

'ECOmise it': EBV Elektronik Presents Latest Update on EuP-Directive

New Minimum Requirements Change the European Market for Energy-using Products

by Dr. Norbert Reintjes, Ökopol GmbH/EuP Consultant EBV Elektronik | April 2009

The conventional TV set is destined to disappear from the European market, and maximum energy consumption levels are to be specified for water heaters, refrigerators and circulating pumps. Although implementation of the EuP, or ecological design directive, has received little public attention to date, the ordinances worked out in the course of lengthy discussions will have far-reaching consequences for the Energy-using Products (EuPs) approved for the market.

At best, the gradual ban on the 'light bulb' throughout the European Union has received intensive media coverage. At the same time, however, drafts already exist for minimum requirements related to other product groups and expert studies are creating the basis for additional proposals. The EU Commissions plan to deal gradually with the most environmentally-relevant product groups and to ensure that existing requirements are subject to regular checks – an ambitious process. These developments are important not only for the end-customer, who may find that shelves no longer contain certain products in their familiar form, but particularly for the manufacturers and importers of energy-using devices. These are obliged to comply with the minimum requirements. Following a transition period, it will no longer be possible to market devices that do not meet the requirements. In some circumstances, this period may be extremely short. For this reason, it is particularly advantageous for market players to be informed of forthcoming requirements as early as possible.

This article outlines the main features of the EuP Directive and its implementation while also providing an overview of the product groups and processes involved. Subsequent articles will discuss the future, EU-wide, binding minimum requirements for individual product groups (list below).

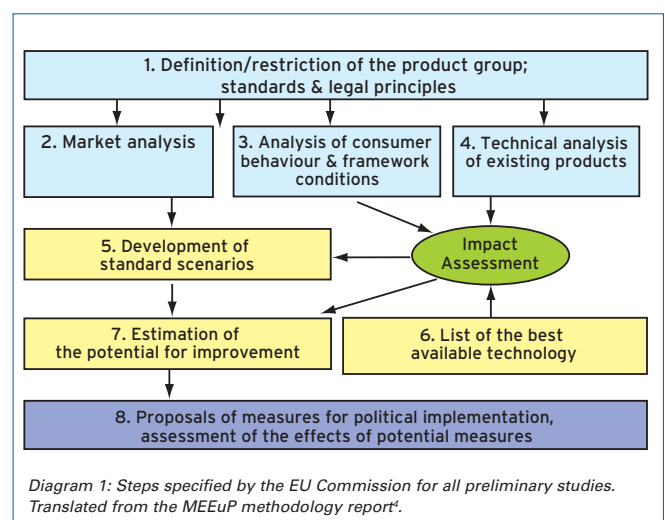
- Consumption in standby and off mode
- Simple set-top boxes
- Commercial illumination (office and street lighting)
- External power supplies
- General (household) illumination
- TV sets

How the EuP Directive Works

The main purpose of the EuP Directive¹ (also known as the ecological design directive) is to improve the energy efficiency of energy-using products. It is also aimed at promoting implementation of the European climate protection goals. Other goals are to achieve holistic, environmentally-friendly

product designs as well as harmonisation of the European domestic market for such products. A directive requires implementation at a national level; this was achieved in Germany on the basis of the German Energy-using Products Act (EbPG) passed in March 2008². The authority responsible for this is the German Federal Institute for Materials Research and Testing (BAM)³, which reports directly to the Federal Ministry of Economics and Technology. In close co-operation with the German Federal Environment Agency, it supports the EuP process at European level and carries out activities in Germany. The directive applies to all products and/or product groups that require energy in order to function as intended. This excludes vehicles. The EuP Directive formulates comprehensive objectives and procedural regulations while, however, delegating the further specification of material requirements for individual product groups to a downstream system of ratification by the EU Commission with the participation of the member states, the market players and other interested groups.

In the knowledge that the design phase has a considerable impact on the environmental effects of a complex product, the EuP Directive places more emphasis than other current product-related regulations on analysing the environmental effects during the entire service life, which are influenced by various technological concepts. The EuP Directive specifies criteria to be used in the selection of the products and/or product groups for which concrete requirements are to be produced. These include the relevance of the environmental effects and existing optimisation



potential as well as a minimum pan-European market volume of 200,000 units. The EU Commission in conjunction with the member states and with the participation of the market players and interested groups is responsible for selection.

