

# CONSTRUCTION INDUSTRY COUNCIL

## CIC GREEN PRODUCT CERTIFICATION

### *Assessment Standard*

### General Requirements



**CIC GREEN**  
PRODUCT CERTIFICATION

(Version 2)

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## TABLE OF CONTENTS

<b>1.</b>	<b>OVERVIEW .....</b>	<b>1</b>
1.1	<b>PURPOSE.....</b>	<b>1</b>
1.2	<b>FRAMEWORK .....</b>	<b>2</b>
1.2.1	<b>Carbon Label.....</b>	<b>2</b>
1.2.2	<b>Resource Label .....</b>	<b>2</b>
1.2.3	<b>Environment Label .....</b>	<b>2</b>
1.2.4	<b>Performance Label.....</b>	<b>2</b>
1.3	<b>Criteria Evaluation.....</b>	<b>3</b>
1.4	<b>Scores and Grading .....</b>	<b>3</b>
1.5	<b>Use of the Certifications .....</b>	<b>4</b>
1.6	<b>Quality Assurance.....</b>	<b>4</b>
<b>2.</b>	<b>CERTIFICATION PROCESS .....</b>	<b>4</b>
2.1	<b>DOCUMENT PREPARATION AND VERIFICATION.....</b>	<b>5</b>
2.1.1	<b>Compliance under Carbon Label .....</b>	<b>5</b>
2.1.2	<b>Compliance under Resource, Environment, Performance and InnoSmart Labels .....</b>	<b>6</b>
2.2	<b>AWARD OF CERTIFICATION .....</b>	<b>6</b>
2.3	<b>GUIDELINES FOR INCLUSION OF SIMILAR PRODUCTS .....</b>	<b>6</b>
<b>3.</b>	<b>DEFINITIONS &amp; ACRONYMS .....</b>	<b>7</b>
3.1	<b>TERMS RELATING TO CFP QUANTIFICATION AND LABELLING....</b>	<b>7</b>
3.2	<b>TERMS RELATING TO LIFE CYCLE ASSESSMENT.....</b>	<b>8</b>
<b>4.</b>	<b>CARBON FOOTPRINT OF PRODUCT STUDY .....</b>	<b>9</b>
4.1	<b>GOAL AND SCOPE DEFINITION.....</b>	<b>9</b>
4.1.1	<b>The Goal.....</b>	<b>9</b>
4.1.2	<b>System Boundary .....</b>	<b>10</b>
4.2	<b>LIFE CYCLE INVENTORY ANALYSIS .....</b>	<b>10</b>
4.2.1	<b>Key Principles.....</b>	<b>11</b>
4.2.2	<b>Data Requirements .....</b>	<b>11</b>
4.3	<b>Life Cycle Impact Assessment .....</b>	<b>13</b>
4.4	<b>Life Cycle Interpretation .....</b>	<b>13</b>
4.5	<b>CFP Study Report.....</b>	<b>13</b>
4.5.1	<b>Goal and Scope.....</b>	<b>13</b>
4.5.2	<b>LCI and LCIA:.....</b>	<b>13</b>
4.5.3	<b>CFP quantification results: .....</b>	<b>14</b>
<b>5.</b>	<b>REFERENCES.....</b>	<b>15</b>

## 1. OVERVIEW

### 1.1 PURPOSE

The CIC Green Product Certification (the “Scheme”) is a green product labelling scheme owned by the Construction Industry Council (CIC) and implemented by the Hong Kong Green Building Council (HKGBC). The primary goal of the scheme is to support Hong Kong’s transition to a low-carbon economy by encouraging the adoption of environmentally friendly construction practices.

With the CIC Green Product Certification, various stakeholders, including consumers, building professionals, construction practitioners, and policymakers, can easily and unequivocally identify environmentally preferable construction materials and building products. This certification serves as a reliable indicator of a product’s sustainability, helping to drive market demand for greener options.

To ensure the credibility and effectiveness of the certification, the CIC and the HKGBC have jointly developed this Assessment Standard (the “Standard”), which sets out the assessment criteria and their benchmarks to govern the application and award of a grade under the Scheme. The comprehensive assessment evaluates the overall sustainability of construction materials and building products across multiple dimensions. These dimensions include carbon footprint, environmental impact, resource efficiency, technical performance, and the use of smart manufacturing technologies.

