

EuP Preparatory Study Lot 15: Solid fuel small combustion installations Minutes of the interim stakeholder meeting

Place: European Commission
Centre Albert Borschette, Brussels

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10h-17h

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Agenda:

10:00 – 11:00	Introduction, context and Task 1 (Scope of the study)
11:00 – 12:00	Task 2 (Economic and market analysis) and Task 3 (Consumer behaviour and local infrastructure)
12:00 – 12:45	Discussion
Lunch	
14:00 – 15:15	Task 4: Technical Analysis of existing products
15:15 – 16:30	Next steps
16:30 – 17:00	Discussion and AOB

Participants:

European Commission

Ismo GRÖNROOS-SAIKKALA	EC – DG TREN
Andrej KOBE	EC – DG ENV

Lot 15 consortium

Shailendra MUDGAL	Bio Intelligence Service
Lea TURUNEN	Bio Intelligence Service
Anne Turbé	Bio Intelligence Service
Sanaée Iyama	Bio Intelligence Service
Nathalie ROY	Bio Intelligence Service
Robert STEWART	AEA Technology
Robert KUBICA	ITT

Stakeholders

Martine BANIZETTE	Staub Fonderie
Anja BEHNKE	UBA
Veit BURGER	Oeko-Institut e.V.
Gunnar BOYE OLESEN	International Network for Sustainable Energy - Europe
Daniel CHALI-RACHED	Bodart & Gonay S.A.
Alan COUCH	WSP Group plc / DEFRA
Mark CROWTHER	GASTEC at CRE Ltd (UK) / HETAS (UK)
Magnus DAVIDSSON	SBBA / Swedish Fireplace Manufacturers Association
Maya DE GROOT	Belgian Federal Government Environment
Michel DEGAILLIER	Ministère de la Santé publique, Sécurité de la Chaîne Alimentaire et Environnement de Belgique
Thomas DUQUESNE	Concept & Forme S.A. - Stûv
Reinhold EINHELLIG	Wamsler HKT
Alessandro FODERA	HKI
Moritz FRANKE	Wuppertal Institute for Climate, Environment and Energy
Heinrich GÖDDEKE	European Fireplace Association / European Chimney Association
Michael GORGES	Hase Kaminofenbau
Elmar GOUVERNEUR	Hase Kaminofenbau
Susanne GRIESMAYR	Austrian Bioenergy Centre GmbH
Lennart GUSTAVSSON	Swedish Boilers and Burners Association
Walter HASLINGER	Austrian Bioenergy Centre GmbH

Rolf HEINEN	Rheinbraun Brennstoff GmbH
Jukka HEISKANEN	Helsinki University of Technology Lahti Center
Pekka HORTTANAINEN	Tulikivi Oyj
Janusz KASZA	MCI Sp. z o.o.
Frank KIENLE	HKI
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Noël LE MAUFF	Syndicat des Energies Renouvelables (France)
Wilfried LINKE	Association of the European Heating Industry
Jérôme MALDONADO	GFCC (France)
Thierry MALLEREAU	Chinvest SAS
Anthony MASSIN	Bodart & Gonay S.A.
Ludo MEEUS	Dovre nv (Belgium)
Bo NILSSON	Nibe AB
Heikki ORAVAINEN	Technical Research Centre of Finland
Wouter PORTEMAN	SAEY Home & Garden
Henning RUCKELSHAUSEN	Rüegg Cheminée AG (Switzerland) / Lohberger (Austria)
Gianni SANTAROSSA	Palazzetti SpA
Thomas SCHIFFERT	VEUKO - European Association of the Kachelofen-building/Hafner-craft
Volker SCHMATLOCH	Spartherm Feuerungstechnik GmbH
Christian SCHWARZ	Bosch Thermotechnik GmbH
Eric SMIT	Interfocos BV
Peter SORENSEN	Klokkedal
Folkemar UKENA	LEDA Werk GmbH & Co. KG
Björn VALENTIN	Swedish Stove Manufacturer Organisation / Nibe AB
Felix VAN EYKEN	Association of the European Heating Industry
Hanna VANHANEN	Helsinki University of Technology
Vijay Kumar VERMA	Vrije University Brussels
Kim WINTHER	Danish Technological Institute
Jasper WOUTERS	Flemish government – The Environment, Nature and Energy Department
Johann ZIRNGIBL	Centre Scientifique et Technique du Bâtiment (France)

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1. INTRODUCTION

Shailendra Mudgal (SM) welcomed the participants to the meeting and presented the Lot 15 consortium. Changes to be noted in the team are the leaving of Lea Turunen, and arrival of the new Project Manager Anne Turbé and MEEuP expert Sanaée Iyama (both BIO Intelligence Service).