From Product Group Selection to the Minimum Requirement

Minimum requirements are specified on the basis of preliminary studies. These studies, which are commissioned by the EU Commission, follow an eight-step uniform procedure (Diagram 1). The EU Commission produces minimum requirements regarding the environmental effects of the selected products on the basis of the preliminary study results. The EuP Directive basically provides two different regulatory alternatives: Implementation measures issued by regulatory law and industry self-regulatory initiatives. However, self-regulatory initiatives have not played any role as yet. Instead, past procedures have been based on EU ordinances with direct application.

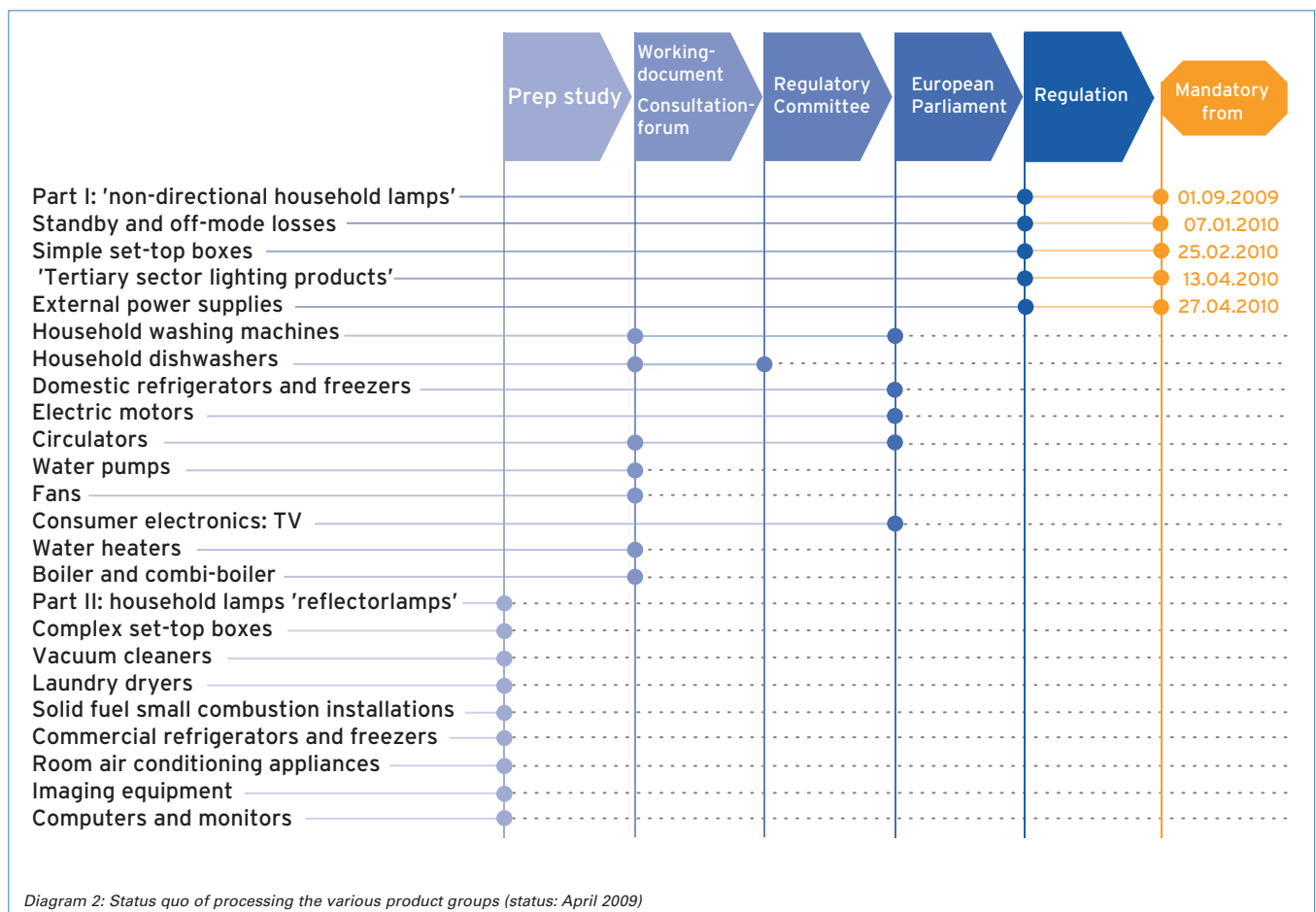
Working documents are available for discussion to the interested groups to act as precursors to such ordinances. The consultation forum, in particular, provides an opportunity for feedback. This forum is made up of representatives of the member states as well as selected representatives of interest groups (usually representatives of the European

central associations). Following this consultation process, the Commission reviews the draft which is subjected to an impact assessment before being submitted to a committee of representatives from the member states – the Regulation Committee – for approval. Before it can take effect, it must then be checked by the EU Parliament.

