



EU Environmental Technology Verification (ETV) pre-programme

Europe is confronted with urgent environmental challenges such as climate change, the unsustainable use of resources and loss of biodiversity. Environmental technologies¹ have a role to play in addressing these challenges and, at the same time, could contribute positively to EU competitiveness and growth.

However, new environmental technologies can face difficulties in breaking into the market and accessing potential users. Empirical evidence suggests that purchasers tend to opt for established technologies with a track-record of performing according to specifications. A lack of reliable information about potentially excellent technologies, as well as inaccurate assessment of their risks, benefits and limitations, discourages both investors and customers. This in turn creates a disincentive to further technological development, in particular by SMEs. The resulting low level of innovation has a negative impact on the competitiveness of EU eco-industries, on the cost-effectiveness of environment protection measures, and is thus to the detriment of society as a whole.

In the context of the Environmental Technologies Action Plan² (ETAP), the European Commission is actively exploring the development of a voluntary scheme on Environmental Technology Verification (ETV) through research and pilot projects, impact assessment and broad consultation. The EU ETV pre-programme – on a voluntary basis – will generate independent and credible information on new environmental technologies, by verifying that performance claims put forward by technology developers and vendors are complete, fair and based on reliable test results. The objective is three-fold:

- To help developers and vendors, especially SMEs, provide objective and reliable evidence on the performance of new eco-technologies arriving on the market, in order to convince first investors and customers on the merits of these technologies;
- To support technology purchasers (public or private) in basing their decisions on sound information, widely recognised as scientifically valid and acceptable as proof of evidence in tendering and purchasing procedures;

¹ Environmental technologies are defined in this context as all technologies (products, processes and services) whose use reduces environmentally harmful impacts, when compared with alternatives.

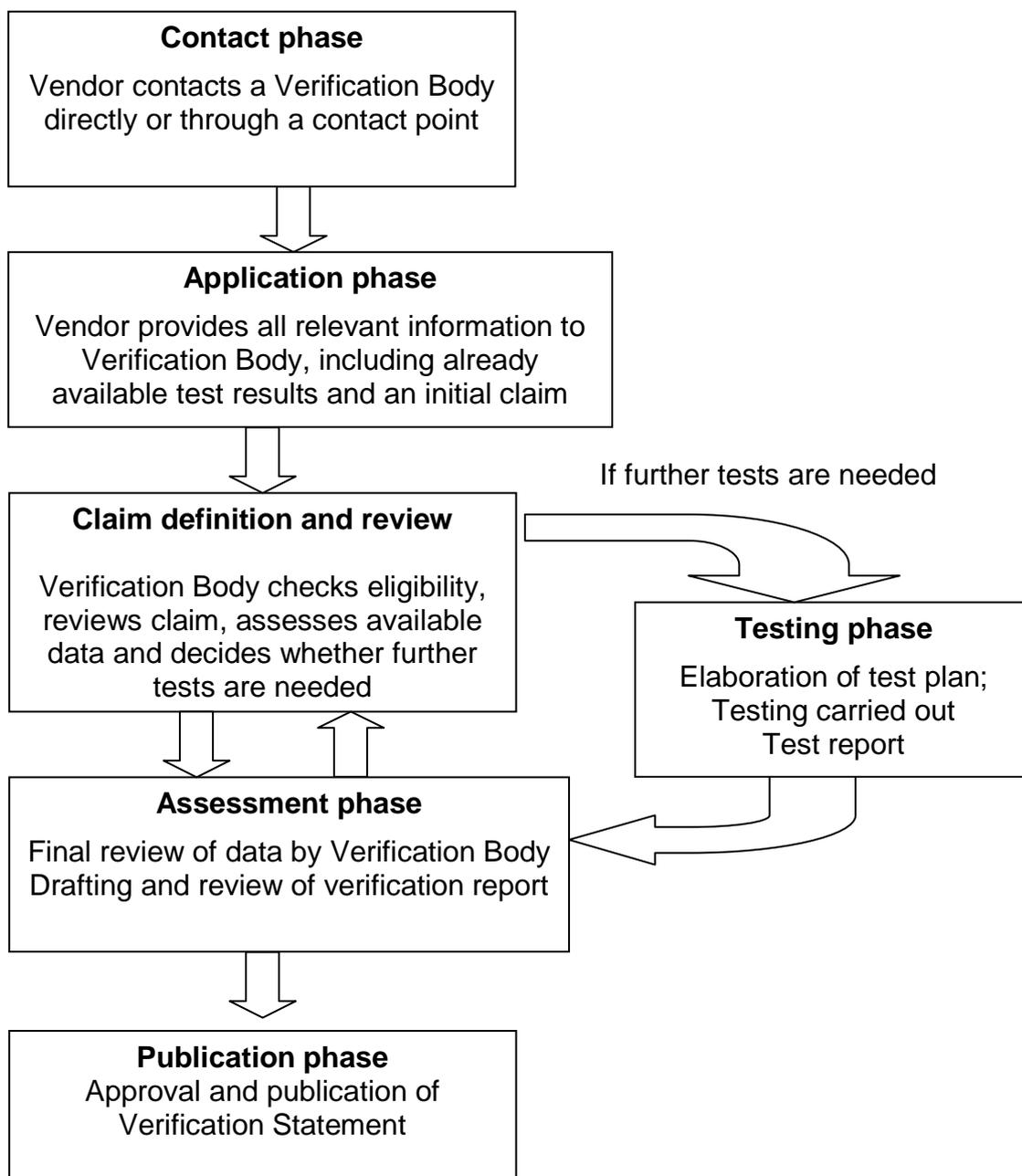
² Communication from the Commission to the Council and the European Parliament on 'Stimulating Technologies for Sustainable Development: An Environmental Technologies Action Plan for the European Union', COM(2004) 38 final, 28.1.2004

