

FINAL Minutes Boilers 1st stakeholder meeting

1st Stakeholder meeting ecodesign preparatory studies 'ecoboiler-review'

Date/time: 23 Jan 2018, 9:30 reception, 10:00 – 13:30 Boilers

Location: Conference Centre Albert Borschette (CCAB), Room 4A, Rue Froissart 36, 1040 Brussels, Belgium

Participants – see Annex I

MORNING session: Central Heating Boilers

Introduction and Task 1 Central Heating Boilers

Veerle Beelaerts (DG ENER) introduces herself as policy officer and introduces the studies. René Kemna (VHK) is chairing the meeting, introduces the study team and gives the floor to Martijn van Elburg (VHK) to present results for Task 1 on the Central Heating Boiler study. After the presentation there is room for a Q&A on Task 1.

Jens Schuberth (DE) asks whether the study scope allows for changing the labelling metrics. Beelaerts replies that changing the energy labelling classes of space heaters is not the intention of the study. Later on she adds that she will consult with the Commission legal services as to what room is allowed to introduce changes to the labelling metrics.

Kemna asks for comments on introducing the PFHRD in the labelling scope. Chris Farrell (Canetis) mentions two specific benefits: an indirect benefit where energy losses of space heating operation are recovered for water heating purposes, which is awarded in the UK SAP with 65% recovery in winter mode and 25% recovery in summer mode. And there is a direct benefit in instantaneous efficiency.

Kemna states that some countries have tried to force change of equipment, but that other national law prevents such legislation (e.g. in Germany). William Rode (NO) states that mineral oil is forbidden to use in existing boilers in Norway after 2020, and that new buildings cannot use installations with fossil fuels since 2010.

As regards the consideration of the PEF (Primary Energy Factor) in (both) review studies Kemna states that the PEF is determined in the context of the EED (Energy Efficiency Directive) and Beelaerts adds that the Council and Parliament are currently in trialogue to settle the value. Once this is finalised the PEF value will be considered in the review studies to assess effects on seasonal efficiencies. Paul Gelderloos (BDR Thermea) proposes to use the marginal PEF when calculating heating efficiencies as the objective of the calculated value should determine the PEF value to be used. Olivier Jung (EHPA) asks if the PEF value is the same as used for EED. Beelaerts replies that this is indeed the intention of the EC. Gunnar Olesen (ECOS) and Fanny Rateau (EHI) and Gelderloos (BDR Thermea) mention that if the PEF is changed, the label classes and ecodesign requirements should be revisited. Kemna explains an impact assessment will follow after review study. Beelaerts refers to the need to finalisation of the EED process.

Kemna asks whether MS have aligned EPBD methods with ecodesign boiler metrics (UK still uses SEDBUK, Germany uses other than ecodesign boiler metrics) and how the regulation could possibly be changed to promote this integration. Mike Rimmer (UK) replies that SEDBUK is used, but the UK is also looking to use the package label for existing installations¹, e.g. the 'Boiler Plus'.

Els Baert (EPEE) states that she is in favour of the product information generated in the light of ecodesign to form the basis for EPBD related calculations.

Arnaud Collard (BE) states that in Belgium the data from ecodesign information sheets is used in EPB but –e.g. in the case of water heating with external cylinders- sometimes insufficient for EPBD purposes.

Eric Bataille (Groupe Atlantic) states that France uses a different PEF (2.58) in EPBD, which is much higher than in ecodesign.

Gelderloos states that ecodesign cannot be used in EPBD is because the weighted averaging of efficiencies as done in ecodesign is flawed and the general EPBD approach, using specific energy consumption (e.g. kWh/m²), avoids this known problem.

William Rode (NO) states that Norway does not use a PEF either in EPBD nor ecodesign and explains that Norway advocates an approach based on final energy..

Michael Pittner (Bosch) says that on a very basic level the German EPBD uses ecodesign boiler information as inputs, but the rest of the calculation for EPBD takes many more variables into account. Carlos Lopes (SE) states that requirements for EPBD and boilers are different. Kemna mentions that the study is not looking to replace the full technical heating calculation (including distribution losses, etc.) in EPBD by the Ecodesign metrics, but at the least the basic boiler efficiency calculation. Farrell explains the difference between ecodesign boiler information (e.g. based on EN 15502-1) and SEDBUK whereby SEDBUK can take into account the fact that the boiler may not be in condensing operation for extended periods (small radiator size requires high flow temperatures).

