In accordance with the GHG Protocol, an organization can choose between three consolidation approaches when defining its organizational boundary, as detailed in Table 1.

Table 1: Consolidation approaches for organizational boundaries

Consolidation approach		Description
Equity Share		An organization accounts for activity data and GHG emission sources from operations that are wholly owned and partially owned according to the organization's share of equity in the operation.
Control	**Financial**	The ability to dictate or direct financial policies of a facility with the interest of gaining economic benefits from its activities (i.e., wholly own facility).
	Operational	The full authority to introduce and implement corporate or site-specific operating policies at the particular asset or operation.

For this GHG assessment, Hikal has applied the principles of the **Operational Control Approach**. Under this approach, Hikal accounts for all emissions where it has direct control over its operations and can influence decisions that affect GHG emissions. This includes all owned or leased facilities and vehicles operated by Hikal. This approach is consistent with the WRI/WBCSD GHG Protocol and general sustainability reporting protocols and guidelines.

3.2 Organization-wide sites in the inventory

Hikal provided SE with a list of 10 sites, all of which were tracked during the reporting period and for which the corresponding GHG emissions were calculated. A list of sites within the organizational boundaries can be found below:

<u>Manufacturing facilities and Research & Technology Centre:</u>

I. Jigani unit 1

II. Jigani unit 2

III. Taloja unit

IV. Panoli Pharma unit

V. Panoli Crop unit

VI. Mahad unit

VII. Pune R&T Centre

Offices:

VIII. Head office (Navi Mumbai)

IX. Sales office (Bangalore)

X. Chairman's office (Nariman Point)

3.3 Operational Boundaries

Establishing operational boundaries for Hikal's activities requires quantification of associated impacts and emissions, categorized by Scope 1 (direct emissions), Scope 2 (energy indirect emissions) and Scope 3 (other indirect emissions). The following sections provide details on the applicable operational boundaries for Hikal's inventory.

Standard greenhouse gas reporting covers emissions associated with seven greenhouse gases:

- Carbon Dioxide (CO_2)
- Methane (CH_4)
- Nitrous Oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur Hexafluoride (SF_6)
- Nitrogen Trifluoride (NF_3)

Hikal has outsourced the employee commuting activity to third-party vendors. All the vehicles used for employee commuting were owned and operated by the third-party vendors. Therefore, in accordance with the GHG Protocol, emissions due to employee commuting were included under scope 3 emissions.

3.3.1 Emission Categories and Sources

Following the definition of the inventory boundary of Hikal, relevant emission sources are identified and classified into Scopes 1, 2 and 3 according to the defined organizational boundaries. Where applicable, biogenic emissions are reported separately outside of Scopes 1, 2 and 3 in accordance with GHG Protocol guidance (see Attachment A - Scope 1 and 2 emissions calculations, and Attachment B – Scope 3 emissions calculations).

The definition of the emission scopes considered for the inventory is provided in Table 2 below.

Table 2: General description of emission scopes

Emission scopes	Description
Scope 1 - Direct	Emissions from sources that are owned or controlled by an entity directly. Activity data and emissions include combustion of fuels in stationary (non-transport) combustion sources on-site (e.g., heating boilers), mobile combustion sources (company-owned/leased vehicles), or process-based emissions (e.g., cement or ammonia production). Also included, are refrigerants mainly for air conditioning purposes.
Scope 2 - Indirect (energy)	Emissions associated with the consumption of purchased or acquired electricity and district heating/cooling, or steam. Activity data and emissions include the purchase of electric power, district heating/cooling, and steam from the local utility.
Scope 3 - Indirect (other)	All indirect emissions (not included in scope 2) that occur in the value chain of a company, including both upstream and downstream activities.
Out of Scope (biogenic)	The fraction of CO_2-only emissions related to the consumption of bioenergy (CH_4, N_2O are included in Scope 1 & 2). Biogenic CO_2 emissions are one of several activities labelled 'outside of scopes' by the GHG Protocol Corporate Accounting and Reporting Standard, because the impact has been determined to be a 'net zero' (i.e., the fuel source itself absorbs an equivalent amount of CO_2 during its growth phase as the amount of CO_2 released through combustion).

Below is a listing of Hikal's activity types that are part of the operational boundaries for Scope 1, 2 & 3. For more details on the emission sources and categories included in the FY 2024-25 inventory, please refer to Attachment A (Scope 1 & 2 emissions calculations) and Attachment B (Scope 3 emissions calculations).

