



Brussels, 27 March 2020

WG 1 - Hydrogen Position on the discussion paper

These comments reflect the position of ECOS, the EEB and the Coolproducts campaign regarding the [discussion document](#) shared in the context of the [study](#) providing technical assistance for the revision of space and water heater regulations. ECOS, the EEB and the Coolproducts campaign followed the preparatory study for the review of the water heater Ecodesign and Energy Labelling Regulations and provided [written comments](#) in May 2019. We also issued a [discussion document](#) outlining our vision for the revision of the regulations on space heating.

1.3 – Ecodesign and energy labelling requirements in support of the decarbonisation of the gas-grid

Question 1: *Based on today's technical, economic and environmental knowledge, do we recommend to leave or to keep – as a precautionary measure -the policy option to support a 100% hydrogen gas-grid on the table or not? On what grounds?*

We do not believe that ecodesign and energy labelling for boilers should support a 100% Hydrogen gas grid. We do not believe that the limited supply of clean hydrogen likely to be available by 2050 will be or should be used for domestic heating. Only two scenarios (1.5TECH and 1.5LIFE) in **the EU's Long-Term Strategy (LTS) for decarbonisation¹**, can achieve the 1.5°C global temperature target – to which the EU is committed to as part of the Paris Agreement. In these scenarios, the overall gas use in buildings is below 600 TWh², while currently the projection of gas use for space heating in the Task 7 report for space heating is around 800 TWh (figure 7). The only scenario in the LTS that considers Hydrogen, is the Hydrogen (H₂) scenario, which only achieves a reduction in GHG emissions of 80% - and is therefore incompatible with the EU's climate neutrality objective. Even the H₂ scenario only projects a maximum H₂ mix of 50% by 2050 - which means that domestic heating currently operated with fossil gas could never be fully switched to Hydrogen in 30 years. Considering that domestic heating will be decarbonized thanks to a 100% hydrogen gas grid only means that we will extend our dependence on natural gas.

Should any ecodesign or energy labelling requirements be introduced anyway for hydrogen boilers in the present revision, these should apply to boilers operating on 100% hydrogen, not on a blend of hydrogen and natural gas.

¹ https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_en.pdf

² All gas use in buildings in 2050 is 50 Mtoe = 580 TWh for the two 1.5°C scenarios in the EC decarbonisation strategy, according to figure 44 in: https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_analysis_in_support_en_0.pdf

Question 2: *What would an alternative policy option for decarbonising the gas grid? On what grounds?*

Natural gas is a fossil fuel, and its continued use is not compatible with the Paris Agreement. Most gas boilers should be replaced with heat pumps and district heating. Should any renewable or decarbonised gas be available it should be used for heavy industries where electrification is not possible. The ecodesign and energy labelling regulation for boilers should aim to secure energy savings and a reduction of CO₂ emissions from space heating, not looking to decarbonise the gas grid.

Question 3: *Based on today's knowledge, do we recommend policy makers to include the 'hydrogen-ready' feature or any other feature to support a decarbonised gas grid in any form or the other in new Energy Label and/or –possibly at a later stage— mandatory Ecodesign regulations for space- and water heaters. On what grounds? What information, which is out there, is possibly missing and should be retrieved by the study team before a decision can be made?*

As mentioned above, Hydrogen should be considered as a major energy carrier for domestic heating. We however understand that there might be some specific urban areas where Hydrogen could be used, and in that perspective, we support that 100% Hydrogen readiness becomes an option: this should include equipment that is type-tested with hydrogen, to give consumers information about efficiency, power and other main features that can be expected in case of a switch to Hydrogen. No bonus should be granted to Hydrogen ready boilers.

Question 4: *If the answer to both questions above is positive, how should the 'hydrogen ready' feature and/or feature to support a decarbonised gas grid be shaped in the measures, i.e. exact criteria and boundary conditions, mandatory or voluntary, possible energy label factor, possible icon on the energy label, timing, etc..*

Ecodesign and energy labelling should not support a “decarbonisation” of the gas grid. The only measure that could be adopted would be to have an icon or label on H₂-ready boilers (either on the energy label or on the name plate of the equipment, and in the technical documentation) for the specific cases where Hydrogen could be used as an energy carrier. In the (unlikely) eventuality of Hydrogen becoming a valid option to decarbonise heating, then and only then we could consider making it a mandatory requirement for any boilers placed on the market (e.g. after 2025) to be ready to operate on 100% H₂. In a second Tier, we could envisage to have only 100% H₂ fueled boilers placed on the market (e.g. by 2030), as opposed to H₂-ready natural gas boilers for which shifting to H₂ will require a minor technical intervention.

