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Greenhouse gases — Competence requirements for greenhouse gas validation teams and verification teams

Gaz à effet de serre — Exigences de compétence pour les équipes de validation et les équipes de vérification de gaz à effet de serre

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Contents

Page

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 14066 was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 7, *Greenhouse gas management and related activities*.

Introduction

This International Standard specifies competence requirements for validation teams and verification teams for the benefit of greenhouse gas (GHG) programme administrators, regulators, validation bodies and verification bodies. To achieve consistency in the international marketplace and maintain public confidence in GHG reporting and other communications, there is a need to define competence requirements for validation teams and verification teams.

Requirements for GHG validation bodies and GHG verification bodies are established in ISO 14065. ISO 14065 requires that validation bodies and verification bodies establish and maintain a procedure to manage the competence of its personnel undertaking the various validation or verification activities within the team appointed for the engagement. It is the role of the validation or verification body to ensure that teams have the necessary competence to effectively complete the validation or verification process. This International Standard includes principles for ensuring competence of validation teams and verification teams. Supporting these principles are general requirements based on the tasks that validation teams or verification teams need to be able to perform and the competence required to do so.

This International Standard can be used in conjunction with ISO 14065 as the basis for assessing and recognizing the competence of validation teams and verification teams.

Users of this International Standard are encouraged to refer to ISO 14064-1 and ISO 14064-2 for GHG quantification and reporting and to ISO 14064-3 for GHG validation and verification.

Figure 1 shows the relationships between the application of this International Standard and ISO 14064-1, ISO 14064-2, ISO 14064-3 and ISO 14065.