- To facilitate the implementation of public policies and regulations by providing citizens, regulators and decision-makers with solid information on the level of performance achievable by new eco-technologies ready for the market.

The EU ETV pre-programme will test the ETV approach and procedures on a large scale, with interested Member States, in a maximum of three technology areas. Based on the results of the pre-programme and on a detailed market assessment run in parallel, the Commission will assess the options for moving towards an EU ETV scheme in due course.

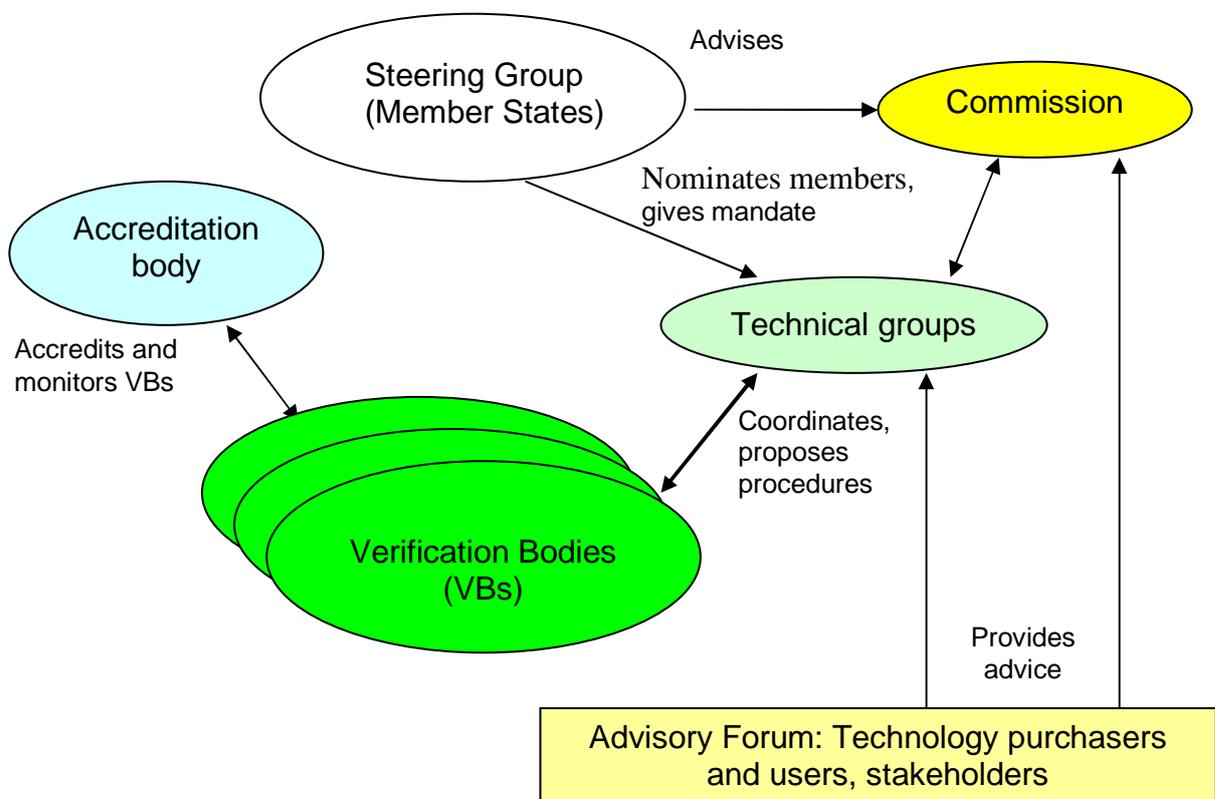
MAIN ELEMENTS OF THE ETV PRE-PROGRAMME

For the applicant company, which is the technology manufacturer or an authorised representative of the technology manufacturer, the main relationship will be with a Verification Body competent for implementing ETV in the relevant technology area. The procedure to be followed can be summarised by the following chart:



ETV will not substitute the actual testing of a new technology, but will facilitate a review of test results in order to assess the credibility of a given performance claim. The value added for the technology developer will be the proof of credibility of the overall claim provided by the ETV process, and thus subsequent recognition of the product across the European Union.

Verification Bodies will be accredited by National Accreditation Bodies to perform verification activities in a given technology area. Verification Bodies will participate in Technical Groups responsible for harmonising the specific procedures followed per technology area, providing the coherence and quality assurance of the system. The overall organisation of the ETV pre-programme can be summarised by the following chart:



CONSISTENCY WITH OTHER EU POLICIES AND STRATEGIES

