

**Sub-group Small Combustion Installations (SCI) under EGTEI**  
**Minutes of the kick-off meeting in Zurich**  
**3 February 2010**

**Participants :**

Nadine Allemand, CITEPA, EGTEI secretariat (F)  
Staffan Asplind, Swedish Environmental Protection Agency (S)  
Richard Ballaman, Federal Office for the Environment (FOEN) (CH)  
Jean-Guy Bartaire, Electricité de France (EDF), EGTEI co-chair (F)  
Anja Behnke, Umweltbundesamt (D)  
Stefano Caserini, Environmental Protection Agency of the Lombardy Region (I)  
Evelien Dils, VITO NV (B)  
Liesbet Goovaerts, VITO NV (B)  
Michael Hiete, Deutsch-Franz. Institut für Umweltforschung (DFIU), EGTEI secretariat (D)  
Francesca Hugony, Combustion and Environment Laboratory (I)  
Pieter Kroon, Energy Research Center of the Netherlands (ECN) (NL)  
Thomas Krutzler, Umweltbundesamt (A)  
Stephen Morrin, School of Electrical, Electronic and Mechanical Engineering, University College Dublin (Ir)  
Beat Müller, Federal Office for the Environment (FOEN) (CH)  
Thomas Nussbaumer, Verenum (CH)  
Kristina Saarinen, Finnish Environment Institute (SYKE) (Fi)  
Simon Schulte Beerbühl, Deutsch-Französisches Institut für Umweltforschung (DFIU) (D)  
Gaston Theis, Federal Office for the Environment (FOEN) (CH)  
Guest: Angelo Papis, Amt für Abfall, Wasser, Energie und Luft, Zurich (CH)

**The meeting and progress made:**

The meeting was chaired by Richard Ballaman. 19 participants attended the meeting in Zurich, some of them new in the EGTEI group.

After adoption of the agenda, Richard Ballaman presented the mandate of the sub-group. The sub-group has been set up as an EGTEI sub-group to answer to September 2009 WGSR 45's invitation to explore the possibility of establishing ELVs for PM for small combustion plants. Switzerland chairs this sub-group. The sub-group will include also consideration on black carbon emissions. Annex VII related to dust will be completed with these activities.

Jean-Guy Bartaire presented the other topics under consideration by EGTEI with the next WGSR in which EGTEI will have to provide information of proposals of ELVs during parallel sessions to the plenary session where technical experts from Parties are invited.

Several presentations were made. The presentations are available on the EGTEI web site.

- Thomas Nussbaumer (Verenum, Zurich) made a Technical Briefing on biomass combustion with an overview on available techniques and PM emission levels of biomass combustion, incl. consideration on black carbon, the influence of particle sampling method, the costs of PM removal in SCIs, the relevance of quality management (planning and operation) and biomass fuel specification, and add-on technologies for domestic appliances.
- Michael Hiete (DFIU, Karlsruhe), EGTEI secretariat, presented the work carried out by EGTEI to update technical annexes and the guidance document on stationary sources, in particular on combustion installations below 50MW.

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- Stephen Morrin (University College, Dublin) presented work carried out in Ireland to improve the emissions inventory for SCI based on quantification of PM emissions from small combustion.
- Francesca Hugony (Combustion & Env., Milano) presented work on the determination of emission factors for small combustion plants.
- Anja Behnke (UBA, Dessau) presented current developments of the EU Eco-Design Directive with a focus on consequences for SCIs.
- Stephano Caserini (ARPA, Italy) presented an overview on regulations on SCI in Italy.

The draft synopsis of selected national regulations concerning PM emissions from SCIs has been discussed. To be comparable ELVs have to be expressed according to the same oxygen content. The table of values will be corrected for the next meeting as some experts noted some errors in the provisional table. The comments have to be sent to Kristina Saarinen who will rearrange the figure and make a separate table for installations < 1 MW.

The discussion on options for ELVs has been based on a draft proposal submitted by the chair. Progress has been made on:

#### Cut points of categories

The cut points for categories according to the thermal input and regulation by products standards or ELVs are:

0 to [50] [70] kW: Fuel specific type approval is recommended to countries (according to the Eco-Design Directive including energy efficiency criteria); a heat storage tank should be mandatory.

[50] [70] to [350] [400] kW: Fuel specific type approval is recommended to countries (according to the Eco- Design Directive including energy efficiency criteria)

[350] [400] to 1 MW: ELVs

1 to 5 MW: ELVs

5 to [10] [20] MW: ELVs.

[10] [20] to 50 MW: ELVs.

The exact cut point has still to be discussed.

#### Categories of equipment to be considered in the range 0 to 70 kW.

The Swiss proposal has been modified for simplification reasons. Merging equipment is possible if standards are the same. However if an efficiency standard has to be proposed, some differentiation is still necessary.

#### ELVs for dust and VOC

Monitoring of dust is very complex. The presentation of Thomas Nussbaumer reflects discrepancies which can emerge from the different techniques. It is not the aim of the work to go into such details. However, the background document can give information. As only solid particles are considered according to the definition of dust adopted by the Protocol in preparation, ELVs for VOC might be introduced to minimize emissions of condensable organic compounds.

#### O<sub>2</sub> content reference

For coal the oxygen reference is 6 %. For wood it is 13% under 400 kW but not yet decided between 13 or 11 % for equipment > 400 kW.

#### Monitoring time

In the case of continuous monitoring daily average should be adopted as monthly averages are less stringent.

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**Future work programme:**

- 2<sup>nd</sup> meeting SCI sub-group to be held on 26 March 2010 in Zurich; (update of ELVs proposals, background document to be discussed);
- Informal document and/or oral presentation at 46<sup>th</sup> meeting of WGSR in April 2010;
- 3<sup>rd</sup> meeting to be held back to back with the next EGTEI meeting in Rome in the afternoon of 6 May 2010;
- Approval of final draft for options on PM ELVs for SCIs by EGTEI;
- Official document with options for PM ELVs for SCIs to be submitted by EGTEI for consideration at the 47<sup>th</sup> meeting of WGSR before 5th June 2010;
- Background paper and complement to chapters 7.1 and 7.2 of the Guidance Document to be finalized by electronic comments and to be submitted to EGTEI before the end of June 2010.

Documents of the meeting: EGTEI website [http://www.citepa.org/forums/egtei/egtei\\_index.htm](http://www.citepa.org/forums/egtei/egtei_index.htm)

Minutes compiled by:

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