

AEGPL Position on the ongoing revision of the Primary Energy Factor

As requested by the European Commission after the ad-hoc Consultation Forum on the use of the "Primary energy factor" which took place on June 17th, AEGPL is delighted to share its comments on this important matter.

First of all, AEGPL welcomes the European Commission decision to keep a single Primary Energy Factor (PEF) for electricity, at European level. This will guarantee the free movement of goods on one hand, while on the other hand, it will allow European consumers to compare the efficiency of appliances that use different energy sources. This solution also leaves each Member State the possibility to take into account the specificities of its own energy mix when implementing energy efficiency legislation that is not subject to EU single-market rules.

The final report evaluating the options for the calculations of electricity's PEF, as published on May 13th, includes a robust and structured analysis of the different methodologies to assess the PEF, which we globally support.

Nevertheless, we would like to highlight that it is essential that the method to be chosen for PEF calculations reflects as much as possible the real performance of the energy mix. As such, we consider that some bias contained in the final report must be corrected.

a. Using a life-cycle assessment approach for all energies

The change of the PEF value, and its influence on the calculation of energy savings towards the EU's objective is a very important issue. It is essential that the method to be chosen is also the one that best represents the reality of how energy mixes work and the losses associated to them. The choice of the method should be made by favouring accuracy and technical correctness, over transparency and simplicity¹.

As such, even if the method 4 seems to be the most solid option, it fails to take into account the global losses on the energy chain and underestimates the conversion coefficients. Using the LCA approach for primary energies only, for the reasons² that 1) if it was used for nuclear and renewable energy sources it would project a relatively high PEF and 2) it would bring more complexity into the approach, seems questionable in our opinion. Such choice is somewhat subjective and questions both the scientific rigor and the ultimate objective of this initiative. We would like to stress that the PEF is meant to be a policy tool in the context of EU's legislation on energy efficiency, while other policy objectives such as the promotion of renewables or the fight against climate change are covered by

¹ Final report from Franhofer p.14: A large variety of options exists for the database, and for each of the options several methods exist to calculate the PEF. Like with many other categories, defining the data base involves trade-offs **between transparency and simplicity on the one side versus accuracy or technical correctness on the other**.

² Final report from Franhofer p.94: "Yet, for renewable energies and nuclear, no LCA is made for two reasons. Firstly, the physical energy content method already **results in a relatively high PEF for those fuels**, and thus only imperfectly reflects their benefits regarding climate protection. **And secondly, a full LCA involves a much higher effort.**"

other dedicated pieces of legislation. Any decision affecting the PEF therefore has to focus on energy efficiency, and should not be driven by other policy objectives.

In our view, for the sake of consistency the LCA approach should be applied to all energy options (including nuclear and RES) and not be used only for conventional fossil fuels. That would avoid creating a distortion in the treatment of the different energy sources and make the chosen approach more consensual. For all these reasons, the use of a zero-equivalent approach for the primary energy of RES (i.e. only counting the non-renewable primary energy) would be unacceptable.

b. Harmonising PEF for all energies

Unlike the EUROSTAT method, option 4 treats differently fossil energies (PEF1.1) and renewable energies (PEF 1), when it comes to PEF levels. As stated in the final report, this choice regarding fossil energy is justified by the consideration that integrating the upstream part of the energy system into the evaluation of PEF allows for a more representative and more precise comparison with electricity.

On this topic, we believe it is important to standardise the method used to obtain the PEF between fossil and renewable energies:

- Either by applying the method used for fossil energy to RES as well, taking into account the real efficiency of the renewable electricity production chain. This would lead to $1 > \text{PEF}_{\text{RES}} > 1.1$;
- Either by keeping PEF 1 for all energies, fossil and renewable, as it is done in Method 3.

c. Considering LCV versus HCV consumptions

Consumptions of electric power plants are calculated in the report in LCV (Lower Calorific Value) terms, which reduce heat losses and therefore affects the value of the PEF. In view of ensuring consistency with Directive 2009/125/EC on Ecodesign, we recommend to consider consumptions in HCV (Higher Calorific Value) terms in the context of the PEF evaluation for electricity.

d. Only a marginal evaluation method for PEF allows to make horizon 2020 projections

It is essential to adapt the evaluation method for PEF to fit with the type of data used. A method based on the average market position³ is not suitable to make projections at the horizon 2020 because it does not consider the future consequences of energy choices.

Only a marginal method allows to assess the energy mix distortion caused by an evolution of the electricity demand, and to define a PEF reflecting future developments of the demand and the production capability. As a result, if a prospective approach is chosen to define the PEF in the future (e.g. 2017-2020 period as suggested in the paper), only a marginal evaluation method can be used.

Otherwise, if the “average” method is retained for reasons related to simplicity, it is necessary to calculate the PEF based on real consumption and production available data from the recent past. Using

³ Final report from Fraunhofer p.64: *One main purpose of using a PEF is to reflect and compare the primary energy consumptions of different generation technologies or appliances. Regarding the category market position, various stakeholders argue however that only if the PEF is determined based on a marginal market position effects of the deployment of new appliances could be shown. Yet, normally the effect of one single new appliance in the system normally is marginally low. The marginal PEF of an appliance depends, above all, on its time of use and the RES feed in situation at that specific point in time. Moreover, very complex and time consuming power system model calculations would have to be carried out to determine the marginal supplier for a specific point in time in the future. Since such calculations seem too complex to be carried out in each revision cycle the PEF for electricity, an **average market position** is favoured in this project*

latest years' data available will guarantee the robustness of the approach and the reliability of the results.

e. Properly assessing all impacts of the PEF review

We remind the European Commission that the PEF review (upwards or downwards) will require a number of regulatory updates in view of remaining in line with the established EU objectives on energy efficiency, bearing in mind that:

- The 2020 energy saving objective of 368 Mtoe at European level was defined on the basis of current PEF 2.5 ;
- The PEF plays a role in the overall assessment of energy efficiency measures;
- The PEF value mentioned in the Energy Efficiency Directive is used in a number of implementing regulations for the Ecodesign and Energy Labelling Directives, thus having an impact on the requirements related to products' efficiency and raking on the labels.

For example, if the requirements in Ecodesign and Energy Labelling are not properly redefined in the next revision of these two pieces of legislation and their respective implementing measures, the potential change of the PEF value may result in artificially increasing electric appliances performance (a decrease of 0.3 points of the PEF as suggested in the paper's method 4 would mechanically reduce by 12% the energy efficiency efforts that electric appliances will have to deliver vs. appliances running on primary energies). This change would therefore be counter-productive, and in full contradiction with the objectives of the European Union in the field of energy efficiency, as it may deter manufacturers from improving the energy efficiency of their products.

For further information, please contact Samuel Maubanc at samuel.maubanc@aegpl.be

About AEGPL (The European LPG Association)

AEGPL is the sole representative of the LPG industry at European level, representing national LPG Associations as well as distributors and equipment manufacturers from across Europe. Our mission is to engage with EU decision-makers and the wider policy community in order to optimise the contribution that LPG - as a clean and immediately available energy source - can make to meeting Europe's energy and environmental challenges.