



# **VERSION** 4.0

STEP 1

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Stichting Klimaatvriendelijk Aanbesteden & Ondernemen

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### **FOREWORD**

We proudly present version 4.0 of the CO<sub>2</sub> Performance Ladder. The number one decarbonisation tool to assist organisations in taking concrete steps in our collective goal towards zero emissions. Since its introduction in 2009, the CO<sub>2</sub> Performance Ladder has been continuously developed without losing sight of its core principles. The Ladder offers organisations a structured approach for gradually implementing ambitious changes that will reduce CO<sub>2</sub> and save energy. The additional advantages include certified organisations gaining an advantage in procurement processes and immediate compliance with energy reporting requirements.

The use of the Ladder has increased more than ever in recent years. At the beginning of 2025, more than 7,500 organisations are using the CO<sub>2</sub> Performance Ladder in the Netherlands and Belgium. In another five European countries, we are testing the use of the Ladder in their specific national context with local partners. The CO<sub>2</sub> Performance Ladder is quickly becoming one of the most important instruments in the field of socially responsible purchasing within Europe.

CO<sub>2</sub> Performance Ladder 4.0 aligns better with what is expected in 2025 of organisations in how they approach emissions reduction. It rewards ambitious progress and, above all, actual results. The new CO<sub>2</sub> Performance Ladder is better aligned with our (inter)national context and European standards and legislation. At the same time, it continues to guide large and small organisations, in an accessible manner, in their first steps towards CO<sub>2</sub> reduction.

This new version took more than three years to develop and the result of a completely new Ladder is impressive. As chair of the Foundation for Climate Friendly Procurement and Business (SKAO), I would like to thank everyone who contributed. All those companies, procuring authorities, industry bodies, certification bodies and civic organisations that contributed to the analysis and writing. Together with the driven SKAO staff, this active community has made this outcome possible.

We expect the CO<sub>2</sub> Performance Ladder 4.0 to further challenge and inspire all companies, procuring authorities and organisations to complete their unique path to zero emissions. We have been working towards this goal together since SKAO was founded. Because only together can we prevent further climate change.

Dimitri Kruik

Chair of the Foundation for Climate Friendly Procurement and Business

### INTRODUCTION

The CO<sub>2</sub> Performance Ladder is the sustainability instrument that helps companies and governments reduce energy consumption, CO<sub>2</sub> emissions and related costs. This involves reductions across operational management, in *projects*, and the value chain. The CO<sub>2</sub> Performance Ladder is used as a CO<sub>2</sub> management system and as a procurement instrument. *Organisations* that use the Ladder will see this investment immediately pay off in terms of lower energy costs, material savings and innovation gains.

Organisations can obtain certification from accredited certification bodies for the CO<sub>2</sub> Performance Ladder. This requires continual improvement in insight, energy and CO<sub>2</sub> reduction measures, communication and collaboration. In the execution of projects, but also in the value chain. Organisations satisfying the requirements are often more likely to win a (public) procurement.

The CO<sub>2</sub> Performance Ladder has three steps that increase from 1 to 3¹. Each step has a Handbook containing the requirements for the energy and CO<sub>2</sub> performance of the *organisation* and its *projects*. These requirements cover four different angles: insight, reduction of *energy consumption* and emissions, communication and collaboration. The position of an *organisation* on the CO<sub>2</sub> Performance Ladder is determined by the highest step at which the *organisation* meets all requirements.

Contracting authorities and companies can use the CO<sub>2</sub> Performance Ladder in procurement. The principle behind the CO<sub>2</sub> Performance Ladder is that effort is rewarded. A higher score on the Ladder means a concrete advantage in the procurement process, in the form of a – fictitious – discount on the tender price. All information about procurement with the CO<sub>2</sub> Performance Ladder can be found on the CO<sub>2</sub> Performance Ladder website.

<sup>1</sup> At the time of publication, Step 4 is still being worked on. This is expected at a later date.

### **READER'S GUIDE**

This Handbook for Step 1 of the CO<sub>2</sub> Performance Ladder contains all the requirements that *organisations* must meet in order to obtain and maintain a CO<sub>2</sub> Performance Ladder Certificate at Step 1.

The Handbooks are part of the certification scheme of the CO<sub>2</sub> Performance Ladder. This scheme consists of the following normative documents:

- The certification regulation This contains the requirements for the audit,
   CBs and auditors.
- The Harmonisation Acts These are interpretations of requirements adopted after the publication of the Handbook.
- The audit days table This indicates the minimum audit time and applicable criteria.
- Any other normative documents that are specified at a later time.

The current overview and currently applicable versions (including any transition periods) of normative documents can be found on the CO<sub>2</sub> Performance Ladder website under 'normative documents'.

Each Handbook consists of two parts:

- Part 1 This is the general part that is the same for each step. It contains all
  the general requirements relevant to all certificate holders regardless of
  the step. The classification in Part 1 follows the ISO-Harmonised Structure
  (HS)<sup>2</sup>
- Part 2 This part is different for each step of the CO<sub>2</sub> Performance Ladder.
   It contains all the requirements that apply to the specific step, including
   the requirements of the underlying steps that apply. It is divided into
   four angles: A Insight, B Reduction, C Communication and D –
   Collaboration.

Certification at a desired step requires satisfying the requirements of Part 1 and the requirements of Part 2 for that particular step. There is therefore no need to consult the Handbooks of the underlying steps.

<sup>2</sup> Note that the chapter format, but not the paragraph format, matches the HS throughout

# PART 1

### **SUBJECT AND SCOPE**

This document lists the requirements, criteria and explanations to establish, implement, maintain and improve an energy and  $CO_2$  management system. The goal of the  $CO_2$  Performance Ladder is that energy and  $CO_2$  reduction are a permanent part of the organisation's strategy, policy and actions. Organisations do this both independently and with organisations in the sector and/or value chain.

### NORMATIVE REFERENCES

Below are all the norms and standards that Handbook 4.0 and the CO<sub>2</sub> Performance Ladder certification scheme refer to. Only the named version applies to standards and norms with a publication year<sup>3</sup>. Elements of these norms and standards relevant to the CO<sub>2</sub> Performance Ladder are explained with the requirements or are included in normative Appendix A. So, in general, it is not necessary to download and/or purchase the standards and norms.

**EN 15804:2012+A2:2019** Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products

**GHG Protocol Corporate Standard:2004** A Corporate Accounting and Reporting Standard

**GHG Protocol scope 2 Guidance:2015** An Amendment to the GHG Protocol Corporate Standard

GHG Protocol scope 3 Calculation Guidance:2011
Technical Guidance for Calculating scope 3 Emissions

**GHG Protocol scope 3 Standard:2011** Corporate Value Chain (scope 3) Accounting and Reporting Standard

IAF MD-1:2023 IAF Mandatory Document for the Audit and Certification of a Management System Operated by a Multi-Site Organization

IAF MD-2:2023 IAF Mandatory Document for the Transfer of Accredited Certification of Management Systems IAF MD-5:2023 Determination of Audit Time of Quality, Environmental, and Occupational Health & Safety Management Systems

IPCC AR6:2021 Working Group 1 Contribution to the Sixth Assessment Report of the IPCC: 7SM

**ISO 14064-1:2018** Greenhouse gases – Part 1: Specification with guidance at the organization step for quantification and reporting of greenhouse gas emissions and removals

**ISO 14064-3:2019** Greenhouse gases – Part 3: Specification with guidance for the verification and validation of greenhouse gas statements

**ISO/IEC 17021-1:2015** Conformity assessment – Requirements for bodies providing audit and certification of management systems – Part 1: Requirements

**ISO 50001:2018** Energy management systems – Requirements with guidance for use

**ISO 14067:2018** Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification

<sup>3</sup> For the sake of readability, publication years have been omitted in the rest of the Handbook.

### **TERMS AND DEFINITIONS**

The list below defines key terms as they appear in the Handbook and certification scheme. Some terms are followed by the abbreviation in brackets. Any definition based on an outside source is noted as such.

Accreditation body This is a government organisation responsible for accrediting and maintaining accredited Certification Bodies for the CO<sub>2</sub> Performance Ladder. In other countries, these are organisations that entered into a Multi-Lateral Agreement (EA/IAF) with the RvA, including BELAC in Belgium. In the Netherlands this is the Dutch Accreditation Council (RvA).

Action Plan This is a *short-term strategy* involving the intended preparatory actions and concrete measures to achieve an *organisation*'s targets. If the *organisation* has a *Climate Transition Plan*, the *Action Plan* aligns with the objectives and targets described therein.

Annual audit This external audit is performed by a CB one or two years after the initial audit or after the recertification audit where the certification step remains unchanged.

Audit criteria (Source: ISO 50001) Any policies, procedures or requirements used as a reference against which *audit evidence* is tested.

**Audit evidence** (Source: ISO 50001) Records, factual claims or other information relevant and verifiable to the *qudit criteria*.

**Avoided emissions (Comparative emissions)**<sup>4</sup> These are reduced emissions (positive) or increased emissions (negative) that occur or can occur outside the *organisation*'s *value chain* (and thus outside

scopes 1, 2 and 3), relative to a baseline due to the organisation's action or measure.

**Base year (Source: ISO 14064-1)** A specific historical period identified to compare with other years of energy consumption, energy generation, greenhouse gas emissions,  $CO_2$  removals or other energy or greenhouse gas information.

**Branch** A permanent branch site of one or more entities belonging to the same *organisation*.

- **Head office** The place of business where the *main* entity is located.
- · Branch offices The other branches.

**Business travel (Source: GHG Protocol scope 3 Standard)** These emissions are due to passenger transportation for work-related activities, including business air travel, business travel by private cars and business travel by public transportation. These emissions are a separate scope 3 category per the GHG Protocol.

**Category A, B and C measures** Various steps of implementation have been defined for each measure on the *Measure list*.

- Category A This refers to a 'standard' step of implementation. This means that more than 50% of the organisations for whom this measure is relevant have implemented it.
- Category B This involves a 'progressive' step of implementation. This means that 20% to 50%

<sup>4</sup> Although comparative emissions are more appropriate, the Ladder uses the term avoided emissions because it is a well-recognised term.

of the *organisations* for whom this measure is relevant have implemented it.

 Category C This involves an 'ambitious' step of implementation. This means that only a few organisations have implemented this measure (at most 20%).

Certification Body (CB) A certification body is a third party authorised to conduct a certification or audit to assess an organisation's compliance with the CO<sub>2</sub> Performance Ladder. A prerequisite for this authority is that the CB has an agreement with SKAO and has relevant accreditation by a national accreditation body (or is in the process of obtaining such accreditation).

Certification scheme All normative documents required for certification for the CO<sub>2</sub> Performance Ladder, consisting of the various Handbook versions (Part 1 and Part 2), the certification regulation, the *Harmonisation Acts*, the audit days table and any other normative documents to be designated later.

**Climate Transition Plan** An *organisation*'s long-term and/or medium-term strategy for CO<sub>2</sub> reduction. The deadline, scope and targetss of the *Climate Transition Plan* depend on the certification step.

Consolidation approaches (Source: GHG Protocol Corporate Standard) Methods for determining whether entities partially owned by the *main entity* are wholly, partially or not within the *organisational* boundaries of the organisation. There are three consolidation approaches: equity share, operational control and financial control.

**Consortium** A legal entity through which several organisations (the consortium members) jointly execute one or more projects. Often the organisational form is a VOF (The Netherlands) or Tijdelijke Maatschap (Belgium).

Continual improvement (Source: ISO 50001)
Repetitive activity to improve performance.

**Corrective action** Measure to remove the cause of a *nonconformity* and to prevent repetition.

CO<sub>2</sub> compensation The implementation of CO<sub>2</sub> reductions or CO<sub>2</sub> removals outside the organisation's value chain by purchasing tradable carbon credits. For example, for planting forests or investing in renewable energy projects. Therefore it does not contribute to achieving targets or a (higher) step on the CO<sub>2</sub> Performance Ladder<sup>5</sup>.

CO<sub>2</sub> emissions inventory (Source: GHG Protocol Corporate Standard) An emissions inventory is a quantified list of an *organisation*'s CO<sub>2</sub> emissions and CO<sub>2</sub> sources.

CO<sub>2</sub> equivalent (Source: GHG Protocol Corporate Standard) This unit of global warming potential is used for comparison with a non-CO<sub>2</sub> greenhouse gas to CO<sub>2</sub>. Note to the term: Wherever the Handbook states CO<sub>2</sub> it should be read as: CO<sub>2</sub> including non-CO<sub>2</sub> greenhouse gases relevant to the organisation expressed in CO<sub>2</sub> equivalents, unless it is specifically stated to be CO<sub>2</sub> only.

 ${
m CO}_2$  footprint This is the sum of  ${
m CO}_2$  emitted by an organisation broken down into scope 1, scope 2 and scope 3 and expressed in kg or tons of  ${
m CO}_2$  equivalents.

CO<sub>2</sub> Performance Ladder Certificate A document showing that an organisation's energy and CO<sub>2</sub> management system meets the requirements of the certification scheme for the step of the CO<sub>2</sub> Performance Ladder stated on the certificate. This document has been issued by an authorised CB.

CO<sub>2</sub> Performance Ladder Project A tendered *project* where the CO<sub>2</sub> Performance Ladder plays a role in the procurement process and/or where the contracting authority grants a benefit for holding or obtaining a CO<sub>2</sub> Performance Ladder Certificate. For example, by giving a fictitious discount on the tender price. If there is any advantage in awarding by having, or achieving, a CO<sub>2</sub> Performance Ladder Certificate, it is always a CO<sub>2</sub> Performance Ladder Project. It is not

<sup>5</sup> The CO<sub>2</sub> Performance Ladder does not make any judgements about the social relevance of CO<sub>2</sub> compensation.

relevant here whether the award advantage was or was not decisive when being awarded the contract or in which manner the  $\mathrm{CO}_2$  Performance Ladder was requested in the tender. **SKAO explicitly advises against this practice** (see the Procurement Guide) but the  $\mathrm{CO}_2$  Performance Ladder is sometimes used as a selection criterion or eligibility requirement. This also constitutes a  $\mathrm{CO}_2$  Performance Ladder Project. If there are partial projects within a framework agreement, these projects may be jointly considered as one  $\mathrm{CO}_2$  Performance Ladder Project.

CO<sub>2</sub> removals (negative CO<sub>2</sub> emissions or CO<sub>2</sub> sequestration) (Source: ISO 14064-1) The quantification of the sequestration of CO<sub>2</sub> from the atmosphere within the *organisation*'s value chain.

