**TEKNICAST SDN. BHD.**

*"LEADER IN PRECISION, PARTNER IN SOLUTIONS"*

# GREENHOUSE GAS (GHG) INVENTORY REPORT

2024

TEKNICAST SDN BHD

# FOREWORD I

As we step into 2024, Teknicast Sdn Bhd reaffirms its unwavering commitment to sustainability and responsible business practices. Since our establishment in 1983, we have continuously evolved—driving innovation, maintaining excellence, and embracing environmental stewardship as a core pillar of our growth. Today, as climate challenges intensify, we recognize that meaningful action is not just an option but a necessity.

A key milestone in our sustainability journey is the significant 40% reduction in greenhouse gas (GHG) emissions, a testament to our dedication to operational efficiency, cleaner energy practices, and continuous improvement. This achievement reflects not only our commitment to reducing our carbon footprint but also our ability to turn ambition into tangible results. As we look ahead, we remain steadfast in our goals to further reduce our emissions by 2030 and, achieve net-zero by 2050, by committing to SBTi.

This 2024 Emission Inventory and Greenhouse Gas (GHG) Report provides a comprehensive assessment of our emissions profile and the strategies driving our progress. Sustainability is embedded in our culture, and through collaboration with employees, stakeholders, and partners, we continue to push the boundaries of innovation and environmental responsibility.

I extend my sincere appreciation to everyone who has contributed to this journey. Your dedication fuels our progress, and together, we will continue shaping a more sustainable future—where business growth and environmental preservation go hand in hand.

**Thank you for being part of this important mission.**

John Patrick English
Managing Director
Teknicast Sdn Bhd

# FOREWORD II

I am honoured to present Teknicast Sdn Bhd's 2024 Emission Inventory and Greenhouse Gas (GHG) Report, a reflection of our continuous journey toward sustainability. As the Business Development Manager and Sustainability Champion, I take great pride in leading our environmental initiatives, ensuring that Teknicast not only fulfils its commitments but also sets new benchmarks in responsible manufacturing.

Since our founding in 1983, Teknicast has been a pioneer in aluminium high-pressure die-casting manufacturing, consistently striving for excellence and innovation. In response to the urgent need for climate action, we have taken decisive steps to reduce our environmental impact—achieving a 40% reduction in GHG emissions this year. This milestone fuels our determination to go even further, with a clear objective of cutting our emissions by 50% by 2030 and reaching net-zero by 2050.

This report highlights our emissions profile, sustainability strategies, and recent commitment to SBTi, reinforcing our adherence to international best practices. By adopting data-driven approaches and continuous improvement, we are strengthening our role as a responsible and forward-thinking industry player.

None of this progress would be possible without the dedication of our team, who have embraced sustainability as a shared mission. Their hard work and commitment are the driving forces behind our achievements. I also extend my gratitude to our stakeholders and partners, whose collaboration and support have been instrumental in advancing our sustainability goals.

As we move forward, Teknicast remains committed to fostering a future where business growth and environmental stewardship go hand in hand.

**Thank you for being part of this journey.**

Victor Huang Jiunn Yeh
BD Manager & Sustainability Champion
Teknicast Sdn Bhd

# TABLE OF CONTENT (TOC)

# 1: EXECUTIVE SUMMARY

The executive summary outlines Teknicast Sdn Bhd's commitment to environmental responsibility and sustainability through its comprehensive emission inventory and greenhouse gas (GHG) report. Established in 1983 as an aluminum die casting manufacturer based in Malaysia, Teknicast pledges to reduce carbon emissions by 50% by 2030 and achieve net-zero emissions by 2050. The report provides transparency on the company's emissions profile, sustainability initiatives, and adherence to international standards. It covers general details, organizational boundaries, reporting boundaries, and a quantified GHG inventory of emissions, utilizing a hybrid calculation approach for CO2e values. Through meticulous data collection methodologies and continuous improvement processes, Teknicast aims to demonstrate its environmental performance and progress towards emission reduction targets to stakeholders and the wider community.

# 1: GENERAL DETAILS, PURPOSE AND POLICY

## 1.1 Introduction

This report serves as the comprehensive emission inventory and greenhouse gas (GHG) report for Teknicast Sdn Bhd. It outlines our commitment to environmental responsibility, detailing our efforts to measure, manage, and mitigate our carbon footprint. Through this report, we aim to provide transparency regarding our emissions profile, sustainability initiatives, and adherence to international standards.

## 1.2 Purpose

Teknicast is playing our role in joining worldwide movements focused on reducing carbon emissions and preventing further degradation of the planet's climate. We are committed to this cause by pledging to reduce our carbon emissions by 50% by 2030 and achieve net-zero emissions by 2050. By aligning our efforts with global initiatives, we aim to make a significant contribution to mitigating climate change and safeguarding the environment for future generations.

## 1.3 Description of Teknicast

Teknicast is an aluminium die casting manufacturer based in Malaysia which started its operations in 1983. Supplying high-pressure aluminium die-casting parts with complex features and serving various Multi-National Corporations around the globe. Apart from being a die casting company, we are a fully-integrated facility providing a one stop centre concept extending to machining, trimming, leak test, impregnation, painting and sub-assembly services.