The aim of ETV is not to substitute existing regulatory or voluntary systems such as type-approval or labels; the aim is to fill the gaps for those technologies going beyond applicable regulations or standards and for innovations not fitting into existing legislative, labelling or standards frameworks. ETV does not change legal obligations but can facilitate proof of compliance by providing objective evidence on environmental performance. Also, ETV does not compare technologies directly, but it should provide potential purchasers and users with reliable information allowing them to make meaningful comparisons and informed decisions.

Some differences with existing schemes and legislation at EU level should be highlighted:

- ETV is concerned with industrial products and processes and should provide detailed information for use in business-to-business relations, whereas eco-labels relate to consumer products and aim to identify greener products based on agreed criteria;
- The Eco-Design Directive on Energy-using Products defines mandatory criteria on the design of products, to be understood as minimum requirements; ETV is not about defining minimum requirements, but about ensuring the credibility of performance claims defined by a producer;
- The EU Eco-management and Audit Scheme (EMAS) relates to the environmental management within organisations, not to the performance of specific technologies; however, Statements of Verification issued by ETV could facilitate the definition and verification of companies' commitments under EMAS;
- The Integrated Pollution Prevention and Control Directive relates to permitting procedures under which Member States define the obligations of some production plants in terms of emission limits. The Best Available Techniques defined in this context are largely technologies already in use, for which a track record on environmental performance exists. By addressing innovative technologies arriving on the market, ETV may well complement the IPPC process but without causing overlap or confusion.