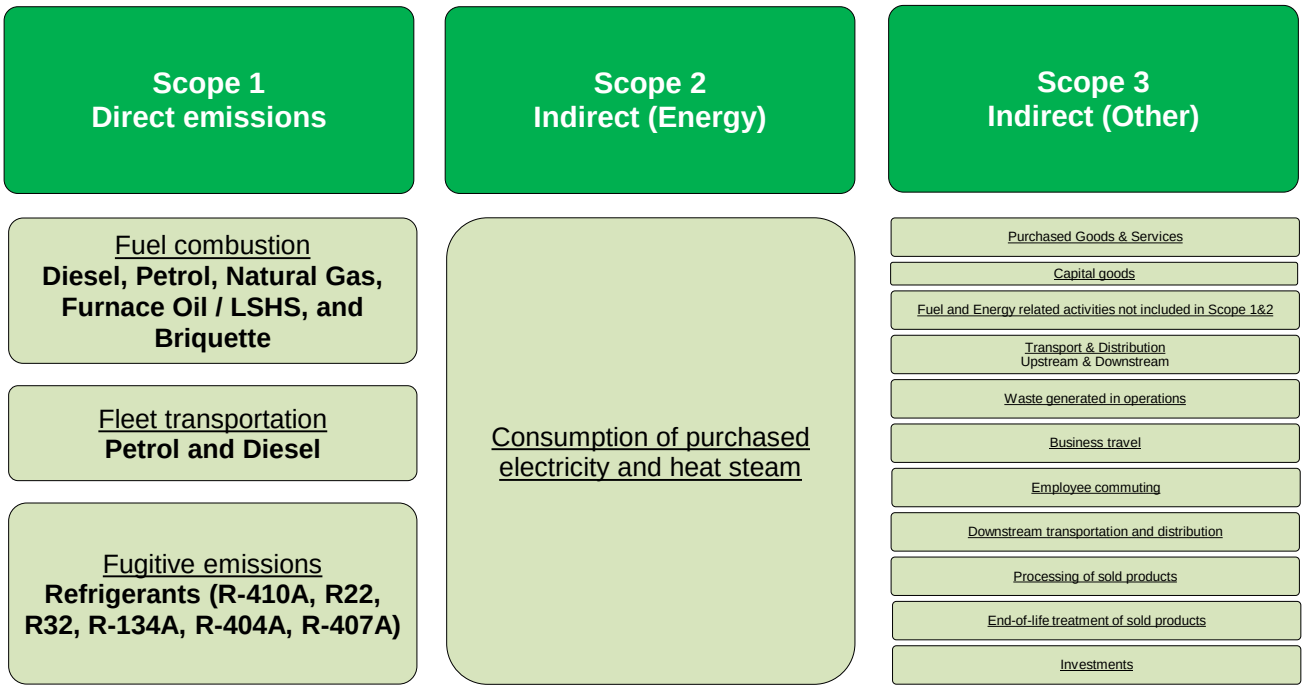


Figure 1: Emission sources and categories.

Scope 3 (other indirect emissions) consists of 15 different reporting categories that were assessed as part of Hikal's FY 2024-25 GHG assessment (see Sections 4.1.2 and Section 4.6.2 for more details).

For reference, the GHG Protocol definition for each of the 15 Scope 3 categories is provided in Table 3 below.

Table 3: Description of Scope 3 categories

#	Scope 3 Category	Source	Reported in FY 2024-25 GHG IMP
C1	Purchased Goods & Services	All upstream (cradle-to-gate) emissions of purchased goods and services	Yes
C2	Capital Goods	All upstream (cradle-to-gate) emissions of capital goods	Yes
C3	Fuel & Energy-Related Activities	All upstream (cradle-to-gate) emissions of purchased fuels and energy (from raw material extraction up to the point of, but excluding, combustion, including T&D losses)	Yes
C4	Upstream transportation and distribution	The scope 1 & 2 emissions of transportation and distribution providers that occur during use of vehicles and facilities (e.g., from energy use)	Yes
C5	Waste generated in operations	The scope 1 & 2 emissions of waste management suppliers that occur during disposal or treatment	Yes
C6	Business travel	The scope 1 & 2 emissions of transportation carriers that occur during use of vehicles (e.g., from energy use) for transportation of employees for business purposes	Yes
C7	Employee commuting	The scope 1 & 2 emissions of transportation of employees between their homes and their worksites	Yes
C8	Upstream leased assets	The scope 1 & 2 emissions from the operation of leased assets that are not already included in scope 1 & 2	Not applicable
C9	Downstream transportation and distribution	The emissions from transportation and distribution of sold products in vehicles and facilities not owned or controlled by Hikal	Yes
C10	Processing of sold products	All emissions from processing of sold intermediate products by third parties (e.g., manufacturers) after sale by Hikal	Yes
C11	Use of sold products	The direct use-phase emissions of sold products over their expected lifetime (i.e., the scope 1 and scope 2 emissions of end users that occur from the use of products that directly consume energy (fuels or electricity) during use; - fuels and feedstocks - GHGs	Not applicable
C12	End-of-life treatment of sold products	The scope 1 & 2 emissions of waste management companies that occur during disposal or treatment of sold products	Yes
C13	Downstream leased assets	The scope 1 & 2 emissions from the operation of leased assets that are owned or controlled by Hikal and leased to other entities that are not already included in scope 1 & 2	Not applicable
C14	Franchises	The scope 1 & 2 emissions from the operation of franchises not included in scope 1 & 2	Not applicable
C15	Investments	The scope 1 & 2 emissions from investments not included in scope 1 & 2	Yes

