

T F T E I



Under the Convention on Long Range Transboundary Air Pollution

Task Force on Techno-Economic Issues

Last Developments and Future Work

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- ✓ Promote awareness and understanding of Guidance Documents on control techniques in EECCA Countries : Berlin Workshop, Saint Petersburg Workshop
- ✓ Development of techno-economic tools to evaluate the costs of reduction techniques of SO₂, NO_x and PM in the Large Combustion Plants Sector and costs of VOCs emission reduction techniques for large industrial users of solvents
- ✓ Development of Guidance Documents
- ✓ Development of the Clearing House of control technology information for primary emissions of NO_x, SO₂, VOCs and PM, including SLCPs, heavy metals and POPs

- ✓ Promote awareness and understanding of Guidance Documents on control techniques in EECCA countries :
 - Berlin Workshop
 - Saint Petersburg Workshop

- ✓ Held in Berlin, Germany, from 20 to 22 April 2016
- ✓ Organisers: TFTEI, EU Commission, Federal Ministry of the Environment Germany and UBA
- ✓ Funded by EU Commission, Sweden and Germany
- ✓ Simultaneous translation: English-Russian
- ✓ 60 participants:
 - from 23 countries
 - EU COM, UN ECE Secretariat, UN ESCAP
 - 4 industrial organisations



Context

- ✓ Considerable reduction of air pollution in UNECE region but uneven regional development and slow progress
- ✓ Increased energy production, industry growth and urban development in the EECCA region lead to increased emissions
- ✓ Slow progress in implementing UNECE LRTAP protocols

What was the aim of the Workshop?

- ✓ To learn from different BAT approaches in different parts of the UNECE
- ✓ To improve the understanding of the concept of BAT and its application
- ✓ Different perspectives of application and implementation (competent authorities, industry, BREF author)
- ✓ Discussion of obstacles to the implementation

- ✓ Promote awareness of policy makers by constructive dialogs between decision makers and operators/companies in order to promote win/win situations (environment and sustainable production)
- ✓ TFTEI Information exchange platform to be used /complemented with basic information on BAT
- ✓ Training and demonstration projects on integrated permitting would be useful
- ✓ Low level/inexpensive measures below BAT could be explored were practical (Best Environmental Practices)
- ✓ Access to permits which have been granted to real installations by competent authorities (links on the website of the Clearing House)
- ✓ Develop guidance for a permitting procedure (guidance for operators as well as for authorities)

Joint Workshop TFTEI / Coordinating Group for EECCA countries



Saint Petersburg, on October 19-20, 2016.

A number of relevant and common issues were addressed:

- ✓ Promoting awareness and understanding of the latest Guidance Documents (mobile sources and NMVOCs monitoring).
- ✓ Synergies between the Heavy Metals Protocol and the Minamata Convention on mercury.
- ✓ TFTEI LCPs cost methodology and ERICCa LCP tool
- ✓ TFTEI Clearing House of technologies
- ✓ TFTEI Methodology for GAINS scenario analysis

- ✓ Development of techno-economic tools to evaluate the costs of reduction techniques of SO₂, NO_x and PM in the Large Combustion Plants Sector and costs of VOCs emission reduction techniques for large industrial users of solvents

Tools to estimate the costs for emission reduction in LCPs



Development of tools to estimate the costs of pollutant emission reduction (investment, operational costs, total annual costs specific abatement costs)

Large combustion plants : ERICCa LCP

Plants	Boilers (> 50 MW _{th})
Pollutants	NO _x , SO ₂ , PM
Fuels	Coal, oil, gas, solid biomass (wood) in co-combustion with coal
Technologies	NO_x : LNB (Low NO _x Burner), SCR (selective catalytic reduction), SNCR (selective non-catalytic reduction) SO₂ : Wet flue gas desulphurization (FGD), lime spray dryer, dry process PM : Fabric filter (FF), electrostatic precipitator (ESP)

Tools to estimate the costs for emission reduction for large users of solvents



Development of tools to estimate the costs of pollutant emission reduction (investment, operational costs, total annual costs specific abatement costs)

Users of solvents

The work focused on two sectors in 2016-2017:

- ✓ car manufacturing (painting)
- ✓ packaging printing

ERICCa-VOC tool has been developed to implement the methodology and carry out the cost calculation.

