

3 September 2010

EURELECTRIC response to the European Commission consultation

on the draft Commission regulation on

implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for water heaters and hot water storage tanks.

The Union of the Electricity Industry – EURELECTRIC wishes to set out its views on the draft Commission regulation on implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to the ecodesign requirements for water heaters and hot water storage tanks.

EURELECTRIC strongly opposes the calculation methodology proposed in Annex III, insofar as it is proposed to use a factor of 2.5 to convert from electricity to primary energy.

The use of this conversion factor would, in our opinion, be discriminatory, technically wrong and undermines the objectives of related EU policies, particularly on reducing greenhouse gas emissions and on the promotion of renewable energy sources.

EURELECTRIC proposes that the conversion factor be adjusted downwards, so as:

- to reflect changes in the electricity energy mix which have taken place over the past decade, and
- to take into consideration the changes which will result from meeting the 2020 targets, as appliances installed from 2010 onwards will have an expected operational life at least until that date.

EURELECTRIC remains committed to working with the European Commission to put in place ways to effectively promote energy efficiency measures, which should be aimed at empowering consumers in their choices.

Changes in electricity production

The conversion factor of 2.5 was introduced in the footnote to Annex II of the Directive on energy end-use efficiency and energy services (Directive 2006/32/EC). The footnote was already in the Commission proposal for a directive, tabled in December 2003, where it was stated:

“For savings in kWh electricity Member States may apply a default co-efficient of 2.5 reflecting the estimated 40% average EU generation efficiency during the target period. **Source:** Eurostat.”

Taking into consideration the structural delay in publishing official data, Eurostat data used in the Commission proposal were, at best, based on 2001 values.

Since 2001, the electricity generation mix has changed, in part arising from the EU Directive on the promotion of renewable sources in electricity. In this respect, the Commission website, clearly states:

Since the adoption of Directive 2001/77/EC, the Community has set targets and tried to remove barriers to encourage the growth in the share of electricity from renewable energy sources. This share has risen from roughly 13% in 2001 to 16% in 2006, but under the new directive on renewable energy it is expected to need to double, to over 30% for the EU to reach its overall renewable energy target of 20% by 2020.

Concerning thermal power plants, new investments in combined-cycle gas turbines and more efficient coal-fired power plants have significantly improved the efficiency of the EU portfolio of plants. Moreover, looking to the 2020 horizon, the Emission Trading Scheme will be one of the primary drivers in boosting efficiency in combustion plants.

The recently published EURELECTRIC study, *Power Choices*, based on PRIMES 2009 model, shows investments in the power sector which took place in the past and those expected to meet the 2020 targets:

GW net	Observed	Projection	Market Data		Model results for Mitigation scenario	
	Capacity in 2005	Capacity in 2010	Decommissionings 2010-2020	Confirmed constructions 2010-2020	Capacity in 2020	Investment 2010-2020
Coal/lignite	195.7	191.9	76.9	32.0	167.3	48.5
Gas Turbine						
CC	74.1	117.4	5.4	73.2	150.8	82.1
Small gas plants	84.0	89.5	27.5	9.1	76.0	19.5
Oil	62.1	55.8	36.8	2.7	40.0	14.7
Nuclear	134.4	127.0	27.0	12.0	123.5	16.1
Biomass	17.5	24.1	2.3	15.4	46.2	31.0
Wind onshore	39.9	80.1	-	79.5	162.7	122.8
Wind offshore	0.7	4.3	-	35.0	53.1	52.4
Solar etc.	2.9	16.2	0.4	38.0	43.9	41.4
Hydro	104.5	107.3	0.2	7.7	114.3	10.0
TOTAL	715.7	813.8	176.4	304.6	977.9	438.5

Investments in electricity generation have improved the efficiency of combustion plants and increased the amount of electricity from renewable sources. As a result, the share of technologies used in the total electricity mix in 2000 was different from that in 2010, and will be different again from that in 2020. The trend to more thermally efficient and less carbon intensive plant is clear:

	TWh net			Shares in %		
	2000	2010	2020	2000	2010	2020
Nuclear energy	892	880	849	31.7	28.5	24.5
Fossil Fuels	1503	1597	1511	53.5	51.7	43.5
Solids fired	870	786	707	31.0	25.5	20.4
Oil fired	158	62	63	5.6	2.0	1.8
Natural gas	449	722	704	16.0	23.4	20.3
Derived gasses	26	27	37	0.9	0.9	1.1
Renewable energy	416	612	1112	14.8	19.8	32.0
Hydro (pumping excluded)	348	318	335	12.4	10.3	9.7
Wind on-shore	22	147	349	0.8	4.8	10.1
Wind off-shore	0	14	174	0.0	0.5	5.0
Solar	0	17	50	0.0	0.5	1.4
Other renewables (tidal etc.)	0	0	3	0.0	0.0	0.1
Geothermal heat	4	6	12	0.2	0.2	0.3
Biomass-waste fired	42	110	188	1.5	3.5	5.4

TOTAL	2812	3090	3473	100	100	100
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These figures clearly show that setting the conversion factor at 2.5 is, at the very best, outdated. Moreover, if the European Commission believes that Europe will meet the 2020 target, it will also have to recognize that any conversion factor set at the 2010 level will be too high for the subsequent period.

Negative consequences of the conversion factor

In addition to the above, keeping the conversion factor at 2.5 will discriminate against the use of electric appliances, as they are deemed, in effect, to be no more than 40% efficient. This is fundamentally wrong, considering the real high efficiency of electric appliances, and, in its turn, generates the following negative effects:

- Higher costs in meeting the 2020 GHG emission reductions

Emissions from the electricity sector are accounted for at the point of generation within the EU emissions trading scheme. Consequently the use of all electricity in electrical appliances, including water boilers, has no associated CO₂ emissions as this would constitute double counting i.e. substituting fossil energy use by electricity results in a 100% saving in emissions for the non-ETS sector, for which Governments are accountable. The corresponding increase in electricity demand must be delivered within the existing fixed ETS cap. The result is a real reduction in EU emissions to atmosphere. Ignoring this effect increases costs for member-states in meeting their individual effort-sharing targets as they must offset CO₂ emissions associated with primary energy fossil fuel in heating elsewhere in the non-ETS sector.

- Higher costs in meeting the 2020 renewable energy target

The most cost-effective way to integrate electricity generated from renewable sources is through developing controllable demand-side measures which can adapt instantaneous demand to the fluctuating supply that is typical of renewable sources like wind. Electrical heating and cooling appliances in general, and water heaters in particular, offer this opportunity. In doing so they also allow benefits from the deployment of smart meters to be better realised.

Discriminating against electric appliances will, in effect, result in locking-in CO₂-emitting gas technologies for at least the next 10-15 years.