

# CEMEP POSITION ON THE PREPARATORY STUDY FOR THE ECODESIGN AND ENERGY LABELLING WORKING PLAN 2020-2024

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## 1. General comments

CEMEP, the European Committee of Manufacturers of Electrical Machines and Power Electronics, welcomes the study and the effort to identify the most promising product groups and horizontal initiatives to further study in the Ecodesign and Energy Labelling Working Plan 2020-2024. This position paper will focus on the more horizontal initiatives of which many of them are still of a very immature nature. Looking across all 16 initiatives included in the task 4 report, we have 3 general comments:

### 1. Systematical view enables high saving

The Ecodesign Directive has until now focused on measures on the product or component level, which has contributed to set clear requirements for products put on the market and have led to considerable energy savings, but which has also missed out the large potential for energy savings at the system level. With the study on industrial smart sensors, the emphasis is no longer on the component level but rather on the possible contribution to optimization of the system level. The study emphasize that the high saving potential is only possible with a systematical view and no longer with a component-based approach. CEMEP strongly encourages the use of the systematical view of the entire unit (a good example of this is the Extended Product Approach) as far as possible and also to explore how this can be supported by digitalization – and eventually how regulation may support the digitalization and the system approach.

### 2. Additional studies to prove the real energy saving potential

The study includes estimates of potential energy savings. As some of these estimates could be questioned, we recommend using them carefully and mostly as indicative. For those product groups and horizontal measures, that will be selected for the Working Plan, we recommend more in-depth studies on the potential energy savings be carried out. Please keep in mind that there seems to be a double counting of energy consumption: Energy consumption of motors, Energy consumption of fans and compressors (which have inbuilt electric motors).

### 3. The difference between B2B products and B2C is essential

For the horizontal initiatives, we recommend that a distinction be made between consumer products (B2C) and industrial products(B2B). B2B products are typically designed for longer

lifetimes, higher reliability and with a bigger variation in mission profiles compared to most B2C products. Also, the market conditions are typically different including the markets for maintenance and repair. There is no one-size-fits-all solution for such horizontal areas, and therefore implementation should be done specifically for each product group.

## 2. UPS

It is important to keep in mind that for most UPS markets, energy efficiency is the first criteria of choice for buyers. Consequently, manufacturers have been working for decades to improve the environmental footprint of their products through standardization (IEC EN 62040-3 & IEC EN 62040-4) and voluntary agreements like the UPS Code of Conduct (CoC). CEMEP UPS and the Joint Research Center agreed some weeks ago on an update of the CoC. The final values are for all products higher than the ones that are enforced since 2014. For some products proposed values are up to 8 points higher to the current ones. This is a testimony of the positive & natural dynamic of the UPS markets in terms of energy efficiency. Given this positive situation, the industry does not see enough new reasons for the EU Commission to reconsider the decision it took in 2017 not to implement an ecodesign regulation for UPS.

## 3. Industrial smart sensors

The study points to a big energy savings potential from the use of industrial smart sensors. It is important to stress that energy savings do not come from the sensors themselves but only from the active use of the data that such sensors can provide. As already stated above, the most important effects will come from the possible optimization at an Extended Product level (system level) and not necessarily for the products that host the sensors. The possible saving comes from the application, not from the products. It is important to control the product with the feedback from the sensor.

As the potential benefits from use of sensors will vary significantly from product to product, we recommend not to apply a potential initiative on industrial smart sensors as an own product initiative but rather to explore the possibilities to promote the use of sensors for relevant product groups covered by regulations under the Ecodesign Directive.

When applying measures to support increased use of data, it is important to be technology neutral. Data can be collected from sensors but also from already existing appliances such as variable speed drives. Focus should be on what kind of data to enable without specifying which technology to use to collect it. Further, open or standardized protocols should be used to ensure that data can be collected and processed from different sources in a given system.

Also, with all sorts of data collection, data- and information security, cybersecurity and ownership of the data must be taken seriously into account. These aspects are crucial as a huge part of potential data comes from critical infrastructure installations such as water- or wastewater pumps.

