



## Boosting new technologies through performance verification EU Environmental Technology Verification pilot programme

Europe faces a number of serious environmental challenges including resource depletion, biodiversity loss, increasing water scarcity, air pollution and climate change. Innovative environmental technologies could play a significant role in addressing them and, at the same time, could contribute positively to EU competitiveness and growth. But sometimes the best ideas have trouble breaking into the market and accessing potential users.

Empirical evidence suggests that purchasers tend to opt for well-established technologies with a track-record of performing according to specifications. A lack of reliable information about potentially excellent new technologies, coupled with an inaccurate assessment of their risks, benefits and limitations, discourages both investors and potential customers. This in turn creates a disincentive to invest in further technological development, in particular among Small and Medium-sized Enterprises. As a result, technological lock-in is maintained while more effective and less costly environmental protection measures may never see the light of day.

### THE ETV PILOT PROGRAMME

The EU Environmental Technology Verification pilot programme (ETV) – operating on a voluntary basis as part of a build-up towards a formalised system – aims to generate independent and highly credible information about new environmental technologies. It will do this by verifying that performance claims by technology developers and vendors are accurate, complete, fair and based on reliable test results. The objective of the ETV pilot programme is three-fold:

- To help developers and vendors, especially SMEs, provide objective and reliable evidence on the performance of new eco-technologies they are bringing to the market, in order to convince investors and potential customers about the merits of the technologies;
- To support technology purchasers (public or private), who need to base their buying decisions on sound information, widely recognised as scientifically valid and acceptable as proof of evidence in tendering and purchasing procedures;
- 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.

Accredited Verification Bodies (see below) will begin offering verification services to all interested manufacturers of innovative environmental technologies in 2012. All technologies ready for the market and showing a potential for innovation and environmental benefits can be proposed under ETV. The technology scope of the ETV pilot programme will initially include the following technology areas:

1. Water treatment and monitoring (monitoring of water quality, treatment of drinking water and of waste water)

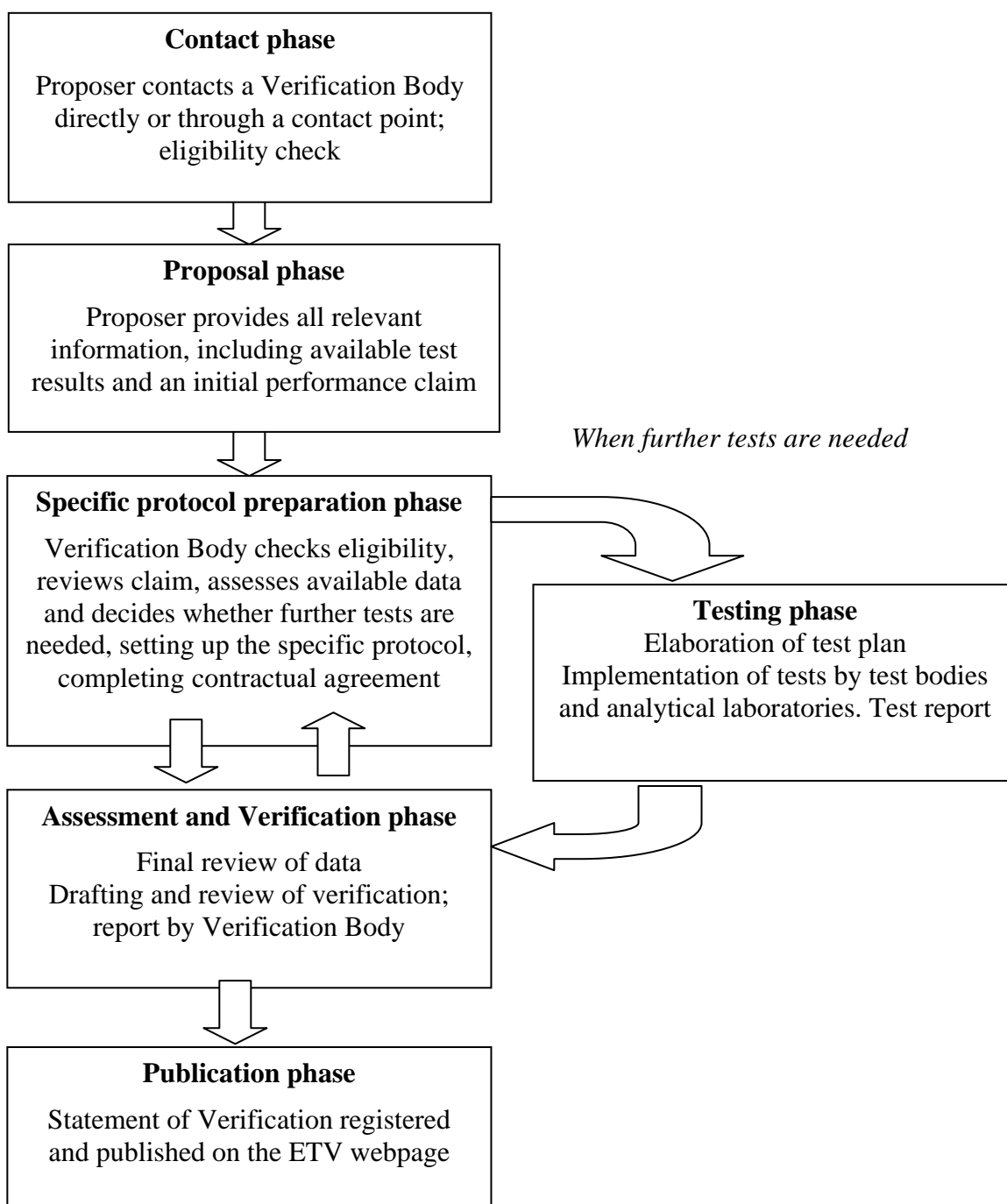
2. Materials, waste and resources (separation and sorting of solid waste, recycling of materials, end-of-life products and chemicals, products made of biomass)
3. Energy technologies (renewable sources of energy, energy from waste, energy efficiency technologies)

