Brussels, XXX
[…](2019) XXX draft

COMMISSION REGULATION (EU) …/…

of XXX

on amending Regulation (EU) 2015/1188 with regards to the ecodesign requirements for local space heaters

(Text with EEA relevance)

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COMMISSION REGULATION (EU) …/…

of XXX

on amending Regulation (EU) 2015/1188 with regards to the ecodesign requirements for local space heaters

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to Article 114 of the Treaty on the Functioning of the European Union,

Having regard to Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products[1], and in particular point 1 of Article 15 thereof,

Whereas:

(1) Pursuant to Directive 2009/125/EC the Commission should set ecodesign requirements for energy-related products which account for significant volumes of sales and trade in the Union and which have a significant environmental impact and present significant potential for improvement through design in terms of their environmental impact, without entailing excessive costs.

(2) The Communication from the Commission COM(2016)773[2] (ecodesign working plan) established by the Commission in application of point 1 of Article 16 of Directive 2009/125/EC sets out the working priorities under the ecodesign and energy labelling framework for the period 2016-2019. Local space heaters are among the energy-related product groups to be considered as priorities for the undertaking of preparatory studies and eventual adoption of measures.

(3) Measures from the ecodesign working plan have an estimated potential to deliver a total in excess of 260 TWh of annual final energy savings in 2030, which is equivalent to reducing greenhouse gas emissions by approximately 100 million tonnes per year in 2030. Local space heaters is one of the product groups listed in the Working Plan.

(4) The Commission established ecodesign requirements for the local space heaters in Commission Regulation (EU) 2015/1188[3] and pursuant to that Regulation, the Commission should regularly review the Regulation in the light of technological progress.

(5) The Commission has reviewed Commission Regulation (EU) 2015/1188 and analysed the technical, environmental and economic aspects of local space heaters as well as real-life user behaviour. The review was carried out in close cooperation with stakeholders and interested parties from the Union and third countries. The results of the review were made public and presented to the Consultation Forum established by Article 18 of Directive 2009/125/EC.

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1 OJ L 285, 31.10.2009, p. 10.

2 Communication from the Commission. Ecodesign working plan 2016-2019, COM(2016)773 final, 30.11.2016.

3 OJ L 193, 21.07.2015, p.76.

(6) The review study shows the need to clarify and update the scope of Regulation (EU) 2015/1188.

(7) The annual final energy consumption of products subject to this Regulation in the Union was estimated at 673 PJ (40,0 Mtoe) in the EU in 2010, corresponding to 75,3 million tonnes of CO2 equivalent. In a business as usual scenario the energy consumption is estimated to increase to 929,1 PJ (43,1 Mtoe) in the EU in 2030 and 765,9 PJ (33,4 Mtoe) in the EU in 2040.

(8) The environmental aspects of local space heaters have been identified as significant for the purposes of this Regulation are energy use in the use-phase.

(9) To improve the effectiveness and credibility of the Regulation and to protect consumers, products that automatically alter their performance in test conditions to improve the declared parameters should be prohibited.

(10) A review of this Regulation should assess the appropriateness and effectiveness of its provisions in achieving its goals. The timing of the review should be sufficient for all provisions to be implemented and show an effect on the market.

(11) The measures provided for in this Regulation are in accordance with the opinion of the Committee established by Article 19(1) of Directive 2009/125/EC.

HAS ADOPTED THIS REGULATION:

Article 1

Amendments to Regulation (EU) 2015/1188

Regulation (EC) No 1275/2008 is amended as follows:

(1) The title is replaced by the following:

'**Commission Regulation (EU) 2015/1188 of 28 April 2015 laying down ecodesign requirements for local space heaters pursuant to Directive 2009/125/EC of the European Parliament and of the Council**';

(2) Article 1 is replaced by the following:

'Article 1

Subject matter and scope

This Regulation establishes ecodesign requirements for the placing on the market and putting into service of domestic local space heaters with a nominal heat output of 50 kW or less and commercial local space heaters with a nominal heat output of the product or of a single segment of 300 kW or less.

