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# **Tailoring an Environmental Technology Verification (ETV) scheme to Accelerate SMEs' Green Transition**

## **Step-by-Step Guidelines for ETV Action Plan for SMEs**

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## INTRODUCTION

### *Overview*

Environmental Technology Verification (ETV) has been designed as a voluntary environmental scheme tailored to address the performance demonstration needs of new and even disruptive, commercially ready environmental technologies. With the role to support market uptake of green technical solutions, it has been announced by the European Commission in the Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan (SCP/SIP) and implemented based on a Commission Staff Working Paper “The Environmental Technology Verification (ETV) initiative helping Eco-Innovations to reach the Market” accompanying the Ecoinnovation Action Plan in 2011.

ETV provides attestation of performance claims of new environmental technologies to offer market-relevant and objective evidence to communicate their technical and functional performance and the resulting environmental benefits to buyers, investors, and other stakeholders. In this way ETV ensures credibility and fosters trust in new green technologies. It enables stakeholders such as buyers, permitting and regulatory bodies, and investors to make informed decisions, promotes market acceptance, and drives adoption of sustainable solutions, thus advancing environmental performance of operations and their innovation.

The key output of the ETV scheme is the Statement of Verification that serves as a key document for use in business relations and technology marketing. It includes the specification of the verified performance of the technology expressed as parameters and their numerical values together with a concise summary of the verification activities relevant for technology buyers, users and other stakeholders to properly understand the process which led to the achieved results together with all the conditions, assumptions and constraints which apply to it and the technology.

ETV is neither an eco-label nor a compliance or certification scheme. Certification confirms that a product or a service meets the specified standards or requirements typically established by independent organisations (e.g. standardisation bodies such as ISO or CEN/CENELEC). ETV is based on a ‘snapshot’ of the overall technology performance and is recommended for technologies when their innovative features reflected by their technical and functional performance or the environmental added value are not fully reflected in the existing regulatory requirements, labelling and compliance certification schemes or standardised performance frameworks for products. For example, an innovative wastewater treatment technology might produce higher quality effluent whilst using less energy than current technologies.

ETV considers many performance parameters together, including energy consumption, enabling a useful comparison with relevant alternatives. ETV addresses parameters quantifiable and measurable through testing. The environmental added value is considered from a life cycle

perspective, i.e. considering the main benefits and impacts at each stage of the technology life cycle. However, ETV does not have the same objective and does not provide the same information as tools based on Life Cycle Analysis (LCA), such as Environmental Product Declaration (EPD) or Product Environmental Footprint (PEF).

ETV does not involve a regular third-party surveillance to confirm that the technology continues to meet the performance claim(s) as presented in the Statement of Verification, whereas certification requires any changes to the certificated technology to be reported in advance to the certification body, allowing checks to ensure ongoing compliance with certification requirements. In ETV it is the responsibility of the Statement holder to ensure that the verified technology conforms to the published Statement of Verification and to address any changes affecting the verified performance claims.

### *Scope*

**This document provides guidance to SMEs and similar entities interested in defining their environmental technology action plan for performance verification based on Environmental Technology Verification (ETV) initiative.** More specifically, it explains:

- o **eligibility requirements**, with explanations to the required information and documents;
- o **stages of the verification process**: - specification of performance to be verified and verification planning; - verification; reporting; including Statement of Verification; - practical tips on how to leverage Statements of Verification for marketing purposes.

**The performance verification of the technology that can be obtained following these guidelines could be a significant result, which could be further implemented in a collaborative process that involves a dialogue between the SMEs and a Verification Body.** Indeed, **the ETV process could follow a formal process defined in the technical standard ISO 14034:2016 - Environmental Management: Environmental Technology Verification** (a summary of the contents of this standard has been provided in Annex F). The quality and impartiality assurance framework for this process is also provided by:

- The Conformity assessment standard ISO/IEC 17020 - Requirements for the operation of various types of bodies performing inspection, which specifies the requirements for the competence and impartiality of the Verification Bodies performing ETV. Verification Bodies performing ETV must demonstrate compliance with the requirements for inspection bodies by means of accreditation. In that sense ETV is an inspection scheme.
- The standard ISO/IEC 17025 - General requirements for the competence of testing and calibration laboratories. The standard defines the conditions for generation of test data used to verify the performance.

## How ETV enhances the market acceptance of green innovations

ETV addresses key market entry barriers for new environmental technologies, which often stem from a lack of credible, objective, and market-relevant information<sup>9</sup>.

<i>Challenge addressed</i>	<i>ETV solution/benefit</i>
Market confidence	Provides independent, quality-assured verification of performance claims, using a factual approach with quantifiable and measurable parameters.
Technology adoption hurdle	Provides verified information about the technology's performance, including limitations and assumptions, for a specified intended application.
Limited trust of investors	Helps technology providers get assurance of the technology's effectiveness and environmental benefits, demonstrating its environmental added value (more beneficial or less adverse impact) assessed from a life cycle perspective.
Technology readiness and performance	Offers flexibility in choosing performance parameters to be verified, allowing a full assessment of innovative characteristics that may fall outside existing standards.

ETV provides a significant competitive edge and helps overcome market barriers for innovative green technologies:

### Market credibility and differentiation

- **Increased confidence of buyers and users:** ETV provides an **independent and third-party validation** of a technology's performance based on quality framework. This instills confidence in buyers and users who might be uncertain about a technology's performance and environmental benefits, leading to higher adoption rates.
- **Credibility and trust:** offering a verified technology enhances the **credibility and trustworthiness** of the technology provider, which is especially vital for new companies competing with established market players.
- **Market differentiation:** having an ETV **Statement of Verification** sets a technology apart from its competitors. It serves as a tangible demonstration that the technology has been rigorously tested and verified, giving it a competitive edge.
- **Improved marketing opportunities:** ETV is a **powerful marketing tool**. Technology providers can leverage the verification in their promotional materials, advertising, and communication strategies to attract a wider audience.

### Finance and risk mitigation

- **Facilitated financing and investor interest:** technology providers with ETV-verified technologies often find it easier to **secure financing or attract investment**. Investors and financial institutions view verified technologies as **lower-risk investments** with potential for

positive environmental and financial returns, particularly in the context of ESG (Environmental, Social, and Governance) and the EU green taxonomy.