The Standard is divided into two main parts:

- General Requirements (This document refers): This part introduces the Scheme’s framework, outlines the application procedure, and details the grades.
- Technical Requirements (Refer to documents for each assessment standard): This part defines the principles, requirements, and guides for quantifying and reporting the carbon footprint of a product (CFP), along with other sustainability assessment criteria and scoring standards.

This Standard neither modifies nor supersedes laws and regulations. Compliance with this Standard is not a substitute for, and does not assure, compliance with any applicable laws or regulations. Compliance with all applicable laws and regulations is a prerequisite for the manufacturing and marketing of the product.

The Scheme is owned by the Construction Industry Council (CIC), 38/F, COS Centre, 56 Tsun Yip Street, Kwun Tong, Kowloon, Hong Kong; and operated by Hong Kong Green Building Council (HKGBC), 1/F, Jockey Club Environmental Building, 77 Tat Chee Avenue, Kowloon Tong, Hong Kong, Phone: +852 3994 8888, Email: [cicgpc@hkgbc.org.hk](mailto:cicgpc@hkgbc.org.hk)

## **1.2 FRAMEWORK**

To thoroughly assess green construction materials and building products in line with the international sustainability goals and frameworks, such as the United Nations Sustainable Development Goals (SDGs) and the Paris Agreement on climate change, the Scheme introduces five Sustainability Labels listed below:

- Carbon
- Resource
- Environment
- Performance, and
- InnoSmart

### **1.2.1 Carbon Label**

The Carbon Label focuses on quantifying and reporting the carbon footprint of products (CFP). The goal of carrying out a CFP study is to calculate the GHGs generated from the production of the material/product in terms of CO<sub>2</sub> equivalents (CO<sub>2</sub>e).

For carbon-intensive materials, including cement, ready-mixed concrete, reinforcing bar and structural steel, and precast concrete, the Scheme requires an assessment of the product's CFP value, benchmarking it against the industry's long-term decarbonisation goal.

For the other materials/products under the Scheme, the manufacturers/suppliers are encouraged to quantify and report the CFP value to obtain the Carbon Label, demonstrating their commitment to the industry decarbonisation.

The Scheme would create a transparent pathway for construction professionals to make informed choices by thoroughly assessing relevant types of GHG emissions linked to the product.

### **1.2.2 Resource Label**

The Resource Label recognises the efficient use of resources, ensuring compliance with standards concentrating on the incorporation of recycled or renewable raw materials, water and energy optimisation, and the adoption of circular economy principles.

### **1.2.3 Environment Label**

The Environment Label recognises products that prioritise both human health and environmental protection. Products awarded this label have demonstrated a commitment to responsible manufacturing and creating healthier, and eco-friendly offerings.

### **1.2.4 Performance Label**

The Performance Label recognises the durability and functionality of the products, promoting long service life and better performance during the product life. Products achieving performance beyond code compliance are encouraged.

### 1.2.5 InnoSmart Label

The InnoSmart Label recognises the use of innovative and smart technologies or practices to enhance productivity, reduce carbon emissions, and achieve exemplary environmental performance.

## 1.3 Criteria Evaluation

Assessment criteria are established according to the focus of each Sustainability Label and documented in the Technical Requirements for the specific product category. The criteria are categorised as “Core Criteria” and “Non-core Criteria”.

### i) Core Criteria

Core criteria set the mandatory requirements the products must achieve to get the Basic Points as a passing score, equivalent to a “Green” Rating under the Scheme.

### ii) Non-core Criteria



Non-core criteria are optional, and bonus points will be topped up once the products meet the relevant requirements under the non-core criteria.

## 1.4 Scores and Grading

For products that achieve all the Basic Points under the Core Criteria, a “Green” grade (i.e. “pass” grade) will be awarded.

For products that achieve all the Basic Points under the Core Criteria and selective Bonus Points under the Non-core Criteria, the final grading will be decided according to the accumulated Basic Points and Bonus Points awarded (Table 1 refers).

