

## Expert Group on Techno-Economic Issues Ninth meeting, Paris 10 April 2006

Mr. J-G Bartaire (France) and Mr. T. Pignatelli (Italy) chaired the meeting, which was hosted by France.

### INTRODUCTION

This report describes the results of the ninth meeting of the Expert Group on Techno-Economic Issues, held in Paris on 10 April 2006. It includes progress made on the development of the techno-economic database ECODAT, including the potential efforts of the Expert Group to prepare for the review of the technical annexes IV, V and VIII related to ELVs in light of the entry into force of the 1999 Gothenburg Protocol; the meeting was followed by a workshop on emerging technologies held on 11 April 2006 in Paris. Presentations made during the meeting and previous reports of the Expert Group can be accessed on the Internet at [www.unece.org/env/egtei](http://www.unece.org/env/egtei) and the EGTEI website:

Experts from the following Parties to the Convention attended the meeting of the Expert Group: Austria, Belgium, Czech Republic, Finland, France, Italy, Netherlands, Spain, Sweden, Switzerland and the United Kingdom. Also present were representatives from the Association of European Adhesive Manufacturers (FEICA), British Petroleum International Limited (BP), European Cement Association (CEMBUREAU), European Chemical Industry Council (CEFIC), the Oil Companies' European Organization for Environment, Health and Safety (CONCAWE), Total France, Federation of European Electricity Industry (EURELECTRIC), Flexible Packaging Europe, EUROMOT, Syndicat National des Fabricants de Boîtes, Emballages et Bouchages Métalliques (SNFBM) / Association of European light metal packaging manufacturers (SEFEL). The Chairman of the Working Group on Strategies and Review and a member of the secretariat attended.

### I. OBJECTIVES AND INTRODUCTORY REMARKS

The Chairmen of the Expert Group, Jean-Guy Bartaire and Tiziano Pignatelli stated the objectives of the meeting, noting the importance of data validation and the importance for Parties to validate data before it is accepted in ECODAT and RAINS. It was suggested to include on the website of the Expert Group, which countries have provided comments and which have provided data. The Chairman encouraged experts to verify with their Heads of Delegation the status of the Parties involvement **with** the Expert Group. The Chairman noted the last Chairman's report of the Expert Group indicates which sectors have already been incorporated into RAINS and those that still needed to be considered (EB.AIR/WG.5/2005/6/annex).

Mr. Richard Ballaman, Chairman of the Working Group on Strategies and Review, presented the results of the 37<sup>th</sup> session of the Working Group and its expectations for the Expert Group meeting. He noted the importance of data for ECODAT being validated by national administrations and accepted by CIAM for integration into the RAINS model. He informed on the review of the Gothenburg Protocol that entered

into force in May 2005. The review of the Protocol shall begin one year after its entry into force. Elements to be considered for review included: best scientific information on health effects, critical loads, integrated assessment modelling, technological developments, changing economic conditions and database development, such as ECODAT on emissions and abatement techniques. He explained that technical annexes in the Protocol would be reviewed, in particular the annexes IV and V on emission limit values for NO<sub>x</sub> and SO<sub>2</sub> and annex II on emission ceilings. Moreover, the review would cover the scheduled evaluation of ELVs for new and existing boilers and process heaters > 50 MWth and new and heavy-duty vehicles. Parties would also need to consider how to handle particulate matter in a future instrument. He also noted the eventual updating of the guidance document on economic instruments to be primarily be carried out by the Network of Experts on Economic Benefits. Other guidance documents (SO<sub>2</sub>, NO<sub>x</sub>, VOC control techniques for stationary and mobile sources) would be reviewed later. He reminded the working plan of the Convention for EGTEI:

- (a) Continue to collect and store techno-economic data on emission control options and abatement techniques in selected sectors, their costs and ranges of uncertainties; data collected according to NFR,
- (b) Provide data on reference installations, control technologies, investment, and operational costs to CIAM following consultations with national experts.
- (c) Make data available for future revision of tech. annexes to protocols (ELVs > 50 MWth and new heavy duty vehicles) according to art. 3 § 4;
- (d) Provide summaries of background info to WGSR,
- (e) Assess emerging technologies and their abatement efficiencies,
- (f) Organize training sessions to increase understanding and needs of EGTEI,
- (g) Synopsis document to WGSR for endorsement before integration into RAINS model

EGTEI would encourage other Parties to nominate experts and stimulate interest.

