The EuP Directive: a framework for continuous improvement of the environmental performance of energy-using products

Michaïl Papadoyannakis

1 European Commission, Brussels, Belgium

Abstract
The European Parliament and the Council adopted a framework Directive for setting eco-design requirements for energy-using products, the "EuP" Directive (Directive 2005/32/EC of 6 July 2005) (1) on the basis of a Commission proposal submitted in August 2003 (2). Legal obligations for manufacturers will flow from the implementing measures, to be adopted separately. The Directive establishes criteria for the selection of products, and spells out the environmental aspects that may be addressed as well as the type of eco-design requirements and the methodologies for determining those. This paper discusses the main operational aspects of the Directive and explains how, in a context of increasing market and legal pressures on environmental issues worldwide, a coherent framework for addressing environmental performance of energy-using products enhances the competitiveness of the EU industry and economy as a whole, while contributing to major policy objectives such as environmental protection, security of energy supply and good functioning of the EU internal market.

Keywords

1 BACKGROUND
Sustainable development is one of the major policy goals of the European Union. Article 6 of the EC Treaty requires environmental considerations to be integrated into the other Community policies and activities, with a view to promoting sustainable development. A well functioning internal market, security of energy supply (3) and reduction of the negative effects created by products on the environment in the context of an Integrated Product Policy (4), are essential contributions to sustainable development.

In the light of the estimation that over 80% of all product-related environmental impacts (such as climate change linked to energy consumption) are determined during the product design phase, the Commission proposed to establish a legislative framework for adoption of implementing measures concerning eco-design requirements for energy-using products (EuPs), excluding means of transport.

This proposal underwent the various steps of the co-decision procedure and on its basis the European Parliament and the Council adopted the EuP Directive. The aim of the Directive is to ensure free movement of energy-using products; it contributes to sustainable development through increased security of energy supply and high environmental protection. It is applicable in principle to any product using energy to perform the function for which it was designed, manufactured and put on the market. In practice the criteria indicated in the Directive restrict the scope to those products which are relevant for the internal market, may have an important environmental impact and present a significant improvement potential. All energy sources are covered, although it is likely that only those products using fuel, gas and electricity will be the subject of implementing measures.

The main elements of the Directive are:
- It creates an integrated framework for setting requirements which consider all environmental aspects of energy-using products throughout their entire life-cycle (Integrated Product Policy approach)
- The Directive does not create immediate obligations for manufacturers but defines the rules and conditions for the Commission to do so through implementing measures
- Implementing measures are adopted by the Commission assisted by a regulatory Committee
- The Directive defines the criteria that must be fulfilled by the products so that they may become the subject of implementing measures
- It also defines the type of eco-design requirements that may be included in the implementing measures, as well as methodologies for establishing them
- Implementing measures define eco-design requirements, conformity assessment procedures and implementation dates

This framework Directive will be followed by implementing measures (to be adopted by the Commission assisted by a regulatory committee) establishing eco-design requirements for given energy-using products. Each implementing measure will be accompanied by an explanatory memorandum, an impact assessment and will be subject to a consultation procedure.

2 OPERATIONAL ASPECTS OF THE DIRECTIVE
2.1 When considering an implementing measure
Self-regulation
In considering whether to prepare a draft implementing measure the Commission will examine relevant self-regulation, such as voluntary agreements or other measures adopted by industry, taking into account that in some cases such actions are likely to deliver the policy objectives faster and less costly than mandatory requirements.

At the same time it should be kept in mind that if voluntary actions of the economic operators to address environmental aspects of energy-using products are to be...
examined as an alternative option to legislation, they must be credible and coherent.

The EuP Directive refers explicitly to self-regulation (Article 17) and contains an annex listing indicative criteria to evaluate self-regulatory initiatives as possible alternative to implementing measures. The stakeholders represented in the Consultation Forum (foreseen in Article 18 of the EuP Directive) will also contribute to the assessment of voluntary agreements and other self-regulation measures.

Should a self-commitment prove not to work for whatever reason (such as a fragmented market or too many “free riders” not sharing the same environmental improvement targets), compulsory requirements would present a quick alternative.

The adoption of a framework directive on eco-design requirements will reinforce the potential impact of self-regulation by the industry. It is expected that the availability at EU level of an efficient tool for setting eco-design requirements on energy-using products rapidly will stimulate industry to build on the already existing extensive know-how and experience and conclude satisfactory self-commitments.