*Table 1 Five Grades of the CIC Green Product Certification*

Platinum	Gold	Silver	Bronze	Green
				
90 points or above	80 ~ 89 points	70 ~ 79 points	60 ~ 69 points	50 ~ 59 points

## 1.5 Use of the Certifications

Products certified under the CIC Green Product Certification can display the certification label, indicating that the product has been independently verified and meets the assessment criteria detailed in the Scheme.

Relevant Sustainability Label will be displayed on the certificate if the products meet the established criteria for that label. The evaluation criteria are detailed in the Technical Requirements for the specific product category.

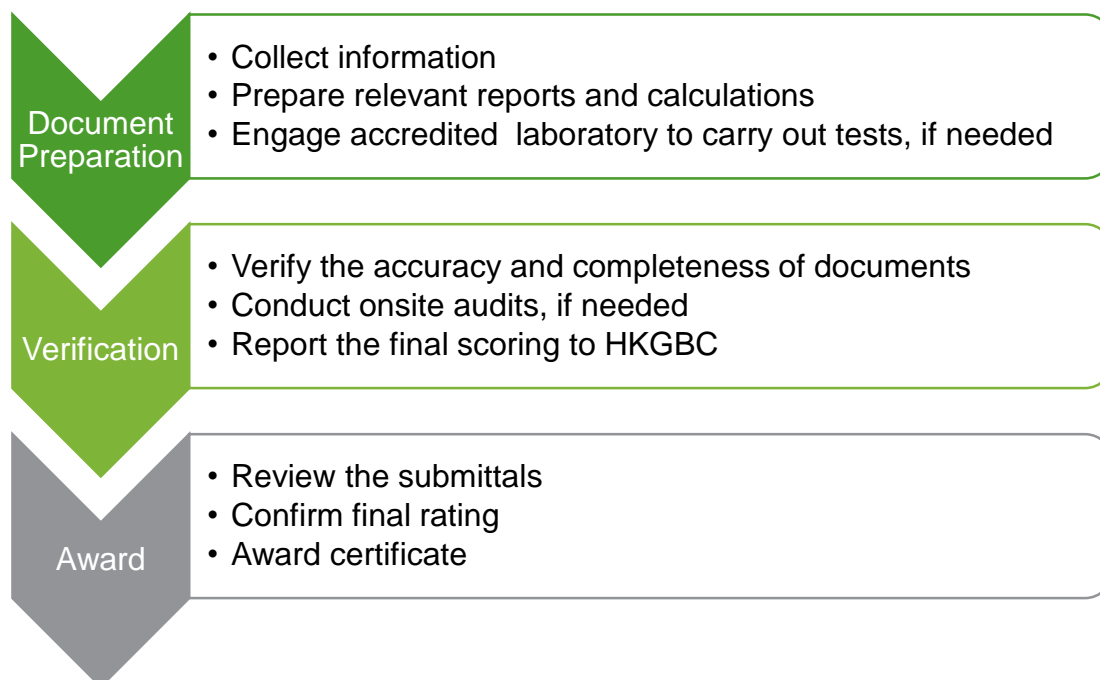
Upon complying with the Guideline for the Use of the CIC Green Product Certificate and Logos (the “User Guide”), and with the payment of a licence fee, the CIC Green Product Certification with product details may be displayed for consumer information by print, online, or other accessible media.

## 1.6 Quality Assurance

The CIC or the HKGBC may conduct periodic surveillance assessments of the certified product. The product shall demonstrate compliance with the relevant requirements as claimed during the application.

## 2. CERTIFICATION PROCESS

The Applicants interested in the Scheme are required to go through the following three major processes, as shown in Figure 1, (i) Document Submission; (ii) Verification Process by VVB; (iii) Award of the certificate.



*Figure 1 Certification Process*

## 2.1 DOCUMENT PREPARATION AND VERIFICATION

### 2.1.1 Compliance under Carbon Label

To demonstrate compliance with the Carbon Label, the Applicant is required to provide a life cycle assessment report or a third-party verified product-level Type III Environmental Product Declaration (EPD) for quantifying and reporting the carbon footprint of a product (CFP) in accordance with ISO 14025:2006, ISO 14067:2018, ISO 21930:2017, GB/T 24025-2009, GB/T 24067-2024 or BS EN 15804:2012. The system boundary of the CFP study shall cover at least A1 (raw material supply), A2 (material transport), A3 (manufacturing process) and A4 (product transport)<sup>1</sup>. The points would be awarded according to the benchmark specified in the Technical Requirements of a specific product category (if applicable). For a detailed explanation of the Life Cycle Assessment and Carbon Footprint of a Product Study, please refer to Section 4.

