

Topic	Minutes of the 2 nd Technical Working Group Meeting: Ecodesign/ Energy Labelling Review Study: Cooking appliances
Day & Location	4 and 5 May 2021 by means of interactive webinars
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Participants	<ul style="list-style-type: none"> • ADEME • APPLIA (Home Appliance Europe) • APPLUS Laboratories • ARÇELIK A.Ş • BAM (Bundesanstalt für Materialforschung und -prüfung) • berbel Ablufttechnik • BORA Vertriebs GmbH & Co. KG • BSH • CENELEC (European Committee for Electrotechnical Standardization) • Danish Technological Institute • De Longhi • ECOS • EGO • Eico AS • Electrolux • Elica • ENGIE • EuRIC • FEA (Foodservice Equipment Association) • Finnish Energy Authority • Group SEB • HKI • ICF • IKEA • INFORSE • LCOE • LG Electronics • MIELE • Mondragon Componentes • Panasonic • Rijksdienst voor Ondernemend - Netherlands • SIT Group • SLG • SMEG • Société Industrielle de Lacanche
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- Swedish Energy Agency
- UBA (Umweltbundesamt)
- UNOX
- Vestel
- Whirlpool
- WITT
- ZOPPAS

Introduction and general aims of the 2nd TWG meeting

The second Technical Working Group (TWG) meeting for the review study for Cooking appliances aimed to present and discuss the main outcome of the second draft of the Preparatory study. The meeting was carried out by means of two webinars that were structured as follows:

Day 1: Ovens and material efficiency aspects

- Scope
- Declaration of energy consumption
- Ecodesign and Energy labelling
- Horizontal Requirements - Material Efficiency

Day 2: Hobs and Cooking fume extractors

- Hobs: main results and policy options
- Cooking fume extractors: scope
- Cooking fume extractors: improvement options, current situation and policy option 1
- Cooking fume extractors: policy option 2
- Cooking fume extractors: policy option 3
- Cooking fume extractors: scenarios comparison
- Wrap-up and next steps

Ovens

JRC presented the main outcomes and proposals of study, in terms of scope modifications, declaration of energy consumption, ecodesign minimum energy performance requirements and energy label.

Scope

In terms of scope, the topics presented were the inclusion of solo-MW ovens, combi-MW ovens, small and portable ovens, solo-steam ovens and combi-steam ovens.

ECOS indicated that they support the inclusion of solo-MW ovens as well as small and portable ovens, in terms of minimum energy performance. Solo-MW ovens are quite numerous and there is a test available, so they should be included in regulation to remove the least efficient from the market. For small and portable, the current energy consumption test is applicable, so they should be included as well.

JRC indicated that the only reason for not including those appliances in terms of minimum energy performance is due to the lack of data.

Declaration of energy consumption

In terms of energy consumption declaration, several topics were presented by JRC: the adoption of a new measurement method; the heating mode to declare energy consumption and get energy class; the definition of Standard Energy Consumption (SEC); cooking food for the measurement of energy consumption; energy declaration of other relevant heating modes and functions; the measurement of cavity volume; the inclusion of self-cleaning in product information; and the inclusion of pre-heating in product information.

ECOS indicated that they support the adoption of Brickmethod 2.0 (BM2.0). In terms of heating mode, they supported a weighted sum approach, giving 80% to standard mode and 20% to energy saving mode (the 80-20 approach), in order to be more consumer relevant. They were also in favour of a flat approach for Standard Energy Consumption (SEC). They did not support giving a 10% and 15% bonus to MW-combi and automatic functions, respectively, since there is no data to support those numbers.

Netherlands supported most of the comments from ECOS, particularly regarding the bonuses for MW-combi and automatic functions (bonuses, if given, should be more conservative). Regarding heating mode to declare energy consumption, they supported the 80-20 approach. They were not in favour of including energy consumption of various heating modes in the label. Alternatively, they suggested including only the weighted energy consumption. In terms of cavity volume measurement, they supported measuring with the side racks, for consumer relevance.