The time required for the preliminary studies, which varies depending on the anticipated complexity, is usually between 1½ and 2 years. For the product groups already processed, the subsequent process from submission of the Commission's first draft (working document) to approval of the legally binding ordinance lasted another 1 to 1½ years. These periods depend heavily on political and personnel circumstances and may change in the future.

Implementation in Detail

Completed preliminary studies have already been submitted for 15 product groups; a few more will be completed in 2009, while new preliminary studies are also being launched (list next page). The results and interim results of these studies can be downloaded at www.eup-netzwerk.de. As these preliminary studies involve considerable expense in order to gather various categories of information concerning the particular product groups being examined (Diagram 1), they can also be very useful in areas other than the EuP process.



While the preliminary studies serve the EU Commission as a basis for developing proposals for minimum product group requirements, the Commission is in no way bound to such recommendations and is entitled to specify the scope of requirements regardless of the scope set out in the preliminary studies. Moreover, the regulated aspects including the expected standards and the schedule to implementation may differ considerably. An ordinance on the restriction of the standby and off losses has already been approved as legally binding throughout the EU. Further ordinances are to follow in 2009 (Diagram 2).

List below: New preliminary studies are currently being launched in addition to the product groups stated in diagram 2. Details on working through the preliminary studies and the development of implementation measures can be found at www.eup-netzwerk.de.

- Heating units for individual rooms
- Hot-air central heating (without cogeneration)
- Domestic and commercial food ovens
- Domestic and commercial cookers and grills
- Commercial dishwashers, washing machines and dryers
- 'Non-commercial' coffee makers
- Consumption in networked standby mode
- Domestic emergency power supply units
- Other domestic refrigerators and freezers
- Transformers: distribution transformers, power transformers
- Devices for recording and playing sound and images

Practical Consequences

Where implementation measures apply to energy-using products, the manufacturers and importers (distributors) must check the conformity of their products using one of several conformity assessment procedures approved by the EuP Directive. Manufacturers generally commission test institutes to perform tests on their products. The product-group-specific implementation measures specify not only the standards expected but also the test methods to be used for testing. Wherever possible, the EU legislator applies existing measurement standards that are already established in the industry. Nevertheless, it has become clear that a number of these measurement standards need to be adapted or even newly created. In such cases, the EU Commission awards appropriate orders to the standardisation organisations (CENELEC & CEN).

The manufacturer must submit the measurement results together with a declaration of conformity for inspection by the authorities. Before market launch, the product must receive the CE conformity mark. The vast majority of energy-using devices require the CE mark (e.g. EMC) anyway as a result of other existing legislation. In this case, the CE mark is extended to include the declaration of conformity with the relevant EuP implementation measure.

The state-organised market surveillance authority in the member states is designed to test conformity on the basis of

random samples. If requirements are not complied with, the violation is reported to the EU authorities. Depending on the severity of the violation, the consequent penalty may range from fines to a marketing ban or even product withdrawal.

Interaction between the EuP Directive and other Product-Political Instruments

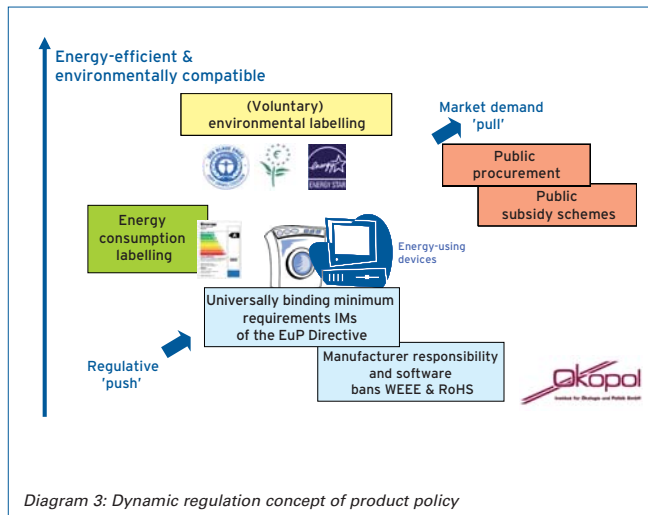
A frequently heard complaint is that the EuP Directive creates additional administrative ballast. Particularly where electrical devices are concerned, it is often pointed out that numerous legal instruments already exist to regulate product development. While this is of course correct, it is also true that these instruments address different aspects and pursue different goals despite some areas of overlap. Therefore, the key product-political instruments are shown below as well as the sub-aspects they concern and the ways in which the instruments interact.