SM specified that all the comments received about published tasks are documented in a file, alongside the actions taken by the consortium to deal with each comment (i.e. changes made or explanation in case no changes were made). For confidentiality reasons, this file has not been made public yet, but it is envisaged to make it available (without the names of people who commented), in order for stakeholders to be able to see how their comments have been taken into account by the Lot 15 consortium. It has also been stated that the presentations made during the meeting would be available on the website of the study (www.ecosolidfuel.org) just after the meeting.

Ismo Grönroos-Saikkala informed about the settlement of measures based on the preparatory studies in the frame of the Eco-design Directive, and specified that for a consultation forum for lot 15 products (for the definition of policy options) is planned to be organised at the end of year 2009. Due to other professional constraints, Mr Grönroos-Saikkala apologised for not being able to be present during the whole meeting.

Throughout the meeting, the participants were encouraged to comment on different aspects of the study. Main comments and resulting discussions are summarised below.

2. TASK 1: SCOPE OF THE STUDY

SM presented the project methodology (MEEuP) and timeline, as well as the stakeholder involvement. He then summarised the main elements of Task 1 (Scope of the study). An important point made was that all the tasks can be refined and improved until the end of the study.

3. TASK 2: ECONOMIC AND MARKET ANALYSIS

Nathalie Roy (NR) presented the results of the Task 2 - Economic and market analysis.

- Mark Crowther (MC): what is the unit of the fuel prices presented on slide 27?

NR replied that the presented prices are retail fuel prices without VAT, expressed in Euros per Gigajoule of heat, on a net basis¹.

4. TASK 3: CONSUMER BEHAVIOUR AND LOCAL INFRASTRUCTURE

Anne Turbé presented the results of the Task 3 – Consumer behaviour and local infrastructure. To be noted that the quantification of energy use carried out in this task is open for comments and suggestions.

¹ The net basis has been checked, and corresponding information given after the meeting.

- WH raised the question about how the Lot 15 consortium was going to deal with the issue of “local infrastructure” as this is going to strongly influence real-life behaviour of the installations and therefore their assessment.

SM clarified the meaning of “infrastructure” in the Lot 15 context, in particular fuel supply, availability and information to consumers are considered as local infrastructure.

- Volker Schmatloch (VS): considering that it is obviously a challenge to get complete and precise data, you use models and assumptions, although you are aware that there can be uncertainties in the estimations. How are you going to take this aspect into consideration in the results of the study?

SM answered that in Task 8, sensitivity analysis (subtask 8.3) will be carried out in order to assess how the results vary according to changes in the parameters value (assumptions).

- Anja Behnke (AB): you said that you concentrate on products. But the efficiency of a system can be very different of the efficiency of a product, and it is quite difficult to see what you consider as one product.

NR: the focus is indeed on the products. Even if we are aware that the overall efficiency can be a result of several parameters and not only the efficiency of the product itself (e.g. for boilers), implementing measures, if any, will be based on the analysis of individual products. A definition of what we consider as product is given in Task 1 section 1.4.1 (as a discussion following the use of the term “installation”).

SM added that other relevant legislations at EU level, like the Energy Performance of Buildings Directive (EPBD) will be able to deal with system specific issues.

- Gunnar Boye Olesen (GBO) questioned why sauna stoves were excluded from the scope of the study.

Lea Turunen (LT) reminded that sauna stoves have been excluded of the scope of the study based on their different functionality, and their restricted market (45 000 solid fuel appliances sold almost only in Finland).

- Vijay Kumar Verma questioned about the total costs of a system, in particular when some parts of it were covered by incentives.

SM mentioned that the incentive mechanism at the EU level has been the subject of a recent study² carried out for DG Taxud, in which BIO Intelligence Service was involved.

- Peter Sorensen: emissions related to a fuel type are important, but electricity has also an impact (e.g. in pellet stoves).

Robert Stewart (RS) said that electricity consumption is taken into account in the MEEuP, but only 3 questionnaire responses mentioned it.

² A study on the costs and benefits associated with the use of tax incentives to promote the manufacturing of more and better energy-efficient appliances and equipment and the consumer purchasing of these products (the conclusions of this study are not public yet).

- Veit Bürger (VB): we are aware of the important impact of fuel and fuel characteristics in real life: to which extent will this aspect be taken into account in implementing measures?