CO<sub>2</sub> sink The process, action or mechanism the organisation contributes to that results in CO<sub>2</sub> removal. For example, this includes the storage of biogenic CO<sub>2</sub> in the soil or materials within the organisation's value chain. If this occurs outside the organisation's value chain, it is equated with CO<sub>2</sub> compensation.

**CO<sub>2</sub> source** (Source: ISO 14064-1) A process that releases CO<sub>2</sub> into the atmosphere.

(Direct and indirect) biogenic CO<sub>2</sub> emissions CO<sub>2</sub> emissions from burning or oxidising biogenic material from human activities. These emissions are short-cycle. That is, they have a cycle from CO<sub>2</sub> emission to CO<sub>2</sub> sequestration within a few centuries. This contrasts with a cycle of several million years (as with fossil fuel combustion). Biogenic CO<sub>2</sub> emissions can occur in the value chain (indirect) or as a result of the actions of the organisation itself (direct). Biogenic CO<sub>2</sub> emissions explicitly refer only to CO<sub>2</sub> and not to non-CO<sub>2</sub> greenhouse gases.

Direct emissions See Scope 1

**Direct relations** Parties in the *value chain* with which the *organisation* has a contractual relationship, such as suppliers, buyers, customers and commissioning parties.

**Downstream emissions (Source: GHG Protocol scope 3 Standard)** *Indirect CO*<sub>2</sub> *emissions* of sold products and services, this also includes products and services that are distributed but not sold (i.e. without payment). See also *scope 3 emissions*.

Emissions due to energy consumption on a (the) project CO<sub>2</sub> emissions resulting from the energy consumption of a project.

Energy and CO<sub>2</sub> management system (Source: ISO 50001) All related or interacting elements of an organisation's efforts to establish an energy and CO<sub>2</sub> policy and targetss, as well as the processes to achieve those targets.

Energy and CO<sub>2</sub> management team The person or persons with responsibility and authority for implementing an energy and CO<sub>2</sub> management system and improving CO<sub>2</sub> and energy performance.

Energy and CO<sub>2</sub> policy (Source: ISO 50001) The intentions and direction of an *organisation* regarding energy consumption and CO<sub>2</sub> emissions as formally stated by its *management* in, among other things, the Climate Transition Plan and Action Plan.

Energy balance A quantified list of all energy purchased, self-generated, sold and all *final energy consumption* of an *organisation*. The list is broken down into (groups of) facilities, systems, processes or equipment, expressed in joules (kJ, MJ, etc.) or watthours (kWh, MWh, etc.) within a one-year period.

Energy consumption (Source: ISO 50001) The amount of energy used.<sup>6</sup>

Energy consumption on a (the) project Energy consumption for transportation to and from the project site (LCA Stage A4) and energy consumption at the project location (LCA Stage A5).

**Energy efficiency (Source: ISO 50001)** The ratio between the performance, service, goods or energy obtained and the energy input.

<sup>6</sup> For example, an organisation consumes 10,000 kWh of electricity in a month.

**Energy review** (Source: ISO 50001) The analysis of energy efficiency, energy use and energy consumption based on information. This results in the organisation identifying significant energy consumption and opportunities for improving energy performance.

**Energy use (Source: ISO 50001)** The application of energy.<sup>7</sup>

Final energy consumption The energy consumption of the organisation consists of: the sum of the energy purchased and self-produced by the organisation minus the energy sold. This involves only fuels and energy carriers consumed for energetic applications. Fuels and energy carriers consumed as raw materials (such as petroleum for asphalt production) are not included.

Flexibility in the energy system The capacity to temporarily adjust or store the electrical production or consumption of a plant or process. The goal is for organisations to reduce congestion and/or increase the share of renewable energy in the energy system.

Global Warming Potential (of GWP-100) (Source: IPCC) This is a factor that gives the radiative forcing of one unit of a particular non-CO<sub>2</sub> greenhouse gas relative to one unit of CO<sub>2</sub> over a 100-year period. (This is the degree of damage to the atmosphere.) The unit for global warming potential is CO<sub>2</sub> equivalent. Refer to the IPCC for accurate values.

**Green electricity** Electricity from renewable non-fossil sources that meets the criteria<sup>8</sup> for sustainability and additionality described in requirement 1.A.2/2.A.2/3.A.2.

**Green gas** Gas from biomass upgraded to natural gas quality. Note that this is different from natural gas whose CO<sub>2</sub> emissions are compensated through the purchase of tradable carbon credits, i.e. CO<sub>2</sub> compensation.

Greenhouse gases (Source: ISO 14064-1) Gaseous component of the atmosphere that absorbs and reflects radiation emitted by the earth, atmosphere and clouds in the infrared spectrum. A greenhouse gas can be either of natural origin or from human activity. The absorptive capacity of various greenhouse gases is expressed in terms of global warming potential.

**Grey electricity** Electricity that is not *green*.

**Guarantee of Origin (GoO)** A digital certificate that serves as proof that the energy carrier in question (including *green electricity* and *green gas*) has a sustainable origin. A GoO represents 1 MWh of sustainably generated energy.

**Harmonisation Act** The normative interpretations of requirements published after the publication of the Handbook.

**Indirect emissions** See Scope 2 and Scope 3.

**Independence (Source: ISO 50001)** This means having no responsibility connected to the *energy and CO*<sub>2</sub> *management system* or being free from bias and conflict of interest.

Initial audit This external audit is performed by a CB to award the first CO<sub>2</sub> Performance Ladder Certificate or to award a certificate at a new step or in the event of major changes in the activities or organisational boundaries of the organisation.

Intensity value This is an indicator for energy consumption, the use of sustainable energy or  $\rm CO_2$  emissions of the organisation during the reporting year based on energy consumption (in MJ/kWh) or  $\rm CO_2$  emissions per self-chosen reference unit, such as net sales (e.g. kg  $\rm CO_2$ /euro), number of staff (e.g. kg  $\rm CO_2$ /FTE) or production size (kg  $\rm CO_2$ /kg product).

- 7 For example, an organisation consumes energy to heat a furnace.
- 8 These criteria for sustainability and additionality are supplemental to the definition from the EU Renewable Energy Directive (and the Dutch Energy Act, among others). This means that electricity that may be called 'green' in Europe does not automatically count as green electricity for the CO<sub>2</sub> Performance Ladder.
- 9 The CSRD prescribes an intensity value per net revenue.

**Interested party** (Source: ISO 50001) A person or organisation that can influence a decision or activity, can be influenced by a decision or activity or considers itself influenced by a decision or activity.

#### (Internal and external) audit (Source: ISO 50001)

A systematic, independent and documented process used to obtain audit evidence. This objectively assesses the extent to which the audit criteria have been met. An internal audit is conducted either by the organisation itself or by an outside party on behalf of the organisation. An external audit is performed by a CB at an organisation. The CO<sub>2</sub> Performance Ladder has four types of external audits: the initial audit, annual audit, recertification audit and special audit. Note 1 to the term: an audit can be a combined audit (of two or more disciplines). Note 2 to the term: wherever the word 'audit' appears it means an external audit unless it is specifically stated to be an internal audit.

**Issuing body** An organisation responsible for issuing GoOs and recognised by a government. Examples of issuing bodies include VertiCer (the Netherlands), VREG (Flanders), CWaPE (Wallonia) and BRUGEL (Brussels).

**Key persons** Employees who by virtue of their role or function have, or can have, a significant influence on the *organisation's* CO<sub>2</sub> and energy policy, *energy* consumption, consumption, storage or generation of renewable energy, and/or CO<sub>2</sub> emissions. Employees include persons performing work under the authority of the *organisation*.

**Knowledge institute** This independent and professional *organisation* has the relevant knowledge regarding *LCAs* and CO<sub>2</sub> emissions. This can be, for instance, a university or consultancy.

**Large organisation** An *organisation* that does not meet the requirements of a *small organisation*.

**Leased assets** Capital assets used by the *organisation* that are owned by a third party, such as leased cars, leased buildings or leased equipment.

Life Cycle Assessment (LCA) (Source: EN 15804)
An analysis of the potential environmental impacts (including CO<sub>2</sub> emissions) of a product or activity

throughout its life cycle. A distinction is usually made within an *LCA* for construction works by its stage in the life cycle:

- Stage A1-3 Product stage
- · Stage A4-5 Construction process stage
- Stage B1-7 Usage stage
- Stage C1-4 Demolition and disassembly stage
- **Stage D** Opportunities for reuse, recovery and recycling.

See normative Appendix A for more detail on the *LCA* stages for construction work.

Location-based method for scope 2 (Source: GHG Protocol scope 2 Guidance) This is a method that quantifies an organisation's scope 2 emissions from electricity consumption that assumes an average emission factor for electricity generation within a defined location. The demarcation consists of local, sub-national or national boundaries. The role of the location-based method for scope 2 is limited in the CO<sub>2</sub> Performance Ladder to obtaining and providing (§7.3.1 in Part 1) insight. In all other places in the Handbook where reference is made to scope 2, this should be read as scope 2 per the market-based method for scope 2.

Long-term A period until no later than the year 2050.

Main entity The highest entity within an organisation.

Management (level) (Source: ISO 50001) A person or group of persons that direct and manage an organisation at the highest level. Note 1 to the term: Management has the power to delegate authority and provide the organisation with resources. Note 2 to the term: If the energy and CO<sub>2</sub> management system is only applied to part of an organisation, the management refers to those who direct and manage that part of the organisation.

Management review Review of an energy and CO<sub>2</sub> management system by the management of the organisation to ensure the continued suitability, implementation, adequacy, effectiveness and efficiency of the system.

Market-based method for scope 2 (Source: GHG Protocol scope 2 Guidance) A method to quantify an organisation's scope 2 emissions from electricity consumption that assumes the CO<sub>2</sub> emissions of

the energy supplier with whom the organisation has a contractual agreement. These emissions may be offset against GoOs. All requirements for scope 2 in the CO<sub>2</sub> Performance Ladder assume the market-based method for scope 2 unless explicitly stated to be scope 2 using the location-based method.

Material emissions and material energy use If materiality relates to scope 1 or scope 2 emissions (not applicable to scope 3 emissions), these are material emissions. If materiality relates to energy consumption, this is material energy consumption. The limit above which reported emissions or energy consumption is material (the materiality threshold) is 5% for the CO<sub>2</sub> Performance Ladder. Non-material scopes 1 and 2 emissions may be omitted from the emissions inventory and footprint (for lower administrative burden). However, this means these may only add up to a maximum of 5% of total scopes 1 and 2 emissions. Wherever it states scope 1 emissions and/or scope 2 emissions and/or energy consumption, this should be read as 'material scope 1 emissions and/or material scope 2 emissions and/or material energy consumption'.

Materiality (Source: ISO 14064-3) The concept that individual or multiple inaccuracies combined can affect the decisions of internal and external interested parties. Inaccuracies are defined as errors, omissions, incorrect representations or misrepresentations. Whether something is material requires the judgment of an expert.

**Measure list** A list of  $\mathrm{CO}_2$  and/or energy reduction measures broken down by common activities of organisations participating in the  $\mathrm{CO}_2$  Performance Ladder. The purpose of the list is to inspire new measures. This list is also intended to help determine the level of ambition for the targets with category A, B and C measures.

**Medium-term** A period of 5 to 10 years.

**Nonconformity** (Source: ISO 17021-1) An organisation fails to meet a requirement. This can be a major or minor nonconformity depending on the severity of the nonconformity.

**Non-CO<sub>2</sub> greenhouse gases** All *greenhouse gases*, excluding CO<sub>2</sub>, that are recognised in the Kyoto Protocol: methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), HFCs,

PFCs,  $SF_6$  and  $NF_3$  and can be converted to  $CO_2$  equivalents with their global warming potential. **Note to the term:** Wherever the Handbook states  $CO_2$  it should read:  $CO_2$  including non- $CO_2$  greenhouse gases relevant to the organisation expressed in  $CO_2$  equivalents unless it is specifically stated to be  $CO_2$  only.

**Organisation** All entities within the same organisational boundary per Chapter 4.

Other influenceable emissions (OIE) Emissions that fall outside scope 1, 2 or 3 per the GHG Protocol for the organisation. The reason is that these are short-cycle or occur outside the organisation's value chain. If the organisation can significantly influence these emissions, they are relevant to contributing to global climate neutrality. A distinction is made between three OIE types: biogenic CO<sub>2</sub> emissions, CO<sub>2</sub> removals and avoided emissions. CO<sub>2</sub> compensation is explicitly not part of OIE.

Partnerships Formal or informal collaborations between (groups of) parties that are affiliated through their sector, value chain or location and that aim to research or implement energy saving, renewable energy or CO<sub>2</sub> reduction measures that directly relate to the organisation's environment, activities or value chain.

**Pool of experts** This is a public list on the CO<sub>2</sub> Performance Ladder website of SKAO-approved climate or energy experts who can review an organisation's *Climate Transition Plan* in a particular sector or value chain.

**Project** A *project* is a work, service or delivery performed by one *organisation* under contract from another *organisation*. Project activities belong to the *organisation* and are explicitly covered by the targets and requirements of the CO<sub>2</sub> Performance Ladder. If it is a tendered *project*, it may be a CO<sub>2</sub> Performance Ladder Project.

**Project plan** This is an *Action Plan* for a specific CO<sub>2</sub> *Performance Ladder Project*.

**Recertification audit** This *external audit* is performed by a *CB* every three years after the *initial audit*, where the certification step remains unchanged and based

on which a CO<sub>2</sub> Performance Ladder Certificate is awarded on the same step.

Regular frequency The frequency with which requirements are followed must be regular. This means that the requirement is met on the same date – with a margin of one month earlier or later – as the previous time the requirement was met.

Relevant scope 3 emissions and relevant OIE If scope 3 emissions or OIE affect the deliberations and estimates of the *interested parties* of and associated with the *organisation*, they are relevant to the *organisation*. An *organisation* determines its relevant emissions based on

- their relative volume compared to sector emissions;
- their relative volume compared to the organisation's other scope 3 emissions or OIE;
- the organisation's influence on emissions;
- the risk the organisation would face should it not report emissions;
- the value placed on it by interested parties of the organisation;
- outsourcing of work that the organisation first performed itself;
- · identification by the sector as relevant.