The Applicant can choose to apply for the Carbon Label via either (i) the Carbon Auditing Route; OR (ii) the EPD Route.

#### i) Carbon Auditing Route

**Document Preparation:** Applicant shall first engage a certified carbon auditor (CCA), either internally or externally, to carry out the carbon auditing and reporting duties. Based on the requirements stated in the Standard and the CFP quantification tool provided, a CFP study report should be compiled by the appointed CCA detailing the carbon footprint of the studied product throughout the designated life cycle stages. The methodology and contents to be included in the CFP Study report are listed in Section 4.

**Verification:** The CFP study report and relevant documentation should be validated and verified by a GHG Validation / Verification Body (VVB) accredited by the Hong Kong Accreditation Service (HKAS) or equivalent accreditation programmes.

The Applicant shall provide relevant supporting information as requested by the VVB. This includes, but is not limited to, the completed CFP assessment, evidence of raw materials and fuel used, electricity bills, and the type of machines used.

The VVB shall prepare the verification report and recommend the acceptance and associated points to be awarded under the Carbon Label.

#### ii) The EPD Route

A simplified route is applicable for products obtained a product-level Type III EPD certificate, given that the EPD certificate fulfil the following requirement

- The EPD certificate shall be issued by an independent 3<sup>rd</sup> party at a product level.
- The product name listed on the EPD certification must match exactly with the product name specified in the application.

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<sup>1</sup> Reporting of A4 (transport) is mandatory for Reinforcing bar & Structural steel only.

- The EPD certificate shall be issued in accordance with BS EN 15804:2012, ISO 21930:2017, ISO 14025:2006, GB/T 24025-2009.
- The EPD certificate shall clearly state the GHG emission covering the product stage A1-A3 (Cradle-to-gate).

**Document Preparation:** The Applicant shall submit the EPD certificate for the Carbon Label.

**Verification:** Verification by VVB for Carbon Label is waived if the product is applicable under EPD Route.

### **2.1.2 Compliance under Resource, Environment, Performance and InnoSmart Labels**

To demonstrate compliance under labels other than the Carbon Label, the Applications shall follow the general process as illustrated in Figure 1.

**Document Preparation:** The Applicant shall prepare relevant reports, calculations, supporting evidence and laboratory test reports in accordance with the verification documents specified under the target criteria.

**Verification:** The relevant documentation should be validated and verified by a GHG Validation and Verification Bodies (VVB) or Verification Body (VB) accredited by the Hong Kong Accreditation Service (HKAS) or equivalent accreditation programmes. The Applicant shall provide relevant supporting information as requested by the VVB/VB.

The VVB/VB shall prepare the verification report and recommend the acceptance and associated points to be awarded under each label.

## **2.2 AWARD OF CERTIFICATION**

Once the document preparation and verification are completed, the Applicant shall submit a complete application form, settle the application fee, and provide the EPD certificate (if applicable) and verification report with supporting documents.

Based on the review and total points achieved, the CIC Green Product Certification will be issued with a corresponding grade.

For further information and assistance during the application process, please visit the CIC Green Product Certification website: <https://cicgpc.hkgbc.org.hk>.

## **2.3 GUIDELINES FOR INCLUSION OF SIMILAR PRODUCTS**

Products under the same product series are eligible to be certified under ONE group product certificate, and the CFP value shall be under same rating, but not remain consistent within the product series.

For detailed definition, please refer to the Technical Requirements under specific product category.

### 3. DEFINITIONS & ACRONYMS

#### 3.1 TERMS RELATING TO CFP QUANTIFICATION AND LABELLING

*Biomass:* Material of biological origin excluding material embedded in geological formations and material transformed to fossilised material. Biomass includes organic material (both living and dead), e.g. trees, crops, grasses, tree litter, algae, animals, and waste of biological origin, e.g. manure.