This Regulation shall not apply to:

(a) local space heaters using a vapour compression cycle or sorption cycle for the generation of heat driven by electric compressors or fuel;

(b) local space heaters that are specified for outdoor use only;

(c) local space heaters of which the direct heat output is less than 6 % of the combined direct and indirect heat output at nominal heat output;

(d) air heating products;

(e) sauna stoves;

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(f) cooking appliances.';

(3) Article 2 is amended as follows:

(a) definition (1) is replaced by the following:

'(1) 'local space heater' means a device that is equipped with one or more heat generators with the purpose of converting electricity or gaseous or liquid fuels directly into heat to contribute to a certain level of human thermal comfort in the enclosed space in which it is situated by direct heat transfer, possibly combined with a heat output to other spaces or with heat transfer to a fluid;';

(b) definition (6) is replaced by the following:

'(6) 'commercial local space heater' means either a luminous commercial local space heater or tube commercial local space heater;';

(c) definition (7) is replaced by the following:

'(7) 'open combustion, open fronted local space heater' means a local space heater, using gaseous or liquid fuels, of which the fire bed and combustion gases are not sealed from the space in which the product is fitted, where the air intake cannot be adjusted and which is sealed to a chimney or fireplace opening or requires a flue duct for the evacuation of products of combustion;';

(d) definition (8) is replaced by the following:

'(8) 'balanced flue local space heater' means a local space heater, using gaseous or liquid fuels, of which the fire bed and combustion gases are sealed from the space in which the product is fitted and which is sealed to a chimney or fireplace opening or requires a flue duct for the evacuation of products of combustion;';

(e) definition (9) is replaced by the following:

'(9) 'electric portable local space heater' means an electric local space that is equipped with a cord supply and plug by the manufacturer which are designed to be portable in order to be operated in different rooms or locations. A portable appliance with features which can be used to fix it to a wall and/or floor is considered an electric fixed local space heater;';

(f) definition (12) is replaced by the following:

'(12) 'electric underfloor local space heater' means an electric local space heater designed to be used while incorporated in the building structure or building finishing including self-regulating heating cables and mats;';

(g) definition (13) is deleted;

(h) definition (17) is replaced by the following:

'(16) 'luminous commercial local space heater' means a local space heater, using gaseous fuel which is equipped with a burner; which is to be installed above head level, directed towards the place of use so that the heat emission of the burner, being predominantly infrared radiation,

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directly warms the subjects to be heated and which emits the products of combustion in the space where it is situated;';

(i) definition (18) is replaced by the following:

'(17) 'tube commercial local space heater' means a local space heater, using gaseous or liquid fuel, which is equipped with a burner; which is to be installed above head level, near the subjects to be heated, which heats the space primarily by infrared radiation from the tube or tubes heated by the internal passage of products of combustion and of which the products of combustion are to be evacuated through a flue duct;';

(j) definition (23) is replaced by the following:

'(22) 'air heating product' means a device that:

(a) incorporates or provides heat to an air-based heating system;

(b) is equipped with one or more heat generators; and

(c) may include an air-based heating system for supplying heated air directly into the heated space by means of an air-moving device.

A heat generator designed for an air heating product and an air heating product housing designed to be equipped with such a heat generator shall, together, be considered as an air heating product;';

(k) the following definitions are added:

'(31) 'towel rail' means a fixed local space heater which is equipped with additional features to hold and dry or warm towels;

(32) 'cooking appliance' means an appliance or part of an appliance which incorporates one or more cavities using electricity and/or gas in which food is prepared by use of a conventional or fan-forced mode;

(33) 'closed combustion, open fronted local space heater' means a local space heater, using gaseous or liquid fuels, of which the combustion gases are not sealed from the space in which the product is fitted, but the front is closed and the air intake from the room can be adjusted. The product is sealed to a chimney or fireplace opening or requires a flue duct for the evacuation of products of combustion;

(34) 'balanced flue/closed combustion local space heater' means a local space heater, using gaseous fuel, of which the combustion chamber is closed by a glass or metal pane and is sealed from the space in which the product is fitted, and which requires a flue system for the evacuation of the products of combustion.';

(4) The following Article is added after Article 5:

'Article 6

Circumvention and software updates

The manufacturer, importer or authorised representative shall not place on the market products designed to be able to detect they are being tested (e.g. recognising the test conditions or test cycle), and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level for any of the parameters declared by the manufacturer, importer or authorised representative in the technical documentation or included in any of the documentation provided.

