Position paper

Comments on the Ecodesign and Energy Labelling draft requirements for cooking appliances

Brussels, April 2024

Summary

We welcome the Ecodesign and Energy labelling review's regulation proposal for cooking appliances. However, we regret that the review of this regulation has been delayed for more than three years after the expected review.

ECOS believes domestic cooking needs to transition away from gas-powered appliances to diminish our reliance on fossil fuels. This transition not only safeguards climate ambition but also promotes the usage of fossil fuel-free kitchens and cleaner indoor air throughout Europe.

To further enhance this proposal, we suggest several modifications:

- Implementing **more stringent energy efficiency requirements**, particularly for gas-powered ovens and hobs.
- Introducing an **energy label for hobs** to provide consumers with clear information.
- Incorporating **emission requirements** for gas-powered hobs and ovens to mitigate environmental and health impacts.

General remarks

Gas stoves harm the planet and our health by releasing pollutants such as nitrogen dioxide and carbon monoxide. Studies show that indoor air quality often exceeds the indoor emission limits set by the WHO, affecting more than 100 million Europeans and costing governments €3.5 billion annually in healthcare and productivity losses. Poor air quality increases cardiovascular and respiratory risks, with over 700,000 children in the EU developing asthma yearly due to gas stove pollution.

ECOS - Environmental Coalition on Standards
c/o WeWork rue du Commerce 31 · 1000 Brussels · Belgium
T +32 2 899 7680 · info@ecostandard.org · ww.ecostandard.org

Hobs are the most used cooking appliances in our homes, yet they are still not considered for Energy Labeling Regulation. Household kitchen appliances consume the most energy after heating and cooling in our homes, yet hobs still do not have an energy label informing consumers about their energy efficiency and emissions, leaving European citizens unable to choose more efficient appliances and less pollutant ones, limiting their decisional right.

We strongly call for introducing energy labels on gas and electric hobs.

We welcome the European Commission's decision to explore the possibility of introducing **smart appliance elements**, such as induction hobs integrated with batteries, into the regulation.

Considering the increasing need for flexibility in the electricity grid, smart appliances — including hobs and ovens — could shift the power demand away from the peak, reducing the cost and stress on the grid. This view highlighted the importance of continuous work on induction and electric hobs.

Ecodesign regulation

Article 1 – Subject matter and scope

We welcome **the introduction of the scope** of ovens with ''microwave heating'', small ovens (volume below 10 litres) and portable ovens.

While we understand the exclusion of **commercial and professional cooking appliances** from this regulation, we ask the Commission to communicate a timeline for developing the Ecodesign and energy labelling requirements for those product lots and proactively issue standardisation requests to develop appropriate test methods for professional cooking appliances.

Appliances that use **third-family gases** (butane and propane) should be **included** in the regulation's scope, as the JRC study reiterated in 2022.

Article 2 – Definition

We regret that gas hobs are still defined as gas burners with a minimum of 1,16 kW; ECOS recommends following the JRC recommendation put forward.

We call for developing a procedure test to properly overcome the reproducibility issues during testing in the standard EN 30-2-1 in order to be rapidly adopted by this regulation.

We call for introducing the definition of **''best-performing mode''** and **''standard heating mode''** as defined in Brickmethod 2.0, replacing the "conventional" and "fan-forced modes" definitions.

Article 9 - Review

We regret that the review of the regulation has been set in place for seven years. It is crucial to note that, due to previous delays, the revision may not be completed until 2025 rather than the initially intended deadline of 2021, as specified in the 2014 review.

It is important to note that, as specified in the Ecodesign Impact Accounting 2023, the stock of cooking appliances is not decreasing overall; instead, it is expected to increase by 12% by 2030.

The delays in the review of the regulation, combined with the 7 years of the planned review, would affect the energy savings that are overseen by applying the necessary measures, equal to 22 TWh/a, 12% of the total primary energy consumption,

Additionally, a shorter revision term would put us on track for the expected emission reduction by 2030, equal to 2 Mt of $CO_{2,eq}$/a.

