

WWF® for a living planet®

GREENPEACE

INFORSE-EUROPE
International Network for Sustainable Energy - Europe

EU Ecodesign Policy for Boilers and Water Heaters

A huge and underestimated opportunity for climate & energy savings

Background Paper – 10 October 2008

Climate change could leave billions of people at risk through extreme weather, damages to infrastructure, food and water shortages. At the same time, high **oil, natural gas and coal prices** threaten the economy and increase poverty. The European Union has promised to take the lead, through a reduction in greenhouse gas emissions by 20 to 30% and a 20% improvement in energy efficiency by 2020.

Less widely known than other EU policies, the Directive on the **Ecodesign of Energy-Using Products** (also known as EuP)ⁱ is one of the most crucial tools to meet these targets. Once its Implementing Measures (IM) are in place, this policy will set **mandatory energy efficiency requirements** for nearly all electric appliances and heating equipment sold in the internal market.

Strikingly, the stock of our **heating equipment is responsible for 25% of all CO₂ emissions**, around the **same level as road transport**.ⁱⁱ The European Commission and Member States are now discussing specific Ecodesign measures for boilers, water heaters and combi-boilersⁱⁱⁱ. On top of improved building insulation, these measures alone could **reduce CO₂ emissions and energy consumption of household heating by a quarter**. And energy bills would be reduced by up to **44 billion Euros** a year!

The **key period** of the decision-making process for this IM is from **October to December 2008**.

Current European legislation is lagging behind Japan, Canada and even the US. Unfortunately, several Member States and industrial lobbies are attempting to force the European Commission to **water down its original ambition**. This is partly because some stakeholders are heavily promoting the *status quo* in heating systems – a disaster for climate change policies.

Instead, bold action is needed in order to achieve the very large energy and CO₂ saving potential of this policy. Therefore we need:

1. **Mandatory performance requirements** removing inefficient products from the market. In particular, no favours should be granted to climate-unfriendly electrical heaters. Such requirements should be strengthened at regular intervals (e.g. in 2011, 2013...).
2. **Clear energy labelling** helping consumers to chose the greenest possible heating systems. They should be able to compare solutions regardless of the technology and fuel used. The successful European “A-G” scale should be used without the introduction of confusing A+ or A++ classes.

RECOMMENDATIONS FOR THE ECODESIGN POLICY

1) Setting ambitious performance requirements

- As boilers and water heaters may last for more than a decade, **only the most climate-friendly technologies such as solar panels, biomass, condensing boilers or efficient heat pumps should now be promoted.** Some Member States, in line with industry lobby groups, argue that for old inefficient technologies a “retrofitting” solution with the same technology should always exist on the market. This completely jeopardises attempts to live up to the challenge of climate change.
- Mandatory energy efficiency requirements must be rapidly set **at more ambitious levels than the ones currently being considered.**^{iv} Unsubstantiated claims that consumers are unwilling to change their habits and would not pay more for an efficient product (even if this means a substantial decrease of their energy bills) should be disregarded. Given trends in energy prices and massively increased public awareness of climate change^v, most consumers are now eager to “do their bit”. For the poorest families, Member States could work on fiscal measures to complement the EU requirements.

Wasted opportunities? An example

Existing medium-sized water heaters (the most popular size on the market) have an average energy efficiency of a poor 35%, meaning two thirds of the energy is wasted. The most cost-effective models for consumers reach a 43% efficiency. And the greenest available technology models on the market already achieve over 50%.

The current proposal from the European Commission, which had already been watered down following complaints from influential stakeholders, would only require a level of efficiency of 36% by 2011. **This is unacceptable, as it barely represents an improvement from the current average model on the market.** Instead, the limit should **at least** be set at the 43% level, substantially above the current weak proposal. This would enable the EU to really tap into the enormous potential of energy and CO₂ savings, without any negative impact on consumers’ bills.