Wherever it states scope 3 emissions and/or OIE, this should be read as relevant scope 3 emissions and/or relevant OIE.

Scope 1 emissions (direct emissions) (Source: GHG Protocol Corporate Standard) Scope 1 emissions, or direct emissions (term used in ISO 14064-1), are CO<sub>2</sub> emissions that come from CO<sub>2</sub> sources that the organisation owns or controls. Examples include emissions from burning fossil fuels in its own boilers, furnaces or in its own vehicles. For more explanation, see normative Appendix A.

Scope 2 emissions (indirect emissions from imported energy) (Source: GHG Protocol Corporate Standard)
Scope 2 or indirect emissions from imported energy (term used in ISO 14064-1) are CO<sub>2</sub> emissions that arise from the generation of consumed electricity, heat, cooling and steam that the organisation has purchased (or otherwise brought within organisational boundaries). For more explanation, see normative Appendix A.

Scope 3 emissions (other indirect emissions) (Source: GHG Protocol Corporate Standard) Scope 3 emissions or other indirect emissions (term used in ISO 14064-1) are CO<sub>2</sub> emissions that are a result of the organisation's activities, but arise from sources that are neither owned nor controlled by the organisation. Examples are emissions from the production of purchased materials (upstream) and fulfilment of the work, project, service or delivery supplied or sold by the organisation (downstream). For more explanation, see normative Appendix A.

**Sector** A sector (trade) is a label for all organisations together that are active in a certain category of products or services.

**Sector agreement** An agreement that is demonstrably supported by multiple (international) market players (or industry associations) and NGOs and/ or government.

Short-term A period of one to three years.

**Small organisation** An *organisation* that meets at least two of the following conditions for the previous year:

- staff size was equal to or less than 250 FTE;
- annual turnover was equal to or less than 50 million euros;
- the balance sheet total was equal to or less than 25 million euros.

**Special audit** A *special audit* for the CO<sub>2</sub> Performance Ladder is an unannounced *external audit*, which a *CB* performs at an organisation when

- SKAO or another (interested) party informs the CB of possible significant nonconformities;
- there are indications causing the CB to doubt the proper functioning of the energy and CO<sub>2</sub> management system.

A special audit does not always have to be carried out at the location of the certified organisation. The CB may also reach an opinion by requesting relevant information.

**Supplier** An entity that provides works, services and/or goods to the *main entity* including any subsidiary organisations.

- A-Suppliers the largest suppliers who collectively account for at least 80% of the purchase value of the main entity including any subsidiaries;
- A&C-Supplier these A-Suppliers belong to the same corporate group as the main entity and, as such, must be included in the organisation.

**Tank-to-Wheel (TtW) emissions** CO<sub>2</sub> emissions from the use of a fuel or energy carrier, excluding emissions from extraction and production.

#### Technology Readiness Level (TRL) (Source: NASA)

A type of measuring system used to assess the maturity level of a particular technology. Each technology project is evaluated with the parameters for each technology level and this *project* is then given a *TRL* rating based on the progress of the *project*. There are nine *TRLs*. *TRL* 1 is the lowest and *TRL* 9 is the highest. *TRL* 1 represents technology at the beginning of development and *TRL* 9 represents technology that is technically and commercially ready.

Upstream and downstream emissions on a (the) project Upstream emissions result from purchased materials (*LCA* stages A1, A2 and A3) and downstream emissions include at least those while result from energy or material use in the usage stage of completed construction works (at least *LCA* stage B).

Upstream emissions (Source: GHG Protocol scope 3 Standard) Indirect CO<sub>2</sub> emissions of purchased or acquired products and services. See also Scope 3 emissions.

Value chain (Source: GHG Protocol scope 3 Standard)
A value chain is the combination of all upstream
and downstream activities associated with the
organisation. This value chain includes the use and
disposal of products sold by consumers.

Value chain analysis This is the inventory and analysis of CO<sub>2</sub> emissions from a *value chain* in which the *organisation* operates. This analysis focuses on understanding the extent and origin of CO<sub>2</sub> emissions and the *organisation*'s ability to reduce these emissions by modifying the production process. These may occur due to different design choices and/or by choosing, influencing or collaborating with *organisations* in the *value chain*.

Well-to-Tank (WtT) emissions These CO<sub>2</sub> emissions are from the extraction and production of fuels and energy carriers.

**Well-to-Wheel (WtW) emissions** These CO<sub>2</sub> emissions are from the full life cycle of a fuel or energy carrier. Thus, this is the sum of emissions from extraction and production (*Well-to-Tank emissions*) and use (*Tank-to-Wheel emissions*).

**Zero CO\_2 emissions** Reducing scope 1, 2 and 3 emissions to zero.

# CONTEXT OF THE ORGANISATION

4.1

#### **ORGANISATIONAL BOUNDARIES**





Before an *organisation* is certified, the *organisation* must determine which entities it wants certified in their entirety or in part using methods described in this section. We call this defining the organisational boundary. All subsequent steps in certification depend on the appropriate determination of organisational boundaries. Thus, we recommend doing this at an early stage and submitting the outcome to a *CB*.

In determining organisational boundaries, the following conditions apply:

- a. These are always legal entities only, i.e. not unincorporated departments, branches or trade names;
- b. The organisation chooses to use
  - i. the top-down method or lateral method (see §4.1.1 and §4.1.2), and
  - ii. one of the three consolidation approaches from the GHG Protocol: operational control, financial control or equity share (see GHG Protocol Corporate Standard, Chapter 3 and/or the brief summary in normative Appendix A).
- c. The preferred choice for the CO<sub>2</sub> Performance Ladder is the combination of the topdown method and operational control.<sup>10</sup> If the *organisation* departs from this, it must justify its choice;
- d. The *organisation* publishes its choices of methods under b. on the organisation page on the CO<sub>2</sub> Performance Ladder website;
- e. The *organisation* may switch between methods and/or *consolidation approaches* in each *audit* provided it provides adequate justification;
- f. Determining organisational boundaries may require crossing national borders. Organisational boundaries may not be limited by a geographic boundary;
- g. The organisation annually checks that its organisational boundaries are still current, and if necessary, adjusts them. If these changes (may) have major consequences, such as acquisitions, mergers or a method change (see e.), this may result in the next audit being an initial audit.

<sup>10</sup> This combination is also prescribed in the CSRD.

#### 4.1.1 METHOD 1: THE TOP-DOWN METHOD

The top-down method requires a complete organisational chart showing all legal entities that are wholly or partially, directly or indirectly, property or owned by the legal entities for which certification is sought. The entity located at the highest point in the organisational chart is the *main entity*. This is the holding company in the diagram below (e.g. this could be a ministry or municipality outside of the business sphere). The next step depends on the chosen *consolidation approach* and the operational or financial control or equity share for which legal entities are (partially) within the organisational boundaries and thus part of the *organisation*.

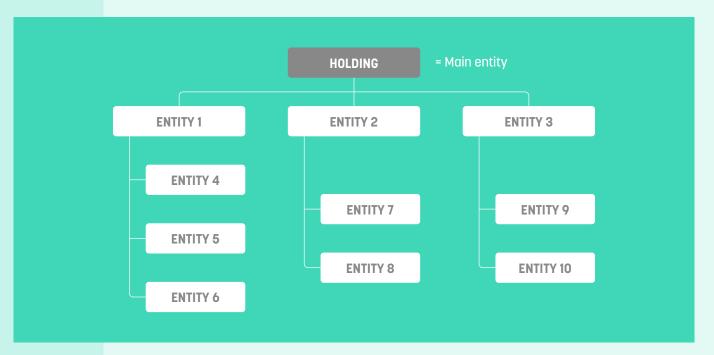


Figure 1 Example of determining the main entity with the top-down method

#### 4.1.2

#### **METHOD 2: THE LATERAL METHOD**

The lateral method is used to choose a *main entity* at a lower step in the organisation chart (at the level of entity 1, 2, 3, 4, 5, etc.).

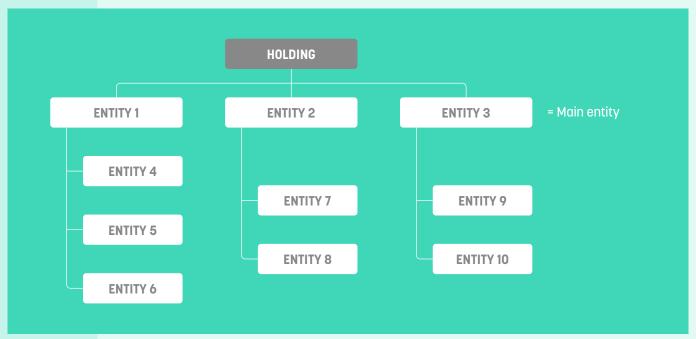


Figure 2 Example of determining the main entity with the lateral method

Therefore the lateral method can lead to a smaller organisation than the top-down method. This may be desirable when an organisation prefers to keep certain entities out of the scope of the energy and CO<sub>2</sub> management system, such as in the case of a foreign entity that operates completely independently. This is conditional on the excluded entities not having significant financial control over the entities that do belong to the organisation or vice versa. This method requires a detailed step-by-step process: the AC analysis. This prevents relevant entities from being excluded.

#### **AC ANALYSIS, PART OF THE LATERAL METHOD**

- **Step 1** Create the complete organisational chart described in the top-down method and note all legal entities within it. This is the list of group relationships.
- **Step 2** Choose a legal entity<sup>11</sup> at a lower step within the organisational chart that is preferably desired as an alternate *main entity*.
- Step 3 Include all suppliers who supply to this alternative main entity and its subsidiary organisations. This includes all subsidiary organisations unless they are under shared ownership. The consolidation approach (see §4.1(b)) then determines whether to include the subsidiary organisation. Place the suppliers in order of financial purchase value, excluding VAT, from large to small. The supplier where the most purchases are made will be ranked number 1 in the list. See an example in figure 3. In this example there are 200 suppliers with a total cost of sales of more than €1 billion. The largest supplier generates more than 100 million euros.

<sup>11</sup> This is usually the operating unit that wants to obtain a CO<sub>2</sub> Performance Ladder Certificate.

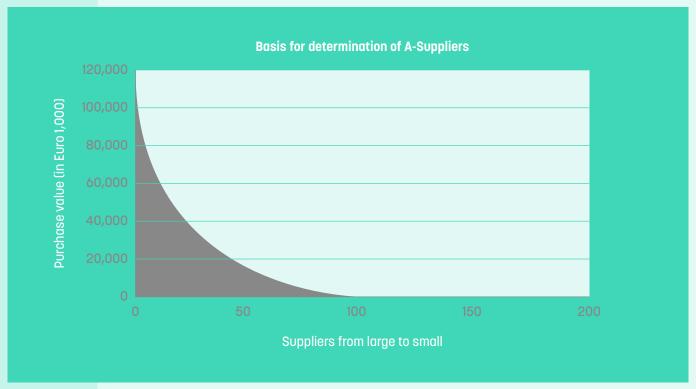


Figure 3 Suppliers from large to small based on purchase value

• Step 4 Express the purchase value per supplier as a percentage of the total (based on Step 3). This is represented cumulatively in figure 4. In this example, supplier number 1 provides almost 10% of the total purchase value and number 1 and 2 combined, over 18%. Figure 5 is the expanded beginning part of figure 4.

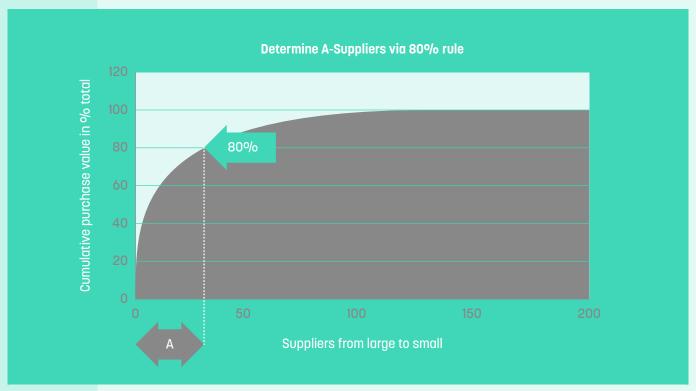


Figure 4 Cumulative suppliers' purchase value as a percentage of total

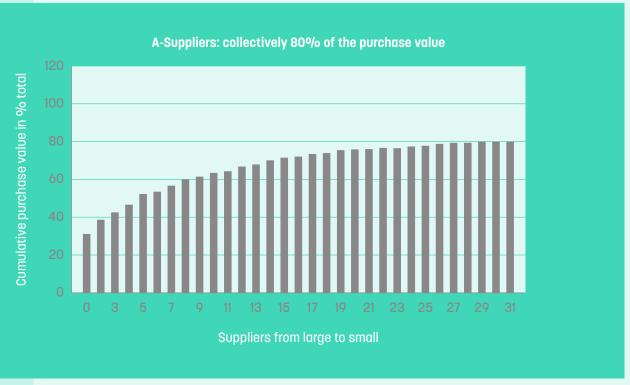


Figure 5 Expanded beginning part of figure 4

- Step 5 Select all *suppliers* that fall within the 80% limit of the *organisation*'s total purchase value, including the supplier whose purchase value exceeds this 80% limit. We call these *suppliers* the A-*Suppliers*. In the example, this is *supplier* Number 31 with a turnover of more than 6 million (more than 0.6% of the total), see figure 5. Thus, the supplier with Number 32 is not an A-Supplier.
- **Step 6** Select all A&C *suppliers*. These are all group relationships that are also A-Suppliers. Include them in the organisational boundaries and remove them from the *supplier* file.
- **Step 7** Start again with Step 3. Repeat this process until there are no new A&C *suppliers*. The organisational boundaries ultimately consist of
  - \* the main entity;
  - \* the (parts of) subsidiary organisations determined using the consolidation approach (see §4.1, item b);
  - \* the A&C suppliers.

**Note:** You may add a group relationship that is discovered not to be an A-Supplier at Step 5 to the organisational boundaries.12 In that case, a separate AC analysis must be performed for this group relationship beginning at Step 3. The results are then merged once the AC analysis of the main entity and the separate AC analysis of this group relationship are fully completed.

<sup>12</sup> This means this group relationship is also listed on the certificate. This can be advantageous, for example, when this group relationship bids for tenders that reward use of the CO<sub>2</sub> Performance Ladder.