Therefore, we advocate for a timely review process, possibly occurring no later than **four years** after this revision enters into force.

Moreover, the review shall assess, among other things, the feasibility of setting stricter Ecodesign requirements for energy efficiency and more stringent emission requirements (NO2, CO, CH4) for appliances that use gases such as methane, butane, and propane.

For cooking fume extractors, we call for a review of the following aspects: the possible extension of the scope to cooking fume extractors integrated into ventilation systems, the possible increase of Ecodesign requirements for efficiency, the inclusion of capture efficiency, the inclusion of heating loss from ventilation air in efficiency, the inclusion of efficiency requirements for recirculating cooking fume extractors, and the efficiency measurements and calculations.

Annex I - Definition

We regret that the working document does not clearly state the test method used to calculate the energy consumption of electric ovens.

If the **Brick Method 2.0 (BM2.0)** is applied for oven testing, it is fundamental to define or reference the '**s-factor**,' which is crucial in ensuring that designated heating functions do not rely on residual heat. The energy-saving modes for energy declaration purposes may not accurately reflect real-world usage patterns. Therefore, it is essential to define terms clearly, such as **'standard heating mode'** and **'best performing mode'** within the regulations, to provide clarity and consistency in the evaluation criteria. As also stated in the JRC study, a particular variant of fan-forced modes is the energy-savings modes, also called ''eco-modes''. This cooking mode is irrelevant to the energy consumption declaration since it does not allow proper cooking of all kinds of dishes. The missed opportunity to clearly define these modes could pose significant risks of inappropriate use of these heating modes to declare energy consumption.

We suggest changing the definition of "*multi-cavity oven*" to "an oven with two or more cavities, each of which is controlled and heated separately".

We suggest changing the definition of "*small oven*" to 'an oven with one cavity volume below 10 litres'.

Annex II – Ecodesign requirements

We regret to see that the **European Commission proposed a single-tier value for this regulation**.

As recommended by JRC in 2022, not providing different tiers with ambitious requirements does not stimulate the technological developments and improvement of such appliances. It pushes for a short-term adaptation of the technology without further commitments until 2032.

We would also like to highlight the following aspects:

1. Requirements for household ovens

We regret to acknowledge that the **EEI_{cavity} parameter for gas ovens** equals the previous regulation adopted in 2014. The JRC's study proposed a Least Life Cycle Cost (LLCC) level of 91 for gas ovens by 2025, tightening to 82 by 2030. Hence, we ask that the three tiers proposed by the JRC study be adopted in the LLCC scenario. If this is not accepted, we ask for more ambition, and therefore, we suggest adopting the value of **$EEI_{cavity} = 82$** aligned with JRC's recommendation.

We agree with the APPLiA methodology on the continuous polynomic approach for calculating the Ecodesign limits. However, if the European Commission proposes no tiers, we ask for a single value that is ambitious enough and coherent with the time needed for the next Regulation review. Therefore, we propose to adopt the **EEI for electric ovens** as follows:

$$EEI_{cavity} < 93 * f(v)$$

$$f(v) = 1 + 3.3 * 10^{-7} * V^3$$

2. Requirements for household hobs

Regarding the proposed value of the **EEgas**, we would like to remind the European Commission that the JRC study already suggested **58% for 2027**. If this regulation is not reviewed for the next seven years, we will have the energy efficiency requirement proposed in the Working Document until 2032. We believe this value is not ambitious enough. Therefore, we ask that it be aligned with the last value proposed by the JRC recommendations study.

We welcome the European Commission's ambition to set the **NO_x emissions** for gas-fired appliances. This is an excellent opportunity to regulate these appliances based on emissions requirements and reduce the health risks that affect millions of European citizens.

We support CLASP's proposal to set NO_2 emission limits equivalent to 6 ng/j based on Australian standards.

We strongly suggest introducing **CH_4 emissions** due to the leakage of gas appliances. As stated in the latest ECOS report – *Leaks, pollution, and emissions: New lab tests shatter claims of hydrogen benefits for homes* – leaks represent an issue not only to indoor air quality but also to provide a correct estimation of the environmental impact of these appliances.