- **Risk mitigation:** ETV can help **mitigate risks associated with market failure**. Potential users are more likely to adopt, and investors are more likely to finance, technologies that have been independently validated, reducing uncertainties related to performance, interoperability, or environmental impact.
- **Demonstration of long-term savings:** while innovative environmental technologies are often perceived as costly, ETV can help demonstrate how **long-term savings** resulting from reduced environmental impacts are achieved.

#### **Market access and regulatory support**

- **Access to new markets:** ETV can open doors to new markets, especially in regions or industries that emphasize environmental sustainability or where standards and regulations vary across jurisdictions. Many buyers, particularly in the public sector, prioritize technologies with proven performance when making procurement decisions.
- **Regulatory compliance support:** ETV may help technology providers navigate regulatory requirements and administrative burdens by assuring regulatory or permitting bodies that their technologies meet or even exceed environmental standards. It also helps buyers and users understand how the technology will enable *them* to comply with legal regulations and standards once installed. This can streamline approval processes.
- **Innovation recognition:** ETV serves as a recognition that a technology is innovative. It allows developers to prove how the **novelty** of a technology translates into its performance, resulting in reduced environmental impacts.

#### **Stakeholder engagement**

- **Stakeholder engagement:** ETV facilitates engagement with various stakeholders, including regulatory agencies, investors, actors in the value chain, and environmental organizations. It provides a standardized and **transparent way to communicate** the performance and resulting environmental benefits of a technology. This is particularly helpful for technologies that suffer from low public acceptance or raise concerns among regulatory bodies.

## IMPLEMENTATION OF AN ETV ACTION PLAN FOR SMEs

ETV involves proving in a credible and objective manner that the claims regarding environmental technology performance are true and based on performance test data generated under quality-assured and controlled conditions.

The ETV verification process for SMEs can be summarised in the following **steps**:

1. **Pre-verification:** some initial information about the candidate technology are provided and an initial performance claim in the form of a Quick Scan;
2. **Verification:** An Application file is developed, including performance claim and available test data, as well as a Verification plan, which details how exactly the stated performance will be verified, including the testing requirements;
3. **Reporting:** A Verification report is developed, reflecting all the technical and operational details of the performed verification together with a Statement of Verification summarising the verification.
4. **Post-verification:** The Statement of Verification is published in a publicly available directory (e.g. website and social media).

As already described in previous paragraphs, the ETV process described in this document could be a starting point for a SME, which can be also further implemented in a collaborative process that involves a dialogue between the Applicant and a Verification Body, following the process defined in the technical standard ISO 14034:2016.

## 1. Pre-verification

### Eligibility and application requirements

ETV scheme defines criteria for eligibility which refer both to the technology<sup>1</sup> and to the Applicant<sup>2</sup> SME. There are 3 key eligibility criteria which a technology must satisfy cumulatively to be eligible for ETV:

- A. Compliance to the definition of environmental technology;
- B. Sufficient level of maturity, i.e. the technology must be ready to enter the market or already commercially available;
- C. Potential to comply with legal and regulatory requirements of the target market.

The criteria are explained further below.

#### CRITERION A: COMPLIANCE WITH THE DEFINITION OF ENVIRONMENTAL TECHNOLOGY

A candidate technology demonstrates compliance with the definition of an environmental technology when it either results in an environmental added value or helps better measure parameters that indicate environmental impacts compared to relative alternatives, i.e. solutions currently used in similar situations.

A technology results in environmental added value when its environmental impact, wholly or partially resulting from material acquisition, design, production, use or end-of-use, is beneficial or less adverse compared to relative alternatives.

A candidate technology helps better measure parameters that indicate environmental impact when it is, for example, more precise, more robust or flexible in terms of application, allows for faster or autonomous measurement, detects emerging pollutants not detected or measured before, utilises novel detection or measurement methods, requires fewer chemicals, energy or resources, generates less waste or facilitates multiple uses instead of single-use parts, etc.

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<sup>1</sup> The term “technology” refers to the practical application of technical or scientific principles in the environmental area to achieve a given purpose. It covers a variety of products, processes, and services. In general, ETV is a scheme for technologies with industrial applications rather than consumer products for which different labelling schemes may add better value.

<sup>2</sup> The Applicant can be any legal entity or natural person established in or outside the European Union. The Applicant may be a technology developer, manufacturer, provider, or an authorised representative (e.g. an investor). Typically, the applicant should have full control over the candidate technology, i.e. be its sole owner.

Examples of ETV technology candidates resulting in environmental added value include, but are not limited to:

- different treatment technologies aimed at eliminating/reducing pollution emissions to different environmental media (e.g. wastewater treatment technologies, air cleaning systems, soil remediation technologies, etc.);
- solutions for manufacturing processes aimed at reducing consumption of resources, energy or/and generating less waste/emissions to the environment;
- technologies for energy production and storage, including renewable energy sources;
- novel materials for industrial applications, e.g. secondary raw material-based materials, bio-based materials such as bioplastics, novel construction materials improving insulation properties in buildings or increasing energy efficiency (e.g. insulation materials);
- solutions aimed at improving energy efficiency in production and treatment processes, e.g. energy efficient pumps;
- novel solutions enabling easy recycling, reuse, repurposing or recovery of different materials/products, e.g. recycling of artificial turf from sports facilities, recovery of phosphorus from wastewater;
- monitoring systems, sensors, detection devices, and sampling devices dedicated to measuring the quality of different environmental media, e.g. air pollution sensors, water quality monitoring systems, micro-plastics pollution detection and measuring devices, sensors, sampling kits, etc.;
- technologies reducing the environmental impact of agricultural production, e.g. systems for cleaning exhaust air from stables. It should be noted that measurement equipment is also subject to assessment of the environmental added value.

#### **CRITERION B: SUFFICIENT LEVEL OF TECHNOLOGY MATURITY**

The minimum Technology Readiness Level (TRL)<sup>3</sup> of a technology to be proposed for ETV have to be TRL 7 - System Prototype Demonstrated in Operational Environment, TRL 8 - System complete and qualified, or TRL 9 - Actual system proven in an operational environment.

In practical terms, the candidate technology could be:

- a commercially available unit;
- a prototype that is the final design and represents a pre-commercial unit;
- a pilot unit with demonstrated scale-up factors that do not influence its performance and prove that the commercial unit will satisfy the performance claim.

Moreover, if the candidate technology is not in the market yet, to apply for ETV, it must demonstrate the following features:

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<sup>3</sup> Technology Readiness Levels (TRL) are a type of measurement system used to assess the maturity level of a particular technology. Each technology project is evaluated against the parameters for each technology level and is then assigned a TRL rating based on the projects progress. More specifically, TRL scale uses the parameter that evaluates the maturity of a technology according to a series of indicators that go from 1 (the basic principles are documented) to 9 (the technology is released, and industrial production is started).

