Carbon Neutral Standard V1.0

CARBON NEUTRAL CERTIFICATION FOR CONSTRUCTION AND RENOVATION PROJECTS

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1.0 Purpose, Structure and Intended Uses

1.1 Purpose

This document presents the general rules of procedure of the Taïga Initiative applicable to the carbon neutral certification program for projects whether construction or renovation of buildings or infrastructure.

This certification is intended to assure consumers that the construction or renovation is carbon neutral because there has been an intrinsic carbon offset and movement of workers to the construction or renovation project site through the purchase of carbon offset credits based on a scientific method and an internationally recognized standard.

The purpose of this Standard is to describe the requirements for claims that construction or renovation is carbon neutral.

1.2 Structure of this Standard

The Standard provides:

- Steps in the carbon neutral certification process leading to the issuance of a certificate;
- Guidelines for users of the Taïga Initiative certification marks; and
- Provisions relating to all construction or renovation projects certified by Taïga Initiative.

1.3 Intended users

The intended users of this Standard are any type of business or organization as well as anyone interested in the purchase or rental of buildings or in public sector carbon offsetting efforts in infrastructure projects in meeting the requirements of this Standard. This Standard also provides guidelines for users of the Taïga Initiative certification mark.

Once the company or organization has selected the certification (s) it is interested in, it must then choose the project it wants to have certified.

Subsequently, the company or organization should contact Taïga Initiative in order to obtain a service contract (*Services Agreement* of Taïga Initiative) and begin the certification process.

2.0 Scope, objectives and limits

2.1 Scope

This Standard applies to all projects for the construction or renovation of buildings or infrastructure. This Standard allows building construction or renovation or infrastructure

projects to be qualified and quantified for the purpose of making a carbon neutral certification claim.

The relative carbon neutral claim must be based on the fact that there has been an intrinsic carbon offset of the construction or renovation project, also considering the displacement of site workers through the purchase of carbon credits.

The amount of carbon to be offset must be determined by a life cycle analysis (LCA) of the construction or renovation project according to ISO 14040-44 or ISO 14064-1 or the *Greenhouse Gas Protocol*.

2.2 Objectives

The objectives of this Standard are:

1. To assess and provide third party carbon neutral certification for projects whether construction or renovation of buildings or infrastructure.

2. Ensure that products bearing the Taïga Initiative logo, meeting the requirements of this Standard, are credible in the carbon neutral declaration.

2.3 Limits

Ideally, you should reduce your carbon emissions to reduce the greenhouse effect caused mainly by CO2. But when this is not possible or difficult to achieve for economic reasons, for example, we can offset our emissions by purchasing carbon credits from other projects which are carbon sinks.

Carbon sinks absorb carbon from the atmosphere like reforestation and agriculture projects.

2.4 Study boundaries and life cycle stages

The useful life of the construction or renovation must be at least 60 years to take full account of maintenance and replacement. In addition, the limit of the system must be a cradle-to-grave study. Tables 1 and 2 indicate the stages of the life cycle considered and not considered.

Table 1. Life cycle stages considered and not considered.

LIFE CYCLE STAGES CONSIDERED	DETAILS
Materials manufacturing	Including: • Resource extraction and recycled content, • Transportation, • Production, • And everything applicable from the extraction of raw materials to the

LIFE CYCLE STAGES CONSIDERED	DETAILS
	finished product for construction materials (cradle-to-gate).
Transportation of material to the construction or renovation site	
Transport of workers to the site	
Construction or renovation / installation process	Energy use by construction equipment as well as production, transport and disposal of residues during construction.
Maintenance and replacement	Production and transport of replaced material and transport and disposal of replaced material.
Regional variation in construction energy consumption	Energy extraction, transport, distribution and combustion / use of energy.
Type of construction and expected lifespan	Expected lifespan of 60 years.
Deconstruction / Demolition	Energy used by demolition / deconstruction equipment.
Transport: Transport of demolition / deconstruction residues	
Disposition	Effects of landfill / incineration activities.

Table 2. Life cycle stages not considered.

LIFE CYCLE STAGES NOT CONSIDERED	DETAILS
Use of building or infrastructure	Material emissions during use of the building or infrastructure.
Repair and renovation	Production and transport of replaced material and transport and disposal of replaced material.
Treatment of construction / demolition residues	Energy used for handling and processing until the end of the waste.

The materials that should be included in the LCA studies (if applicable) are listed in Table 3.

Table 3. Materials included and excluded in LCA studies.