4 Data Management

The most accurate, reliable, and readily available data were used to quantify impacts from the above sources on Hikal's operations. Sources of activity data include, but are not limited to, monthly purchase records, meters, internal measurements, and tracking controls. The following section describes the primary data collection and validation process, the data estimation methods used, as well as a *de minimis* assessment where applicable.

4.1 Data Collection

This section describes the process of collecting and processing activity or monitoring data from its original source to the final data disclosed in Hikal's GHG inventory. For the FY 2024-25 GHG inventory, both the Resource Advisor data collection system and Excel spreadsheets were used to collect and consolidate operational and financial data. SE issued the templates as a request for information (Scope 3 RFI). In addition to the Excel spreadsheet, the revised data was shared via emails, and a few units have updated their data directly in the excel calculation sheet that was shared with respective units.

4.1.1 Scope 1 & 2

The activity data for Scope 1 & 2 were collected using the Resource Advisor data collection system, where data for all the applicable emissions sources and operational sites were uploaded by the respective data owners. Additionally, inventory entries were provided to SE Client Management team via RFIs to ensure accuracy and efficiency. Hikal and SE teams then collated all emissions sources and entered the data into the Resource Advisor. The information was provided by Hikal's Point of Contact for each site, and both SE and Hikal teams reviewed the data input and calculations.

4.1.2 Scope 3

The data for Scope 3 was provided by Hikal's Point of Contact primarily on an expenditure basis using the Scope 3 RFI. The Scope 3 RFI data collection is designed to be consistent with SE's Proprietary Scope 3 assessment tool, which is aligned with the GHG Protocol. Also, activity data was collected for certain categories such as waste generated in operations, end-of-life treatment of sold products, investments, etc.

Note on data collection for Category 4 'Upstream Transportation & Distribution' and Category 9 'Downstream Transportation & Distribution':

4.1.2.1 Upstream Transportation & Distribution

Category	Upstream Transportation & Distribution
Data collection approach	This category includes all inward freight charges (road transport) and outbound freight charges across all modes of transportation that are paid directly by Hikal during the reporting period. Since the procurement of raw materials is based on the CIF (Cost, Insurance, and Freight) model, Hikal does not have visibility into the freight costs, particularly for air and sea transport, embedded within the procurement price. To avoid double counting, these freight-related emissions are accounted for under Categories 1 and 2, which are calculated using the spend-based approach.
Reason for Estimation	The above-described method is considered adequate to reflect the magnitude of emissions from this category, based on the available data and procurement practices.

4.1.2.2 Downstream Transportation & Distribution

Category	Downstream Transportation & Distribution
Data collection approach	All outbound freight costs, except those paid by Syngenta (a crop division customer), are borne by Hikal. These shipments follow a CIF (Cost, Insurance, and Freight) procurement model, and hence, the associated emissions are accounted for under Category C4 (Upstream Transportation and Distribution). As a result, only the freight emissions related to Syngenta are considered under Category C9.
Reason for Estimation	Hikal primarily manages outbound logistics under the CIF model, where the company is responsible for transportation up to the customer's port of destination. Since these emissions are already captured under upstream logistics (Category C4), they are excluded from Category C9. However, in the case of Syngenta, where the customer bears the freight cost, the emissions fall under downstream transportation and are reported accordingly.

4.2 Data Quality Check and Validation

The responsibility for the validity and accuracy of the data provided lies with Hikal. SE has not been contracted in the capacity to verify any of the data against evidence of the primary data, including Renewable Energy claims. Therefore, SE cannot be held liable for incorrect results due to inaccurate primary data provided by Hikal. After Hikal consolidated and shared the data, SE conducted high-level quality checks and requested explanations for apparent data gaps where necessary.