- at least one unit must be available at the stage of development where no substantial changes affecting its performance will be implemented before being introduced into the market;
- stable and predictable performance under normal conditions proven by test data; performance that varies within determined ranges due to some known variables that affect this performance under normal operating conditions may also be considered stable and predictable.

Technologies that are already commercially available may also be verified under the ETV scheme if the SME sees the added value in having the performance verified. For example, if a standard relevant to the candidate technology or product does not exist, or if proving better performance would help distance the competitors.

### CRITERION C: POTENTIAL TO COMPLY WITH LEGAL AND REGULATORY REQUIREMENTS OF THE TARGET MARKET

Ensuring legal compliance is the responsibility of the SME. Therefore, the applicant should be aware of which legal and regulatory requirements the target market applies to the technology for verification of its performance in the intended application. Compliance with legal and regulatory requirements may require demonstrating that the technology meets the reference values defined in regulations, technical or ISO standards related to performance parameters, Best Available Technologies values provided in BAT reference documents (BREFs) in relation to the Industrial Emissions Directive.

For example, equipment that comes in contact with drinking water must have an appropriate certificate; a drinking water treatment technology must meet the drinking water criteria of the target market, and some technologies must meet the CE mark requirements. Therefore, depending on the scale and readiness level of the technology, evidences that the technology demonstrates potential to perform in line with legal and regulatory requirements should be provided.

To facilitate the development of the Application file, the applicant can conduct a preliminary self-assessment to check the eligibility of the technology and preliminarily verify if the required information is available. The self-assessment can be done by using the Quick Scan Template provided in Annex B.

## 2. Verification

### Application file

To apply for ETV, the applicant needs to develop an Application file and supporting documentation. The information to be provided in the file and the accompanying documentation requires an understanding of what ETV delivers and on which pillars it is built. Additionally, the person involved in completing the document must be well acquainted with the technical and functional aspects of the technology proposed for verification.

More specifically, the required information to be included in the Application file is:

- A. *Information about the applicant, including the contact person and their name and address(es) of their physical location(s).*
- B. *Description of the technology, including a clear identification of the technology and details about the intended application of the technology (namely, the purpose of the technology, the type of material the technology is intended for measurable properties affected by the technology and how they are impacted).*

The performance claim proposed for verification must refer to the intended application of the technology. The intended application shall specify the matrix, the purpose of the technology, defining the measurable property of the matrix that is affected by the technology and how it is affected, as well as a set of parameters defining the technical conditions under which the claimed performance is achieved.

Matrix means the type of material for which the technology is intended, and which is affected by the technology. Examples of a matrix could be: different types of wastewater, e.g. from a dairy, municipal wastewater, drinking water, a specific type of waste, air/effluent polluted with a compound, contaminated soil, alkaline degreasing bath, etc.

A technology may be intended for more than one type of matrix. For example, if the purpose of the technology is to extract the solid fraction from manure, it could also be used for domestic wastewater.

The characteristics of the material should be provided in such a way that makes it possible to define the effects of the technology on the material, which can be measured through testing. The key parameters of the matrix which affect the claimed performance should be specified and defined in terms of numerical values (usually within ranges of limit values)<sup>4</sup>.

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<sup>4</sup> Proper characteristics of the matrix may require analysis of historical data from technology testing. However, it is essential to define the requirements and conditions for test data generation related to the parameters of the matrix that need to be measured during the technology testing in order to generate data relevant to verify the performance claim.

For example, the key parameters of the matrix for a technology intended to treat domestic wastewater while preserving the content of nutrients in order to produce an effluent with fertilising properties for agricultural use could be defined as follows:

Matrix: domestic wastewater after sand and grease removal, characterised by the following daily contaminant concentrations in the influent:

- BOD limit value expressed as gO<sub>2</sub>/m<sup>3</sup>;
- COD limit value expressed as gO<sub>2</sub>/m<sup>3</sup>;
- total nitrogen content in m<sup>3</sup> of the influent;
- phosphorus content in m<sup>3</sup> of the influent;
- suspended solids content in m<sup>3</sup> of the influent.

Purpose means the way in which the technology affects the matrix, i.e. what it does to the matrix and with what effect. The purpose should be expressed in a way that can be measured or monitored. For example, “reduction” can be measured by determining the parameters of the matrix before and after the implementation of the technology<sup>5</sup>.

Examples of purpose could be:

- for a treatment technology: reduction of the concentration of a given substance or the rate of removal of a pollutant from the matrix;
- for a recycling technology, the purpose could be the recovery of a given resource from the matrix;
- for a manufacturing technology, the purpose could be the utilisation of carbon dioxide from a flue gas stream to produce precast concrete components or the utilisation of a secondary raw material to replace a raw material;
- for a measurement device, the purpose could be the measurement of a specific parameter in the matrix, such as microorganisms, bacteria or heavy metals;
- for an energy technology like solar panels, the purpose could be the recovery of energy released by the panel.

When relevant, the applicant may define more than one purpose of the technology.

C. *Performance claim including a proposed set of performance parameters and their numerical values;*

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<sup>5</sup> Information on the intended application of the technology may be expressed differently depending on whether it is a technology resulting in environmental added value (e.g. water/air/soil clean-up technologies, recycling technologies, recycled material-based products, energy production technologies, technologies improving energy efficiency) or a technology for measuring parameters reflecting environmental impacts and/or state of the environment (e.g. monitoring technologies, test kits, probes, analysers). For example, the intended application of the technology resulting in environmental added value can be expressed as follows: the purpose of the technology is to remove nutrients from municipal wastewater (type of material) by reducing (mode of impact) nitrate concentrations (measurable property affected by the technology expressed as mg NO<sub>3</sub>-/l). The intended application of a technology measuring parameters reflecting environmental impacts and/or state of the environment can be expressed as follows: the purpose of the technology is to detect (mode of impact) total coliforms (measurable property affected by the technology expressed as number of organisms per ml) in drinking water (type of material).

