

# Analysis

# 3

## 3.4 Efficiency, Implementation procedures and market surveillance

A second major consideration for the evaluation is the question of the efficiency of the implementation procedures of the Directive, which includes questions about the costs of implementing the legislation at its various stages and whether the minimum requirements set by the Implementing Measures are effectively enforced. In addition, the evaluation aims to examine, whether the current requirements and procedures are appropriate in the case of complex products or product systems. Addressing this aspect of the evaluation means that the following issues need to be examined:

- How adequate, effective and efficient have been the processes for determining the products to be considered for Implementing Measures?

This question refers to:

- the procedures of the Directive relating to the identification of products or product systems with significant energy and environmental parameters
  - the criteria established by the Directive (significant sales and trade volumes, environmental impacts and potential for improvement) for the selection of products and product systems
  - the technical, economic and environmental analysis applied (including the use of the MEEuP methodology)
  - the detailing of the implementation provisions and the impacts that are to be anticipated
  - the complementarities and overlaps with other relevant policy tools (ELD, Ecolabel, WEEE, RoHs etc.)
- How effective and efficient has been the development of Implementing Measures for specific products? This question refers to:
    - the procedures for developing Implementing Measures (working plan, preparatory studies, Consultation Forum and Regulatory Committee)
    - the quality of the discussion in a Consultation Forum
    - the value of the impact assessments
    - the conduct of the review of the draft Regulation by a Regulatory Committee
    - the use in practice of specific and/or generic requirements (SERs and GERs)
    - other requirements of the Implementing Measures (measurement standards/methods, conformity assessment procedures, information requirements etc)
    - the use of a Regulation as the form of legislation
  - What has been the implementation of the Regulations on the ground?  
This question refers to:
    - The Conformity Assessment processes and the development and use of standards
    - The costs of compliance
    - The effectiveness and efficiency of market surveillance by Member States
  - What has been the role of self-regulation and voluntary agreements?

This refers to:

# Analysis

# 3

- the criteria listed in Annex VIII of the Directive to evaluate the admissibility of self-regulatory initiatives
- the actual experience of the use of voluntary agreements (imaging equipment and complex set top boxes and medical imaging equipment and machine tools)

These issues are considered in separate sections below. First an explanation of the nature of the processes involved is provided and then we present the evidence now available. In the First Progress Report, the evidence mainly related to information collected through the stakeholders' survey. This has now been supplemented through the observations made at the first stakeholders meeting and information provided subsequently by some of the participants, through a continuing literature review and through comments made during the course of the interview programme.

The first stakeholder meeting was an important occasion to discuss how well the different processes work and to raise questions on the financial and administrative costs imposed on businesses, public administrations and others involved. Comments made have been followed up in a wider documentary search, while the structured interviews allowed discussion of various points with different kinds of stakeholders. The following sections, therefore, up-date the information provided in the First Progress Report, but each section again concludes with further questions where clarification or more evidence is sought from stakeholders or where new issues have been identified.

### 3.4.1 Process for determining the products to be covered by the Directive

#### *Background*

The Directive sets out the framework for progress with energy-related products in general and makes provisions for Implementing Measures that set requirements relating to specific classes of product. Article 15 establishes a set of criteria for deciding, which products should be considered for Implementing Measures. The aim is to ensure that only products with significant sales and trade volumes, environmental impacts and potential for improvement are targeted. It determines the principles, the criteria and the procedures to be used in developing Implementing Measures. It also defines the technical, economic and environmental analysis necessary for setting requirements and provisions relating to the content of specific implementations and the impacts that are to be anticipated.

A key consideration of the Directive is that it should apply to energy-related products with significant potential for improvement and reduction of environmental impacts. Thus, according to Article 15 of the Directive Implementing Measures should be developed only for products with a significant volume of sales (more than 200,000 units sold annually in the EU is stated in Article 15 as an indicative number), have a significant impact on the environment and with a significant potential for improvement. Article 15 describes the different stages that should be followed for the development of the Implementing Measures and sets general criteria concerning the content of the provisions of the Implementing Measures

According to Article 16 of the Directive, the products to be selected for the development of Implementing Measures should be defined by the Commission in a Working Plan. The 2005/32 Directive required a Working Plan for the period 2009-2011 to be prepared by 6 July 2007 and submitted for review. In parallel, during the initial "transitional period" between the entry into force of the Directive and the final adoption of the Working Plan, Implementing Measures were to be introduced for a number of energy related product groups mentioned in Article 16(2) that were identified as priorities by the European Climate Change Programme. They included:

- heating and water-heating equipment
- electric motor systems
- lighting in the domestic and tertiary sectors

# Analysis

## 3

- domestic appliances
- office equipment in both the domestic and tertiary sectors
- consumer electronics
- heating, ventilation and air conditioning systems.

The first **Working Plan for the period 2009-2011** was adopted on 21 October 2008 and identified 10 energy using product groups that were selected from a broader list of 57 products identified.<sup>149</sup> These 10 product groups – under which more than one product category may be included – are:

- Air-conditioning and ventilation systems;
- Electric and fossil-fuelled heating equipment;
- Food-preparing equipment;
- Industrial and laboratory furnaces and ovens;
- Machine tools;
- Network, data processing and data storing equipment;
- Refrigerating and freezing equipment;
- Sound and imaging equipment;
- Transformers;
- Water-using equipment.

The products covered in the two lists can vary in their complexity. Products categories such as heating, ventilation and air conditioning systems, machine tools, domestic and tertiary lighting or boilers can sometimes be rather complex products or represent systems of products. In contrast, other categories (e.g. white goods) are easier to define.

Following the adoption of the Directive 2009/125, that extended the scope of the legislation to energy related products (ErPs), a second Working Plan for the period 2012-2014 is to be established by the Commission by 21 October 2011. The Plan should identify energy related products (ErPs) that meet the requirements set in Article 15 of the Directive. A study is currently underway to inform the selection of energy related product groups to be considered for the development of Implementing Measures.

### *Evidence from the survey*

The on-line survey of stakeholders provided some initial evidence on a series of matters relating the question of effectiveness and efficiency of the procedures associated with the Directive. In relation to the question of the adequacy of the criteria set by the Directive for the identification and coverage of significant environmental parameters, 52% considered them adequate or very adequate while around 20% considered them inadequate. The percentage that considered the criteria adequate for the selection of products with significant improvement potential is even higher (57%) while less than one in four respondents considered them inappropriate.

However, the individual comments suggest certain issues and problems linked with the actual use of the criteria. Summarising, the main points are:

- Generally criteria are adequate but in practice the selection process is unclear

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<sup>149</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52008DC0660:EN:HTML:NOT>

# Analysis

# 3

- There are issues with use of PRODCOM criteria – environmental improvement potential is more important
- The definition of the product scope is an issue and also the changes over the period from the Working Plan to the determination of the final product requirements
- Criteria are generally appropriate – but there are some comments on the fact that in practice they are not used and a focus on energy arises from the methodology

While only a few suggested that the sales volume criterion of 200,000 units was not an appropriate starting point, more consider that it is a rather arbitrary and static number that cannot respond to market trends. In order to reach this benchmark, product categories have often been grouped together in the Working Plan, only for the preparatory studies afterwards to treat them separately. Our overall understanding is that while the underlying principle of focusing on products with significant market volumes is generally accepted, the use of the indicative 200,000 units benchmark may not provide the best approach for certain product groups and, if used rigidly may lead to an inappropriate exclusion of products with a significant environmental impact.

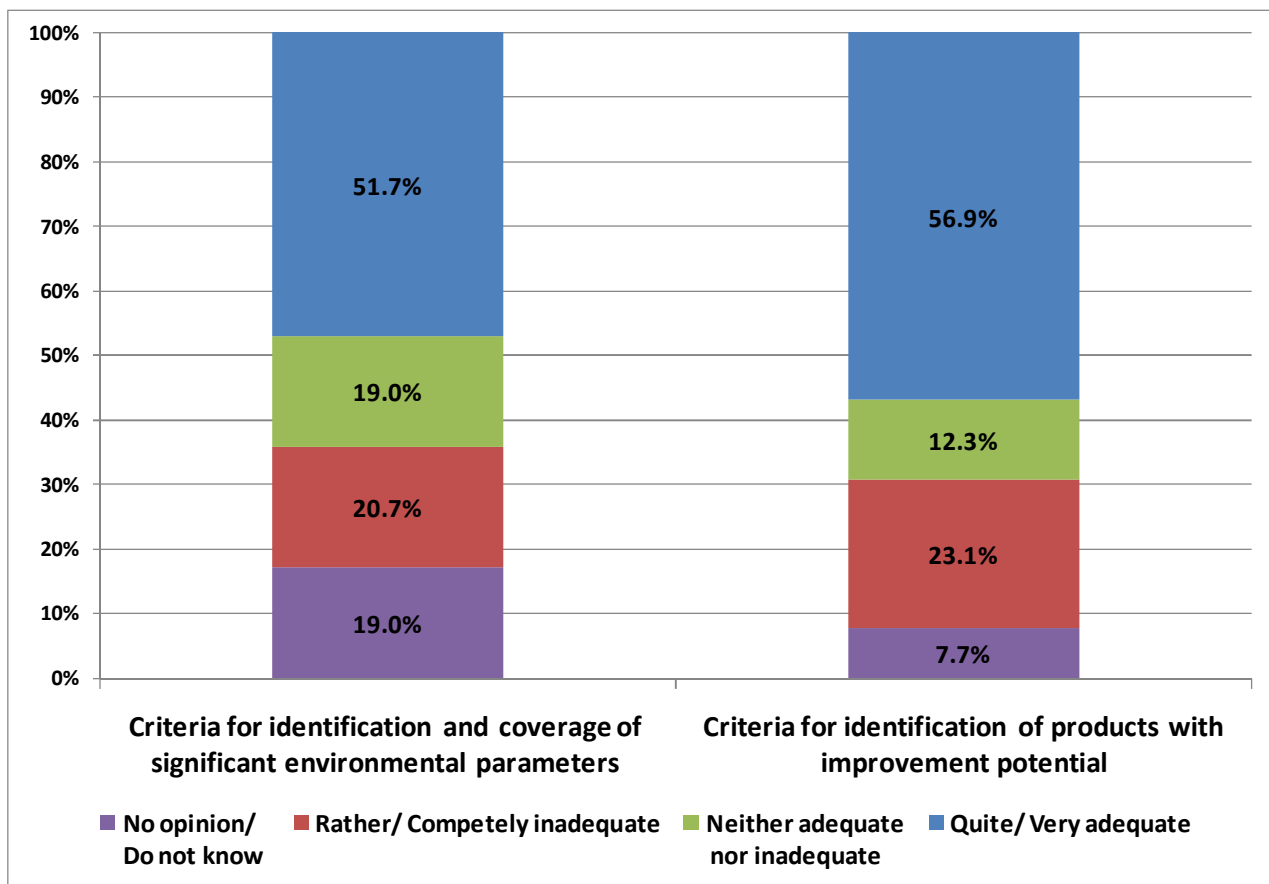
In relation to the environmental parameters, while the list is considered to be complete, there is some criticism that in practice the focus tends to be only on energy consumption during the use phase. While there is a general acceptance that this represents the key issue for energy using products, there is less agreement that this continues to be the case in energy related products.

The responses to the survey collected indicated a high level of satisfaction with the initial work conducted, under the Working Plans to identify products with significant environmental impacts. The main concern relates to the adequacy of the Eurostat PRODCOM database as a basis for the identification of products.

## Analysis

## 3

**Chart 3.42 – Adequacy of the criteria set by the Directive for the identification of products and selection of significant environmental parameters.**



#### Further evidence from stakeholders

It has now been possible to consider the observations made in the First Stakeholder Meeting, some of the additional free text comments provided by stakeholders in the survey and comments made in interviews. In addition, the evaluation team has received documents on various issues from industry associations, including a report of a survey of members of Teknikföretagen, the Association of Swedish Engineering Industries, on the Ecodesign legislation<sup>150</sup>. A more differentiated message emerges.

Most stakeholders believe that the general framework, its objectives and its processes have been well formulated and operate well as far as they go. On the whole, governmental, industry, environment and consumer groups believe that there are appropriate opportunities for expressing their opinions and recognise that the procedures prevent any one group from dominating the process. However, there have been numerous comments about how the framework could be strengthened and also on its ultimate limitations.

As a potentially overarching and co-ordinating instrument, the Ecodesign Directive also provided an opportunity for a consistent regulatory approach to environmental issues, especially through the application of Article 15.6. But industry stakeholders, in particular, have indicated that there are problems of consistency between the requirements of the Ecodesign Directive and those of the WEEE and RoHS

<sup>150</sup> Teknikföretagen, the Association of Swedish Engineering Industries 'Ecodesign Directive- How to create a more efficient legislation' July 2011

# Analysis

# 3

Directives. In contrast most stakeholders believe that the Ecodesign Directive is well co-ordinated with the Eco and Energy Labelling Directives.

The legislative approach under the Directive is bringing results more quickly than 'ordinary' approaches, even though it takes time to develop standards etc.

There are differences of opinion about whether or not the product-based approach works. There are arguments for a systems or performance-based approach, illustrated by the situation of fans, which in certain products do not need to work with maximum efficiency. In addition, certain products have already been 'picked up' by other pieces of regulation, such as the Energy Performance of Buildings Directive, which are more favourable to the concept of overall system performance. Consequently, certain stakeholders believe that their products are more appropriately regulated by other Directives. Others-including CECEC - see the merit in focusing on products. However, there are problems in the consistency of the implementation of the requirements (and testing) for products where a performance-based approach is adopted and perhaps the Ecodesign Directive is not the appropriate instrument for this type of approach.

Although it has been asserted that the concentration on energy issues means that other environmental concerns are not given sufficient weight, the evidence provided by the JRC and others, suggests this is not the case. Rather measures to promote energy efficiency generally also promote better performance in other areas.