The RoHS and WEEE Directives, both implemented in Germany with the German Used Electrical Devices Act, are aimed particularly at minimising problems that arise during waste recycling and elimination and to promote optimum recycling. As a result, RoHS prohibits the use of specific hazardous substances in electrical and electronic devices in any of the product groups. Exceptions are made in cases in which these substances are indispensable for technical reasons (e.g. mercury in luminescent tubes). By contrast, the WEEE provides specifications for product disposal – again covering all product groups. These usually include general specifications regarding component labelling and responsibilities in the disposal chain.

Energy consumption labelling focuses on identifying the amount of energy a device uses during the utilisation phase. For selected product groups (e.g. washing machines), it specifies that devices should be accompanied by certain information at the point of sale in order to provide guidance for end-users. This is done by use of a uniform label, which assigns the device to an energy-using class and describes other environmental and consumer-relevant characteristics of the product (e.g. water consumption).

Voluntary environmental labelling with the EU Flower or the Blue Angel identifies products that are more fully classified as particularly environmentally compatible. Product-group-specific criteria that may be related to selected environmentally relevant aspects of the product's entire life cycle are specified in order to determine the environmental compatibility.

The Energy Star has an interim status. In itself, a voluntary product-group-specific environmental label, it is currently used in some areas (e.g. information technology) as a virtual minimum standard for public procurement procedures. As such, it is directed primarily towards power consumption during operation of devices.



An important distinction is the legal status of the instruments and the resulting consequences for the manufacturer/importer. While RoHS, WEEE and EuP set legally binding minimum standards for devices launched on the European market, the energy-consumption label makes identification a requirement without additionally defining binding requirements. As a voluntary instrument, the environmental label gives manufacturers the chance to label particularly 'good' devices accordingly. Of the instruments mentioned earlier, the Implementation Measures (IMs) of the EuP Directive define universally binding minimum standards for energy efficiency and other life cycle aspects related to the environment, thereby preventing the 'worst' devices of a product group from gaining access to the market.

According to the understanding of the EU Commission, the interaction between these instruments and their own interaction with other elements such as public procurement or systematic market incentive programmes should give way to a momentum that leads to a constant development of energy efficiency and environmental compatibility in the product groups concerned. Diagram 3 illustrates this concept.

However, those responsible for creating standards in Brussels have realised that there is still considerable room for improvements to the detailed interaction between the instruments. For this reason, the 'Action plan for sustainability in production and consumption' published in the summer of 2007 by the EU Commission, calls for greater networking of product-political instruments. Energy consumption labelling is to be extended to cover a wider range of product groups and categorisation is to be linked to the minimum standards set by the EuP. With respect to the criteria to be checked prior to awarding the voluntary environmental label and the minimum standards of the EuP, the relevant testing and development procedures should be more closely interconnected.

All in all, market players can benefit considerably from closely following the development of the various instruments outlined here since it is these that will be defining the standards for future market potential and restrictions.

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In addition to basic background texts and legal references, Ökopol's universally available internet information page (www.eup-netzwerk.de) provides a regularly updated German-language overview of the status of on-going processes for testing and implementing the EuP requirements in the various product groups as well as links to further, more detailed information regarding these processes.

¹ Guideline 2005/32/EC of the European Parliament and the Council of 6 July 2005 regarding the creation of a framework for specifying requirements related to the environmentally-compatible design of energy-operated products and for amending Guideline 92/42/EEC of the Council as well as Guidelines 96/57/EC and 2000/55/EC of the European Parliament and the Council. Official Journal of the European Union no. L191 dated 22 July 2005, Pp. 29 – 58.

² 'Energy-using Products Act (EBPG)', German Federal Law Gazette, (BGBl) no. 7 dated 6 March 2008: <http://www.bundesgesetzblatt.de/>

³ <http://www.ebpg.bam.de>

⁴ Van Holsteijn en Kemma BV MEEuP Methodology Report, 2005 http://ec.europa.eu/enterprise/eco_design/index_en.htm

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EBV Elektronik, an Avnet (NYSE:AVT) company, was founded in 1969 and is the leading specialist in European semiconductor distribution. EBV maintains its successful strategy of personal commitment to customers and excellent services. 250 Technical Sales Specialists provide a strong focus on a selected group of long-term manufacturing partners. 120 continuously trained Application Specialists offer extensive application know-how and design expertise. Warehouse operations, complete logistics solutions and value-added services such as programming, taping & reeling and laser marking are fulfilled by Avnet Logistics, EBV's logistical backbone and Europe's largest service centre. EBV operates from 60 offices in 28 countries throughout EMEA (Europe – Middle East – Africa). For more information about EBV Elektronik, please visit www.ebv.com.