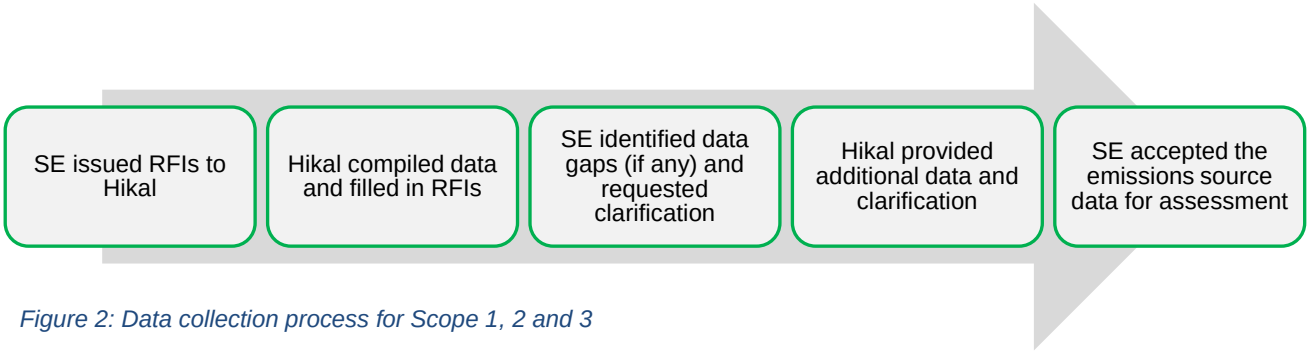


Figure 2: Data collection process for Scope 1, 2 and 3

Year-on-year comparisons were undertaken for the financial years 2024 and 2025 to identify any significant variation in the data inputs and emissions. This comparison, based on the IMP and emission data points for FY 2024, revealed a considerable increase in Category 1 (Purchased Goods and Services) emissions. The rise in emissions is primarily due to a more granular accounting approach adopted for calculating emissions from the raw materials procured during the reporting period.

4.3 Data Security

The information compiled to develop the FY 2024-25 GHG inventory is maintained and controlled by SE. Security and confidentiality of the data are assured in accordance with the Service Agreement. Changes to the RFIs are not acknowledged after SE accepts the data for analysis unless the changes are explicitly communicated by Hikal and approved by SE.

4.4 Management engagement and review

A kick-off meeting was conducted with Hikal's key contact(s) by SE, detailing the required data and demonstrating the data collection methodology. Subsequent communication between SE and Hikal in the form of meetings, phone calls, and emails served to provide further information and clarification regarding the completion of the RFI for Scope 3.

All data and assumptions provided to SE by Hikal are considered truthful and accurate. The final version of the IMP has been reviewed by Hikal's key contact(s), and any issues raised have been amended before final submission.

4.5 Frequency

Site data is collected month-wise at the corporate level from respective sites, and further, since the last reporting year, Hikal has adopted Schneider Electric Resource Advisor to continue with the monthly data collation and computation. However, external reporting is done on an annual basis to relevant stakeholders.

4.6 Estimated data

4.6.1 Scope 1 and 2 emissions

The concentration of Total Nitrogen in the untreated wastewater was estimated for the Pune R&T Centre. Apart from this, no estimations were required as Hikal was able to acquire primary data for all active sites and emissions sources throughout the entire reporting period for calculating scope 1 and 2 emissions. SE has allocated the electricity consumption data between Panoli Pharma unit and Panoli Crop unit based on their consumption. There is a common electricity supply for Panoli unit, which further bifurcates into Pharma unit (80%) and Crop unit (20%).

4.6.2 Scope 3 emissions

In terms of scope 3 calculations, when precise data was not available, SE conducted estimations to obtain reliable input data under the supervision, or in collaboration with Hikal.

The following sections detail the estimation methodologies that were applied to support Hikal's GHG Inventory.

- C7 - Employee commuting
- C12 - End-of-Life Treatment of Sold Products

The specific estimation methods used for Hikal's FY 2024-25 inventory are outlined in the following sections.

4.6.2.1 Employee commuting

Category	Employee commuting
Estimation Method / Assumption	The calculation steps were as follows: 1. An average employee emission is 2.89 t CO_2e (Using US Department of Transportation data (USDOT 2014), in conjunction with Ecoinvent 2.2 datasets for various transportation modes in conjunction with GWP impact assessment (SCLCI 2010, IPCC 2007), as well as some assumptions about commuting and work schedules).

	2. Hikal reported 3,595 Full-time-employees for the reporting year. 3. The average employee emission was multiplied by the number of employees. 4. To include the whole lifecycle of the fuel used for this category, SE used 23.3% adjustment factor to reflect the Well to Wheel emissions.
Reason for Estimation	The above-described method deemed adequate to reflect the magnitude of emissions from this category.

4.6.2.2 End-of-Life Treatment of Sold Products

Category	**EOL Waste**
Estimation Method / Assumption	For end-of-life treatment of sold products, Hikal has assumed 116 MT of industrial hazardous waste, which represents 1% of the total output produced by Hikal during this financial year.
Reason for Estimation	Hikal operates through a B2B sales model, supplying chemical intermediates to leading companies that further process these into final products for end consumers. Due to the nature of the B2B model and limited visibility into the downstream product lifecycle, an estimate of 1% of the total output being treated as industrial hazardous waste at end-of-life was considered appropriate.