## *Remaining questions/issues*

It is important to build on the initial responses received. Contributions at the stakeholder meeting and subsequently might usefully address the following questions, particularly where substantiating evidence is provided:

- Are the criteria established by the Directive (significant sales and trade volumes, environmental impacts and potential for improvement) for identifying products appropriate and effective discriminators?
- It has been stated that the relationship between the Ecodesign Directive and the WEEE and RoHS Directives gives rise to problems. Specific examples are needed to analyse this further.
- How do the criteria operate in the case of more complex products or systems (e.g. motors, boilers, ventilation systems)? What is the experience from the Working Plan and the preparatory studies? Are there any specific difficulties? How can they be addressed?
- Have the procedures for establishing the Commission's working plans and the conduct of studies operated satisfactorily?

### **3.4.2 The Development of Implementing Measures**

#### *The procedures*

Following the initial identification of products in the Working Plan, a step-wise procedure is required for the development of the Implementing Measures. So far, the procedure has involved the following:

- A preparatory study to identify which Ecodesign requirements should be set for a particular product to improve its environmental performance. These studies inform the formulation of a proposal by the Commission. The preparatory studies for energy-using products have been expected to follow the Methodology for the Evaluation of Energy using Products (MEEuP) that was developed by the Commission with the help of an external consultant. A Methodology for the Evaluation of Energy related Products (MEErP) is currently being developed and would need to be developed further if an even wider group of products were to be targeted.

# Analysis

# 3

- A discussion in a Consultation Forum including experts, stakeholders and Member States representatives to allow stakeholders to be informed and provide their positions on the possible measures. The role of the Forum is to contribute in the definition and review of the Implementing Measures. The Forum should also monitor the efficiency of the established market surveillance mechanisms and to assess voluntary agreements and other self-regulatory measures taken in the context of the Directive. The Forum is composed of up to 60 members including representatives from each of the 27 Member States, 3 representatives from EEA countries and 30 stakeholders representing industry, standard bodies, trade unions, environmental protection groups and consumer organisations. The group meetings are open for observers from candidate and EFTA countries and from organisations which are not official members but have a legitimate interest in the discussion.
- An impact assessment by external experts or the Commission services to assess the expected environmental, economic and social impacts of alternative policy options leading to the definition of the appropriate Implementing Measures. The impact assessment should be reviewed by the European Commission's impact assessment board. On the basis of the comments of the Consultation forum and the impact assessment the Commission develops a draft regulation.
- Notification of the World Trade Organisation
- Review of the draft regulation by a Regulatory Committee composed of representatives from each Member State and adoption on the basis of weighted majority.
- After adoption from the Regulatory Committee the Regulation is sent to the European Parliament and the Council for scrutiny
- Adoption of an Implementing Measure in the form of a Commission Regulation

We should note that, while this has been the approach followed so far, there is no legal requirement for the adoption of an Implementing Measure in the form of a Commission Regulation. A procedure leading to a Directive may also be adopted, if this is considered to be more appropriate.

## *Analysis of evidence*

Evidence from the initial survey has been complemented by comments made during the first Stakeholders Meeting and during the course of interviews and documentation.

A key issue raised in relation to the above step-wise procedure is its length and complexity. From the twenty four preparatory studies launched for the products identified in the transitional period (Article 16)<sup>151</sup> twelve Implementing Measures have been adopted so far in the form of an EU Regulation. In addition to that, Directive 2000/55 concerning ballasts for fluorescent lighting was repealed by Regulation 245/2009 that took the form of an Implementing Measure of the Ecodesign Directive.

According to the information collected from the remaining products in the initial list, 9 are in the consultation phase and for 4 the preparatory study has been completed but no working document has been published. For one product in the list (complex set-top boxes) a voluntary agreement has also been accepted<sup>152</sup>(see Table 3.47 below) – although not officially - while a second agreement for imaging equipment is under discussion.

Finally, in the case of the products identified in the first working plan, 3 studies have been completed and 9 more are in different stages. Furthermore, a proposal for voluntary agreements concerning machine tools is also being discussed. In addition, although not included in the transitional period product list or the first

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<sup>151</sup> [http://ec.europa.eu/enterprise/policies/sustainable-business/eco-design/product-groups/files/productgroups\\_transitionalperiod\\_en.pdf](http://ec.europa.eu/enterprise/policies/sustainable-business/eco-design/product-groups/files/productgroups_transitionalperiod_en.pdf)

<sup>152</sup> [http://www.eceee.org/Eco\\_design/products/complex\\_set\\_top\\_boxes/Recommendations\\_Feb2011](http://www.eceee.org/Eco_design/products/complex_set_top_boxes/Recommendations_Feb2011)

## Analysis

## 3

Working Plan, the manufacturers of medical imaging equipment have come forward with a proposal for a voluntary agreement that is under consultation.

**Table 3.47 – Progress in the development of Implementing Measures for ErPs (Products in transitional period and First Working plan)**

	Work plan	LOT	Product	IM adopted (date)	Regulatory committee	Consultation stage	Preparatory study completed	Preparatory Study on-going
1	TP <sup>153</sup>	ER 6	Standby and off-mode losses of EuPs	17/12/2008				
2	TP	ER 18a	Simple set-top boxes	04/02/2009				
3	TP	ER 19	Domestic lighting (general lighting equipment)	18/03/2009				
4	TP	ER 8-9	Tertiary Lighting	18/03/2009				
5	TP	ER 7	Battery chargers and external power supplies,	06/04/2009				
6	TP	ER 13	Domestic refrigerators and freezers,	22/07/2009				
7	TP	ER 11	Electric motors 1–150 kW,	22/07/2009				
8	TP	ER 5	Televisions	22/07/2009				
9	TP	ER 11	Circulators in buildings	22/09/2009				
10	TP	ER 14	Domestic dishwashers	01/12/2010				
11	TP	ER 14	Domestic washing machines	01/12/2010				
12	TP	ER 11	Ventilation fans	26/04/2011				
13	TP	ER 18	Complex set-top boxes	VA approved (not official)				
14	TP	ER 10	Room air conditioning appliances		Adopted by RC May 2011			
15	TP	ER 3	PCs and computer monitors					
16	TP	ER 11	Electric pumps					
17	TP	ER 2	Water heaters					
18	TP	ER 1	Boilers and combi-boilers					
19	TP	ER 4	Imaging equipment			VA discussed		
20	TP	ER 12	Commercial refrigerators and freezers					
21	TP	ER 16	Laundry driers					
22	TP	ER 17	Vacuum cleaners					
23	TP	ER 19b	Directional lighting					

<sup>153</sup> Transitional period

## Analysis

## 3

	Work plan	LOT	Product	IM adopted (date)	Regulatory committee	Consultation stage	Preparatory study completed	Preparatory Study on-going
24	TP	ER 15	Solid fuel small combustion installations					
25	TP	ER 26	Networked standby losses					
26	TP	ER 10	Residential ventilation and kitchen hoods					
27	TP	ER 12	Refrigerated display cabinets and vending machines					
28	WP1	ENT 1	Refrigerating and freezing equipment					
29	WP1	ENT 3	Sound and imaging equipment					
30	WP1	ENT 2	Distribution and power transformers					
31	WP1	ENT 5	Machine tools					VA discussed
32	WP1	ER 20	Local room heating products					
33	WP1	ER 21	Central heating products (other than CHP)					
34	WP1	ER 22	Domestic and commercial ovens					
35	WP1	ER 23	Domestic and commercial hobs and grills					
36	WP1	ER 24	Professional wet appliances and dryers					
37	WP1	ER 25	Non-tertiary coffee machines					
38	WP1	ENT 4	Industrial furnaces and ovens					
39	WP1	ENT 6	Tertiary Air Conditioning					
40	-		Medical imaging equipment			VA discussed		

Sources: ECEEE<sup>154</sup> and Coolproducts<sup>155</sup>

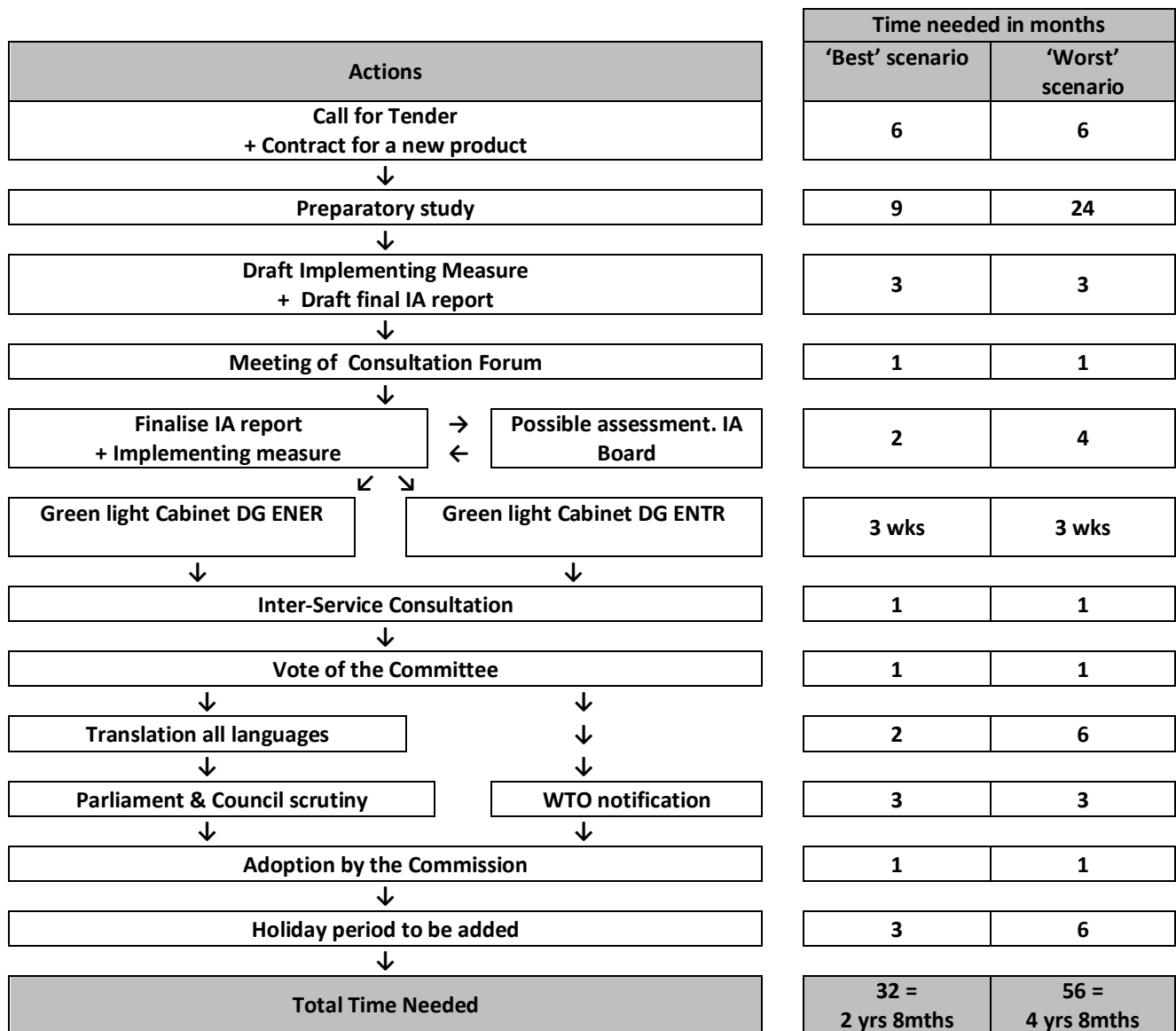
The Commission's estimates for the time required for the various stages are as follows:

<sup>154</sup> [http://www.eceee.org/Eco\\_design/products/?sort=status\\_reverse](http://www.eceee.org/Eco_design/products/?sort=status_reverse)

<sup>155</sup> <http://env-ngo.eup-network.de/product-groups/>

# Analysis

Chart 3.43 - Procedural Steps for Ecodesign Implementing Measures



The best scenario is for the full development of a regulation is 2 years, 8 months, while the worst scenario is timed at 4 years, 8 months. Furthermore, it appears that the time taken to arrive at a Regulation has been getting longer, as more complex products and more complex market and technical considerations are targeted.

Given the multiple stages and stakeholders involved, there are various possible bottlenecks and reasons for delays arising. The discussions and survey responses have indicated some of the more salient of these, although their role can vary among product categories:

- the complexity of a specific product category and of the relevant technical issues
- the availability of relevant data for the preparatory study
- the presence of relevant standards
- the position taken by industry and other stakeholders and the negotiations that can be very lengthy

# Analysis

## 3

- the structure of the product market, especially the number and size of firms operating in it
- the human resources dedicated by the Commission Services

In relation to the last point, there are 8 desk officers working full time in the unit responsible in DG Energy, that have assumed the burden for the development of all Implementing Measures for the products in the transitional period. The 8 desk officers are currently responsible for 21 products, for which the process is at different stages. Furthermore, in the initial period desk officers in DG Enterprise and Industry were responsible for various horizontal issues (equivalent to 2 FTE) while in the last two years for 19 products of which 6 are in an active stage.

In terms of resource requirements for the Commission, the evaluation team has examined some alternative scenarios. Assuming that 10 Commission staff were engaged over the 6 year period of 2006-2011, together with assumptions about salary and other costs, gives rise to an estimate that the cost for the Commission of the Ecodesign Directive up to now has been around €24.6 million for the six year period of 2006-2011. For the coming 5 years, on the assumption that 10 new products<sup>156</sup> from the second working plan will be considered and 14 FTE will be occupied<sup>156</sup> it would amount to an additional €14.8 million. However, if the number of staff involved is increased to respond to the increasing number of products, more products studies are initiated or more IM reviews this cost could increase further. (see further analysis in Section 3.4.5).