SM replied that implementing measures will be based on Standards conditions. Both fuel variability and fuel availability will be taken into account. The influence of parameters like fuel characteristics can be assessed in sensitivity analyses. SM also reminded that the mandate on Standards may be launched in the context of this study, since for the moment appropriate Standards are missing.

- MC: emissions can vary by up to a factor 10 between two types of fuels (e.g. anthracite and bituminous hard coal), due to large differences in volatile and sulphur content. This results in wide variations in emissions even from the same appliance.

NR replied that this will be taken into account in the definition of Base-Cases: there is a possibility to make two separate Base-cases for a given appliance, each with a different fuel.

- Kim Winther (KW): there are wrong numbers in table 3-14 dealing with moisture content.

Stakeholders are invited to indicate precisely in written comments which values appear to be wrong and the corresponding corrections. The consortium will of course correct any identified mistake.

[Lunch break]

- Frank Kienle (FK) reported a number of CEFACD comments about published tasks 1 to 3: he pointed out for example some remaining mistakes in Task 1 (wrong percentage of O₂ in CO measurement, and calculations inaccuracies (Tables 3-21 and 3-24).

The Lot 15 consortium has already changed the report according to comments on previous version of the tasks, and will correct any mistake that could have been omitted during the revision process.

5. TASK 4: TECHNICAL ANALYSIS OF EXISTING PRODUCTS

Robert Stewart (RS) presented the data that have been collected for Task 4.

- VS commented on the correlation in slide 52: there is no linear trend, (the correlation is not statistically significant), the line has to be removed, since it is misleading. In addition, it is not clear why the weight of the appliance should be correlated to the output – there are no models out there for that.

RS: the reason for checking the correlation is to tie together the output of base case appliances to BOM. We agree that there is no significant trend, and this is precisely what the figure shows.

- VS: we agree. Then don't give the impression there is a straight line there. Say that the data are randomly distributed.

RS: ok. RS asked Austrian Bioenergy Centre to comment on the BOM for a state-of-the-art boiler.

- Walter Haslinger (WH): regarding boilers of a capacity below <50 kW. We provided data for one typical state of the art boiler, with a ceramic chamber. What you find on the market is state of the art boilers with either iron/steel/ or ceramic combustion chambers. Each has its advantages and disadvantages.

RS: what is presented here is indeed not representative of the state of the art in all existing boilers. Robert S asked for comments on larger boilers.

- MC: by way of example for small pellets boilers, the weight of the fuel handling and storage system can be either included or excluded from the mass of the whole unit.

RS presented the data gaps and insisted on the possibility for stakeholders to make suggestions. In particular, in the use phase it would be helpful to get more specific product data on emissions.

- MC: what is the reference fuel for the emissions (open fireplaces)?

RS answered that the reference fuel is a specific fuel (according to test Standards procedure), however this level of information was not given in the questionnaires, and fuels could only be classified broadly as wood of mineral fuels.

- MC: suggested that, there is a risk that some future universal 'eco-Standard' for appliances might be inappropriate and/or misleading, if the emissions were not measured with the right fuel.

RS: Tests are for individual products with standard fuels. But here we just don't know which fuel that was.

- MC made two comments on emissions:

- Sulphur emissions: as emissions reflect elemental composition there can be wide differences in emissions (maybe 50% variation)

- Particulate emissions: the quantitative amount of emissions reported depends on the technique used to measure it. The comparison between the figures resulting from two methods (for example dilution tunnel vs. in stack method) can lead to a factor of 5-10 difference. Therefore it is problematic to just give a single number. You need to specify on the chart the measurement method used.

The Lot 15 consortium agreed that there is a need to state the method used to measure PM, and will pay attention to indicate the method used for figures of PM emissions (when possible) in the next version of Task 4 report.

- VS: it has to be done not only for PM, but also for CO measurement.
- Thomas Schiffert: many Member States in the EU have to deal with limits. There is a strong correlation between the method and the limits. You have to deal with many existing limits in specific countries, so be careful when dealing with measures, and take this into account with specifying the method.

RS: we are aware there are large issues here. I don't think that we can really resolve that here. I would like to leave that aside for now. We are aware of the different methods, and of the differences in limit values, we will take into account the needs to reflect on the measurement method.

- VS: for this report it is an easy solution to give the method that was used.

RS: in the report we say that, where we have the information, the measure is typically direct / stacking method. This is not always clear in the literature data: IEA for example gives data which can differ from the stacking method (there are different elements, e.g. how the filters are prepared). We will state the measuring method wherever possible in the report.

- VS: the measurement method can be noted in a footnote. Why are there differences in footnotes of tables?

RS: this depends on the data origin. Data from the literature can give for example different calorific values for the same fuel.