For further information, please visit our website: https://teknicast.com/

## 1.4 GHG and Sustainability Strategies and Programs

Our GHG and programs underscore our dedication to environmental stewardship, outlining our strategies and programs for reducing emissions and promoting sustainability throughout our operations.

## 1.5 Persons Responsible

The provided GHG Inventory and Report has been prepared by the Sustainability Team, with continuous support on data collection from all elected committee members.

Responsibility for the preparation of the inventory and report:

- Mr. Victor Huang Jiunn Yeh, Business Development Manager & Sustainability Champion

Supporting and preparation of the report:

- Noor Adilah Hamzah, Commercial and Sustainability Executive
- Nur Alia Johari, ESG Executive

Below appointees are responsible to collect and maintain the data in a secured database internally stored in our server. Mr. Victor Huang is a certified GHG Practitioner under BSI Academy.

### 1.6 Sustainability Organizational Chart

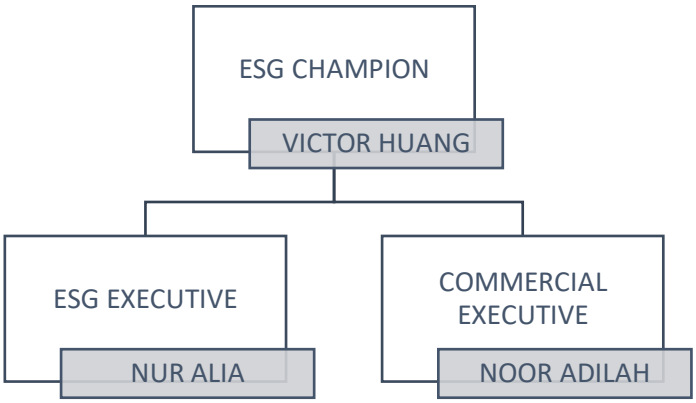


**Figure 1:1: Sustainability Organizational Chart**

**Table 1:1 Sustainability Committee**

| Department | Name | Assisted by | Role |
|---|---|---|---|
| **Management** | John English | - | Chairman |
| **Business Development** | Victor Huang | Nur Alia<br>Noor Adilah | Champion |
| **Finance** | Tan Chang Boon | Chan Wei Yuan | Committee |
| **Human Resources** | Foo Kok Yeong | Siti Umaimah | Committee |
| **Strategic Sourcing** | Des Morgan | Yee Seng Chun | Committee |
| **CSCS** | Alwin Wong | Nik Nur Hazwani | Committee |
| **Operations** | John Abraham | Abdul Rahim | Committee |
| **HSE** | Raymond David | Mohamad Naim | Committee |
| **IT** | Sum Weng | Lim Siew Chen | Committee |

Team Trainings are provided for the Preparation of this Emission Inventory and GHG Report. The main members of the inventory presentative team are made to be aware of the all principles and requirements within ISO 14064-1:2018 standard.

### 1.7 Audience and Dissemination Policy

This report is intended for all Teknicast stakeholders that interested in its greenhouse gas emissions inventory and the associated reporting structure, notation, and explanations. The report will be provided publicly and published on our website and in EcoVadis platform following appropriate third-party verification.

### 1.8 Reporting Period and Frequency of Reporting

The GHG Report encompasses the calendar year from January 1st, 2024, to December 31st, 2024. The chosen base year of 2022 is after post Covid-19 in 2021 and we were running at our maximum capacity in 2022, which makes it a good benchmark as a starting point. This period serves as the defined time-frame for assessing and reporting our organization's greenhouse gas emissions and related sustainability efforts. Moving forward, such reports will be generated every year, ensuring regular and

consistent monitoring of our sustainability performance and progress towards our emission reduction targets.

### 1.9 Reporting Standards, Approach and Verification

The GHG emissions taken into account is carbon dioxide, methane, and nitrous oxide documented with:

- Compliance with ISO 14064-1:2018
  The GHG Report has been prepared in accordance with ISO 14064-1:2018.

- Carbon Boarder Adjustment Mechanism (CBAM)- The report will be using hybrid approach calculation methodology to determine our average carbon emission per Kg of completed finished articles.

- Teknicast has adopted the data collection and calculation framework using our ISO-14064-1 verified 2022 emission report

**0 above**

# 2: ORGANIZATIONAL BOUNDARIES

## 2.1 Consolidation Approach

Teknicast utilises control consolidation method for our emission inventories. This approach considers all emissions that Teknicast has "financial control" over at all operation sites and a corporate office. This control allows the organisation to financially approve plans or investments towards a more sustainable environment achieving reduction of greenhouse gas emission goal.

## 2.2 Geographic Boundaries of inventory

Teknicast reporting protocols, gathers data from three separate sites (Figure 2.1), with its main operation centred at TPG. This site, served as the primary collection point, and contributes majority of the collected emission data whilst also serves as the central archive for all documents.