The extent of resources made available clearly poses a major constraint at various points in the implementation of the Directive. By way of comparison, staffing levels in the USA (including the DoE, USEPA and LBNL<sup>157</sup>) are in the region of 10 times the number of desk officers in DG ENER in the Commission. Similarly in relation to studies, it has been calculated that the resources spent on developing the first Working Plan and the 37 Preparatory Studies (22 completed and 15 ongoing) so far amount to €11.1 million. Each of the main studies costs around € 300,000. This contrasts starkly with the amounts spent by the United States administration on parallel preparatory studies, where the budget per product frequently amounts to over a million dollars. Furthermore these studies only focus on energy efficiency issues. Overall in 2010 alone, the budget for the US Department of Energy's Appliance and Equipment Efficiency Standards programme was \$ 35 million, leading to one estimate that the average US budget per product group is more than 10 times the EU budget<sup>158</sup>. This disparity in resources has enabled the US to catch up on a backlog of products under review and may explain some of the perceived shortcomings in the European studies.

It is generally held by all the different stakeholder groups that a lack of resources on the part of the Commission is a major constraint on the whole implementation process and is particularly significant in explaining the relatively slow progress in recent years in arriving at Implementing Measures for some products. In fact, this constraint is said by some to be of such significance that it brings into question the possibility of any extension of the scope of the Directive or even, in the near future, any consideration of other products under the existing provisions.

It should be said that there are other factors affecting the time taken to follow the process through to a Regulation, such as the inherent complexity of the products, the number and variety of stakeholders etc. In fact, in order even to make a preliminary assessment of the overall question of resourcing, it is necessary to consider other aspects of the efficiency with which the procedures operate.

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<sup>156</sup> Estimate provided by DG Enterprise and Industry.

<sup>157</sup> The US Department of Energy, US Environmental Protection Agency and the Lawrence Berkeley National Laboratory

<sup>158</sup> VHK in 'Draft Report : Methodology for Ecodesign of Energy-related Products' Annex V

# Analysis

# 3

In the survey and subsequently, there have been numerous comments on various aspects of the processes by which the Directive is implemented. Some of these comments are quite controversial and need further debate. Again at this stage they are summarised, without in any implication of endorsement on the part of evaluation team, but as a basis for this further discussion.

## *Working Plan*

- The Working Plan is a fundamental tool of Ecodesign policy and should give clear signals to manufacturers and to the market.
- If it were more extensively researched, it could have a more determinant role, reducing the need for subsequent discussion and major changes in the provisions. This would encourage producers to anticipate the changes with confidence. It would speed up the delivery of results.
- The Working Plan often uses broad definitions of product groups which must then become much more detailed in subsequent stages. This means that manufacturers cannot assess clearly from the beginning which specific products will be included and if they are concerned and to what extent. The examples of products given in the appendix are not all-encompassing. In addition, too broad a product group definition makes it difficult or even impossible to conduct a substantiated preparatory study.
- Precision with regard to the products targeted could be improved if they were listed by PRODCOM or CN codes, with which firms are familiar.
- Good quality research at an early stage can save time and expense for everyone subsequently.
- Initial research could at an early stage exclude products where it is not possible to achieve large energy savings through the adoption of legislation.
- The criteria for selecting products, which the Directive envisages should be applied at the product level (in the preparatory studies) are more generally applied to product groups at the Working Plan stage.
- No indication is given in the Working Plan of product priorities or timelines for adopting regulatory measures, as is required by law in the US. Clear priorities and timelines would provide more certainty and enable better planning for all stakeholders. Looming deadlines would also concentrate minds and help to speed up decisions in difficult areas.

The Working Plan could usefully highlight the in-depth study areas required in the preparatory studies for analysing non-energy impacts.

## *Preparatory Studies*

- The product groups considered in the Working Plan are significantly broader than the focus of the Preparatory Studies or the final Regulation. Thus the actual consumption and potential savings associated with the product group, as presented in the Working Plan, are not addressed or necessarily captured by the final Regulation or Implementing Measure.
- There should be a more rigorous check that the selection criteria specified in the Directive relate to the specific products considered in the Preparatory Studies, as well as the product groups considered in the Working Plan. More generally, the methodology used in preparatory studies needs to be very clear about how the Article 15 criteria are being interpreted.
- Ecodesign Directive requirements should always remain technology neutral in order not to promote one technology against another and inhibit innovation.
- Lack of financial and human resources and of adequate technical expertise to follow-up and carry out the studies are real challenges that hamper the delivery of robust, high quality studies that cover all the issues and this in turn means that the technical basis for the Implementing Measures is less than

# Analysis

# 3

adequate. This is particularly a problem for more complex product groups, such as boilers and water heaters. In effect there is too little expertise to properly address the very ambitious goals of the Directive.

- The long delays mean that the data used in the preparatory studies are in many cases out-dated by the time of the adoption of the Regulation. And, since they do not take into account newly developed technologies or market trends, they may lead to inappropriate Implementing Measures in some cases or measures that are not sufficiently ambitious in others. Perhaps an “expiry date” for studies should be considered.
- The long and complicated procedures mean significant costs for certain types of stakeholder, like environmental groups or SMEs, and this can affect their level of participation.
- Larger studies should be organised or groups of studies, involving experts that are really familiar with each of the products under consideration.
- The lack of sound and reliable data is not taken serious enough. If a well-founded preparatory study is not feasible, this should be acknowledged and the attempt to move to a regulation abandoned.
- There is a suggestion from a number of sources that input from industry seems to be automatically integrated into the body of the report by the consultants whereas that from other stakeholders is often ignored, or disregarded without explanation, even when presented in a constructive way and substantiated by high quality analysis and data. It is as if the agenda for the reports is pre-set.

## *Consultation Forum*

- All sides generally welcome the opportunity presented by the Consultation Forum to debate proposals.
- Some question the way that representation at the CF is determined. Industry appears to be able to be represented relatively easily, but other stakeholders less so.
- There has not been a Call for Expressions of Interest relating to Ecodesign Consultation Forum membership since 2006. The current methods for appointing CF members are not transparent.
- The process of determining the requirements is far too long. Knowledge and experience from eco-labels, energy labels and green public procurement could be better utilised to shorten the process.
- The Consultation Forum focuses on the content of Implementing Measures, and does not consider such questions as whether a Regulation is necessary at all.
- In the case of electric motors, already established voluntary actions were ignored.
- There is usually very little time to react when the final proposal is presented. Papers are not available in time to consult with association members.
- Boiler working papers contained proposals regarding product bundling not covered in the preparatory study. This caused industry much concern since such important issues should have been discussed with industry in the preparatory phase, not at the Consultation Forum.

## *Regulatory Committee & the Final Provisions of the Implementing Measures*

- The way the impact assessment is conducted is not transparent.
- Impact assessments should feature much earlier in the process and accompany each stage. Impacts on consumers, industry, the environment, international trade, etc. (both short and long term) should be a feature of each part of the analysis.

# Analysis

# 3

- In the case of fans, the Implementing Measures cover products and applications that were not included in the preparatory study. This has meant that household appliance manufacturers have not been consulted during the preparatory phase and were suddenly faced with legislative proposals that had not been properly discussed.

There was also an appeal for better information provision. It should be possible to bring all the various activities and web sites together in a single Ecodesign portal.

Although stakeholders have expressed a number of very specific points, there appears to be a general message that more effort expended at an earlier stage to produce extensive, detailed and authoritative Working Plans and Preparatory Reports could speed up the subsequent process, provide greater certainty for producers and reduce the work and costs, currently incurred at later stages.

### *The MEEuP methodology*

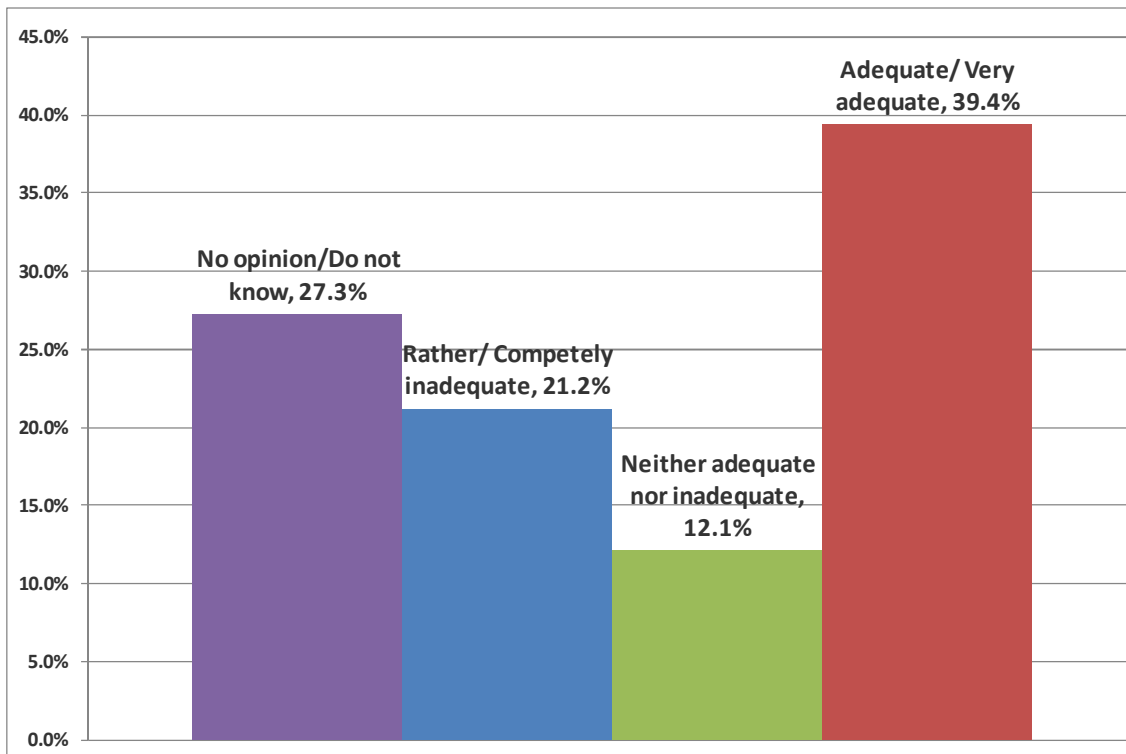
The MEEuP methodology has been a key element of all preparatory studies. The methodology is based on a life cycle approach aiming to assess the broad range of environmental impacts of products in the different phases of the products' life cycle. The methodology has been built with a clear focus on energy using products.

The initial survey feedback indicated that the MEEuP methodology is not considered adequate by a significant number of stakeholders (around 35% of respondents). The key criticism – that reflects a more general criticism of the Ecodesign approach – is that it cannot adequately handle other environmental aspects besides energy and that it tends to put greatest weight on the use phase. While it is generally accepted that during the use phase energy represents the key issue as far as EuPs are concerned, it is seen by some as leading to a sidelining of other environmental aspects. The limitations are considered to be even greater when it comes to an extension to energy-related products.

# Analysis

## 3

**Chart 3.44 - How adequate do you consider the methodology (MEEuP) developed for the identification and coverage of significant environmental parameters considering the whole life cycle of energy-using products? (% of respondents stating ; n=66)**



On the other hand, some stakeholders maintain that the MEEuP provides the appropriate balance between a very detailed and rather theoretical full scale life cycle analysis and the need for a practical and operational tool that will identify the key areas that pose environmental problems.

Further discussions and analysis of material submitted in the survey have highlighted a number of more specific points. At the same time, a review has been under way of the MEEuP with a view to developing a methodology for MEErP. This review has involved a comprehensive stakeholder consultation and a number of stakeholders referred the evaluation team to their contributions to this process. The main conclusions of this review are not available at the time of writing this report. The issues highlighted below will therefore have to be reconsidered in the light of these conclusions when they are available. The following points are therefore provisional for an additional reason.

The MEEuP methodology is generally thought to be a useful tool, particularly in providing a standardised reference point for all concerned, but it is also thought to be something that could be further developed to take into account various points made:

- MEEuP primarily applies to products in the mass market (such as white goods) and the analysis (Base Case definition, best available technology, scenario analyses etc) follows this approach. Its application to more specialised products in which there is one-off or small scale production is not appropriate, as is acknowledged in the methodology. However, this type of product is increasingly being considered for Ecodesign Implementing Measures.
- The relationship between the components and products needs to be clearer.

# Analysis

## 3

- MEEuP is not an appropriate tool to quantify precisely the whole range of environmental impacts. However, the methodology and the Eco-report tool could be taken beyond energy efficiency. Some have suggested that emissions during product use and resource/material efficiency be taken into account. Others have pointed to biodiversity and toxicity.
- Metals are not properly considered. The treatment of toxicity should be in line with REACH and the ELCD of the JRC.
- The methodology consistently overestimates the influence of the use phase on environmental impacts, in part by significantly overestimating the mean product life length and the recycling rates for critical materials, and by not considering the impact of depletion of abiotic resources (non-energy). It is also thought that different methods are applied to determine energy expenditure in use. For certain products and materials, an assessment of the actual life cycle of the product is overlooked and certain product phases may therefore be discriminated against.
- The systematic assumption that all existing legislation is fully implemented is wrong and tends to undermine the impact of requirements beyond the energy in use stage. For example, assuming a full compliance with RoHS and WEEE has led to totally neglecting end of life impacts. Saying 85% of a product is recovered is a wrong assumption, since it neglects the collection rate (between 20% and 35% at EU level).
- Current recycled content reflects the past but does not say much about the future. The metals industries collectively have severe reservations about the current approach, which focuses on recycled content only. Current recycled content in itself is an important, but not sufficient indicator of resource saving. Some products may not be recyclable a second time because of unacceptable loss of properties. Metals, in contrast, are recyclable again and again.
- The methodology is mainly useful for the energy in use stage, but several studies have now confirmed how production stage impacts have been neglected, notably in the case of ICT products. The EcoReport tool has some limitations that can make it unreliable to compare different product life stages and environmental impacts and can produce results that are out of line with other research (e.g. the Eco-report analysis of PCs which concluded that the use phase was four times more polluting than the manufacturing phase.) Eco-report results should always be compared with available scientific LCAs.
- Treatment of material/substances is not exhaustive. Although the use of Environmental Product Declarations under ISO 14025 would be too far, a move towards them could be beneficial.
- Article 15.5 of the framework Directive stresses that there should be no significant negative consequences for the product's functioning. Some of those interviewed think that the lack of detailed knowledge of specific products on the part of the consultants conducting the studies and the strong focus on energy means that impact on usage is sometimes not handled to a sufficient extent. 'This means that the limit values for energy consumption proposed by the consultant in fact significantly affect other properties of the product in a negative way'. The database used in the Eco-Report is not comprehensive, is often outdated and is not complete for all the product groups considered.
- A number of points have been made about particular tasks within the MEEuP methodology :
  - Some tasks in the preparatory studies are usually insufficiently developed (e.g. tasks 3 and 8) and the assumptions are not transparent and standardised enough.
  - Task 1: although there is a general requirement to involve relevant standardisation bodies, this does not always seem to have been done. There should be far more dialogue between

# Analysis

# 3

consultants and the European Standards Organisations, preferably including discussions with relevant technical committees.