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The energy consumption of the product and any of the other declared parameters shall not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to update. No performance change shall occur as a result of rejecting the update.

A software update shall never have the effect of changing the product's performance in a way that makes it non-compliant with the ecodesign requirements applicable for the declaration of conformity.'

(5) Article 6 is replaced by the following:

'Article 7

Review

The Commission shall review this Regulation in the light of technological progress and shall present the results of this review, including, if appropriate, a draft revision proposal, to the Consultation Forum referred to in Article 18 of Directive 2009/125/EC no later than *[OP – please insert date - five years after its entry into force*].

This review shall in particular assess:

– whether it is appropriate to set stricter ecodesign requirements for energy efficiency and for emissions of nitrogen oxides (NO_x);

– whether the verification tolerances should be modified;

– the validity of the correction factors used for assessing the seasonal space heating energy efficiency of local space heaters, — the appropriateness of introducing third party certification the appropriateness of fume and odour removal requirements;

– whether it is appropriate to include outdoor heaters in the scope;

– the appropriateness to set additional resource efficiency requirements in accordance with the objectives of the circular economy, including whether more spare parts should be included;

– whether the lifetime of local space heaters has decreased due to the introduction of more advanced control and the appropriateness of introducing requirements of a minimum lifetime and/or spare parts availability and/or upgradeability of controls.';

(6) Annex I is amended as follows:

Definition (2) is replaced by the following:

'(2) 'conversion coefficient' (CC) means a coefficient reflecting the estimated 47,6 % average EU generation efficiency, as established in Annex IV of Directive 2012/27/EU of the European Parliament and of the Council[4]. The value of the conversion coefficient is CC = 2,1;'

(7) Annex II is amended as follows:

(a) point 1 is replaced by the following:

[4] Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJ L 315, 14.11.2012, p. 1).

‘1. Specific ecodesign requirements for seasonal space heating energy efficiency

(a) Local space heaters shall comply with the following requirements from 1 January 2022:

(i) seasonal space heating energy efficiency of open combustion, open fronted local space heaters using gaseous or liquid fuel shall not be less than 42 %;

(ii) seasonal space heating energy efficiency of closed fronted, open combustion local space heaters and balanced flue, closed combustion local space heaters using gaseous or liquid fuel shall not be less than 72 %;

(iii) seasonal space heating energy efficiency of electric portable local space heaters shall not be less than 43,6 %;

(iv) seasonal space heating energy efficiency of electric fixed local space heaters with a nominal heat output above 250 W shall not be less than 45,6 %;

(v) seasonal space heating energy efficiency of electric fixed local space heaters with a nominal heat output equal or below 250 W shall not be less than 41,6 %;

(vi) seasonal space heating energy efficiency of electric storage local space heaters shall not be less than 41,6 %;

(vii) seasonal space heating energy efficiency of electric underfloor local space heaters shall not be less than 45,6 %;

(viii) seasonal space heating energy efficiency of electric visibly glowing radiant local space heaters with a nominal heat output above 1,2 kW shall not be less than 42,6 %;

(ix) seasonal space heating energy efficiency of electric visibly glowing radiant local space heaters with a nominal heat output equal or below 1,2 kW shall not be less than 38,6 %;

(x) seasonal space heating energy efficiency of luminous local space heaters shall not be less than 85 %;

(xi) seasonal space heating energy efficiency of tube local space heaters shall not be less than 74 %;

(xii) seasonal space heating energy efficiency of towel rail local space heaters with a nominal heat output above 250 W shall not be less than 44,6 %;

(xiii) seasonal space heating energy efficiency of towel rail local space heaters with a nominal heat output equal or below 250 W shall not be less than 40,6 %.

