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Local space heaters Position on the ecodesign & energy labelling proposals

Local space heaters are the largest product group of the space heating segment, with 285 million units installed in 2015 across the EU¹. The climate emergency requires bold action, and the superficial improvements currently proposed to amend Regulation 2015/1118 are wildly insufficient to ensure any significant energy savings.

We call for a full revision of the text, including:

- Stricter energy efficiency requirements;
- Lower emission limits for air pollutants (NO_x, CO);
- Measures to facilitate repair and upgrade;
- Better information to consumers through the inclusion of electric heaters in the scope of the energy label and reworded information requirements.

Ecodesign Regulation

Refine the definitions

- **Definition (1) - Local space heater**

We are in favour of the change that has been made to the definition. Local space heaters “contribute” to a certain level of human comfort more than they “reach and maintain” it. This new wording could also help avoid circumvention cases highlighted in the preparatory study linked to the previous wording (“reach and maintain”). The definition also clearly states that the device has “the purpose of converting electricity or gaseous or liquid fuels directly into heat”, which de facto excludes energy consuming devices that produce heat as a “secondary effect”, such as lamps.

- **Definitions (8) and (34) - Balanced flue local space heater and balanced flue/closed combustion local space heater**

Both definitions are extremely similar and the difference between both technologies is not clearly apparent. We recommend highlighting the difference between both technologies.

- **Definition (33) Closed combustion, open fronted local space heater**

The definition for these appliances mentions that “the front is closed” when it is supposed to define an “open fronted local space heater”. We recommend revising this definition.

1 p.23 https://ec.europa.eu/energy/sites/ener/files/documents/eia_overview_report_2017_-_v20171222.pdf

Review clause (Article 7)

As developed above, we find that the review clause is essentially the same as in the 2015 Regulation. The requirements for NO_x emissions, the appropriateness of introducing third party certification and resource efficiency requirements should be addressed in the currently revised regulation.

Strengthen the energy efficiency requirements and F-factors

We urge the European Commission to strengthen the efficiency requirements for most of the local space heater categories including electric heaters.

It is clear that the values proposed for most systems in Annex II point 1 (*Specific ecodesign requirements for seasonal space heating efficiency*) are higher because the conversion coefficient has been lowered to 2.1. The energy efficiency requirements are not strengthened in this revision of the regulation, which questions the usefulness of this revision and misses an opportunity to secure energy savings.

We propose to increase the requirements as follows:

Annex II – 1. a (i) and (ii) – **heaters using gas and liquid fuels:**

For open fronted heaters: The efficiency can be increased from 42% to 65% which is the BAT level.

For closed fronted heaters: The efficiency can be increased from 72% to 88% which is the BAT level.

Heaters that are open to the chimney (according to definition in Art. 2.22) should have the same energy efficiency and NO_x emission requirements as currently applicable for open fronted heaters. There is no valid reason for a category of heaters to be exempted from requirements, and heaters without exhaust fume controls should not be put on the market if they cannot meet the efficiency and NO_x requirements that other heaters meet.

For **electric heaters**, the requirements in practice specify the controls required, via the minimum efficiencies set in Annex II and the F-factors set in Annex III.

Our view is that it should be mandatory for electric heaters to be equipped with electronic thermostats of high accuracy, automatic night setback, automatic presence detection setback, and, for fixed heaters with window opening detection, a weekly timer or intelligent auto-programming that detects user need patterns. This could be done by increasing the energy efficiency threshold in Annex II or by amending the F(1), F(2) and F(3) factors in Annex III. The control accuracy of electronic thermostats needs to be below 0.3 °C, for fixed and for portable electric heaters.

Towel rail heaters above 150W should be treated as fixed electric heaters and equipped with a time limiter (time limit could be 5h) and a room thermostat. Towel rail heaters below 150W should also be equipped with a time limiter and a thermostat if they are able to emit heat continuously.

Visibly glowing electric heaters should be treated as electric heaters.

In Annex III, Table 7, the column for visibly glowing electric heaters, which is included in the 2015 Regulation, has disappeared from the new proposal. We wonder whether this is an error or whether it implies that visibly glowing heaters should be treated as respectively fixed and portable electric heaters in Annex III. This needs to be clarified, and in any case those heaters should be equipped with an adequate thermostat.

In general, in Annex III, the accuracy of mechanical thermostats to get an F1 factor above 0 is not specified. Accuracy should be lower than 1°C, as mechanical thermostats are important for non-electric heaters.