- *details regarding specific technical aspects and relevant alternatives to the technology, including their performance;*
- *information on significant environmental impacts of the technology proposed for verification and its environmental added value.*

The Applicant shall provide all information required to understand the operation and performance of the technology. This includes:

- Conceptual design of the technology: a conceptual design of the technology shall be typically presented in the form of a diagram or scheme with relevant descriptions and explanations necessary for understanding the design and operation of the technology. The conceptual design should also indicate interactions or processes. If the technology to be verified is part of a larger installation or system, the conceptual design should specify where the technology fits into the installation/system (interfaces) as well as indicate input and output points.
- Manufacturing drawings or similar schematics: manufacturing drawings should provide information on how the technology is constructed and manufactured. They should present components, sub-assemblies, circuits, etc. Similarly to the conceptual design, the drawings and schemes should be accompanied with descriptions and explanations necessary for understanding these documents as well as the operation of the technology. Manufacturing drawings may be particularly relevant for the verification of products or equipment.
- Technical and scientific principles relevant to the performance and operation of the technology: a description must present how the technology achieves its purpose. It must also explain which scientific or technical principles and techniques the technology is based on. For example, technologies for environmental monitoring and assessment rely on principles of sensor technology, data analysis, and remote sensing to collect and analyse environmental data. The description of the scientific principles and techniques applicable to the technology may also serve to identify the possible risks related to its performance and resulting environmental aspects/impacts. Additionally, this information is relevant to properly define the parameters to be verified and/or to determine if the technology results in reduced environmental impacts compared to other technologies or helps better measure parameters reflecting environmental impacts.
- Information about relevant alternative(s) to the technology: a relevant alternative means a technical solution with the same function/purpose that is currently used in a similar situation (e.g. a conventional technology) as the technology proposed for verification. There may be more than one relevant alternative available. A relevant alternative may be also a combination of technologies that altogether give the same result, for example, technologies working in sequence, e.g. in recycling, a material sorting procedure including dismantling can be an alternative to a crusher. Relevant alternatives are identified to allow the determination of the benefits of an environmental technology, especially the

environmental added value and the innovation. They provide a baseline for benchmarking performance and could include, for example: i. current best available technology; ii. existing technologies available in the market, with similar applications and purposes; iii. conventional technologies having a similar application or producing similar outputs; iv. state-of-the-art technologies.

If the technology proposed for verification is a completely new solution to a problem, the relevant alternative could be a commercially available technology (or a combination of technologies) currently used to address this problem. For example, in the case of an entirely new process for recycling a certain waste that has never been recycled before, the relevant alternative could be its disposal without recycling, e.g. landfilling, or incineration.

Relevant alternative also serves to demonstrate the innovation of the technology proposed for verification, e.g. novelty in terms of design, raw materials and energy involved, production process, use/operation, recyclability, or final disposal compared to a conventional solution. They also help determine the environmental added value of the technology proposed for verification through a qualitative comparison. Therefore, the scope of information about the relevant alternative should also include qualitative information about its major environmental impacts and, whenever available - quantitative data.

- Information on significant environmental impacts and environmental added value: information is necessary to demonstrate its environmental added value and compliance with the definition of an environmental technology. This information is particularly relevant for technologies that are claimed to deliver an environmental added value and may be less relevant for measurement technologies. As much qualitative and quantitative information as possible should be provided regarding the significant differences in the environmental impacts (e.g. use of raw materials, water, energy and other consumables, presence of pathogenic bacteria, together with all types of emissions, products, and wastes) likely to be generated by the technology as compared to the relevant alternative. The life stage of the technology at which the significant environmental impacts likely to be generated may occur (e.g. material acquisition, design, manufacturing, use or end-of-use) in comparison with the relevant alternative, should be indicated.

For example:

- if the technology uses biodegradable materials rather than conventional materials, as used in the relevant alternative, information on the environmental impacts related to the material acquisition and the end-of-use of this technology should be provided in addition to information on the manufacturing and use phases;
- if the technology proposed for verification uses a different manufacturing process than that of the relevant alternative in order to increase its efficiency during its use phase, but uses natural resources similar to those used by the relevant alternative, information on the environmental impacts for the manufacturing and use of the technology should be provided.

Providing quantitative information which shows the differences in the major negative or positive environmental impacts between the technology proposed for verification and the relevant alternative(s) applies in particular to these differences which are directly linked to the performance parameters included in the performance claim and/or reflect the innovative features of the technology. Such information can be derived from the knowledge of the environmental performance parameters of the relevant alternative(s), especially when they are directly linked to the purpose of the technology or from understanding the environmental problems and issues of the technology users and concerns of the interested parties.

*D. Relevant existing test data and methods of obtaining such data used to support the performance claim as well as any relevant legal requirements, regulations or standards related to the technology and its use.*

The performance claim of the technology shall be a concise declaration consisting of a set of parameters and their numerical values which:

- describe the functioning or performance of the technology in a specified application and under specified conditions of technology use and operation;
- are directly related to the technology itself, and not, e.g. to the environmental management of the company or the sources of raw material;
- highlight the advantages and innovative features of the technology;
- reflect potential, direct environmental impacts of the technology in the specified application and under specified operating conditions;
- are quantitatively verifiable through tests<sup>6</sup>.

The performance claim proposed for verification may refer to both technical/functional performance parameters of the technology and/or the resulting reduced environmental impacts related to its intended application. Technical/functional performance refers to the performance of the technology in fulfilling its purpose in specified conditions of use and operation. Parameters presenting reduced environmental impacts generally refer to the environmental added value of the technology.

When proposing the performance claim, the following main aspects should be considered:

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<sup>6</sup> Test data refer to data sets from testing of the technology generated before application for ETV. These data sets may refer to the tests pertaining to the claimed performance of the technology itself, i.e. provide evidence supporting this claim (e.g. the specification of the performance parameters, their values and ranges) and demonstrate the stability of technology performance as well as the characteristics of the matrix, in particular to its parameters that may affect the performance claim to help determine testing conditions. The test data could be generated by in-house testing or by a third-party testing body. Such data sets can be produced, for example, at the final stage of the technology development during the validation of its operation in the real environment (e.g. under a demonstration project), for compliance testing or for market implementation activities.