*Carbon Dioxide Equivalent (CO<sub>2e</sub>):* Unit for comparing the radiative forcing of a greenhouse gas to that of carbon dioxide. Mass of a GHG is converted into CO<sub>2e</sub> using global warming potentials according to IPCC Global Warming Potential Values.

*Carbon Footprint of Product (CFP):* Sum of greenhouse gas emissions and removals in a product system, expressed as CO<sub>2</sub> equivalents and based on a life cycle assessment using the single impact category of climate change.

*Certified Carbon Auditor (CCA):* An individual who is qualified to conduct carbon auditing for a particular product category under the Scheme

*CFP Study:* A carbon footprint study measures the total greenhouse gas emissions (GHG) directly and indirectly caused by an individual, organization, event, or product. This measurement is typically expressed in terms of carbon dioxide equivalents (CO<sub>2e</sub>), accounting for various greenhouse gases such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) over their lifecycle, from production through consumption to disposal.

*Global warming potential (GWP):* An index measuring the radiative force following an emission of a unit mass of a given substance, accumulated over a chosen time horizon, relative to that of the reference substance, carbon dioxide (CO<sub>2</sub>). The GWP thus represents the combined effect of the differing times these substances remain in the atmosphere and their effectiveness in causing radiative forcing.

*Greenhouse Gas (GHG):* Gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of radiation emitted by the Earth's surface, by the atmosphere itself, and by clouds. This property causes the greenhouse effect. Water vapour (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>) and ozone (O<sub>3</sub>) are the primary GHGs in the Earth's atmosphere. Human-made GHGs include sulphur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons (HFCs), chlorofluorocarbons (CFCs) and perfluorocarbons (PFCs); several of these are also O<sub>3</sub>-depleting.

*ICE:* Inventory of Carbon and Energy.

<i>IPCC:</i>	Intergovernmental Panel on Climate Change.
<i>ISO:</i>	International Organization for Standard.
<i>Manufacturer:</i>	for the purpose of this Standard these terms comprise both manufacturers of a product as well as material suppliers. These may not necessary be the companies that apply for the CIC Green Product Certification, since certification can also be awarded to retailers of a product. However, data from the original manufacturer of the product are required.
<i>Product Category:</i>	Group of products that can fulfil equivalent functions.
<i>Product Category Rules (PCR):</i>	Set of rules, requirements and guidelines for development Type III environmental declarations for one or more product categories.
<i>Product System:</i>	Collection of unit processes with elementary flows and product flows, performing one or more defined functions and which models the life cycle of a product.
<i>System Boundary:</i>	Set of criteria specifying which unit processes are part of a product system.
<i>Type III Environmental Declaration:</i>	Environmental declaration providing quantified environmental data using predetermined parameters and, where relevant, additional environmental information.
<i>V/VB:</i>	GHG Validation / Verification Body that provides GHG assertions' validation and verification services.

### 3.2 TERMS RELATING TO LIFE CYCLE ASSESSMENT

<i>Life Cycle:</i>	Consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal.
<i>Life Cycle Assessment (LCA):</i>	Compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle.
<i>Life Cycle Impact Assessment (LCIA):</i>	Phase of life cycle assessment aimed at understanding and evaluating the magnitude and significance of the potential environmental impacts for a product system throughout the life cycle of the product.
<i>Life Cycle Inventory Analysis (LCI):</i>	Phase of life cycle assessment involving the compilation and quantification of inputs and outputs for a product throughout its life cycle.

<i>Primary Data:</i>	Quantified value of a unit process or an activity obtained from a direct measurement or a calculation based on direct measurements at its original source. [note: primary data need not necessarily originate from the product system under study because primary data may relate to a different but comparable product system to that being studied; primary data may include GHG emission factors and/or GHG activity data.]
<i>Site-specific Data:</i>	Data obtained from a direct measurement, or a calculation based on direct measurement at its original source within the product system.
<i>Secondary Data:</i>	Data obtained from sources other than a direct measurement, or a calculation based on direct measurements at the original source such as databases and published literature validated by competent authorities.
<i>Sensitivity Analysis:</i>	Systematic procedures for estimating the effects of the choices made regarding methods and data on the outcome of a CFP study.
<i>Sensitivity Check:</i>	Activity of verifying that the information obtained from a sensitivity analysis is relevant for reaching the conclusions and giving recommendations.