#### SUPPLEMENT TO STEP 6 IN AC ANALYSIS: ADDITIONAL OPPORTUNITIES TO EXCLUDE AN A&C SUPPLIER

At Step 6 in the lateral method, the desired *main entity* may not have sufficient control over an A&C supplier to include it in the *organisation*. The obvious solution is to choose a *main entity* that is at a higher step in the hierarchy (if this is the highest entity, this is essentially equivalent to the top-down method). This increases control in many cases.

However, mandatory inclusion of an A&C supplier in the *organisation* or choosing a *main entity* at a higher step in the hierarchy may be disproportionate. For example, if this leaves a large number of foreign entities within organisational boundaries with limited control over the originally intended *main entity*.

When faced with such a dilemma, the CB must weigh this up within the following framework:

- 1. It is always permitted to exclude an A&C supplier if on average over a term of the last three years
  - a. The proportion of the purchase value of the A&C supplier at the *organisation* is less than 5% of the total purchase value of the *organisation* and
  - b. The proportion of the sales value (revenue) of the A&C supplier at the *organisation* is also less than 5% of the total sales value of the A&C supplier.
- 2. An A&C supplier should never be excluded just because it exists temporarily (for example, because it was established for a specific contract);
- 3. An A&C supplier should never be excluded solely because it produces relatively low greenhouse gas emissions;
- 4. Finally, the A&C *suppliers* that are not included in the *organisation* should be removed from the entire AC analysis and the process should continue at Step 7.

The available methods and above framework allow for flexibility in determining organisational boundaries. Nevertheless, it is not always possible to arrive at workable organisational boundaries, for example for large (international) companies or complex government organisations. In these cases, customisation is sometimes possible by seeking a binding opinion from a Boundary Committee. In this case, the *organisation* must submit an application to SKAO in coordination with its *CB*. Thereafter, an ad hoc committee – at the cost of the *organisation* – makes its decision within three months. The conditions and procedure for a Boundary Committee are listed on the CO<sub>2</sub> Performance Ladder website.

#### 4.1.3

#### CONSOLIDATION APPROACHES IN LEASED ASSETS AND CONSORTIUM PROJECTS

Although the organisation is free to choose one of the three consolidation approaches from the GHG Protocol (see §4.1, item b.), the CO<sub>2</sub> Performance Ladder provides further elaboration on how to consolidate leased assets and projects carried out by a consortium.

For leased assets, the organisation must always consolidate them per operational control, even when it opted for equity share or financial control. If it is unclear whether the tenant or the landlord has the most operational control, the party responsible for paying the fuel or electricity bill is the party with the most operational control.

For consortium projects, the organisation must consolidate them per its consolidation approach (see §4.1(b)), unless this results in a significant portion of the energy consumption or emissions in the project being included by none of the consortium members within its boundaries. In this case, there are three possibilities:

- the consortium members agree jointly and with good argumentation on an allocation key, or
- the *organisation* must include *energy consumption* and emissions from the *project* within its boundaries on an equity share basis, or
- the entity carrying out the consortium project (the project entity) independently implements operational energy and CO<sub>2</sub> policies<sup>13</sup> and, per the GHG Protocol, records the energy consumption and emissions of the project within its boundaries.

It is very important to avoid double counting of *energy consumption* and emissions and the complete elimination of *energy consumption* and emissions. Note that double counting is preferable to the situation where no one reports on (part of) *energy consumption* or emissions.

#### 4.2

#### **DETERMINING THE SIZE OF THE ORGANISATION**

Small organisations<sup>14</sup> may qualify for a limited number of exemptions at Step 3 (listed under the requirements themselves) based on their organisation size. Organisations are small when they meet at least two of the following three conditions over the previous year:

- staff size was equal to or less than 250 FTE;
- annual turnover<sup>15</sup> was equal to or less than 50 million euros;
- the balance sheet total was equal to or less than 25 million euros.

<sup>13</sup> An independent operational energy and CO<sub>2</sub> policy exists, for example, when the project entity has its own certificate for the CO<sub>2</sub> Performance Ladder.

 $<sup>{\</sup>bf 14}$  This is the same definition used for the CSRD on the publication date.

<sup>15</sup> For organisations without turnover (e.g. public authorities), this should be read as 'income'.

#### 4.3

#### **PROJECT REQUIREMENTS**



Many organisations carry out projects. They do this alone or with others. These projects may include works, services or deliveries. The  $\mathrm{CO}_2$  Performance Ladder distinguishes between  $\mathrm{CO}_2$  Performance Ladder Projects and all other projects. All projects must always be part of the organisation's energy and  $\mathrm{CO}_2$  management system, but for  $\mathrm{CO}_2$  Performance Ladder Projects, the  $\mathrm{CO}_2$  Performance Ladder imposes specific requirements on the documented information for each individual project (see §7.3.1). This documentation, supplemented with general project data (such as the name, client and location of the project), must be shared with the CB via 'My  $\mathrm{CO}_2$  Performance Ladder' before the audit so that they can take a sample of from the  $\mathrm{CO}_2$  Performance Ladder Projects, currently running or that have been completed since the previous audit.

#### 4.4

#### **UNDERSTANDING LEGAL OBLIGATIONS**

The organisation must understand its legal obligations related to energy conservation, renewable energy and CO<sub>2</sub> reduction.

The organisation must:

- be familiar with national and international legal obligations related to energy conservation, renewable energy and CO<sub>2</sub> reduction;
- determine how these legal obligations apply to the *organisation* and how it takes them into account.

These legal obligations are both current and adopted (but not yet in force) local, national and/or international legislation that applies to all aspects of the *organisation*'s operations, including activities for *projects*, human resources and housing. For upcoming legislation, this is only the legislation that has been enacted by the competent authorities but has not yet entered into force.

#### 4.5

#### **ENERGY AND CO<sub>2</sub> MANAGEMENT SYSTEM**

The organisation must establish, implement, maintain and continuously improve an energy and CO<sub>2</sub> management system. This includes the necessary processes and their interactions. The organisation must also continuously improve energy and CO<sub>2</sub> performance per the requirements of this scheme.

Note: The processes required may vary from organisation to organisation because of:

- the size of the organisation and the type of activities, processes, products and services;
- the complexity of the processes and their interactions;
- · staff competence.

<sup>16</sup> This method is described in the certification regulation.

## 5 LEADERSHIP

#### 5.1 **LEADERSHIP AND COMMITMENT**

Management must show leadership, direct responsibility and commitment to continual improvement of energy and  ${\rm CO_2}$  performance and the effectiveness of the energy and  ${\rm CO_2}$  management system. The management does so by:

- a. ensuring that the scope of the energy and CO2 management system is defined (see §4.1);
- b. ensuring that energy and CO<sub>2</sub> policies and targets are established and that they are part of the organisation's strategic direction;
- ensuring that energy and CO<sub>2</sub> management system requirements are integrated into the organisation's business processes;
- d. ensuring that the *Action Plan* and (if applicable) the *Climate Transition Plan* are approved and implemented;
- e. ensuring that the necessary resources for the energy and CO<sub>2</sub> management system are available;
- f. communicating the importance of effective energy and  ${\rm CO_2}$  management and of meeting energy and  ${\rm CO_2}$  management system requirements;
- g. ensuring that the energy and  ${\rm CO_2}$  management system achieves the intended results;
- h. promoting continual improvement of energy and CO<sub>2</sub> performance and the CO<sub>2</sub> management system;
- i. establishing an energy and CO<sub>2</sub> management team;
- j. directing and supporting the key persons identified in §7.2 to make the energy and  $CO_2$  management system more effective and to improve  $CO_2$  and energy performance.

#### 5.2 **ENERGY AND CO<sub>2</sub> POLICY**

Management must establish an energy and CO<sub>2</sub> policy that

- a. fits the purpose of the organisation;
- provides a framework for setting and reviewing targets and plans (such as the Climate Transition Plan and/or Action Plan);
- c. includes a commitment to ensure that information is available and that all necessary resources to achieve the targets are available;
- d. includes a commitment to meet the legal requirements for energy conservation, renewable energy and CO<sub>2</sub> reduction, as stipulated in §4.4;
- e. includes a commitment to continual improvement (see §10.1) of energy and CO<sub>2</sub> performance and the energy and CO<sub>2</sub> management system;

The energy and CO<sub>2</sub> policy must:

- be communicated within the organisation;
- · be available to interested parties in an appropriate manner;
- be reviewed regularly and updated as needed.

# 6 PLANNING

#### 6.1 **ACTIONS TO ADDRESS RISKS AND OPPORTUNITIES**

The organisation's planning for the CO<sub>2</sub> Performance Ladder must be consistent with the energy and CO<sub>2</sub> policy (see §5.2) and must result in actions that continuously improve energy performance. The organisation must identify risks and opportunities that must be acted upon to:

- provide assurance that the energy and CO<sub>2</sub> management system can achieve its intended result(s), including improvement in energy and CO<sub>2</sub> performance;
- prevent or reduce unwanted effects;
- continuously improve the energy and CO<sub>2</sub> management system and energy and CO<sub>2</sub> performance.

#### 6.2 TARGETS AND PLANNING TO ACHIEVE THEM

The targets of the organisation must

- · be monitorable;
- be established relative to the base year and relative to the last initial or recertification audit;
- take into account applicable requirements such as legal obligations (see §4.4);
- consider opportunities to improve energy and CO<sub>2</sub> reduction performance.

If the *organisation* creates plans to achieve its targets, the *organisation* must document and maintain:

- · what will be done;
- · what resources are needed;
- · who is responsible;
- · when it will be completed;
- how the results will be evaluated. This includes the method(s) used to verify the improvement in energy and CO<sub>2</sub> performance.

For implementing all requirements of the CO<sub>2</sub> Performance Ladder unless, the organisation must maintain at least at an annual regular frequency unless

- a higher regular frequency suits the specific organisational processes better (for example, if there is otherwise insufficient time for adjustment);
- a requirement explicitly (under the heading 'planning') prescribes a different minimum regular frequency. Requirements to which this applies are:

REQUIREMENT	PRESCRIBED MINIMUM REGULAR FREQUENCY
<b>1.A.2/2.A.2/3.A.2</b> Estimate whether non-CO <sub>2</sub> greenhouse gases are material to scope 1 and scope 2 emissions	Before each <i>initial audit</i> and triennially
<b>2.A.2/3.A.2</b> Estimate whether <i>non-CO</i> <sub>2</sub> <i>greenhouse gases</i> are relevant to <i>scope 3</i> emissions	Before each <i>initial audit</i> and triennially
<b>2.A.2/3.A.2</b> Conduct the qualitative <i>OIE</i> analysis (only when the previous <i>OIE</i> analysis substantiated that all three <i>OIE</i> types are not relevant)	Before each <i>initial audit</i> and triennially
<b>2.A.5/3.A.5</b> Investigate whether <i>value chain analysis/(es)</i> should be completely revamped, including implementation	Before each <i>initial audit</i> and triennially
2.B.1/3.B.1 Review the Climate Transition Plan	Before each <i>initial audit</i> and triennially
<b>2.D.4/3.D.5</b> Dialogue on the <i>Climate Transition Plan</i> with an organisation in the value chain	Every six months
The documented information on $CO_2$ Performance Ladder Projects (see table in §7.3.1 for all requirements in which this appears)	At <i>project</i> start and completion. If it is a multi-year <i>project</i> , the <i>organisation</i> also does this annually.

## 7 SUPPORT

#### 7.1 **RESOURCES**

The organisation must establish and make available the resources necessary to establish, implement, maintain and continuously improve energy and  ${\rm CO_2}$  performance, the energy and  ${\rm CO_2}$  management system and the achievement of targets. These resources minimally consist of:

- Capacity and budget for setting up, maintaining and implementing the energy and CO<sub>2</sub>
  management system;
- Capacity and budget for the annual external audit;
- Capacity and budget to implement the Action Plan and the Climate Transition Plan, including measures to be taken;
- Capacity and budget to participate in required initiatives and collaborations;
- The annual contribution to SKAO.17

#### 7.2 **KEY PERSONS AND THEIR COMPETENCE**

(ii)

The organisation must identify the key person or key persons and ensure that they have the necessary competencies for their role and required level of  $CO_2$  awareness as defined in 1.C.1/2.C.1/3.C.1. The organisation must

- identify these *key persons* at all levels of the *organisation* based on their position or job profile;
- always identify at least one of the organisation's own employees as a key person;
- always identify at least one key person for each CO<sub>2</sub> Performance Ladder Project.

When establishing competency, the organisation must:

- a. be able to demonstrate that *key persons* are educated, trained and have the necessary skills or experience;
- b. take actions to acquire the necessary competence, and evaluate the effectiveness of these actions, as appropriate.

<sup>17</sup> The CO<sub>2</sub> Performance Ladder Certificate is not valid until the organisation pays the required annual contribution to SKAO. (See: www.co2performanceladder.com). Before issuing a new certificate or a positive annual Ladder assessment, the CB checks whether the organisation has met its payment obligations toward SKAO. A new certificate cannot be issued if the organisation cannot demonstrate that it has met its payment obligations.

### DOCUMENTED INFORMATION AT THE ORGANISATIONAL AND PROJECT LEVEL

The organisation's energy and  $CO_2$  management system must contain documented information for which

- the organisation is free to determine the form and bundling of information;
- it is always permitted to reuse (parts of) existing documented information in subsequent audits, as long as the content is still usable;
- the frequency of updating or renewal is prescribed in §6.2;
- information related to the entire organisation must be partially published on the organisation page on the CO<sub>2</sub> Performance Ladder website;<sup>18</sup>
- information related to  $CO_2$  Performance Ladder Projects must be partly shared digitally with the client<sup>19</sup> and the CB via 'My  $CO_2$  Performance Ladder'. The organisation does so at the start and completion of the project. If it is a multi-year project, the organisation also does this annually.