### MAIN ELEMENTS OF THE ETV PILOT PROGRAMME

For the technology manufacturer (the proposer), the main contact will be with a Verification Body which is competent for implementing ETV in the relevant technology area.

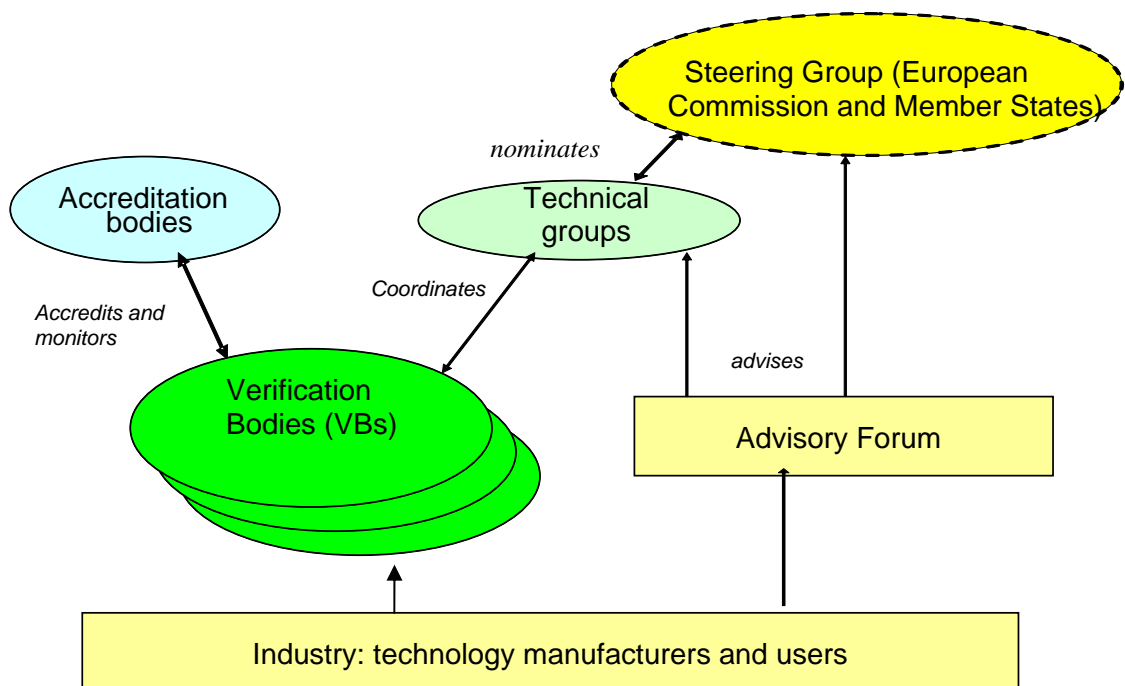
During the verification process, a testing body or analytical laboratory may also be involved in case further tests are needed to verify the technology.