- A further section - Section 1.4 Scope - should be introduced to clearly identify the products the consultants have decided to focus upon and their reasoning for this. Reasons should also be given when certain products are considered out of the scope of the study.
- Task 2 Economic and market analysis: Data gathering is a fundamental aspect. An objective and comprehensive assessment of the market under examination needs to be carried out by the consultant using reliable sources.
- More emphasis could be given to competitiveness (in line with Article 15(4)(b) of the Directive), especially as many electrical and electronic goods are traded globally and so face competition from manufacturers elsewhere in the world and may also face technical barriers to trade elsewhere.
- Market structure should also be taken into account.
- Task 3: the limitations of behavioural investigations need to be clearly stated, as do any constraints experienced in gathering data.
- Analysis of BAT (Task 6): The state-of-the-art in applied research may not always become mainstream; the methodology should ensure all relevant caveats are highlighted when it comes to these analyses. If a BAT is commercialised it is also likely to be protected by patents and so will not be generally available to all manufacturers.
- Task 5 Definition of base case: there are difficulties in considering bills of materials since these are confidential and manufacturer and technology specific.
- Task 7 Improvement Potential: Option identification is very important and clearly links to the setting of eco-design requirements. It is right that options are listed and related to impacts and costs, but the LLCC point should be used with some flexibility. If the savings to be delivered are limited and only reachable at high cost for consumers or for manufacturers (with major modifications of the production lines), the consultant should carefully evaluate all these impacts before making a proposal simply based on the LLCC.
- Task 8: Industry and consumer impacts could be studied to a far greater degree. In keeping with references made to SMEs in the Framework Directive, it would be appropriate to highlight SME impacts in Task 8 work.
- A standardised format could be used in presenting study conclusions/recommendations.

A particular problem with the use of a primary energy factor (PEF) of 2.5 for electricity has been raised by several Norwegian stakeholders and this issue has also been taken up by Business Europe. This PEF has been used for several product groups and is said to give other energy carriers (e.g. distributed gas) and less energy efficient products a competitive advantage. The purpose of introducing a PEF in Ecodesign Regulations is to take account of energy losses from the extraction, conversion and distribution of primary energy. However, energy sources differ between countries and in the case of Norway, electricity is primarily generated by clean hydro-electric systems. Consequently, and the focus on energy use rather than energy production is inappropriate and poses a substantial threat to domestic producers.

It is argued that the bottom-up approach of the Directive is not coherent with other top-down EU policy measures, including measures in the ETS Directive, RES Directive and CHP Directive. The use of a PEF in this way may even contravene Lisbon Treaty provisions, which guarantee freedom for Member States to choose energy sources and will therefore not contribute to the maximisation of socio-economic welfare. Overall, it is worth bearing in mind a note of caution sounded by one stakeholder on the need to keep the

# Analysis

## 3

methodology practical and not too detailed. Only those factors that pose a really significant environmental impact should be addressed in pan European legislation.

There is also a case for some flexibility in the application of the method to the parts of the life cycle being studied with a view to speeding up the preparatory study process and making sure all relevant parts are included. When it is widely known that the main problem is at a certain phase of the cycle, there should be a way to reduce the time taken to examine the other phases.

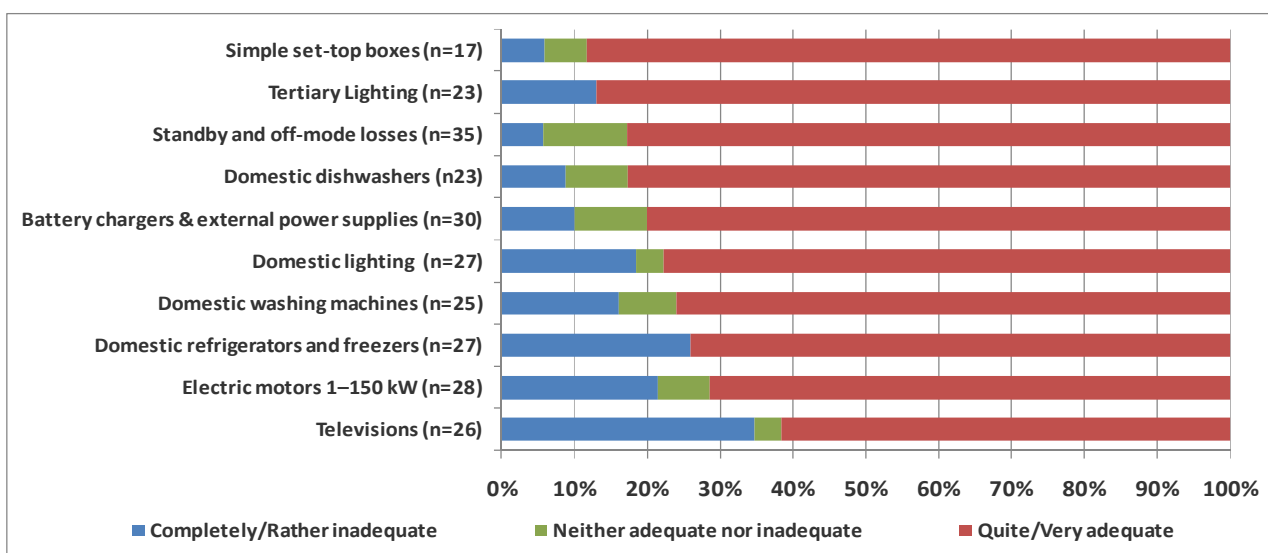
Finally, there has been the comment that the expansion of the Working Plan to cover energy related products before the methodology has been adopted is problematic. Energy related products should only be included in the Working Plan once the necessary methodology has been agreed. In the meantime, there is still sufficient work to be carried out with energy using products not yet covered.

### *Adequacy of requirements set*

The analysis of the survey responses indicates a high level of acceptance of the adequacy of the requirements for all products although a large number of stakeholders (more than 50% of those that responded) did not state an opinion. Among the remaining respondents more than 60% consider that the Implementing Measures have been adequate for all product groups so far. This is particularly the case for tertiary lighting, stand-by and off-mode and simple set top boxes and less so for domestic refrigerators and freezers, and televisions.

Individual comments point to a failure to develop separate and more adequate requirements for certain niche domestic refrigerators (e.g. wine storage) or the fact that LED technologies have not been considered for television sets. In a different way the points raised here again make again reference to the long period between the preparatory study and the Implementing Measures and the fact that market developments may in certain cases lead to suboptimal requirements.

**Chart 3.45 – Adequacy of the requirements set by Implementing Measures for different products (share of respondents – no opinion/do not know not counted).**



Source: CSES survey

Another common criticism made, concerns the focus, so far, of the Implementing Measures and the requirements on energy efficiency and energy use and the absence, in most cases, of provisions for other

# Analysis

# 3

environmental impacts. This is considered to be particularly problematic if it continues to be the case for energy-related products.

## *Products and Product Systems*

An issue frequently raised in relation to certain products (fans, motors, construction products) is whether it is appropriate to set requirements for the products specifically or rather to have an approach that sees them as part of systems. The argument is that the appropriate performance requirements depend importantly on the situation in which the product is used. In the case of insulating material, for instance, an energy-related product that may potentially be covered by a Regulation, its thermal properties and the overall insulating effect depend considerably on the situation and the properties of materials where it is used. The same insulating material will have different overall effects depending on whether it is used in cavity walls of differing materials or as roofing insulation. Specifying thermal requirements for insulating material in isolation, it is argued, may not make much sense, could be difficult to verify and may promote the use of materials that are less good in relation to other environmental criteria. Similar situations apply to electric motors and ventilation fans, already covered by existing Regulations.

Comments received have mainly raised the problems faced by producers with existing or prospective Regulations, rather than suggesting any potential resolution, other than the need to look at systems such as buildings rather than individual products. Reliance on the Energy Performance in Buildings Directive has been suggested by some in the case of construction materials, but there have also been remarks about problems with this approach arising from differences in implementation across the EU. The approach now being taken with eco-labelling of different building categories has been referred to as a possible model, while the case has also been made for having at least minimum requirements for specific products within a more general solution. Overall, however, a more detailed input is required before arriving at any conclusions in this area. An important contribution to this will be the conclusions in this area of the work on the revision of the MEEuP methodology. This is not yet available at the time of writing this report, but is expected to become so, before the next Stakeholder Meeting.

## *Questions to stakeholders*

In order to pursue the question of how effectively and efficiently the procedures associated with the development of Implementing Measures are operating, it is necessary to go further in the analysis of the specific issues. Additional information is sought on the following issues:

- Can the processes of the Ecodesign Directive be made to accommodate broader environmental considerations? Should this be the main priority?
- Should Implementing Measures make more systematic use of generic Ecodesign requirements (Annex I of the Directive)?
- Would it be possible to specify priorities in the Working Plan and a time line for the period from preparatory study to adoption of a Regulation?
- In which cases has the time taken from preliminary study to Regulation led to inappropriate or not ambitious provisions?
- Is it the case that greater effort at the time of the Working Plan and Preparatory Studies could save time and resources subsequently?
- Would the development of standards prior or in parallel to the preparatory studies help expedite and/or improve the process?

# Analysis

# 3

- Would it be beneficial to centralise the preparatory work for Implementing Measures to a single entity such as a new executive Agency or the Joint Research centre? What would be the advantages and disadvantages?
- How should the composition of the Consultation Forum be determined?
- What is the best solution for products that are part of systems?

### 3.4.3 Implementation of the Directive on the ground

#### Conformity assessment and role of standards

In order to place any energy related product on the market, manufacturers (or the authorised representative) have to assess the product's conformity with all the relevant requirements of the applicable Implementing Measure. Assessment of conformity can be based on an internal design control or the establishment of an appropriate management system (requirements set out respectively in Annexes IV and V of the Directive). As a general rule conformity assessment in the context of the Ecodesign Directive is based on self-assessment, with limited reliance on third party certification in order to reduce compliance costs. Implementing Measures may define conformity assessment procedures in line with the modules described in Decision 768/2008<sup>159</sup>. Presumption of conformity can be provided by the adoption of harmonised standards developed by the European standardisation bodies that concern management systems that cover the design function. Similarly, the establishment of environmental management systems (EMAS) that cover product design or the European Ecolabel can be used to provide presumption of conformity with the corresponding Implementing Measures. Other eco-labels (Energy Star) may also be used to provide presumption of conformity on a case by case basis.

Harmonised standards developed by the European standardisation bodies have a key role in the implementation of the Directive. Test and performance standards can help manufacturers in applying the Implementing Measures adopted under this Directive for the specific product group. In the case of generic eco-design requirements, harmonised standards may also guide manufacturers in establishing the ecological profile of their products in accordance with the requirements of the applicable Implementing Measure. Other standards provide tools for integrating environmental aspects in product design from a life cycle perspective, templates for information supply along the chain and treatment facilities so as to minimise the impact on the environment during the use and end of life management phases respectively.

The Commission mandated the European standardisation bodies (mandate M/341)<sup>160</sup> to draw up a standardisation programme to develop an inventory of existing relevant standards and the additional standards to be developed. The two organisations provided an initial inventory<sup>161 162</sup> with an indicative work programme extending over a four year period until 2010. In the period 2010-2011 additional

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<sup>159</sup> Decision 768/2008/EC (<http://Eur-Lex.Europa.Eu/Lexuriserv/Lexuriserv.Do?Uri=OJ:L:2008:218:0082:0128:En:PDF>). It determines the obligations of economic operators when placing product in the market, specifies the various conformity assessment procedures and requirements. Furthermore, it determines procedures for the removal of products on the grounds of health and safety risks. Annex ii of the decision describes alternative modules that can be used for assessment of conformity.

<sup>160</sup> [http://ec.europa.eu/enterprise/policies/sustainable-business/documents/eco-design/standardisation/files/mandate\\_en.pdf](http://ec.europa.eu/enterprise/policies/sustainable-business/documents/eco-design/standardisation/files/mandate_en.pdf)

<sup>161</sup> [http://ec.europa.eu/enterprise/policies/sustainable-business/documents/eco-design/standardisation/files/tc111x\\_report\\_en.pdf](http://ec.europa.eu/enterprise/policies/sustainable-business/documents/eco-design/standardisation/files/tc111x_report_en.pdf)

<sup>162</sup> [http://ec.europa.eu/enterprise/policies/sustainable-business/documents/eco-design/standardisation/files/cen\\_response\\_eup\\_en.pdf](http://ec.europa.eu/enterprise/policies/sustainable-business/documents/eco-design/standardisation/files/cen_response_eup_en.pdf)

# Analysis

# 3

mandates for most of the products covered by Implementing Measures were issued<sup>163</sup>. Two more, concerning pumps and fans are expected by September 2011.

However, in order to better streamline and organise the process, the Commission has decided to issue a draft horizontal mandate aiming to provide a long term view overview of the expected standardisation work and to facilitate the earlier involvement of the standardisation bodies in the decision process, starting from the preparatory studies<sup>164</sup>.

