INTRODUVTION of VERIFIED ENVIRONMENTAL TECHNOLOGIES in JAPAN
-CURRENT ACTIVITIES of ETV in JAPAN-

JAPAN ENVIRONMENTAL MANAGEMENT ASSOCIATION FOR INDUSTRY (JEMAI)

ETV MANAGEMENT ORGANIZATION IN JAPAN

Japan Environmental Technology Verification

ETV Ministry of the Environment

http://www.env.go.jp/policy/etv/

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I. Benefits of ETV for SMEs in Japan

Small and medium-sized enterprises (SMEs) develop, manufacture and sell beneficial environmental technologies in Japan.

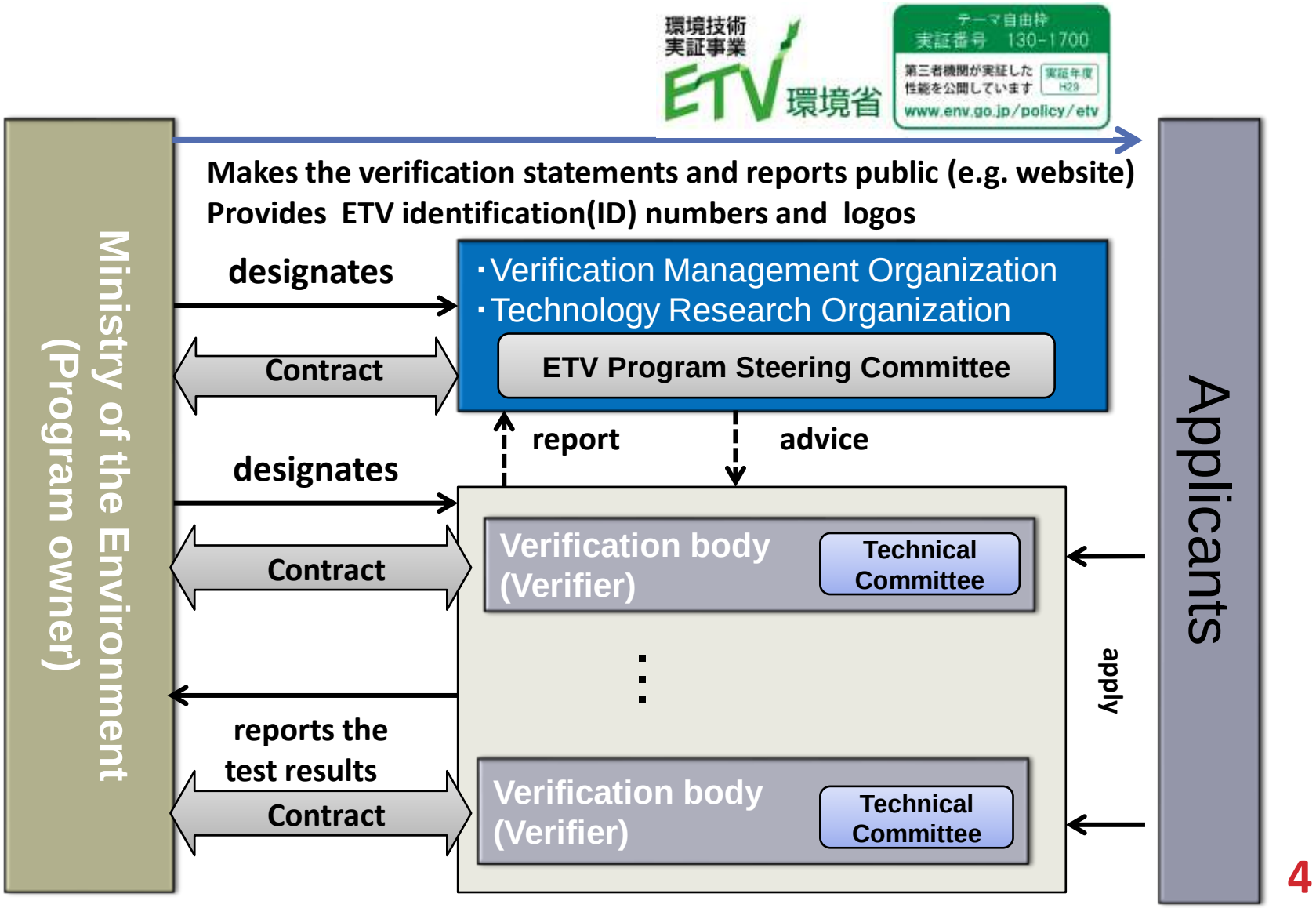
ETV is conducted by the Ministry of the Environment (MOE) as a national program to disseminate environmental technologies , which contributes to address the environmental challenges*.*
MOE provides the reliable information on the performance to technology purchasers and users.