4.7 *De minimis* assessment

A *de minimis* assessment has not been conducted, as all activity data have been included in the inventory.

5 GHG Emissions Quantification

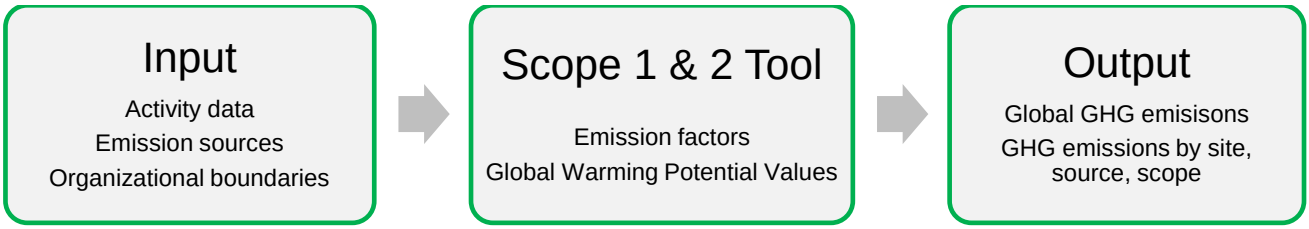
5.1 Quantification Methods

5.1.1 Scope 1 & 2

The quantification methods used for the inventory are in accordance with best practice as followed by WRI/WBSCSD GHG Reporting Protocol and are based on the latest available factors.

Usage or “activity” data from emission sources is used to calculate Scope 1 & 2 emissions. The activity data is multiplied by the correlating emission factor as defined in the GHG Reporting Protocol or by technical assessments for that activity. A general formula for calculating emissions is:

Activity Data x Emission Factor = (CO_2, CH_4, N_2O, HFC, PFC, SF_6, NF_3) Emissions



5.1.2 Scope 3

For screening purposes, we estimated Scope 3 emissions using verified emission factors from diverse sources. Category 1- Purchased goods and services, Category 2 - Capital goods, Category 4 - Upstream transportation & distribution, Category 6- Business travel, Category 9- Downstream transportation & distribution, and Category 10 - Processing of sold products related emission factors were taken from the EPA_Supply Chain Greenhouse Gas Emission Factors v1.3 by NAICS-6_AR6_Inflation Applied.

Category 3- Fuel and energy-related activities emission factors were taken from the 2024 UK Department for Environment, Food and Rural Affairs (DEFRA) emissions database. Category 5- Waste generated in operations and Category 12 End-of-life treatment of sold products, emission factors were taken from ADEME (French Environment and Energy Management Agency) and US EPA (Environmental Protection Agency) Waste Reduction Model (WARM)- Version 15.

Category 7- Employee commuting a global average of 2.89 t CO2e was considered to be calculated per employee was based on US Department of Transportation data (USDOT 2014).

These factors were linked to Hikal's activities and expenditures using a combination of economic input-output and process life cycle inventory data. The calculation methods and emission factors applied follow the GHG Protocol guidelines for screening Scope 3 emissions and identifying significant Scope 3 categories.

The emission factor data sets used, calculations and results of the screening assessment can be found in Attachment A and B.

5.2 Global Warming Potential and Emission Factors

5.2.1 Global Warming Potential

In order to compare the impacts associated with different GHGs, all emissions must be converted into CO_2 equivalent (CO_2e), which is the reference gas, using a value unique to each gas. These values are regularly updated by the Intergovernmental Panel on Climate Change (IPCC). In this document, the values published in IPPC – AR5 and AR6, corresponding to the FY 2024-25 reporting period, have been used for all calculations of Scope 1 & 2 (Table 4).

Table 4: Global Warming Potential (GWP) values used for Hikal's inventory

GHG	CO_2	CH_4	N_2O	R-134A	HFC-32	HCFC-22	HFC-410A	R-404A	R-407A
GWP	1	28	265	1,470	771	1,960	2,285	4,808	2,266

5.2.2 Emission Factors

In accordance with the dual reporting requirement of the GHG Protocol, Hikal's inventory uses emission factors from two relevant emissions databases: location-based (LB) and market-based (MB) inventories. The LB and MB emission factors differ only in Scope 2 – Electricity. The LB method reflects the average emissions intensity of grids on which energy consumption occurs and uses grid-average emission factors. The MB method reflects specifically the carbon intensity of the electricity purchased by Hikal.

For direct emissions (Scope 1), fuel-specific emission factors for CO_2, CH_4, N_2O are used for all sites using the 2022 UK Department for Environment, Food and Rural Affairs (DEFRA) emission dataset (adjusted with GWP values from IPCC AR6), while refrigerant-specific emission factors are taken from IPCC AR5 and AR6.