Additionally, gas appliance leakage represents not only an environmental issue, releasing considerable amounts and potent GHG emissions, but also a risk in case other molecules, smaller than CH_4, are introduced into the network. This leakage rate cannot be monitored with the instruments currently used for safety purposes, as it might cause additional risks.

3. Requirements for households CFEs

3.1 *Fluid Dynamic Efficiency*

A cooking fume extractor removes fumes, including odour and pollutants, from cooking. The current method of calculating dynamic energy efficiency only measures the efficiency of moving the air through the cooking fuel extractor. We support that the fluid dynamic energy efficiency requirement is not set below 8% with the calculation method proposed in Annex III, but as described below, we propose to replace the basis for the Ecodesign requirement for fluid dynamic efficiency with a requirement for an Energy Efficiency Index (EEI) that includes:

- Fluid dynamic efficiency
- Electricity use of lamps
- Other electricity use as electronic displays, standby, and other low power modes
- Capture efficiency with odour reduction factor in an interim method
- Heat loss with ventilation air

To identify the efficiency of removing cooking fumes, we propose to include the capture efficiency in an EEI for energy efficiency requirements. Since a definitive method for determining capture efficiency is currently unavailable, we suggest an interim approach incorporating the odour reduction factor alongside a parameter facilitating a straightforward transition from the odour reduction factor to a future capture efficiency without altering the EEI.

In the updated (2022) standard IEC 61691 ED3, the odour reduction factor is exclusively outlined for recirculating fume extractors. However, tests conducted at the Danish Technological Institute indicate that it also applies to cooking fume extractors. Consequently, we advocate for extending the use of the odour reduction factor to cooking fume extractors.

It is crucial to incorporate the capture efficiency and an interim method utilising the odour reduction factor due to the emergence of new fume extractor designs that may exhibit lower capture rates. According to a review by JRC in 2022, there has been a notable increase in the penetration of A+ grade extractors, particularly attributed to the sales of ceiling hoods and worktop vent hoods. These worktop vent hoods, equipped with downdraft technology, boast high airflow capacities but relatively deficient capture rates. This underscores the necessity of devising an energy efficiency calculation method that doesn't solely rely on high airflow rates. Consequently, including capture efficiency and an interim method based on odour reduction becomes imperative.

Furthermore, the **energy consumption attributable to lamps** in cooking fume extractors (CFEs) ranges from 2% to 50% of the total annual energy demand, as indicated in the JRC review. This highlights a significant portion of electricity usage warrants continued consideration in the energy efficiency index (EEI). Therefore, we ask that additional electricity usage be included, such as electronic displays, standby power, and other low-power modes.

When operating a cooking fume extractor, airflow is extracted outside. It is composed not only of the fumes from food and gas combustion but also of air at the kitchen temperature that is replaced naturally. This replacement air then requires either cooling or heating by the household's cooling/heating system. We recommend considering the **indirect heating (or cooling) consumption** when calculating the EEI, using typical values for heating/cooling, as PEF = 1. Additionally, ECOS supports the inclusion of a heat recovery factor for fume extractors with heat recovery.

Further, we propose to include efficiency requirements for recirculating fume extractors.

3.2 Air flow

We support that the air flow is limited for domestic cooking fume extractors as proposed in the working document.

We disagree, however, with the proposal to base the maximum flow on an average of the 9 flows in the 9-point method. This would open a loophole, allowing the possibility of one mode with very high flow and one mode with very low flow, which consumers hardly use. Instead, we propose that the maximum flow be based on an average of the 3 points in the maximal permanent flow.

3.3 Odour reduction factor

We support the requirement for a minimum odour reduction factor, but we find that it can be higher than the proposed 35%, for instance, 75%, as proposed by Sweden.

We also propose that the odour reduction factor be measured with the odour filter supplied with the model unless it is sold without one. If the latter, the recommended odour reduction filter must be available at the point of sale. Additionally, we propose introducing the odour reduction factor requirement for extracting fume extractors.