Given the uncertainty of the use of the stand-by mode, we propose to change the calculation of auxiliary energy in the F(4) correction factor: heaters should be compliant with the standby Regulations (EU 801/2013 and EU

1275/2008). The idle/thermostat off-mode and standby mode should follow the requirements for simple standby mode (0.5W) and the off-mode requirements (0.5W) when they are off.

For heaters using gas and liquid fuels, the standby losses originate mostly from pilot flames (permanent or non-permanent). Pilot flames are an old, energy-wasting technology that should be phased out. We propose that permanent pilot flames are banned, and that non-permanent pilot flames have a time limitation of 10 minutes or less, which is enough time for the pre-heating they provide in some heaters.

Include stricter emission requirements for NO_x

- Annex II- 2. Specific ecodesign requirement for emissions

For flueless heaters, the NO_x (or NO₂) and CO emission limits need to be compatible for a safe use in an indoor environment. We propose to align the emission limits to those set in the Australian legislation²:

2.5 ngNO₂/J, which is equal to **9 µgNO₂/kWh**.

Limits for CO need to be considered as well.

For heaters using gaseous or liquid fuels the NO_x emissions should be reduced from 130 mg/kWh-input to **50 mg/kWh-input**, which is closer to the BAT value.

Better inform consumers through the product information requirements

- Annex III – Requirements for product information - Section 3b

The current product information requirements in Annex III section 3b are the following:

- (i) **“This product is not suitable for primary heating purposes”** (for flueless/open to chimney heaters)

² See

[http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubStatbook.nsf/93eb987ebadd283dca256e92000e4069/F5B17047B0D9DF40CA258313001B202D/\\$FILE/18-140sra%20authorised.pdf](http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubStatbook.nsf/93eb987ebadd283dca256e92000e4069/F5B17047B0D9DF40CA258313001B202D/$FILE/18-140sra%20authorised.pdf)

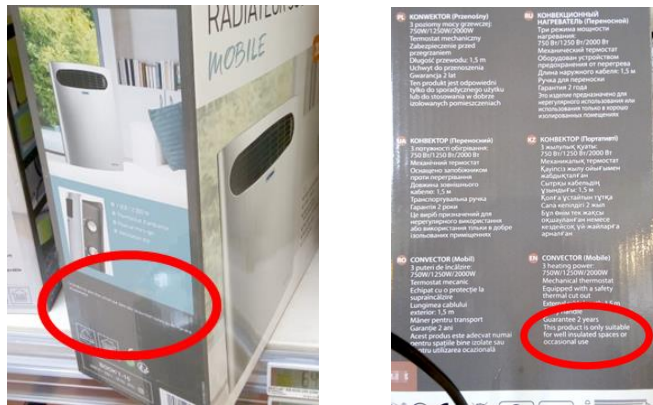
- (ii) **“This product is only suitable for well insulated spaces or occasional use”** (for electric portable heaters)

Improve the legibility of the information requirement

The regulation needs to set strict guidelines to ensure “clear visibility and legibility” of the sentence:

- A **minimum size and colour** for the text
- A requirement to place this text on the **front of the packaging**, as well as on the appliances that are open and on display in the shops.
- A **pictogram** accompanying the text.

A quick search online and in shops shows that these sentences are often not placed “in a prominent position in the packaging”, despite the explicit requirement in Annex II.



Source: ECOS – own production

The current regulation specifies that the sentence should also be “in a language easily understood by the end users of the Member State where the product is marketed”: this requirement needs to be amended and read as follows: “in the national language of the Member State where the product is marketed”. If all food products sold across the EU can have the list of ingredients in the language of the Member State where they are sold, we do not see why this should not be possible for a heating appliance.

Reword the information requirements to better inform consumers

In our opinion, neither of the sentences to be displayed on the packaging (according to the information requirements Annex III section 3b) properly conveys the message intended.

For flueless / open to chimney heaters, the Australian guidelines specify that these are not used in bedrooms or in small rooms such as bathrooms³, and give guidance for minimum ventilation.

³ See

https://www.commerce.wa.gov.au/sites/default/files/atoms/files/flue-less_gas_space_heaters.pdf

We therefore propose to replace the existing sentence with the following:

“More efficient alternatives exist: this product is not suitable to be used as the main source of heat for a room. Only use this product in well ventilated spaces (not less than XX⁴ m³/h). Do not use this product in bedrooms or in small, poorly ventilated spaces such as toilets and bathrooms.”