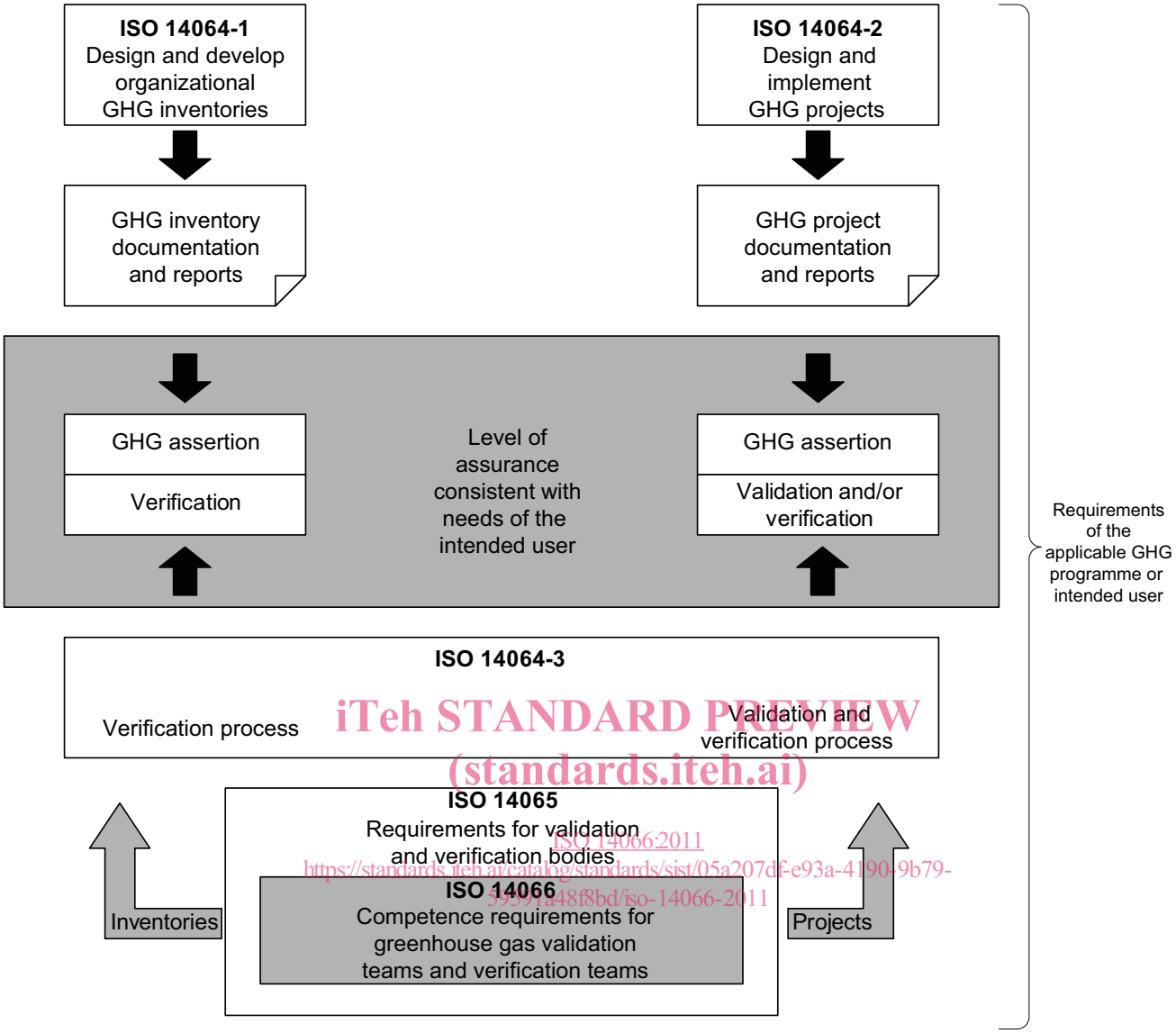

Figure 1 — Framework for using ISO 14066 with ISO 14064-1, ISO 14064-2, ISO 14064-3 and ISO 14065

Greenhouse gases — Competence requirements for greenhouse gas validation teams and verification teams

1 Scope

This International Standard specifies competence requirements for validation teams and verification teams. This International Standard complements the implementation of ISO 14065.

This International Standard is not linked to any particular greenhouse gas (GHG) programme. If a particular GHG programme is applicable, competence requirements of that GHG programme are additional to the requirements of this International Standard.

NOTE Requirements for the management and support of personnel competence are specified in ISO 14065:2007, Clause 6.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14064-3:2006, *Greenhouse gases — Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions*

ISO 14065:2007, *Greenhouse gases — Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition*

3 Terms and definitions

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

3.1 Terms specific to competence requirements

3.1.1
sector
technical area sharing common attributes and similar GHG sources, sinks and reservoirs

NOTE The abbreviated term SSRs is used to define sources, sinks and reservoirs.

3.1.2
team leader
person who manages the validation team or verification team

3.1.3
professional scepticism
attitude that includes a questioning mind and a critical assessment of evidence

NOTE Taken from International Framework for Assurance Engagements[16], paragraph 40.

3.1.4
competence
ability to apply knowledge and skills to achieve intended results

NOTE 1 Ability implies exhibiting appropriate personal behaviour when conducting the validation or verification.

NOTE 2 Adapted from ISO 19011:—, definition 3.14.

NOTE 3 When defining competence, the following meanings have been applied to the words used:

— knowledge refers to facts and methods, i.e. to know;

— skills means to carry out in practice, i.e. to do.

NOTE 4 This International Standard uses the term “competence” instead of “competency”. The meanings of the terms are differentiated as follows:

— competence is defined as the broad range of knowledge, skills, attitudes and observable behaviour that together comprise the ability to deliver a specified professional service; it also involves adoption of a professional approach that values accountability to the public and leadership in professional practice, the public sector, the corporate sector and education;

— competency is defined as the particular tasks that competent personnel perform while applying, or bringing to bear, the pervasive qualities and skills that are characteristic of competent personnel to the level of proficiency defined as appropriate by the profession.

3.1.5
test
audit technique used to assess a characteristic of items in a sampled population of GHG data and information against validation or verification criteria

NOTE 1 See ISO 14064-3:2006, 4.7.