4. Requirements for material resource efficiency and spare parts

We welcome the introduction of material efficiency and spare parts in the review of the current regulation. We believe that access to spare parts and information for repairs should at least be allowed for all independent operators, defined as "a natural or legal person, other than an authorised dealer or repairer or remanufacturer, who is independent of the manufacturer and the producer and is directly or indirectly involved in the repair, maintenance and installation of cooking appliances", as it is currently the case in other EU policy measures. For spare parts, where the exchange requires authorisation, the supply can be limited to repairers authorised to work on, for instance, gas or electric appliances, as applicable.

In a context where professional repairers must provide evidence of their professional status to manufacturers before accessing repair and maintenance information, requiring manufacturers to motivate their rejection is necessary.

However, we actively support the end of the distinction between professional repairers and end-users in terms of access to spare parts and repair information: all the parts currently listed for professional repairers should be made available to everyone, together with repair information necessary to conduct repair operations as safely as possible. This distinction is purely discriminatory and based on unsubstantiated safety issues. Analysis of data from community repair initiatives shows that the range of repairs performed by end users at repair cafes is wide, requiring access to all the same spare parts used by professional repairers.

Repair information must contain the level of detail necessary to replace parts. Besides, we think there should be no fee for repairers to receive product information, provided that this information is accessible in a digitalised form.

We strongly support the insertion of recyclability criteria in this product group. For this reason, we suggest that from 48 months after entry into force, all cooking appliances containing copper, aluminium, lead and steel will have to include a share of at least 50% recycled content for those material streams coming from manufacturing or post-consumer waste.

We support the required availability of spare parts. Yet, given the cooking appliances' lifetime, spare parts should be available for the product's lifetime, 15 years instead of 10 years.

We propose that all repairers have access to all spare parts that can be changed without risk of electric shocks. Further, we propose that filters be available within one year of a model's introduction, not only after two years.

For the maximum delivery time of spare parts, we consider 15 working days to deliver spare parts that are too long for cooking appliances. Consumers cannot be expected to live without a functioning appliance for over three weeks without the possibility to cook their meals. Following what has been proposed for electronics products, we suggest delivering them in as short as five working days to the repairer in charge or the end user. We recommend that products be

assembled with standard seals and connection means. If this is not the case, the suitable tools to disassemble the proprietary seals and connection means should at least be bundled with the product at the time of sale.

We support Germany's call for a **reparability index**. Having an appliance's reparability score shown would allow consumers to choose more repairable products and push manufacturers to improve their products' reparability. If smart appliances are introduced in the next revision, this requirement will become even more needed.

Already introduced in France for smartphones, laptops, TVs, washing machines, and lawnmowers, the index considers the documentation, disassembly, availability of spare parts, price of spare parts, and product-specific aspects.

We ask that **glass for radiant hobs** and **a power regulator for induction hobs** be included in the spare parts list.

5. Product information requirements

We strongly recommend the introduction of NO_x and CH_4 emissions in the information requirements for all gas-powered hobs, as well as mixed hobs information requirements. Equally important for ovens, even though the gas oven market seems to be declining, it is still important to ensure that emissions are under the set limits.

6. Low power mode requirement

Due to the delayed start, we are not convinced that it is necessary with 4.00 W power consumption. Indeed, a delayed start should not require more power than networked standby, which is 2 W.

Annex III – Measurements and calculation methods

1. Household ovens

We welcome adopting the approach of calculating EEI based on 80% of the energy consumption on the standard heating function and 20% of the energy consumption in ecomode.
We reiterate the need to clearly differentiate between ecomode and standard heating mode. This could be done by acting on the **s-factor**, reducing the determination time, or additional requirements. Indeed, the current definition of the s-factor could open the door to future loopholes.

