



# CONSUMER RELEVANT ECO-DESIGN REQUIREMENTS FOR EXTERNAL POWER SUPPLIES

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ANEC-PT-2008-EuP-002draft  
BEUC X/006/2008

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## Summary

In the context of the implementation of the Eco-design of Energy-using Products (EuP) Directive, the European Commission is proposing eco-design requirements for external power supplies. These requirements are largely based on the finding of the relevant preparatory study on external power supplies.

This paper outlines the main consumer relevant issues related to the possible eco-design requirements for external power supplies and recommends improvement options. We give specific, technical recommendations to increase the energy efficiency of these products and highlight the need for a mandate to standardise interfaces of external power supplies. We also stress the importance of providing better information to consumers.

## **Introduction**

This paper outlines the main consumer relevant issues related to the possible eco-design requirements for external power supplies proposed by the Commission and recommends improvement options. We give specific, technical recommendations to increase the energy efficiency of these products and highlight the need for a mandate to standardise interfaces of external power supplies. We also stress the importance of providing better information to consumers.

### **1. General remarks**

Consumer organisations welcome and support the Commission proposal to introduce eco-design requirements for external power supplies. We are however disappointed that the Commission working document merely focuses on energy-efficient aspects of these products while neglecting other important issues which have an impact on the environmental life cycle costs. In particular we believe that standardisation of interfaces and user information regarding energy use and end-of-life treatment should be foreseen.

### **2. Coverage of the draft implementing measure**

The draft implementing measure covers external power supplies and excludes battery chargers. However, the Preparatory Study emphasises that external power supplies and battery chargers belong to the same product family and that some products even serve dual functions of supplying power and charging batteries. For example, power supplies for laptops are designed for both charging batteries and supplying power during product use. The situation for devices for mobile phones and digital cameras is also unclear: while the Preparatory Study refers to them as external power supplies, their primary function is charging batteries.

### ***Recommendations***

We ask to explicitly clarify that power supplies designed to charge mobile electronic devices are also covered by the implementing measure and to add the following to paragraph 1 of the “definitions” (p. 1):

*“1. ‘External power supply’ means a device which [...] is intended to be used with a separate device that constitutes the primary load, or is intended to be used to charge a mobile electronic device; [...]”*

### **3. Special treatment of halogen lighting converters**

We consider that the different treatment of external power supplies and halogen lighting converters in the draft implementing measure is meaningful and should be maintained.

#### **4. Thresholds for no-load and active energy efficiency of external power supplies**

We support the proposed threshold values for no-load and energy efficiency that are proposed for external power supplies and the timing for their implementation.

#### **5. Thresholds for no-load and active energy efficiency of halogen lighting converters**

For external power supplies the first set of thresholds will be imposed six months after the implementing measure has come into force. Considering this, we do not see any reason why producers of halogen lighting converters should be given a longer period of time (i.e. one year) to comply with binding thresholds. We thus ask for the same deadlines to apply to both external power supplies and to halogen lighting converters. Furthermore, we consider that a second round of stricter thresholds should be introduced for lighting converters, as has been proposed for external power supplies.

#### ***Recommendation***

We ask to align the timing and thresholds of halogen lighting converters to the provisions of external power supplies. We call for changing the text on halogen lighting converters on page 4 of the draft implementing measure as follows:

#### ***“Halogen lighting convertors***

*Six months after this implementing measure has come into force:*

*No-load: The no-load power consumption shall not exceed 0.50 Watt.*

*Active efficiency: The active efficiency shall not be less than 0.925.*

*Two years after this implementing measure has come into force:*

*No-load: The no-load power consumption shall not exceed 0.30 Watt.*

*Active efficiency: The active efficiency shall not be less than 0.950.*

*No-load requirements are irrelevant for converters with the on/off-switch on the primary side of the converter.”*

#### **6. The need for a “well-placed” power supply for lights**

We consider it problematic that the current proposal contains the possibility for manufacturers to place the supplies of halogen lights in two different ways:

- between the on/off switch and the light (switch on the primary side of the transformer);
- between the plug and the on/off switch (switch on the secondary side of the transformer).

In the first case, off-mode losses are not an issue as users turn out the light using an off-switch which will also switch off the power supply. However, in the second case, even when the hard-off switch is used, the power supply will still use energy. The second option is often favoured by industry due to lower production costs. Indeed, "real" off-switches need galvanic separation which makes products more expensive. Since producers do not cover the electricity bill of consumers, there is currently no incentive to change this practice.

### **Recommendation**

We ask for the arrangement of the switch to be taken into account in the implementing measure. In this case, a 0.0 Watt off-mode threshold for power supplies would be technically simple and we therefore support this solution. This issue should also be addressed in Lot 8 on Office Lighting and Lot 19 on Domestic Lighting.

## **7. Standardisation of interfaces**

A harmonised standard for interfaces is urgently needed. We consider the following to be the benefits of standardising interfaces:

- **More convenience for consumers:** today a specific power supply is only usable for one specific device. When consumers possess several devices, they are bound to possess - and carry along while travelling - a whole variety of power supplies. Moreover, different plug sizes and shapes can be found in different countries which forces consumers to use adaptors. We therefore believe that interfaces should be standardised, in order to allow consumers to use the same power supplies for more than one electronic device.