## 4. CARBON FOOTPRINT OF PRODUCT STUDY

The CFP study shall include the four phases of life cycle assessment (LCA), i.e. goal and scope definition, life cycle inventory (LCI) analysis, life cycle impact assessment (LCIA), and life cycle interpretation, as defined in ISO 14067: 2018.

### 4.1 GOAL AND SCOPE DEFINITION

#### 4.1.1 *The Goal*

The goal of carrying out a CFP study is to calculate the potential contribution of a specific product to climate change expressed as CO<sub>2e</sub> by quantifying all significant GHG emissions and removals over the product's life cycle. Under the Kyoto Protocol, seven types of GHGs are identified to have a direct impact on global warming, namely, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>) (United Nations, 2012).

The CFP study reports submitted by the Applicant will be evaluated by Validation and Verification Body. This is facilitated by identical CFP quantification and communication requirements under the same product category as stipulated in Annex C of ISO 14067:2018.

### 4.1.2 System Boundary

The assessment of carbon footprint under this Scheme is based on a “cradle-to-gate” approach<sup>2</sup>, illustrated in Figure 2. All GHG emissions and removals arising from raw material acquisition through production shall be captured, as shown in Table 2.

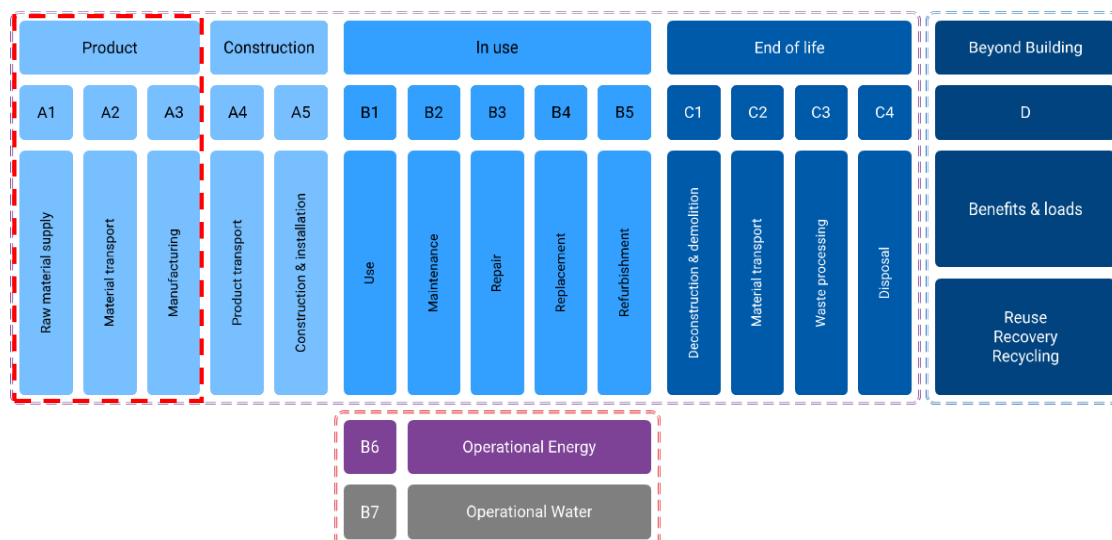


Figure 2. Product Carbon Assessment Boundary

Table 2 System Boundary for Quantifying Carbon Footprint

System Boundaries	Processes
A1. Raw material supply	<ul style="list-style-type: none"> <li>Extraction, handling, and processing of the raw materials and intermediate component products as well as fuels used in the production</li> <li>If relevant, recycling process of recycled materials used in the product</li> </ul>
A2. Transport	<ul style="list-style-type: none"> <li>Transportation of all input materials and fuels from the supplier to the gate of production plant</li> </ul>
A3. Manufacturing	<ul style="list-style-type: none"> <li>The energy to store, move, produce and finish the product, operate, and manufacture, as well as transport and process wastes from these core processes</li> <li>Production of input components</li> <li>Production of distribution and consumer packaging</li> </ul>

## 4.2 LIFE CYCLE INVENTORY ANALYSIS

LCI is the phase of LCA involving the compilation and quantification of inputs and outputs for a product throughout its life cycle. This Section states the key principles of

<sup>2</sup> Reporting of A4 (transport) is required for Reinforcing bar & Structural steel only.