For indirect emissions (Scope 2), the India-specific grid emission factor was taken from the CO2 Baseline Database for the Indian Power Sector - User Guide Version 19.0 and Version 20.0 published by the Central Electricity Authority of India. Emission factors used in the LB and MB inventories are presented in Table 3.

For indirect emissions (Scope 3), multiple emission factors databases were referred. We have provided a category-wise list of scope 3 emission factors in Table 5.

Table 5: Description of Location-based and Market-based emission factors

Inventory		Location-Based	Market-Based
Scope 1	Fuels	DEFRA (adjusted with GWP values from IPCC AR6)	
	Refrigerants	IPCC AR5 and AR6	
Scope 2	Electricity	CEA - CO2 Baseline Database for the Indian Power Sector - User Guide Version 20.0	CEA - CO2 Baseline Database for the Indian Power Sector - User Guide Version 19.0
Scope 3	C1 - Purchased goods and services. C2 - Capital goods C4 - Upstream transportation & distribution C6 - Business travel C9 - Downstream transportation & distribution C10 Processing of sold products	EPA_Supply Chain Greenhouse Gas Emission Factors v1.3 by NAICS-6_AR6_Inflation Applied.	
Scope 3	C3 - Fuel and energy-related activities	WTT emissions: Defra 2024 (fuels) T&D Losses: IEA 2024	
Scope 3	C5 - Waste generated in Operations. C12 End-of-life treatment of sold products	Pre-treatment process ("Recovery facility") – ADEME Final treatment - US EPA EF Hub 2024 AR5	
Scope 3	C7 Employee commuting	US Department of Transportation data (USDOT 2014)	
Scope 3	C15 Investments	CEA - CO2 Baseline Database for the Indian Power Sector - User Guide Version 20.0	

