Danish preliminary comments to Discussion Points of WG2 meeting regarding review studies of Commission Regulations No. 811, 812, 813, 814/2013 – Ecodesign and Energy Labelling of space heaters and water heaters

Please find below Danish preliminary comments to the discussion document as presented at the working group meeting on the 2nd of April 2020. The comments follow the overall structure of the discussion document.

2.1 Assessing the energy performance of heat pumps
We believe that medium temperature is the most representative for heat pumps. A Danish study from 2011 showed little deviation from the temperatures specified in the standard EN14825 for medium temperature. The deviation was significantly higher when tested for high temperature.

Changing the temperature for heat pumps may also result in the unintended cases where heat pumps are moved to low temperature, even if they are suited for the majority of buildings with radiators.

Additionally, moving heat pumps to high temperature would remove information provisions for heat pumps to consumers based on a consideration for the renovation industry. Removing this information will not help in furthering the market for heat pumps as a sustainable solution for space heating.

Thus, Denmark is not in favour of the proposed change in the calculation of efficiency for heat pumps from medium temperature to high temperature.

2.2 Dynamic testing of heat pumps
The studies must continue to show high levels of reproducibility so that these new methods can form the foundation for energy labelling in the ecodesign regulation.

Preferably, the compensation method should be introduced as soon as possible by incorporating it into the standard EN14825; as far as the studies show that, the study has a high level of reproducibility.

1 Approval of systems entitled to subsidies, measurements, data collection and dissemination (Danish Technological Institute, 2011)
On that ground, Denmark supports the further investigation of the compensation and dynamic methods to ensure independence and to better represent proper operating conditions.

2.3 Heat pump settings
Denmark supports the need for clearer guidelines and the development of definitions of heat pump settings if need be. Therefore, we agree that an out-of-the-box test method can open up for misuse that is not covered by the circumvention provisions, and that other settings may be preferable. The energy efficiency should reflect real-life use also in the test conditions.

2.4 Display \( \eta_5 \) on Energy Label
Denmark supports the proposal to show the \( \eta_5 \) with the energy efficiency class on the energy label as this will help consumers in choosing the most energy efficient product even within the same energy class. This is especially valuable information for consumers as regards the energy classes for space heaters, which are broad and contain a wide range of products.

3.1 Assessing the energy performance of fuel boilers
Denmark does not necessarily agree that there is a need for aligned test temperatures across technologies; rather the tests should reflect the use of the specific technology.

3.2 Inter- and extrapolation of test results for boilers
Denmark agrees that it is acceptable to use inter- and extrapolation to determine efficiency, as long as this method proves to reflect the actual efficiency of boilers. Denmark believes this can help mitigate parts of the economic burdens of the test of boilers.

3.3 Boiler settings
As for heat pump settings, Denmark supports clearer guidelines and definitions for boiler settings. There should be no room for interpretation as regards the definitions and there should be only an acceptable level of complexity for market surveillance authorities (or third parties) concerning testing.

4. Verification tolerances
Denmark supports the proposal to lower the tolerances for gas- and oil boilers and for ‘instantaneous water heaters’. Other products and parameters should remain unchanged until studies show that these can also be lowered.

Lowering these tolerances also takes into account that these products are in a more narrow energy efficiency class.
5. Third party assessment
In principle, requirements should be ambitiously set, e.g. internal product control (module C level). However, the requirements must not be too costly for the manufacturers. In order to consider this issue the requirements can be based on smart technologies, such as IoT-rigged sensors. These technologies have the potential to enable cost-efficient auditing/monitoring by automatically gathering and sending data, to ensure that products continuously live up to the conditions (and requirements) that they were tested under. Denmark agrees that there should be some kind of requirement for a mandatory independent third party assessment.

6. Scope extension to 1MW
At the current time, it is uncertain if this extension of the scope to include products with a capacity up to 1 MW would create any additional value as this type of products are often one of a kind, in-situ built products produced for a specific purposes.

Additionally, test of products of this size will prove challenging. Partly, because they will have to be tested on-site, and partly because the test standards, as they stand now, are not appropriately representative.

It should also be noted that heat pumps of this size would be used for other purposes than space heating, in which case the operating condition would be significantly different.

Thus, Denmark is not in favour of the extension of the scope for this regulation.

7. New ErP Group: Emitters and controls
Denmark agrees that the design of emitting systems plays a crucial role in the total energy efficiency of a heating system. However, Denmark is not in favour of the proposal to include emitters in the study, as it is better regulated in the Energy Performance of Buildings Directive (EPBD).

Additionally, radiators and their performance is already regulated in the construction products regulation (CPR).

Other issues – sound power
Denmark supports a clearer definition of the required test point for noise.

Denmark suggests that noise requirements are set under stricter test conditions, preferably in EN14825 point A (-7°C) or optionally point B (2°C). Although the current test condition of 7°C may be representative for the average annual noise level from heat pumps, the peak performance is a much more crucial parameter in relation to the local environment and concerning the surroundings. This could be
handled by a provision that requires that the peak noise level is available to the consumer.

**Other issues – Temperature control**
A bonus to the energy efficiency class under temperature controls should only be given for controls that directly improve the energy efficiency of the product. If bonuses are not given sparingly, the energy label may become less transparent for consumers and in turn, it will not result in the promised energy savings.