Why do SMEs need to obtain ETV logos and the statements ?

SMEs need:

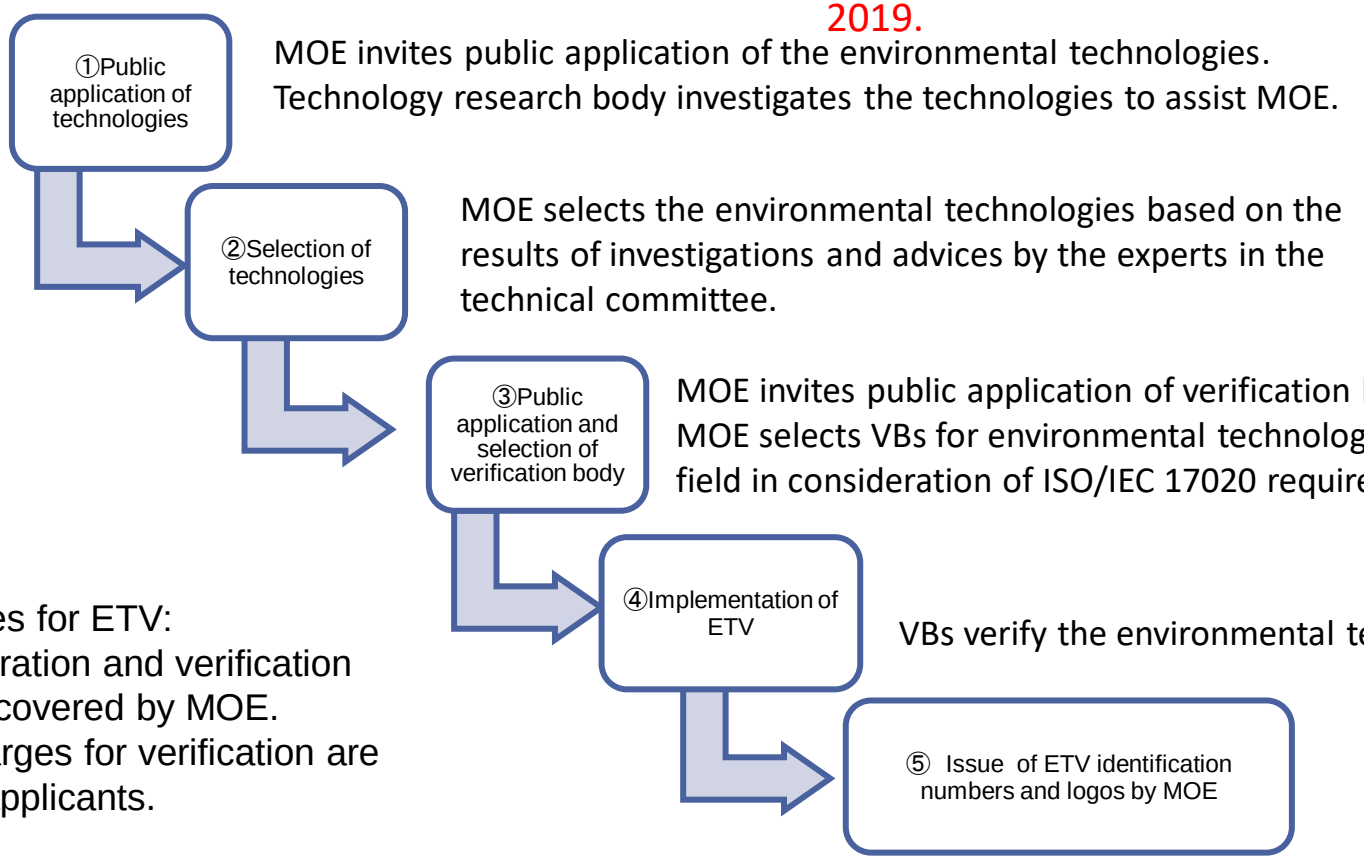
- ✓ To get confidence on their technologies (products) by providing reliable performance data measured by third parties.
- ✓ To boost their sales domestically and internationally with ETV logs and the statements.
- ✓ To provide additional value to the products to win in the competitive markets.
- ✓ To get useful advices from experts in the technology area.

Ⅱ． Current ETV framework in Japan



Ⅲ. Current ETV process in Japan

The process of ①-③ has been done in FY 2018.
The process of ④ and ⑤ will be done in FY 2019.



About charges for ETV:
The administration and verification charges are covered by MOE.
The test charges for verification are covered by applicants.

The guidelines of ETV program in Japan have already consisted with the requirements of ISO 14034.

Ⅳ. Introduction of verified environmental technologies in Japan

Technology areas are selected by MOE in consideration of the social significance and needs necessary for addressing the environmental challenges.