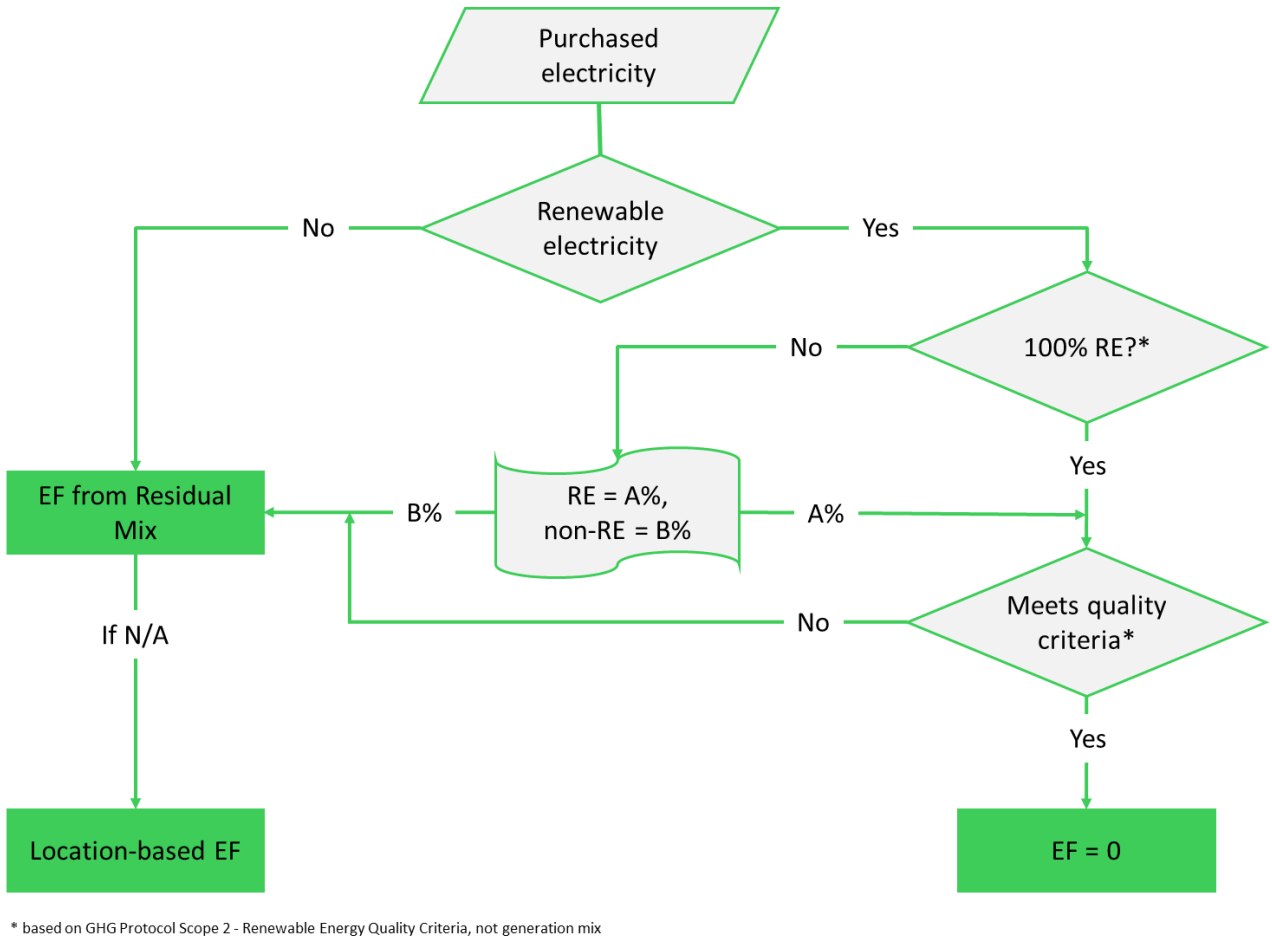


Figure 3: Decision tree for determining Market-Based emission factor.

6 Base Year

The base year shall represent an "average" year for the organization's emissions data reflecting 'business-as-usual'. Most organizations select a single year as the base year, but it is also possible to choose an average of annual emissions over several consecutive years. Furthermore, the GHG Protocol states that "companies shall choose and report a base year for which verifiable emissions data are available and specify their reasons for choosing that particular year" (p. 35, GHG Protocol). Selecting a year with anomalies or exclusion of more than 5% Scope 1 & 2 emissions is not recommended, as the emissions data may not compare well with subsequent years.

6.1 Adjustments to Base Year Emissions – Structural and Methodology Changes

Hikal's base year and subsequent year inventories shall be adjusted for mergers, acquisitions, and divestitures, according to the methodology provided in the GHG Protocol. They shall be updated when a significant cumulative change in Hikal's base year emissions is identified. Any change would be considered significant under the following circumstances:

- A structural change in Hikal's organizational boundaries due to a merger, acquisition, or divestiture of entities that already existed in the base year
- A change in emission calculation methods or factors used
- Additional or new data and/or methodologies are provided for emission sources that were previously not available
- Outsourcing (i.e., production of goods/services contracted outside of Hikal's agreed reporting boundaries) or insourcing (i.e., internal production of goods/services previously subcontracted), resulting in new Scope 1, 2 and 3 emissions not previously included in the original GHG inventory
- A significant error or errors are identified in the inventory.

The GHG Protocol does not specify a significance threshold. Hikal must determine what significance threshold should trigger a recalculation of the base year. As a best practice, SE recommends defining the significance threshold as a cumulative change (+/-) of five percent (5%) or more of Hikal's total base year emissions.

If Hikal has acquired or merged with a company, but despite all reasonable efforts, base year data is not available for the new company, an alternative simplified method may be used to update the base year data using all available data. In such instances, all related procedures, calculation methodologies, and supporting data should be documented in the IMP.

If the amount of data for the newly acquired entity is insufficient to apply agreed-upon data estimation procedures to adjust the baseline data, a re-baselining exercise for the current reporting period must be performed (which includes the new acquisition / merger). Such changes to the reporting program shall be documented in the IMP.

The following are examples of circumstances that are considered insignificant and therefore do not require a redetermination of Hikal's base year data (please note that this list is not exhaustive):

- An acquisition or merger of new facilities that did not exist in the base year
- Outsourcing (i.e., production of goods/services subcontracted outside of Hikal's agreed reporting boundaries) or insourcing (i.e., bringing any production of goods/services in-house, which were previously sub-contracted), that has already been reported under a different Scope
- Organic growth or decline, such as increases or decreases in production output, changes in processes or product mix, and closure / openings of operating units owned or controlled by Hikal.

7 Recommendations

7.1 Quality of Data

SE recommends reviewing data trends, including Year-on-Year variances and missing values. All reported deviations shall be reconciled with comments from the representative who provided the data. In cases where the representative provides a full explanation, the discrepancy is marked as resolved. For unclassified deviations, the report should be returned to the Process/Department representative for clarification to verify consumption against primary data if the deviation cannot be explained.

Sources where zero or no values were entered in year N and a value was entered in year N-1 and vice versa shall also be flagged as a deviation. This will be verified and an explanation (e.g., process opening/closure, data availability, etc.) should be documented in this case.

7.2 Data Gaps

SE recommends that the data shall be maintained for the following indicators:

- Import Transport Charges: Currently, Hikal receives supplier quotes on a CIF (Cost, Insurance and Freight) basis, which includes both raw material and transport costs. It is recommended to engage with suppliers to obtain a clearer breakdown of freight charges. This will enable more accurate reporting under Category 4.

- Cashew Shell Usage: Cashew shells are used as a fuel source in Hikal's operations. It is recommended to begin accounting for this under Scope 1 emissions using an activity-based approach to ensure comprehensive and accurate emissions reporting.

