

Position paper on Directive 2005/32/EC Eco-Design implementation policy for boilers and water heaters

Introduction

MARCOGAZ supports the principle of the ambitious energy efficiency goals proposed by the European Commission. However, the proposed methods of efficiency assessment, labelling and implementation of the 'system approach' cause some concerns for the Gas Industry. It is felt that the proposals in their current form may lead to incorrect labelling, customer confusion and the introduction of an unworkable design, supply and installation chain.

Therefore, MARCOGAZ would like to present the comments below.

Main comments

1) Harmonisation of Directives

Issue: A clarification and an harmonisation is needed between the different Regulatory Instruments: Directive 90/396/EEC on Gas Appliances, revision of Directive 2002/91/EC Energy Performance of Buildings, Directive 2005/32/EC Eco-design, revised Directive 92/75/EEC on labelling.....) which all in one way or another deal with energy efficiency, and in some cases are in conflict.

Proposed solution: A clear scheme of the future regulatory edifice should be presented for a better understanding. Harmonisation shall be undertaken between emerging Eco-Design implementing measures and EPBD revision.

2) Is the market adapted to the system approach and who has the responsibility of labelling?

Issue: There are concerns at the implied 'system approach' of the manufacturer packaging components at the factory gate as it appears to run contrary to other legislation which gives consumer choice and the ability of the end user/installer/specifier to use a range of components from various manufacturers to optimise the system cost, design and installation, based on the actual property and end user requirements.

Any 'system' approach must consider that in some countries, installers design the system but smaller installers can not deal with the complexity of the individual system approach without specific additional training.

Questions:

- Who will be bear the cost of organising the system labelling where the same appliance can be combined with many different components?
- Regarding CE marking package (or the gas appliance itself) clarification is needed as who should bear the responsibility for the CE marking?
- What will happen for the labelling of systems after a component (e.g. control or boiler) is replaced in situ by an installer?
- Who will bear the responsibility of bringing systems on the market?

- Is it practical for the manufacturer of the system to verify the commissioning of every system and how will this affect cost?
- How can manufacturers pre-design a bundled package without any knowledge of the property into which the system is to be installed?
- Will there be any flexibility for the installer to modify the bundled system to suit specific site requirements and if so how will the system be relabelled?
- How will boiler replacement onto an existing heating system be dealt with if it already incorporates effective control systems or components that do not need to be replaced?

Proposed solutions:

- The manufacturer provides a matrix showing the performances (specific efficiency, rating) of the appliance combined with different components (controls) or situations (building size, solar, heat pump assist).
- The installer can select the appropriate combination from the matrix and guide the consumer choice.

3) The danger of using a non-validated complex model

Issues:

1. In principle a model has to be first validated.

The proposed model is extremely complex. Its principles and details are difficult to follow and validate. There seems still to be some anomalies, particularly the influence and calculation of distribution, stratification and fluctuation losses or the minimum sizing of boilers compared to the usages in some countries (e.g. the model would not allow the selection of a boiler below approximately 30 kW in a house using 20,000 kWh per year).

We are concerned by the fact that any correction of the model during its application will add cost and confusion on the market and therefore insist on an extended validation of it before it is put in force.

2. This model should be a reference in the implementing measures but not part of a binding regulation for a better flexibility in case of modification.
3. The test for solar panels according to EN 13203-3 leads to a great number of tests depending on the surface of the collectors.

Proposed solutions:

1. The final version of the model should be validated by independent competent bodies.
2. It is proposed to use it as a basis for an EN standard.
3. Regarding the solar panels the calculation matrix should be amended accordingly.

4) Labeling and reliability of the data used

Issues:

- The label is primarily aimed at informing end customers and installers offering advice to end customers. It should therefore not be used for boilers or water heaters used for big size installations where highly competent professionals intervene.

- In addition, the label should be simple and easy to understand. Specific ratings such as A+, A++, A+++ ...should be avoided since the current label format is now well known.
- Reliable labeling should be based on independent performance measurement with the highest possible accuracy.

Proposed solutions:

- It is proposed to limit labeling to products with a maximum output of 70 kW in line with EN standards.
- Use an A-G label and develop a system whereby the very best systems proposed are A.
- Require third party certification, including type examination and production surveillance, based on tests performed by an accredited and qualified laboratory.

5) It is technically feasible to have such low NOx and is it justified?

Issues: Emissions levels should be fixed at a reasonable level at is achievable, since they always result from a compromise between different conflicting aspects such as maximum efficiency, production of different pollutants (CO for example), or the current EU activities to enlarge gas quality specifications, especially the Wobbe Index range to improve the functioning of the EU gas market.

NOx is also notoriously difficult to measure accurately. In this context the NOx values proposed are simply not applicable. Moreover, we are surprised that such severe limit shall apply to an industry that impact on total NOx emission is far lower than other industries (e.g. transportation).

Considering NOx requirements only for gas and oil appliances is discriminatory compared to electrical appliances since electricity generation may also produce NOx and are not taken into account.

Proposed solutions: The NOx limits should be altered to challenge available and developing technology but not so as to eliminate some sectors completely. As discussed on 29th February 2008 during the last Consultation Forum dedicated to boilers, a working group of experts should meet as soon as possible to make proposals taking into account:

- a. The real impact of heating industry on acid rain;
- b. The energy security of supply context that will bring fuel with wider quality specifications on the market;
- c. What is technically feasible;
- d. The specific case of instantaneous water heaters, running time and impact on the market should be considered before establishing the NOx limit values.
- e. Develop methods to assess NOx emissions for electricity generation;
- f. Propose reasonable Nox limits.

6) Multi Fuel Label

Issues:

1. Whilst MARCOGAZ recognises the drivers behind one label for all fuels and technologies, there are very real concerns that a label based only on efficiency, may drive customers and installers to wrong choices because the CO₂ aspect in term of primary energy has not been addressed in a sufficient manner.
2. In addition, for the vast majority of the situations, the customer purchases a heating appliance for the replacement of the existing one. The comparison of different technologies appliances or the comparison of appliances using different energy is therefore only relevant for only about 10% of the purchase situation.
3. The technical difficulty to build up a system able to compare fairly the technologies and energies is a concern for the industry (the electricity conversion factor is different depending on the countries energy mix).
4. It seems that the model can be used to calculate performances of electrical heat appliances, heat pumps or solar systems as stand-alone appliances. Therefore it is important to validate the equivalence of the calculation methods and data used.
5. Certification and market surveillance are different from energy to energy that may generate a market distortion as well as an unfair competition.

Proposed solutions:

We suggest that:

- The system approach shall be used by technology and energy in a first stage and have information on the carbon intensity.
- Further comparison work and validation is made to extend the system at a later stage

7) Early Replacement of old boilers and water heaters

Issue: The biggest potential in energy savings and CO₂ emissions reduction can be achieved by replacing the installed old boilers and water heaters in consumer's homes. However, those oldest boilers and water heaters are often the most reliable, and therefore can last for many years.

Proposed solution: Introduce measures to encourage the early replacement of customer's old inefficient boilers. If simple enough the label could be extended to allow use on existing already installed systems to give the consumer an indication of just how inefficient and carbon intense their existing system is.

8) Inclusion of new Technologies

Issue: New and innovative products such as micro cogeneration (Fuel cells, Stirling engine, Rankine cycle etc.) or tri-generation, all of which also produce electricity or possibly cooling in the future shall be included in the scope.

Proposed Solution: The scope of the EuP should be extended, including fuel cells, to allow for such appliances, the mass market launch of which are only months away.