For portable electric heaters, we propose to replace the existing sentence with the following:

“This product has a low efficiency is not suitable to be used as the main source of heat for a room. It should only be used occasionally, in well insulated spaces. More efficient alternatives exist.”

Include resource efficiency requirements

Material efficiency requirements for this product group have been described as “counterproductive” on the grounds that some of the products, portable electric heaters, are cheap, short-lived products that consumers do not tend to repair. The preparatory study suggests that if there are very few repair operations performed on local space heaters, it might be because of a lack of spare parts or a lack of repair information. This revision of the regulation should contain strict requirements to facilitate repair, to end this culture of disposable, unrepairable products. We call on the European Commission and Member States to take ambitious action on these aspects as suggested below.

Strengthen the provisions on spare parts

Availability of spare parts is a key material efficiency consideration. The review study finds that the life expectancy of portable electric heaters is 9 years (p.114). This is less than the life expectancy of all the other appliances for which resource efficiency provisions were recently adopted (i.e. displays - 10 years, fridges -16 years, dishwashers - 15 years, lighting - 15 years, and washing machines - 11 years, as reported by the Commission). Consequently, it is not understood why resource efficiency provisions were not included for this product group or deemed “counterproductive” by the consultants. Furthermore, as discussed in the consultation forum electronic controls on heaters are vulnerable to damage due to their proximity to heating elements – this means electronic parts are likely to fail before the heater itself stops working. Overall, heating appliances should be durable, long lived and repairable products; we reject the acceptance of the status quo where electric heaters have become cheap disposable products which easier to replace than maintain and repair.

We urge the Commission to introduce ambitious provisions on spare parts availability as described below:

- all spare parts should be available **during at least the average product lifetime**, i.e. 9 years after the last unit is supplied for electric portable heaters, or 15 years for towel heaters.

⁴ XX to be calculated to ensure safe levels of NO₂, CO, and CO₂ in the room, depending on heater size and its emissions.

The EU limit for air quality is 40 Micro-g/m³ NO₂ as annual average (dir. 2008/50/EC). This is also the limit included in the WHO guideline for indoor air (WHO guidelines for indoor air quality: selected pollutants, WHO Europe 2010 p.247). Given a background concentration of 15 µg/m³, a gas appliance should not increase the level with more than 25 µg/m³. With a flue gas production (13% O₂) of 9 m³/hour/ kW, the ventilation for a flueless heater should be 360 m³/hour per mg of NO_x in the flue gas per kW. For a heater of 1 kW that fulfills Australian NO₂ standards, ventilation should be 0.5 m³/hour to keep NO₂ levels below the guideline. CO levels must be considered as well.).

- the **list of spare parts should** include:
 - fans – identified as the part that breaks most often in the preparatory study
 - electronic timers
 - displays
 - thermostats
 - switches and buttons
 - wirings
 - plugs
 - remote controls
 - filters
 - outside housing

- Access to certain spare parts (such as remotes, filters and housings) **should not be restricted to professional repairers but should also be open to end users**. This is because maintenance and repairs can be carried out with little technical ability.

In general, greater clarity is needed on how professional repairers are defined. It is crucial that such a registry is not defined in such a way which excludes credible repair actors (e.g. independent, repair cafes, and social enterprises). We call on European decision-makers to remove barriers to repair, by giving access to repair information and spare parts to all types of repairers. The repair market must not be distorted through unnecessarily restricting the availability of information and spare parts. Should it be decided to maintain the concept of professional repairers, we request that Member States have the proposed official registration systems set up before the entry into force of the repair requirements. The maximum information that manufacturers or national registers can require from repairers should be defined in order to ensure that there are not disproportionate barriers to access such a status:

- **Technical competence:** It should be specified that a self-declaration from the repairer stating that the repairer has the technical competence to carry out the repair is sufficient. Further optional information can be requested from the repairer to i) state their compliance with the applicable regulations for repairers of electrical equipment in the Member States where they operate, and ii) to provide reference to their professional repairer registration in an official system, where such system exists in the Member States concerned, but the absence of this information shall not prevent the recognition of the repairer as professional.

- **Liability insurance:** It should be specified that a self-declaration from the repairer stating that they have appropriate insurance to cover liabilities resulting from their activity, regardless of whether this is required by the Member State, is sufficient.

It is also important to clarify the basis upon which national registries, manufacturers, importers or authorised representatives can accept or refuse the registration.