NOTE 2 Characteristics can include accuracy, completeness, functionality, knowledge, quality and veracity.

3.2 Terms related to greenhouse gases

3.2.1
greenhouse gas
GHG
gaseous constituent of the atmosphere, both natural and anthropogenic, that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere, and clouds

NOTE GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6).

[ISO 14064-3:2006, definition 2.1]

3.2.2
greenhouse gas assertion
factual and objective declaration made by the responsible party

NOTE 1 The GHG assertion could be presented at a point in time or could cover a period of time.

NOTE 2 The GHG assertion provided by the responsible party should be clearly identifiable and capable of consistent evaluation or measurement against suitable criteria by a validator or verifier.

NOTE 3 The GHG assertion could be provided in the form of a GHG report or GHG project plan.

NOTE 4 Adapted from ISO 14064-3:2006, definition 2.11.

3.2.3
greenhouse gas information system
policies, processes and procedures to establish, manage and maintain GHG information

[ISO 14064-3:2006, definition 2.12]

3.2.4
greenhouse gas project
activity or activities that alter the conditions identified in the baseline scenario which cause greenhouse gas emission reductions or greenhouse gas removal enhancements

[ISO 14064-3:2006, definition 2.14]

3.2.5
greenhouse gas programme
voluntary or mandatory international, national or sub-national system or scheme that registers, accounts or manages GHG emissions, removals, greenhouse gas emission reductions or greenhouse gas removal enhancements outside the organization or GHG project

[ISO 14064-3:2006, definition 2.16]

3.3 Terms related to people and organizations

3.3.1
client
organization or person requesting validation or verification

NOTE The client could be the responsible party, the GHG programme administrator or other stakeholder.

[ISO 14064-3:2006, definition 2.27]

3.3.2
intended user
individual or organization identified by those reporting GHG-related information as being the one who relies on that information to make decisions

NOTE The intended user could be the client, the responsible party, GHG programme administrators, regulators, the financial community or other affected stakeholders, such as local communities, government departments or non-governmental organizations.

[ISO 14064-3:2006, definition 2.26]

3.3.3
organization
company, corporation, firm, enterprise, authority or institution, or part or combination thereof, whether incorporated or not, public or private, that has its own functions and administration

[ISO 14064-3:2006, definition 2.23]

3.3.4
personnel
persons working with or on behalf of the validation or verification body

[ISO 14065:2007, definition 3.2.4]

3.3.5
responsible party
person or persons responsible for the provision of the GHG assertion and the supporting GHG information

NOTE The responsible party can be either individuals or representatives of an organization or project and can be the party who engages the validator or verifier. The validator or verifier may be engaged by the client or by other parties, such as the GHG programme administrator.

[ISO 14065:2007, 3.2.5]

3.3.6
technical expert
person who provides specific knowledge or expertise to the validation team or verification team

NOTE 1 Specific knowledge or expertise is that which relates to the organization, the project to be validated or verified, or language or culture.

NOTE 2 A technical expert does not act as a validator or verifier in the validation team or verification team.

NOTE 3 Adapted from ISO 19011:—, definition 3.15.

3.4 Terms related to validation and verification

3.4.1
validation
systematic, independent and documented process for the evaluation of a greenhouse gas assertion related to a GHG project plan against agreed validation criteria

NOTE 1 In some cases, such as in first-party validations, independence can be demonstrated by the freedom from responsibility for the development of GHG data and information.

NOTE 2 The content of a GHG project plan is described in ISO 14064-2:2006, 5.2.

NOTE 3 Adapted from ISO 14064-3:2006, definition 2.32.

3.4.2
validator
competent and independent person or persons with responsibility for performing and reporting on the results of a validation

NOTE 1 Competence areas for validators include GHG programme, technical, data and information auditing, and project specific requirements.

NOTE 2 Adapted from ISO 14065:2007, definition 3.3.2.

