



FEAD Summary

The Eco-design Directive (2009/125/EC) European Implementation Assessment

November 2017

Structure, background info of the European Implementation Assessment

This European implementation assessment (EIA) has been provided to accompany the scrutiny of the implementation of the Eco-design Directive. The EIA consists of the opening analysis and two briefing papers. The opening analysis situates the directive within the EU policy context, provides key information on implementation of the directive and presents the opinions of selected stakeholders on implementation. The paper also contains a short outline of consumer opinions and behaviours.

Briefing papers:

- The first paper gathers opinions from EU-level and national stakeholders on successes and failures, as well as challenges to the implementation of the directive and the underlying reasons. Experts from seven Member States were interviewed: Belgium, Denmark, Germany, the United Kingdom, Poland, Portugal and Finland. These interviews are complemented by a literature review of available studies, reports and position papers;
- The second paper is based on three elements. The first part presents an analysis of the Eco-design Directive, eco-design working plans and related regulations, the second is based on the analysis of the scientific articles discussing the application of the directive to specific product groups, whereas the third analyses the results of on-line surveys evaluating the application of the directive's provisions for selected product groups.

The full text of the EIA is available [here](#).

Please note that FEAD was not contacted in the context of this EIA. For our industry to be contacted (and to be visible) in the work on eco-design, FEAD needs to have experts who would be present at meetings with the EU institutions (e.g. Stakeholders Consultations Forums). **After multiple calls for experts by the FEAD Secretariat in the past several years, we do not have a single active and approachable expert on eco-design within FEAD.**

Opening Analysis

The Eco-design Directive was adopted in 2009, revising a directive from 2005. According to its Article 2 on definitions, 'eco-design' means the integration of environmental aspects into product design with the aim of improving the environmental performance of the product throughout its whole life cycle. The directive establishes a framework for the setting of eco-design requirements for energy-related products (ErPs) with the aim of ensuring the free movement of such products on the internal market. The directive is implemented via working plans, which set indicative lists of product groups to be considered as priorities for the adoption of implementing measures.

The Eco-design Directive and the 2016-2019 Eco-design Working Plan should help to achieve objectives of the new circular economy package, which underlines the role of design in

saving resources. Whereas originally the focus of the directive was on the energy efficiency of products, over time more attention has been paid to the resource efficiency of products.

In the Circular Economy Action Plan, the European Commission underlines that *'better design can make products more durable or easier to repair, upgrade or remanufacture. It can help recyclers to disassemble products in order to recover valuable materials and components'*. This was also stressed strongly in the European Parliament resolution on a longer lifetime for products: benefits for consumers and companies¹. In the 2017 report on the implementation of the Circular Economy Action Plan², the Commission underlined that *'in 2017, the implementation of the eco-design working plan will have an increased focus on circular economy and resource efficiency beyond energy efficiency'*. The Commission considers that *'eco-design is one of the most effective ways to enhance security of energy supply and to reduce emissions of greenhouse gases and other pollutants'*. The Commission also estimates that the Eco-design Directive, together with energy labelling, may contribute to around half of the energy savings target for 2020. Some think tanks stressed that the Eco-design Directive *'is one of the most effective tools the European Union (EU) counts on in order to deliver cost-effective energy savings'*. Yet, selected opinions presented in this European Implementation Assessment suggest that the objectives may not be ambitious enough and some improvements in the implementation of the directive are proposed.

Findings of the Opening Analysis

- The Eco-design Directive was warmly welcomed at its adoption and is still found to be a good tool to improve the energy efficiency of products. Yet there is a desire to focus more on the resource efficiency of products as well.
- The European Parliament has called for action to make consumer products *'more durable, to promote reparability and longevity and to ensure better information for consumers'*. The European Commission has taken measures in this direction by changing *'from eco-design requirements being mainly targeted for energy efficiency to issues such as reparability, durability, upgradability, recyclability, or the identification of certain materials or substances'*.
- The European Parliament, the European Economic and Social Committee, and other stakeholders have urged the European Commission to come up with more ambitious plans concerning eco-design and the circular economy. The success of eco-design depends partially on consumers' behaviour and knowledge about the EU's eco-design, energy labelling and other environmental policies. That is why, on one hand, consumer's behaviour should be taken into account in product design and, on the other hand, more should be done to promote knowledge about the energy and resource efficiency of products.