The ERICCa-VOC tool provides the total annual costs of emission abatement, total emissions abated and specific abatement costs (per kilogram of VOCs abated).

- ✓ Development of two new Guidance Documents

Characteristics of the Guidance Document (a technical report also available)

- ✓ BAT presented **per category** of vehicle or machinery
 - Differentiation between BAT applicable to **new** and **older** types
 - **Emerging techniques** separately addressed
- ✓ **Guidance** on emission control techniques (more detailed information in the technical report)
- ✓ BAT may not necessarily be the implementation of the latest technology
 - Emphasis on existing stock
 - Importance of the cost-effectiveness

Document officially endorsed at the last EB meeting in December 2016

Guidelines to estimate and measure the emissions of Volatile Organic Compounds



✓ **Gothenburg Protocol :**

- Introduction of commitments for reduction of VOC emissions for Parties to the Convention in 2020
- Emission Limit Values (ELVs) for different activities (for VOCs, annex VI and annex XI)
- Establishment of solvent management plans for activities using solvents covered by annex VI

✓ **Why developing Guidelines :**

- VOC a complex pollutant : group of substances with different chemical properties, stack emissions and fugitive emissions, complex measurement...

→ Develop guidelines to facilitate the ratification of the Protocol by EECCA countries

Guidelines to estimate and measure the emissions of Volatile Organic Compounds



Information available:

- ✓ Context and aim of the guidelines
- ✓ Explanations on types of ELVs implemented in annex VI
- ✓ VOC measurement techniques
- ✓ Solvent management plan
- ✓ Control of ELVs for selected activities (other than solvents)
- ✓ Summary of measurement methods for the different activities covered by annex VI
- ✓ Example of development of a solvent management plan

Document officially endorsed at the last EB meeting in December 2016

- ✓ Development of the Clearing House

➤ Content

- **General information on reduction techniques** for SO₂, NO_x, PM, VOC, HM and POP
- Updated information on the different options to abate emissions and on the characteristics of reduction techniques
- Information from reduction technique manufacturers on the **latest development of reduction techniques** both for general applications and for specific applications
- **Operating experience and feedback from operators**, taking advantages of lessons learned, having information on real life investments costs and operating costs

✓ Organisation

- A publicly available part with information checked
- An exchange platform only available for registered persons
(User names and codes to be asked to the TFTEI secretariat)

Information coming from plant operators and technique manufacturers exchanged through the exchange platform.

From this platform, interesting **information can be made publicly available after validation by the Clearing House Committee**

Who's involved ?

General information on reduction techniques for SO ₂ , NO _x , PM, VOC, HM and POP. Available studies	Delivered by the TFTEI Technical Secretariat (TS) assisted by TFTEI experts from administration and industry
Latest development of reduction techniques	Delivered by manufacturers through the exchange platform before coming publicly available, and/or searched by the TFTEI TS
Operating experience and feedback from operators	Delivered by operators through the exchange platform before becoming publicly available

✓ Clearing House Committee

Committee set up, chaired by Emmanuel FIANI from ADEME

Its tasks consist in **reviewing the information** delivered through the exchange platform before including it in the public web site.

A guide for delivering information is available on the web site, developed in order to ensure a certain quality in the information provided and to guide the information provider.

Further implementation of the Work Programme

Further work on the following items was identified as a priority:

- ✓ The further development, extension and feature improvement of the Clearing House ;
- ✓ Training and demonstration projects on BAT and integrated permitting, with due regard to the needs of the EECCA countries (subject to availability of adequate resources);
- ✓ The further development of the cost methodology for VOCs and related tools ;
- ✓ Collaboration with the European IPCC Bureau located in Seville, Spain;

Further implementation of the Work Programme

- ✓ Exploring collaboration with other international organisations (outreach activities);
- ✓ Further development of the collaboration, in particular, with the Task Force on Reactive Nitrogen and other technical bodies of the Convention.

Next Annual Meeting of the Task Force

In Rome on 19 and 20 October 2017

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Thanks for your attention