#### 4. Recycled content

CEMEP welcomes the focus on recycled content but also acknowledges that there are still many challenges to further uptake of especially recycled plastic. For industrial products such as those provided by CEMEP members, the mission profile, the long lifetime, and the high requirements to reliability mean that the plastic materials used need to live up to high quality and safety criteria. The market for such high-quality plastics based on recycled content needs to mature further before setting regulatory requirements.

#### 5. Ecological profile

When considering the introduction of an ecological profile, it is important to be aware of the different needs in B2C markets and B2B markets. Whereas environmental information for consumer products need to be simple and aggregated to facilitate environmentally conscious purchase, the industrial market will need more detailed information to support not only the purchase but also the optimal operation.

Furthermore, it is important to ensure a full alignment between different ongoing initiatives on display of environmental information like the PEF/OEF and the initiative on substantiating green claims as well as the energy labels and environmental labels. In the case of PEF as an evaluation criterion, the country comparison must be taken into account through different evaluations of primary energy production.

#### 6. Durability

The study suggests several measures to support a longer lifetime of products, one of them being “product-specific labelling of minimum lifetime with civil law effect applied in case of non-conformities”. This may be applicable for consumer products that are typically exposed to similar use profiles and environmental conditions. This is not the case for industrial products, where for instance average usage time for electric motors can vary from 500 hours a year (i.e. a swimming pool pump) to 8,000 hours for industrial motors and where operating conditions also vary from stable, indoor locations, to humid, dusty and low or high-variance temperature environments.

When choosing implementing measures for durability, the actual lifetime for the specific product groups should be considered, as many industrial products are already designed for a long lifetime and have proven high reliability rates.

The study also refers to the potential development of a digital product passport under the Sustainable Products Initiative. CEMEP suggests that the approach for such a passport is not establishing new central databases but rather to specify a unique identifier that can provide access to defined data provided by the manufacturers. We can help with best practice examples from the industry, we have solutions ready. Measures to protect business-critical information must be observed.

Also, technical requirements should not be laid out in regulatory text but in harmonized products standards. CEMEP suggests that CEN/CENELEC be mandated to draft those standards taking the full aspects of material efficiency into account.

## 7. Firmware and software

The study on firmware and software focuses mainly on how to ensure that updates do not lead to lower energy efficiency for the product and that obsolescence through lack of updateability is avoided. However, for industrial products, a system approach is needed, as a software update may imply a reduced energy efficiency for the given component but at the same time allow for bigger energy efficiency at the system level. CEMEP would also question how it will be possible to calculate the energy efficiency effect of a given update. Another question will be the technical skill level needed to update a product. In critical infrastructures, it is not that easy and secure. This is a big difference compared to a consumer-based product like a television.

Many products do not have the possibility to store different software versions on the inbuilt memory, which will make it impossible to allow backwards updating. In this case you will have to flash a firmware by a product expert. There is a need to differentiate between industrial products and consumer products. The study proposes several potential measures for firmware and software that are related to or concerning cyber security and any further initiative on this area should be careful about what belongs to where and how it relates to other software-related legislation.

Also, as the mission time for industrial products is easily 20 years or longer, full compatibility of old firmware versions cannot be guaranteed. This is mainly due to the fact that components like CPU or other logic components need to be replaced as they are phased out by component suppliers, so also the firmware needs to be adapted.

Other questions arise, which efficiency goal has the higher value: durability or energy efficiency. For certain environmental conditions in which the product is used during its lifetime, it could be beneficial to e.g. increase the cooling fan speed, which will increase the energy consumption but reduce the thermal stress on the product and thus increase the durability and so the lifetime of the product.

## 8. Critical raw materials

The study suggests horizontal minimum requirements such as declaration requirements for critical raw materials as well as more stringent requirements for certain product groups such as requirements to use of recycled content. As stated above for recycled content, it is critical only to require use of recycled content when such materials live up to the appropriate performance and safety requirements.

Industrial products have a longer lifetime than consumer products. It is also questionable if the recycled material can be used again in the same product. For example, a permanent magnet motor needs very high material quality to reach the efficiency and performance parameters and use of recycled material may jeopardize these performance parameters.

*CEMEP is the European Committee of Manufacturers of Electrical Machines and Power Electronics, representing an industry with 130,000 employees. The members of CEMEP are the National Associations in Europe, representing manufacturers of electric motors, variable speed drives and uninterruptible power systems*