7.3 Management Review

It is recommended that the annual GHG reports be reviewed and validated by Hikal's management as part of the annual review process. This process is intended to ensure that the GHG inventory is complete and accurate. In addition, it is recommended that Hikal refines and codifies the management review process and clearly defines internal roles and responsibilities for subsequent IMP versions.

7.4 Way forward for Scope 3 accounting and decarbonization

The top three Scope 3 categories, namely Purchased Goods and Services (Category 1), Fuel-and-Energy-Related Activities (Category 3), and Processing of Sold Products (Category 10), constitute 92.3% of the total Scope 3 emissions. Based on their relevance, it is recommended to focus on these categories going forward, both in terms of data quality improvement and in designing decarbonization actions. Science-Based targets are required to cover at least 67% of Scope 3 emissions if an organisation commits to an absolute emissions reduction target. As Hikal is planning to commit to SBTi for near-term target setting and must undergo a target validation process, it is essential to focus on and improve these Scope 3 categories to achieve decarbonization commitments.

Purchased goods and services accounted for 57.3% of Hikal's FY 2024-25 Scope 3 inventory, totalling 109,577.01 tonnes of CO2e. To improve the accuracy of the emissions inventory, it is recommended to establish a strategy for supplier engagement. The first step is to identify suppliers who contribute most to Hikal's emissions. This initial stage can be based on the cost spent with specific suppliers. Once the list of the most significant suppliers is identified, their sustainability maturity should be assessed. This assessment should determine whether suppliers have sustainability reports or disclose sustainability-related and more specifically, emission data on their operations.

It is recommended to screen various global sustainability reporting schemes such as CDP, SBTi, ESG rating agencies, as well as suppliers' websites and sustainability reports. This screening will allow for a scoring of suppliers, helping Hikal understand where its suppliers stand on a sustainability maturity scale. The most mature suppliers will be capable of reporting their emission data, which Hikal can then incorporate into upcoming emission inventories based on the allocation of emissions according to the share of revenues in the suppliers' client portfolio. For suppliers at the beginning of their sustainability journey, a different approach needs to be planned and launched. Clear communication regarding Hikal's reporting needs must be conveyed, and collaboration with these suppliers should commence. The aim of this collaboration is a joint effort to establish and, over time, improve sustainability and emission reporting data gathering from suppliers, which will ultimately enhance Hikal's Scope 3 emissions data accuracy.

To accelerate the decarbonization of purchased goods and services, several activities can be carried out, including establishing a supplier criterion and a green procurement policy. The supplier criterion is a set of KPIs that is set by Hikal, and suppliers need to comply with. Green procurement policy targets those purchased goods that can be either replaced by low-emission alternatives or comply with a threshold set against "recycled content". Lowering emissions from purchased goods and services will need information on emission intensity which can be introduced as a requirement for suppliers by Hikal. Environmental Product Declarations (EPDs are available at: https://www.environdec.com/library), They are a good source for supplier and product-specific

emissions, and with the expansion of sustainability reporting schemes, the availability of product-specific emission data and Life-Cycle Assessment (LCA) based product emissions is likely to become more available. More product-specific databases to improve PG&S emission calculation are available at: https://ghgprotocol.org/life-cycle-databases.

Establishing the above-mentioned data improvement strategy, including supplier data and product-specific data collection and identifying the necessary steps to implement decarbonization actions targeting purchased goods and services will contribute to Hikal's Scope 3 emission accuracy.

Emissions from 'Fuel-and-energy related activities not included in Scope 1 and Scope 2' are related to the production of fuels and energy purchased and consumed by Hikal in FY 2024-25. These emissions contribute 9.43% of Hikal's Scope 3 emissions. Four types of activities are reflected in this category: upstream emissions of purchased fuels and electricity, transmission and distribution losses, and the generation of purchased electricity.

To reduce emissions in this category, purchasing less energy and sourcing energy from more sustainable sources can be an effective strategy. Energy-efficiency measures, resulting in lower energy demand, will have a direct impact on these emissions. On-site renewable energy generation will also impact this category by removing emissions associated with fuel extraction (mining) and transmission and distribution losses.

Processing of sold products accounted for 25.6% of Hikal's FY 2024-25 Scope 3 inventory, totalling 48,942.11 tonnes of CO2e. To improve the accuracy of the emissions inventory, it is recommended to establish a strategy for customer engagement. The first step is to identify customers based on the revenue received during the reporting period. After identifying the most significant customers, it is necessary to set up meetings with them to understand the type of products they are manufacturing from the ingredients provided by Hikal.

To streamline the information collection process, Hikal can prepare a standard template for capturing the information required from customers to calculate the processing of sold products. Key data points that should be collected include: the percentage of APIs provided by Hikal in the final product, energy consumption during the manufacturing process, and the country names to identify relevant emission factors. This information should then be compiled for all major products across all business units.