CENELEC highlighted that in some occasions it is not easy to identify what is a MW-combi oven, since each appliance incorporates MW function in a different manner. They reminded

that current method (Brickmethod 1.0) or new one (BM2.0) are not applicable to ovens that have a turntable. If the intention is to test MW-combi ovens with turntable, the measurement method needs to be adapted, which will take time. In terms of cavity volume measurement, they recommended to continue testing without the side racks, because the volume around them is also consumer relevant (it needs to be heated as well).

JRC clarified that the energy classes obtained by ovens do not change when changing from a 50/50 to a 80/20 approach. The declared energy consumption does change. JRC clarified that the 10% and 15% bonuses suggested for MW-combi and automatic function are based on manufacturers' feedback. The intention of using bonuses was to show the benefits of these appliances in terms of energy efficiency.

CENELEC reiterated it is very challenging to develop standard methods for modes such as combi-steam, solo-steam and combi-MW.

Ecodesign and energy label

JRC presented the proposed new limits for ecodesign in terms of minimum energy performance, and different approaches that could be taken for the new energy label. JRC also presented the benefits and risks of a combined label for electric and gas appliances.

Netherlands recommended that ecodesign limits should be aligned with energy classes thresholds, so the proposed limits should be reviewed. On the topic of a combined label for electric and gas ovens, they mentioned that, based on the current EU CO₂ emissions reduction plans, in the future no gas should be used for activities such as cooking. Therefore, they were in favour of a combined label. For new regulation, they supported ecodesign limits that would leave in the market only the best gas ovens.

ECOS supported as well a combined label for electric and gas ovens. However, they highlighted that electric and gas ovens have different energy consumption measurement methods, so this combined label cannot be implemented now. They suggested aligning methods so that a combined label can be used in the future. They agreed with the comment from Netherlands regarding the use of gas for cooking.

APPLIA indicated that they are still working to optimize the test procedure to measure energy consumption (BM2.0). They reminded that changing to either a 50/50 or 80/20 will have consequences. They added that it is difficult to comment on ecodesign and energy label limits presented, with data available today. In principle, ecodesign limits seem quite strict, since no products available in the market today will comply in 2030. Regarding the energy classes thresholds, they stressed that the step difference needs to be taken into account carefully, to avoid issues related to measurement uncertainties. They added that a flat approach would be better to avoid these issues.

Netherlands reminded that this project is now in the preparatory phase, where recommendations are made. Some decisions are more political than technical, and will be discussed and decided in the CF.

CENELEC asked about the topic of low energy modes, since it is unclear how this will be included in this revision. JRC answered that this topic has not been covered with detail in the report and that a recommendation still needs to be done. JRC confirmed that a recommendation on low energy modes will be ready in next version of the draft.

Material efficiency

JRC presented different policy options that might be adopted regarding material efficiency of ovens, hobs and range hoods.

On this topic, ECOS encouraged to include more ambitious proposals for these appliances. They also reminded the availability of new horizontal standards on material efficiency, which can be used to develop product specific standards.

Netherlands responded that product specific standards might be developed for future revisions of this regulation. They indicated that reparability has not been addressed in enough detail in the report, and that it could be included in regulation, for instance with a reparability index, only for consumer information. They added that including durability is more complicated.

APPLIA responded that cooking appliances are an example of long lasting products, so good practices in terms of material efficiency are already being implemented. Another APPLIA representative added that testing the full appliance or certain components for durability may take long time and questions the feasibility of such a test. They also added that user behavior needs to be taken into account, since installation, usage patterns, environment, maintenance are factors that influence product durability.

Hobs

JRC presented the main outcomes and proposals of study, in terms of scope modifications, base cases and improvement options and policy options and scenarios.

Energy savings and Life cycle energy comparison

Netherlands pointed out that the energy saving potentials showed in the different scenarios are very limited, which questions the need of Ecodesign requirements for this product group and in gas hobs in particular. They would not recommend a very extensive policy development, considering the small energy savings.

From a technology neutral approach and considering LCA results of radiant and induction, it was also highlighted that since, there is not much difference in the use phase between the two technologies, the conclusion might be that induction should not be used.

ECOS recommended to align test methods for gas and electric hobs, in order to achieve a complete technology neutral approach for the three technologies.