A summary of the mandatory documented information per paragraph or requirement is listed below. This summary also states whether the information must be published or, in the case of  $CO_2$  Performance Ladder projects, shared with the client and the CB. For detailed explanation of the content of the documented information, refer to the specific paragraph or requirement. All paragraphs and requirements subject to this obligation are marked with a symbol in the rest of the handbook:



DOCUMENTATION
REQUIREMENT AT THE
ORGANISATIONAL LEVEL



PUBLICATION
REQUIREMENT AT
ORGANISATIONAL
LEVEL (ON THE CO2
PERFORMANCE
LADDER WEBSITE)



DOCUMENTATION
REQUIREMENT FOR CO2
PERFORMANCE LADDER
PROJECTS



OBLIGATION TO SHARE
DOCUMENTATION FOR
CO2 PERFORMANCE
LADDER PROJECTS WITH
CB AND CLIENTS VIA A
CLOSED PLATFORM (AT
START AND COMPLETION,
AND AT LEAST ANNUALLY)

- 18 To do this, an organisation must log in to 'My CO<sub>2</sub> Performance Ladder'. Login codes and instructions will be sent upon registration with SKAO. If the organisation does not have a valid certificate at the time of the audit (it is the first certification or there is an expired or suspended certificate), the organisation can upload documents, but the organisation page is not yet public. Publication occurs only after the certificate is issued. In such situations, it is sufficient to upload the mandatory documents in 'My CO<sub>2</sub> Performance Ladder'.
- 19 Dialogue on CO<sub>2</sub> reduction during the implementation of CO<sub>2</sub> Performance Ladder Projects The purpose of sharing this documentation digitally with the client is to facilitate a 'dialogue on CO<sub>2</sub> reduction' during the implementation of a CO<sub>2</sub> Performance Ladder project. The CO<sub>2</sub> ambition and possible opportunities for further reduction are regularly discussed by making the dialogue about CO<sub>2</sub> reduction an explicit part of the collaboration between contractor and client during the implementation of projects. The method of the 'dialogue on CO<sub>2</sub> reduction' is detailed in the Procurement Guide.

PARA/ REQ	DOCUMENTATION REQUIREMENT AT THE ORGANISATIONAL LEVEL	PUBLICATION REQUIREMENT AT ORGANISATIONAL LEVEL (ON THE CO <sub>2</sub> PERFORMANCE LADDER WEBSITE)	DOCUMENTATION REQUIREMENT FOR CO <sub>2</sub> PERFORMANCE LADDER PROJECTS	OBLIGATION TO SHARE DOCUMENTATION FOR CO <sub>2</sub> PERFORMANCE LADDER PROJECTS WITH CB AND CLIENTS VIA A CLOSED PLATFORM (AT START AND COMPLETION, AND AT LEAST ANNUALLY)
§4.1	Documenting organisational boundaries	YES (only the chosen methods for determining the organisational boundaries)		
§4.3			General project details	YES
§7.2	Inventory of key persons			
§9.1.2	Data quality management plan			
§9.1.3	Base year emissions inventory			
§9.2	Internal audit report			
§9.3	Management review report			
§10.2	Action plan for corrective actions			
1.A.1 2.A.1 3.A.1	Energy review and energy balance	YES (final energy consumption only)	Energy balance of energy consumption on the CO <sub>2</sub> Performance Ladder Project	YES
1.A.2 2.A.2 3.A.2	Emissions inventory and footprint scope 1 and scope 2	YES (footprint for scope 1, market-based scope 2 and location- based scope 2 only)	Quantitative estimation of emissions due to energy consumption on the CO <sub>2</sub> Performance Ladder Project	YES

PARA/ REQ	DOCUMENTATION REQUIREMENT AT THE ORGANISATIONAL LEVEL	PUBLICATION REQUIREMENT AT ORGANISATIONAL LEVEL (ON THE CO <sub>2</sub> PERFORMANCE LADDER WEBSITE)	DOCUMENTATION REQUIREMENT FOR CO <sub>2</sub> PERFORMANCE LADDER PROJECTS	OBLIGATION TO SHARE DOCUMENTATION FOR CO <sub>2</sub> PERFORMANCE LADDER PROJECTS WITH CB AND CLIENTS VII A CLOSED PLATFORM (AT START AND COMPLETION, AND AT LEAST ANNUALLY)
2.A.2 3.A.2	Emission inventory and footprint for scope 3	YES (footprint for scope 3 only)	Quantitative estimate of the upstream and downstream emissions on the CO <sub>2</sub> Performance Ladder Project	YES
2.A.2 3.A.2	Qualitative <i>OIE</i> analysis		Qualitative estimation of O/E at the CO <sub>2</sub> Performance Ladder Project	
3.A.2	Qualitative <i>OIE</i> analysis		Quantitative estimation of OIE at the CO <sub>2</sub> Performance Ladder Project	YES (if applicable)
2.A.3 3.A.3	Overview of organisational activities			
2.A.3 3.A.3	Quantifying emissions by activity			
2.A.4 3.A.4	Impact and influence analysis	YES (only the ranking of organisational activities)		
2.A.4 3.A.4	Determining most important activities	YES		
2.A.5 3.A.5	Value chain analysis	YES (including a brief summary)		
3.A.5	Inventory possible strategies toward <i>zero</i> CO <sub>2</sub> emissions for most important activities			
3.A.5	Inventory possible strategies toward <i>zero</i> CO <sub>2</sub> emissions for other activities			
2.B.1 3.B.1	Climate transition plan, including targets	YES		

PARA/ REQ	DOCUMENTATION REQUIREMENT AT THE ORGANISATIONAL LEVEL	PUBLICATION REQUIREMENT AT ORGANISATIONAL LEVEL (ON THE CO <sub>2</sub> PERFORMANCE LADDER WEBSITE)	DOCUMENTATION REQUIREMENT FOR CO <sub>2</sub> PERFORMANCE LADDER PROJECTS	OBLIGATION TO SHARE DOCUMENTATION FOR CO <sub>2</sub> PERFORMANCE LADDER PROJECTS WITH CB AND CLIENTS VIA A CLOSED PLATFORM (AT START AND COMPLETION, AND AT LEAST ANNUALLY)
1.B.1 2.B.2 3.B.2	Action plan and Measure list, including targets	YES	Project plan and Measure list for the CO <sub>2</sub> Performance Ladder Project	YES
1.B.2 2.B.3 3.B.3	Progress Report	YES	Evaluation/progress report for the measures on the CO <sub>2</sub> Performance Ladder Project	YES
2.C.2 3.C.2	Process for key persons to submit comments and suggestions for improvement			
1.C.2 2.C.3 3.C.3	Communication Plan		Communication plan for CO <sub>2</sub> Performance Ladder Projects	
3.C.4	Report of Climate Transition Plan review by independent expert			
1.D.1 2.D.1 3.D.1	Analysis of knowledge and collaboration needs		Analysis of knowledge and collaboration needs for CO <sub>2</sub> Performance Ladder Projects	
1.D.2 2.D.2 3.D.2	Identification of opportunity for fulfilling knowledge and collaboration needs			
2.D.3 3.D.3	Collaboration agreement or established arrangements	YES (only a description of the collaboration and progress)		
2.D.4 3.D.5	Report on consultation Climate <i>Transition</i> <i>Plan</i> with relevant <i>organisation</i>			

### **OPERATION**

See Part 2 for operation requirements.

# PERFORMANCE EVALUATION

9.1

# MONITORING, MEASURING, ANALYSING AND EVALUATING ENERGY AND CO<sub>2</sub> PERFORMANCE AND THE ENERGY AND CO<sub>2</sub> MANAGEMENT SYSTEM

9.1.1

#### **GENERAL**

The organisation must establish for the energy and CO<sub>2</sub> management system:

- a. what must be monitored and measured to attain sufficient insight, including minimally whether the targets in the Action Plan will be met;
- b. the methods for monitoring, measuring, analysing and evaluating to get valid results;
- c. when to monitor and measure;
- d. when to analyse and evaluate the results of monitoring and measurement.

The organisation must investigate and respond to significant nonconformities in the performance of the energy and CO<sub>2</sub> management system.

9.1.2

#### **DATA QUALITY MANAGEMENT PLAN**



The organisation must establish a data quality management plan. This plan must describe how the organisation strives for continual data improvement, such as:

- the data needed to be able to manage the effect of energy and/or CO<sub>2</sub> reduction measures
- the data related to material or relevant emissions or material energy use.

A data quality management plan details how energy and emissions data will be reported as accurately as possible. The plan also states how the *organisation* systematically strives to improve, broaden and refine its data. GHG Protocol Corporate Standard (Chapter 7) provides a clear checklist of the elements for a data quality management plan.

#### DATA QUALITY ROADMAP BASED ON GHG PROTOCOL, CHAPTER 7

- 1. Establish a quality person/team.
- 2. Develop a data quality management plan.
- 3. Perform generic data quality checks based on the data quality checks.
- 4. Carry out specific data quality checks.
- 5. Review the energy balance and emissions inventory and related reporting.
- 6. Establish formal feedback loops to improve data collection, handling and documentation processes.
- 7. Draw up reporting, documentation and archiving procedures.

For scope 1 and scope 2, the calculation method is mostly fixed (see §9.1.3). For scope 3 and OIE, there is more freedom and calculations will be partly based on assumptions. This increases the importance of properly recording the calculation method and the assumptions in the data quality management plan.

#### 9.1.3 USING CO<sub>2</sub> EMISSION FACTORS

When an organisation calculates (parts of) its CO<sub>2</sub> emissions inventory, it must use CO<sub>2</sub> emission factors. SKAO designates a list of national CO<sub>2</sub> emission factors for each country as a standard list because CO<sub>2</sub> emission factors can differ internationally.<sup>20</sup> At the time of publication of this Handbook, this is for:

- Netherlands: www.co2emissiefactoren.nl 🔼
- Belgium: www.co2emissiefactoren.be

If SKAO designates lists for other countries, this will be mentioned on the CO<sub>2</sub> Performance Ladder website.

The following principles apply to the use of emission factors for the CO<sub>2</sub> Performance Ladder:

- The emission factors on the national list designated by SKAO are the standard values;
- If no list is designated for a particular country, the organisation must select an accurate list itself. If this is not available, the organisation can use the list designated by SKAO for the Netherlands;

<sup>20</sup> For example, this might be due to differences in the electricity mix (including more or less generated with natural gas, coal, nuclear or renewable), different blending ratios for fuels or differences in the origin of fuels (including which continent they come from).

- 3. If the designated list is (partially) updated, the new emission factors should not be used until the *organisation* reports on the period in which the update occurred;<sup>21</sup>
- 4. The organisation may use other (officially recognised) factors in the following situations.
  - i. if this results in a more accurate outcome. For example, this applies to emissions that are highly dependent on the local context.<sup>22</sup>
  - ii. If there is no appropriate emission factor in the national list for a particular fuel, mode of transport, etc.
- 5. If there is a deviation from the national list of emission factors, the assumptions used to establish this list and the calculation method must remain the same.
- 6. If an *organisation* deviates from the national list for one or more factors, it must clearly indicate the origin of the alternative factor(s) and make a plausible case for why their use leads to a more accurate outcome.

To determine scope 3 emissions, the above principles also apply, and the national list of emission factors should be used as much as possible for energy carriers and coolants. With respect to materials, an organisation is advised to use the CO<sub>2</sub> emissions data based on LCA data that fits the context of the organisation. If the organisation uses LCA data, the LCA must be prepared per ISO 14067<sup>23</sup> or EN 15804<sup>24</sup> for building products. The organisation can also use data established in an EPD or MRPI certificate. Nonconformities must be substantiated.

#### 9.1.4

#### **BASE YEAR AND RECALCULATION**



The organisation must establish a base year to compare the current data with historical energy consumption, energy generation and CO<sub>2</sub> emissions data. When choosing a base year, it is important that

- · reliable energy and emissions data are available for that year;
- the base year in the initial audit is no further in the past than three years before the year in which the initial audit takes place. Note: An organisation must always have an emissions inventory for the past year (see requirement 1.A.2/2.A.2/3.A.2). Thus, choosing an earlier base year means that two emissions inventories must be prepared during the initial audit (one for the base year and one for the past year);
- an *organisation* can simultaneously choose different base years for *energy consumption*, energy storage, energy generation, scope 1 emissions, scope 2 emissions, scope 3 emissions and OIE;
- when substantiated, a base year may be reselected at each audit.

<sup>21</sup> An example: the update will take place in January 2025. The new factors will be used once reporting for the period January – December 2025.

<sup>22</sup> An example would be the fuel mix for electricity production.

 $<sup>{\</sup>bf 23} \; {\bf Greenhouse} \; {\bf gases} - {\bf Carbon} \; {\bf footprint} \; {\bf of} \; {\bf products} - {\bf Requirements} \; {\bf and} \; {\bf guidelines} \; {\bf for} \; {\bf quantification}$ 

<sup>24</sup> Sustainability of construction work – Environmental declarations of products – Basic rules for the building products product group

#### **COMPLETE RECALCULATION OF THE BASE YEAR**

A new base year must be selected when there are

- significant changes in the organisational boundaries of the *organisation*, for example, due to acquisition or mergers;
- significant changes in the *organisation*'s activities. These are internal changes and changes in the *value chain(s)* in which the *organisation* operates.

If the base year is (voluntarily or mandatorily) changed, the energy balance and emissions inventory (for scope 1 and scope 2 and if applicable scope 3) must be fully recalculated for the new base year.

#### **PARTIAL RECALCULATION OF THE BASE YEAR**

If an *organisation* does not change the *base year*, it may still be necessary to recalculate some of the historical energy or emissions data.

- The energy balance and/or emissions inventory for scopes 1 and 2 require a partial recalculation when an energy or CO<sub>2</sub> emission factor changes due to a methodology change. This includes a different calculation method or source of information for determining the energy or emission factor. Changes in the energy or CO<sub>2</sub> emission factor as a result of technological progress, change in fuel type or changed market conditions does not constitute a methodology change.
- For the scope 3 emissions inventory, partial recalculation must occur when changes in methodology or availability of more accurate data lead to significant changes in (parts of) the emissions inventory. If information about the base year is not available in sufficient detail, the recalculation may be based on an educated guess based on information about later years that is available (backcasting). If this is not possible, the recalculation may be omitted and must be stated with the emissions inventory.

#### **RULES FOR RECALCULATION OF INTERMEDIATE YEARS**

It may be necessary to recalculate all or part of not only the *base year*, but also any intermediate years. This is the case if the energy and/or emission data from the intervening years are relevant to the information that the *organisation* must be able to demonstrate at the next *audit* (i.e.  $CO_2$  footprints,  $CO_2$  emissions inventories, reduction targets, progress reports, communication statements, etc.).

The *organisation* must clearly document any full or partial recalculation of the *base year* and any intervening years. Also see the rules on recalculation in ISO 14064-1, §6.4.2.

