

T F T E I



Under the Convention on Long Range Transboundary Air Pollution

Task Force on Techno-Economic Issues (formerly EGTEI)

Co-Chairs' report to the
53rd Session of the WGSR

State of progress in the work of the TF
(ECE/EB.AIR/WG.5/2015/3)

Premise

This presentation refers to the activities carried out by the Task Force (formerly known as EGTEI) between October 2014 and the present time, according to the work plan 2014-2015 adopted by the Executive Body at its 33^o Session, December 2013 (ECE/EB.AIR/122/Add.2).

The activities are presented according to the item numbering in the work plan 2014-2015. This presentation is based upon the Chairs' Report (ECE/EB.AIR/WG.5/2015/3) and includes the latest updates after the submission of the report to the UN Secretariat.

ECE/EB.AIR/WG.5/2015/4 and informal document n. 4

Item 2.2.1 - Develop guidance document on control techniques for emissions of sulphur, NOx, VOCs and dust (including PM10, PM2.5 and black carbon) from mobile sources and its translation into Russian

The work, financed by the European Commission, and assigned by service contract to IIASA (CIAM) and EMISIA (Greece) resulted in a background technical report and a draft Guidance Document on mobile sources. The two documents were circulated among the experts of the TF, at end of March, and their contributions discussed at the TFTEI annual meeting, held in June 2015, in Brussels. The Guidance Document was then agreed and finalized among the experts, also with the valuable contribution from the Swiss and EU COM experts, and finally submitted to the UN Secretariat.

2.2 1– Cont'd – GD doc ECE/EB.AIR/WG.5/2015/4 and informal document n. 4

Aim of GD: “provide the Parties to the LRTAP Convention with guidance on identifying best abatement options for mobile emission sources, in order to assist in meeting the obligations of the Gothenburg Protocol”

Emphasis is given to the “technical measures” BAT, but also other measures are discussed in the GD, e.g. changes in fuel type, fuel specifications, and “non-technical measures”

Main pollutants addressed : *NO_x, PM, VOC, Black Carbon* through the measures for PM,

SO_x, ammonia (*NH₃*), ozone precursors carbon monoxide (CO) and methane (*CH₄*) only when deemed relevant.

Road vehicles, non-road machinery, passengerships and freight vessels in inland water-way, and sea-going ships considered.

2.2 1- *Cont'd - GD doc ECE/EB.AIR/WG.5/2015/4* and informal document n. 4

BAT Identification - Several techniques can be identified as BAT for reducing a specific pollutant.

The following characteristics are determinant in the identification of a BAT:

- Already applied in wide scale real-world
- Applications economic viability
- Boundary conditions and limiting factors
- Potential synergies and trade-offs

2.2 1- Cont'd

Recommendations are given per **category** of vehicle or machinery:

- 1) differentiation between BAT applicable for newer and older types
- 2) emerging techniques or experimental scale addressed separately

Key messages:

- 1) GD provides general guidance of possible emission control techniques, but it is *not an exhaustive list of all possible techniques*.
- 2) Under specific local conditions, other techniques might be judged equally good BAT.
- 3) Technical, financial, infrastructural limiting factors may exist in particular cases.
- 4) BAT is not necessarily the latest technology, emphasis on existing stock.
- 5) Technology for latest Euro standards is considered by definition as BAT for new vehicles.

2.2 1– Cont'd - doc ECE/EB.AIR/WG.5/2015/5

Guidelines document for estimation and measurement of VOC emissions from activities covered by annex VI of the Gothenburg Protocol

The Guidelines Document is organized according the following sections:

1) Context in the frame of the Gothenburg Protocol Annex VI, including :

- *Commitments for reduction of VOC emissions for Parties in 2020*
- *Mandatory 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*

2.2 1– Cont'd

Guidelines document for estimation and measurement of VOC emissions from activities covered by annex VI of the Gothenburg Protocol

2) Types of ELVs implemented in annex VI

- ELVs expressed as total organic carbon (TOC)*
- ELVs related to one or several substances, expressed in mass of VOC*
- ELVs expressed as a total VOC emission, expressed in % of solvent input, or g VOC/unit of activity (g VOC/m² , g VOC/kg high solid, ...)*
- Fugitive emission of VOC expressed in % of solvent input*

2.2 1– Cont'd

Guidelines document for estimation and measurement of VOC emissions from activities covered by annex VI of the Gothenburg Protocol

- 3) VOC measurement techniques available for total VOC and individual substances.

- 4) Translation of concentrations of single VOC expressed in mass of VOC, in total VOC concentrations expressed in mass of carbon

The calculation formula is provided with examples

2.2 1– Cont'd

Guidelines document for estimation and measurement of VOC emissions from activities covered by annex VI of the Gothenburg Protocol

5) Solvent management plan

- *Definition of inputs and outputs*
- *Means to estimation of the different components of the balance*

6) Means to control VOC of other activities :

- *Loading /unloading of mobile containers at terminals (excluding load of sea going ships)*
- *Storage of petrol at service-stations (Stage I)*
- *Car refueling at service stations (stage II)*

2.2 1– Cont'd

Guidelines document for estimation and measurement of VOC emissions from activities covered by annex VI of the Gothenburg Protocol

7) Summary of measurement methods available for the different activities

- *Illustrative examples to explain total VOC ELV and ELVf/ELVc*
- *Illustrative examples on the development of a solvent management plan*

8) Annex : VOC measurement in EECCA – Example of Belarus

- *VOC measurement methods used in Belarus*
- *Gaps identifies by TFTEI related to the solvent management plan*

Item 2.2.2 Workshops in 2014 to promote awareness and understanding, in particular in countries of Eastern Europe, the Caucasus and Central Asia (EECCA), of the Guidance document on control techniques for emissions of sulphur, NO_x, VOCs and particulate matter (including PM₁₀, PM_{2.5} and black carbon) from stationary sources.