For products that contain the control in the package, the ecodesign requirements apply to the product tested with the controls contained in the package.’;

(b) the following is added to point 3(a)(i):

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‘(6) for flueless local space heaters, the NO_x emissions expressed in mg/kWh_{input} based on GCV, measured and calculated in accordance with Annex III;’;

(c) the following is added to point 3(a):

‘(iii) the instruction manual for end-users, free access websites of manufacturers and the product packaging shall incorporate the following in such a way to ensure clear visibility and legibility and in a language easily understood by the end-users of the Member State where the product is marketed:

(1) for products that incorporate the controls: ‘This product contains the controls necessary for use and installation in accordance with the ecodesign requirements’

(2) for products that do not incorporate the controls:

– ‘This product cannot be installed or used alone, but needs an additional control to support the necessary functions of the product.’

– ‘This products is a [insert product category] and needs to be installed with a separate control in order to function. The control needs as a minimum the following functions:

[list of functions necessary to comply with the ecodesign requirements]

to achieve the energy efficiency class claimed on the energy label.’;

(d) the following is added to point 3:

‘(c) From 1 January 2022 the following product information for all the controls for local space heaters shall be provided:

(i) ‘This control is suitable for local heaters of the category [insert product category].’

(ii) ‘This controls has the following functions:

[list of functions necessary to comply with the ecodesign requirements].’;

(8) Annex III is amended as follows:

(a) point 5(a) is replaced by the following:

‘(a) The seasonal space heating energy efficiency of all local space heaters except commercial local space heaters is defined as:

$$\eta_S = \eta_{S,on} - 10\ \% + F(1) + F(2) + F(3) - F(4) - F(5)$$

The seasonal space heating energy efficiency of commercial local space heaters is defined as:

$$\eta_S = \eta_{S,on} - F(1) - F(4)$$

Where:

– $\eta_{S,on}$ is the seasonal space heating energy efficiency in active mode, expressed in %, calculated as set out in point 5(b);

– $F(1)$ is a correction factor accounting for a positive contribution to the seasonal space heating energy efficiency of electric storage local space heaters due to adjusted contributions for options for heat storage and output; and a negative contribution to seasonal space heating efficiency for commercial local space heaters due to adjusted contributions for options for the heat output, expressed in %;

– $F(2)$ is a correction factor accounting for a positive contribution to the seasonal space heating energy efficiency due to adjusted contributions of controls of indoor heating comfort, the values of which are mutually exclusive, cannot be added to each other, expressed in %;

– $F(3)$ is a correction factor accounting for a positive contribution to the seasonal space heating energy efficiency due to adjusted contributions of controls for indoor heating comfort the values of which can be added to each other, expressed in %;

– $F(4)$ is a correction factor accounting for a negative contribution to the seasonal space heating energy efficiency by auxiliary electricity consumption, expressed in %;

– $F(5)$ is a correction factor accounting for a negative contribution to the seasonal space heating energy efficiency by energy consumption of a permanent pilot flame, expressed in %.';

(b) Point 5(b) is replaced by the following:

'(b) The seasonal space heating energy efficiency in active mode is calculated as:

For all local space heaters except electric local space heaters and commercial local space heaters:

$$\eta_{S,on} = \eta_{th,on}$$

Where:

– $\eta_{th,nom}$ is the useful efficiency at nominal heat output, based on NCV.

For electric local space heaters:

$$\eta_{S,on} = CC^{-1} \cdot \eta_{th,on}$$

Where:

– CC is the electric to primary energy 'conversion coefficient'.

– $\eta_{th,on}$ for electric local space heaters is 100 %.