Mr. Markus Amman (CIAM) noted that sectors that had been finalized by the Expert Group had been incorporated into RAINS by early 2005. After this, CIAM began bilateral consultations with 25 Parties. Experts will see the results in the coming months. The synopsis sheets are a summary of information for each activity treated, including an inventory of available measures, removal efficiencies and costs. Cost data were not a part of the baseline projection and could be treated differently. One critical issue is the removal efficiencies. The figures in the database are not modified once agreement has been reached with the country.

Mr. Bernd Calaminus (IFARE) pointed out the importance of increased transparency and questioned if changes made to the data through bilateral consultations are made transparent to the others. Markus replied that all the data is available on the Internet so it is possible to locate the data for various sectors for all participating countries.

## **II. PROGRESS OF THE EXPERT GROUP**

The Chairman Jean-Guy Bartaire gave an update on the European Commission's Programme and the Thematic Strategy on air pollution. The final objective of the Strategy is to not give rise to adverse effects on human health and the environment. Several NECPI meetings are scheduled up to July 2007. A number of methodology points had been discussed such as meteorology, number of scenarios, sensitivity analyses...

CIAM has developed baseline scenarios for Member states up to 2020, which will also be important for the review of the Gothenburg Protocol. Markus Amman said

they were currently working on the baseline scenarios for CAFÉ, but noted there was not a clear indication of the current ambition levels in terms of robustness, uncertainties and what issues would be considered.

The Chairman pointed out that the revision of the NEC directive will include PM 2.5. It was pointed out that it was not yet clear which of the energy scenarios will be used.

The Chairman J-G Bartaire explained the background of the synopsis sheets on selected sectors. Synopsis sheets on cement production, glass production and petroleum refineries have been circulated for comments to Heads of Delegation of the Working Group on Strategies and Review.

Pierre Kerdoncuff presented a summary of feedback and comments received from national experts and industry representative on synopsis sheets. There were three types of comments: method, adequacy for specific country situation, details on costs and other parameters and compatibility with data used in RAINS. Synopsis sheets are just a summary of information included in the background document. Around 50 sectors have been considered thus far by the Expert Group. Open questions remain for certain sectors such as in the glass plants, refineries, cement plants and large combustion plants. When proposed methodologies can be sufficiently applied in a number of countries, their approval is easier. He gave a summary of results obtained on the delivery of the input parameters and comments on the compatibility with the RAINS structure. The compatibility between a sector being represented with EGTEI approach on the one hand and the type of information having been reported on the sector to CIAM by Parties and industry has been addressed by some comments. Belgium inquired, for example, as to whether CIAM would use the background document and ECODAT for refineries as one source of information besides others that would impact data in RAINS. Could the structure of the RAINS module be adapted to include new categories like the catalytic crackers and the sulphur production units? An ideal approach would be the knowledge of technical parameters (size of installation, emissions, etc.) characterizing a sector by a representative sample of installations. In EGTEI for simplification reasons only a small number of reference installations are used. It is important to minimize the statistical data to be collected. The data collected include: activity level, share of reference installations, application rate of emissions abatement techniques, the applicability and country-specific parameters.

Mr Sergio Herman, from the Energy Research Centre of the Netherlands introduced the Dutch comments to the synopsis sheets. Documents have been sent to industry representatives. Meetings have been organised and comments have been compiled. The most important comments involved costs, in particular for which years are these costs and these costs would be translated for other years. Other more specific technical comments have been made. The industry in the Netherlands is aware of the process. Participation of industry into conclusions is important. The working procedure (i.e. how the results will be used) is the most important barrier. It is important to show that other countries are involved and commenting on synopsis sheets. Mr Sergio Herman also said the participation of the Netherlands to test the EGTEI methodology on LCP has not yet been decided due to budget restrictions.

The representative of the petroleum industry (CONCAWE) mentioned that the figures in ECODAT are not necessarily representative of reality and oil companies were currently assessing those costs in light of uncertainties.

Mr Bernd Calaminus pointed out the origin of EGTEI was to take the data from a subset of plants and aggregate the information to be used in RAINS. There is a dilemma because it is necessary to apply the EGTEI approach in one country for a

specific sector, to test whether the approach is applicable. He also pointed out that the EGTEI figures are not necessarily lower than those from industry in Europe. EGTEI does not stay below BREF. But the task is different and there is a need to provide a method that can apply to a wide-range of standards.

Mr. Sergio Herman said that communication should be enhanced and transparency increased.

Mr Mike Woodfield pointed out that he sent out documents to industry but received very few responses, probably due to a poor knowledge of the background. One reason for gaining less than broad support is that the data are often not known or even recognized by their own industries. Following this comment, Jean-Guy Bartaire suggested promoting the idea of official letters from European industry associations to their member to agree on the EGTEI work.