As follow up of the discussion at the 2015 Task Force meeting, the workshop originally, already postponed several times, was finally re-scheduled in Spring 2016 due to organizational reasons. The workshop is aimed at promoting a better understanding of the guidance document on stationary and mobile sources in the countries of Eastern Europe, the Caucasus and Central Asia (EECCA)

Item 2.2.2 – Cont'd

Other issues in the agenda of the workshop :

- 1) guidelines for the calculation of VOCs emissions;
- 2) identification of synergies between the 1998 Protocol on Heavy Metals and the Minamata Convention on Mercury
- 3) cost methodologies for large combustion plants;
- 4) GAINS Model-related methodology used by the Task Force (*item 2.2.6*).

Item 2.2.5 — Develop a techno-economic tool for evaluating costs in the Large Combustion Plants Sector

A new update of the methodology and the applicative tool were presented, at the Task Force meeting in 2015.

A User Interface developed in Visual Basic Applications (VBA) and an updated User Manual are now available.

A phone conference took place on October, 23, 2015, to present the updated methodology with experts of the Institute for Prospective Technological Studies (IPTS), Joint Research Centre of the European Commission, in Seville, Spain. It was agreed to have a physical meeting in Seville, in 2016, with the aim of providing a complete presentation of the methodology.

Item 2.2.6 Analyse the available Gothenburg GAINS scenarios to estimate the technical upgrade to be implemented by countries of Eastern Europe, the Caucasus and Central Asia in order to comply with the Gothenburg Protocol. Organize workshop/bilateral consultations

The EGTEI/GAINS methodology to estimate technical potential upgrade to be implemented in EECCA Countries has been developed and applied through an ad hoc tool developed for of Excel Macro (VBA, Visual Basic Applications). Examples of applications and results have been presented in previous TFTEI Annual Meetings.

The conclusion of this activity is linked to the *Item 2.2.2*, where, at the Joint TFTEI / Coordinating Group for EECCA meeting, expected to take place in Spring 2016, the results will be discussed with the EECCA experts, the report and the tool commented and finalized.

Item 2.2.7 Collect and provide up-to-date data for cost modelling for BAT; conduct workshop with IIASA experts as necessary

In 2015-2016, costs of reduction techniques, for activities using solvents are being updated.

Two activities are under study :

- Car manufacturing
- Flexible packaging

An ad hoc technical meeting, to present the Excel Tool on Cost Methodology for LCP to IIASA experts took place in July 2015.

Item 2.2.9 – Annual meeting of the Expert Group

The Task Force held its 1st annual meeting, in Brussels on the 25th of June 2015, hosted by the liaison office of the *Italian Agency for New Technology, Energy and the Sustainable Economic Development (ENEA)*.

Twenty-eight experts attended the first meeting of the Task Force on Techno-Economic Issues, including experts from 13 Parties to the Convention: Austria, Azerbaijan, Belarus, Croatia, France, Germany, Italy, Netherlands, Poland, Russian Federation, Spain, Sweden and Switzerland, the representatives of the UN Secretariat and the EU Commission. Simultaneous translation English-Russian was provided by the French organization of the meeting. The participation of experts from the EECCA Countries was financially supported by France.

The British Co-Chair of RNTF joined the meeting with a presentation on NO_x recapture and utilization (via Skype).

Item 2.2.10 – Explore abatement techniques for further reducing heavy metals emissions

At the Task Force annual meeting 2015, the former Chair of the discontinued Task Force on Heavy Metals has presented the key issues related to heavy metals.

In particular, the need to promote the ratification of the amended Protocol and increasing awareness of the flexibility mechanisms have been highlighted.

Also potential links with the work under the Minamata Convention on Mercury were underlined.

Item 2.2.10 – Cont'd

Explore abatement techniques for further reducing heavy metals emissions

The following areas were indicated as priority:

- (a) provision of information to Parties with regard to technical work in industrial sectors and products;*
- (b) work on the costs of abatement techniques;*
- (c) provision of information to Parties on studies with regard to health effects of heavy metals and particulate matter (PM); and*
- (d) provision of support to EECCA countries through workshops and projects in cooperation with the EECCA Coordinating Group.*

Item 2.2.12 – Serve as a regional clearinghouse of control technology information for primary emissions of NO_x, sulphur dioxide, VOCs and PM, including SLCPs, heavy metals and POPs

The technical secretariat of the Task Force (CITEPA), has developed, a new TFTEI web site, (*tftei.citepa.org*) which will be available also in Russian Language, thanks to funds made available by Germany.

An Ad Hoc Web Site (accessible by the TFTEI web site) has been developed for the purposes of the Clearing House of Technologies and it will be progressively populated of technical documents. All the experts of the Parties are invited to contribute through the *Exchange Platform*. An *Evaluation Committee* has been established to examine the proposed new documents.

Miscellaneous

Acknowledgements are due to:

- 1) The European Commission for its financial support to the work on the mobile sources, determinant for the development of the related Guidance Document.
- 2) All the experts who have contributed to the finalization of the guidance documents
- 3) The UN Secretariat for their support in editing and translation of the guidance documents

Next Annual Meeting of the Task Force

Catania, Sicily, Italy

May, 19-20, 2016 (tentatively)

Hosted by the University of
Catania