## *Evidence so far*

The feedback provided by stakeholders indicates that there are definitely problems arising from ambiguities in relation to some requirements in Implementing Measures, especially when it is not possible to refer to an existing standard. These ambiguities leave producers unclear about what they have to do in their own internal conformity assessments. A common comment, for example, arising from the survey of the Association of Swedish Engineering Industries, is that the process generating specific requirements is not a problem as such. The question is more how firms are to interpret the requirements in ensuring conformity and how to get guidance for this interpretation. Horizontal requirements are seen by some industry representatives to be a particular problem. By definition, they cannot be as precise as a vertical measure applied to a given product category. The Regulation is then subject to many kinds of interpretation by stakeholders including the Market Surveillance authorities. The best example provided is the Regulation on Standby and Off-mode losses (1275/2008). Even if the intentions of the policy makers have been clearly understood by the manufacturers, they still have to spend a lot of time in assessing and anticipating the risk that they may be considered to be non-compliant through the interpretations of particular Market Surveillance authorities. Clear guidance is needed at a European level to reconcile these interpretations, especially in the case of horizontal measures.

Some see a solution in making the Ecodesign Directive closer to the processes used for new Approach Directives and in a greater use of standards. This would mean that companies could be more involved in the work, the processes would be more familiar to the companies and global harmonisation of requirements could be achieved more quickly. Others, in contrast, believe that, in the environmental area, standards cannot replace regulation, since the former are largely determined by industry and there is a need for a broader consensus with environmental targets and ultimately a political decision. However to reinforce this process it is suggested that right from the preparatory study, the requirements should focus on measurable criteria that can be enforced easily. This would avoid the need for subsequent guidance documents, whose legal status always leaves room for doubt.

Experience internationally (outside the EU) is that legislation setting of minimum standards on the energy efficiency of products (that may be regarded as similar to the Ecodesign Directive in the EU) is implemented with detailed measurement standards the development of which is led by Governments directly rather than the standardisation bodies, equivalent to CEN or CENELC in the EU. Countries that adopt this approach include, the USA and Australia. This is because in such countries policy makers take the view that measurement standards are such a key and intrinsic part of the development of effective "Ecodesign" type policies that, they should be developed by the same actors that develop policies (i.e. policy makers with stakeholders input as appropriate).

When they exist, standards have an important contribution to the implementation of the Directive. Standards for measurement and testing, particularly, are seen to be important contributors to the successful implementation of the Directive. When they are present before the development of the

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<sup>163</sup> DG Enterprise, Standardization action plan, [http://ec.europa.eu/enterprise/policies/european-standards/files/standards\\_policy/action\\_plan/doc/standardisation\\_action\\_plan\\_en.pdf](http://ec.europa.eu/enterprise/policies/european-standards/files/standards_policy/action_plan/doc/standardisation_action_plan_en.pdf)

<sup>164</sup> Standardization action plan, [http://ec.europa.eu/enterprise/policies/european-standards/files/standards\\_policy/action\\_plan/doc/standardisation\\_action\\_plan\\_en.pdf](http://ec.europa.eu/enterprise/policies/european-standards/files/standards_policy/action_plan/doc/standardisation_action_plan_en.pdf)

# Analysis

# 3

Implementing Measures they support the preparatory study; when this is not the case it causes problems for this process of the development of the requirements (e.g. boilers). On occasions, however, standards can be applied too rigidly. There are cases (e.g. vacuum cleaners) where, according to some stakeholders, the Implementing Measure essentially copies the standards and this is too prescriptive.

Most stakeholders believe that there are important gaps in most categories of product (nearly all with the exception of motors, fans) and that the standards development process is quite slow. The transitional arrangements that have been put forward on a number of occasions have been helpful but are not ideal and cannot replace standards. The process of standards development needs to start earlier on and be better integrated with preparatory studies. The draft horizontal mandate in 2011, discussed presented earlier in 2011 attempts to address this problem and appears to receive the support of the standardization community that is in favour of an early involvement into the process. Still, additional action is considered necessary:

- There is a need for the standardisation bodies to achieve greater co-ordination with the IEC, where international standards are developed, since this is where manufacturers focus
- The assessment of the environmental (or even wider sustainability) characteristics of products is missing in the development of technical standards. Greater use could be made of the relatively new development of environmental characteristics for products in line with CEN TC350 standards (prEN15804).

More generally, in relation to conformity assessment, the following points have been made:

- Some Member States do not have accredited laboratories for the testing procedures and so the cost of testing can be very high.
- It has been claimed by a minority of industry representatives that authorities in certain countries may request extensive testing which may not be necessary and represents an additional cost.
- Tolerances allowed in testing (at 15%) are thought to be too large by a number of contributors, undermining the whole approach.
- Generally, there is a concern about the costs of testing. Member States that cover the costs of testing believe it to be the determining factor in how effective a market surveillance system can actually be.
- There are doubts about the qualifications of some designated laboratories.
- Specific obligations for distributors and importers should be introduced into the Ecodesign Directive along with procedures that can make them more easily identifiable.

## *Questions to stakeholders*

The initial findings suggested that there are a number of problems in the implementation of Regulations by firms. Further information is still required relating to the following questions:

- What is the evidence to support concerns about the qualifications of some designated laboratories?
- What are the main gaps in terms of the development of standards (test and measurement standards, performance standards, horizontal standards)? Which ones are the most important?
- Are there specific instances where the absence of the required standards is causing particular problems?
- At which point are concerns about tolerances allowed in testing best tackled?

# Analysis

# 3

## Market surveillance and enforcement of the Directive

‘Market surveillance’ is defined in the Directive as ‘the activities carried out and measures taken by public authorities to ensure that products comply with the requirements set out in the relevant Community harmonisation legislation and do not endanger health, safety or any other aspect of public interest protection’. The New Legal Framework Regulation 765/2008/EC<sup>165</sup> has established the current system for market surveillance by the Member States. It sets requirements for accreditation bodies, the establishment of the necessary surveillance infrastructure and the development of surveillance programmes, the types of check to be performed, the exchange of information among the responsible national authorities concerning products that do not conform to EU regulations and other procedures to ensure an effective surveillance of the market.

The establishment of the necessary structures and mechanisms at the Member State level to ensure effective market surveillance and the enforcement of the requirements of the Directive and the Implementation Measures is a major determinant of the overall effectiveness of the Directive and the achievement of the policy objectives set. Without a credible enforcement regime, the efforts of compliant firms are undermined. The market conditions become more uncertain, firms potentially suffer cost disadvantages and these act as a disincentive to the commitment of compliant firms to environmental objectives and to further improvements.

The evaluation questions that are relevant in this area are:

- Have Member States correctly transposed the framework Directive and established the required competent authorities?
- How effective is the surveillance of the market by Member States across the EU? Have the appropriate market surveillance mechanisms for cooperation been established and are they effective? Which, if any, are the barriers to effective application of the Directive?
- What is the level of conformity with the Implementing Measures? Are there free-riders on the market supplying non-complying products and if so, to what extent?
- Are stakeholders well informed on how to interpret and apply the Directive?
- Are adequate resources allocated to authorities in view of effectively implementing the Directive?
- Are there any impacts of Regulation 765/2008/EC and Decision 768/2008/EC on the application of the Directive?

### *Analysis of evidence*

Generally, it is clear from the response to the survey and from a range of interviews that most stakeholders believe that there is a compliance problem. Many refer to anecdotal evidence that suggests that there are non-compliant goods on the market, especially as imports from outside of the EU. Many also believe that market surveillance is not effective. They also believe that the situation varies across the Member State and that some countries have stronger market surveillance systems than others.

Some suggest that the problem is partially one of communication. Firms can still be unaware of what is required, especially if they are not members of an industry association. Importers of goods from third countries often deal with a range of products and may not know what is required in each particular product. There is also a potentially growing problem with goods bought over the Internet from outside the EU. Clearly, however, the perception is that there are firms that deliberately ignore the regulations, when putting new products on the market.

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<sup>165</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:218:0030:0047:en:PDF>

# Analysis

# 3

However, when asked about the extent of the problem, most say that they do not know. Evidence cited has so far mainly related to well-known studies. It might be as well to summarise these findings, even though most of them relate to labelling rather than to Ecodesign Regulations directly:

- The UK's Department for Environment, Food and Rural Affairs (DEFRA) has a policy of conducting compliance tests and publishing the results on its website, often with the identification of individual models and brands. It estimated that in 2010, the rate of non-compliance in the UK was around 10 to 15% at manufacturing level (failure to meet the claim on the label) and 20% at retail level (absent or incorrect labelling).
- More recently, the UK's National Measurement Office, which is the surveillance authority for the Ecodesign Directive and related legislation (including energy labelling), has also undertaken compliance projects and has published the results of those completed in the course of 2011<sup>166</sup>. Projects have examined the labelling of washing machines and fridges and freezers and the compliance with Ecodesign requirements in the case of televisions, audio-visual appliances and domestic lighting.
- Of the eight washing machines tested, half performed to a lower standard than was claimed and after the study of fridges and freezers; the NMO prosecuted one company, for labelling as A-rated a chest freezer whose performance actually rated F. Of the 20 televisions tested, one failed on standby and the other three failed on peak luminance performance. And, only 15% of the televisions would be compliant under future requirements. 7 DVD players and 3 Blu-ray players were assessed for standby/off mode compliance. 100% were compliant with the current requirements, though 85% of the DVD players would be non-compliant under future requirements.
- Earlier in 2007, DEFRA in conjunction with the European Association for the Coordination of Consumer Representation in Standardisation (ANEC) had published a report on compliance with EU label regulations<sup>167</sup>. The study had found an average of 20-30% of appliances in shops were not labelled, that only three of the nine countries studied could present figures about in-store inspections, and that only four of the nine countries asked for corrective action in writing after the discovery of unlabelled appliances.

Clearly, the situation may have improved recently, but the study's general conclusions are still valid, namely that poor monitoring is a key barrier to the successful implementation of the labelling scheme and that a significant factor contributing to low monitoring is the small budget (in monetary and human resource terms) often allocated to monitoring activities.

- The ATLETE project, funded under the Intelligent Energy Europe Programme (IEE) was designed to demonstrate that market surveillance and testing can be done in a systematic, effective and cost-efficient way. It has developed guidance for surveillance authorities on practical procedures, but in the current context is particularly interesting in that it has conducted pan-European testing on a large number of refrigeration appliances, primarily in relation to labelling requirements.
- 80 appliances, from 40 producers, available for purchase across the European Union, were tested for their energy label declaration. Each appliance was tested according to five parameters (energy consumption, storage temperature - including the climate class - storage volume, freezing capacity and temperature rise time). If the declared values were found not to be within the accepted testing tolerances, a second round of testing was undertaken, using stricter tolerance thresholds. Test results currently available show that 84% of appliances complied with the energy efficiency class declaration

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<sup>166</sup> <http://www.bis.gov.uk/nmo/enforcement/ecodesign/news-and-events>

<sup>167</sup> ANEC and Defra (2007), A Review of the Range of Activity throughout Member States Related to Compliance with the EU Energy Label Regulations in those Countries, ANEC-R&T-2006- ENV-006, Final Report, January 2007.

# Analysis

# 3

and the two related key parameters: energy consumption and storage volume. When all five parameters were taken into consideration, the rate of compliance declined to 47%.

- The SELINA project has examined Off-mode and Standby energy losses in new products. As part of the project, the effect of the introduction of Regulation EC 1275/2008 was tested in 12 different countries. 5844 different pieces of equipment being sold in shops were measured in the project, covering 140 different products in five main product categories: kitchen devices, communications, entertainment, office appliances and accessories.
  - It was found that 17 % of the appliances whose off-mode power was measured do not respect the EU regulation threshold of 1 W. For standby mode consumption, 28 % of the measured products did not comply with EU regulation limit for 2010. The figures in relation to the 2013 threshold were 38 % and 59 % respectively. It should be noted that some of the appliances were tested before the first set of new thresholds came into effect at the end of 2009 and therefore technically did not breach the requirement. The figures nonetheless give some indication of the state of the market in the period of transition.
  - Since the measurement campaign started in 2009 and ended in June 2010, it was possible to observe if the Market Surveillance Regulation entering into force in January 2010 had any immediate effect. A slight decrease of the share of appliances exceeding the EU regulation limits was observed.

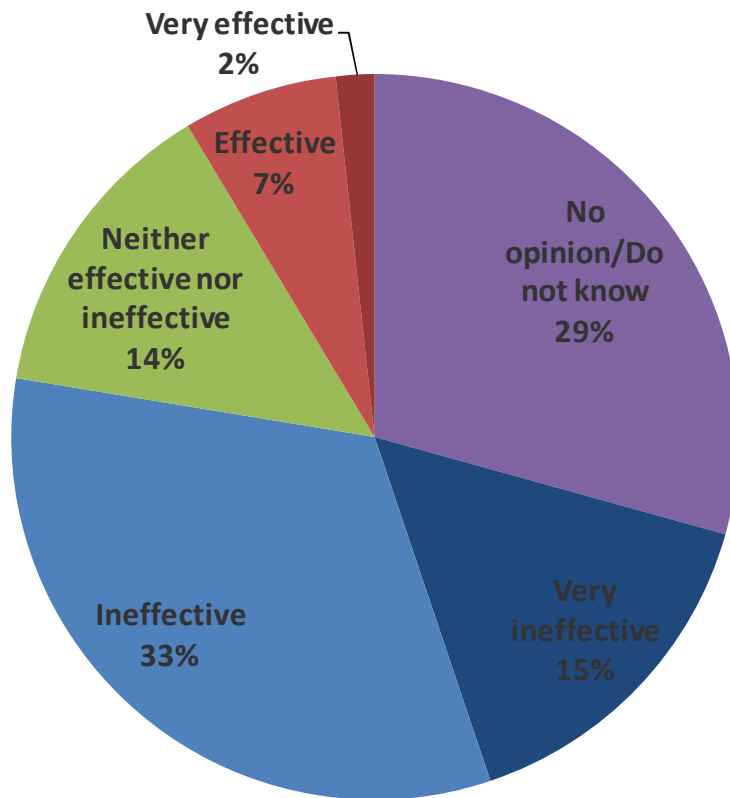
Although much of the work mentioned above focuses on labelling, altogether it is indicative of a shortfall in compliance that supports the perceptions of stakeholders. Indeed, the levels of non-compliance are significant enough to raise serious concerns about the effectiveness of enforcement of the regulations by Member State authorities.

The feedback provided in the consultation on the Action Plan on Energy Efficiency in 2009 had suggested that market surveillance in some Member States is a significant weakness and this earlier observation was supported by the evidence from the stakeholders' survey.