As regards the F-gas regulation Rateau (EHI) mentions the restrictions in place in France regarding the use of flammable refrigerants. Baert adds that such restrictions may apply elsewhere as well, but that standards are being adapted to allow for more use of refrigerants of certain risk phrases (e.g. 2L-rated: mildly flammable). Mihai Scumpieru (Mitsubishi Electric) added that the quota system introduced under F-gas regulation leads to price peaks and shortages of certain refrigerants but also quota (needed for the importers of pre-charged equipment) which make heat pumps less competitive on price level compared to boilers. He added that ultra-low GWP refrigerants (like CO₂ and some HFO blends) may have detrimental effects on efficiency, as generally depending on the climate conditions, applications and flammability restrictions in the building codes, such units cannot reach the same efficiency levels as for instance with R410. Jung (EHPA) is preparing a written contribution for DG Clima on this topic and can share this. EHI states that DG CLIMA stated the price hikes on high GWP refrigerants show the quota system in F-gas is working as intended. Laure Meljac (NIBE) states that requirements should not be conflicting: A solution for tight noise requirements is to increase the evaporator, but this increases the refrigerant charge as well, which is not in line with F-gas. Requirements from different measures may counteract each other.

¹ <https://www.gov.uk/government/consultations/heat-in-buildings-the-future-of-heat>

As regards 3rd party certification (the remnants of the 92/42/EEC BED articles in Regulation (EU) No 813/2013) Rimmer states that the UK is supportive of removing 3rd party certification from a revised regulation as it does not avoid compliance testing and adds costs to SMEs in particular. Wilfried Linke (BDH) adds that 3rd party certification must be defined as it can mean different things.

Kemna asks for responses regarding the package label and adds that its implementation for solar devices in particular will be further discussed in the afternoon session. Federica Sabbati (EHI) mentions the preliminary findings of an EHI survey on the package label, indicating a mixed message (okay for manufacturers, but indeed issues with installers).

As regards the differences between the EN 50465 standard and the Transitional Methods for cogeneration Alexandra Tudoroiu-Lakavice (COGEN Europe) states that the standard is more robust and reflects potential savings better, both when comparing micro-CHP with other technologies (e.g. heat pumps) but also within the cogeneration family of products (e.g. engine based micro-CHP vs. fuel cell micro-CHP). Gelderloos states that the Transitional methods should be rejected. Pittner states that Bosch follows the Transitional Methods and finds the alternative proposed by EN 50465 not acceptable, and asks for clarification as to which calculation method should be followed. Sabbati (EHI) asks that a revised regulation will incorporate an agreed calculation method instead of referring to Transitional Methods.

As regards hybrid products (fuel boiler combined with (electric) heat pump) the presentation shows recent developments by TC 109 WG1. Laure Meljac of NIBE and Michèle Mondot of CETIAT mention that EN 14825 already incorporates a definition and calculation method for performances of hybrids. One difference though is that EN 14825 assume a flow temperature of max. 55°C and the CEN TC 109/WG1 assumes a flow temp. of max. 80°C (as the technology allows replacement of existing boilers without changes to the heating system). Pittner of Bosch views hybrids as a good way to introduce heat pump technology in existing homes. Sabbati of EHI states that the definition of "hybrids" should not be limited to gas boilers in combination with electric heat pumps but could also comprise solar or oil etc. as confirmed by Tristan SUFFYS (EUROFUEL)

Gunnar Olesen (ECOS) asks whether the study will solve the differences between EN standards and Transitional Methods. Pascal Antoine (Ariston) asks if Transitional Methods will be updated. Beelaerts replies that an update of the Transitional Methods is not foreseen. Harmonising standards for presumption of conformity is the generally accepted way.

Kemna asks for written comments regarding experiences of experts or Member States with market surveillance. Beart asks that the exercise regarding 3rd party certification starts with (1) a proper definition of "3rd party certification", (2) a robust pro/con analysis and (3) and impact analysis on consumers, industries, etc.

Task 2 Central Heating Boilers

Kemna presents the findings of Task 2 on the EU boiler market, largely based on the input of subcontractor BRG Building Solutions, indicating the positive changes in the market as regards increased efficiency and (inflation corrected) price drop.