¹ <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT%20REPORT%20A8-2017-0214%200%20DOC%20XML%20V0//EN>

² http://ec.europa.eu/environment/circular-economy/implementation_report.pdf

- More should be done to promote knowledge about the energy and resource efficiency of products, at both EU and Member State levels, in the latter also at regional and local levels.
- The success of eco-design also partially depends on companies' attitudes towards eco-design and circular economy requirements, and also their openness to follow the European Parliament's recommendations, that *'essential components, such as batteries and LEDs, should not be fixed into products, unless for safety reasons'*.

First briefing paper “Stakeholders views on the Eco-design Directive: An assessment of the successes and shortcomings”

This paper summarises the responses of 27 stakeholders who have been interviewed on their evaluation of the implementation of the Eco-design Directive, specifically the successes and shortcomings, the results and processes and its contribution to the circular economy. The results are not representative in a statistical sense; instead, the paper is meant to gather opinions from a range of stakeholder groups. The majority of stakeholders were selected based on their expertise on this topic, as evidence by the papers they have authored (e.g. EEB, ECOS, Digital Europe, Electrolux, CECED, etc). Member State representatives were acquired through a contact of the Eco-design Regulatory Committee. EU-wide findings are separated from specific member state results, including Belgium, Denmark, Finland, Germany, Poland, Portugal, and the UK.

Key EU-wide findings

- Stakeholders from NGOs, academia and industry are in agreement that the Eco-design Directive (ED) in combination with the Energy Labelling Directive has been successful in regards to its energy efficiency objectives.
- The majority of stakeholders specified three main obstacles in the implementation of the ED:
 1. The lack of political support at the EU level for the progress and implementation of the Eco-design Directive. According to the interviewed experts, the main reasons for this lack of support were concerns over negative publicity directed towards the Directive and the EU.
 2. The slow pace of the regulatory processes. It was generally agreed that it takes too much time to bring a regulation into force. This is particularly the case for some product groups whose markets are evolving quickly as a result of rapid technological advancements.
 3. To varying degrees, the inadequacy of market surveillance within member states, which is considered a key factor for the success of the Directive. It is estimated that 10% to 25% of products on the market regulated under the Directive do not comply with its

requirements. With non-compliant products on the market, manufacturers are less motivated to innovate. Additionally, shortcomings in market surveillance can lead to competitiveness issues when products enter the market from outside the EU do not conform to eco-design requirements.

- Many stakeholders claim that double regulation on products is currently not an issue, but as more material efficiency requirements are included in the ED, there is a risk that double regulation could become a problem. Double regulation might occur in different ways. For example, it can occur when the scope of different regulations overlap, i.e. one aspect of a product is regulated under several different pieces of legislation. It can also occur when a product is regulated twice under the ED. The latter instance refers to regulating a component of a product as well as the system it is built into (for example, regulating the motor in a washing machine as well as the washing machine itself).
- There were differences of opinion concerning the enhancement of circular economy parameters into the requirements of the Eco-design Directive. On the one hand, some participants claimed that since the Directive has been successful in improving energy efficiency, more emphasis should be on material efficiency requirements under the ED. On the other hand, a number of stakeholders claimed that the Directive is already extremely encompassing and that there are certain barriers to including material efficiency requirements. A general conclusion was that any circular economy parameter would need to be identified as having substantial improvement potential and would be enforceable and hence feasibly verifiable by market surveillance authorities.