- Technology users' needs and other interested parties. These may include, for example, regulatory or permitting bodies (e.g. when the verified performance is to support environmental permits, requests or to demonstrate compliance with BAT requirements), public buyers (e.g. when the verified performance is to demonstrate compliance with technical specification/green criteria defined for a public tender or some specific requirements of the target market), funding bodies (e.g. if the verification is performed under a project funded by a programme with specific performance indicators), investors (e.g. when the verified performance is to prove that the project involving the verified technology may be considered as a green investment in the meaning of ESG reporting or to help demonstrate the improvements of the environmental performance of the user's organisation in the meaning of compliance to the technical criteria of the EU Green Taxonomy), industrial associations or value chains of large enterprises as they may have some common additional performance indicators or technology performance/reduced environmental impact requirements resulting from joint commitments.
- Legal requirements of the target market applicable to the performance of the technology in its intended application (technical or legal reference values). The most important are those which concern the effect of operation and use of the technology, methods and measurements required to obtain data that are significant to quantify its impact on the environment. Knowledge of the legal requirements of the target market allows defining a performance claim to be verified that includes parameters relevant from the viewpoint of the target market. It applies to the knowledge of reference values defined in the relevant regulatory and legal requirements (e.g. BAT reference values or values defined in technical or ISO standards), especially when the performance claim is to prove better performance than legally required.
- Environmental added value (significant positive differences between the technology proposed for verification and the relevant alternatives throughout the life cycle);
- Technical conditions for use and operation including relevant constraints, assumptions and limitations;
- Market requirements for the specified application. They may refer to specific user demands and conditions which the technology should fulfil to succeed in the market. Additionally, there may be specific rules regarding the installation functionalities, use of the technology, or the necessity for compliance with other certifications;
- Required use of resources for operation, e.g. energy demand; raw material demand and/or demand for water (e.g. quality and quantity), chemicals, reagents, specific hazardous substance necessity, etc.

For example:

- parameters referring to the required use of resources for production of the equipment/technology itself: consumption of raw materials (e.g. steel used in construction; this parameter may also be combined with the end-of-life and decommissioning parameters in the context of how much steel was used for production and how much can be recovered);

- consumption of electricity or other energy (heat);
- use of hazardous substances;
- use of recycled material/raw material substitutes;
- waste generated (biodegradable/recyclable/hazardous, etc.);
- emissions (air, water);
- longevity: e.g. robustness/vulnerability to changing conditions of use or maintenance;
- end-of-life decommissioning and disposal: e.g. reusability, recyclability (fully or in part), parts needed to be disposed of.

The tables below show examples of how an initial performance claim is converted into a set of performance parameters.

	Performance claim and operational parameters	Specification of parameters	Comment
Example of technology	Disinfection technology		
Matrix		Industrial process water from reusable water bottles washing	Industrial process water from reusable water bottles washing
Purpose		Disinfect industrial process water to the standard required for food contact surfaces	Disinfect industrial process water to the standard required for food contact surfaces
Example of performance parameters	1) Removal of 99.9 % of bacteria	1) Removal of 99.9 % of bacteria 2) Chloride in output < 0.5 mg/L 3) Trihalomethanes in output < 100 µg/L	2) For this purpose it is required that the output water fulfils the drinking water criteria of 0.5 mg chloride/L 3) During the treatment process there is a risk of trihalomethane formation  The listed criterion is the EU drinking water criterion
Operational parameters (operating conditions)	1) Conductivity above 250 µS/m 2) Ambient temperature: 5-35°C	1) Conductivity above 250 µS/m 2) Ambient temperature: 5-35°C 3) Chloride in input above 15 ppm	3) Conductivity and chloride often follow each other, but after revision of the technology it was clear that a certain level of chloride needs to be controlled separately

Here below is reported another example of performance claims, not reported in a table format.

Technology: A MICROBIOLOGICAL PROCESS FOR UPGRADING BIOGAS INTO METHANE

Matrix:

Biogas with 20 – 40 % of CO<sub>2</sub> and < 1000 ppm hydrogen sulphide

Technology purpose:

The technology converts CO<sub>2</sub> contained in the biogas into CH<sub>4</sub> with addition of H<sub>2</sub> to achieve parameters enabling its injection to the natural gas grid.

Performance claims proposed for verification:

1. the technology converts feed streams of biogas with 20 – 40 % CO<sub>2</sub> and up to 1000 ppm hydrogen sulphide into methane, with the following quality specifications: > 95%vol. methane, < 4% H<sub>2</sub>, < 1% CO<sub>2</sub>, 5 mg/Nm<sup>3</sup> H<sub>2</sub>S;
2. electricity consumption (including H<sub>2</sub> generation) less than 25 kWh/Nm<sup>3</sup> of produced CH<sub>4</sub> for the flow of 20 Nm<sup>3</sup>/h of CO<sub>2</sub>.

Operational parameters:

- Flow range of CO<sub>2</sub>: between 5 – 30 Nm<sup>3</sup>/h.
- Required addition of H<sub>2</sub>: 4m<sup>3</sup> per m<sup>3</sup> CO<sub>2</sub>.
- Reactor temperature: between 60°C and 65°C.
- Pressure: up to 10 bar.
- Content of impurities in the biogas: below 5000ppm of hydrogen sulphide.

Limitations:

The system is designed to operate within specifications at normal outdoor conditions for the site (-10°C to 35°C), however, its testing in the outdoor temperature limits is not possible due to the lack of controllable test parameters.

Constraints:

Once at operation temperature and pressure is reached, the system can achieve the nominal conversion performance within 15 minutes. The system can be stopped and stay idle without energy input for 2 hours.

Additional information:

- The system can be stopped in less than 1 minute.
- The H<sub>2</sub> can be delivered from an electrolysis unit or any other process with excess H<sub>2</sub>.
- The oxygen can be utilised in the aeration tanks of the biogas plant to increase the efficiency there. The heat produced by the water electrolysis and the methanation reactions can be exported, for instance for the heating of the biogas plant, to increase the overall energy efficiency.

- E. *Depending on the type of the technology proposed for verification, additional supporting information relevant to the interested parties including, but not limited to:*
- *installation and operating requirements and conditions;*
  - *service and maintenance requirements;*
  - *the expected duration for which the technology will function under normal operating conditions, and;*
  - *any applicable health and safety requirements and considerations.*

Installation requirements include all conditions that must be met to ensure proper operation and safe use of the technology. These may include, for example, standard operating procedures (SOPs), requirements regarding installation site and space, adequate electrical power supply, cooling or ventilation system, or the need for appropriate subfloor preparation. Operating requirements may be relevant for conditions necessary for the proper exploitation, performance and use of the technology after its installation and launching, for example, start-up time required to achieve full performance, set-up adjustments, etc. This information is relevant to ensure that the requirements related to installation and operation are met during technology testing to generate test data for the needs of the performance verification.