- **Better choice for consumers:** consumers have little choice for buying power supplies. Since power supplies are almost exclusively sold together with electronic devices in product bundles, consumers fully rely on the producers' design. Standardisation of interfaces will therefore allow consumers to select between different external power supplies whatever the device they want to use.

- **Reduced costs for consumers and longer product life-span:** Although standardised power supplies might be more costly due to higher technological demands in the short term, this will be compensated by the fact that consumers will have to purchase fewer power supplies in the future. These supplies could also serve for more than just one generation of appliances. Furthermore, standardisation would lead to the cost-efficient mass production of high-quality power supplies that provide a more adapted and controlled charging process. This will prolong the life-span of batteries in end-appliances and subsequently further reduce environmental impacts and consumer costs.

- **Increased resource efficiency:** Lifetime extension of power supplies will lead to a reduction of the total energy demand, a result that can be verified for all types of power supplies covered by the preparatory study. Moreover, the number of power supplies purchased by consumers will decrease and the life-span of many batteries and power supplies will be prolonged. This would result in a reduced demand of energy and material in production, packaging and distribution.

- **Reduced generation of electronic waste:** Fewer power supplies on the market will result into a reduction of waste. This issue is of considerable importance since end-of-life power supplies represent a huge amount of waste. Moreover, these products are classified as hazardous waste under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

- **Impact on product safety:** During the last years, there have been several scandals around exploding and burning batteries in mobile phones and notebook computers. The standardisation of interfaces will contribute to replace low quality chargers with high quality smart charging technologies and therefore will have a positive influence on product safety.

### **Recommendation**

We recommend focusing on the standardisation of interfaces for power supplies for mobile electronic devices (mobile phones, digital cameras and similar products). The environmental gains and gains for consumers will be undoubtedly high for these product groups. A preparatory study carried out by the Consumer Council of the German Institute for Standardisation (DIN) clearly outlines these gains. Our position is shared by COPOLCO<sup>1</sup> which also asked CENELEC/IEC for such standardisation work in October 2006.

To this aim, the implementing measure should require the Commission to draft a mandate to CENELEC / IEC to **prepare a harmonised standard for power supplies** that are primarily used to charge mobile electronic devices. We suggest including the following paragraph in the draft implementing measure:

*“Standardisation of interfaces*

*For external power supplies for mobile electronic devices, the European Commission will issue a mandate for standardisation of interfaces within one year after this implementing measure has come into force. The standard shall be made compulsory after review by virtue of an amendment of the implementing measure. If no suitable standard is delivered within the foreseen time frame for the execution of this mandate the Commission shall initiate the development of a specification by itself.*

*Definition:*

*‘Mobile electronic devices’ are electronic products that are designed in a way that they can be used and carried around when not connected to the mains.”*

## **8. Need for better consumer information**

Even though the introduction of strict thresholds will bring most external power supplies to a technical optimum and thereby reduce the need to label different energy efficiency classes, we believe that there is room for better consumer information. Consumer behaviour is decisive when it comes to off mode losses. Most consumers are not aware that plugged external power supplies use electricity even when they are not plugged into the actual device. Therefore consumers should be informed accordingly.

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<sup>1</sup> COPOLCO is the consumer Policy Committee of ISO.

Moreover, considering that power supplies are classified as hazardous waste, they should be treated accordingly and consumers should thus be informed about the way to properly dispose of any unwanted power supplies.

### ***Recommendation***

The eco-design requirements for external power supplies should be completed by a mandatory product information scheme on off-mode losses and end-of-life treatment. This could be formulated as follows:

*“Requirement for user information:*

*External power supplies shall be labelled with information on no-load power consumption. External power supplies should be additionally labelled with the following information: ‘Unplug from the electricity grid if not in use to save energy!’*

All external power supplies shall be additionally labelled with:

*‘This device contains hazardous substances. Do not dispose of with household waste. Please use your municipal collection point for electric and electronic equipment.’*

*The user information shall be given in the official language of the Member State where the device is sold. The user information shall be displayed in a clearly visible and permanent way.”*

Moreover we propose that standard battery chargers and chargers for power tools should not be fully excluded from the Implementing Measure. The preparatory study suggests to create a special marking for microprocessor controlled battery chargers aimed at consumers, indicating that such chargers achieve important “battery savings”. We therefore ask to introduce a consumer information scheme on the type and quality of the battery charging system.

## **9. Verification procedure**

While we accept that every electronic device may feature slightly different efficiency and standby values, we think that a systematic violation of all ecodesign thresholds by 10% is unacceptable.



### **Recommendation**

We ask to change the verification procedure for market surveillance to the following wording in order to avoid that a systematic breach of the 10% threshold will be possible:

*“The model shall be considered to comply with the provisions set out in Annex I of this implementing measure if none of the results for no-load and average active efficiency exceeds the limit values set out in Annex I by more than 10%.*

*Otherwise, three more units shall be tested. The model shall be considered to comply with this implementing measure if the average of the results of the latter three tests for no-load and average active efficiency does not exceed the limit value set out in Annex I.”*

END