

VERIFYING THE ENVIRONMENTAL PERFORMANCE OF TECHNOLOGIES

DESCRIPTION OF INITIATIVE

Verifying the environmental performance of technologies is an important driver in the development, deployment and successful adoption of environmentally sound technologies (ESTs) in all sectors of society. This initiative builds on proven global experiences of independent, third-party assessment of the environmental performance of technologies.

In Canada, the Program was designed to promote the implementation and deployment of ESTs through performance benchmarking and verification. This Program is being implemented by ETV Canada under license to Environment Canada. The performance benchmarking component addresses the needs of technology users and involves the development of sector-based performance criteria. The performance verification component of the Program addresses the need for environmental performance verification of technologies and involves working closely with technology innovators and qualified testing organizations. A third component of the Program involves coordination and harmonization with national governments and international organizations.

In the area of performance benchmarking, ETV Canada has considerable experience in the application of innovative decision support tools and approaches to ensure that performance criteria reflect the perspectives of society, including technology users. ETV Canada has already been successful in applying performance benchmarking in addressing issues such as mercury amalgam, manure management and arsenic-contaminated water treatment. Environment Canada sees considerable opportunity to apply performance benchmarking in the water and sanitation area, thus helping to address the Millennium Development Goals (MDG) and World Summit on Sustainable Development (WSSD) targets.

In the area of performance verification, ETV Canada provides technology developers with third-party, independent validation and verification of technology performance claims. This has proven itself as an efficient and economically viable tool for accelerating the development and deployment of innovative ESTs, thus helping to address both domestic and global environmental priorities.

Environment Canada's oversight of the Program enhances the credibility of technology performance evaluation and helps to clarify acceptable standards of performance in the national and international marketplace. The ETV Program provides buyers with the assurance that a technology vendor's claims of performance are valid and that they are supported by suitable demonstration and test data.

PARTNERS

The ETV program was developed by the Government of Canada, in close partnership with Canadian institutions and the private sector. A series of consultations across Canada with industry and other stakeholders provided invaluable direction to refine the Program concept. ETV Canada delivers the ETV Program on a cost-recovery basis, under a license arrangement with Environment Canada. An extensive network of qualified Verification Entities provides verification services. Promotion of the ETV Canada Program is provided by the Canadian

Environmental Technology Advancement Centres (CETACs), also partially funded by Environment Canada.

Internationally, progress has been made in cooperation and harmonization through joint efforts with Korea, Indonesia, China, and other countries. For example, ETV Canada has completed a Canadian International Development Agency (CIDA) funded project to assist [China's State Environmental Protection Administration](#) to develop an ETV program. Similar cooperation is being sought with other countries, including the U.S. and the European Commission to augment cooperation and the harmonization of verification initiatives.

PROGRESS AND OPPORTUNITIES

Progress has been made in applying environmental performance benchmarking to help define technology user needs and expectations. For example, in Bangladesh, ETV Canada and the Ontario Centre for Environmental Technology Advancement (OCETA) have developed the Environmental Technology Verification Arsenic Mitigation Program (ETV-AM). This capacity-building project is funded by CIDA to assess and verify arsenic mitigation technologies for treating contaminated, rural drinking water. A large number of technologies are being field tested in this project. Other examples where performance benchmarking has been applied include manure management and the application of mercury amalgam separation technology.

With respect to technology verification, an increasing number of ETV Certificates have been awarded since ETV was launched in 1997, and many companies are in various stages of the verification process. An Operations Manual has been developed which includes a peer-reviewed General Verification Protocol.

MAINSTREAMING SUSTAINABILITY

Meeting goals and targets associated with the MDG and the WSSD Implementation Plan requires practical measures and workable approaches to accelerate the development and deployment of ESTs. Although examples of technology implementation can be found in every country, specific actions are needed to augment capacity-building and institutional effectiveness in accelerating the adoption and use of ESTs. Many of these required actions are contained within the UNEP Strategic Plan for Technology Support and Capacity-building.

REPLICATING THE INITIATIVE

Opportunities for replicating the success of performance benchmarking and verification exist in the water and sanitation area, thus helping to address the MDG and WSSD targets. Pathways and modalities for technology transfer among developing countries can be improved through the sharing of information on the performance of ESTs and through joint demonstration programs. Wherever possible, publicly funded research and development should be targeted toward the development of ESTs that are appropriate in developing countries and adaptable to local conditions. Transparent public procurement and project approval procedures are essential requirements.