SLOVENSKI STANDARD
oSIST ISO/DIS 14034:2016

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Ravnanje z okoljem - Preverjanje okoljske tehnologije (ETV)

Environmental management -- Environmental technology verification (ETV)

Management environnemental -- Vérification des technologies environnementales (ETV)

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Environmental management — Environmental technology verification (ETV)

Management environnemental — Vérification des technologies environnementales (ETV)

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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.

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 14034 was prepared by Technical Committee ISO/TC 207, *Environmental Management*, Subcommittee SC 4, *Environmental performance evaluation*.

ISO Guide 82 has been taken into account in the development process of this International Standard.

Introduction

The objective of Environmental Technology Verification (ETV) is to provide credible, reliable and independent verification of the performance of environmental technologies. An "Environmental technology" is a technology that brings an environmental added value and/or measures environmental parameters. Such technologies will have an increasingly important role in dealing with environmental challenges and achieving the sustainable development goals.

ETV contributes to protecting and conserving the environment by developing, promoting and facilitating market uptake of innovative environmental technologies, especially those performing better than established relevant alternatives. ETV is particularly applicable for those environmental technologies whose innovative features or performance cannot be fully reflected in product standards. Through the provision of objective evidence, ETV provides an independent and impartial confirmation that specified environmental and technical performance is fulfilled by an environmental technology. ETV strengthens the market viability of new, innovative technologies by supporting informed decision-making among technology users.

ETV was established in the United States of America in 1995. Later, similar activities were introduced in other countries, among them: Canada, some European Union Member-States, Japan, South Korea and the Philippines. The environmental performance of many technologies has been verified in these countries under their own ETV programmes. Since 2008, interest in verifications, carried out together by different ETV schemes for the purpose of mutual recognition of ETV programmes, has increased. With the aim of exploring ways to accelerate international harmonization and mutual recognition of ETV programmes, the International Working Group on ETV (IWG-ETV) composed of international experts having in charge an ETV scheme: Canada, USA, Japan, South Korea, the Philippines, and the European Commission, was established in 2008. It reached a consensus that standardization of the ETV process by means of an ISO/ETV standard is an appropriate way to establish the credibility and robustness of ETV world-wide.

1 Scope

This International Standard specifies principles, procedures and requirements for environmental technology verification.

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/IEC 17020, *Requirements for the operation of various types of bodies performing inspection*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply:

3.1 Terms related to organisation

3.1.1
organisation
person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives

NOTE to entry: The concept of organization includes, but is not limited to sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution, or part or combination thereof, whether incorporated or not, public or private. For organisations with more than one operating unit, a single operating unit may be defined as an organization.

[SOURCE: ISO 14001]

3.1.1.1
verifier
organisation (3.1.1) that performs *environmental technology verification* (3.3.1.2)

3.1.1.2
test body
organisation (3.1.1) providing a test-environment, test-implementation and means for performing and reporting on the testing of an *environmental technology* (3.3.1.1)

3.1.1.3
applicant
organisation (3.1.1), submitting a *technology* (3.3.1) that will be verified through an *environmental technology verification* (3.3.1.2) procedure

NOTE to entry: Applicant can be a technology developer, manufacturer or provider or a legally authorised representative of the organisation.

3.1.1.4
interested party
person or *organisation* (3.1.1) being concerned with, affecting, being affected by, or perceiving itself to be affected by the results of *environmental technology verification* (3.3.1.2)

NOTE to entry: Interested parties can include customers, users, communities, suppliers, developers, manufacturers, investors, regulators, nongovernment organisations.

3.2 Terms related to verification

3.2.1
verification
confirmation, through the provision of objective evidence, that specified performance requirements have been fulfilled

[SOURCE: ISO 14025:2006]

3.2.2
verification plan
detailed planning document for implementation of the *verification* (3.2.1) procedure

3.2.3
verification report
document detailing the *environmental technology verification* (3.3.1.2) process and its results

3.2.4
verification statement
document provided by a *verifier* (3.1.1.1) summarizing the results and confirming the verification of an *environmental technology* (3.3.1.1)

3.2.5
test plan
detailed planning document specifying the principles, testing methods, conditions and procedures, required to produce test data

3.2.6
data quality
characteristics of data that relate to their ability to satisfy stated requirements

[SOURCE: ISO 14040:2006]

3.2.7
test report
document describing results and conditions of testing

3.3 Terms related to technology

3.3.1
technology
application of scientific knowledge, tools, techniques, crafts, systems or methods of structuring in order to solve a problem or achieve an objective which can result in a *product* (3.3.2), *process* (3.3.3) or service

3.3.2
product
any goods or service

[SOURCE: ISO 14050:2009]

3.3.3
process
set of interrelated or interacting activities that transforms inputs into outputs

[SOURCE: ISO 14050:2009]

3.3.1.1
environmental technology
technology (3.3.1) that either results in an *environmental added value* (3.3.1.4) or measures parameters that indicate an *environmental impact* (3.3.1.3)