3.4.3
validation statement
formal written declaration to the intended user, following validation of a GHG project plan, which provides assurance on the statements in the responsible party's GHG assertion

[ISO 14065:2007, definition 3.3.4]

3.4.4
verification statement
formal written declaration to the intended user, following verification, which provides assurance on the statements in the responsible party's GHG assertion

[ISO 14065:2007, definition 3.3.5]

3.4.5
verification
systematic, independent and documented process for the evaluation of a greenhouse gas assertion against agreed verification criteria

NOTE In some cases, such as in first-party verifications, independence can be demonstrated by the freedom from responsibility for the development of GHG data and information.

[ISO 14064-3:2006, definition 2.36]

3.4.6
verifier
competent and independent person, or persons, with responsibility for performing and reporting on the verification process

NOTE 1 Competence areas for a verifier include GHG programme, technical, data and information auditing, and project specific requirements.

NOTE 2 Adapted from ISO 14065:2007, definition 3.3.8.

3.4.7
validation body
body that performs validations of GHG assertions in accordance with ISO 14064-3 and ISO 14065

NOTE 1 A validation body can be an individual.

NOTE 2 Adapted from ISO 14065:2007, definition 3.3.3.

3.4.8
verification body
body that performs verifications of GHG assertions in accordance with ISO 14064-3 and ISO 14065

NOTE 1 A verification body can be an individual.

NOTE 2 Adapted from ISO 14065:2007, definition 3.3.3.

3.4.9
validation team
one or more validators conducting a validation, supported if needed by technical experts

NOTE 1 One validator of the validation team is appointed as the validation team leader.

NOTE 2 The validation team can include validators-in-training.

NOTE 3 When the team consists of one person, that person is expected to possess all the competencies required.

NOTE 4 Adapted from ISO 14065:2007, definition 3.3.6.

3.4.10
verification team
one or more verifiers conducting a verification, supported if needed by technical experts

NOTE 1 One verifier of the verification team is appointed as the verification team leader.

NOTE 2 The verification team can include verifiers-in-training.

NOTE 3 When the team consists of one person, that person is expected to possess all the competencies required.

NOTE 4 Adapted from ISO 14065:2007, definition 3.3.6.

3.4.11
materiality
concept that individual or the aggregation of errors, omissions and misrepresentations could affect the greenhouse gas assertion and could influence the intended users' decisions

NOTE 1 The concept of materiality is used when designing the validation or verification and sampling plans to determine the type of substantive processes used to minimize risk that the validator or verifier will not detect a material discrepancy (detection risk).

NOTE 2 The concept of materiality is used to identify information that, if omitted or misstated, would significantly misrepresent a GHG assertion to intended users, thereby influencing their conclusions. Acceptable materiality is determined by the validator, verifier or GHG programme based on the agreed level of assurance.

[ISO 14064-3:2006, definition 2.29]

4 Principles

4.1 General

The application of principles is fundamental to the evaluation of team members' competence to carry out validation and verification. Principles are the basis for, and will guide the application of, requirements in this International Standard.

4.2 Independence

The principle of independence involves:

— remaining impartial to the activity being validated or verified, and free from bias and conflict of interest;

— maintaining objectivity throughout the validation or verification to ensure that the findings and conclusions will be based on objective evidence generated during the validation or verification.

4.3 Integrity

The principle of integrity involves demonstrating fair behaviour through trust, honesty, working with diligence and responsibility, observing the law, maintaining confidentiality and making disclosures expected by the law and the profession throughout the validation or verification process.

4.4 Fair presentation

The principle of fair presentation involves:

— reflecting truthfully and accurately validation or verification activities, findings, conclusions and reports;

— reporting significant obstacles encountered during the validation or verification process, as well as unresolved, diverging opinions among team members, the responsible party and the client.

4.5 Due professional care

The principle of due professional care involves:

— exercising due care and judgement in accordance with the risk attributed to the task performed and the confidence placed by clients and intended users;

— having the necessary competence to undertake the validation or verification.