

The Department for Business Energy and Industry Strategy (BEIS)
1 Victoria Street
London

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Dear Tom Bastin

BEAMA represent UK Manufacturers of electrotechnical equipment that make up the electrical system in buildings (including heat, hot water and metering products), and the end to end supply chain for the electricity grids. We have been heavily engaged in the review of the Clean Energy Package through our EU trade bodies and through UK government representatives.

The Energy Efficiency Directive (EED) is an important element of the Clean Energy Package and specifically the final decision to be agreed on for the Primary Energy Factor will have significant implications for UK manufacturers.

Importantly this is applied through the EcoDesign and Energy Labelling Directive. The energy efficiency of products is expressed in primary energy to make products using different energy carriers comparable in the internal market – e.g. efficiency of electric heat pumps or electric boilers. A PEF is applied to convert electricity (final energy) into primary energy. Any change within the EED will require corresponding changes to all products and associated labelling that fall within scope of the EcoDesign and Energy Labelling regulation.

The current PEF in the EU is 2.5. It implies that each unit of electricity requires an input of 2.5 units of primary energy. This therefore assumes that all power generation (independent of source) in the EU is only 40% efficiency ($100 \div 2.5 = 40$).

The European Parliament recently agreed on a revised PEF within the EED of 2.3. This goes against the previous recommendations from Industry, and the European Commission's original recommendation of 2. BEAMA, supported by our EU trade bodies, strongly disagree with this position, and believe this to be counterproductive in the EU's overall drive for decarbonising the energy system and incentivising the take up of low carbon heating and cooling.

We therefore call on BEIS to support us in pushing for a PEF of 2. This is the maximum value we feel should be settled on if we are to truly reflect the current energy mix within the EU power system and accommodate for the short to medium term decarbonisation of the system we know to be taking place. Anything higher than 2 would continue to misrepresent the efficiency of electricity using products. We therefore view the higher PEF value as a market distortion and barrier for the uptake of low carbon energy technologies. The benefits of a lower PEF value includes:

- A lower PEF value will accelerate the efficiency in electrification of the heating and cooling sector and enable a deeper integration of electrically driven heating and cooling markets. It will help ensure low carbon electric heating products can compete fairly against other fuels and options on the market. This supports the UK's current climate change objectives and policy agenda.
- This would in turn empower consumers to become active participants in the electricity market as more low carbon technologies become available
- This will in turn improve security of supply through the replacement of fossil imports with renewables,
- And facilitate deeper integration of electrical renewables through more flexible heat demand.
- With UK policy objectives for such appliances to apply TOU tariffs, therefore using lower cost, lower carbon energy (low prices correlating with higher infeed of Renewables), this should arguably apply an even lower PEF value. Although it won't be possible to adjust the PEF value in this way, we can't ignore the fact that our policy goals in the UK are for the majority of consumers to be able to participate in such a market and will therefore contribute to an overall increase in the efficiency of the product used.

We strongly believe a PEF of 2 as a maximum is based on valid scientific assessment. The consultants original review proposed four different methodologies and recommended Methodology 2 for the assessment of a suitable PEF value in their final report. The Commission later supported methodology 4, which represents the worst case and gives a value of 2.2. Methodology 4 deviates from the one recommended by the consultants in that it applies a different fuel-allocation procedure to calculate the efficiency of electricity generated by CHP plants and that it takes all primary energy into account (i.e. it doesn't distinguish whether primary energy originates from renewable sources or fossil fuels). Both differences result in a higher primary energy factor. Therefore, this methodology releases the highest possible PEF value, and we do not see this as future proof given the current rates of decarbonisation in the energy system.



It is also thought widely that the difference between RES and fossil fuel factors is not enough (.1) and therefore doesn't reflect the benefits of renewable energy over the use of fossil fuels. Arguably if the difference between the two values was extended and applied for the PEF in the EED, this would decrease the PEF even further. In the absence of this being done before the final PEF is written into the EED and then adjusted within product regulation, we strongly urge the UK government to push for a PEF of 2, ensuring this is future proofed.

Going for a higher PEF value at this stage risks having to re-visit this in the near future. Any change to PEF requires other product regulations and consumer labelling to be amended in turn. Repeated adjustments to the PEF value would be very damaging to the market, requiring manufacturers to make more regular and costly changes to their registered products and labels. It would also create significant confusion for consumers.

In the Parliament's amendment they specify 'this is applicable for this directive (EED) only'. We would like to ask BEIS to discuss the consequences of this wording with your lawyers to establish if this would have any impact on how this is applied in eco design and energy labelling regulations. Ultimately BEAMA would support the consistent application of PEF for product regulation and there is a need for this to be lowered to 2, as previously discussed. The EED would be the key driver for this.

Kind regards
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International Policy Manager

For information on UK Smart Grid activity please visit www.uksmartgrid.org.uk



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