ESTIF written contribution to European Commission consultation on Primary Energy Factor (PEF)

Issue: *Review of the default primary energy factor (PEF) reflecting the estimated average EU generation efficiency referred to in Annex IV of Directive 2012/27/EU and possible extension of the approach to other energy carriers*

Dated: 1 July 2016

ESTIF is the voice of the solar thermal industry, actively promoting the utilisation of solar thermal heating and cooling technologies in Europe. It represents over 90% of the sector, with members across 17 European countries covering the entire solar thermal value chain, from collector manufacturers to component suppliers, research institutes, service providers, national solar thermal and renewables associations.

General comments

ESTIF supports the initiative to have an enduring, clear and scientifically sound method for calculation of the primary energy factor (PEF). In this regard it is interesting that this process is combined with the energy legislative review in progress.

Implications of the Primary Energy Factor on Energy Labelling and Eco-design

The European PEF is particularly relevant in the implementation of regulations 811/2013[1], 812/2013[2], 813/2013[3], 814/2013[4] related to space and combination heaters (Lot1) and water heaters (Lot2), namely due to the implications in the comparison between devices using different energy sources.

[1] *CDR (EU) No 811/2013 of 18 February 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device*
[2] *CDR (EU) No 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device*
[3] *CR (EU) No 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters*
[4] *CR (EU) No 814/2013 of 2 August 2013 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*

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While knowing that the European Commission decided to adopt a single PEF, ESTIF would like to express the belief that there would be more benefits for consumers and the market as a whole if different PEF values would reflect different factors affecting it, such as **seasonality and distance from power generation**. This should be done taking into account the obvious need to strike a **balance between simplification and adequacy**.

This means that a single, averaged annual PEF will not provide an adequate framework for the primary energy conversion applied to energy consumption affected strongly by seasonal variations. This means that a calculation should take into consideration the seasonality of heat consumption (demand) or that such consumption is of small intensity and decentralized. Consequently, **seasonal changes in power generation efficiency** or differences in **grid losses affecting energy supply at residential level** (compared to industrial level) need to be taken into account.

We are well aware of the complexities of applying different seasonal values for the PEF applicable to space and water heaters, including the additional challenges for consumers to understand the information provided.

Different PEF values for different product groups

Though it is possible to find adequate solutions that would improve the relevance and accuracy of the information provided to consumers. Relatively simple alternatives would include **adapting the PEF to product groups differently**, considering their main characteristics. This could mean that different PEF values could apply specifically to each of the main uses: **space heating, space cooling or water heating.** Therefore, this would not affect the way the information is presented to the consumers, only the way the calculation is done, making it more accurate.

Impact on energy labelling and eco-design for water and space heaters

In what concerns the application in the framework of energy labelling and eco-design (namely Lot1 and Lot2), it should also be considered that a lower PEF will provide a benefit for low efficiency electric heaters, some of which would be out of the market for not fulfilling the required threshold in terms of performance. The impact of these changes should not be ignored, as they could distort the original intention behind of such regulations, which was to phase out inefficient products.

Entry into force of new PEF value

Another important point is the moment of application of a recalculated PEF. The moment when a new PEF may be considered and how it shall be introduced is very relevant. For instance, we need to avoid situations where two identical products in the market fall under different energy labelling classes just because they are applying a different PEF in the

calculation. Hence, with regard to Lot1 and Lot 2, such changes in the PEF value should only be taken into consideration when there is a review of the Lot 1 or Lot 2, taking into account the stipulations of the Commission delegated regulations for Space and Water Heaters or the revised Energy Labelling Directive.

Well accepted methodology needed

Adopting a methodology that is well accepted by stakeholders brings additional benefits with regard to the potential application in the framework of EED and EPBD, where Member States can opt for different solutions. A well accepted methodology would facilitate that Member States opt to use it for their specific calculations, with clear benefits in terms of transparency and comparability.

ESTIF believes that this could be achieved if this work is performed in the framework of CEN, namely developing a specific **European standard on determination of primary energy factors**, which could even include other energy carriers. To prevent any void, the current methodology under discussion could be considered as a **transitional calculation method** providing an interim reference value.

Comments to specific elements

Questions proposed by EC for this consultation stage:

1. As for the RES accounting method, what are your views on the options 'Total primary energy' and 'Non-RES primary energy' approach?
2. Which system boundaries would you find appropriate? What are your views on a life cycle approach in the calculation of the PEF for electricity?
3. In order to include the effect in the next future of current policies in the calculation, do you think PRIMES data satisfy this need or would you opt for an extrapolation of Eurostata data?

1) As for the RES accounting method, what are your views on the options 'Total primary energy' and 'Non-RES primary energy' approach?

The suggested approach by the European Commission, proposing to apply the total primary energy approach as the preferred accounting method for RES, is a reasonable

one with regard to EED, in particular the implementation of Art. 3, and to energy labelling and eco-design.

In the case of EPBD the situation is different. Taking into account that the EPBD should promote the combination of efficiency and renewable energy, produced on-site and/or nearby, the application of a non-renewable primary energy factor seems more logical.

2) **Which system boundaries would you find appropriate? What are your views on a life cycle approach in the calculation of the PEF for electricity?**

We agree that it is important to use a life cycle approach. This approach should take into account the entire value chain, from extraction to combustion. Such comprhhensive analysis can lead to more accurate results and serve better the need to account effectively for the effects on climate change and resource sustainability.

Different approaches can lead to important variations; hence it is important that adequate information is available.

3) **In order to include the effect in the next future of current policies in the calculation, do you think PRIMES data satisfy this need or would you opt for an extrapolation of Eurostata data?**

Considering that the value of the PEF should be, as far as possible, close to the reality, ESTIF defends that using Eurostat data would be the best option. The question lies on if an extrapolation of data is more adequate than using the latest available data directly.

Still, an extrapolation based on real values, even if having some limitations (could induce an erroneous trend), would be better and more transparent than the use of the PRIMES model, where some assumptions are not clear or consistent.