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The Eco-Design Directive

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Up-to-date status of the studies carried out and regulations arising from the EuP and the new extended ErP directive

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Design with the best

The Eco-Design Directive

History of EuP and ErP

The Eco-Design of Energy using Products (EuP) Directive (2005/32/EC) became law in the European Union (EU) on the 11th of August 2005, and was transposed by Member States into national law by 11th August 2007. In 2009 the European Parliament adopted the European Commission's (EC) proposal to widen the scope of the directive to include energy related products (ErP). This new directive, 2009/125/EC superseded 2005/32/EC in November 2009.

The directive itself is a framework defining the legal context for so called "implementing measures" and does not itself impose any obligations on industry. However, these implementing measures, developed and targeted at particular product groups, are now coming through in the form of EU regulations affecting a wide range of products - the first of these entered force in January 2009 and now ten electrical product groups are covered. As a result, this eco-design driven legislation is having a major impact on the design phase of a wide variety of products.

Objectives and scope

The main objective of the Eco-Design Directive is to bring about improvements in the environmental performance of products throughout their life cycle from mining of the raw material through to recycling at end-of-life. Up to now the focus has been on increasing energy efficiency particular during the use phase of a product's life. Obligations which arise focus on the design phase since it is considered that this is the determining stage affecting the resources used in a product.

The Directive did not apply to means of transport (planes, cars etc.) but, apart from this, the scope was deliberately broad covering, in principle, any product which when in use depends on, generates, transfers or measures energy (electricity, fossil fuel or renewable) - boilers, computers, televisions, industrial fans, light bulbs etc. However, many products have an indirect impact on the energy in use such as water using devices, taps and showerheads for example, and double glazing windows or insulating material. Improvement in design could clearly result in the significant saving of energy and other resources. The extension of scope to energy-related products in November 2009 enables these types of product to be regulated in principle.

How Implementing Measures arise?

Before an implementing measure can be put in place for a particular product sector (e.g. boilers) certain criteria must be taken into account and determine whether there really is a need and a benefit for doing so. These criteria are as follows:



A product sector must

- represent a significant volume of sales and trade - indicatively more than 200,000 units per year in the EU
- have a significant environmental impact
- present significant potential for improvement.

Also, Implementing Measures must not have a “significant negative impact” on

- a product’s price or performance, or
- on the competitiveness of EU industry.

Having taken all this into account the European Commission (EC) may decide not to introduce an Implementing Measure. This could happen if it believes that the industry is already progressing at a satisfactory speed (e.g. by voluntary agreements or targets to reduce energy consumption).

What obligations arise from Implementing Measures?

A typical regulation arising under the Eco-design Directive comprises three elements:

- Specific requirements - numerical targets which must be met before the product can be placed on the market. Targets such as a maximum power consumption when off-load or minimum efficiency when on-load are common. These targets generally tighten with time and are often linked to the requirement to label under the Energy Labelling Directive

- Generic requirements - non quantitative requirements such as providing information to the end user on parameters relevant to the environmental performance (e.g. noise, rating)

- Conformity assessment - the requirement to assess the product for compliance with the given requirements in a formal way and application of the CE mark

In practice, a voluntary agreement would include the first two of these elements and manufacturers would generally need to provide evidence of conformance to an independent third party to demonstrate to the Commission that the scheme is effective.

Products covered and status of implementation

When the EuP Directive entered into force a number of largely volume consumer electrical products had already been identified as meriting implementing measures. Many of these are already regulated or very close to regulation:

Studies in phase one:	Status
Boilers and combi-boilers (gas/oil/electric)	P
Water heaters (gas/oil/electric)	P
Personal Computers (desktops & laptops), computer monitors + “small scale” servers	P
Imaging equipment: copiers, faxes, printers, scanners, multifunctional devices	V
Consumer electronics: televisions	R
Standby and off-mode losses of EuPs	R
External power supplies (and battery chargers - studied but omitted)	R
Office lighting (combined as tertiary lighting)	R
(Public) street lighting (combined as tertiary lighting)	R
Residential room conditioning appliances (aircon and ventilation)	P
Residential room conditioning appliances (comfort fans)	P
Electric motors 1-150 kW	R
Water pumps (commercial buildings, drinking water, food, agriculture)	P
Circulators in buildings	R
Fans (non-residential).(Note scope now widened beyond ventilation)	P
Commercial refrigerators and freezers, including chillers, display cabinets and vending machines	C
Domestic refrigerators and freezers	R
Domestic washing machines	P
Domestic dishwashers	P
Solid fuel small combustion installations (in particular for heating)	S
Simple Converter Boxes for digital television	R
Laundry dryers	P
Vacuum cleaners	P
Complex set top boxes (with conditional access and/or functions that are always on)	V
Domestic lighting products I - including incandescent bulbs (non directional)	R
Domestic lighting products II - reflector lamps and luminaires (directional)	P
Key	
S	Study underway
C	Study completed
P	Legislation proposed
V	Voluntary agreement possible
R	EU regulation in force

Studies in phases two and three	Status
Refrigerating and freezing equipment: service cabinets, walk-in cold rooms, chillers, ice makers, ice cream and milk-shake machines, minibars	S
Transformers: distribution transformers, power transformers	S
Sound and imaging equipment: DVD/video players and recorders, video projectors, video game consoles	S
Local room heating products	S
Central heating products using hot air to distribute heat (other than CHP)	S
Domestic and commercial ovens (electric, gas, microwave), including when incorporated in cookers	S
Domestic and commercial hobs and grills, including when incorporated in cookers	S
Professional washing machines, dryers and dishwashers	S
Non-tertiary coffee machines	S
Networked standby losses of EuPs	S
Air-conditioning and ventilation systems	S
Industrial and laboratory furnaces and ovens	S
Machine tools	S
Water-using equipment	S
Medical imaging equipment (Proposed by industry not by the EC)	V

These studies are scheduled to complete from mid 2011 onwards.

Where next for the Eco-Design Directive

A clear trend starting from volume consumer towards commercial products and now industrial infrastructure equipment can be seen. A new working plan identifying other product groups for study will emerge in 2011. New studies on energy using and energy related products will follow. In parallel existing regulations will also be subject to revision or scrutiny in the light of technological progress.



Please note:

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