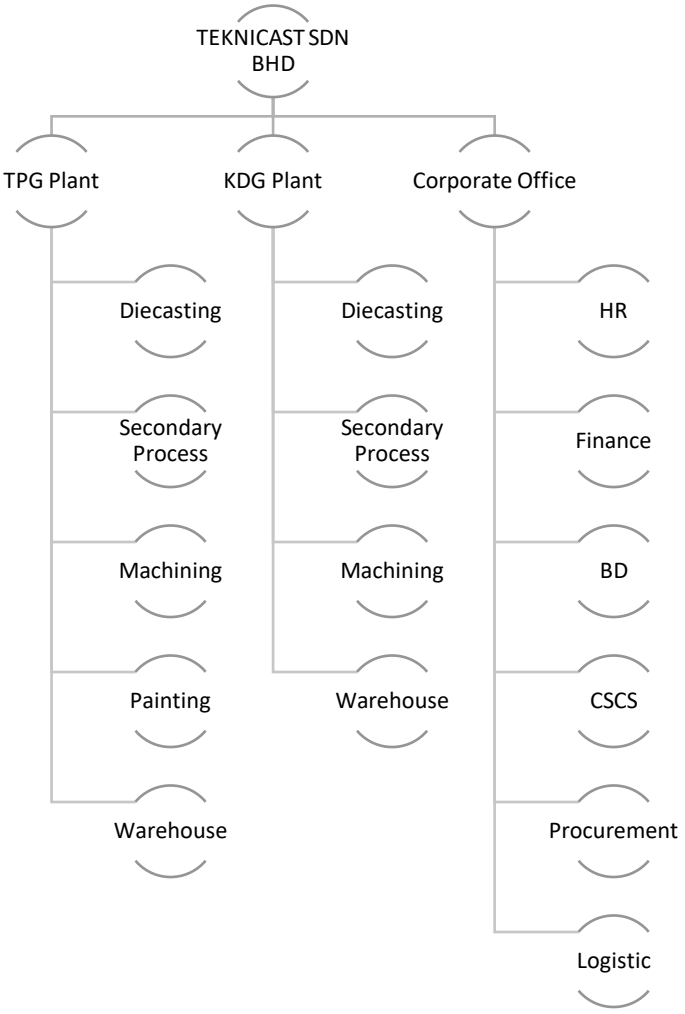


**Figure 2:1 Teknicast Sdn. Bhd. Geographic Boundaries**

### 2.3 Organizational Chart

The organizational chart presented below illustrates the operational structure of TSB pertinent to the emissions summary:

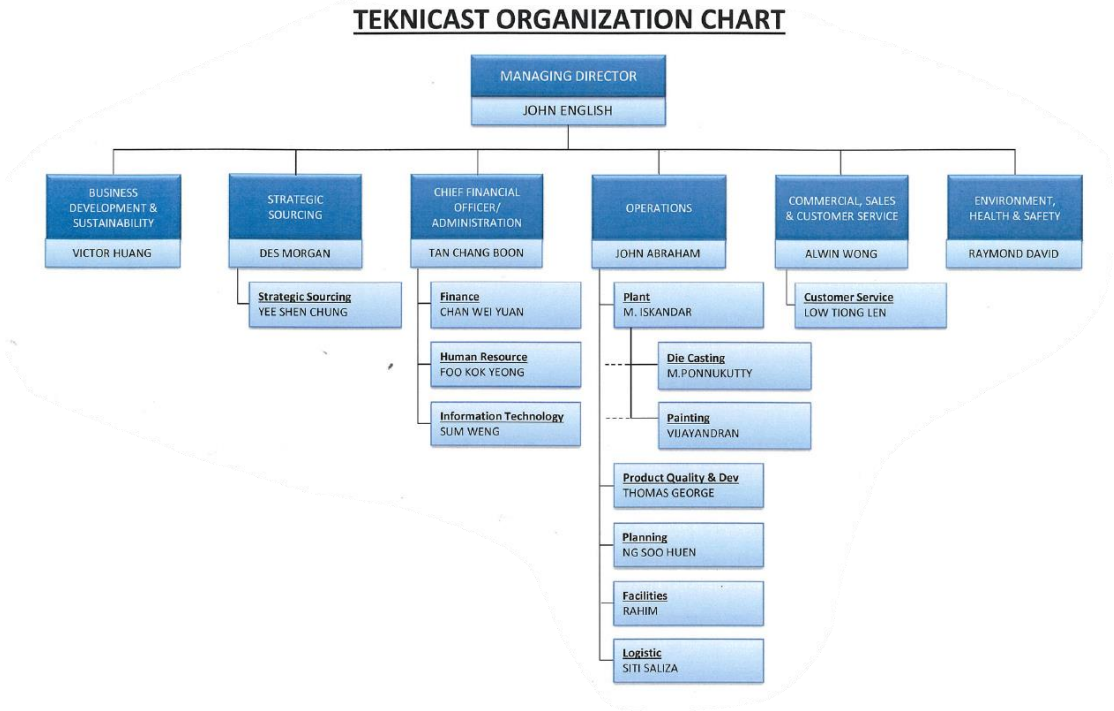


**Figure 2:2 Teknicast Sdn. Bhd. Organizational Chart**

# 3: REPORTING BOUNDARIES

## 3.1 Emissions Categories and Classification

Emissions sources were identified with the reference to the methodology described in the Greenhouse Gas Protocol and ISO 14064-1:2018. This report includes the following GHG Emissions;