Key Member States findings

- Market surveillance is considered key for a successful implementation of the ED. There are several challenges related to market surveillance, however, which are generally common across all member states. Such challenges can refer to costs, standards, testing methods, testing facilities, as well as lack of coordination between member states. The ED addresses a large variety of products, some of which are very costly and difficult to monitor for compliance. A number of stakeholders expressed concern over the lack of clear standards, including guidance on testing methods and the exact metrics to be used. The difficulty lies in setting effective ED standards and testing requirements that do not pose significant compliance costs.
- Some stakeholders mentioned the potential benefits of auditing manufacturers' production processes, as a means to ensure compliance at the production stage, but this is not possible for imported goods. A suggestion was made that it could be more efficient and cost effective to allow for third-party-led verifications by certified experts at production level.
- Authorities responsible for market surveillance raised a number of concerns regarding non-EU imports and products sold online. It is difficult to obtain information on how products have been assembled and the nature of many components.

- The limited administrative capacity in some smaller member states poses an additional challenge for ED implementation and market surveillance. Lack of human and financial resources and testing facilities are particularly challenging for Central and South East Europe member states.
- Increased cooperation on market surveillance across member states is needed, with the development of the database as a central information-sharing tool. Currently, the general ICSMS market surveillance database (Information and Communication System on Market Surveillance –www.icsms.org) is used in some (but not all) member states, but it was designed for product safety and consumer protection rather than for energy performance. A new database for the ED is being developed. The obligation to record results in the database is limited to non-compliant products. A number of stakeholders recommend inputting all information, i.e. including for compliant products, to avoid unnecessary testing in other member states, and expanding the information on testing methods used.
- In addition to a database, sharing of certain testing facilities may also be useful. However, issues related to transport burdens and uncertainty on cost-sharing need to be taken into account.
- Inclusion of circular economy requirements into the Eco-design Directive, although potentially important, raises concerns about additional sets of requirements, additional compliance and enforcement burdens for member state authorities, as well as new stakeholders involved along the value chain. The following elements should be considered: a) inclusion could be gradual, starting with products already included in the ED in order to allow for the development of expertise; b) clear yet flexible standards should be set to avoid stifling innovation; c) realistic opportunities should be made available for applying the new measures, which must be verifiable and enforceable, and d) the potential must be proportional to the costs. Alternatives to prescriptive standards, such as producer responsibility schemes, can be considered provided that they can be monitored.

Policy recommendations

- Continue to include more energy-related product groups. Since the directive has been very successful with regard to energy efficiency requirements, it is recommended to continue to include more energy-related product groups. Products should be selected on the basis of their eco-design potential, with the assessment not only limited to their energy efficiency potential. Therefore, the scope of the MEErP (Methodology for the Eco-design of Energy-related Products) should include material efficiency details when appropriate for a product group. These features should only be considered if the environmental impact is assessed and there is significant improvement potential, as well as the requirements being set are enforceable by Market Surveillance Authorities.

- Improve the long regulatory processes. Improvements can be made by setting calendars, milestones and indicators for new implementing measures and reviews in working plans. Similar to the new time limits included in Article 11 of the Energy Labelling Regulation, a timeline or time limit as to when a regulation must be agreed could be introduced into the Eco-design framework.
- Assess ways to improve market surveillance in member states. An option could be to encourage coordination and information exchange between member states.
- Expand the database to all products addressed by the Eco-design Directive. If considered a success after its application in 2019, the database should be expanded to all eco-design products to allow market surveillance authorities to enforce eco-design as well as energy labelling requirements. Therefore, once a product has been tested in one member state, all other member states will be aware of the results. The database could also offer functionalities such as the possibility to generate reports on given searches, and serve as a learning tool by requiring the input of information, such as test methods used.
- Strengthen the link between other policies and the Eco-design Directive. To ensure efficiency, strengthen the coordination between the regulatory processes of the Eco-design Regulations with requirements in other EU legislation, such as the Ecolabel Directive, the REACH Regulation, the RoHS Directive and the WEEE Directive. Secondly, to complement the rules in other directives, such as the WEEE Directive, the regulations under the ED could set design requirements for the easy dismantling of products.
- Explore ways to regulate non-energy-related products on material efficiency elements. Considering the success of the directive, the EU should assess ways to introduce circular economy requirements for non-energy-related products. However, there are different challenges for non-energy-related products that should be carefully taken into account. There are several ways forward, for instance requirements could initially be achieved through voluntary agreements, or like energy efficiency requirements, a market pull policy could be introduced, such as a labelling scheme, and then later a market push policy. Either way would allow the Commission and industry to learn what is required when mandatory regulations are introduced later.
- Explore ways to effectively include material efficiency requirements within the regulations. These requirements are inherently more complicated than energy efficiency requirements and often need different standards and testing methods. They are, however, necessary to transition to a circular economy. Therefore, ways to effectively include, test and enforce material efficiency requirements within regulations should be studied. Inclusion of such requirements should be done only if i) there are realistic opportunities to apply them, ii) they can be tested, iii) they are enforceable and iv) the potential is related to the costs.