- The policy should be **dynamic**, by **constantly upgrading these mandatory requirements over time.** This is a prerequisite to stimulate innovation and green markets. Further requirements should be set in 2013 at more stringent levels. Further improvements should be proposed when the implementing measure is revised in 5 years.
- **Electric equipment such as storage water heaters should not be considered as an energy efficient solution.** Countries with a high share of nuclear electricity tend to push for the survival of obsolete electrical equipment^{vi}. However, these technologies are far from being energy efficient and they represent a disaster for the climate and for energy bills. Keeping them on the market would seriously undermine efforts to reach the EU 2020 targets on climate change and energy savings.
- EU policy should not discourage Member States from setting additional, and in some cases more advanced national policies to promote green and efficient heating and water heating.

2) A clear label to help consumers

- The EU Ecodesign Policy may also lead to the introduction of an energy labelling system for heating and water heating equipment (similar to the “A-G” scale currently used for fridges). To be successful and drive markets in the right direction, **this label needs to allow fair comparison between all heating systems, regardless of the technology and fuel source used.** Most manufacturers and some Member States are advocating for several labels and scales: one for gas boilers, one for electric heaters, one for oil, etc. **A unique label is the only way to avoid confusion**

and send adequate signals to consumers and installers. By rejecting this common sense approach, industries and energy utilities are denying consumers the right to make comparisons between energy sources and switch to more efficient equipment. Again, they are promoting the *status quo* instead of contributing to the fight against climate change and high energy bills.

- In particular, **this unique label needs to be based on the equipment's primary energy consumption.** This is the only effective way to take into account the impacts these products have on climate change. This way, the label would give electric heating and electric storage water heaters an accurate rating and would encourage alternatives (such as solar-fueled and efficient water-heating systems, efficient heat pumps using ventilation air, waste water or indoor air in hot climates).
- Moreover, **the label has to remain simple and clear** by avoiding the introduction of confusing upper classes such as A+, A++ and A+++.^{vii} Otherwise, consumers may believe that an A rated boiler is a super-efficient product, when it would not be the case. The label must build on the successful A to G layout, with a system for the regular upgrading of classes.
- Finally, this energy label should distinguish between climate zones in Europe. This would give a more accurate signal to consumers.^{viii}

3) Reducing air pollution

- Air pollution is also a concern when considering the performance of boilers. **Limits on pollutants such as NOx emissions should be set in the Ecodesign policy**, targeting the best available level.
- Given the global warming impact of methane, limits for methane emissions from gas boilers should also be considered.

Further information on the Ecodesign of Energy-Using Products policy process:

www.ecostandard.org (“Ecodesign of Products” section).

Contacts:

Edouard Toulouse

ECOS - European Environmental Citizens' Organisation for Standardisation

edouard.toulouse@ecostandard.org

Gunnar B. Olesen

INFORSE Europe

ove@inforse.org

Paper written on behalf of ECOS by Germana Canzi: <http://www.europeplanetearth.eu>