**Table 3:1 GHG Reference Index**

| Type of Emissions | GHG Protocol Index | ISO 14064-1:2018 Index |
|---|---|---|
| Direct Emissions | Scope 1 | Category 1: Direct Emissions and Removals<br>• Direct emission from stationary combustion<br>• Direct emission from mobile combustion<br>• Direct Fugitive Emission |
| Indirect Emissions | Scope 2 | Category 2: Indirect Emissions from imported energy<br>• Indirect emission from imported electricity |
| | Scope 3 | Category 3: Indirect Emissions from transportation<br>• Indirect emission from upstream transportation and distribution<br>• Indirect emission from downstream transportation and distribution<br>• Indirect emission from employee commuting<br>• Indirect emission from business travel<br>• Indirect emission from hotel stays |
| | | Category 4: Indirect Emissions from products used by organization<br>• Indirect emission from purchased good and services<br>• Indirect emission from disposal of solid and liquid waste |
| | | Category 5: Indirect Emissions associated with the use of products from the organization |
| | | Category 6: Indirect Emissions from other sources |

### 3.2 Summary of Greenhouse Gas Inventory

**Table 3:2** tabulate the summary of GHG Inventory and the emission factor use for every category. For Category 2-Indirect Emission from Imported Electricity, the emission factor is taken from Grid Emission Factor by Energy Commission (ST). Meanwhile the International Emission Factor is referred to Defra 2024 and the National Emission Factor is indicated factor from Malaysian National Water Service Commission (SPAN). The purchasing of ingot is using the emission factor supplied by the manufacturer.

**Table 3:2 Details of GHG Inventory**

| Category | Classification | Variable | Unit | Emission Factor kg CO2e per unit | Emission Factor Source | CO2 | CH4 | N2O | Others |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Stationary combustion | Natural gas (GJ) | Cubic meters | 2.04140 | International EF | / | / | / | |
| | Mobile combustion | Trucks | Mileage (km) | 2.47960 | International EF | / | / | / | |
| | | Company cars | Mileage (km) | 2.07047 | International EF | / | / | / | |
| | | Fuel use (litre) | Litres | 2.62818 | International EF | / | / | / | |
| | Refrigerant | R22 | kg | 1760.00 | International EF | / | | | |
| | | R32 | kg | 677.00 | International EF | / | | | |
| | | R410A | kg | 1924.00 | International EF | / | | | |
| | Septic Tank | No of Employees | kg | 0.02800* | National Emission Factor | | / | | |
| 2 | Indirect emissions from imported electricity | Electricity | kWh | 0.774** | Regional Emission Factor | | | | |
| 3 | Emissions from Upstream transport and distribution for goods | Ingot transportation | Tonne.km | 0.07547 | International EF | / | / | / | |
| | | Pallet's transportation | Tonne.km | 0.38023 | International EF | / | / | / | |
| | | Component land Transportation | Tonne.km | 0.07547 | International EF | / | / | / | |
| | | Component sea Transportation | Tonne.km | 0.01612 | International EF | / | / | / | |
| | | Local vendor Transportation | Tonne.km | 0.60195 | International EF | / | / | / | |
| | | Diesel Transportation | Tonne.km | 0.50546 | International EF | / | / | / | |
| | | Household Residual Waste | Tonne.km | 0.60195 | International EF | / | / | / | |

| Category | Classification | Variable | Unit | Emission Factor kg CO2e per unit | Emission Factor Source | CO2 | CH4 | N2O | Others |
|---|---|---|---|---|---|---|---|---|---|
| | | Commercial and Industrial waste | Tonne.km | 0.60195 | International EF | / | / | / | |
| | | Diesel Transportation | Tonne.km | 0.885.01 | International EF | / | / | / | |
| 3 | Emissions from Downstream transport and distribution for goods | HGV (Diesel) | Tonne.km | 0.07547 | International EF | / | / | / | |
| | | Rail/Train | Tonne.km | 0.02779 | International EF | / | / | / | |
| | | Freight Flights | Tonne.km | 1.09904 | International EF | / | / | / | |
| | | Container Ship | Tonne.km | 0.01612 | International EF | / | / | / | |
| | Emissions from Employee commuting includes emissions | Passenger Vehicle | Distance travelled (km) | 0.16382 | International EF | / | / | / | |
| | | Passenger Vehicle (Hybrid Car) | Distance travelled (km) | 0.04309 | International EF | / | / | / | |
| | | Motorbike | Distance travelled (km) | 0.11138 | International EF | / | / | / | |
| | Emissions from Business Travel and hotel accommodation | Flights | Travelling distance (km) | 0.17580 | International EF | / | / | / | |
| | | Rental Cars | Travelling distance (km) | 0.16450 | International EF | / | / | / | |
| | | Taxi | Travelling distance (km) | 0.20805 | International EF | / | / | / | |
| | | Train | Travelling distance (km) | 0.03549 | International EF | / | / | / | |
| | | Hotel stays | Number of nights | *** | International EF | / | | | |
| 4 | Emissions from Purchased goods | Ingot Purchased | Ton | 0.21500 | Manufacturer EF | / | | | |
| | | Component Purchased | Ton | 0.39000 | International EF | / | | | |
| | | Pallet Purchased | Ton | 0.00820 | International EF | / | | | |
| | Emissions from the disposal of solid and liquid waste | Household residual waste | Ton | 497.04416 | International EF | / | / | / | |
| | | Commercial and Industrial waste | Ton | 520.33420 | International EF | / | / | / | |