- Testing methods. Better guidelines for testing need to be provided. Requirements should not be set before appropriate testing methods have been devised. Shorter 'screening tests' can be used to identify products that would clearly not succeed in further testing phases. Auditing of quality systems during production can be used in certain cases as an alternative to laboratory tests, for example when products are too large to be moved.

Second briefing paper “Implementation of the Eco-design Directive via working plans, based on the analysis of the selected product groups – Analysis from a circular economy and energy perspective

Key findings

- The Eco-design Directive has a life cycle approach with measures that can contribute to Circular Economy, but its application through Eco-design working plans and regulations has focused on the use phase and the energy efficiency.
- The main drawback for the inclusion of resource efficiency requirements in the regulations is its minor role in the methodology for the Eco-design of Energy-related Products (MEErP), which focuses more prominently on energy efficiency.
- A more in-depth assessment of other life cycle phases should be done within preparatory studies in order to improve generic requirements from the Eco-design Directive.
- Legislative and non-legislative measures to enhance the re-use, prevention and recycling of waste should be adopted, as indicated in the directive.

The second briefing paper presents the assessment of the regulations for the product groups selected (domestic light products, vacuum cleaners, professional refrigerating and freezing equipment, heaters, dishwashers, televisions and electronic displays).

Below is the summary of the current strategies for resource and energy efficiency and improvements proposed for the product groups assessed in this report.

Table I. Summary of the current strategies for resource and energy efficiency and improvements proposed for the product groups assessed in this report.

Product group	Current strategies	Improvements
Domestic light products	• Energy efficiency of the use phase. • Durability	• Accelerate the Ecodesign process for the integration of new technologies • Enhance the Design for Recycling and the Design for Resource efficiency • Improve the lamp collection
Vacuum cleaners	• Energy efficiency of the use phase. • Durability of hose and motor • Information regarding the maintenance and disassembly	• Extend the lifespan of the product. • Design to enhance disassembly and dismantling • Enhance recyclability: remove unnecessary connectors, strategic placement of key components, compatibility of the materials
Professional refrigerating and freezing equipment	• Energy efficiency of the use phase • Information on maintenance and end-of-life	• Assess the whole life cycle of the product, especially the manufacturing • Improve the durability
Heaters	• Energy efficiency of the use phase. • Noise pollution • Nitrogen oxides emissions • Information regarding the end-of-life	• Improve the durability • Include further generic requirements from the Ecodesign Directive • Assess the resource efficiency of the product adopting a system-approach
Domestic dishwashers	• Energy efficiency of the use phase • Information regarding the use phase	• Assess the whole life cycle of the product • Improve the durability of the product • Design for material recovery: ease extraction of key components, combination of materials
Television and electronic displays	• Energy efficiency of the use phase • Content of mercury	• Assess the whole life cycle of the product, especially the manufacturing and distribution • Improve the durability enhancing the design for reparability • Enhance recycling of copper and plastics