Schuberth (DE) asks whether more detailed information on 2016 will be made available. Kemna replies that this may happen if stakeholders send more information. As far as the contribution of the

subcontractor BRG Building Solutions is concerned, the Task 2 is complete. Walter Giuseppe Pennati (ASSOCLIMA) points out that the ongoing development of measures (ecodesign/labelling for fans, motors, pumps, boilers, F-gas, etc.) forces manufacturers to continuously adapt their products to new legislation, without rest. This is confirmed by Dina Koepke (Emerson). Sabbati (EHI) confirms the general positive effect of the ecodesign measures, but is more sceptical on the effect of labelling. Nor have the measures helped to increase the modernisation rate of the stock (currently 4%/a) and she asks for additional measures for increasing consumer awareness, financing, market surveillance and the role of installers acting both as gateway and roadblock. Erwin Fontbonne (Groupe Atlantic) confirms the role of government in influencing sales (heat pumps in France are promoted due to changes in Building Codes for detached housing). Thomas Nowak (EHPA) is pleased with the results of the ecodesign regulations in boosting sales of heat pumps and emphasises the need for good quality data so that the positive effects can be shown with confidence to interested parties. Kemna agrees that good data is necessary to convince Member States of the merits of such measures.

Rateau (EHI) mentions whether the compensation of solid fuel boiler turnover (not in scope) by the controls, solar, etc. turnover (in scope, but not included in Eurostat production data) is correct because she believes that e.g. controls are included in the boiler unit price. Kemna responds that Eurostat only uses the bare boiler price (without controls). Andrea Corso (BRG) mentions that typically in the sector and for the sales, the prices relate to the bare boiler product.

Schuberth asks whether it is possible to implement something that allows end users to show the performance of appliances in real life, to check whether the products function as shown on the label or not. Kemna replies that in the past there were proposals to a) test at four temperature/power conditions for gas/oil boilers (not two like now) and b) the modulation degree, which is relevant for oversizing issues. Hans-Paul Siderius (NL) adds that that labels by their nature are generic (for the testing many variables that affect performance are removed or fixed to ensure reliable results).

Pittner says that, unlike many other domestic appliances, the purchase of a central heating boilers requires consultation of a heating specialist, which affects the role of the label for the end-consumer.

Carlos Lopes (SE) states he would like to see the seasonal efficiency mentioned on the label, as this allows identifying the more efficient appliances that are in the same class.

William Rode (NO) states that the label does not give correct guidance in Norway as the PEF for electric appliances puts different technologies in the same efficiency class.

Pedro Dias (LabelPack A+) praises the availability of sector-wide market data, but would like to see more detailed data for the coming years. He states that certain market trends may have initiated before the ecodesign/labelling measures. He emphasises the need to work on planned replacement, possibly by having better labelling information, together with instruments set up by Member States. The labelling database could be useful, but even more so if it could give access to package label information and information on various climate zones. The respondents of the LabelPack A+ survey are not aware of any market surveillance activities. The study shows it is rather the opposite, as authorities do not know how to perform market surveillance of the package label.

Aline Maigret (ANEC BEUC) agrees with the need for robust calculations and confirms the low awareness of consumers with especially package labels. She is interested in the online evaluation. Beelaerts replies that there are 5 studies ongoing which aim to revise the current label designs. Results of these studies will be fed back into the recommendations of this study, if available by the end of 2018.

Pennati (ASSOCLIMA) mentions the problem with 'nominal power' of large heat pumps (< 400 kW) which is either established at -10°C or +7°C.

Any other business

The morning session is concluded with the presentation on the problem of C4 boilers in Germany, by Schuberth. Kemna invites other stakeholders and/or Member States to come forward with their solutions to this problem.

Kemna prefers to receive written comments on the task reports discussed within one month, but adds that none of the task reports will be considered 'final' until the very end of the study.

The meeting is closed at 13:20h.