Question 5: *Should the boiler be more than 'just' ready for conversion from natural gas to 100% hydrogen (after a minor installer intervention) or should it be ready or able to cover also the intermediate stages between 30% (probably possible without adjustments to a standard gas boiler) or 100% hydrogen. The latter could be relevant if utilities want to have staged hydrogen implementation in the 30-100% range and will of course come at a considerably higher extra price for the boiler. Is that economically and technically feasible?*

Hydrogen readiness should mean that the boilers can operate on 100% Hydrogen. We oppose any possibility to foster the use of blending, as this will create a long-term lock-in effect for natural gas,

going against the decarbonisation objective. In addition, the level of mixture for the gas supply is out of the control of consumers or installers.

1.4 – Primary energy factor, impacts on limits

Question 1: *In principle, and not to suggest that this will be the last word on limits (also because WG2 and 3 will have input), is the suggested PEF-correction of the Ecodesign limits correct or should is there another way to use the new PEF and not downgrade the current limits?*

We will come up with a proposal for new ecodesign limits at a later stage in this process. The PEF correction should be considered for both the ecodesign requirements and the energy label.

Question 2: *Given that it seems the prime argument against change of labelling class limits, how important – in view of realizing policy goals-- is it to keep condensing fossil fuel boilers in the 'A' class (and not lower)?*

There is no valid reason to keep fossil fuel (condensing gas) boilers in the A-class. Doing so will jeopardise the EU's climate neutrality objective by giving the signal to consumers that fossil fuel heaters are an efficient, future-proof technology. Instead of encouraging consumers to switch to condensing gas boilers, the European Commission and Member States should massively support consumers to invest in more efficient, renewable-based technologies.

Concerning the changes made to the energy label for boilers, we call for a single rescaling to be performed (in view of the deadline included in the Energy Labelling Framework Regulation), and to avoid having to change the energy label in a 5 years period. Our view on what the energy label should look like is developed in this [discussion paper](#).

1.5 – Micro-cogeneration metrics

Question 1: *Can parties agree with the proposal? If not, apart from the proposals already known to be diverging, what proposals are made to solve the issue?*

We can agree with the principles of using a simplified method and a higher PEF than 2.1 could be used, but this value should not exceed the proposed 2.65.

In addition:

- the method should reward installations with high electric efficiency;
- combinations with other heaters should have a realistic evaluation of combined efficiency;
- there should be no difference between the evaluation of combinations using the package label and treating them as one hybrid unit.

1.6 – Shared chimney problem B1, C4 and C8

Question 1: *Do critical Member States want to make the effort and spend the money to realize the saving through condensing boilers?*

Installing condensing boilers in the B1 case and others may be a pure waste of time and energy, as these may not work with condensing possibilities until the whole building has been renovated. If the whole building needs to be renovated anyway then considering a more radical shift to renewables would make much more sense.

In general, exemptions to the rules should be reduced to a minimum, and priority should be given to renovations and investment in renewable heating technologies.

Question 3: *If so, how could additional European funds help to realize the chimney renovation?*

European funds cannot be used to install fossil fuel fired appliances, and this including condensing boilers and related chimney renovations. Public funding should be used to support large scale renovation of building and enable a switch to renewable energy.

Question 4: *If Member States asking for the exception do not want to make the effort and spend the money, are the other Member States prepared to accept the lower savings from the loophole that is created. Do the other Member States have alternative options to meet their policy goals—in the context of effort sharing—rather than the switch to condensing boilers?*

The question should not be about the readiness of Member States to accept the loophole if the concerned Member States do not make any efforts, but about the readiness to consider structural funding to renovate all the problematic buildings requiring the exemption by a certain date (2030). If the exemptions currently granted to non-condensing gas boilers are removed from the Regulation, it should lead to building renovations, that will need to be monitored. If the risk of creating a loophole is too high, and if Member States and EU institutions are not ready to take action, the exemptions should not be removed until there is a clear phase out of all fossil fuel operated boilers.

Contact:

ECOS – European Environmental Citizens' Organisation for Standardisation

Mélissa Zill, melissa.zill@ecostandard.org

Gunnar Olesen, ove@inforse.org