CFP quantification, and the associated sources of GHG emissions, and data requirements for LCI analysis under the CIC Green Product Certification.

#### **4.2.1 Key Principles**

The quantification and reporting of a CFP in accordance with the Standard is based on the principles of the LCA methodology provided in ISO 14040:2006/Amd 1:2020 and ISO 14044:2006/Amd 2:2020.

##### **i) Relevance**

Select data and methods appropriate to the assessment of the GHG emissions and removals arising from the product system being studied.

##### **ii) Completeness**

Process to determine whether information from the phases of a life cycle assessment is sufficient for reaching conclusions in accordance with the goal and scope definition.

##### **iii) Consistency**

Process to determine whether the assumptions, methods and data are consistently applied throughout the study and are in accordance with the goal and scope definition.

##### **iv) Accuracy**

Ensure that CFP quantification and communication are accurate, verifiable, relevant and not misleading and that bias and uncertainties are reduced as far as is practical.

##### **v) Transparency**

Due to the inherent complexity of LCA, transparency is an important guiding principle in executing LCAs in order to ensure a proper interpretation of the results.

##### **vi) Avoidance of double counting**

To decrease the risk of misunderstandings, a description of each unit process shall be recorded. Since data collection may span several reporting locations and published references, measures should be taken to reach uniform and consistent understanding of the product systems to be modelled.

#### **4.2.2 Data Requirements**

CFP quantification carried out following the Standard shall include all GHG emissions and removals of those unit processes within the predefined system boundary that have the potential to make a significant contribution to the CFP. The calculation shall relate system input and output data to the functional unit e.g. tCO<sub>2e</sub> / t of product produced. The assessment shall include:

- i) Contribution from any one source of GHG emissions of more than 1% of the anticipated total GHG emissions associated with the product being assessed; and
- ii) At least 95% of the anticipated life cycle GHG emissions and removals associated with the functional unit.

**Site Specific Data**

Site-specific data can be collected from a specific site, or can be averaged across all sites that contain the process within the product system under study. They can be measured or modelled, as long as the result is specific to the process in the product's life cycle.

ISO 14067: 2018

Site-specific data shall be collected for individual processes under the financial or operational control of the organisation undertaking the CFP study and shall be representative of the processes for which they are collected. Site-specific data should also be used where practicable for those unit processes that contribute significantly to the CFP but are not under the financial or operational control of the organisation undertaking the CFP study.

Primary data and secondary data that are not site-specific data shall only be used for inputs where the collection of site-specific data is not practicable such as GHG emissions in the upstream processes, or for processes of minor importance and may include literature data, such as default emission factors, calculated data, estimates or other representative data. Primary data that are not site-specific data, based on global or regional averages, collected by regional or international organisations and which have undergone third-party verification should be used when the collection of site-specific data is not practicable. Secondary data shall be justified and documented with references in the CFP study report. A CFP study should use data that reduce bias and uncertainty as far as practical by using the best quality data available. Primary and secondary data shall be selected to enable the goal and scope of the CFP study to be met.

If allocation of GHG emissions and removals is needed, the inputs and outputs of the product system should be partitioned between its different products or functions in a way that reflects the underlying physical relationships between them. For instance, should more than one product be transported by a transport system (e.g. truck, ship, aircraft, train), the emissions arising from the transport system shall be divided amongst the products on the basis of: (i) the relative mass of different products being transported; or (ii) the relative volume of different products being transported. Where physical relationship alone cannot be used as the basis for allocation, the inputs should be allocated between the products and functions in a way that reflects other relationships between them (e.g. economic value). The selected allocation methods shall be documented in the CFP study report in detail and the GHGs taken into account shall be clearly stated.