The draft Minutes were revised following comments by:

- Stefan Abrecht (Solar heat Initiative)
- Fanny Rateau (EHI)
- Mihai Scumpieru (Mitsubishi Electric)
- Kirsti Hind Fagerlund (Norway)
- Pedro Dias (Solar Heat Europe / former ESTIF)

Annex I – List of participants (morning and/or afternoon session)

First name	Surname	Affiliation
Ahmed	Abdelghani	Electrolux
Stefan	Abrecht	Solar Heating Initiative
Ross	Anderson	ICOM Energy Association
Nemes	Aniko	Bosch Thermotechnology GmbH
Pascal	Antoine	Ariston Thermo
Karl-Heinz	Backhaus	Vaillant GmbH
Els	Baert	EPEE / Daikin Europe NV
Eric	Bataille	Groupe Atlantic
MIRKO	BORTOLOSO	Mitsubishi Heavy Industries Air Conditioning Europe
Johannes	Brugmann	Stiebei Eltron
Matteo	Caldato	CLIVET SPA
Vanessa	Chesnot	EPEE
Alan	Clarke	Baxi Heating UK
Arnaud	Collard	BE / Walloon Energy Agency
Andrea	CORSO	BRG (UK) Ltd

Valentina	D'Acunti	Immergas
Pedro	Dias	Labelpack A+
Olaf	Diederich	Stiebel Eltron
Kirsti Hind	Fagerlund	NVE
Christopher	Farrell	Canetis Technologies Ltd
Ahmed	Fatteh	PRDCG/Panasonic
Verger	Florian	Aldes
Erwan	Fontbonne	Groupe Atlantic
Paul	Gelderloos	BDR Thermea Group B.V.
Caroline	Haglund Stignor	RISE Research Institutes of Sweden
Edward	Harris	Bosch Thermotechnology Ltd
Wolfgang	Hormel	Viessmann
KENICHI	Ichihara	Fujitsu General Ltd.
Oliver	Jung	EHPA
Anke	Kaltenmaier	DVGW-Forschungsstelle
Hideaki	Kasahara	JRAIA
Rene	Kemna	VHK
Christian	Koch	CECED
Lina	Kinning	
Dina	Koepke	Emerson Climate Technologies GmbH
Valérie	Lammerant	Daikin Europe NV
Ciara	Leonard	Electrolux
Wilfried	Linke	BDH/ CEN/TC 57 WG 6, 8, 9
Jaume	Loffredo	AEGPL
Carlos	Lopes	SE - Swedish Member State representative
Aline	Maigret	BEUC/ANEC
Joana	Maio	EHl
Sandrine	Marinhas	Eurovent Certita Certification
Armin	Marko	Bosch Thermotechnik GmbH
Jerome	Martel	Groupe ATLANTIC
Samuel	Maubanc	AEGPL
Laure	Meljac	NIBE AB
Olga	Milanin	DE - German Member State representative
Kristel	Mondelaers	ACV International
Michèle	MONDOT	CETIAT
Thomas	Nowak	EHPA
Gunnar Boye	Olesen	International Network for Sustainable Energy and ECOS
Per Henrik	Pedersen	Danish Technological Institute
Walter Giuseppe	Pennati	Assoclima/ANIMA
Domenico	Peserico	EHl/ Polidoro
Cristina	Pini	EHPA
Michael	Pittner	Bosch Thermotechnik
Matteo	Rambaldi	CECED

Fanny	Rateau	EHI
Adrian	Regueira-Lopez	BEAMA
Edward Michael	Rimmer	UK - United Kingdom Member State representative
William Walker R	Rode	NO - Norway EEA representative
Federica	Sabbati	EHI
Jens	Schuberth	Umweltbundesamt
Jean	Schweitzer	Marcogaz / Ecotest project / ECOBEDAC
Francesco	Scuderi	Eurovent
Mihai	Scumpieru	Mitsubishi Electric Europe B.V.
Hans-Paul	Siderius	NL - Dutch Member State representative
Alexander	Sperr	Bundesverband Wärmepumpe (BWP) e.V.
Emilie	Stumpf	Panasonic
Tristan	SUFFYS	EUROFUEL
Holger	Thamm	Stiebei Eltron
Alexandra	Tudoroiu-Lakavice	COGEN Europe
Gerard	van Amerongen	Solar Heat Europe/ESTIF
Kurt	Van Campenhout	Cedicol - Eurofuel
Hendrik Martijn	van Elburg	VHK
Robertus	van Holsteijn	VHK
Jan	Viegand	Viegand Maagøe A/S
Andre Martin	Wachau	DE/ BAM
Alain	Xhonneux	CECED/Ariston Thermo Group

5.2.2018 / MVE