# Analysis

# 3

**Chart 3.46 – Level of effectiveness of market surveillance by Member State authorities across the EU (n=58)**



Market surveillance by Member States authorities across the EU is seen as ineffective by 32% of respondents and 'very ineffective' by 23%. Moreover, the large majority of respondents (73%) indicate that the application and enforcement of the Directive is not uniform across the EU.

Further exploration of this critical issue is required, since the survey has revealed other dimensions to the market surveillance problem and also some possible routes to improvement. Among the issues are the following:

- Absence in some Member States of any effective market surveillance and enforcement
- The level of co-operation between Market Surveillance authorities is low and varies from country to country
- Many authorities have a lack of experience of the Ecodesign Directive specifically and perceive it simply as requiring energy labels to be checked
- The tendency of surveillance authorities, when they are also responsible for product safety, to give priority to safety issues, because of their higher public profile
- Use by the Member States of their own national interpretations of requirements and of practices that are not derived from the Directive (often relating to former national procedures) – issues currently being addressed in the ADCO work on the harmonisation of enforcement activities

# Analysis

## 3

- The consequent disincentive and cost to firms trading in different Member States
- The fact that in contrast to safety requirements, there is no risk of financial liability and loss resulting from non-compliance
- The level of resources and legal structures for Market Surveillance are insufficient in some countries
- Insufficient checks in relation to imported goods from outside the EU
- The cost of testing
- Penalties for non-compliance are not a sufficient deterrent.

From the point of view of some Member State authorities, the key constraint appears to be the absence of the necessary financial resources to support the enforcement of the Directive and the establishment of the appropriate structures. Data provided by some Member States indicate annual costs equal to 3-5 officials covering all aspects of surveillance and enforcement plus costs for testing, studies and other technical analysis (over €300,000 per annum) in addition to the inspectors on the ground (another full-time equivalent). However, since it is widely reported that surveillance activity in some Member States is not as developed as it should be, estimates of the actual cost of surveillance should be scaled down somewhat.

In addition, most surveillance authorities are responsible for both the Ecodesign Directive and Energy Labelling and the same people are often involved in both. Among the 26 countries responding to a survey conducted by the ATLETE project, 18 indicated that their authorities are responsible for both areas, 4 said that responsibilities are divided and in 4 the responsibility for the Ecodesign Directive had still not been allocated. While more work has previously been done on labelling, estimates of current workload indicate that the split is now 60:40, in favour of the Ecodesign Directive.

On the basis of the above, 2 FTE at an average cost of € 80,000 gives an estimated staffing cost of € 160,000 per annum per Member State. Furthermore, with study and testing costs of € 350,000, the estimated total annual costs of surveillance (without institutional overheads) is € 510,000 plus additional (non-staffing) administrative costs of actual enforcement (any court costs etc). These costs relates to surveillance and enforcement only.

One Member State authority pointed to the trade-off between staffing and testing, as a consequence of a fixed overall budget for enforcement. Given the expense of some individual tests, ways of reducing this element of expenditure, through the development of in-house facilities or particularly through the sharing of test results is thought to be an important consideration. Some concern was also expressed about the need for surveillance of a growing number of products. With budget restrictions in many countries, there is a prospect of spreading a stable or even declining quantum of resources over a greater number of products. This will strain confidence in the system still further.

The significance of effective enforcement has been emphasised by the work undertaken by CLASP (the Collaborative Labelling and Appliance Standards Program), notably in its 'Practitioner's Guidebook'<sup>168</sup>. CLASP is an independent, non-profit organisation, originating in the United States, but promoting Energy Efficiency Standards and Labels (S&L) for appliances, equipment, and lighting around the world. Based on international comparisons, the Practitioner's Guidebook comments that investment in compliance and enforcement regimes is 'likely to be one of the most cost effective means to increase the environmental impact of S&L programmes in the short and long terms', while also remarking that there is a corresponding

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<sup>168</sup> Mark Ellis & Associates in Partnership with the Collaborative Labeling & Appliance Standards Program (CLASP) 'Compliance Counts: A Practitioner's Guidebook on Best Practice Monitoring, Verification, and Enforcement for Appliance Standards & Labeling' Sept 2010

# Analysis

# 3

risk that failure to address issues of non-compliance can lead to serious long-term consequences through the erosion of consumer confidence.

However, feedback from the various sources has also suggested ways in which the situation might be improved, largely within existing resources. In particular there appears to be a willingness among Member State authorities to co-operate more, and more effectively.

The responsibility for market surveillance and enforcement lies with the Member States. Article 3 of the Directive says that ' Member States shall take all appropriate measures to ensure that products covered by Implementing Measures may be placed on the market and/or put into service only if they comply with those measures and bear the CE marking in accordance with Article 5.'

However, this does not prevent national authorities from co-operating with each other to increase the effectiveness of their actions. In fact, the Directive envisages such co-operation in Article 12 of the Directive, with the Commission encouraging and contributing to this co-operation.

Such co-operation has already taken place to a limited extent. The Ecodesign Administrative Cooperation group (ADCO) made up of the Market Surveillance Authorities of all EU Member States has been established to improve co-operation in the implementation and enforcement of the Directive and in particular is discussing better co-ordination of product testing. The Commission is assisting these moves with the development of a database of cases and through the possibilities presented by programmes such as Intelligent Energy Europe, under which a number of surveillance authorities have submitted a proposal for a project exploring how co-operation can be improved. One of the issues with this sort of project, however, is that they mainly involve Member State authorities that are already relatively active in the enforcement area.

However, the Stakeholder Meeting, interviews and written comments in the survey all indicate a general agreement that still more could be done to improve surveillance and enforcement, especially in the following areas:

- **Registration:** for some products in Europe, such as chemicals and fertilisers, some Member States already require registration before a product can be put on the market. This can be done easily on-line and mainly consists of the information already required in the declaration of conformity. It would involve a negligible administrative requirement. Such a system is already in operation in Australia for products within the scope of energy efficiency regulations. The benefits are that surveillance authorities would be in a much better position to plan and carry out their work and the benefits of more open information on market developments referred to in the Directive, would be more readily apparent.
- **Sharing investigation results:** especially for products on the market in different Member States, the sharing of information on product conformity checking and testing could greatly reduce costs and assist enforcement, but although this is one of the aims of the ADCO group, the effects of this co-operation have still to be felt.
- **Information requirements:** surveillance and testing would be much easier if the relationship between similar products were clearer. Suppliers of products should be required to specify (in conformity statements and when registering) the relationship between original and daughter products, especially when variants are introduced for particular markets. Differences in performance in relation to Implementing Measure requirements should be distinguished from differences relating to other aspects of the product or simply name differences.
- **Penalties for non-compliance:** these are said to be weak or meaningless in many cases. A review and comparison of penalties imposed by Member States should be undertaken and kept up to date.

# Analysis

# 3

- **Engagement of industry and consumers:** Article 3.4 of the Directive says that Member States shall ensure that consumers and other interested parties are given an opportunity to submit observations on product compliance to the competent authorities. However, this aspect of enforcement is considerably less developed than in the United States, where industry plays a significant part in enforcement by being able to challenge the conformity of competitors' products. This system is said to work well.
- **Facilitating compliance:** a point made by CLASP is that taking steps to facilitate compliance by suppliers is often overlooked, yet it is one of the least expensive and easiest ways to increase compliance rates. This is mainly a matter of communication, education and training among producers and importers of the relevant products and has the advantage of encouraging active engagement in the regulatory process and anticipation of regulatory requirements.

These are all matters that will be further discussed and clarified during the second next Stakeholder Meeting.

## *Questions to stakeholders*

The findings have suggested that there are problems with the enforcement of the Directive that need to be addressed. Further information relating to the following questions will be highly valuable:

- Is there further evidence to support or contradict the perception that there is a significant degree of non-compliance in most markets?
- Do other Member States have information available on surveillance tests conducted?
- Is the estimate of resources dedicated by the Member States to market surveillance and enforcement broadly correct?
- Would registration of products be a good idea?
- Are surveillance authorities applying different approaches to confirming compliance, as is claimed? Does this represent a barrier to the Internal Market?
- Is it the case that penalties for non-compliance are 'weak or meaningless'?
- Are there other ways (beyond those mentioned above) that Member State authorities could cooperate with each other to improve the effectiveness of market surveillance and enforcement?
- Could there be more scope for industry, consumers and other groups to raise concerns about compliance?
- Would greater use of naming and shaming be appropriate and effective?
- Could surveillance and enforcement issues have a higher profile in the Consultation Forum?
- Are the estimates of the costs of enforcement for Member States in the right order? Is there any information on the costs of enforcing the legislation in identified cases of non-compliance?

## **Costs of compliance for enterprises**

Compliance with the Directive and its requirements gives rise to costs for enterprises. A first type of cost arises from the need for investments in technology and the redesigning of production processes, in order to achieve compliance with the requirements. The impact assessments, for each Implementing Measure have, analysed the expected costs for redesign or changes of production. In almost all cases, the costs for re-

# Analysis

# 3

design per product were expected to be limited in absolute terms and not significant in relative terms<sup>169</sup>. The figure provided for most categories of products was in the range of €50,000-100,000 per product platform plus an additional €1-€10 per unit of product. The evaluation needs to validate these estimates on the basis of information provided by stakeholders. So far, only fragmentary input has been provided. In the case of circulators, it is claimed that the total costs for production changes for the whole industry were close to €400 million. In motors above 750W, the Implementing Measure increased production costs by 20%, according to an industry association.

In addition to production costs, the implementation of the Directive leads to administrative costs for firms. Most impact assessment studies referred to “no significant administrative costs in the order of several thousand Euros”. The survey responses have provided rather limited information concerning the specific nature and extent of these costs. One manufacturer suggested that administrative costs (including the human resources dedicated) are very high, if the full range of costs is taken into account, including management time to follow initial developments prior to the Regulation and to make changes across the firm, establishing and maintaining technical files and other documentation, the creation and operation of testing facilities, possible involvement in standardisation activities; and writing eco-design features into supplier terms and conditions. Another producer has indicated that administrative costs are negligible and could well have been incurred anyway in responding to global market conditions. In order to set some kind of benchmark for the costs, we have asked stakeholders to indicate, if the costs are high in comparison with higher in relation to other environmental legislation. The responses of six individual manufacturers are rather balanced (3 say that they are higher and 3 that they are less or the same). The experience of firms may vary depending on the product concerned and their own experience. More information and data on the costs for different categories of firms are clearly necessary.

As well as the costs of implementing the provisions of the Regulation, there are the costs of participating in the processes leading up to a decision on the nature and scope of the Implementing Measures. For many firms, this will be through their industry association, for which they usually pay a subscription fee. For some firms, however, especially the larger ones, there will be direct involvement. The costs involved in this process are not negligible, especially if the process is protracted. One representative organisation in a middle-size Member State reported that there are 4 full time staff employed just in monitoring the Ecodesign process.

In addition to industry and Member State input into the development of Implementing Measures, there is, of course, an input from various environmental organisations, a number of which have staff working on Implementing Measures. Estimates of time input ranged from 0.5 of a FTE to 3 full time staff.

Furthermore, some industry associations and enterprises have raised the issue of costs arising from their experience in some Member States of officials using their own national interpretations of requirements and of practices that are not derived from the Directive (often relating to former national procedures.) This is an infringement of Internal Market rules, but in practice imposes additional administrative costs on firms trading in different Member States.

### *The suitability of the procedures for SMEs*

Costs of compliance, both in terms of investment in production processes and of administrative overheads can be much more significant for SMEs in that they represent a much higher proportion of turnover. It also has to be remembered that for many SMEs incorporating environmental thinking into their planning and operations, and especially adopting a life-cycle perspective, still involves a fairly fundamental change in the

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<sup>169</sup> In the case of external power supplies the costs related to product re-design and re-assessment of conformity were expected to be small. In the case of household refrigerating appliances they were not expected to be disproportionate.

# Analysis

# 3

firm's culture. Some require expensive assistance from consultants to inform them of new developments and to help them adjust to new requirements. Sometimes this can even involve unnecessary costs, when 'advice' prompts them to go further than the actual requirements.

There are also other aspects of the implementation of the Directive that particularly affect SMEs. Naturally they find it more difficult to participate in stakeholder discussions and are often not members of industrial associations. They are therefore particularly affected if developments after the Working Plan are protracted or take unexpected directions or if there is poor information provided about what is happening.

Those who press for changes in important details of the proposed Implementing Measures at a late stage in the process should be aware that their action could have a particularly adverse effect on SMEs that are attempting to respond to the proposals set out in the preparatory study.

It has been pointed out in a number of comments that as the programme of the Working Plan is followed through, it is increasingly moving into markets where there are more suppliers and where more of these are SMEs. This highlights the increasing need, for instance, for the MEEuP analysis to include a good assessment of the structure of the market under Task 2 and to have an explicit consideration of the impact of prospective Implementing Measures in Task 8.

Formal involvement of SMEs in consultations also needs to be assisted with practical measures. The circulation of complex technical documents in English shortly before important meetings does not help SMEs or their organisations to react properly, especially when documents have to be translated and technical advice is required. Timely distribution of documents and highlighting salient points in a way that allows translation to be done quickly can help to support more effective participation by SMEs in the consultation process.

## *Questions to stakeholders*

- What are the nature and the size of the different costs that arise in the implementation of the Directive on the ground?
- Are there differences among the different products?

### **3.4.4 Role of voluntary agreements**

The main evaluation question that is relevant in the case of voluntary agreement is:

- What has been the role of Voluntary agreements/Self-regulations? Are they effective and cost/resource efficient? Do they fulfil the criteria of Annex VIII?

## *Background*

The Directive envisages that self-regulation by the industry should be considered as an alternative to the adoption of regulation, if it is in line with the policy objectives. By allowing flexibility in the implementation of the policy, self-regulatory developments can be appropriate where rapid technological progress occurs.