THE MATERIALS THAT ARE CONSIDERED	MATERIALS THAT ARE NOT CONSIDERED
Footings and foundations	Excavation and other site improvements
Floor slabs	Facilities / equipment / fittings: interior components including counters, lockers, ladders, display panels, etc.
Parking structures	
Basement walls	Building services (electricity, mechanics, fire detection, alarm systems, elevators, etc.).
Floor construction	Operation energy*
Roof construction	Water exploitation
Exterior walls (from cladding to interior finishes)	Partitions / partitions
Exterior windows	Interior doors
Exterior doors	The finishes for the stairs
Roof covering	Finishes for non-structural walls
Roof openings	Finishes for floors
Staircase constructions	Finishes for ceilings

* *Could be considered for a LCA of building, but optionally*.

Moreover, the environmental impact of the stages of the life cycle listed in Table 4 must be taken into account in the LCA of the construction or the renovation.

Table 4. Potential impact analyzed in the LCA.

MEASURED IMPACT	UNIT
Global warming potential	Kg CO2 equivalent

It is strongly suggested to use the LCA software of Athena Impact Estimator (IEB), to calculate the inventory and assess the potential environmental impacts of a building or a house. Or Athena Institute's Pavement LCA software for paving projects. But all other recognized software will be accepted, such as: SimaPro, GaBi and OpenLCA.

The accepted environmental impact assessment methods:

- TRACI, v2.1: For North American construction projects, LCI data should be of North American origin and LCIA method should be TRACI.
- CML, v2001.
- ReCiPe, v1.07.

The databases used to study construction or renovation must comply with ISO 14040-44 or ISO 14064-1 or the *Greenhouse Gas Protocol*. Here are the most used databases:

- Encoinvent: database widely used by LCA experts.
- US LCI: database mainly for regional data in transport.
- Athena: the database comes by default with the impact assessment tool.

3.0 Terms and definitions

Specific terms and definitions are provided below.

Activity: Specific activity, grouping of activities or event of a company or organization carried out in a given or planned time.

Certified project: Project for which a company or organization has demonstrated full compliance with the requirements of this Standard and for which a company or organization is authorized to apply the Taïga Initiative certification logo, as proof that the project complies with the conditions of the program.

Construction: According to the Larousse dictionary, *What is built, house, building or monument*.

Global warming potential: Environmental impact which is due to the accumulation of greenhouse gases such as carbon dioxide (CO2), methane (CH4) and nitrous oxide (N20).

Infrastructure: According to the Larousse dictionary, *Set of works constituting the foundation and installation on the ground of a construction or set of installations (for example roads, railways, airports) or Set of installations, equipment needed by a community*.

Life Cycle Assessment (LCA): LCA is an approach that takes into account potential environmental impacts in the design and development of a product, service or building. This approach takes into account these potential impacts throughout its life cycle: from resource extraction to end of life.

Process: A process is a *set of interrelated or interactive activities that transforms entrants into exits*. (ISO 9000: 2005, definition 3.4.1)

Renovation: According to the Larousse dictionary, *Action to refurbish by deep transformations*.

Standard: Carbon neutral standard from the Taïga Initiative.

4.0 Referenced documents

4.1 Normative references

The following normative documents contain provisions which, by reference in this text, constitute modalities of this Standard.

1. ISO 14040: 2006 “Environmental management - Life cycle assessment - Principles and framework. "
2. ISO 14044: 2006, “Environmental management - Life cycle assessment - Requirements and guidelines. "
3. World Resources Institute and World Business Council for Sustainable Development, September 2011, “Greenhouse Gas Protocol: Product Standard Product Life Cycle Accounting and Reporting Standard. "
4. ISO 14064-1: 20018, “Greenhouse gases - Part 1: Specifications and guidelines, at the organization level, for the quantification and reporting of greenhouse gas emissions and removals.

4.2 Other reference

1. Athena Institute (March 2014) Athena Guide to Whole-Building LCA in Green Building Programs. Accessed March 13, 2021: https://calculatelca.com/wp-content/uploads/2014/03/Athena_Guide_to_Whole-Building_LCA_in_Green_Building_Programs_March-2014.pdf
2. Athena Institute: Athena Pavement LCA is a free LCA-based software package that measures environmental impact of Canadian and US roadway designs. Accessed March 13, 2021: http://www.athenasmi.org/our-software-data/pavement-lca/
3. ISO 14020: 2000, “Environmental labels and declarations - General principles. "
4. ISO 14021: 2016, “Environmental labeling and declarations - Self-declared environmental claims (Type II labeling). "
5. ISO 14024: 2018 “Environmental labels and declarations - Issuance of the type I environmental label - Principles and procedures. "
6. ISO 9001: 2000, “Quality management systems - Requirements. "
7. ISO / IEC Guide 17065: 2012, “Conformity assessment - Requirements for bodies certifying products, processes and services. "
8. Larousse Dictionary “Dictionnaire Larousse”: https://www.larousse.fr/dictionnaires/francais/. Accessed March 19, 2021.