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### **INTERNAL AUDIT**

The organisation must conduct an internal audit through which it examines whether the energy and  $CO_2$  management system meets the requirements of the certification scheme, and thus that the organisation is ready for the external audit, and whether work within the organisation is done per the arrangements in the energy and  $CO_2$  management system (such as targets, procedures, communication, publication, planned measures, etc.). Apart from the actual assessment, the internal audit also assesses the possibility of improving the system and/or the execution. In an energy and  $CO_2$  management system the internal audit is a very important source of information for the management review.

Without undue delay, the *organisation* must take all *corrective actions* to eliminate *nonconformities* from requirements and the *energy and CO<sub>2</sub> management system* and their causes within an appropriate time frame. In addition, the *organisation* must verify that sufficient points have been achieved in Part 2 to achieve or maintain its step. To guarantee the execution of the *internal audits*, it is important to properly lay down the process, planning/execution and responsibilities.

An organisation can combine and/or integrate the internal audit according to the CO<sub>2</sub> Performance Ladder with the internal audit(s) for other management system standards.

The results of the *internal audit* are recorded in an *internal audit report*. This report includes at least the following:

- the date of the audit;
- the names of auditor(s) and auditee(s);
- the audit's objective;
- the scope;
- the locations visited;
- · the audit's findings;
- the effectiveness of the system to improve CO<sub>2</sub> and energy performance and meet (reduction) targets.

The internal audit should explicitly address the following questions:

- Does the *organisation* find that the activities (on whose basis the *organisation* meets the requirements) achieve progress within the organisation?
- · What substantiates this?
- Do the procedures established by the *organisation* and the processes within the *organisation* contribute to the achievement of the targets?
- What decisions are required of management regarding possible corrective actions?

#### The internal auditor

- a. must be objective and impartial. Among other things, this means that the internal auditor may not audit the content of their own work;
- b. must have relevant knowledge and skills;
- may be an outside party (e.g. a consulting firm), as long as the requirements in a. and b. are met.

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# (iii)

### **MANAGEMENT REVIEW**

The management must review the *organisation's energy and* CO<sub>2</sub> management system to achieve its continuous suitability, adequacy, effectiveness.

The input for the management review includes at least:

- a. the points in §5.1 on leadership;
- b. the status of actions from previous *management reviews*, *internal audits* and *external audits*;
- c. changes in external and internal developments relevant to the *energy and* CO<sub>2</sub> management system;
- d. information about the performance and efficacy of the energy and CO<sub>2</sub> management system, including:
  - i. energy policy and reduction measures;
  - ii. the energy performance, emissions and the energy review (requirement 1.A.1/2.A.1/3.A.1);
  - iii. the progress towards the reduction targets and the extent to which they have been achieved;
  - iv. internal and external communications and initiatives;
  - v. the concerns of the independent expert (requirement 3.C.4);
  - vi. the audit results: internal audit and external audit;
  - vii. nonconformities and corrective actions;
- e. the effectiveness of actions taken to address reduction opportunities;
- f. opportunities to improve.

The output of the management review includes at least decisions and actions related to:

- a. opportunities to improve;
- b. the need to change the *energy and* CO<sub>2</sub> *management system*, reduction targets, reduction measures and (participation in) collaborations;
- c. conclusions on the probability of achieving reduction targets previously published internally or externally;
- d. efficacy of the energy and CO<sub>2</sub> management system, including an explicit statement about the extent to which the CO<sub>2</sub> Performance Ladder functions as intended. This statement is based on the results of the *internal audit*;
- e. the need for resources.

The organisation must maintain documentation as evidence of the results of the management review. An organisation can combine and/or integrate the management review according to the  $\rm CO_2$  Performance Ladder with the management review(s) for other management system standards.

### 9.4

### **EXTERNAL AUDIT**

The organisation must ensure an annual audit is performed. The requirements that apply to the initial audit, annual audit, recertification audit and the special audit and the scores required to pass a particular step of the CO<sub>2</sub> Performance Ladder are contained in the certification regulation.

During each *audit*, the *organisation* itself is responsible for communicating with the auditor. If an external party (e.g. a consulting firm) is present during the *audit*, their role should be limited to the passive role of prompter.

# 10 IMPROVEMENT

# 10.1

## **CONTINUAL IMPROVEMENT**

The Ladder system is based on the principles of a management system and aims for continual improvement. This means that continual, repeated processes should exist in the organisation that are geared toward improving the energy and CO<sub>2</sub> performance as well as the management system. This system can also be thought of as Plan-Do-Check-Act (PDCA). In brief, PDCA can be described as follows:

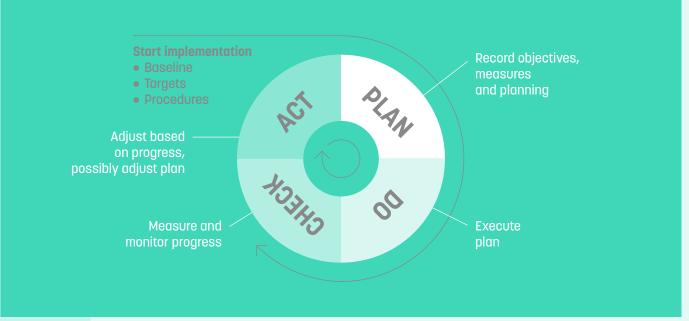


Figure 6 Plan-Do-Check-Act cycle

## 10.2

# **NONCONFORMITIES AND CORRECTIVE ACTIONS**



If a nonconformity is identified, the organisation must:

- a. Respond to the *nonconformity*, and as applicable:
  - i. Take measures to manage and correct the nonconformity;
  - ii. Address the consequences;
- b. Evaluate the need to take measures to eliminate the cause(s) of the *nonconformity* so that the *nonconformity* does not recur or occur elsewhere, by
  - i. Assess the nonconformity;
  - ii. Identify the causes of the nonconformity;
  - iii. Determine whether similar nonconformities occur or could occur;
- c. Implement the necessary measures;
- d. Assess the effectiveness of corrective actions taken;
- e. If necessary, make changes to the energy and CO<sub>2</sub> management system.

Corrective action should be appropriate to the effects of the nonconformities that have occurred. The organisation must maintain documented information of:

- The nature of nonconformities and subsequent actions taken;
- The outcomes of corrective actions.

For significant nonconformities found during an external audit, the organisation must take corrective action within three months. For minor nonconformities, the organisation must develop and implement a corrective Action Plan before the next audit.



# OVERVIEW STEP 1 REQUIREMENTS

ANGLE A INSIGHT	ANGLE B REDUCTION	ANGLE C Communication	ANGLE D COLLABORATION
Requirement 1.A.1 The organisation has quantitative insight into its own energy consumption	Requirement 1.B.1 The organisation has short-term preparatory actions, measures and target(s) and has established them in an Action Plan	Requirement 1.C.1 The organisation ensures that key persons are demonstrably aware of their role in the organisation's energy and CO <sub>2</sub> policy	Requirement 1.D.1 The organisation analyses its own knowledge and collaboration needs related to the 1.B.1 Action Plan
Requirement 1.A.2 The organisation has quantitative insight into its scope 1 and scope 2 emissions	Requirement 1.B.2 The organisation succeeds in achieving the targets and/or preparatory actions and measures in the 1.B.1 Action Plan	Requirement 1.C.2 The organisation communicates about its 1.B.1 Action Plan, including progress, internally and to its key external target groups	Requirement 1.D.2 The organisation identifies opportunities by which it can meet the knowledge and collaboration needs of 1.D.1



# ANGLE A INSIGHT

# **REQUIREMENT 1.A.1**

1.A.1

# THE ORGANISATION HAS QUANTITATIVE INSIGHT INTO ITS OWN ENERGY CONSUMPTION

#### **CRITERION 1.A.1-1**

1.A.1-1

#### **ENERGY BALANCE AND ENERGY REVIEW**



To meet this criterion, the *organisation* needs three things: The *organisation* has an *energy* balance for its own *energy* consumption, an *energy* review per §6.3 from ISO 50001, and an analysis of the *organisation*'s (potential) role in *energy* system flexibility.

The following three conditions apply to energy balance:

- a. It is quantified with measurements and/or plausible estimates;
- b. Quantification includes at least 90% of the *organisation's final energy consumption*. Very small *energy consumption* and production need not be included when substantiated on the basis of *materiality*;
- The calculation uses accurate conversion factors, based on final energy, of fuels and energy carriers.<sup>25</sup>

An energy review per §6.3 from ISO 50001 is subject to the following four conditions:

- a. This is an analysis of energy efficiency, energy use and energy consumption based on information. This results in the organisation identifying significant energy consumption and opportunities for improving energy performance.
- b. This is an analysis of the main features of the current and past energy consumption and production. This involves comparing it with the base year and with developments from that point onward;
- c. This is a detailed *energy balance* analysis to identify the facilities, systems, processes or equipment that have a significant impact on *energy consumption* and production;
- d. It is designed to identify and record priorities and document opportunities for energy performance improvement based on consumption and/or the potential for energy performance improvement;

For more information and examples on *energy reviews*, see also (informative) Annex A.6.3 of ISO 50001.

25 For this purpose, for example the energy content of fuels at www.co2emissiefactoren.nl can be used.

The following two conditions apply to the analysis of the *organisation*'s (potential) role in *energy system flexibility*:

- a. This describes whether the *organisation* and/or its branches are located in one or more regions with an increased probability of congestion on the local electricity grid;
- b. This describes the measures the *organisation* can take, alone or with others, that contribute to *flexibility in the energy system* including
  - i. temporary reduction or increase in its own electricity consumption from the grid;
  - ii. temporary reduction or increase in its own electricity production delivered to the grid;
  - iii. temporary storage of self-generated or off-grid electricity;
  - iv. purchasing renewable electricity that is demonstrably (e.g. through time-based certificates<sup>26</sup>) produced at the time the *organisation* uses it.



#### DOCUMENTED INFORMATION IN CO2 PERFORMANCE LADDER PROJECTS

For each  $CO_2$  Performance Ladder Project, the organisation must draw up an energy balance for the energy consumption on a project and must provide insight into the project's contribution to the energy balance at the organisational level. This also applies if the  $CO_2$  Performance Ladder Project is implemented in a consortium (see §4.1.3 in Part 1 for how to consolidate). The organisation does so at the start and completion of the project. If it is a multi-year project, the organisation also does this annually.

For each  ${\it CO_2}$  Performance Ladder Project, the organisation must identify opportunities for energy performance improvement, prioritise and document opportunities based on consumption and/or potential for energy performance improvement.

# **REQUIREMENT 1.A.2**

1.A.2

# THE ORGANISATION HAS QUANTITATIVE INSIGHT INTO ITS SCOPE 1 AND SCOPE 2 EMISSIONS

#### **CRITERION 1.A.2-1**

1.A.2-1

#### **EMISSIONS INVENTORY SCOPES 1 AND 2**





The organisation must draw up a report that details the  $CO_2$  emissions inventory for its scopes 1 and 2 emissions, per ISO 14064-1 (supplemented by elements from the GHG Protocol Corporate Standard). This report also includes a  $CO_2$  footprint of the organisation. The following requirements are imposed on the report and inventory:

<sup>26</sup> These are certificates that do not match renewable energy production and consumption on an annual basis (as with GoOs), but, for instance, on a quarterly basis.

#### a. Reliability and timeliness:

- i. the emissions inventory is based on actual energy consumption figures for an entire year;
- ii. the CO<sub>2</sub> emission factors and any recalculation have been applied per Section 9.1.3 from Part 1 and are provided with source citations;
- iii. the data used can be traced back to the sources (for example, fuel invoices, electricity bills or consumption data);
- iv. the substantiation is correct for the differences in CO<sub>2</sub> emission factors, methods and reported emissions with the previous emissions inventory;
- v. an emissions inventory is up to date up to a maximum of 15 calendar months after the end of the year for which the emissions are reported.

#### b. Completeness:

- the organisation must make an educated guess as to whether emissions of non-CO<sub>2</sub> greenhouse gases<sup>27</sup> are material. If this is the case, the material non-CO<sub>2</sub> greenhouse gases should be listed separately and quantified by greenhouse gas in kg or tons of CO<sub>2</sub> equivalents;
- ii. the emissions inventory meets all requirements of §9.3.1 Point a through t of ISO 14064-1 as adopted in normative Appendix A, using the scope classification from the GHG Protocol;
- iii. the emissions inventory contains all (groups of) facilities, systems, processes or equipment from the *energy balance* of requirement 1.A.1 and is complete with respect to *material scope 1 and scope 2 emissions*;
- iv. the emissions inventory lists the CO<sub>2</sub> footprint for scope 1 and scope 2 separately;
- v. the organisation may include emissions from business travel (scope 3 Category 6) in its scopes 1 and 2 emissions inventory as long as it reports it separately;<sup>28</sup>
- vi. the emissions inventory covers all organisational units and the *organisation*'s activities to the extent they fall within organisational boundaries, including the *organisation*'s *projects*;
- vii. for fuels and energy carriers, you may
  - \* report the Well-to-Wheel (WtW) emissions in scope 1 and scope 2, or
  - \* report Tank-to-Wheel emissions (TtW) in scope 1 and scope 2 and Well-to-Tank emissions (WtT) in scope 3 (under Category 3). If the organisation chooses to do this, it must be clearly stated;
- viii. If the organisation demonstrably purchases green gas, it may use a green gas emission factor for the quantity purchased. This is demonstrable when green gas GoOs for the same quantity, by the organisation or its energy supplier, are entered as settled in the register of the issuing body in the country in which the green gas is used.

<sup>27</sup> Up until Handbook 3.1, reporting on material non-CO<sub>2</sub> greenhouse gases was optional. From Handbook 4.0 onward, it is mandatory.

<sup>28</sup> Up until Handbook 3.1, reporting on emissions from business travel was mandatory with the scopes 1 and 2 emissions inventory. In Handbook 4.0, this requirement is linked to reporting on scope 3 and therefore mandatory from Step 2. At Step 1, reporting is not required but is recommended. Especially for organisations where these emissions are material relative to scopes 1 and 2.