In practice, when considering whether to prepare a draft Implementing Measure, the Commission is firstly required to examine the presence of relevant self-regulation, such as: voluntary agreements or other measures adopted by industry, taking into account that in some cases self-regulation is likely to deliver the policy objectives faster and in a less costly manner than mandatory requirements and allow flexible and appropriate adaptation to technological solutions and market sensitivities. The Directive refers explicitly to self-regulation (Article 17) and also lists the criteria to be used to evaluate self-regulatory initiatives as a possible alternative to Implementing Measures (annex VIII). Furthermore, Stakeholders represented in the Consultation Forum (Article 18 of the Directive) are expected to contribute to the assessment of voluntary agreements and other self-regulation measures. Furthermore, in response to requests from stakeholders,

# Analysis

## 3

in March 2010 the European Commission produced a document developing guidelines on the minimum criteria that VAs have to fulfil to be accepted as a substitute for mandatory Ecodesign requirements.

### *Analysis of findings*

It should be noted that the evidence from on the actual use, and even more on the effectiveness of voluntary agreements, is rather limited. So far voluntary agreements have been proposed for four products categories; complex set top boxes (CSTBs), imaging equipment, machine tools and medical imaging equipment<sup>170</sup>. According to the information available a final agreement was recently reached in the case of complex set top boxes and imaging equipment while the other proposals are in different stages of the consultation phase with the case of medical imaging equipment being approaching the final stages. In the case of medical imaging equipment, the industry came forward with a proposal without the specific category being included in the list of products in the working plan or that of the transitional period and with no preparatory study conducted. As a result, the analysis focused more on the procedural issues and aims to identify key issues and parameters for success in relation to the development of the VAs.

The views of stakeholders concerning the adequacy of voluntary agreements towards achieving the objectives of the Directive vary a lot. In total 54% of the 61 that responded to the survey considered that voluntary agreements are adequate or 'very adequate' while 38% consider them 'inadequate'. However, there are clear differences depending on the type of stakeholder. The majority of Member States (and environmental groups) do not consider voluntary agreements appropriate. The comments provided suggest that the main issues are that voluntary agreements tend not to be ambitious enough in relation to the business as usual scenario and cannot bring the same results as regulation can. In most cases the initial proposals from industry had to be revised in order to provide similar savings commensurate with those that were considered as similar results to a possible regulatory initiative would cause. In addition, there are criticisms from Member States and NGOs on the transparency of the procedures for initiating and establishing the Voluntary Agreements and important questions on the monitoring of compliance from the side of industry. Voluntary Agreements are thus considered appropriate by these stakeholders only as complementary to regulation, especially when they aiming to address issues and aspects that Implementing Measures cannot effectively address, particularly in relation to aspects other than energy efficiency.

From the point of view of industry representatives, there is in general a more positive approach towards voluntary agreements (71% among industry associations) because of the flexibility that they provide in comparison with Implementing Measures. However, a large number – even among those with a positive view - expressed concerns about the actual capacity of the industry to reach agreements and, even more, their capacity to enforce them in a way that will ensure fair competition and avoid free-riders.

**Table 3.48 - Adequacy of voluntary agreements as a mechanism to achieve the objectives of the Directive (n=61)**

	European/national industry association	Individual manufacturer	Member States	Environmental/consumer groups	Experts	Total
<b>Very/quite adequate</b>	17 (71%)	7 (50%)	3 (25%)	-	-	<b>27 (44%)</b>
<b>Neither adequate not inadequate</b>	2 (8%)	-	-	-	2 (25%)	<b>4 (7%)</b>
<b>Completely/rather inadequate</b>	3 (13%)	5 (36%)	5 (42%)	3 (100%)	3 (38%)	<b>19 (31%)</b>
<b>No opinion/Don't know</b>	2 (8%)	2 (14%)	4 (33%)	-	3 (38%)	<b>8 (18%)</b>

<sup>170</sup> [http://www.eceee.org/Eco\\_design/process/Voluntary\\_Agreements/](http://www.eceee.org/Eco_design/process/Voluntary_Agreements/)

# Analysis

## 3

	European/national industry association	Individual manufacturer	Member States	Environmental/consumer groups	Experts	Total
<b>Total</b>	24	14	12	3	8	<b>61 (100%)</b>

Source: CSES survey

The discussions suggest that Voluntary Agreements cannot work for all products and sectors. The key aspect is the capacity of the industry to bring together the main actors involved and this depends on the industry structure. Thus, in the case of complex set top boxes, the vertical structure of the industry and the involvement in the Digital Interoperability Forum of the final service providers - the ones that actually select the products sent to the final consumers - is considered as a key parameter of success. It provides a high level of coverage of the market and a rather easy monitoring process. In other sectors, with a much larger number of actors, voluntary agreements are much more difficult to achieve and even more difficult to enforce. Industry stakeholders refer to the possible dangers of free-riders.

The advantage of the flexibility of the Voluntary Agreements is also relevant for sectors where technologies are rapidly changing or where there is a large range of products with different characteristics and where a single set of requirements may prove problematic. In relation to the first issue Voluntary Agreements gives the opportunity to manufacturers to focus on high volume products and exempt products in niche markets or with niche technologies. This, according to the industry is the case for Imaging and Medical Imaging Equipment. In the latter the Voluntary Agreement approach also offers the flexibility to integrate requirements in relation to additional functions over time. Concerning the variety of products, in the case of machine tools, CECIMO proposes that the Voluntary Agreement route provides the necessary flexibility to adopt a modular approach where complex machine tools will be split into different modules on the basis of which potential improvements for the whole product will be identified and adopted by manufacturers. The adoption of mandatory requirements applicable to all products cannot provide the necessary flexibility. We do not have any practical evidence so far to support or dispute the above statements.

From the efficiency side, there are certain benefits in terms of resources required. From the Commission side, the difference in resources needed appears to be rather limited. The full involvement of a Commission officer in the development phase and the conduct of a preparatory study are most often necessary. Furthermore, the overall duration of the process is not always much faster. In the case of complex set top boxes and for medical imaging equipment the process lasted around 3 years. This, purely in terms of timing (not benefits delivered), compares rather favourably against the 4 year average for Implementing Measures. However, in the case of imaging equipment, the preparatory study was launched in 2006 while a first proposal for a Voluntary Agreement was submitted in 2009. Still, there are certain savings for the public authorities, given that the industry assumes the responsibility for developing the proposals bringing together the key market actors and, when the Voluntary Agreement is in force, collecting and independently verifying the necessary data to ensure compliance. It remains to be seen how well this last process will operate.

### 3.4.5 Summary of overall cost and efficiency considerations

Reference to costs incurred by various stakeholders has been made at several points in the preceding sections and while it has not been one of the primary objectives in this evaluation exercise to undertake a systematic analysis of the respective costs and benefits associated with the Directive, nonetheless, as part of commenting on the efficiency with which the Directive is operating, the opportunity has been taken to gather what evidence is readily available on these fundamental issues.

Various costs have been referred to. By way of summary, the principal areas where costs can arise are as follows:

- Developing the Framework :

# Analysis

# 3

- The initial administrative cost of adopting the Directive
- The process leading to the Working Plan
- Monitoring & evaluation
- Review and revision
- Development of the Implementing Measures
  - Preparatory studies
  - Consultation & decision-making
  - Preparation of standards
  - Supporting studies and technical analysis
- Implementation & Enforcement of the Regulations
  - Adaptation by enterprises of products and production processes
  - On-going compliance costs
  - Market surveillance & enforcement

Different stakeholders incur these costs at different points:

- The Commission: contributions in all three areas listed above and including inputs from the JRC and other bodies close to the Commission
- The Member States : parallel contributions in the first two areas and prime responsibility for surveillance and enforcement
- Enterprises : adaptation of products and processes, but also compliance costs and inputs into consultation processes
- Business Associations : Inputs particularly into the second area, but also into consultation and lobbying on the legislative framework and monitoring of implementation
- NGOs : Inputs particularly into the second area, but also into consultation and lobbying on the legislative framework and monitoring of implementation

Other inputs at various points include those by members of the European and national Parliaments, academics and consultants.

The estimates that it has been possible to make at this point relate primarily to the inputs of the Commission and Member States. As was remarked above, it is hoped that it will be possible to obtain more information about the costs to enterprises before the next report, although it should be appreciated that a systematic analysis of enterprise costs is clearly beyond the scope of the current study. Estimates of the costs to business associations and NGOs are also relatively sketchy at the moment and are likely to remain so. Broad assumptions will have to be made about the cost of these inputs.

The detailed calculations of the estimates for the costs of the Directive to the Commission and the Member States are set out in Annex D. A summary of the main figures is presented below calculated on the basis of the following assumptions:

- The estimates distinguish between costs incurred up to now (2005 – 11) and costs for the period 2012-2016. The cut off point is possibly arbitrary but the periods allow for distinctions between what has already been incurred and what is projected for a reasonable time into the future, while recognising that there is increased uncertainty as we move beyond a certain period.
- An initial assumption of 10 new products resulting from the second working plan has been made. This is based on discussions with the Commission. The conclusion of the second working plan will provide a better base for estimating this number.
- We have used a fix number of Commission staff for each period to calculate the staff costs incurred. A total of 10 for the period 2006-2011 and 14 for the period 2012-2016. This is irrespective of the number of products examined and includes work on individual measures but also horizontal activities. This assumption of a fixed number of staff is important and it should be recognised that it is

## Analysis

## 3

conceivable that by 2016 more staff will be involved in the process. We therefore did some further analysis on the basis of a more flexible response.

- We have used an average of 4 years for the whole procedure from the time a preparatory study starts until the entry of an Implementing Measure into force. This represents the experience so far.
- Voluntary agreements have not been considered. Still, as suggested by the Commission, the amount of work involved during the development of a Voluntary Agreement is not very different from that for an Implementing Measure.
- In the case of Member States estimates where made of what would be a 'reasonable' number of staff employed by the Member States in market surveillance and enforcement of the Directive. A total of two FTE for the period 2006-2011 has been used reflecting the numbers provided by a small number of interviewees. For the period 2012-2016 we assumed a total of three FTE to reflect the increasing number of products covered and the needs for more extensive market surveillance activities. These 'reasonable' averages cover considerable variation across Member States relating to different size, relative importance of the relevant manufacturing sectors domestically, different degrees of policy activism etc.
- A total of 12 reviews of the existing Implementing Measures have been assumed referring to the Implementing Measures already in force.
- Where possible, consistency with estimates in parallel areas have been maintained, for instance, the initial costs of adopting the revised Directive is are estimated at the same cost level as was given in the Impact Assessment for the Energy Labelling Directive.
- All costs are considered incurred at the time of the initial commitment.

Bearing these assumptions in mind the main estimates are as follows:

**Table 3.49 - Commission & Member State costs (period 2006-2011 and 2012-2016)**

	Units	Unit price	2006-2011 (6 years)		2012-2016 (5 years)	
			Number	Total	Number	Total
<b>Commission</b>						
<b>Initial adoption</b>				€ 1,000,000	-	-
<b>Staff</b>						
EC staff	FTE/year	€ 120,000 <sup>171</sup>	10	€ 7,200,000	14	€ 8,400,000
JRC support work	Man Months	€ 8,333	126	€ 1,050,000	n.d.	n.d.
<b>Preparatory studies</b>						
Completed	Number	€ 300,000	22	€ 6,600,000	-	-
On going	Number	€ 300,000	15	€ 4,500,000		
Designated	Number	€ 300,000	5	€ 1,500,000		
Coming period					10	€ 3,000,000
<b>Work plans</b>	Number	€ 150,000	2	€ 300,000	-	-
<b>IM reviews</b>	Number	€ 200,000			12	€ 2,400,000
<b>MEEuP</b>						
Methodology	Number	€ 300,000	12	€ 300,000	-	-
Review		€ 75,000		€ 75,000	-	-
<b>Other studies</b>	Number	-	2	€ 760,000	n.d.	n.d.
<b>Standards</b>		n.d.			n.d.	n.d.
<b>Evaluation</b>	Number	€ 300,000	1	€ 300,000	-	-
<b>NGOs/SME support</b>	Number	€ 1,000,000	1	€ 1,000,000	1	€ 1,000,000
<b>Commission costs</b>				<b>€ 24,585,000</b>		<b>€14,800,000</b>
<b>Cost/year</b>				<b>€4,100,000</b>		<b>€2,960,000</b>
<b>Member states(27)</b>						

<sup>171</sup> Includes overhead

## Analysis

## 3

	Units	Unit price	2006-2011 (6 years)		2012-2016 (5 years)	
			Number	Total	Number	Total
<b>Initial adoption</b>				€ 4,000,000		
<b>Staff</b>						
IM development	FTE	€ 80,000 <sup>172</sup>	27 (1/ MS)	€ 12,960,000	27 (1/ MS)	€ 10,800,000
Market surveillance	FTE	€ 80,000	27 (1/MS)	€ 12,960,000	54 (2/MS)	€ 21,600,000
<b>Tests &amp; studies</b>	Cost/year	€ 350,000	27 (1/MS)	€ 56,700,000	27 (1/MS)	€ 47,250,000
<b>MSs costs</b>				<b>€ 86,620,000</b>		<b>€ 79,650,000</b>
<b>MSs Costs/year</b>				<b>€14,435,000</b>		<b>€15,930,000</b>
<b>Total costs</b>				<b>€ 111,205,000</b>		<b>€ 94,450,000</b>
<b>Total costs/year</b>				<b>€ 18,534,000</b>		<b>€ 18,890,000</b>

The estimate of the cost to the Commission over the period up to the current year (6 year period of 2006-2011) is that it has been € 25 million, including the costs involved in the adoption of the current Directive. Over the next five years period the overall costs to the Commission are estimated to fall to € 14.8 million but this number does not include the possible additional work of the JRC or other studies that may have to be undertaken and assumes a much small number of new preparatory studies. The main new cost element is the review of the Implementing Measures.

The costs to the 27 Member States for the initial period are estimated to be around € 86.6 million (€3.2 million/MS) although it is expected that this will vary greatly among Member States. With the addition of one additional FTE in each Member State the cost per Member State per year is expected to increase by €80,000 and over the 5 year period 2012-2016 it will be close to €80 million. On the basis of the assumptions made for future workload the total cost per year to both Commission and Member States - on average over the two periods - is estimated close to € 19 million.