### 2.2 When drafting the implementing measure

The Commission attaches a lot of importance to the proper and timely consultation of stakeholders; this is why it is intended to ensure their participation throughout the whole process (preparatory studies, impact assessments, Consultation Forum).

With regard to the type of eco-design requirements to be included in the implementing measure they may be specific, taking the form of limit values or thresholds for selected environmental aspects with a significant adverse impact on the environment and on the basis of sufficient technical and/or market evidence (such requirements exist for example for the energy efficiency of certain energy using products such as refrigerators, boilers, light ballasts). They may also be generic, aiming at the improvement of the overall environmental performance, focusing on environmental aspects identified in the implementing measure; generic requirements would be relevant when the preliminary work prior to the submission of an implementing measure identifies several important environmental aspects of the product; in this case improving one aspect might lead to deterioration of another and setting simultaneously binding limits for all significant environmental aspects would prove too rigid and counterproductive, whereas generic eco-design requirements can offer the necessary flexibility for trade-offs between environmental aspects. Finally, implementing measures may contain both specific and generic eco-design requirements; in all cases the relevant environmental aspects will be identified in the implementing measure which will also include guidance for their implementation, where necessary.

An adequate balance between the requirements envisaged and their technical/economic feasibility as well as appropriate adaptation deadlines and time schedules for application will be ensured.

In determining the nature and eventually level of the eco-design requirements, mature methods, when available (e.g. least life cycle cost for energy consumption in use) and evidence through other Community activities (such as Ecolabel, relevant thematic strategies in the context of the 6th Environment Action Programme, Energy Star and Energy Labeling) will be used.

### 2.3 When applying the adopted implementing measure

#### Conformity assessment

A conformity assessment procedure based only on self-assessment is proposed as a general rule, thereby avoiding to manufacturers costs associated to certification from third party and hence substantially reducing compliance cost. This would be particularly important for SMEs with a more limited product spectrum and hence potentially much higher marginal cost from a possible obligation for 3rd party certification. Synergy with environmental management systems and with the EU eco-label can offer additional opportunity not to duplicate costs.

It should be borne in mind that many categories of energy-using products fall under the scope of existing Community legislation (for example on safety) with similar requirements in terms of content and format of conformity documentation with which they already have to comply; information on some environmental aspects of the product (as reflected for example in the ecological profile of the product) would constitute for many products the only new element. The level of additional costs of production and maintenance of conformity documentation will depend on the degree to which companies have already integrated environmental considerations in their everyday business. For the increasing number of companies which will have done so before an implementing measure is adopted, the cost will be minimal.

#### Presumption of conformity

Products bearing the CE marking are presumed to comply with the requirements of the applicable implementing measure.

Harmonised standards (the reference numbers of which have been published in the Official Journal) may also provide presumption of conformity with the provisions of the applicable implementing measure that they cover; the application of several harmonised standards may be necessary for demonstrating full compliance with the implementing measure.

Standards may be used for defining measurement and testing methods, to support and guide the assessment of the environmental performance of the product and for communication purposes. The EuP Directive acknowledges the role of standardization, which can provide a valuable support for its implementation; work on a related mandate by the Commission to the European Standardisation Organisations for the programming of standardization work to support implementation of EuP started in 2005. Participation of all important stakeholders is essential; standardisation should not be used for fixing limit values but for establishing measuring and testing methods and, in the case of generic ecodesign requirements, for guiding manufacturers in establishing the ecological profile of their products in accordance with the requirements of the applicable implementing measure.

EuPs which have been awarded the Eco-label, distinguishing products that reach a very high environmental performance (judged on the basis of demanding criteria established in a transparent way at Community level) are presumed to comply with the corresponding implementing measure (if the Eco-label meets the requirements). On a case by case basis, the Commission may decide that other eco-labels as well provide presumption of conformity.

---

2 PROCEEDINGS OF LCE2006
3 ENHANCEMENT OF INNOVATION AND COMPETITIVENESS

Several fundamental elements of the Directive aim at persevering and enhancing EU competitiveness:

- The choice of the legal basis: article 95 avoids fragmentation of the market and ensures that any possible incremental cost of improving the environmental performance of the products is outweighed by the economies of scale offered by the internal market, including legal certainty.

