Position paper

Draft ecodesign and energy labelling regulations for space and combination heaters

Brussels, September 2021

It is estimated that the first ecodesign and energy labelling regulations applied from 2015 have enabled savings in CO2 emissions of about 20 Mt in 2020[1]. Coolproducts campaigners[2] calculated that an ambitious revision of these regulations, banning the fossil fuel fired appliances by 2025, would allow annual CO_2 savings of 110Mt in 2050. This is two thirds of the total emissions reduction needed from residential and public buildings to achieve climate neutrality by 2050.

The proposals put forward by the European Commission to revise the regulations are not as ambitious:

- **The proposed revised ecodesign requirements fail to set an end date for fossil fuel and inefficient electric heating systems**, which could stay on the market for the foreseeable future. Given the average technical lifetime of gas and oil boilers (22 to 25 years), this means that EU households will be locked in with technologies using fossil fuels in 2050, when the EU should have reached climate neutrality.
  To be coherent with the climate neutrality and GHG emission reduction targets the minimum requirement for seasonal space heating energy efficiency at 110%[3] for all technologies.

- **The proposed revised energy labelling requirements are a great improvement** compared to the current situation.
  The proposed rescaled energy label downgrading the fossil fuel fired appliances in the bottom classes of the scale should enter into force without delays, at the latest in 2023.

1 VHK (2019), Space and combination heaters - Ecodesign and Energy Labelling Review Study. & VHK (2019), Water Heaters and Storage Tanks - Ecodesign and Energy Labelling Review Study

2 https://www.coolproducts.eu/coolproducts-reports/the-eu-must-phase-out-new-fossil-fuel-heaters-by-2025-or-will-not-reach-climate-neutrality-on-time/

3 This would phase out inefficient electric and fossil fuel fired appliances

ECOS - Environmental Coalition on Standards
Rue d'Edimbourg 26 · 1050 Brussels · Belgium
T +32 2 894 46 68 · info@ecostandard.org · ww.ecostandard.org

Proposal for the Ecodesign Regulation

Ecodesign requirements for seasonal space heating energy efficiency

The requirements proposed in Annex II for seasonal space heating energy efficiency are not ambitious or forward looking enough.

Ecodesign requirements

1. REQUIREMENTS FOR SEASONAL SPACE HEATING ENERGY EFFICIENCY

(a) From [date] the seasonal space heating energy efficiency ηs shall be equal to or larger than

Space heater type	seasonal space heating energy efficiency
Fuel boiler	88%
B1 Fuel boiler ≤10 kW & Fuel combi boiler ≤30 kW	77%
Electric boiler	43%
Cogeneration space heater	100%
Electric heat pump, MT (Medium Temperature)	130%
Thermally Driven (TD) heat pump, MT	115%
Electric heat pump, LT (Low Temperature)	155%
Hybrid space heater, MT*	110%

*=

(b) From [date] space heaters with pilot flame shall no longer be allowed;

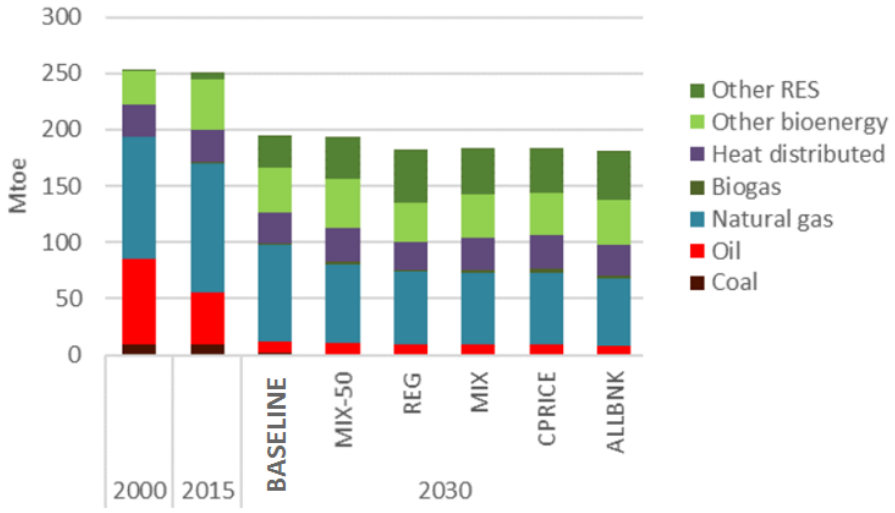
(c) From [date] the contribution of the heat pump in the hybrid space heater shall be at least 25% of the seasonal heating energy output, in kWh/a.

The current proposal foresees no end to the sales of inefficient electric appliances and appliances fired with gas or oil, and this directly jeopardises the realisation of the target to reduce the GHG emissions by 55% in 2030. To achieve this target the EU must reduce its overall greenhouse gas emissions from 3700 Mt in 2018 to 2100 in 2030[4]. If distributed equally by sector, it would mean that direct emissions from buildings (from onsite fuel use, except electricity and district heating) need to be reduced from 440 Mt in 2018 to 255 in 2030 (i.e., a 42% reduction), but buildings are expected to outperform other sectors that are harder to decarbonise.