- Manufacturers, importers or authorised representatives shall ensure that the spare parts can be replaced with the use of **commonly available tools**⁵ and without permanent damage to the appliance – not only limited to the end-of life actions under WEEE.
- A maximum delivery time of **one week** for spare parts should also be introduced.

Enable the upgradeability of local space heaters

The preparatory study highlights the added value of upgradability for controls, as more and more of local space heaters are equipped with electronic controls and displays. We urge the European Commission and Member States to set requirements for local space heaters to be designed with modularity in mind, and controls to be upgradable to more advanced technologies along the product lifetime.

Include provisions on design for dismantling, recycling and recovery

The revised Ecodesign Regulation for local space heaters should contain more ambitious requirements on design for dismantling, recycling and recovery. We propose the following text to be included:

“Manufacturers, importers or their authorised representatives shall ensure that joining, fastening or sealing techniques do not prevent the removal, using commonly available tools, of the components indicated in point 1 of Annex VII of Directive 2012/19/EU on WEEE.

Manufacturers, importers or their authorised representatives shall, without prejudice to point 1 Article 15 of Directive 2012/19/EU, make available the dismantling information needed to access, any of the products components referred to in point 1 of Annex VII of Directive 2012/19/EU on a free-access website.

This dismantling information shall include the sequence of dismantling steps, tools or technologies needed to access the targeted components.

The end of life information shall be available until at least 15 years after the placing on the market of the last unit of a product model.”

Third party conformity assessment

Heaters using gas and liquid fuels are tested by third party laboratories for CPR and GAR requirements (for gas heaters). In practice, the results of these tests are also used to check conformity with the ecodesign requirements. We therefore propose that the efficiency and air emissions of heaters using gas and liquid fuels is tested by notified bodies. This can be done without requiring additional tests, as the notified bodies can be the same for CPR, GAR and ecodesign.

⁵ Commonly available tool should be defined in line with the basic tools class, Class A of prEN 45554 Annex 4.4.

Energy labelling – Discussion paper

As we expressed in our comment from March 2019 to the first version of the discussion paper, labels should give consumers the opportunity to compare different technologies for the same purpose in a simple manner. This position was shared by most stakeholders at the consultation forum meeting.

We support the proposal to combine, on the same label, air-to-air heat pumps ≤ 12 kW and local space heaters ≤ 50 kW, **if this combined label includes electric heaters**. Electric heaters and electric heat pump heaters use the same energy source (electricity) and for the same purpose (space heating), and consumers are currently not informed of the inefficiency of electric heaters. Electric heaters represent 71% of the product group dubbed “local space heaters” and have the largest potential for energy savings: of the 94TWh/year primary energy savings expected for local space heaters in 2030, 63TWh/year (i.e. 67%) are from electric heaters.

Concerning the **efficiency figure**, we find it clear as it is, and we do not see any added value in inverting it.

We are, however, in favour of adding the **energy efficiency number** to the energy label in proximity of the arrow, as we think it will increase the granularity otherwise reduced by the combined label.

Regarding the proposal in Annex II, we find it is only valid if electric local space heaters are included. We agree with the general proposal, but the limits of the label classes could be more thoroughly discussed: the BAT of each main technology should be 1 percentage point above a label class limit to enable a distinction between the BAT and least efficient models of each technology. Our proposal to achieve this in the table below:

Energy efficiency class	With electric local space heaters	Technologies
A	$\eta_{s,h} \geq 292\%$	Heat pumps
B	$292\% > \eta_{s,h} \geq 230\%$	Heat pumps
C	$230\% > \eta_{s,h} \geq 136\%$	-Heat pumps -Best solid fuel space heaters (BAT = pellet stoves)
D	$136\% > \eta_{s,h} \geq 88\%$	-Solid fuel space heaters -Best gas and oil space heaters (above the BAT in 2015/1188)
E	$88\% > \eta_{s,h} \geq 65\%$	-Gas and oil space heaters -Best open fronted local space heaters for biomass, but for gas and oil only NBAT
F	$65\% > \eta_{s,h} \geq 46\%$	-Open fronted local space heaters -Best electric space heaters*
G	$46\% > \eta_{s,h}$	-Electric space heaters -Open fronted and open to chimney space heaters**

* The ecodesign requirements proposed to be amended will make it possible for the most advanced electric fixed and portable, and underfloor and towel heaters to reach 46%. However, we disagree with the F-factors for the efficiency calculations that unfairly favour portable space heaters.

** We do not agree with the proposal (and current situation) whereby gas and oil heaters open to the chimney have no energy efficiency requirements.

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