2. Household hobs

As CLASP stated, we believe there is a need to develop further the study to allow a better comparison of gas and electric hobs. There are the right conditions for implementing this method effectively, and we regret to see that there is not enough involvement from stakeholders to compare appliances that perform the same function efficiently. Indeed, there is a need to represent better the real-life use of hobs, which shall be accurate, reliable, repeatable, and reproducible. This is crucial for enabling the Commission to adopt an energy label that informs consumers about the relative energy efficiency of hobs, alongside important performance metrics like boiling time for water and emissions.

While the JRC study strongly recommended this for the current revision, we understand the method could not be finalised in the next months. We urge the Commission to consider adopting

this method as a transitional method under current regulations, rather than next revision. Delaying adoption would postpone energy label implementation for way too long.

Energy Labelling regulation

We welcome the Commission's decision to rescale the A to G energy labelling scale for the products within the regulation's scope.

Article 1 – Subject matter and scope

ECOS welcome the introduction of small and portable ovens in this regulation, as it is currently the case for the Ecodesign directive.

Article 7 – Review

We regret to see that the review excludes hobs in the scope of the regulation. As the appliances are in the Ecodesign regulation, we find it crucial that these appliances have a label to show consumers their energy efficiency and emissions.

We also propose to add to Article 9 the technological development of cooking appliances for energy efficiency. The revision should also show the NO_x emission for gas-fired ovens. Finally, we propose to consider incorporating small and portable ovens into the regulation, if they have not been adopted in the current one.

Annex I - Definition

We suggest changing the measurement unit for the lighting efficiency (4) to Lumens per Watt (lm/W). Indeed, the measurement unit in the working document (lux/W) measures the illuminance of the amount of light that falls on a surface. This metric helps determine how efficiently an area is illuminated. However, it is not specific and depends on different variables related to the surface and surroundings.

Using Lumens per Watt, we would focus the measurement on how efficiently a lighting system converts electrical power into visible light, regardless of the surface or where the light falls. Therefore, this metric is more useful when the scope of the measurement is energy efficiency and energy usage.

Annex II – Efficiency classes, acoustic airborne emission class and grease filtering efficiency class

We welcome the decision to rescale the oven energy classes from A to G, which will give consumers a clearer and more readily understandable grasp of energy efficiency. We suggest measuring the cavity volume with the side racks since the oven is normally used with them.

Furthermore, we suggest that the Commission declare cavity volume on the energy label and in the manual. We propose to the European Commission the explicit endorsement of the Brick Method 2.0 and the mode in which ovens will be tested, as only through this standardised approach can the classification of energy efficiency be effectively comprehended.

1. Household ovens

We welcome the EC's proposal regarding class division, advocating for an empty class A and a limited number of models in class B.

2. Household cooking fume extractors

We propose that the odour removal factor be included in the label with a number. When a method for measuring capture efficiency is developed, it can later be replaced with the capture efficiency.

Annex IV – Measurement and calculation methods

1. Household cooking fume extractors

We propose setting the EEI for the energy label scale at the G level for models that barely meet the Ecodesign limit. Specifically, G-labels are designated for models with an EEI below 120, assuming the Ecodesign limit is established at an 8% fluid dynamic efficiency, corresponding to an EEI of 100.

Subsequently, the label scale spans from A to G, with A-labels assigned to models boosting an EEI exceeding 360. Similarly to Ecodesign measures, we propose considering fluid dynamic efficiency with a 9-point method, electricity consumption for lighting and additional electricity usage, as well as capture efficiency and heat loss through ventilation air.

Incorporating these elements into the energy label scale would allow a comprehensive and accurate representation of energy efficiency for consumers.

Annex V – Product information sheet

We ask that the information sheet also include the emissions of NO_x, CO_2, and CH_4 for ovens.

Annex VIII – Information to be provided in the case of distance selling through the internet

We propose that the indication of the label letter in an arrow should include a reference to the label scale A-G as in Annex VII.

Contacts:

Fernando Tartaglia, fernando.tartaglia@ecostandard.org

Marco Grippa, marco.grippa@ecostandard.org

Michael Scholand, mscholand@m2s2energy.com

Muriel Dupret, dupret.pro@gmail.com

Gunnar Boye Olesen, ove@inforse.org