For commercial local space heaters:

$$\eta_{S,on} = \eta_{S,th} \cdot \eta_{S,RF}$$

Where:

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– $\eta_{S,th}$ is the weighted thermal efficiency, expressed in %;

– $\eta_{S,RF}$ is the emission efficiency, expressed in %.

For luminous local space heaters, $\eta_{S,th}$ is 85,6 %;

For tube local space heaters:

$$\eta_{S,th} = (0{,}15 \cdot \eta_{th,nom} + 0{,}85 \cdot \eta_{th,min}) - F_{env}$$

Where:

– $\eta_{th,nom}$ is the thermal efficiency at nominal heat output, expressed in %, based on GCV;

– $\eta_{th,min}$ is the thermal efficiency at minimum heat output, expressed in %, based on GCV;

– F_{env} are the envelope losses of the heat generator, expressed in %;

If the heat generator of the tube local space heater is specified by the manufacturer or by the supplier to be installed in the indoor space to be heated, the envelope losses are 0 (zero).

If the heat generator of the tube local space heater is specified by the manufacturer or by the supplier to be installed outside the heated area, the envelope loss factor depends on the thermal transmittance of the envelope of the heat generator according to Table 4.

Table 4

Envelope loss factor of the heat generator

Thermal transmittance of envelope (U)	
U ≤ 0,5	2,2 %
0,5 < U ≤ 1,0	2,4 %
1,0 < U ≤ 1,4	3,2 %
1,4 < U ≤ 2,0	3,6 %
U > 2,0	6,0 %

The emission efficiency of commercial local space heaters is calculated as follows:

$$\eta_{S,RF} = ((0{,}94 \cdot RF_S) + 0{,}19) / ((0{,}46 \cdot RF_S) + 0{,}45)$$

Where:

– RF_S is the radiant factor of the commercial local space heater, expressed in %.

For all commercial local space heaters except tube systems:

$$RF_S = 0{,}15 \cdot RF_{nom} + 0{,}85 \cdot RF_{min}$$

Where:

– RF_{nom}, is the radiant factor at nominal heat output, expressed in %;

– RF_{min}, is the radiant factor at minimum heat output, expressed in %.

For tube systems:

$$RF_S = \sum_{i=1}^{n} (0{,}15 \cdot RF_{nom,i} + 0{,}85 \cdot RF_{min,i}) \cdot P_{heater,i} / P_{system}$$

Where:

– $RF_{nom,i}$ is the radiant factor per tube segment at nominal heat output, expressed in %;

– $RF_{min,i}$ is the radiant factor per tube segment at minimum heat output, expressed in %;

– $P_{heater,i}$ is the heat output per tube segment, expressed in kW, based on GCV;

– P_{system}, is the heat output of the complete tube system, expressed in kW, based on GCV.

The above equation only applies if the construction of the burner, tubes and reflectors of the tube segment as applied in the tube system is identical to a single tube local space heater and the settings that determine the performance of a the tube segment are identical to those of a single tube local space heater.';

(c) Table 6 is replaced by the following:

'Table 6

Correction factor *F*(1) for commercial local space heaters

If the heat output control type of the product is:	*F*(1):	With the following limits:
Single stage	$F(1) = 5\%$	
Two stage	$F(1) = 5\ \% - (2{,}5\ \% \cdot (P_{nom} - P_{min})/0{,}3 \cdot P_{nom})$	$2{,}5\% \leq F(1) \leq 5{,}0\%$
Modulating	$F(1) = 5\ \% - (5\ \% \cdot (P_{nom} - P_{min})/0{,}4 \cdot P_{nom})$	$0\ \% \leq F(1) \leq 5{,}0\%$

';

(d) Table 7 is replaced by the following:

'Table 7

Correction factor *F*(2)

If controls for indoor heating comfort type of the product is (only one option applies):	*F*(2)					
	For electric local space heaters					For local space heaters using gaseous or liquid fuel
	Portable	Fixed	Storage	Underfloor	Towel	
Single stage heat output. No room temperature control	0,0 %	0,0 %	0,0 %	0,0 %	0,0 %	0,0 %