The procedure to be followed can be summarised by the following chart:



The ETV process itself does not include the actual testing of a new technology, but will review test results in order to assess the credibility of a given performance claim. If available test data are not sufficient, test bodies (and possibly analytical laboratories) will be contacted to perform further tests. The value added by ETV will be the assurance of the credibility of the claim as to the performance of the relevant technology, thus facilitating subsequent recognition of the performance of the product by purchasers across the European Union.

Verification Bodies will be specifically accredited by national Accreditation Bodies to perform verification activities for a given area of technology. This will ensure that the Verification Bodies have the capacity and independence to provide high quality services under ETV. To harmonise specific procedures or requirements in a given technology area, Verification Bodies will also participate in thematic technical groups. The overall organisation of the ETV pilot programme can be summarised as follows:



## DIFFERENCES BETWEEN ETV AND OTHER SCHEMES AND LEGISLATIONS

ETV does not aim to substitute existing regulatory or voluntary systems such as type-approval or labels. The aim is to fill a gap for those technologies falling outside regulations or standards and for innovations which do not fit into existing legislative, labelling or standards frameworks. Where legal obligations apply, ETV may facilitate proof of compliance by providing objective evidence about environmental performance. ETV does not compare technologies directly but provides potential purchasers and users with reliable information, to facilitate objective comparison and thus informed decisions.

Some differences between ETV and existing schemes and legislation at EU level:

- ETV is concerned with industrial products and processes and should provide detailed information for use in business-to-business relations; this is complementary to ecolabels, which relate to consumer products and aim to identify greener products based on agreed criteria;

- The Eco-Design Directive on Energy-using Products (and most EU internal market Directives) define 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 put forward by a producer, generally going beyond minimum requirements where they exist;
- The EU Eco-Management and Audit Scheme (EMAS) relates to environmental management within organisations, not to the performance of specific technologies as ETV; however, Statements of Verification issued by ETV might be used to facilitate the definition and verification of participants' commitments under EMAS;
- The EU Integrated Pollution Prevention and Control Directive (and its successor, the Industrial Emissions 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 refer largely to technologies already in use, for which a track record on environmental performance already exists. By addressing innovative technologies arriving on the market, ETV could add value to the process, as emerging new technologies might well perform more favourably than existing 'best available' technologies.

#### **PILOTS AND PROGRAMME ON WHICH THE ETV PILOT PROGRAMME IS BASED**

Between 2004 and 2009, four EU research projects (in the fields of water treatment, soil and groundwater remediation, air emissions abatement, clean production and environmental monitoring) developed and tested the concept of ETV in specific technology fields. TRITECH – a pilot project funded under the LIFE instrument from 2006-2009 – tested an operational procedure for ETV in real conditions on 15 technologies. A new research project, AdvanceETV, began in 2009 to help the establishment of an EU scheme and to support international ETV harmonisation efforts. The websites and results of all ETV related projects are accessible through the common website: <http://www.eu-etv-strategy.eu/>

Some EU Member States also implemented pilot projects on ETV:

The Nordic project on Water Technology Verification Centres (NOWATECH) and DanETV center: see <http://www.nordicinnovation.net/> and <http://www.etv-denmark.com/danetv/>

Verification of environmental technologies for agricultural production (VERA project): see [http://www.ecoinnovation.dk/English/Topics/Verification\\_of\\_ecoefficient\\_agro\\_technologies/](http://www.ecoinnovation.dk/English/Topics/Verification_of_ecoefficient_agro_technologies/)

Some private initiatives also inspired ETV, such as the programmes of instruments evaluation run by associations of industrial users: see <http://www.exera.com/>, <http://www.evaluation-international.com/> and <http://www.wib.nl/> for examples.

#### **COSTS OF VERIFICATION AND FUNDING OF THE ETV PILOT PROGRAMME**

Costs can vary considerably depending on the technology and the quality of existing data. The DANETV verification centre has been active in 5 technology areas since 2009 and uses procedures close to the EU pre-programme. Based on 21 verifications finalised in 2009-2010, the average cost for the testing and verification of technologies was €53,000, of which €28,000 was attributable to the verification procedures per se. The pilot programme is supported by the EU budget and by participating countries, to the aim being to limit the average final contribution of participating Small and Medium-size Enterprises to around €20 000.