On 16 July 2008 the Commission adopted an Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy (SCP-SIP)³ in order to improve the overall environmental performance of products throughout their life-cycle, promote and stimulate demand for better products and production technologies, and to help consumers make better-informed choices through more coherent and simplified labelling. The establishment of an EU scheme for Environmental Technology Verification is included among the initiatives of the SCP-SIP Action Plan to promote the uptake of resource-efficient and eco-innovative products.

ETV PREPARATORY ACTIONS

Four research projects took place under the Sixth Framework Programme for Research and Technological Development between 2004 and 2009, in order to implement the ETAP priority action of technology testing and performance verification:

- 'European Co-ordination Action for Demonstration of Efficient Soil and Groundwater Remediation' (EURODEMO) aimed at networking testing organisations and developing harmonised protocols for verification in the field of soil and groundwater remediation;

³ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan, COM(2008) 397/3, 16.7.2008

- 'Towards European Sectorial Testing Networks for Environmental Technologies' (TESTNET) aimed at networking testing organisations, identifying technologies, designing a testing and verification system in the field of water treatment, clean production and environmental monitoring;
- 'Efficiency control and performance verification of improved approaches for soil-groundwater protection and rehabilitation' (PROMOTE) aimed at defining and experimenting with a concept for testing and verification (ETV system) in the field of soil and groundwater, setting up a platform with other testing networks; and
- 'Testing Network for Verification of Air Emissions Abatement Technologies' (AIRTV) aims at designing and experimenting with a testing and verification system in the field of air emissions abatement technologies.

Another project, TRITECH – a pilot project funded under the LIFE instrument from 2006-2009 – aimed at testing an operational procedure for technology verification in real conditions on 10 to 15 cases in three technology areas: water, soil and energy. All those projects have been completed. In total, some 35 technologies were verified in this research and pilot phase, providing a good basis for further validating and refining the concept of ETV in the European context.

In 2007, the Commission's Joint Research Centre – Institute for Prospective Technological Studies – published a report analysing various aspects of existing ETV systems outside the EU, and a feasibility study of the implementation of ETV in Europe. This report formed the basis for preparation of the Commission initiative in this field and for the consultation of stakeholders, which took place between November 2008 and March 2009. Another IPTS report on the costs of ETV systems and a study commissioned by the Commission on Member States funding schemes for SMEs in technology verification, also contributed to the preparation of an EU scheme.

A new research project, AdvanceETV, began in 2009, to help the establishment of an EU scheme and to support international ETV harmonisation efforts.

For more information on these projects and similar programmes, please see the list of links in annex (non-exhaustive).

SCOPE OF THE ETV PRE-PROGRAMME

The Commission will define the technology areas to be covered by the ETV pre-programme after consultation of the Steering Group where countries participating in the pre-programme are represented.

Technical Groups (where Verification Bodies are represented) will arrange these technology areas (e.g. water treatment) into specific technology groups (applications) where ETV is reckoned most likely to add value (e.g. drinking-water treatment).

Below is a preliminary list of technology areas (first level) and technology groups (second level) as an illustration of the scope of the ETV pre-programme.