- Lennart Gustavsson (LG): there are several issues, and not only about measurement method: do you think that you have enough emissions data to arrive at the conclusions you need? There are a number of different product groups, fuels, operating conditions, etc.

RS: we would always welcome more data, on both generic studies and ongoing measurements.

- FK: (on slide 76: closed fireplaces) what is the type of test method behind the number? It is very low, lower than the actual legislation. It seems that the numbers in tables 4-30 and 4-31 (PM at 46.7 and 31.1) are untrue. Where do the data come from?

RS: the tables are derived from information provided by stakeholders. We will go away and check the numbers.

- MC: are data on net or gross basis?

RS: all the data are on the net basis here.

MC: as a generalisation, are you reporting on a net or gross basis in Lot15 (Lot 1 have moved on to gross data)?

RS: as a generalisation on a net basis. We are constrained by the fuel data.

- VS: considering table 4-30, which data were received? Why is the output different? The criteria have to be put into tables.

RS: there were very few questionnaires with data on emissions (in contrast to BoM data); we have emissions data for other products that are not necessarily corresponding to the BoM data. We need a full response to the questionnaire. Concerning tables 4-30 and 4-31, we will check the numbers for next draft.

- GBO: Do you have measurements of PM 2.5? As they have the most adverse health impacts, would it not be possible to include it?

RS: we did not have product-specific data about PM 2.5. Please provide if you have.

- WH: the differentiation between PM is sometimes interesting, but irrelevant for state-of-the-art boilers as PM 10, 2.5 and 1 are practically identical.
- ES: in the table describing “other stoves”, what is the difference in Corinair between wood stoves, traditional and advanced stoves?

RS: there is a description in Corinair for both types of appliances, but it is impossible to say if Corinair’s advanced stoves would be comparable to the most advanced appliances on the market.

- ES: would it be possible to quantify this / to give a quantitative definition?

RS: not really.

- MC: (on slide 86: cookers) there are cookers that are not just food cookers, they are also kitchen heaters. Some simple open fireplaces, (not even covered by EN-standards) have more modest efficiencies than the figures given.

RS: we do make the point; the product information is for devices covered by EN standards (EN 13 229).

Robert Kubica: we just accomplished a database, so that we can more clearly estimate the population of appliances tested by a certain Standard. This database contains all the information retrieved from the questionnaires and covers a number of answers to your questions. This took time to achieve.

- KW: boilers under 50 kW presented are extremely good boilers, they are best boilers, and not average boilers, and do not seem to represent the market.

RS replied that manufacturers were asked to select the products in order to provide data about such boilers. If people have data on other boilers which are more representative, please forward them to us.

[Coffee break]

- KW: concerning boilers > 50 kW fuelled with mineral fuels, there are differences in all the emissions and efficiency between Task 3 and Task 4. Why?

RS: we’ll look into it for the next draft version.

- MC: what sort of coal (brown coal, anthracite, etc.) is it? Emissions can be quite different according to the type of coal.

RS: in the larger appliances, it is unlikely to be anthracite.

- Heikki Oravainen (HO) commented about boilers > 50 kW, and the analysis of existing products: there are some examples which are state of the art in Austria, but not representative of the EU-27. For example, an average efficiency of 91% is unlikely.

RS: we would be happy to include more data in the review. When stakeholders provide the information, we include it, in anonymous format.

- HO: you don't have any judgment of the data? Do you only put what data given to you? What if you know it's not true?

RS: we can only work with the data we have.

SM made it clear about the Ecodesign process: in EuP studies, the industry provides substantial amount of data because they know the products best. We can only compare and put it in perspective with literature data, e.g. to assess if data are average or not. That's why we encourage industry to provide good data, because this is critical for the quality of the project.

- ES: the paragraph about heat transfer p85 of Task 4 contains mistakes: efficiency is not limited by outer temperature.
- GBO: it is necessary to elaborate further on the integration of the installations into the houses where they are used, that is to say, for example, it is important to evaluate quantitatively how appropriate a stove is in a room. Efficiencies in real-life are not the same as Standards. You need to evaluate how appropriate an installation is (quantitatively).

6. NEXT STEPS

Sanaée Iyama (SI) presented the following tasks of the study, and firstly the Task 5 – Base-cases.

- LG: what is the definition of BAT? Does it include all possible improvement, e.g. technology not available today?

SI: the BATs (Best Available Technologies) include advanced technologies already available on the market, whereas the BNATs (Best Non Available Technologies) include technologies which will be available in the future.