Service and maintenance requirements are important to ensure that these requirements are met during technology testing to generate test data for performance verification. They can also be used to provide additional information on calibration needs or potential environmental aspects/impacts related to technology maintenance and servicing. For example, maintenance of microfiltration membranes to avoid fouling may require cleaning with the use of chemical substances which eventually may become hazardous waste.

Additionally, precisely defined service and maintenance requirements may serve as evidence supporting the market readiness of the technology. If they are not available as a formal document, they should - as a minimum - be defined and described before applying for verification.

Expected length of time for which the technology functions under normal operating conditions may include information that refers to its lifespan or how long it performs as declared in its intended application, technical assistance needed to ensure that the technology remains functional and secure over time, etc.

Health and safety requirements may be required for training the personnel involved in technology testing, if relevant, as well as for on-site visits of the Verification Body personnel conducting the verification process.

## Verification plan

When the performance parameters are specified, as the next step, a verification plan should be developed. The plan defines how a specific verification of an individual technology will be carried out. The key elements of the plan include:

- Specified list of performance parameters to be verified, their assigned numerical values and the description of how they will be verified (i.e. test methods to be used, including sampling and equipment requirements);
- Technical and operational details of the planned verification including overall description of testing activities (e.g. continuous or batch tests, test scale: laboratory/field, site requirements);
- Specification of requirements for the test data, including quality and quantity, test conditions, matrix parameters, etc.;
- Description of methods for the assessment of the test data and their quality, including, e.g. calculation methods, determination of uncertainty and statistical methods, data management, etc.;
- Whenever possible, the test methods used should be standardised internationally or nationally or provided in specifications recognised otherwise. Only in the absence of such standards, the test method should be determined by other means.

Sample structure of the Verification plan is reported in Annex C.

### **3. Reporting**

#### **Verification report**

The Verification report is a comprehensive summary of all verification activities carried out throughout the entire process. Its main parts include:

- Detailed description of the technology and its application;
- The verified performance;
- Operating conditions, constraints, and limitations under which the verified performance is achieved;
- All measurement uncertainties and relevant assumptions taken into consideration during the verification process;
- Description of the tests performed and the obtained results;
- Description of how the requirements for the verification of the performance and the test data, as specified in the verification plan, were met, including reporting of any deviations;
- Final assessment of all data from the test report and from the acceptable existing data;
- Quality management and control procedures applied;
- Any other information necessary to understand and use the performance claim; this may include information not verified under the ETV, which should be clearly stated and explained.

The report is owned by the Applicant. It may only be published by the Applicant themselves or by others with the Applicant's consent.

If the verification report is published, it should be published in full. In some cases, only the publication of some parts of the report could occur; however, this may happen only if the legitimate interests of the Applicant in relation to the verified technology, in particular intellectual property, could suffer disproportionately great harm because of the full publication of the report.

Sample structure of the Verification plan is reported in Annex D.

## Statement of Verification

The Statement of Verification is a summary of the verification report. The document shall contain as a minimum:

- Identification and date of issuance;
- Summary description of the technology verified, purpose and conditions of use;
- The verified performance and the operating conditions, constraints and limitations under which it is achieved;
- Summary of procedures followed to verify the claim, including the statistical confidence interval for specifications, where applicable;
- Description of how the requirements of the verification specified in the verification plan were met, including reporting of any deviations;
- Any other information necessary to understand and use the performance claim; this may include information not verified under the ETV, which should be clearly stated and explained.

As will be described in the next paragraph, the Applicant may use the Statement of Verification for marketing purposes. It may be included in the technical documentation of the verified technology. The Applicant must make the Statement of Verification available in its entirety and cannot use parts of the Statement for any purpose.

Sample structure of the Statement of Verification is reported in Annex E.

#### 4. Post-verification

Post-verification includes publication of, as a minimum, the Statement of Verification and aspects of ensuring the validity of the statement.

The Applicant may refer to the Statement of Verification as follows:

The XXX technology was verified in the framework of the European Environmental Technology Verification (ETV) initiative for the application of AAA (including purpose and matrix) on DD.MM.YYYY.

The Statement of Verification is accessible at the following address: [https: \(provide the address where the Statement is published\)](https://(provide the address where the Statement is published)).

In general, there is no validity period defined for the Statement of Verification or the verification report. The statement remains valid as long as the technology with the same unique identifier for which it was issued is in the market.

If any changes listed below occur to the verified technology, the Applicant must promptly revise the Statement of verification. These changes may include:

- change of ownership;
- design changes;
- change of intended application or operating conditions;
- other changes likely to modify the performance results reported in the Statement of Verification;

Substitution of one part with another with the same documented specifications is not considered a change unless it affects the environmental added value or one of the parameters reported in the Statement of Verification.

The Statement of Verification provides significant added value for the promotion of a new environmental technology. To maximise the utility of the Statement, the Applicant should present the Statement on the company's website, and a copy of the Statement should be available for download. The Applicant may also wish to present the verification report for transparency reasons.

When promoting a verified technology, the Applicant should emphasise the following points:

- Compliance with Standards and Regulations: Showcase how the technology meets or exceeds industry standards and regulatory requirements, ensuring that it complies with environmental and safety regulations;
- Performance and Efficiency: Highlight the verified performance numerical values and benefits of the technology, such as its effectiveness in reducing emissions, conserving resources, improving efficiency, or mitigating environmental impacts;
- Reduced Environmental Impact: Emphasise the less adverse or positive environmental impact of the technology compared to current solutions, such as reducing carbon footprint, minimising waste generation, or preserving natural resources;

- Market Differentiation: Position the ETV verification as a unique selling point that sets the technology apart from competitors, giving it a competitive edge in the market;
- Risk Mitigation: Highlight how ETV verification reduces the risk associated with technology adoption by providing objective, verified data on its performance and reliability;
- Testimonials: Provide real examples of the verified technology application and testimonials from satisfied users or customers to illustrate the successful implementation and benefits of the technology.

## MAIN REFERENCES

### Guidelines:

1. General Verification Protocol (GVP), Version 1.3, 1st April 2018, EU Environmental Technology Verification Pilot Programme.
2. Guidelines on assessing the environmental added value of an environmental technology in a lifecycle perspective at the proposal stage, Guidance document 004/2016, adopted on the 26/01/2016, Version 1.0, EU Environmental Technology Verification Pilot Programme Guidance Document.
3. Guidelines on the Acceptance of Existing Test Data, Guidance document 005/2016, adopted on 07/06/2016, Version 1.0, EU Environmental Technology Verification Pilot Programme Guidance Document.
4. ISO 14034: 2016 Environmental Management: Environmental Technology Verification.