- ix. the *organisation* reports *scope 2 emissions* from electricity consumption dually (see normative Appendix A for more information). This means that the *organisation* calculates emissions from electricity consumption using two methods:
  - \* **Method 1**: location-based method: the organisation uses one accurate emission factor<sup>29</sup> that reflects the average emissions from electricity generation on the local, sub-national or national grid;
  - \* **Method 2**: market-based method: the organisation uses a separate accurate emission factor for each power source. In doing so, the organisation makes a division between grey and/or green electricity purchased from the grid:
    - Grey electricity: The organisation must as far as possible make a distinction by grey electricity source (e.g. coal, gas or nuclear) and use a supplier-specific emission factor. <sup>30</sup> If the organisation cannot discover the exact origin of (part of) its grey electricity, if there's no supplier-specific emission factor available, or it purchases grey electricity from abroad, it must use (for that part) a single accurate average emission factor for all grey electricity sources on the local, sub-national or national grid.
    - Green electricity: The organisation must demonstrate green electricity that meets the following conditions.<sup>31</sup>
      - \* The electricity is demonstrably renewable. This means that
        - it is generated from renewable sources, such as wind, solar, geothermal, ambient, tidal, wave and other ocean energy, hydropower, and energy from biomass, landfill gas, sewage treatment plant gas, and biogas;
        - electricity from biomass, landfill gas, sewage treatment plant gas and biogas is certified to an EU approved scheme<sup>32</sup> or equivalent;
        - the organisation, or its energy supplier, debits GoOs to the issuing body's registry in the country in which the green electricity is used. This can be demonstrated through settlement statements or with an electricity label (or equivalent) in combination with a contract or invoice from the supplier showing how much of this product was taken in that calendar year;
      - \* The electricity is additional. This means it comes from
        - · the country in which the electricity is used or
        - another country and the *organisation* can adequately substantiate the additionality of the electricity it purchases based on
          - \* the importance of its (financial) contribution to the realisation or continued existence of the renewable energy project, and

<sup>29</sup> In the Netherlands and Belgium, this is the emission factor 'power unknown' at www.co2emisiefactoren.nl and www.co2emissiefactoren.be.

 $<sup>{\</sup>bf 30}$  In the Netherlands, the electricity label can be used for this purpose.

**<sup>31</sup>** These conditions for electricity consumption in the Netherlands are in line with SMK's Milieukeur Groene Elektriciteit (Ecolabel Green Electricity). A *green electricity* product with a valid SMK quality mark thus automatically meets the conditions in the Netherlands.

<sup>32</sup> At the time of publication of this Handbook, they are 2BSvs, Better Biomass, Bonsucro EU, ISCC EU, KZR INIG, REDcert, Red Tractor, RSB EU RED, RTRS EU RED, SQC, TASCC, UFAS, SURE, SBP and AACS.

- \* the presence of a physical connection (interconnection) for electricity transmission between the user country and the producer country and
- \* the *issuing body*'s membership in the producing country in the Association of Issuing Bodies (AiB).

#### **PLANNING**

The substantiated assessment of whether non-CO<sub>2</sub> greenhouse gas emissions are among material scope 1 and scope 2 emissions (item 1) must minimally occur before each initial audit and triennially.

#### DOCUMENTED INFORMATION IN CO2 PERFORMANCE LADDER PROJECTS



For each  $CO_2$  Performance Ladder Project, the organisation has a quantitative estimate of the emissions due to energy consumption on a project. For this estimate, the emissions due to the energy consumption on the project may be derived from an LCA calculation<sup>33</sup> if requested by the project client. If the organisation wishes to use an LCA, it must be prepared per ISO14067<sup>34</sup> or EN15804<sup>35</sup> and cover at least LCA stages A4 to A5. This may involve an LCA of the entire project or of part of the project. There is an LCA of the entire project if the organisation can plausibly demonstrate that the LCA covers at least 80% of the combined emissions due to the energy consumption on the project. In all other cases, there is an LCA of part of the project and the organisation can only use it to substantiate this particular part of the CO<sub>2</sub> calculation.

The organisation does so at the start and completion of the project. If it is a multi-year project, the organisation also does this annually.

<sup>33</sup> An example here is a calculation of an Environmental Cost Indicator (ECI)

<sup>34</sup> Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification

<sup>35</sup> Sustainability of construction work – Environmental declarations of products – Basic rules for the building products product group

# B

# ANGLE B REDUCTION

# **REQUIREMENT 1.B.1**

1.B.1

# THE ORGANISATION HAS SHORT-TERM PREPARATORY ACTIONS, MEASURES AND TARGET(S) AND HAS ESTABLISHED THEM IN AN ACTION PLAN

#### **CRITERION 1.B.1-1**

1.B.1-1

#### SHORT-TERM CO<sub>2</sub> TARGET





The organisation must draw up an Action Plan that includes one short-term  ${\rm CO_2}$  reduction target that:

- a. is formulated as an absolute target (kg or tonne CO<sub>2</sub>) or as a relative target (CO<sub>2</sub> intensity value) compared to the base year as well as to the last established short-term target;
- b. is broken down into separate sub-objectives for each scope or activity such that the target can be monitored;
- c. is ambitious given the *organisation*'s own situation and which is ambitious compared to the CO<sub>2</sub> reduction target of relevant *organisations* in its *sector* and in relation to applicable legal obligations. The *organisation* substantiates which (groups of) *organisations* in its *sector* it considers relevant;
- d. uses the Trias Energetica<sup>36</sup> as a starting point where CO<sub>2</sub> reductions that simultaneously result in final energy savings should be preferred over CO<sub>2</sub> reductions that result in no or less final energy savings.

#### **CRITERION 1.B.1-2**

1.B.1-2

#### **SHORT-TERM ENERGY SAVINGS AND RENEWABLE ENERGY TARGET**





The organisation must include quantitative targets in its Action Plan for saving 1.A.1 energy consumption and for self-generation, storage and use of renewable energy for the short-term that:

- a. are established relative to the base year and relative to the last *initial* or recertification audit;
- b. are formulated as an absolute target (in MJ/kWh or as a percentage) or relative target (energy consumption intensity value);

**<sup>36</sup>** This refers to the order of preference for setting targets and taking measures based on **1.** minimising *energy use*, **2.** using renewable energy, and **3.** using fossil fuels efficiently.

- c. is as ambitious as possible given the organisation's own situation and in comparison to the energy saving target(s) of relevant organisations in its sector and in relation to applicable legal obligations.  $^{37}$  The organisation substantiates which (groups of) organisations in its sector it considers relevant;
- have the Trias Energetica as a starting point, where CO2 reductions that simultaneously result in final energy savings should be preferred to CO2 reductions where no or less final energy is saved.

#### **CRITERION 1.B.1-3**

#### 1.B.1-3

#### SHORT-TERM ACTION PLAN





The Action Plan is a concrete short-term plan containing all the planned preparatory actions and measures to achieve the targets. These preparatory actions and measures must

- · be practical and clearly articulated;
- · be planned for, wherein taking preparatory actions and measures earlier is more ambitious;
- include expectations for their contribution to CO<sub>2</sub> reduction, energy conservation, deployment of renewable energy and/or flexibility in the energy system;
- include who is responsible for implementation (department/function/person);

The Action Plan may cover a longer term than just the short term.

In addition to the Action Plan, the organisation indicates how its proposed and/or actual preparatory actions and measures and CO2 intensity value compare to relevant organisations in its sector. To this end, the organisation fills in the Measure list and its CO2 intensity value in 'My CO<sub>2</sub> Performance Ladder'. The organisation includes the output of the completed Measure list in its Action Plan. Next, the organisation analyses and substantiates

- · how its measures and CO2 intensity value compare with the number of measures, the type of measures (e.g. mainly related to 'construction site' or 'passenger mobility') and the category of measures (are they mainly A, B or C measures) of relevant organisations in its sector;
- how its CO<sub>2</sub> intensity value compares with that of relevant organisations in its sector;
- whether, based on its proposed and/or actual measures and CO<sub>2</sub> intensity value, it considers itself to be a front runner, average achiever or low performer.

The organisation should indicate which (types of) organisations it considers relevant in its sector (e.g. based on country, sector or organisation size).

Completing the Measure list is normative. If the organisation proposes and/or takes measures that are not already on the Measure list, the organisation must add them.

37 If applicable, the energy savings target from the Energy Efficiency Directive (EED) applies explicitly.





#### DOCUMENTED INFORMATION IN CO2 PERFORMANCE LADDER PROJECTS

For each  ${
m CO}_2$  Performance Ladder Project, the organisation has a Project Plan containing preparatory actions and measures. The Project Plan will be implemented according to a schedule (the planning).

The organisation does so at the start and completion of the project. If it is a multi-year project, the organisation also does this annually.

The measures in the *Project Plan* are clearly derived from the quantitative target at the organisation level. The *organisation* indicates

- which Action Plan measures it includes in the Project Plan;
- which Action Plan measures, and which are suitable for projects, it does **not** include in its Project Plan. The organisation can justify why it does not implement these measures;
- what additional measures it includes in the Project Plan that are not from its Action Plan.

If measures have not yet been defined in the *Project Plan*, the *organisation* must define when the measures will be named that the *organisation* will implement in the *project*.

It is explicitly not necessary to formulate a separate target at project level for individual *projects*.

# **REQUIREMENT 1.B.2**

1.B.2

# THE ORGANISATION SUCCEEDS IN ACHIEVING THE TARGETS AND/OR PREPARATORY ACTIONS AND MEASURES IN THE 1.B.1 ACTION PLAN

#### **CRITERION 1.B.2-1**

1.B.2-1

#### **IMPLEMENTATION AND/OR COMMITMENT REQUIREMENT**





The organisation must demonstrate for the short-term CO<sub>2</sub> target (1.B.1-1) and for the short-term energy savings and renewable energy targets (1.B.1-2) that the targets and/or the preparatory actions and measures from the past year's 1.B.1-3 Action Plan have been achieved. It documents this progress in a progress report.

#### **PLANNING**

If the deadline for achieving the short-term targets has not yet passed, the *organisation* must substantiate, based on demonstrable results achieved that it is on a realistic path to achieving the targets and/or the preparatory actions and measures in the *Action Plan*.





#### DOCUMENTED INFORMATION IN CO2 PERFORMANCE LADDER PROJECTS

Upon completion of the *project*, the measures for that specific *Project Plan* have been implemented and evaluated, assessing their effectiveness (regarding possible application in other *projects*). In addition, if it is a multi-year *project*, the progress of the measures is documented at least annually. The *organisation* documents the results in a progress or evaluation report.

# C COMMUNICATION

# **REQUIREMENT 1.C.1**

1.C.1

THE ORGANISATION ENSURES THAT KEY PERSONS ARE DEMONSTRABLY AWARE OF THEIR ROLE IN THE ORGANISATION'S ENERGY AND CO<sub>2</sub> POLICY

#### **CRITERION 1.C.1-1**

1.C.1-1

#### **KEEPING KEY PERSONS INFORMED**

Key persons are identified in §7.2. They must be demonstrably aware of their role. This is when the person knows and can explain why and how they are (partly) responsible for the organisation's CO<sub>2</sub> and energy policy.

#### Key persons should

- be informed about their specific role and their specific influence, or what it could be, on the organisation's CO<sub>2</sub> and energy policy, on its energy consumption and CO<sub>2</sub> emissions, and on the use, storage or generation of renewable energy;
- know what is expected of them appropriate to the level of CO<sub>2</sub> awareness, distinguishing the following levels (higher levels include those below it):
  - i. Insight: be familiar with the *organisation's energy and CO<sub>2</sub> policies* and understand the important energy and CO<sub>2</sub> aspects in their work;
  - ii. Support: actively provide ideas and information for action, monitoring and policy;
  - iii. Feel engaged: participate in developing and realising elements of policy, the energy and CO<sub>2</sub> management system, savings measures, monitoring, communication and/ or reporting;
  - iv. Feel responsible: feel responsible for developing and achieving elements of policy, the *energy and CO*<sub>2</sub> *management system*, savings measures, monitoring, communication and/or reporting.
- know the consequences of not complying with energy and CO<sub>2</sub> management system requirements.

# **REQUIREMENT 1.C.2**

### 1.C.2

# THE ORGANISATION COMMUNICATES ABOUT ITS 1.B.1 ACTION PLAN, INCLUDING PROGRESS, INTERNALLY AND TO ITS KEY EXTERNAL TARGET GROUPS

#### **CRITERION 1.C.2-1**

#### 1.C.2-1

#### **COMMUNICATION PLAN**



The organisation has prepared a communication plan and is implementing the plan as scheduled. The goal is to create accountability and collaborative opportunities. The communication plan requirements are:

#### TARGET GROUPS

- It includes a description of the communication's internal target groups, including at least the *key persons* identified in §7.2;
- It includes a description of the communication's key external target groups.

#### **OBJECTIVES**

• It contains the communication objectives (in terms of familiarity with the message);

#### MESSAGE AND RESOURCES

- It contains the message (by target group), which should be related to the *Action Plan* of 1.B.1, including progress.
- It includes an overview of communication tools tailored to the target group and objectives, including at least its own website;
- It contains an overview of the information the *organisation* publishes on its own website. For this information the following applies
  - \* it contains, as a minimum, a description of the organisation's energy and CO<sub>2</sub> policy and progress (possibly supported by the full publication of its Action Plan);
  - \* the information relevant to the CO<sub>2</sub> Performance Ladder must be easily findable and visible to website visitors;
  - \* the published information can have any format. This means the *organisation* decides how it communicates;
  - \* the published information must not contradict its other documented information, including communications on the public organisation page on the CO<sub>2</sub> Performance Ladder website;
  - \* it must include a digital link to the organisation page on the CO<sub>2</sub> Performance Ladder website;
  - \* it must include the organisation's current certificate.

#### **RESPONSIBILITIES AND PLANNING**

- It includes the communication managers and implementers;
- It contains the schedule, including the frequency of communication activities, with annual being the minimum for each activity. In addition, for CO<sub>2</sub> Performance Ladder Projects, communication activities must take place at the start and completion of the project.



#### COMMUNICATION ON CO2 PERFORMANCE LADDER PROJECTS

- It includes a description of the internal target groups of communication within the organisation's CO<sub>2</sub> Performance Ladder Projects, including at least one key person for the CO<sub>2</sub> Performance Ladder Project identified in §7.2;
- It includes a description of the external target groups of the organisation's CO<sub>2</sub>

  Performance Ladder Project communications, including at least the project's client;
- It contains the approach for communication on CO<sub>2</sub> Performance Ladder Projects, minimally consisting of regular internal project consultation and consultation with project partners (including subcontractors) and the project client.
- During both internal and external consultations, attention should be paid to
  - \* the choice of and progress on the implementation of measures;
  - \* the progress and trends related to energy consumption on the project;
  - \* the progress and trends related to emissions due to energy consumption on the project.