Technology areas:

For example:

・Organic wastewater treatment

・Water purification technologies for lakes and reservoirs

・ Water environment improvement technologies for enclosed coastal seas

・ Small and medium scale hydropower generation

・ Heat island mitigation (heat pump air-conditioning systems using ground source heat, wastewater heat, etc.)

・ Heat island mitigation (technologies for reducing air conditioning loads by using building envelope systems)

・ VOC measurement (Handy VOC sensor/monitor, etc.)

・ VOC removing system in waste gases

① Organic wastewater treatment technologies

Purpose: Oily waste water which the threshold value is less than 50 m^3 *) from commercial kitchens should be treated effectually to reduce the load of pollution.

*) Unregulated range in Japan.

Technologies:

- ✓ Physical, Chemical treatment: Screen, Oil/water mechanical separation system, Coagulation, dissolved air floatation etc.
- ✓ Biological treatment: oil decomposing agent (microorganism and enzyme)
- ✓ Mixed treatments of Physical, Chemical and Biological

The number of verified technologies : 40 as of 2017

Sewer pipe is clogged up with oil

Oil ball in seaside

http://www.gesui.metro.tokyo.jp/ HP of Tokyo Bureau of sewerage

Performance parameters for verification		
Effect of Technology	Effect of Environment	Resource
pH	Amount of slug	Electricity
BOD	Amount of waste	Kinds and amount of agents for using treatment
COD	smell	
SS	Vibration and sound	
N-hexane		
T-P & T-N		

Other information

- Initial cost
- Running cost
- Maintenance

Example: Wastewater treatment technology for highly concentrated oily using microorganisms and enzymes

ETV identification number: 020-1402

Treatment method:
Proliferation of microorganisms and enzymes + emulsifier of oil by the aeration

Merit:
Easy to use
Reduce the slug
Low cost

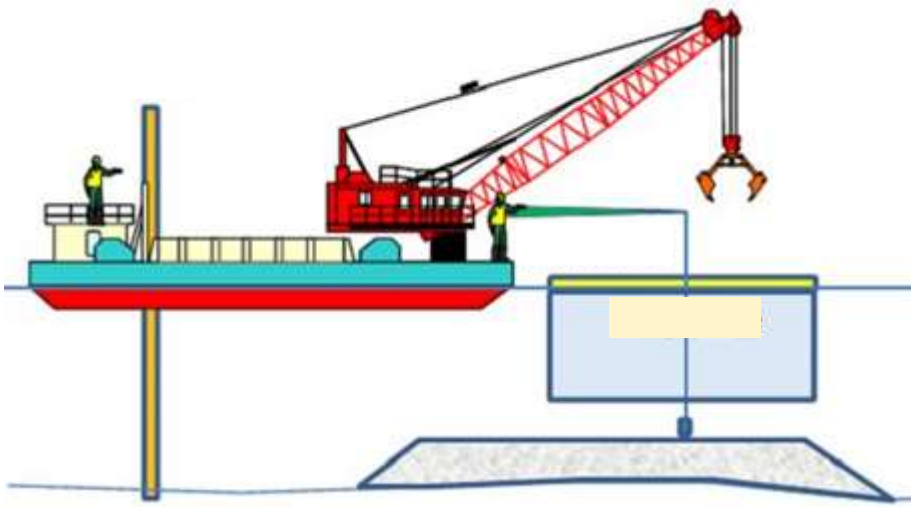
② Water environment improvement technologies for enclosed coastal seas

The number of verified technologies ：24 as of 2017

Example: Seaweed bed construction and water quality improvement technology using steelmaking slag

Particle diameter

5-10mm　　30-50mm



ETV identification number: 090-0902

③ Small and medium scale hydropower generation technologies

The number of verified technologies ：12 as of 2017

Cross-flow turbine

- Amount of flowing water 0.1m^3/s
- Effective head 30m
- Maximum output 17kW

ETV identification number: 120-1502,120-1503

④ Heat island mitigation etc. (technologies for reducing air conditioning loads by using building envelope systems）

The number of verified technologies ：403 as of 2017

Sunshine shield film for the window

Water holding building material

ETV identification number: 051-1414 and 051-1415

⑤ VOC monitoring

VOC measurement sensors

Purpose:
The regulation is exist to reduce oxidant in atmosphere in Japan. The plants using VOCs such as printing and painting factories must reduce the emission of VOC.
VOC measurement sensors help to control emission of VOC from plants.