- MC commented again about the importance of the type of fuel used in a stove: for example anthracite, bituminous coal, brown coal, dry logs (low emissions), unseasoned logs (high efficiencies). There are three eco-criteria by which you can characterise an appliance:

- carbon footprint

- sulphur/particulate emissions(essentially the appliances effect upon local air quality)

- efficiency of the appliance

The three criteria depend on the fuel nature and quality, and are independent of each other. Surely you have to cover more than one ecological criterion.

SM stated that the fuel issue is of course an important parameter, which is why base-cases will distinguish between fuels.

SI specified that the first step will be a base-case with one appliance and one type of fuel (e.g. if this appliance mostly uses 100% wood), and then there can be another base-case with this appliance and another type of fuel, if it is relevant.

SM said that it was obviously impossible to carry out all the possible combinations, so the approach will follow what is done in the Standards. We will not cover all the possible cases, but the most representative ones.

- MC: there are sometimes conflicts between local air quality, carbon footprint and appliance efficiency. Surely any new ecolabel should not detract from efforts to improve air quality.

SM: the Ecodesign measures are not derived by local air quality targets but could indeed help in improving it. This study will target products and how to improve the products. So you should look at it more from the products perspective. Fuel also has to be dealt with as well independently, as EuP cannot control the fuel quality.

- MC: I would not dismiss local environmental issue.

SM: I am not dismissing it either. We need to see how it can contribute to air quality, but not define ecodesign criteria with only local air quality issues in mind. The focus of this study is eco-design. The idea that you should keep in mind is to define the range of ambitions that we can use as our playing-field. You should look at it from the economical and environmental perspective together, the absolute numbers are not important. There are other policies for other goals (e.g. EPBD). Policies will have to be joined together; each piece of the puzzle is important.

In addition, it is also important to keep in mind the objectives of the study. For the Ecoreport calculation, fuels are missing, and different emissions inventories, give different values. We have to find a number of base-cases that is manageable, and not 100 base-cases. The objective for us at this stage is to see how we can aggregate various product types into a reasonable number of base-cases and how we can best choose the fuel inventories.

- GBO: I think that in this study, it is possible to inform the consumer / to provide good quality user information. For instance, you can request that information is tagged on the appliance. Another issue is how will you go about evaluating local air pollution, especially in densely populated areas?

SM: yes, one of the objectives of the study is to address the consumer issues: we can do recommendations on the best practice and give suggestions about what kind of information should be there. Recommendations are about harmonisation of information and products, (e.g. as for what is currently done for chargers).

Concerning air issue in densely populated area, it is up to the local authorities to suggest further restriction on the certain fuels and products.

At this stage, we are looking at very concrete issues, trying to find a way to deal with missing information and data gaps. Once we can deal with calculations (currently the focus is on base-cases), then we can start thinking about how to apply those results to develop pragmatic policy solutions. The points you raise are very valid and they will be important in the future tasks.

- GBO: you could have installation requirements which are not mandatory, then they could be applied.

SM: yes, there might be recommendations, but it is still far. First the focus is on calculations, after that we can worry about policy implications (including best-practices).

LT: EuP is about setting minimum limits and standards that should at least be met all over EU. That is why we are looking at the average products. Limits have to make

sense, even in Paris, London, or in Finnish forests. Then governments can impose stricter limits: there are local possibilities to go further.

- ES: I thought that within EuP, national regulations were not anymore possible. Can Member States put their own stricter limits?

LT: Yes. Any measure will apply in the same way in all Member State, so legally, it might be possible to put something on the market. But locally local air regulation or local specific Standard may be stricter and forbid you to use it, which would result in the banning of some installations in the zone.

AB: in Germany, we actually had this kind of problem with the minimum efficiency of boilers Directive. It is an interesting question.

SM: The very first implementing measures are yet to be adopted by the Commission, so we have to wait a little to see the real life implication of EuP process.

- Felix Van Eyken: you will find the answer in the framework Directive itself. Being base on the article 95 of the EC treaty, the EuP implementing measures ensure in theory the single market.
- GBO: if you give installation recommendations, then local authorities can use them.
- VB: we speak about minimum standard, but implementing measures should be directed not only to the measured efficiency of the appliances but also to the information made available to the consumer. For instance, in order to minimise the environmental impacts of appliances, it is important to provide a minimum level of information on the type of fuel under which the appliance performs better.

SI presented the timeline of the project.

NR stated that the presentations of the meeting will be made available on the website of the study shortly after the meeting, and that every stakeholder will be informed by email when the minutes of the meeting are available.

Stakeholders were thanked for their time and cooperation.