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Two or more manual stages. No temperature control	1,0 %	0,0 %	0,0 %	0,0 %	2,0 %	1,0 %
With mechanic thermostat room temperature control	6,0 %	1,0 %	0,5 %	1,0 %	2,0 %	2,0 %
With electronic room temperature control	7,0 %	3,0 %	1,5 %	3,0 %	2,0 %	4,0 %
With electronic room temperature control plus day timer	8,0 %	5,0 %	2,5 %	5,0 %	5,0 %	6,0 %
With electronic room temperature control plus week timer	9,0 %	7,0 %	3,5 %	7,0 %	7,0 %	7,0 %

’;

(e) Table 8 is replaced by the following:

‘*Table 8*

Correction factor *F*(3)

If controls for indoor heating comfort type of the product is (multiple options may apply):	*F*(3)					
	For electric local space heaters					For local space heaters using gaseous or liquid fuel
	Portable	Fixed	Storage	Underfloor	Towel	
With presence detection	1,0 %	0,0 %	0,0 %	0,0 %	0,0 %	1,0 %
With open window detection	0,0 %	1,0 %	0,5 %	1,0 %	1,0 %	1,0 %
With distance control option	0,0 %	1,0 %	0,5 %	1,0 %	0,0 %	1,0 %
With adaptive start control	0,0 %	1,0 %	0,5 %	1,0 %	1,0 %	0,0 %
With working time limitation	0,0 %	0,0 %	0,0 %	0,0 %	1,0 %	0,0 %
With black bulb sensor	0,0 %	0,0 %	0,0 %	0,0 %	0,0 %	0,0 %

’;

(f) point 5(f) is replaced by the following:

‘(f) The auxiliary electricity use correction factor *F*(4) is calculated as:

This correction factor takes into account the auxiliary electricity use during on-mode and standby-mode operation.

For electric local space heaters the correction is calculated as follows:

The auxiliary electricity use correction factor *F*(4) is calculated as:

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$$F(4) = CC \cdot \alpha \cdot (el_{sb} + el_{idle} + el_{off}) \cdot 100 / P_{nom}$$

Where:

– el_{sb} is the standby electric power consumption, expressed in kW;

– P_{nom} is the nominal heat output of the product, expressed in kW;

– α is a factor taking into account the electricity during standby-mode, off-mode and idle-mode:

  – if the product complies with the following limit values, α is by default 0 (zero):

    $el_{off} \leq 0{,}2$ W

    $el_{sb} \leq 0{,}5$ W

    $el_{idle} \leq 1{,}0$ W

  – if the product does not comply with the limit values above, α is by default 1,3.

For local space heaters using gaseous or liquid fuels the auxiliary electricity use correction is calculated as follows:

$$F(4) = CC \cdot (0{,}2 \cdot el_{max} + 0{,}8 \cdot el_{min} + 1{,}3 \cdot el_{sb}) \cdot 100 / P_{nom}$$

Where:

– el_{max} is the electric power consumption at nominal heat output, expressed in kW;

– el_{min} is the electric power consumption at minimum heat output, expressed in kW. In case the product does not offer a minimum heat output the value for the electric power consumption at nominal heat output shall be used;

– el_{sb} is the electric power consumption of the product while in standby mode, expressed in kW;

– P_{nom} is the nominal heat output of the product, expressed in kW.

For commercial local space heaters the auxiliary electricity use correction factor is calculated as follows:

$$F(4) = CC \cdot (0{,}15 \cdot el_{max} + 0{,}85 \cdot el_{min} + 1{,}3 \cdot el_{sb}) \cdot 100 / P_{nom}$';$$

(g) point 5(g) is deleted.

Article 2

Entry into force and application

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 1 January 2022. However, Article 1(4) shall apply from *[OP – please insert the day of entry into force of this Regulation]*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

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Done at Brussels,

For the Commission
Jean-Claude JUNCKER
The President

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