5.0 Requirements

This section of the Standard describes the compliance requirements for companies or organizations as applicable. See also the graphic representing the certification process in detail in *Annex A: Carbon Neutral project certification Procedure*.

The company or organization must provide a description of the construction or renovation project and demonstrate how the carbon emissions calculations were performed. In addition, he must explain what tools or means that were used.

5.1 Qualification and quantification requirements

5.1.1 Qualification of the carbon emission report

The company or organization must provide a project carbon emission report based on either ISO 14040-44, ISO 14064-1 or Greenhouse Gas Protocol: Product Standard Product Life Cycle Accounting and Reporting Standard and as indicated in section 2.4.

5.1.2 Quantification of emissions

The company or organization must provide proof that its emissions have been offset by the purchase of carbon credits.

6.0 Requirements assessment

6.1 Documentation review

For verification, the company or organization must submit all documents and data necessary for the initiative. The verifier will review the submitted documents and assess the business or organization's compliance with the requirements of the Standard (see section 5.0 Requirements).

6.2 Verification findings

After the completion of the documentation review, the verifier may have three types of findings regarding the degree of compliance of the company or organization with the requirements of this Standard: non-compliance report, new request for information and opportunity for improvement.

6.2.1 Non-compliance report

A non-conformity report is defined as non-compliance with a requirement specified in this Standard. As the case may be, corrective or preventive action or actions must be taken before certification can be granted, within an established timeframe.

6.2.2 New information request

A new information request is for mandatory information that may be needed to determine compliance. As the case may be, corrective or preventive action or actions must be taken before certification can be granted, within an established timeframe.

6.2.3 Opportunity for improvement

An opportunity for improvement is defined as an opportunity to exceed minimum requirements. Certification does not depend on the realization of an improvement opportunity. For this reason, corrective or preventive action or actions are not necessary, but are suggested.

7.0 Guidelines for Certification Mark Customers

7.1 Certification mark customers

Customers of the certification mark are permitted to use the Taïga Initiative certification logo only as a certified claim of conformity, as defined in the *Annex B: Taïga Initiative — Brand & Identity Guideline* of the *Services Agreement*.

7.1.1 Conditions of use of the certification logo

Customers of the certification mark are not permitted to make any changes to the final product before it is sold, or to embellish or assign unsubstantiated environmental claims to the project or business.

7.1.2 Application and fees

These customers must obtain permission to use the Taïga Initiative certification logo by completing an application (*Logo Request Form* (*Annex C* of the *Services Agreement*)) and by submitting to rules and administrative fees for its use.

8.0 Certification and continuous compliance

8.1 Certification

Once a project is qualified for certification, based on its compliance with the Standard, a Taïga Initiative Carbon Neutral Certificate of Compliance is issued. Certificates are valid for one year, provided the company or organization complies with the requirements.

8.2 Continuous compliance

Annual verification to demonstrate continued compliance with the Standard is required if the company or organization wishes to continue to make a Taïga Initiative certified statement.

8.3 Notice of change

If the company or organization makes any changes to its project that affect its compliance with the requirements of the Standard, it shall notify Taïga Initiative of these changes using the *Change Notification* form (*Annex D* of the *Services Agreement*).

9.0 Labelling requirements

9.1 National requirements

All uses of the Taïga Initiative certification logo or references to the certification on the project and in advertising of the project, company or organization must be made in accordance with applicable laws.

9.2 Taïga Initiative requirements

9.2.1 Guidelines

The company or organization must comply at all times with the requirements of the *Annex B: Taïga Initiative — Brand & Identity Guideline* of the *Services Agreement*.[1] A certified and non-certified project cannot have the same trade name or the same brand designation.

[1] Provided as a supplement to the *Taïga Initiative Services Agreement*. This document is also available on request.

10.0 Complaints and appeals

10.1 Complaints

All complaints and appeals are handled in accordance with the *Complaints and Appeals Procedure of Taïga Initiative* (*Annex E* of the *Services Agreement*).[2]

[2] Provided as a supplement to the *Taïga Initiative Services Agreement*. This document is also available on the Taïga Initiative website at: www.taigainitiative.com and on request.

ANNEX A: CARBON NEUTRAL PROJECT CERTIFICATION PROCEDURE