Preliminary list of technology areas and technology groups (applications)

(1) Water treatment and monitoring techniques

- Water monitoring techniques, including test kits, probes, analysers
- Drinking water techniques, such as filtration or disinfection, removal of contaminants
- Wastewater treatment technologies, such as separation techniques, nutrient reduction, disinfection or decontamination
- Groundwater and soil pollution monitoring and remediation, site characterisation

(2) Clean technologies including waste and resource recycling

- Buildings materials, energy efficiency in buildings, indoor air quality
- Cleaner or low-carbon industrial processes, coating equipment (spray, liquid, powder)
- Separation or sorting techniques for solid waste (end-of-life vehicles, plastics, mixed recyclable waste, metals)
- Recycling techniques for batteries and accumulators, for chemicals
- Separation and removal of mercury from waste, safe storage of mercury
- Environmental technologies in agriculture

(3) Air pollution monitoring and abatement

- Air emissions sensors, analysers and monitors, including continuous emission monitors
- Abatement of pollution from stationary sources (filtration, scrubbers, stabilisation of by-products, leakage prevention)
- Technologies related to the combustion of fossil fuels (new fuels, burners, mobile sources devices)
- Technologies related to the combustion of waste and technologies transforming waste into sources of energy

(4) Energy technologies and energy efficiency

- Micro-turbine, Combined Heat and Power systems, Hydrogen and Fuel cells
- Biomass burners and boilers, Heat pumps
- Photovoltaic systems and equipment, solar water heaters
- Wind and sea energy systems and equipment
- Energy efficiency in industrial processes

COSTS OF VERIFICATION AND FUNDING OF THE PRE-PROGRAMME

The total cost of each verification can be expected to vary widely, depending on the technology area, the complexity of the technology itself and the availability or otherwise of quality assured test results. Based on non-EU ETV programmes (US, Canada), preliminary estimates of the fixed costs (staff to run the system, establishment of protocols and quality systems) average out at about **€50 000 to €90 000** per verification. This excludes the actual independent testing of the technology, where costs vary considerably.

Costs related to Member State administrations (accreditation bodies, participation in ETV Steering Group and technical groups) and the provision of information to enterprises, in particular SMEs, would be borne by Member States.

The EU budget would cover the administrative cost related to ETV in the Commission, the costs associated with meetings of the technical groups and of the Advisory Forum. It is also envisaged to conclude grant agreements with accredited Verification Bodies in order to facilitate the setting-up of the pre-programme and support to Small and Medium-Sized Enterprises to participate.

The remaining (variable) cost would be charged to applicants via the verification service. The objective is to limit this **actual cost (for applicants) to an average of about €20 000 per verified technology**.

INDICATIVE TIMELINE FOR THE LAUNCH OF ETV PRE-PROGRAMME

- **January-June 2010:** technical preparation of the ETV pre-programme with participating Member States, national accreditation bodies and group of experts;
- **March-December 2010:** detailed assessment study of ETV potential, potential uptake, added value and willingness to contribute financially;
- **2 July 2010 (tentative):** Launching conference for the ETV pre-programme;
- **September-December 2010:** accreditation of candidate Verification Bodies to the ETV pre-programme by national accreditation bodies;
- **January-March 2011:** establishment and first meetings of the thematic technical groups with Verification Bodies and experts;
- **March-June 2011:** ETV pre-programme becomes operational; first verifications.

ANNEX

List of useful web links (not exhaustive)

1. General information on ETAP and related actions and projects:
http://ec.europa.eu/environment/etap/index_en.htm
2. Studies commissioned by the Commission, Joint Research Centre (Institute for Prospective Technological Studies) on Environmental Technologies Verification systems:
<http://www.jrc.es/publications/pub.cfm?id=1504>
3. Research projects funded by the EU RTD 6th Framework-Programme and relevant for technology verification:
<http://www.eu-etv-strategy.eu/>
4. Website of the US Environment Technology Verification programme:
<http://www.epa.gov/etv/>
5. Website of the Canadian Environmental Technology Verification programme:
<http://www.etvcanada.ca/overview.asp>
6. Presentation of the Nordic project on Water Technology Verification Centres (NOWATECH):
<http://www.nordicinnovation.net/prosjekt.cfm?ld=1-4415-201>
7. Website of EXERA, French network of users of measurement, control and monitoring equipment:
<http://www.exera.com/>