**Malaysian Sewerage Industry Guidelines, The National Water Service Commission (SPAN)*
***Malaysian Grid Emission Factor, Energy Commission (ST)*
****Determine based on country- refer to Defra 2024 UK*

# 4: QUANTIFIED GHG INVENTORY OF EMISSIONS

## 4.1 Consolidated Statement of Greenhouse Gas Emissions

**Table 4:1** shows the summary of the CO2e emission in 2024. The details of calculation and emission factor used is in Appendix B.

**Table 4:1 Greenhouse Gas (GHG) Emission**

| **Direct emissions in tonnes CO2-e** | | **CO2e EMISSIONS** | | | | |
|---|---|---|---|---|---|---|
| | | **Notes** | **CO2e Total** | **CO2** | **CH4** | **N2O** |
| | | | **GWP** | **1** | **27.9** | **273** |
| **1** | **Category 1: Direct GHG Emissions and Removals in tonnes CO2-e** | | | | | |
| | Direct emissions from stationary combustion | | 2048.734603 | 2044.708089 | 3.074974935 | 0.95154 |
| | Direct emissions from mobile combustion | | 289.784 | 286.706 | 0.445 | 2.633 |
| | Direct fugitive emissions from the release of GHGs in anthropogenic systems | **1** | 101.483 | | | |
| | Direct emissions and removals from land use and forest change systems | **NA** | | | | |
| | **One off - refrigerant major leakage** | **NA** | | | | |
| | | | | | | |
| | | | **2,440.001** | **2,331.414** | **3.520** | **3.585** |

**Indirect emissions in tonnes CO2-e**

| | | | | | | |
|---|---|---|---|---|---|---|
| **2** | **Category 2: Indirect GHG Emissions from Imported Energy** | | | | | |
| | Indirect emissions from imported electricity | | 6,681.166 | | | |
| | Indirect emissions from imported energy | | | | | |
| | | | **6,681.166** | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **3** | **Category 3: Indirect GHG Emissions from Transportation** | | | | | |
| | Emissions from upstream transportation and distribution of goods | | 34.298 | | | |
| | Emissions from downstream transportation and distribution of goods | | 345.268 | | | |
| | Emissions from employee commuting | | 166.138 | | | |
| | Emissions from client and visitor transport | | - | | | |
| | Emissions from business travels | | 90.118 | | | |
| | Emissions from hotel stays | | 3.789 | | | |
| | | | **639.610** | **0.000** | **0.000** | **0.000** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **4** | **Category 4: Indirect GHG Emissions from Products Used by an Organization** | | | | | |
| | Emissions from purchased goods and services | | 477.809 | | | |
| | Emissions from capital goods | NA | - | | | |
| | Emissions from the disposal of solid and liquid waste | | 198.025 | | | |
| | Emissions from the use assets | NA | - | | | |
| | Emissions from other services not described above | NA | - | | | |
| | | | **652.193** | **0.000** | **0.000** | **0.000** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **5** | **Category 5: Indirect GHG Emissions Associated with the Use of Products from the Organization** | | | | | |
| | Emissions or removals from the usage of product | NA | - | | | |
| | Emissions from downstream leased assets | NA | - | | | |
| | Emissions from end-of-life stage of the product | NA | - | | | |
| | Emissions from investments | NA | - | | | |
| | | | **0.000** | **0.000** | **0.000** | **0.000** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **6** | **Category 6: Indirect GHG Emissions from Other Sources** | | - | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **7** | **REMOVALS** | | | | | |
| | Direct removals in tonnes CO2e (Hapag Llyod Green Ship) | CO2e | -7.980 | | | |
| | Renewable energy (TNB MYGET program) | CO2e | -4644.000 | | | |
| | | | **-4651.980** | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **TOTAL EMISSIONS CATEGORIES 1-6** | | **5,760.9899** | **2,331.4136** | **3.5200** | **3.5845** |