3.3.1.2
environmental technology verification
verification (3.2.1) of the *performance* (3.4.1) of an e*nvironmental technology* (3.3.1.1) by a *verifier* (3.1.1.1)

3.3.1.3
environmental impact
change to the environment, whether adverse or beneficial, wholly or partially resulting from material acquisition, design, production, use or end-of-use of a *technology* (3.3.1)

[SOURCE: adapted from ISO 14001:2004]

3.3.1.4
environmental added value
more beneficial or less adverse *environmental impact* (3.3.1.3) of a *technology* (3.3.1) with respect to the *relevant alternative* (3.3.1.5)

3.3.1.5
relevant alternative
technology (3.3.1) fulfilling a similar or identical function as the *environmental technology* (3.3.1.1) undergoing *verification* (3.2.1)

3.4 Terms related to performance

3.4.1
performance
measurable result

NOTE to entry: Performance relates to quantitative findings.

[SOURCE: adapted from ISO WD4 14001]

3.4.1.1
environmental performance
performance (3.4.1) of a *technology* (3.3.1) related to the *environmental impact* (3.3.1.3)

3.4.1.2
technical performance
performance (3.4.1) of a *technology* (3.3.1) in relation to its intended application

3.4.2
performance claim
initial statement on the performance of the *environmental technology* (3.3.1.1) declared by the applicant

3.4.3
parameter
numerical or other measurable factor used as a measure of the *performance* (3.4.1) of a *technology* (3.3.1)

4 General principles and requirements

4.1 Principles

ETV is based on a number of principles to ensure that the data is reported accurately, clearly, unambiguously and objectively. ETV provides a credible and balanced account that can be depended on by the intended users and other interested parties.

4.1.1 Factual approach to decision making

Verification statements are based on factual and relevant evidence collected through an objective verification of the performance.

4.1.2 Sustainability

The environmental technology verification process is used as a tool to distinguish environmental technologies that meet relevant performance criteria in support of sustainability.

4.1.3 Transparency and credibility

The environmental technology verification process is based on reliable test results and robust procedures. The process is facilitated such that, to the greatest extent feasible, methods and data are fully disclosed and reports are clear, complete, objective and useful to the interested parties.

4.1.4 Flexibility

Environmental technology verification is a dynamic process that allows for a dialogue between the applicant, verifier, and interested parties, to ensure completeness and maximize utility of verifications.

4.2 Requirements

When verifying performance of environmental technologies, this International Standard and the current version of ISO/IEC 17020 *Conformity assessment – Requirements for the operation of various types of bodies performing inspection* shall be applied and demonstrated.

5 Environmental Technology Verification procedure (ETV procedure)

This section outlines the five key processes that constitute the environmental technology verification procedure. The key processes are: Application , Pre-verification , Verification , Reporting and verification statement and Post-verification. Unless specified otherwise, those processes are performed by the verifier.

5.1 Application for verification

5.1.1 Application requirements

The applicant shall provide to the verifier the following information at a minimum:

1) information about applicant, including its name and address(es) of its physical location(s);

2) description of the technology:

a) a unique identifier for the technology (e.g. a commercial name, an identification number or applicable revision);

b) detailed information in order to understand the operation and performance of the technology including benefits, operational constraints, limitations and system boundary;

c) status of the technology development process and its readiness for market;

d) if applicable, information on relevant alternative(s) of the technology;

e) information about the intended application of the technology expressed in terms of technology purpose, the type of material (for example, soil, drinking water, ground water, etc.) that the technology is intended for and the measurable property that is affected by the technology and how it is affected;

NOTE to entry: more than one type of material and measurable property can be provided.

f) information on significant environmental impacts and environmental added value related to the technology;

3) performance claim;

4) relevant existing data and the methods for acquiring these data that were applied to support the performance claim of the technology;

5) any relevant legal requirements, or standards related to the technology and its use;

6) if relevant, a statement that the technology adheres to applicable regulatory requirements;

7) supportive information relevant for the interested parties including the following, but not limited to:

a) description of user needs;

b) expected time of service of the technology as per the performance claim, if relevant, and;

c) any applicable health and safety requirements and considerations.

5.1.2 Application review

Step 1 Preliminary review

A review of the application and supplementary information shall be made to ensure that all requested application information has been provided in accordance with the requirements in Clause 5.1.1.

Step 2 Technical review

a) A technical review of the application shall be made to ensure that:

i. information about the applicant technology for the conduct of the verification is sufficient;

ii. the performance claim for the intended technology application and the user needs are relevant;

iii. the environmental added value of the technology is relevant.

b) Following the preliminary and technical reviews, any differences in understanding shall be resolved prior to acceptance or decline of the application for verification.

c) Acceptance or decline of the application for verification shall be communicated to the applicant with justification.

5.2 Pre-verification (planning)

5.2.1 Specification of parameters for verification

Parameters for verification shall be specified in consultation with the applicant and interested parties prior to the establishment of the verification plan. These parameters shall be specified considering the following, as a minimum:

a) they provide data relevant to the technical and environmental performance of the technology, and the claimed environmental added value, if applicable;