Phasing out of radiant hobs

ECOS warned that the phasing out of radiant technology, this would have negative consequences for people with pacemakers, and this issues must be considered.

APPLIA commented that the issue with pacemakers is a safety issue, not relevant in an energy or environmental discussion. Therefore, it should be covered in a different regulation (for instance, electromagnetic compatibility).

Ecodesign thresholds proposed

APPLIA stressed that no further improvements in induction are expected in the future. The range in energy consumption of the hobs stems from the differences in cooking zones and the flexibility of induction hobs. Hobs that are more complex give flexibility to the consumer resulting in higher energy consumption. It was highlighted that the proposed ED limits would results in the banning from the market of the hobs that provide more flexibility, without actually improving the energy consumption of the rest technologies. In addition, regarding the standard measurement, flexibility adds uncertainty to the test itself. JRC acknowledge the difficulty of setting so close thresholds taking into account the uncertainties of the tests. It was questioned the point of ED thresholds with such a short time period, if the room of technology improvement was limited or zero. JRC replied that the proposed ED thresholds are a way to approximate every product to the best one in the market, removing the worst.

ECOS pointed out that the compatibility of cookware with induction technology must be considered, including relevant requirements in this revision. JRC replied that the issue of cookware has been mentioned in the study in relation to work being done on standardization, and will be a placeholder for future policy developments.

Cooking fume extractors (CFE)

Only recirculation CFE and odour reduction factor

JRC presented the proposal to include only recirculation CFE, including a declaration and possible Ecodesign requirement on odour reduction factor according to MEK test method. In case that the odour filter was not sold together with the CFE, a standard filter is proposed.

ECOS/INFORSE agreed on the proposal but extending it to extraction CFE, and supporting the threshold of 75% for odour reduction factor. Besides, they proposed two different labels, one for only-recirculation and another for extraction mode. DTI supported 75% based on their own test results.

CENELEC clarified that even MEK test method could be used for extraction CFE, it did not lead to differentiation, all extraction CFE perform around 95%, due to the volume of the test room.

Manufacturers were against the label for only-recirculation CFEs, since it is a niche market product and cannot be tested with 9-point method. A second label for this small market would be confusing for consumers, in their view. They would support ED requirements, but lower than 75%, which would leave many products out of the market. They suggested that the test results from DTI could be different since ventilation standards were also partially applied.

MSs were in favour of including only-recirculation CFE but Netherlands was not of developing a separate label, since it would create confusion among the consumers.

There was a split view on whether the 9-points method could be used for only-recirculation mode. ECOS/INFORSE suggested that it could be adapted for them, while the industry maintained that the 9-points method considers the installation in different scenarios, so it could be used for products that can operate in both modes, but not for only-recirculation CFEs.

Manufacturers also indicated that the crucial element that determines the performance of only-recirculation CFE is the odour filter. Users can also buy filters from online markets at lower prices and lower odour reduction factor, so it is difficult to convey the information to consumers. In this regard, ECOS/INFORSE insisted that a separate label including the recommended filter would be very beneficial for consumers. They were also concerned about low odour reduction factor of CFE with special configuration and geometry, such as downdraft, so they proposed to include them for ED limits as for only-recirculation CFE. On the other side, manufacturers only support ED limits on odour factor for only-recirculation CFE.

Policy proposals and Option 1: EEI and energy classes based on FDE

JRC presented the policy proposals and in more detail, the policy option 1: EEI and energy classes based on FDE.

ECO/INFORSE and DTI agreed that 9-point method is an improvement, but they were concerned because it gives more weight to high drawback pressures. They recommend that the three drawback pressures have the same weight. The high price of brushless motors was also an issue to be considered. They supported the inclusion of indirect energy consumption, though they did not have any specific proposal.

Netherlands recommended synchronizing the energy classes with Ecodesign thresholds. In option b, the classes were too close to each other in the lower energy classes, when the competition is usually at higher energy classes. For the additional cost of brushless motors, it is important to model only additional manufacturing costs, and not the additional price of the high-end products (due to design, quality and other feature) equipped with brushless motors.