Notes: -

1. Calculate based on overall refrigerant used in the plant and estimated 5% leakage rate over per year.

[NA]- Not Applicable

## 4.2 Methodologies for the Collection and Quantification of Data

### 4.2.1 Methodologies

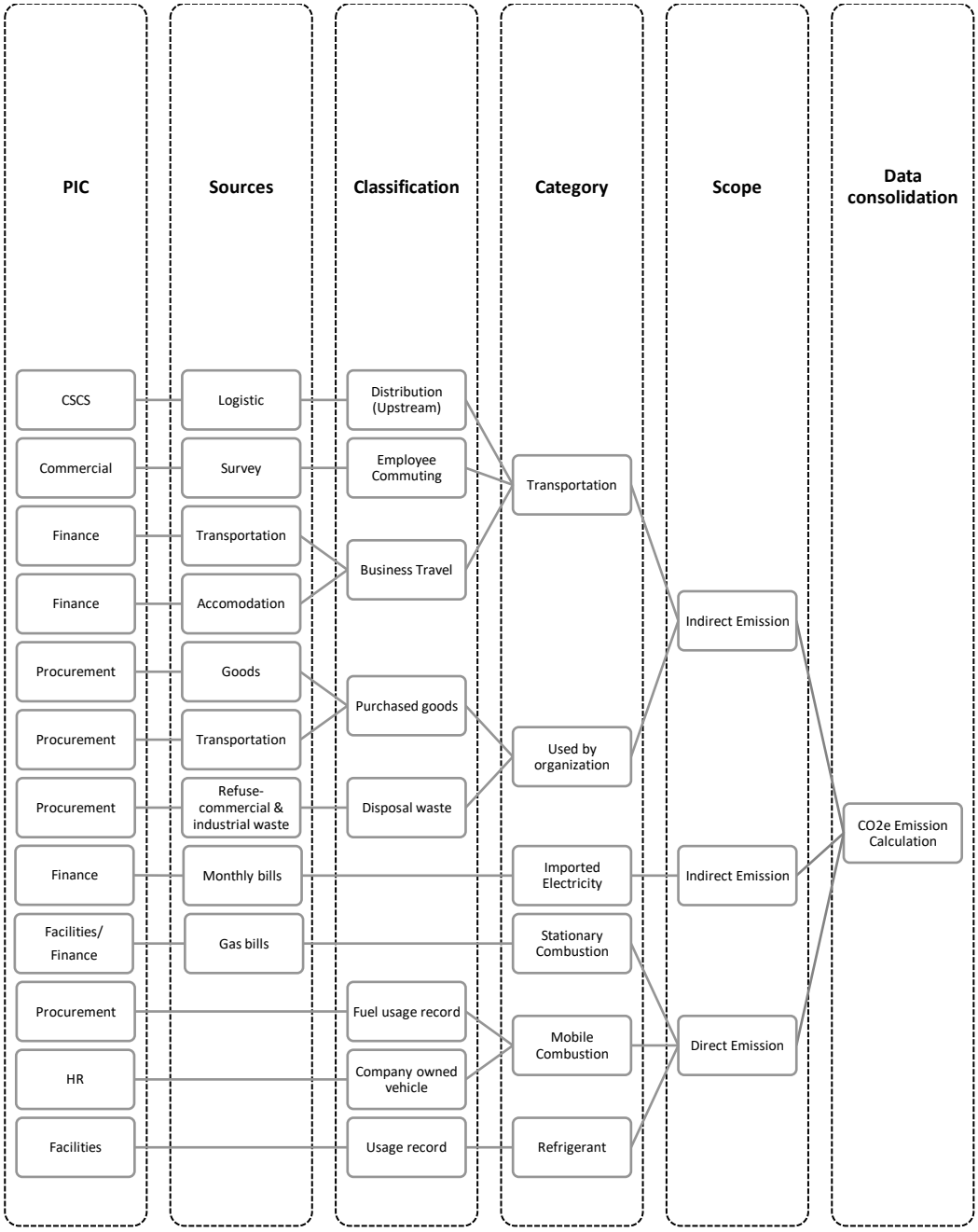


**Figure 4:1 Data Information Management**

### 4.2.2 The Description of Methodologies

Category 1 – Direct Emission and Removals

- Stationary Combustion - Collected based on monthly utility bills, recorded by facilities department, and verified by Finance department. Calculation is using 2024 Defra UK emission factor.
- Mobile Combustion – recorded mileage on all company owned vehicle is by HR department and forklift diesel usage is recorded by Facility department and verified by Procurement department. Calculation is using 2024 Defra UK emission factor.
- Total direct fugitive emission was calculated based on overall refrigerant used in the plant and estimated 5% leakage rate per year.
- HR Dept will provide the headcount for employee for the reporting year and Sustainability department will calculate the wastewater discharge using emission factor obtain from IPCC wastewater treatment and discharge and Malaysian Sewerage Industrial guideline.

Category 2- Indirect Emission from imported energy

- Usage data is recorded by facility department on monthly basis using the utility bill data from the service provider (Tenaga National Berhad). CO2e emission factor is obtained from the latest Malaysia Energy Commission (Suruhanjaya Tenaga) Grid Emission Factor (GEF) for Peninsular Malaysia.