Applicants undertaking a CFP study should have a data management system and should seek to continuously improve the consistency and quality of their data and retention of relevant documents and other records. Since data collection may span several reporting locations and published references, measures should be taken to reach uniform and consistent understanding of the product systems to be assessed. A check on data validity shall be conducted during the process of data collection to ensure compliance with the requirements of the Standard.

The quantified figures for supporting the assessment of GHG emissions and removals of the product shall be collected and submitted for analysis and verification over a minimum of six months and a maximum of the most recent two years. The CFP results obtained from accredited VVB shall be valid for a maximum period of two years. If a significant change associated with the life cycle GHG emissions and removals of the product is observed, the validity ceases in such situation.

### **4.3 Life Cycle Impact Assessment**

In the LCIA phase of a CFP study, the potential climate change impact of each GHG emitted and removed by the product system shall be calculated by multiplying the mass of GHG released or removed by the 100-year GWP given by the IPCC Global Warming Potential Values<sup>3</sup> in units of “kgCO<sub>2</sub>e per kg emission”. The CFP is the sum of these calculated impacts. Where GWP values are amended by the IPCC, the latest values shall be used in the CFP calculations. If the latest IPCC GWP data are not used, this shall be stated and justified in the CFP study report.

### **4.4 Life Cycle Interpretation**

In the life cycle interpretation phase of a CFP study, the results and conclusions of the CFP study shall be documented in the CFP study report without bias. The results, data, methods, assumptions, and the life cycle interpretation shall be transparent and presented in sufficient detail to allow the reader to comprehend the complexities and trade-offs inherent in the CFP study.

### **4.5 CFP Study Report**

The CFP study report shall comprise at least the following information:

#### **4.5.1 Goal and Scope**

The goal and scope shall be defined in accordance with the Standard (or modified scope if applicable along with justifications and exclusions, of the CFP study), including but not limited to:

- Functional unit;
- System boundary; and
- Production process map.

#### **4.5.2 LCI and LCIA:**

- General plant information;
- Reporting period;
- Cut-off criteria and cut-offs;
- Choices and assumptions;

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<sup>3</sup> [Microsoft Word - Global-Warming-Potential-Values.docx](#)

- Selected allocation approach;
- Description of data, including decisions concerning data, sources of data, details of individual data, and assessment of data quality, e.g. results of sensitivity analysis and uncertainty assessments;
- Sensitivity checks regarding the significant inputs
- Treatment of electricity; and
- Disclosure and justification of value choices that have been made in the context of decisions within the CFP study.

#### **4.5.3 CFP quantification results:**

- GHG emissions and removals linked to the main life cycle stages, i.e. raw material acquisition; production, and transportation for both materials and products, including the absolute and the relative contribution of each life cycle stage;
- GHG emissions and removals arising from conventional fossil fuels, alternative fuels and biogenic carbon sources and sinks;
- GHG emissions and removals arising from direct and indirect emissions; and
- GHG emissions of the product assessed in terms of tCO<sub>2e</sub>/t or kgCO<sub>2e</sub>/t of product produced.
- Significant issues based on the results of the quantification of the CFP according to LCI and LCIA phases.
- Evaluation that considers completeness, sensitivity and consistency checks.
- Conclusions, limitations, and recommendations.
- Declaration of the information provided is true and correct.

## 5. REFERENCES

ISO 14025 (2006) *Environmental Labels and Declarations – Type III Environmental Declarations – Principles and Procedures.*

ISO 14040 (2020) *Environmental Management – Life Cycle Assessment – Principles and Framework.*

ISO 14044 (2020) *Environmental Management – Life Cycle Assessment – Requirements and Guidelines.*

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.*

ISO 14067 (2018) *Greenhouse Gases – Carbon Footprint of Products – Requirements and Guidelines for Quantification and Communication.*

IPCC (2006) *Guidelines for National Greenhouse Gas Inventories.* National Greenhouse Gas Inventories Programme, Intergovernmental Panel on Climate Change.

Lindstad, T., Olsen, S.E., Tranell, G., Færden, T. and Lubetsky, J. (2007) Greenhouse Gas Emissions from Ferroalloy Production, *International Ferro-Alloys Congress (INFACON XI)* New Delhi, India, 18-21 February 2007.

United Nations (2020) *The Doha Amendment to the Kyoto Protocol.* New York: United Nations.