

# Environmental Technology Verification as an innovation service



Helping eco-innovations to reach the market.

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- \* Feed-back from ETV-customers
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# DANETV - Danish Centre for Verification of Climate and environmental technologies

- \* Established 2008
- \* Supported by the Ministry of Science, Technology and Innovation
- \* A cooperation between 5 institutions
- \* Methodology similar to EU ETV General Verification Protocol
- \* 14 verifications completed
- \* Covers a wide range of technology and product groups



# Examples of completed DANETV verifications

## Water treatment

- Treatment of water re-circulating over swimming pools (CoMeTas)
- Production of drinking water from surface water (ROS, Sweden)

## Air cleaning

- Removal of hydrocarbons from polluted air (Danmil)
- Removal of aerosols from oil mist (Simas)

## Energy

- Pretreatment of biomass for increased biogas production (GFE)
- Reduction of energy consumption in cooling cabinets in stores (Danfoss)

## Environmental technologies for agriculture

- Reduction of odour and ammonia emissions from pig houses (Rotor)
- Separation of slurry (SB Engineering)



**Experiences from the work  
of the DANETV test bodies and verification bodies**

**Feed-back from the  
the technology suppliers  
= ETV customers**



# Benefits during **early phases** of the ETV process

## Dialogue between technology supplier and verification body

- Agree on the specific application of product to be verified
- Discuss performance claims taking into account:
  - State-of-the art for the specific product group
  - Legislative requirements
- Discuss test parameters and overall test set-up
- Evaluate whether the product is ready for the market / ETV
- In some cases a need for further development is identified
  - ETV is postponed but in the end a better product is the result



**Many technology suppliers express that they benefitted a lot from this dialogue**

# Early phase benefits

**Contact phase**  
Proposer contacts a Verification Body directly or through a contact point, eligibility check

**Proposal phase**  
Proposer provides all relevant information, including available test results and an initial performance claim, Contractual agreement

**Specific protocol preparation phase**  
Verification Body checks eligibility, reviews claim, assesses available data and decides whether further tests are needed, setting up the specific protocol, completing contractual agreement

**Assessment and Verification phase**  
Final review of data  
Drafting and review of verification report by Verification Body

**Publication phase**  
Statement of Verification registered and published by the Commission

**Unexpected benefits for the technology supplier during early ETV phases**

*When further tests are needed*

**Testing phase**  
Elaboration of test plan  
Implementation of tests by test bodies and analytical laboratories.  
Test report

**In the beginning the technology supplier focus only on the verification statement**



# Intended readers of the verification statement

## Main target groups

- \* Potential buyers of the environmental technology
  - \* Private and public
  - \* National and international
- \* Environmental authorities and regulators

## In some cases also:

- \* Potential investors: Case 1
- \* Technology supplier offices in other countries: Case 2



## Case 1– SB Engineering

- A small engineering company in agricultural sector
- Developed a new product for treatment of manure
- Decided to undertake an ETV to open the Danish market
- ETV completed in spring 2010



### Additional benefits

- The product was sold on new, unexpected markets (e.g. Serbia)
- Verification statement also used for potential investors
- In September 2010 property rights of the product were sold to a larger and more capital strong company (Agrometer)
- The product is now marketed and produced by Agrometer



## Case 2– GEA Westfalia

- A multinational technology supplier company
- A known technology used in a new application:
  - Decanter centrifuge for post-treatment of digestate at biogas plants
- The Danish office decided to undertake an ETV to facilitate national sale



### Additional benefits

- Verification statement used for internal marketing within the company
  - Presentation to other relevant country offices
- Facilitating use of the product in this new application internationally



# A fast and flexible ETV-process appreciated

## Especially for new SMEs low on capital

- Fast access to the market is crucial
  - A need to start selling the product to get capital inflow
  - Bringning the company over the "Valley of Death"
- A fast ETV-process is very much appreciated by such SMEs
- Flexibility with respect to test parameters also an advantage

**In the work for EU and global acceptance the ETV-process should be kept fast and smooth without compromising the quality or reliability of the results**



# Challenges met in the ETV-work and lessons learned



# A need for branding the ETV-concept

## **ETV is a complex product to sell**

- Still a new concept in Europe
- Difficult to explain - partly due to the flexibility of the concept

## **Difficult to undertake good ETV market studies**

- Many potential buyers will not demand a product they don't know

## **Effective marketing of the ETV concept is necessary**

- Different marketing channels should be used
- Even after a contact is established to a technology supplier:
  - Several face-to-face meetings needed before contract is signed



# International acceptance is essential

- Denmark is a small market
  - Often technology development is not relevant for this market alone
- ETV is seen by technology suppliers as a tool to open new markets
- A clear need for acceptance of verification statements at
  - EU level
  - Global level
- ... and as soon as possible so that a snow-ball effect can be started!



# Financial support to kick-start ETV

## The costs of test and verifications show great variations

- Depend on product group and amount of existing data
- Difficult to operate with standard prices / average prices

## Especially for SMEs

- The cost of an ETV can be a barrier
- Financial support needed to make ETV available for SMEs



# The ETV methodology

## **The ETV documentation is comprehensive but essential**

- Time is needed for the verification staff and the test staff to get familiar with the ETV methodology and the templates
- The use of external experts for reviews during the process makes the ETV process more complicated but the results more reliable

## **Potential for reducing time consumption**

- The time used for the verification task is reduced when the first verifications are completed and staff has gained experience



# Linking ETV with environmental authorities

## ETV can be used actively for acquiring environmental permission

- Verification statements used as documentation for performance
- Facilitates faster approval of new technologies applied to fulfill environmental requirements

## Case: Verification of environmental technologies for agricultural production (VERA)

- Established in 2010 in cooperation with Netherlands and Germany
- Marketing of the VERA-concept to relevant technology suppliers
- In 2011 many interested VERA-customers



The active involvement of the environmental authorities is an important driver for success of the ETV

# Conclusions

- **There is clearly a high potential for ETV**
  - A tool to commercialise new innovative environmental products
  - Taking the technologies from R&D to the market
- **The international recognition of verifications is an important driver**
  - The EU ETV pre-programme is very relevant!
- **Coordination with environmental authorities is an important driver**
- **Especially for the SMEs financial support is needed**
- **Branding of the ETV is important to make the concept well-known**



# More information

## Nordic Environmental Technology Verification

[www.etvnord.org/](http://www.etvnord.org/)

## Verification of Environmental Technologies for agricultural production

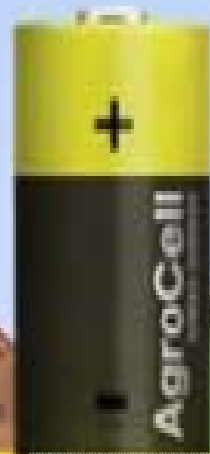
[www.veracert.eu](http://www.veracert.eu)

## DANETV

[www.etv-denmark.com](http://www.etv-denmark.com)



**Thank you for your attention!**  
**Questions and comments?**



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