Category 3- Indirect Emission from Transportation

- Emission from Downstream transportation and distribution of goods – System collected "Shipment Vs Invoice" data is tabulated and summarized. Calculation is using 2024 Defra UK emission factor (tonne.KM) and using the following links to obtain point to point location either by road, sea, air or rail:
  - maps.google.com
  - ports.com
  - airmilescalculator.com

- Emission from upstream transportation and distribution of goods – Based on good receive note and data is tabulated and summarized. Calculation is using 2024 Defra UK emission factor (tonne.KM) and using the following links to obtain point to point location either for all road, sea, air or rail transportation:
  - maps.google.com
  - ports.com

- Emission from the disposal of solid waste and liquid is categorised by:
  - Household residual waste – Data is tracked and recorded by procurement department based on supplier provided information in tonnage of disposal. Calculation is using 2024 Defra UK emission factor.
  - Commercial and industrial waste – Data is tracked and recorded by procurement department based on supplier provided information in tonnage of disposal. Calculation is using 2024 Defra UK emission factor.

- A survey form was created and handed to all individual department to obtain the weekly travelling mileage by type of vehicle commuting to work. Collected data is then tabulated to

obtain a full year mileage by type of vehicle into two categories which are passenger vehicle and motorcycle. Calculation is using 2024 Defra UK emission factor.

- Business Commuting is recorded by finance department upon presentation of individual expense claim, where all claimants is to provide the mileage categorised by air, taxi, rental cars, and train mode of traveling during expense submission.
- Hotels stay is also recorded by Finance department with reference to claimant hotel invoices. Calculation is using 2024 Defra UK emission factor

Category 4- Indirect Emission from products used by organisation

- Top 3 spend purchase goods categorised by Aluminium Ingots, wooden pallets, and stainless-steel component (National Manufacturing) data are collected based on goods received notes and shipping document and tracked by procurement department. 2024 Defra UK emission factor with additional emission factor obtain from
  - Aluminium Ingot – Supplier provided information; using average value of 3 out of 4 supplier provided data.
  - Wooden Pallet – using www.Scileo.cl emission factor.
  - Stainless Steel Component – using www.worldstainless.org emission factor.

### 4.2.3 GHG Emission Calculation

GHG emissions = activity data x emission conversion factor

By referring to UK Government GHG Conversion Factors, navigate the sheet relating to the related activity, determine the unit and define the emission factors. Refer to the guidance (for example, the amount of electricity used or distance travelled). Then multiply this activity data by the relevant (emission) conversion factor. This gives an estimate of the GHG emissions for that activity.

### 4.2.4 GWP Calculation and Source

Greenhouse gas emission $CO_2$ equivalent = annual activity intensity of emission source x emission factor x GWP

| Greenhouse Gas | Global Warming Potential (GWP) |
|---|---|
| Carbon dioxide (CO2) | 1 |
| Methane (CH4) | 27.9 |
| Nitrous oxide (N2O) | 273 |

Figure 4.2 Global Warming Potential Values, Kyoto Gases (IPCC 2021-6$^{th}$ Assessment Report Values)

#### 4.2.5 Review, Internal Audit and Continuous Improvement

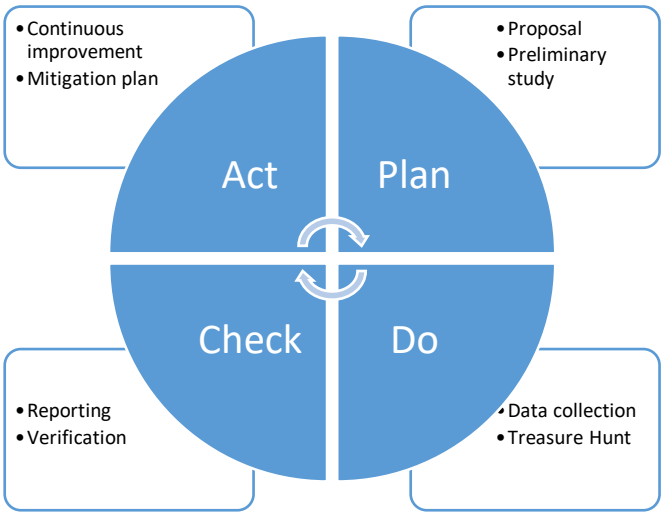


**Figure 4:2 Yearly Project Plan**

This report for the year ending 31st December 2024 has been prepared.

### 4.3 Assessment of Uncertainty

The GHG emission was quantified separately for $CO_2$, $CH_4$, $N_2O$ and others in tonnes of $CO_2$ equivalent. The GHG Inventory framework was determine based on ISO 14064-1 Standard Report. The Uncertainty Assessment was conducted based on several type of evaluation which are magnitude, level of influence, risk or opportunity, sector-specific guidance, outsourcing and employee engagement. In accordance with their magnitude and level of influence have been prioritized as high, medium, and low (refer Table 3.2). Meanwhile, the data for sector-specific guidance, outsourcing and employee engagement were identified by Yes and No criteria, with further details available in the report's Appendix.