The official scenarios published by the Commission assume that buildings will *generate the largest (amongst other final energy consumption sectors) emission reduction levels by 2030 (compared to 2015), i.e., 61% to 65% in the residential sector and 54-61% in services*[5]. To achieve this goal, several paths are considered, but the indisputable conclusion is that fuel switch is the key factor for the decarbonisation present in all scenarios. A decline in the use of all fossil fuels for heating (even gas) is assumed by 2030 and then amplified until 2050. Concretely, it gives the **EU a decade to wipe out nearly all oil and coal heaters and slash natural gas use for heating by about 40% compared to the current situation**.

[4] UK excluded and land-use change included

[5] Impact assessment - Stepping up Europe's 2030 climate ambition, investing in a climate-neutral future for the benefit of our people - https://ec.europa.eu/clima/sites/clima/files/eu-climate-action/docs/impact_en.pdf



Share of heating fuels (electricity excluded) used in the EU residential and tertiary sectors in 2000, 2015, 2030 baseline scenario[6], and various 2030 target-compatible scenarios analysed in the impact assessment[Error! Bookmark not defined.]*Error! Bookmark not defined.*

Furthermore, in March 2021, the International Energy Agency published its Net Zero by 2050[7] report concluding that 'bans on new fossil fuel boilers need to start being introduced globally in 2025'. This is inline with the EU scenarios for a bold reduction of the use of fossil fuels for heating.

Some EU countries and local authorities have already introduced measures to ban new fossil fuel boilers in order to meet their climate targets[8]. The lack of ambition of the Commission will make it more complicated for them to introduce measures banning certain types of appliances without disrupting the single market.

We urge the Commission to be coherent with its climate neutrality and GHG emission reduction targets and set a minimum requirement for seasonal space heating energy efficiency at 110%[9] for all technologies, applicable no later than 2025, as recommended by the IEA.

[6] The baseline scenario includes already the assumption of effective policies leading to the achievement of all EU targets prior to the new -55% target for 2030, and a significant fuel switch in the building sector.

[7] https://www.iea.org/reports/net-zero-by-2050 The report states that "In buildings, bans on new fossil fuel boilers need to start being introduced globally in 2025, driving up sales of electric heat pumps"

[8] https://www.coolproducts.eu/eu-ambition/eu-commission-paralysis-delays-phase-out-of-fossil-fuel-boilers/

[9] This would phase out inefficient electric and fossil fuel fired appliances

Proposal for the Energy Labelling Regulation

We strongly support the proposal for a rescaled energy labelling scale and the energy efficiency classes proposed. This new energy label **should be adopted in 2022 and enter into force without delays, on 1st January 2023 at the latest .**

Seasonal space heating energy efficiency classes of heaters in medium-temperature (MT) and low-temperature (LT) applications, η in %

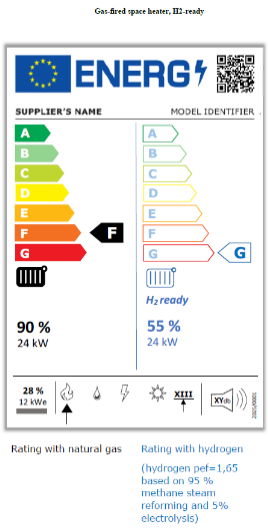
Seasonal space heating energy efficiency class	Seasonal space heating energy efficiency class **MT regime**	Seasonal space heating energy efficiency class **LT regime**
A	$\eta \geq 210$	$\eta \geq 290$
B	$180 \leq \eta < 210$	$240 \leq \eta < 290$
C	$150 \leq \eta < 180$	$215 \leq \eta < 240$
D	$120 \leq \eta < 150$	$190 \leq \eta < 215$
E	$100 \leq \eta < 120$	$172 \leq \eta < 190$
F	$90 \leq \eta < 100$	$155 \leq \eta < 172$
G	$\eta < 90$	<155

While Member States will indeed be able to use this new scale to set their own limits for new and existing buildings and incentive levels for supporting innovation, we doubt that the energy label by itself will be a sufficiently powerful driver to achieve the needed fuel switch to decarbonise the building stock. Downgrading condensing fuel boilers, previously labelled A or A+, to the bottom classes of the scale, means that they are not actively promoted anymore, but they will still be available on the market, which is no longer acceptable given the scale of the climate emergency[10].

We therefore insist on the need to set strict energy efficiency requirements in the ecodesign regulation so that inefficient electric space and water heaters and gas boilers are phased out by 2025.

The role of hydrogen for space heating

Using hydrogen (H_2) for space heating is nonsense. Direct electrification through heat pumps is consistently more efficient and economical, and renewable hydrogen should only be used in sectors that are hard to decarbonize. Consumers should not be misled to choose a gas boiler by the indications of H_2 readiness, therefore we do not support the display of such information on the energy label.
Should there be a majority in favour of mentioning H_2-readiness on the label, we could only support the current proposal to accompany it with the energy efficiency scale, for its inefficiency to be clearly displayed. On a side note, we also want to highlight that a recent study has shown that the type of hydrogen that is considered here ('blue-hydrogen' based on 95%



[10] Climate change widespread, rapid, and intensifying – IPCC, 2021 https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/

methane steam reforming) could have a higher environmental impact than directly burning methane (i.e., 'natural gas')[11].

Contact :
ECOS – Environmental Coalition on Standards
Mélissa Zill, *melissa.zill@ecostandard.org*

[11] How green is blue hydrogen ? https://onlinelibrary.wiley.com/doi/full/10.1002/ese3.956