Additional support provided by Stefan Scheuer: <http://www.stefanscheuer.eu>

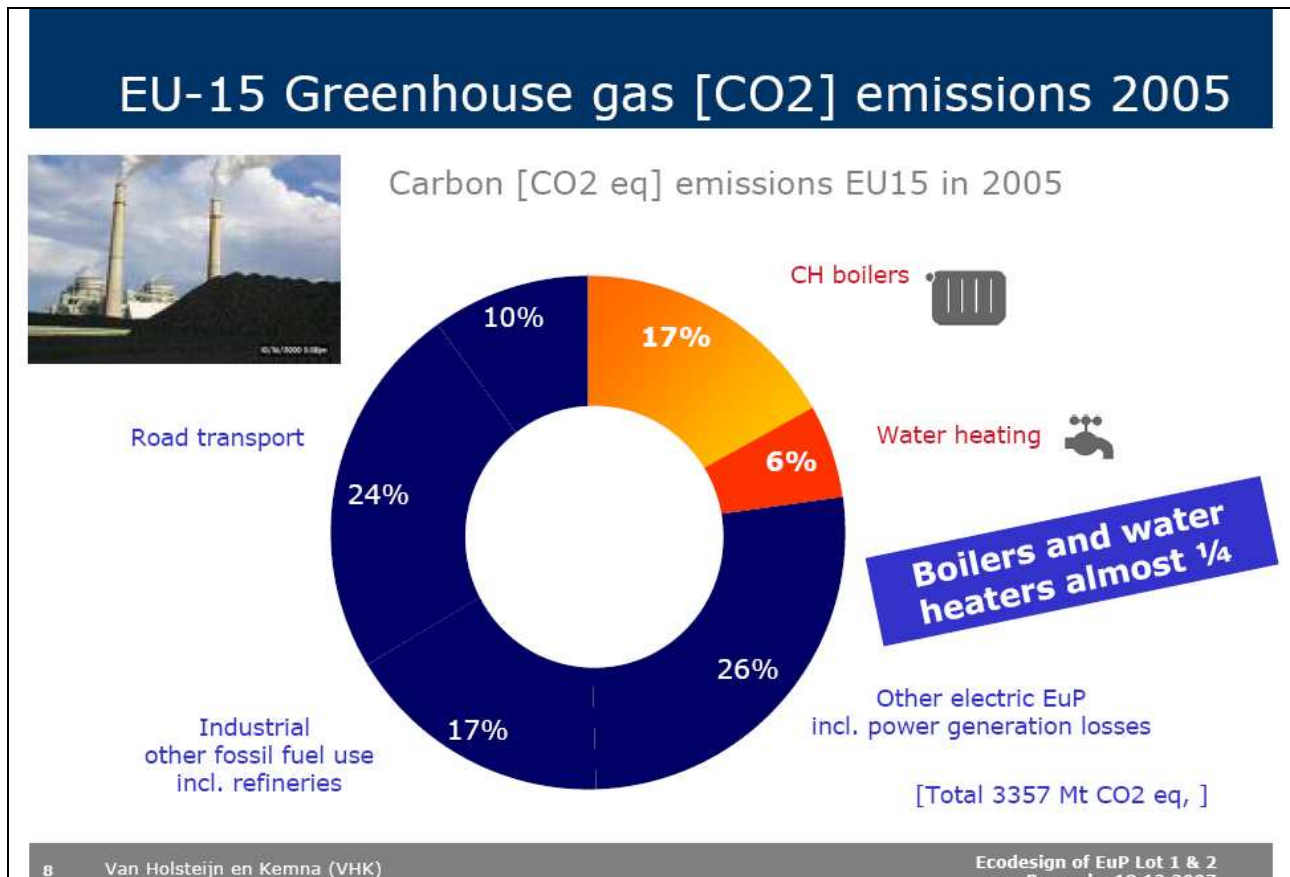
NOTES

ⁱ The Directive on the Eco-design of Energy-Using Products (Directive 2005/32/EC, also known as “EuP”) provides a framework for establishing minimum ecodesign requirements on a broad range of products. The EuP has the potential to reduce EU energy consumption by around 10% by 2020. More information here:

http://ec.europa.eu/energy/demand/legislation/eco_design_en.htm

http://www.ecostandard.org/priorities.php?detail=on&prio_id=61&priocat=22

ⁱⁱ Graph extracted from the Preparatory Study to the EU Ecodesign Policy (www.ecoboiler.com):



ⁱⁱⁱ A boiler heats water to produce hot water or steam, usually for heating systems or process heat. A water heater heats drinking water for sanitary purposes: bath, dishwashing, washing, etc. The word combi-boiler is used for a piece of equipment that do both.

^{iv} More detailed NGO position papers on this are available here:

http://www.ecostandard.org/downloads_a/engo_eup_water_heaters_ii_3-7-08.pdf

http://www.ecostandard.org/downloads_a/eup_environmental_ngos_boilers_22-02-08.pdf

^v A Eurobarometer survey released on 11/9/08 revealed that a very large majority of EU citizens consider climate change a very serious problem, above issues like terrorism, war and economic downturns. In addition, 58% of Europeans wish the EU would do more to fight it.

http://ec.europa.eu/public_opinion/archives/ebs/ebs_300_full_en.pdf

^{vi} nuclear power stations cannot be shut off easily, so heating water at night is one way to use the excess baseload electricity produced during the night.

^{vii} It would be more logical for the labeling scheme to be set in line with Ecodesign requirements. G-labelled products should correspond to the bottom of all allowed products under 2009 requirements. The E could become the bottom class in 2011, avoiding the need to introduce A+, A++ or A+++.

^{viii} For example, it will show consumers in Northern Europe that heat pumps using ambient air may perform poorly in their climate, or that solar panels in southern Europe are a very efficient solution.