Direct support to technology manufacturers, in particular SMEs, for verifications under the ETV pilot programme could also be sought through larger funding programmes, at EU and Member State level:

- Verification under ETV may be proposed as the last step in research and development projects supported by research funding which are aimed at developing environmental technologies to the point where they are ready for the market;
- Under EU programmes such as LIFE+ and CIP<sup>1</sup> eco-innovation, ETV procedures could be integrated into larger projects including, for example, industrial investments, industry-research partnerships or prototypes;
- A number of SME-support schemes in Member States include support to product certification, authorisation procedures or marketing of new products and services. A study commissioned by the Commission in 2009 concluded that many of them could cover support to individual verifications under ETV with little or no modification to their policies.

Technology manufacturers typically have full-scale demonstration or prototype roll-out undertaken before the marketing of new technologies. This can be used as an occasion to organise scientifically-sound performance testing of these technologies, with a view to gathering test data of good quality. To fulfil the quality requirements of ETV, a complete verification procedure under ETV could also be discussed at this stage with a competent verification body. Any additional cost due to the requirements on data and data quality are then likely to be minimal when integrated into larger projects, and the cost of additional verification tests might then be avoided.

#### **PARTICIPATING COUNTRIES**

As of November 2010, participating countries are: Belgium, the Czech Republic, Denmark, Finland, France, Poland and the United Kingdom. Participants from other countries are also welcome and should contact accredited Verification Bodies.

ETV programmes are also implemented in the United States, Japan, Korea, Canada and the Philippines. An informal International Working Group on ETV is preparing the ground for the eventual mutual recognition of ETV programmes. More information on international activities and links to the websites of non-EU programmes are provided on the EU ETV webpage.

#### **MORE INFORMATION ON THE EU ETV PILOT PROGRAMME AND CONTACT POINTS**

More information, in particular on preparatory projects and international activities, are available on the ETV webpage on Europa: <http://ec.europa.eu/environment/etv/index.htm>

Contact points on the ETV pilot programme are:

In the European Commission	<a href="mailto:ENV-ETV@ec.europa.eu">ENV-ETV@ec.europa.eu</a>
In Belgium (Federal Public Service for Health and Environment)	<a href="mailto:Jean-roger.dreze@health.fgov.be">Jean-roger.dreze@health.fgov.be</a>
In the Czech Republic (Ministry of Environment)	<a href="mailto:Evzen.Ondracek@mzp.cz">Evzen.Ondracek@mzp.cz</a>

<sup>1</sup> Competitiveness and Innovation Programme.

In Denmark (Danish Environmental Protection Agency)	<a href="mailto:kadir@mst.dk">kadir@mst.dk</a>
In Finland (Ministry of Environment)	<a href="mailto:Merja.Saarnilehto@ymparisto.fi">Merja.Saarnilehto@ymparisto.fi</a>
In France (Ministry of Economy, Industry and Employment) (Ministry of Ecology, Energy, Sustainable development and Sea)	<a href="mailto:Annie.larribet@finances.gouv.fr">Annie.larribet@finances.gouv.fr</a> <a href="mailto:Michel-louis.pasquier@developpement-durable.gouv.fr">Michel-louis.pasquier@developpement-durable.gouv.fr</a>
In Poland (Ministry of Environment)	<a href="mailto:grazyna.sztandera@mos.gov.pl">grazyna.sztandera@mos.gov.pl</a>
In the United Kingdom (Department for Environment, Food and Rural Affairs)	<a href="mailto:Jerome.Moulin@defra.gsi.gov.uk">Jerome.Moulin@defra.gsi.gov.uk</a>

Organisations interested to become Verification Bodies under ETV should contact the relevant national accreditation bodies. Contacts on ETV are the following:

European co-operation for Accreditation	<a href="mailto:jan.grefhorst@rva.nl">jan.grefhorst@rva.nl</a>
In Belgium (BELAC)	<a href="mailto:Bruno.buts@economie.fgov.be">Bruno.buts@economie.fgov.be</a>
In the Czech Republic	<a href="mailto:frolikr@cai.cz">frolikr@cai.cz</a>
In Denmark (DANAK)	<a href="mailto:edj@danak.dk">edj@danak.dk</a>
In Finland (FINAS)	<a href="mailto:Jenni.Harjuoja@finas.fi">Jenni.Harjuoja@finas.fi</a>
In France (COFRAC)	<a href="mailto:carole.toussaint@cofrac.fr">carole.toussaint@cofrac.fr</a>
In Poland (Polish Centre for Accreditation)	<a href="mailto:k.wozniak@pca.gov.pl">k.wozniak@pca.gov.pl</a>
In the United Kingdom (UKAS)	<a href="mailto:David.Hayward@ukas.com">David.Hayward@ukas.com</a>