Belgium made a lot of comments on LCPs and refineries, and asked if this can have any impact on changing the information in the background documents?

Mr Richard Ballaman pointed out that the aim of EGTEI is to improve the database and not to develop a second set of data. If the Expert Group can produce better data acknowledged and accepted by the countries, they can be integrated into RAINS. The countries will want one set of data for both the revision of the Gothenburg Protocol and the revision of the NEC.

M. Markus Amann indicated it is an important role of the Expert Group in evoking a meaningful response to the synopsis sheets, as well as a critical assessment. The Expert Group has a role to play in limiting the distortion between the sectors. In RAINS too, there must be a balance between economic sectors. There should be a notion that the numbers coming out of the Expert Group are fair numbers.

The Chairman outlined the Expert Group will try to achieve consensus before its next meeting on synopsis sheets for the glass industry, cement industry. In this aim both national authorities and industry experts will be met.

Mr. Tiziano Pignatelli presented the state of progress of the study on small combustion installations carried out by the Italian Agency for New Technologies Energy and the Environment (ENEA) and the national Labour Bank (BNL). The BNL operates several hundred plants in its agencies. Technical sheets have been collected. Mainly horizontal and vertical wall boilers are used. The size ranges from 35 to 685 kW, and oil and gas are used. Boilers are automatic or manual. No abatement measures are used. As there are currently no abatement technologies in place, Italy proposes to identify one or two reference boilers to develop a methodology. Fuel consumption per reference installation will be collected and a flue gas analysis will be performed in a number of available cases. Over the next five years, a fuel switch could be foreseen from oil to gas for medium boilers as much as possible. Cost data collection appears difficult. There is a need to look at different types of boilers in different age classes, and look at the lifespan of the boiler. A closer look at the work of the Task Force on Emission Inventories and Projection could be useful. Costs information could be derived from boiler manufacturers.

Mrs Nadine Allemand and Mr Julien Vincent presented the provisional work carried out by the Expert group for the review of technical annexes IV, V and VIII, as required following decision of the EB of December 2005. In annexes IV and V the ELVs of the Directive 2003/80/EC are already included. For cement production, Claus plants in refineries, titanium dioxide production and metal industry there is no

EC directive implementing ELVs. The IPPC directive uses another concept related to the use of Best Available Techniques.

Annexe VIII is not up to date. New EC directives implemented for off road machineries have to be incorporated. The work will be continued in the next months.

As suggested by the Working Group at its last meeting, the Expert Group established a link between with IPTS in Sevilla. Mr. E. Vésine (ADEME) reported on the STS BREF work (Surface Treatment with Solvent). Only few economic data are available in the STS Bref but importance of having an idea of the costs involved by the implementation of the Best Available Technologies (BAT) is recognised. France (MEDD, ADEME, CITEPA) proposed a meeting at the IPPC bureau (M. Paul Tempany, Sevilla) to speak about the opportunity of using the EGTEI data in the STS BREF. ADEME and CITEPA met M. Paul Tempany on March 9th to present the work of the Expert Group (synopsis sheets and background documents). IPTS examined how to take the results of the Expert Group into account. It was proposed for specific topics to extract the most important tables from the synopsis sheets and to add in the annex, a table of all the STS BREF chapters with a web link to each relevant EGTEI synopsis sheet and background document on the EGTEI website.

The BAT conclusions will not be changed by the introduction of cost data.

## **CONCLUSIONS**

The main purpose of the meeting was to prepare inputs to WGSR and HoD meetings and to see what to do with synopsis sheets in the different sectors.

- a. The synopsis sheets were appreciated by the Working Group on Strategies and Review and Heads of Delegation, although further work was needed on additional sectors, including small combustion plants;
- b. The work on small combustion is started by Italy. The work should be finalized by the end of 2006
- c. Sweden would coordinate a possible test of the methodology used by the Expert Group for large combustion plants among Nordic countries and would report on this, at the next meeting of Heads of Delegation of the Working Group;
- d. Preparatory work would continue on the updating of annexes IV, V and VIII, taking into consideration current ELVs in recent European Community regulations;
- e. The Expert Group would continue to follow-up work on emerging technologies, drawing on the results of the seminar held following the meeting;
- f. The Expert Group would aim to reach agreement on synopsis sheets for the glass industry, cement industry and refineries. For refineries, a meeting would be organized between national experts and CONCAWE as soon as possible;
- g. An agreement on large combustion plants was linked to the willingness and availability of Sweden and the Netherlands to test the methodology used by the Expert Group at national level;
- h. The Expert Group would increase efforts to establish contacts with countries outside the European Union to incorporate them into its work.