### Websites:

- The official page of the European on the ETV programme:  
[https://green-forum.ec.europa.eu/eu-environmental-technology-verification\\_en](https://green-forum.ec.europa.eu/eu-environmental-technology-verification_en)
- The webpage of the LIFEproETV project which has received funding from the European Union's LIFE Programme and is co-financed by the National Fund for Environmental Protection and Water Management, Poland and the Ministry of Agriculture, Hungary:  
<https://lifeproetv.eu/>  
In particular, the following tool and materials have been developed by the LIFEproETV project, which has the aim of improving a full ETV process by the technical standard ISO 14034:2016 - Environmental Management: Environmental Technology Verification.  
The ETV HUB (<https://etv-hub.eu/>) implemented by the LIFEproETV project has a wide range of information about ETV and various tools that can complement this document.

## ATTACHMENTS

### *Annex A – Glossary*

The use of this guide requires knowing and understanding some key terms and definitions provided by the ETV scheme that apply to the verification process and its outputs.

**Applicant** can be any legal entity or natural person established in or outside the European Union. The Applicant may be a technology developer, manufacturer, provider, or an authorised representative (e.g. an investor). Typically, the applicant should have full control over the candidate technology, i.e. be its sole owner.

**Environmental technology** is a technology that either results in an environmental added value or measures parameters that indicate an environmental impact.

**Environmental added value** of an environmental technology means that the technology results in a more beneficial or less adverse environmental impact in comparison to the relevant alternative.

**Environmental impact** is a 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

**Matrix** means the type of material for which the technology is intended, and which is affected by the technology. Examples of a matrix could be: different types of wastewater, e.g. from a dairy, municipal wastewater, drinking water, a specific type of waste, air/effluent polluted with a compound, contaminated soil, alkaline degreasing bath, etc.

**Life cycle perspective** means the consideration of the main environmental benefits and pressures or impacts generated by a technology along its life cycle, from the extraction of raw materials, manufacturing process, use and maintenance, until the end of life of related equipment or products.

**Performance claim** is a statement of performance of the environmental technology declared by the applicant.

**Post-verification** includes publication of, as a minimum, the Statement of Verification and aspects of ensuring the validity of the statement.

**Purpose** means the measurable property that is affected by the technology and how it is affected.

**Quick Scan Template** is a form containing information about the technology, in order to make an initial check if the environmental technology is eligible for ETV.

**Relevant alternative** is a technology applied currently in a similar situation to an environmental technology.

**Statement of Verification** (or Verification Statement) is a document summarising the results of environmental technology verification developed and published on a public domain.

**Technology** refers to the practical application of technical or scientific principles in the environmental area to achieve a given purpose. It covers a variety of products, processes, and services.

**Technology purpose** means the way in which the technology affects the matrix, i.e. what it does to the matrix and with what effect. The purpose should be expressed in a way that can be measured or monitored. For example, “reduction” can be measured by determining the parameters of the matrix before and after the implementation of the technology.

**Verification plan** is a planning document detailing the implementation of environmental technology verification for the technology proposed for ETV.

**Verification report** is a document detailing the performed environmental technology verification and its results.

## Annex B – Quick Scan Template

Purpose: This form aims to collect sufficient information about the proposed technology in order to evaluate coherence with the ETV scheme. The boxes for responses, in grey, may be extended, but responses should remain brief and no more than one half-page each.

SME	<i>Legal name</i>	
	<i>Contact person</i>	
	<i>Address</i>	
	<i>Number of employees</i>	
	<i>Email</i>	
	<i>Telephone</i>	

Identification of the technology	<i>Name of the technology (technology can be a product, a process or a service)</i>	
	<i>Technology Area</i>	<input type="radio"/> Water Treatment and Monitoring <input type="radio"/> Materials, Waste and Resources <input type="radio"/> Energy Technologies <input type="radio"/> Other (specify):

Description of the Technology	<i>Context (specific problem(s) or opportunities the technology wishes to address)</i>	
	<i>Main purpose of the technology (how does the technology address the problems or opportunities?)</i>	
	<i>Principle used (which are the scientific or technical references of the technology)</i>	
	<i>Which are the main claim(s) on the technology's performance that could be verified?</i>	
	<i>Under which conditions is this performance(s) achieved? (key operational parameters and limits in order for the technology to perform)</i>	
	<i>Main technical standards, regulations or references applicable to the technology (Are there existing standards that cover (parts of) the technology? What are the main regulations relevant for the technology?)</i>	

Market readiness	<i>Is the technology already on the market?</i>	<input type="radio"/> YES <input type="radio"/> NO
	<i>What is the target market for the technology?</i>	<input type="radio"/> EU <input type="radio"/> Specific country/countries: <input type="radio"/> Other:

	<i>Does the technology fulfil the legal requirements in the targeted market(s)?</i>	<input type="radio"/> YES <input type="radio"/> NO
	<i>The PMI is the sole and full owner of the technology?</i>	<input type="radio"/> YES <input type="radio"/> NO
	<i>What specific user needs is the technology addressing? How does this technology meet the user needs?</i>	
	<i>Description of the innovation provided by the technology, in comparison with relevant alternatives on the market (novelty presented by the technology in terms of design, raw materials involved, energy used, production process, use, recyclability or final disposal)</i>	

Environmental added-value	<i>Are these stages under your direct control?</i>	
	<i>Natural resources*</i>	<input type="radio"/> YES <input type="radio"/> NO
	<i>Manufacturing phase**</i>	<input type="radio"/> YES <input type="radio"/> NO
	<i>Use phase***</i>	<input type="radio"/> YES <input type="radio"/> NO
	<i>End of life phase****</i>	<input type="radio"/> YES <input type="radio"/> NO
	<i>Is there information concerning environmental aspects for these stages?</i>	
	<i>Are there available test results or other data to back-up the technology's performance? (it is expected to provide as much information as possible, especially for the manufacturing and use phases. Qualitative or quantitative information may be available on emissions, waste streams, consumption or use of raw materials, energy and water. Comment if a test plan was followed, if standard methods were used, if testing was done by accredited testing bodies, i.e. ISO 17025)</i>	<input type="radio"/> YES <input type="radio"/> NO Comments:
	<i>In terms of environmental impacts or environmental added value, are there significant differences in these stages between the technology and relevant alternatives?</i>	

\* Extraction, refining, processing, transformation and transport of natural resources including every aspect of all activities involved before the manufacture of the technology's equipment, subassemblies or products. By definition, this also includes all of the raw materials, the energy and water used and all waste or emissions released to the environment during these activities.