The evaluation of the activity data is determined by data quality level which is continuous measurement, regular measurement and owned estimation. Continuous measurement is a real-time measurement which involving machines to constantly check and record the value. Regular measurement involves taking samples at pre-determined intervals such as daily, weekly, monthly or annually. Then, process by which individual or organization assesses and quantifies the uncertainty as associated with their owned GHG emissions inventory or measurement data. This systematic approach can be breakdown by assessment, quantification, documentation and communication.

**Appendix A** display the significant scores of all identify emission sources within the reported boundaries of the inventory. All direct and indirect emissions sources with significant, medium and insignificant are reported in this document. Emission sources with less than 30 % score mark as insignificant. Meanwhile more than 50% score is mark as insignificant and the score between 31% to 50% labelled as medium.

### 4.4 Hybrid Calculation Approach - CBAM

Total emission will be used to generate our average CO2e value per Kg of all completed articles or finish goods.

$$\frac{\text{Combined Emission value (tonne CO2e)}}{\text{2024 total produced articles in tonne}} = \text{X value of CO2e per Kg}$$

**X-Value**

$$\frac{\text{5,760.9899 tCO2e}}{\text{2,021.88 tonne}} = \textbf{2.84932 CO2e/Kg}$$

### 4.5 Removals

For the 2024 reporting period, carbon removals have been recorded. Through Hapag-Lloyd's Ship Green shipment, emissions were reduced by -7.980 tons of $CO_2e$. Another removal is renewable energy purchased from TNB MYGET program. The renewable energy is purchased by block and -4644.00 tons CO2e has been avoided in 2024.

### 4.6 Base-year GHG Inventory

The 2022 GHG Inventory Report is the first report made by Teknicast Sdn Bhd, it provides the base year for the original assessment and for the future years. The following represents changes in methodology with respect to the based year and our commitment to improve the accuracy and breadth of reporting year on year;

- Total finished goods weight
- Emission factor updates
- Purchasing of Green Electricity Tariff (GET)
- Introducing a Science Based Target Initiative (SBTi) framework
- Implementing and organized methodology for gathering and handling data

# 5: INTERNAL REPORTING AND PERFORMANCE

## 5.1 Emissions by Scope – GHG Protocol

The emissions breakdown by scope is details below: -

**Table 5:1 Data emission based on GHG Protocol Index**

| Scope | Classification | Total CO2e |
|---|---|---|
| **1** | Direct Emission | 2,440.001 |
| **2** | Indirect Emission – Purchased Electricity | 6,681.166 |
| **3** | Indirect Emission – Corporate Value Chain | 1,291.803 |
| **4** | Removals (Direct Removals in tonnes CO2e | -4,651.980 |
| | **TOTAL** | 5,760.9899 |

## 5.2 Emissions by Category – ISO 14064-1 Standard

The emissions breakdown by category is details below: -

**Table 5:2 Data emission based on ISO 14064-1**

| Category | ISO 14064-1:2018 Index | Total CO2e |
|---|---|---|
| Category 1 | Direct Emissions and Removals | 2,440.001 |
| Category 2 | Indirect Emissions from imported energy | 6,681.166 |
| Category 3 | Indirect Emissions from transportation | 639.610 |
| Category 4 | Indirect Emissions from products used by organization | 652.193 |
| Category 5 | Indirect Emissions associated with the use of products from the organization | - |
| Category 6 | Indirect Emissions from other sources | - |
| Category 7 | Removals (Direct removal in tonnes CO2e) | -4,651.980 |
| | **TOTAL** | 5,760.9899 |

### 5.3 GHG Reduction initiatives and Internal Performance Tracking

Based on the provided information about TSB's commitment to reducing its carbon emissions, here are some GHG reduction initiatives and strategies TSB currently consider:

| Reduction Initiatives | Strategies | Action/Plan/Example/Activities |
|---|---|---|
| Energy Efficiency Improvements | Implementing energy-saving measures | Upgrade to more energy-efficient equipment, optimizing manufacturing processes to reduce energy consumption, and conducting energy audits to identify areas for improvement. |
| Transition to Renewable Energy | Investing in renewable energy sources | Installing solar panels on factory roofs or purchasing renewable energy from services providers. |
| Transportation Optimization | Encouraging employees to carpool, use public transportation, or switch to electric vehicles. | Optimizing transportation routes and logistics to minimize fuel consumption and emissions. |
| Waste Reduction and Recycling | Implementing 3R Program | Reusing materials, recycling scrap metal or other waste products generated during manufacturing processes, and properly managing hazardous waste to minimize environmental impact. |
| Supply Chain Optimization | Lower carbon footprints or implementing sustainable procurement practices. | Work with suppliers to improve their environmental performance and reduce emissions throughout the supply chain. |
| Employee Engagement and Training | Educating employees | Providing training on energy-saving practices and promoting a culture of environmental responsibility within the organization. |
| Continuous Monitoring and Reporting | Regularly monitoring and reporting carbon emissions | Using data to identify trends, assess the effectiveness of implemented measures, and make adjustments as needed to further reduce emissions. |