# **ANGLE D**

# **COLLABORATION**

# **REQUIREMENT 1.D.1**

1.D.1

# THE ORGANISATION ANALYSES ITS OWN KNOWLEDGE AND COLLABORATION NEEDS RELATED TO THE 1.B.1 ACTION PLAN

#### **CRITERION 1.D.1-1**

1.D.1-1

#### **INVENTORY OF KNOWLEDGE/COLLABORATION REQUIREMENTS**



The organisation analyses knowledge and collaboration needs in relation to The (potential) measures included in the Action Plan (requirement 1.B.1) that can contribute to:

- · accelerated or further implementation of measures;
- · accelerated achievement of targets;
- realisation of more ambitious targets in a subsequent Action Plan.

The organisation's analysis of knowledge and collaboration needs should distinguish between energy conservation, the generation, storage or use of renewable energy and CO<sub>2</sub> reduction.

#### DOCUMENTED INFORMATION IN CO2 PERFORMANCE LADDER PROJECTS

For each CO<sub>2</sub> Performance Ladder Project, the organisation analyses what the knowledge and collaboration needs are in relation to the (potential) measures included in the Project Plan.

The organisation does so at the start and completion of the project. If it is a multi-year project, the organisation also does this annually.

## **REQUIREMENT 1.D.2**

1.D.2

# THE ORGANISATION IDENTIFIES OPPORTUNITIES BY WHICH IT CAN MEET THE KNOWLEDGE AND COLLABORATION NEEDS OF 1.D.1

#### **CRITERION 1.D.2-1**

1.D.2-1

#### **KNOWLEDGEABLE KEY PERSON**

The organisation shall designate one or more key persons responsible for retrieving and maintaining knowledge already available outside the organisation that may meet the knowledge needs of 1.D.1.

#### **CRITERION 1.D.2-2**

1.D.2-2

#### **INVENTORY OF PARTNERSHIPS**



The organisation identifies existing relevant partnerships that match the knowledge and collaboration requirements of 1.D.1. The partnerships must have a relationship with the organisation's sector and/or value chain and/or CO<sub>2</sub> Performance Ladder Projects and/or must play a role in local<sup>38</sup> energy and CO<sub>2</sub> reduction. The organisation knows the goal of relevant collaborations, the parties involved and the added value the collaboration can bring to the organisation.

**<sup>38</sup>** By 'local' is meant: in the *organisation*'s immediate vicinity, such as in the *organisation*'s industrial park or neighbourhood.





### **APPENDIX A (NORMATIVE)**

# RELEVANT CONCEPTS FROM EXTERNAL STANDARDS

This appendix contains a summary of the main concepts used in the CO<sub>2</sub> Performance Ladder that come from external standards. If the descriptions in this appendix differ from the descriptions in the listed standards, the standards take precedence.

#### **CONSOLIDATION APPROACHES**

(Source: GHG Protocol Corporate Standard, Chapter 4)

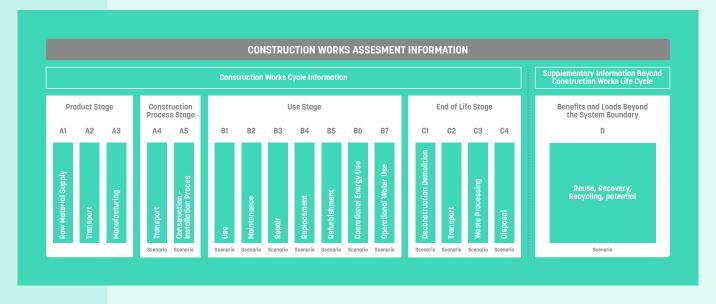
There are three consolidation approaches:

- 1. **Equity share**: the *organisation* reports emissions for the proportion of entities it legally owns. The percentage in emissions equals the percentage of ownership (0 to 100%).
- 2. **Operational control**: the *organisation* reports on an entity's emissions (always 100%) when the organisation has the authority to introduce and implement policies.
- 3. **Financial control**: the *organisation* reports emissions (always 100%) for an entity when the *organisation* has the greatest financial interest expressed in terms of the entity's financial risks and revenues.

# **LCA STAGES FOR CONSTRUCTION WORK**

(Source: EN 15804)

Construction work has the following LCA stages:



# **EMISSIONS INVENTORY REPORTING REQUIREMENTS**

(Source: ISO 14064-1, §9. 3.1)

The following topics should be included in the emissions inventory reporting:

- a. Description of the reporting organisation;
- b. Person or entity responsible for reporting;
- c. Period reported on;
- d. Documentation of organisational boundaries;
- Documentation of reporting boundaries, including the criteria by which the organisation determines its significant emissions;
- f. Direct greenhouse gas emissions, quantified separately for CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, NF<sub>3</sub>, SF<sub>6</sub> and other relevant groups of *greenhouse gases* (HFCs, PFCs, etc.) in tons of CO<sub>2</sub> equivalents;
- g. Descriptions in the emissions inventory of how the organisation addresses biogenic CO<sub>2</sub> emissions and biogenic removals and a quantification of the relevant CO<sub>2</sub> emissions and biogenic removals in tons of CO<sub>2</sub> equivalents;
- h. If quantified: direct greenhouse gas removals in tons of CO<sub>2</sub> equivalents;
- i. A statement that the *organisation* excludes significant greenhouse gas sources or CO<sub>2</sub> sinks from quantification;
- j. The indirect greenhouse gas emissions quantified separately by category in tons of CO<sub>2</sub> equivalents;
- k. The selected historical base year and emissions inventory from the base year;
- Explanation of any change in the base year or other historical greenhouse gas data or categorisation and an explanation of any recalculation in the base year or any other historical emissions inventory, and documentation of any limitation in comparability resulting from such recalculation;
- m. A reference to, or documentation of, the methods of quantification chosen including the reasons for this choice;
- n. An explanation of any change in the previously chosen ways of quantifying;
- o. A reference to, or documentation of, selected greenhouse gas emission factors or removal factors;
- p. A description of the impact of uncertainties on the accuracy of GHG emissions and removals data by category;
- q. A description of uncertainty analysis and results;
- r. A statement that the emissions inventory was prepared per ISO 14064-1;
- s. A statement whether the emissions inventory, report or statement has been verified, including the type of verification and the level of assurance achieved;
- t. The GWP values used in the calculation, including their sources. If the GWP values are not from the latest IPCC report, the *organisation* should include the emission factors or a reference to the database used, including their source.

# **SCOPE 1, SCOPE 2 AND SCOPE 3**

(Source: GHG Protocol Corporate Standard and ISO 14064-1)

#### SCOPE 1 EMISSIONS ('DIRECT GREENHOUSE GAS EMISSIONS')

Scope 1 emissions, or direct emissions (term used in ISO 14064-1), are CO<sub>2</sub> emissions, including non-CO<sub>2</sub> greenhouse gases, from sources owned or operated by the organisation, such as emissions from burning fossil fuels in its own boilers, furnaces or vehicles.

ISO 14064-1 (Annex B) distinguishes the following optional subcategories for direct emissions:

- · Direct emissions from stationary combustion, such as heaters, gas turbines or boilers;
- · Direct emissions from mobile combustion, such as in motor vehicles, ships and aircraft;
- Direct process emissions, such as in cement production;
- Direct emissions from leakage losses (intentional or unintentional), such as from refrigerants from cooling systems, spillage of CH4 or N2O from sewage treatment plants, or leakage from LNG facilities;
- Direct emissions from land use, land use change and forestry.

#### SCOPE 2 EMISSIONS ('INDIRECT EMISSIONS FROM IMPORTED ENERGY')

Scope 2 emissions are emissions generated from the generation of electricity, heat, cooling and steam purchased and consumed by the *organisation*. Scope 2 emissions physically occur at the location where electricity, heat, cooling, steam and compressed air are generated.

ISO 14064-1 distinguishes the following optional subcategories for *indirect emissions* from imported energy:

- Indirect emissions from purchased electricity;
- *Indirect emissions* from purchased energy delivered through a physical network, including heat, cooling, steam and compressed air, excluding electricity.

The organisation must report emissions from electricity consumption (as part of scope 2) in two ways: location-based and market-based. More information can be found in the GHG Protocol scope 2 Guidance and ISO 14064-1 (Annex E).

Location-based emissions are calculated by multiplying the organisation's purchased electricity by one accurate emission factor representing the average emissions from the local, sub-national or national electricity grid.

Market-based emissions are calculated as follows: multiply purchased electricity by emission factors that most accurately reflect CO<sub>2</sub> emissions from the generation source. For example, the production source could be a gas plant or wind farm of the electricity supplier with whom the organisation has a contractual agreement. Offsetting these emissions against GoOs is permitted when applicable.

An organisation may not offset the emissions from electricity it produces and delivers to the grid against the emissions from electricity it takes from the grid at any other time. However, it may record avoided emissions from electricity delivered to the grid separately under avoided emissions.

#### SCOPE 3 EMISSIONS ('OTHER INDIRECT EMISSIONS')

Scope 3 emissions are emissions that are a result of the organisation's activities but arise from sources that are neither owned nor controlled by the organisation.

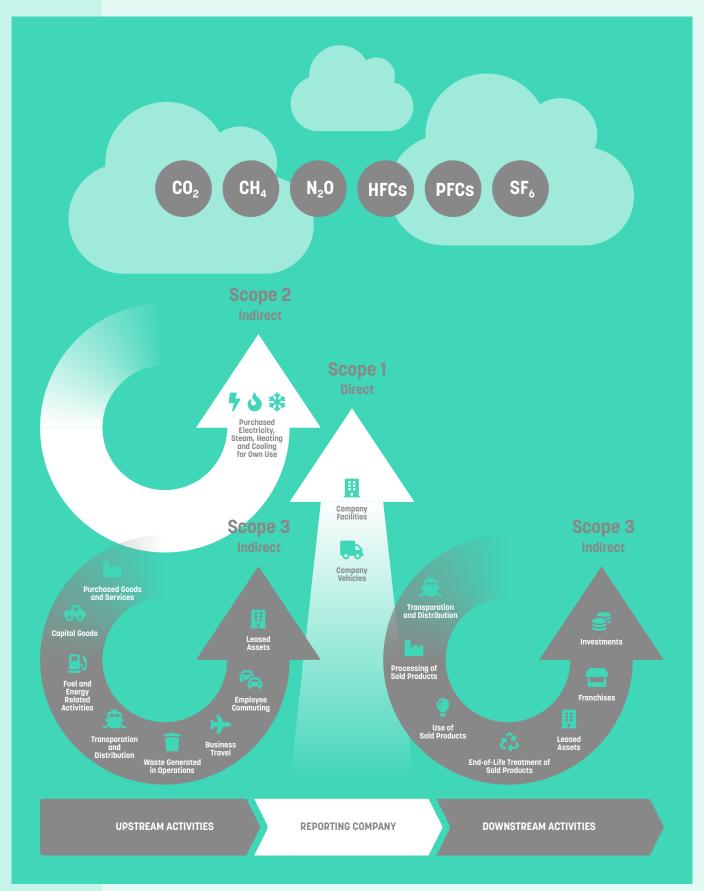
The GHG Protocol Scope 3 Standard (Chapter 5) distinguishes 15 categories of scope 3 emissions during the production stage of a product or service (scope 3 upstream) and the use and disposal stage of a product or service (scope 3 downstream). These are briefly explained below:

SCOPE 3 UPSTREAM		
<b>1</b> Purchased goods and services <sup>39</sup>	Extraction, production and transportation of goods and services purchased or obtained by the <i>organisation</i> during the reporting year that fall outside categories 2 to 8 of this list.	
<b>2</b> Capital goods	Extraction, production and transportation of capital assets purchased or acquired by the <i>organisation</i> during the reporting year.	
<b>3</b> Fuel and energy-related activities (not included in <i>scope 1</i> or <i>2</i> )	Extraction, production and transportation of fuel or energy purchased or obtained by the <i>organisation</i> during the reporting year that falls outside scope 1 or 2.	
<b>4</b> Upstream transportation and distribution	Transportation and distribution during the reporting year of products purchased by the organisation between its direct suppliers and organisation's facilities (in vehicles not owned or operated by the organisation).  Transportation and distribution services purchased by the organisation during the reporting year, including inbound and outbound logistics (e.g. of products sold) and transportation and distribution between the organisation's own facilities (in vehicles and facilities not owned or operated by the organisation).	
<b>5</b> Waste generated in operations	Disposal and treatment of waste generated in the reporting year during the <i>organisation</i> 's activities (in facilities not owned or operated by the <i>organisation</i> ).	

<sup>39</sup> A possible subcategory (Source: CSRD) is 'cloud computing and data centre services'

<b>6</b> Business travel	Passenger transportation for work-related activities in the reporting year.
<b>7</b> Employee commuting	The transportation of employees between their homes and work locations during the reporting year (in vehicles not owned or operated by the <i>organisation</i> ).
8 Upstream leased assets	The operation of assets leased by the <i>organisation</i> (lessee) in the reporting year that fall outside scope 1 or 2.

SCOPE 3 DOWNSTREAM			
<b>9</b> Downstream transportation and distribution	Transport and distribution during the reporting year, of products sold by the <i>organisation</i> , between the <i>organisation</i> 's facilities and those of the end user (if not paid for by the <i>organisation</i> ), including retail and storage (in vehicles and facilities not owned or operated by the <i>organisation</i> ).		
<b>10</b> Processing of sold products	The processing of intermediate products by downstream companies (e.g. manufacturers) that the <i>organisation</i> sold during the reporting year.		
<b>11</b> Use of products and services sold	The end use of goods and services sold by the organisation during the reporting year.		
<b>12</b> End-of-life treatment of sold products	The disposal and processing of products sold by the organisation during the reporting year at the end of their life.		
<b>13</b> Downstream leased assets	The operation of assets owned by the <i>organisation</i> (lessor) and leased to other entities during the reporting year, which fall outside scope 1 or 2.		
<b>14</b> Franchises	Operation of franchises in the reporting year that fall outside scope 1 or 2.		
<b>15</b> Investments	Operating investments (including equity and debt investments and project financing), which fall outside scope 1 or 2		



The scope diagram of the GHG Protocol Scope 3 Standard



The CO<sub>2</sub> Performance Ladder is developed in the Dutch language and is approved for accreditation by the Dutch Accreditation Council (RvA) and the Belgian BELAC. For all translations of normative documents, the Dutch version is leading in case of discrepancies or differences in interpretation. In case of ambiguity, please contact SKAO, info@co2performanceladder.com. No rights can be derived from translations.

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