- The choice of a coherent framework introducing for the first time an integrated approach in a legal instrument in the field of environmental legislation for products, in line with IPP (avoidance of possible contradictory thematic legislation).

- Implementation of the “better regulation” principles including timely involvement and consultation of the interested parties, and dedicated impact assessments for each implementing measure; this involvement culminates in the representation of all relevant stakeholders in the Consultation Forum. It also provides for the necessary adaptation of industry to the changes envisaged as regards planning of design and production process.

- Self-certification (module A) is the rule, which is the most flexible and cost effective process for conformity assessment; additional flexibility is offered with environmental management systems.

- Voluntary agreements are the preferred alternative if they can deliver the policy objectives expected.

- Compatibility and synergy with other policy instruments is taken care of (e.g., with labelling of products or other environmental legislation).

- At macro-economic level:

  technical improvements to products mean added value for companies (also in terms of know how and technical capability); improved environmental performance of the products will help manufacturers meet increasing market demand from consumers and business customers (for example in the context of public procurement and/or subcontracting relationships) but also from shareholders for adopting environmentally responsible solutions for the consumer. Environmentally improved products will have lower running costs throughout their lifecycle. The application of the least life cycle cost method ensures that any increase in the purchase price will be offset by the reduced running costs. Money not spent in wasting resources can be reinvested in the EU economy.

  Finally, society as a whole will benefit of the lowering of environmental externalities.

- Foreign markets:

  Explicit reference is made in the Directive to competitiveness on markets outside the Community; care will be taken while drafting the implementing measures so that the competitive position of European manufacturers is not weakened in foreign markets or indeed that markets (shares) are not lost.

Regulations pertaining to environmental attributes of products exist also in third country markets and they are bound to increase; a harmonised and consolidated framework as EuP will help EU industry to face future challenges in these areas.

4 STATE OF PLAY OF THE IMPLEMENTATION OF THE EU DIRECTIVE

The Directive was published in the OJ of the EU in July 2005. Next steps include the creation of the Consultation Forum (by 2006) and the establishment of the regulatory committee and of a working plan by the Commission (by July 2007). Member States must transpose the EuP framework Directive by August 2007.

A study was carried out for developing a methodology for assessing whether and to which extent EuPs fulfill the criteria so that they may become the subject of implementing measures.

Given the urgent need to contribute to the achievement of the Kyoto commitments, increased energy efficiency is considered a priority environmental goal in the first phase of the EuP implementation; Article 16 (2) refers therefore to products identified under the European Climate Change Programme (ECCP) as relevant for cost-effective energy savings.

On these bases, preparatory studies, will be launched soon. The products to be examined are boilers and combi-boilers (gas/oil/electric), water heaters (gas/oil/electric), personal computers (desktops & laptops) and computer monitors, imaging equipment (copiers, faxes, printers, scanners, multifunctional devices), consumer electronics: televisions, standby and off-mode losses of EuPs, battery chargers and external power supplies, office lighting, (public) street lighting, residential room conditioning appliances (airco and ventilation), electric motors 1-150 kW, water pumps (commercial buildings, drinking water, food, agriculture), circulators in buildings, ventilation fans (non-residential), commercial refrigerators and freezers, including chillers, display cabinets and vending machines, domestic refrigerators and freezers, domestic dishwashers and washing machines.

Further studies, including possibly a study to prepare the working plan, are foreseen for 2006.

Adoption of first implementing measures creating eco-design obligations for some EuPs is expected during the 2nd half of 2007.

5 CONCLUDING REMARKS

The EuP framework Directive will constitute a milestone in EU product policy; it introduces many innovative elements together with concrete application of the principles of the Integrated Product Policy and the “better regulation” package. Mechanisms for rapid, efficient and participatory decision-making are proposed, which at the same time leave sufficient room for innovation and initiative to product manufacturers.

The creation of a coherent framework for environmental product policy will avoid the adoption of uncoordinated measures that could lead to an overall negative result. A Community framework will also ensure that no divergent national or regional measures that could hinder the free movement of products and reduce the competitiveness of businesses are taken.
6 LITERATURE


CONTACT
Michaïl Papadoyannakis, European Commission, Brussels, Belgium. Corresponding Author, michail.papadoyannakis@cec.eu.int +32 2 29 63 914