Sweden was concerned since the function of the CFE (odour removal) was not incorporated into calculations. Sweden and ECOS/INFORSE supported the inclusion of the indirect energy consumption at least in the Annual Energy Consumption.

Manufacturers supported Option 1b since it allows the gradual introduction of new technologies without phasing out capacitor motors. They do not support the introduction of the indirect energy consumption.

JRC clarified that a more refined consumer expenditure modelling will be delivered in the next version of the report. Regarding the inclusion of indirect energy consumption, it has not been included as an option due to lack of data and on difficulties on how to model it. JRC questioned whether heating and cooling indirect energy would not dilute the energy consumption of CFE, discouraging the technology improvement. ECOS/INFORSE disagreed on this last point, since their preliminary calculations proved indirect energy consumption would not be dominant.

Option 2: EEI and energy classes based on airflow

JRC presented the policy option 2: EEI and energy classes based on Standard Annual Energy Consumption as a function of airflow.

Manufacturers and ECOS/INFORSE did not support this option since it could cause reductions in the performance of the products, and there is less opportunity to differentiate products.

Netherlands pointed out that the energy savings for the different scenarios are small. Energy label may not be needed, but only ED thresholds to leave out the worst technologies and gradually move towards only brushless motors.

Option 3: EEI and energy classes based on power

JRC presented the policy option 3: update of the current EEI and energy classes based on Standard Annual Energy Consumption as a function of power, introducing the 9-points method.

Sweden stressed that none of the options presented consider the main functionality of the appliance. Given that the overall savings expected are not high, the added value is uncertain if the main function is not integrated in the methodology. This was also supported by DTI, adding that if main function is not considered, a CFE is treated as a fan.

ECOS/INFORSE recommended to increase the Ecodesign thresholds.

JRC explained that the proposals do not include the odour reduction factor due to lack of data. Even if the main function of the CFE is not covered, the proposals based on FDE and airflow partially capture the function of the CFE in terms of pressure and airflow delivered per power consumed. Higher airflows usually lead to better odour reduction.

DTI disagreed that FDE could be a good representation of main function of CFE FDE alone cannot compare a CFE installed on top or next to a hob, which significantly differ in performance.

Sweden highlighted that energy label should represent the best capture efficiency with the lowest energy consumption, but not the highest airflow with the lowest energy consumption. There should be a mechanism to ensure that CFE with high airflows are not promoted, and that should be the use of the indirect energy consumption.

Netherlands questioned whether Ecodesign and Energy Labelling were worth for so limited energy saving potentials. Besides, they doubted if it was feasible to model scenarios including indirect energy consumption in a realistic and fair way. The need of average climate conditions and average buildings would turn the results meaningless. If the aim was to limit the use of high airflow CFE, it could be solved with an upper limit to airflow.

Manufacturers highlighted that this discussion is more relevant for regulation on buildings energy efficiency. CFE provide ventilation for cooking fumes but there are other ventilation needs in a building. The main function of the CFE is removing air and the key elements for their performance are the motor and the odour filter. They reiterate that standards are already being developed for the odour reduction factor, though it is difficult to develop for such a product and they need more support.

ECOS/INFORSE replied that MEK test method could be used for extraction CFE even if the test is not ideal. It could help as starting point and be refined in the future.

JRC proposed that odour reduction factor is declared together with an Ecodesign requirement for recirculation CFE and certain models such as downdraft. They also pointed out that higher airflow would be working less time, so it will have an impact on energy consumption.

Other topics

ECOS stressed the need to prioritise Commercial and Professional appliances in the next Ecodesign Working Plan.

ECOS/INFORSE warned about some CFEs that have a permanent ventilation mode in low mode, which can consume more than active modes.

Manufacturers requested to address the alignment of low power modes in all cooking appliances. Currently, CFE are not covered by the horizontal regulation, which does include ovens and hobs.

Conclusion - Actions

Stakeholders' feedback to be provided to the project team regarding the presented 2nd part of the preparatory study (Task 1-7) either through by email to JRC-B5-COOKING@ec.europa.eu by 06/06/2021.

After receiving all stakeholders' comments, the project team will revise the documents accordingly.

JRC thanked the stakeholders for their participation and closed the webinar.