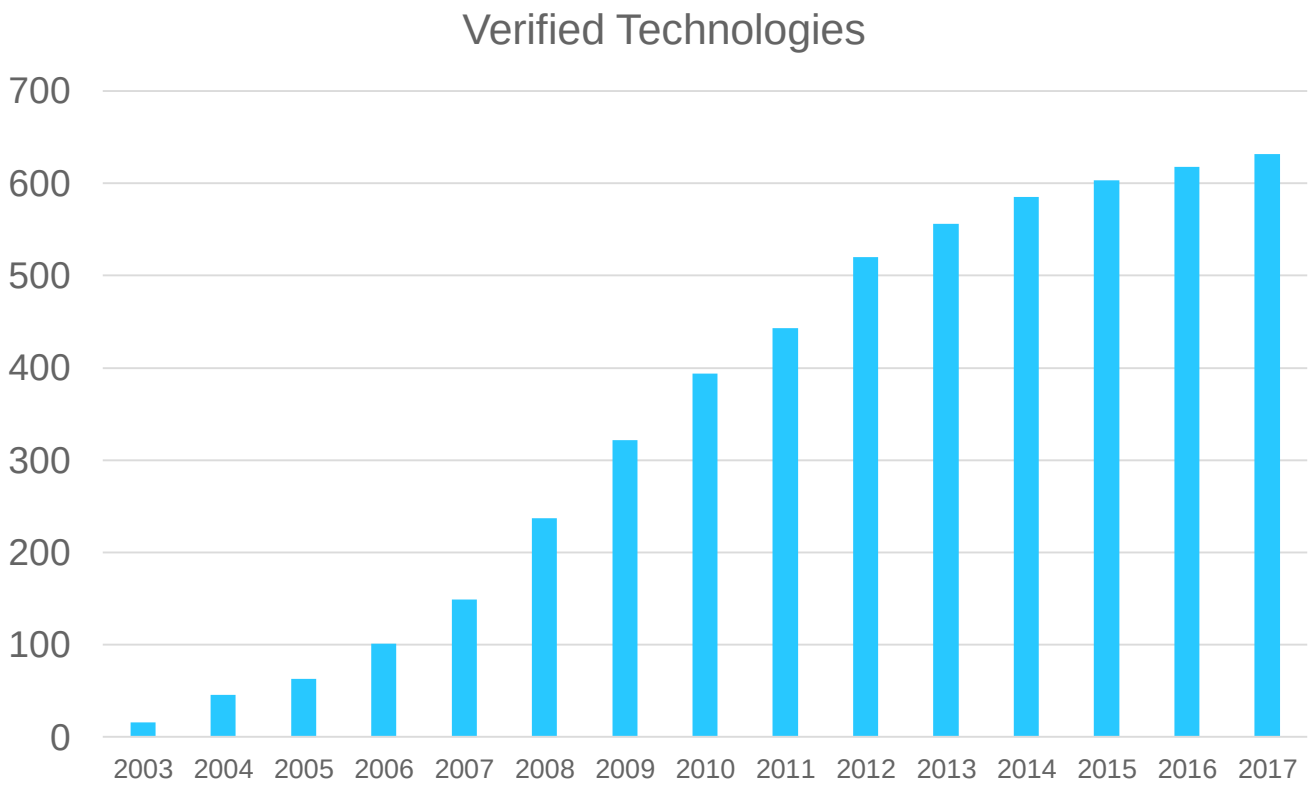
The number of verified technologies : 13 as of 2017

ETV identification number: 100-1203

Number of ETV technologies in Japan

By FY2017, 632 technologies had been verified.

In FY2017, 14 technologies were verified in 8 technology areas.



Ⅴ. Preparing for the adaptation to ISO 14034

ISO14034: 2016 (environmental technology verification: ETV) was published in 2016, Nov.

The guidelines of ETV program in Japan have been revised to consist with the requirement of ISO 14034 in FY 2017 . The new guidelines comes into force in FY2018.

Requirements of ISO 14034

When verifying the performance of environmental technologies, the requirements of ISO 14034 and ISO/IEC 17020:2012 shall be applied and demonstrated.

※ ISO/IEC 17020:2012. Conformity assessment -- Requirements for the operation of various types of bodies performing inspection

Training of verification body (in September 2017)

Experienced verification bodies (VB) have been trained to conform with the requirements of ISO/IEC 17020 by the Japan Accreditation Body (JAB) and JEMAI.

Organizing the seminar (in September 2018)

The seminars on ISO14034 and ISO/IEC 17020 were held in Tokyo, Osaka and Nagoya for potential VBs.

JAB will get ready for launching the accreditation program for ISO/IEC 17020 with respect to ISO 14034 in October, 2019.

Ⅵ. Future Plan

- We will extend the technology area of ETV in 2019

Water and soil environments preservation technologies
Air quality preservation technologies
Resource circulation technologies
Natural resources
Climate change adaptation and mitigation technologies
Ecology system preservation technologies
Environmental monitoring

We will collaborate with

- other supportive projects for the SMEs, e.g. business marching services or ODA projects in Japan.

- other countries implementing ETV to disseminate environmental technologies though global ETV framework.

THANK YOU FOR LISTENING.