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Net zero guidelines

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

International Workshop Agreement IWA 42 was approved at a workshop hosted by the British Standards Institution (BSI), in association with Our 2050 World, held virtually in September 2022.

In order to respond to urgent market requirements, International Workshop Agreements are prepared through a workshop mechanism outside of ISO committee structures, following a procedure that ensures the broadest range of relevant interested parties worldwide have the opportunity to participate, and are approved by consensus amongst the individual participants in the workshops. If there is an existing ISO committee whose scope covers the topic, the published International Workshop Agreement is automatically allocated to this committee for maintenance. An International Workshop Agreement is reviewed three years after its publication and can be further processed to become a Publicly Available Specification, a Technical Specification or an International Standard, according to the market requirement. An International Workshop Agreement can exist for a maximum of six years, following which it is either withdrawn or converted into another ISO document.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

0.1 General

Climate change is one of the most pressing challenges that our world faces. Scientific assessments through the Intergovernmental Panel on Climate Change (IPCC) reports have shown that many of the worst consequences of climate change can be avoided by limiting global warming to 1,5 °C above pre-industrial levels. The global temperature is already over 1 °C above pre-industrial levels, and scenarios assessed by the IPCC indicate that limiting warming to 1,5 °C, with no or limited temperature overshoot, requires achieving at least net zero global carbon dioxide (CO₂) emissions in the early 2050s, along with deep and sustained global reductions in other greenhouse gas emissions (GHGs)^{[15][16]}. These scenarios also show that the earlier and faster emission reductions occur, the lower peak warming and the lower the likelihood of overshooting warming limits. Peak warming depends on cumulative CO₂ emissions from the beginning of the industrial period up to the time they are reduced to net zero, combined with the change in non-CO₂ emissions on the climate system, by the time the temperature peaks.

This document provides guiding principles and recommendations to enable a common approach with a high level of ambition, to drive organizations to achieve net zero GHGs as soon as possible and by 2050 at the latest. It is intended to be a common reference for governance organizations (including voluntary initiatives, adoption of standards, policy and national and international regulation), and can help organizations taking action to contribute to achieving global net zero.

This document should be interpreted and used in line with its purpose and scope to maintain and promote the highest possible climate ambition. This document does not address legal and other obligations relating to climate action.

This document builds on progress by voluntary initiatives, campaigns and governance, supporting their purpose of progressing to a climate positive future, increasing their reach and enabling a more consistent approach for future interventions and deliverables, including ISO standards.

The 2015 Paris Agreement^[17] states the importance of achieving a global balance between human-caused emissions by sources and human-led removals by sinks in the second half of the 21st century, taking into account varying capabilities in different parts of the world, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty. This document therefore includes recommendations on equity and wider impact.

The scope of this document is aligned to the objectives of the “High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities”, formed at the request of the United Nations (UN) Secretary General, and other UN developments, including the United Nations Framework Convention on Climate Change (UNFCCC).

Some initiatives and policies limit actions relating to net zero GHG emissions to those emissions and removals under the direct control of the reporting organization. This document promotes and gives guidance on taking action to address all GHG emissions, direct and indirect, in an organization’s value chain.

0.2 Use of this document

In this document, the following verbal forms are used:

- “should” indicates a recommendation;
- “may” indicates a permission;
- “can” indicates a possibility or a capability.

Information marked as “NOTE” is intended to assist the understanding or use of the document. “Notes to entry” used in [Clause 3](#) provide additional information that supplements the terminological data and can contain provisions relating to the use of a term.

Net zero guidelines

1 Scope

This document provides guiding principles and recommendations to enable a common, global approach to achieving net zero greenhouse gas emissions through alignment of voluntary initiatives and adoption of standards, policies and national and international regulation.

This document provides guidance on what governance organizations and other organizations can do to effectively contribute to global efforts to limit warming to 1,5 °C by achieving net zero no later than 2050. It provides guidance on a common and equitable contribution and recognizes the capability of individual organizations in contributing to achieving global net zero. This document, when used in combination with applicable science-based pathways, provides guidance for organizations seeking to set robust climate strategies.

This document provides common terms and definitions, guidance and specific recommendations on:

- net zero guiding principles for all organizations;
- incorporating net zero into strategies and policies;
- what net zero means at different levels and for different types of organization;
- setting and aligning interim and long-term targets based on equity, latest scientific knowledge, evidence, research and agreed good practice;
- actions to take to achieve these targets;
- greenhouse gas emission reductions within the value chain;
- nature protection and restoration;
- avoided emissions and other climate contributions beyond the value chain;
- removals;
- offsets;
- credits;
- claims;
- monitoring, measuring and use of appropriate and consistent indicators;
- equity, empowerment, fair share and wider impact;
- transparent reporting and effective communication.

This document is intended to align territorial approaches to achieving net zero (e.g. by nations, regions, cities) and value chain approaches by organizations.

This document is intended to enable and support all organizations, including governance organizations developing policies, frameworks, standards or other initiatives on net zero for use by others.

This document is intended to complement voluntary initiatives and facilitate alignment, so that any organization looking to make or support a net zero claim takes a similar approach regardless of the initiative it is associated with.

NOTE 1 A single target for organizations of net zero for all greenhouse gas emissions, as soon as possible or by 2050 at the latest, is used in this document to provide a common, understandable and ambitious target, in line with scientific consensus on the global effort needed to limit warming to 1,5 °C with no or limited temperature overshoot. This organizational target aligns with the target stated in the Race to Zero Criteria^[18].

NOTE 2 Governance organizations include:

- national and sub-national (e.g. regional, local, municipal) governments, as appropriate;
- regulators;
- voluntary initiatives;
- intergovernmental bodies;
- international and national non-governmental organizations.

NOTE 3 This document does not provide guidance on carbon neutrality for organizations or for products and services. Information on carbon neutrality for organizations will be provided in ISO 14068¹⁾.

2 Normative references

There are no normative references in this document.

NOTE The Normative references clause lists, for information, those documents which are cited in the text in such a way that some or all of their content constitutes requirements of the document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

NOTE The Terms and definitions clause provides definitions necessary for the understanding of certain terms used in the document. Some definitions have been drafted specifically for this document, others are based on existing terminological entries from International Standards and from documents published by the Intergovernmental Panel on Climate Change (IPCC), the Greenhouse Gas Protocol (GHGP) and United Nations Framework Convention on Climate Change (UNFCCC).

3.1 Terms related to climate action

3.1.1

net zero

net zero GHG

condition in which human-caused *residual GHG emissions* (3.2.9) are balanced by human-led *removals* (3.3.3) over a specified period and within specified boundaries

Note 1 to entry: Human-led removals include ecosystem restoration, direct air carbon capture and storage, reforestation and afforestation, enhanced weathering, biochar and other effective methods.

Note 2 to entry: The words “human-caused” and “human-led” are intended to be understood as synonymous with the word “anthropogenic” in IPCC definitions.

1) Under development.