One of the key assumptions made in this analysis is that the number of Commission staff will remain the same over the coming period. As already discussed, there are calls for additional staff from a number of stakeholders in order to speed up the process and to be able to respond to an increasing number of ongoing studies. At this point, the Commission operates with around 1 Commission official for every three products covered. If this principle is to be followed and a total of 10 studies are initiated in the coming 5 years, the Commission costs for the coming period will decrease by €0.7 million. With a higher number of studies or more FTE/study the costs increase in the range of €2-€5 million. Only in the case that the number of new products covered is reduced to 5 will there be a reduction in the expected budget due to the reduced number of preparatory studies.

**Table 3.50– Alternative scenario for the evolution of the Commission budget (period 2012-2016)**

	<b>Scenario 1 Same resources 10 new products</b>	<b>Scenario 2 More resources 10 new products</b>	<b>Scenario 3 Same resources 20 new products</b>	<b>Scenario 4 More resources 5 new products</b>	<b>Scenario 5 High Resources 10 new products</b>
FTE/IM development	0.33	0.5	0.33	0.5	0.7
FTE/IM in force	0.1	0.2	0.1	0.2	0.2
New products/year	2	2	4	1	5
New IMs into force/year	5	7	7	3	5

<sup>172</sup> Includes overhead

# Analysis

## 3

	Scenario 1 Same resources 10 new products	Scenario 2 More resources 10 new products	Scenario 3 Same resources 20 new products	Scenario 4 More resources 5 new products	Scenario 5 High Resources 10 new products
Staff costs (2012-2016)	€ 7,656,000	€ 12,600,000	€ 7,848,000	€ 6,600,000	€ 13,400,000
New studies costs	€ 3,000,000	€ 7,500,000	€ 6,000,000	€ 1,500,000	€ 3,000,000
Total Commission costs	€ 14,056,000	€ 19,024,000	€ 16,800,000	€11,760,000	€ 16,080,000
Extra budget required	€ 744,000	€ 4,224,000	€ 2,000,000	€3,300,000	€5,000,000

These calculations are based on a number of assumptions that need to be verified to ensure that all major cost elements have been included (e.g. cost of standards development and the plans for future monitoring exercises).

It is also necessary to put the above costs of €19 million per year in the context of the expected cost savings from the measures adopted. Within the scope of this evaluation study, it is not possible to conduct a detailed cost benefit analysis and, as has been seen, the analysis of costs has only been partial and indicative. Similarly, a full analysis of the benefits would need to consider the effects of each of the Implementing Measures adopted in terms of the consequences in the markets for, and in the use by consumers of, each particular product. Again this is not possible, except where there can be reference to empirical work already undertaken. However, there has been well-established work on the main indicators of economic and environmental impact that it is possible to refer to, in order to see the relationship between the overall benefits of the Directive and the corresponding costs involved.

According to a study by Ökopol<sup>173</sup> savings resulting from the Directive are expected to reach a total of €127 billion in 2020, or €90 billion in the case that prices remain at 2005 levels. In terms of energy savings the total annual savings in 2020 are expected to be close to between 900-1200 TWh, of which 376 arise from the 12 products already covered by Implementing Measures. In terms of GHG emissions a total of 210-265 Mt CO<sub>2</sub> is estimated for the total number of products.

It should be noted then that the numbers currently available do not allow for a straightforward assessment of the cost-effectiveness of the Directive or a comparison with other similar policy measures. Accumulated savings over the whole period 2005-2020 are available for only a few products. Furthermore, one should also consider the costs to industry for compliance with the relevant Implementing Measures for which, no reliable data are available. Further analysis will be undertaken to strengthen the assessment of the expected cost-effectiveness of the Directive., but on the basis of this initial information, it appears that the Ecodesign measures will be rather cost-effective, if the estimated savings are actually achieved

On the basis of these first calculations it is clear that there are certain questions relating to sustainability of the whole exercise in the future, especially if it is to expand to cover non-energy related products, but the anticipated energy and cost savings arising from the Directive are of a different order from the costs involved.

The terms of reference asked the evaluation team to consider the possibility of assessing alternative options concerning the responsibility for the development of Implementing Measures. There have also been certain proposals from stakeholders, especially Member State representatives, that the process could be transferred to an executive agency or an organisation such as the Joint Research Centre and that this

<sup>173</sup> Okopol. Wuppertal institute and RPA(2010), Outlook on the estimated GHG emissions reductions, Report for DG CLIMA, [ec.europa.eu/clima/studies/effort/docs/impact\\_ggas\\_en.pdf](http://ec.europa.eu/clima/studies/effort/docs/impact_ggas_en.pdf)

# Analysis

# 3

would help reduce some of the external costs and also achieve a certain level of operational efficiency. It has not been possible so far to go much further into these questions and this is an issue that will have to be deferred until later reports. However, it may be something that stakeholders may wish to comment on during the course of the second stakeholder meeting.

## *Questions to stakeholders*

- Have the main elements in the costs arising for all stakeholder groups been correctly identified ?
- Indications of the costs to industry of the implementation of the Directive have so far been sketchy and to a certain extent contradictory. More and more detailed information would be very welcome.
- Similarly information on the benefits to consumers and firms, including details of innovatory developments would also be helpful.
- Are there any ways not mentioned that the costs of implementing the Directive could be reduced or tangible benefits enhanced ?

### **3.4.6 Emerging findings – conclusions on the questions of efficiency**

The examination of the processes through which the Ecodesign Directive has been implemented has raised a whole series of questions that will need further consideration, not least in the second Stakeholder Meeting. Nonetheless certain themes have emerged that it will be useful to summarise as initial provisional conclusions.

- So far, the characteristics of the prioritised products have resulted in that the Directive has had most impact on energy efficiency, since the preparatory studies determined that energy consumption during the use phase was the by far most significant environmental parameter with significant improvement potential.
- The provisions of the Directive relating to a broader range of environmental impacts have yet to be utilised for products that have significant environmental impacts with a significant improvement potential.
- The MEEuP methodology is a useful tool, but needs to be improved in a number of specific areas and involve more expertise on the products under consideration in each Preparatory Study. A review and update of the methodology, taking stock of the experience of applying it and addressing the stakeholder concerns is ongoing.
- The delays in following up the identification of product groups in the Working Plan through to Regulations are undermining the credibility and effectiveness of the Directive and in particular are discouraging anticipatory action. Clear timetables need to be announced and adhered to.
- There is a definite capacity problem, particularly in relation to the number of Commission desk officers responsible for developing Implementing Measures.
- Poor market surveillance and enforcement is an additional threat to the credibility and effectiveness of the Directive. It must be improved. Co-operation between Member States, with the active support of the Commission, can make the system much more effective, even within (broadly) existing resources.
- In general, the existing system is straining to meet the objectives of the Directive as it now stands. There is little scope for extending the Directive, without significant extra resources.

# Analysis

# 3

More extensive work at the Working Plan and Preparatory Study stage could save resources for all concerned at later stages. Thought should be given to the best means of achieving this extra input, either in the form of a larger budget for the studies or the development of an institutional capacity to undertake them through an Agency or a new relationship with the JRC.

## 3.5 Utility and European added value of the Directive and the Implementing Measures

### 3.5.1 Utility of the Directive

In relation to the utility of the Directive the terms of reference set the following evaluation questions:

- To what extent do the results achieved so far correspond to the needs they were designed to address? What measures need to be taken to improve the utility of the activities evaluated?
- Have Implementing Measures provided sufficient environmental improvements justifying their development? What is the justified improvement limit?

The long terms objectives identified in the Directive document against which the utility of the Directive has to be evaluated are stated as:

- To support the harmonised operation of the market and avoid fragmentation
- To increase energy efficiency to reduce green house gas emissions
- To increase the security of energy supply and reduce dependence
- To Increase the level of protection of the environment
- To support the competitiveness of industry

Given the limited evidence at this stage on the effectiveness of the Directive it is not possible to provide any conclusive answers. Still, in relation to the issue of the harmonisation of the market, it is clear that the development of Implementing Measures in the form EU-wide Regulations has helped to avoid fragmentation of the market for the EuPs already covered. For those products not yet covered but identified in the Working Plan no new legislation at the national level has been reported.

For the remaining aspects, concrete evidence at this stage is limited and in many respects it is rather premature to judge. Some initial indications can be derived from the responses of stakeholders on the contribution, so far, of the Ecodesign Directive to EU policy objectives (see Chart 3.47).

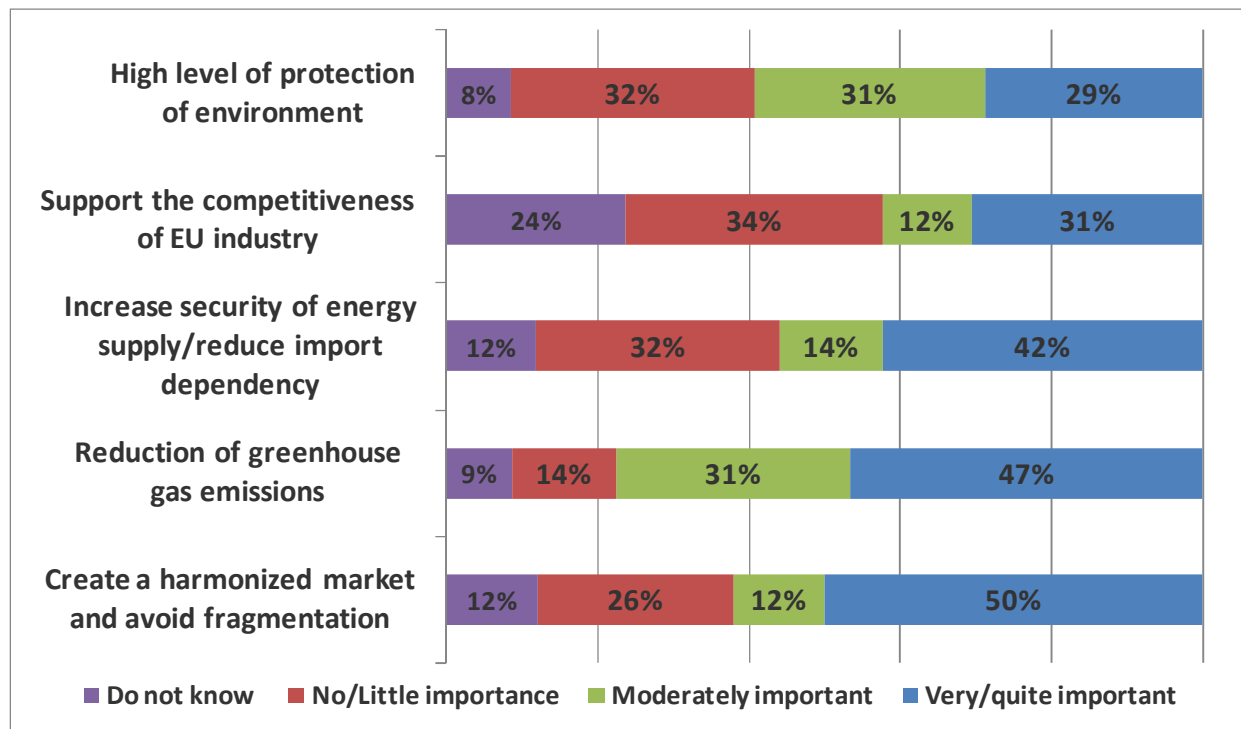
The responses confirm the conclusion that the objective of a harmonized market is rather effectively served. Among the different groups of stakeholders industry representatives are not as supportive (more than 40% have a negative view). This is primarily a reflection of the weak market surveillance that can jeopardize the effective operation of the market. Furthermore, there is rather strong endorsement of the contribution of the Directive to the goal of the reduction of greenhouse gas emissions, a view shared by all categories of stakeholders, and to the reduction of energy dependency for Europe. To a certain extent these are both issues contributing to the achievement of higher levels of energy efficiency in products through the adoption of Implementing Measures. While there is no strongly quantifiable and direct evidence so far on the actual effectiveness of the individual measures, there is a general conviction that certain levels of energy savings will be achieved. In contrast, on the issue of the contribution of the Directive to the competitiveness of the industry, the views of stakeholders diverge. Especially among industry stakeholders (associations or individual firms), less than 25% indicate a positive contribution (important or very important), in contrast to the strong majority of Member State representatives (over 70%) that assign an important role to the Directive in this area. Finally, concerning the protection of the environment, positive and negative views are equally expressed among all categories of stakeholders. As already pointed out, one area of criticism is the perceived focus on energy consumption and the limited

# Analysis

## 3

coverage in the Implementing Measures of other aspects. However, no evidence or example provided of missed opportunities for any of the product covered has been provided. It can be argued that, so far, the focus on energy issues effectively serves the overall objective of the protection of the environment.

**Chart 3.47 - What do you think is the contribution of the Ecodesign Directive in the following key objectives of the EU policy? (n=61)**



Source: CSES survey

### 3.5.2 European value-added

In relation to the question of European added value, it is the view of the great majority of stakeholders that an EU-wide measure in the form of regulations under the Ecodesign framework was the most appropriate approach. The harmonisation of the market is considered to be the key and a crucial added-value against possible national initiatives that could result in a fragmentation of a market that operates at a European and global scale. Even among those that support Voluntary Agreements as alternatives to regulation, an EU-wide approach is still considered necessary. Furthermore, as suggested by some Member State representatives, on their own, Member States would represent too small a market to achieve the same level of results in a cost effective manner. Thus, an EU wide approach provides the necessary scale to drive industry change.

However, there is less acceptance of the appropriateness of developing EU-wide regulatory measures in the case of energy-related products such as construction products. According to a number of stakeholders, including almost all representatives of the construction industry, the variations in terms of climate and use of building materials make the setting of EU wide requirements inappropriate. However, it would still be possible in the relevant implementing Measures to define climate or other geographical zones where manufacturers would be expected to define the intended use of certain products. More important though, it is argued that the existing legislation – namely the Energy Performance of Buildings Directive – addresses the issues of efficiency in better way. The added-value of Ecodesign requirements is proposed as rather limited.