*\*\* Manufacturing of parts, components, machinery and of products including every aspect of the production of the technology. In general, it is expected that this will include the production of most if not all sub-assemblies. This also includes all of the water, energy and consumables used, together with all of the emissions and all of the products and wastes. This will generally occur on production sites under control of the proposer.*

*\*\*\* Use and maintenance phase of a product, a process or a service including estimates of its use by the client/end-user refers to consumables, maintenance, and all raw materials, energy and water used for its functioning, as well as all the emissions, products and waste streams.*

*\*\*\*\* End of life of a technology including every aspect of all activities involved in the 'End of Life' of a product or an equipment, when it is discarded by the client/enduser, including its recycling, dismantling and/or disposal of all components. This also includes all of the water, energy and consumables used, together with all types of emissions, all of the products and wastes.*

## *Annex C – Sample structure of the Verification plan*

The use of this guide requires knowing and understanding some key terms and definitions provided by the ETV scheme that apply to the verification process and its outputs.

1. Identification of the Applicant:
  - a. Organisation name,
  - b. Address of the physical location,
  - c. Organisation registration number,
  - d. Organisation contact,
  - e. Phone number,
  - f. Email address,
  - g. Website.
2. Identification of the verification plan and date of issue:
  - a. A unique verification plan document number should be assigned.
  - b. Person(s) responsible for verification: contact details of persons responsible for verification
3. Description of the technology:
  - a. Brief description of the technology and its technical and scientific principles,
  - b. Intended application including matrix, purpose, technologies, technical conditions,
  - c. Key environmental impacts and emissions (including anticipated environmental benefits),
  - d. Market readiness.
4. Technical and operational organisation of the planned verification.
5. Description specifying the steps of the verification, verification logistics, roles and responsibilities of the involved bodies (including the Applicant), specification of experts involved, information on data files or documentation needed.
6. List of performance parameters, their assigned numerical values and the description of how they will be verified; technical and operational details of the planned verification.
7. A table listing the performance parameters with their numerical values, along with details on how these performance parameters should be evaluated and verified.
8. Requirements for the test data, including quality and quantity and test conditions. Methods for the assessment of the test data and their quality. Requirements for the management of test data and data storage, as well as information on how performance parameter values will be calculated based on the raw measurement data, including calculation methods, statistical methods, assessment of uncertainty, confidence levels, etc.

## ***Annex D – Sample structure of the Verification report***

### 1. Introduction

- 1.1. Name of technology and identifier of the technology being verified
- 1.2. Name and contact of Applicant
- 1.3. Organisation of verification including experts, and verification process
- 1.4. Deviations from the verification protocol

### 2. Description of the technology and application

- 2.1. Summary description of the technology
- 2.2. Intended application (matrix, purpose, technologies, technical conditions)
- 2.3. Verification parameters definition

### 3. Existing test data

- 3.1. Description of existing test data
- 3.2. Assessment of existing test data
- 3.3. Accepted existing test data

### 4. Evaluation

- 4.1. Calculation of verification parameters including determination of uncertainty
- 4.2. Evaluation of test quality: 4.2.1. Control data; 4.2.2. Audits; 4.2.3. Deviations
- 4.3. Verification results (verified performance claim): 4.3.1. Description of statistical methods used; 4.3.2. Verification parameters; 4.3.3. Additional parameters, with comments
- 4.4. Recommendations for the Statement of Verification

### 5. Quality assurance

### 6. Comments

### 7. References

## ***Annex E – Sample structure of the Statement of Verification***

The Statement of Verification shall have the following table of contents:

First page shall contain: ETV references, technology name, Date of issuance, details of Applicant, Signatures of representatives of Applicant, Internet address where this Statement of Verification is available.

The following pages shall contain:

1. Technology description
2. Application
  - 2.1. Matrix
  - 2.2. Purpose
  - 2.3. Conditions of operation and use
  - 2.4. Verification parameters definition summary
3. Test and analysis design
  - 3.1. Existing and new test data
  - 3.2. Laboratory or field conditions
  - 3.3. Matrix compositions
  - 3.4. Test and analysis parameters
  - 3.5. Tests and analysis methods summary
  - 3.6. Parameters measured
4. Verification results (performance, operational and environmental parameters)
5. Additional information, including additional parameters
6. Quality assurance and deviations

## *Annex F – Summary of the contents of the ETV ISO 14034*

The ISO 14034 standard specifies the principles, procedures, and requirements for Environmental Technology Verification (ETV). ETV is a voluntary, third-party verification process that aims to provide credible, objective, and documented evidence that the performance claims made by manufacturers, developers, or vendors about an environmental technology are accurate and based on reliable test data.

### Key Objectives and Principles:

- **Credibility and confidence:** the primary goal is to build vendor credibility and buyer confidence in innovative environmental technologies by ensuring their performance claims are impartial and factual.
- **Factual approach:** verification is based on quantifiable and measurable performance parameters and their numerical values, substantiated by quality-controlled test data.
- **Technology neutrality:** the standard is not tied to any specific environmental technology or application, making it broadly applicable to technologies designed to reduce environmental impact or monitor environmental parameters (e.g., in water treatment, energy, or waste management).
- **Third-Party role:** the verification is carried out by an independent Verification Body (an accredited inspection body, typically following ISO/IEC 17020 and ISO/IEC 17025 principles).

### The ETV Process:

The verification procedure typically involves four main stages:

1. **Application and pre-verification:** the applicant provides detailed information on the technology and its performance claims. The Verification Body reviews this to confirm the claims are clear, measurable, and relevant, and develops a specific Verification Plan.
2. **Verification:** the Verification Body assesses existing test data provided by the applicant (which must be of sufficient quality and quantity, often to a 95% confidence level) or requires the generation of additional test data if the existing data is insufficient to justify the claim.
3. **Reporting:** a comprehensive Verification Report is prepared, detailing the verification process, data, and findings.
4. **Statement of Verification:** the process culminates in the issuance of a Statement of Verification, which formally summarizes the verified functional performance and environmental aspects of the technology under specified operating conditions.

### What ETV is Not:

It's crucial to understand the limitations of ETV:

- **Not a certification:** it is not a pass/fail judgment, nor does it certify the technology against a general standard. it only verifies the specific performance claims.
- **Not a substitute for regulation:** it does not replace mandatory regulatory approval or existing regulatory type approval schemes.