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COMMISSION STAFF WORKING DOCUMENT

Establishment of the Working Plan 2012-2014 under the Ecodesign Directive

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– 1. INTRODUCTION

Ecodesign, together with energy labelling[1], is widely recognised as one of the most effective policy tools in the area of energy efficiency. Ecodesign aims at improving the energy and environmental performance of products throughout their life cycle (raw material selection and use; manufacturing; packaging, transport and distribution; installation and maintenance; use; and end-of-life) by systematically integrating environmental aspects at the earliest stage of product design. Ecodesign is one of the most effective ways to enhance security of energy supply and to reduce emissions of greenhouse gases and other pollutants.

Energy-related products (ErPs) account for a large proportion of consumption of energy and other natural resources in the Community and have a number of other environmental impacts. It is in the public interest to encourage the continuous improvement of the overall impact of those products by identifying the major sources of adverse energy and environmental impacts without entailing excessive costs. The Ecodesign Directive establishes a framework for the setting of ecodesign requirements for energy-related products. **The Directive is a key element of the Community strategy on Integrated Product Policy.** By optimising the environmental and energy performance of products while maintaining their functional qualities, the Directive is meant to provide new opportunities for manufacturers, consumers and society as a whole.

The Ecodesign Directive is complemented by the Energy Labelling Directive. Energy labelling requirements aim at providing citizens with information about environmental performance of products and thus at providing incentives for industry to develop further improved products and innovations beyond minimum ecodesign levels. While ecodesign progressively bans the least-efficient appliances from the market, energy labelling guides consumers towards the most energy efficient appliances leading to concrete economic benefits to the consumer over the life cycle of the product.

Objective of the Working Plan

Article 16(1) of the Ecodesign Directive specifies that the Commission shall publish a working plan setting out, for the three following years**, an indicative list of energy-related product groups which will be considered priorities** for the undertaking of preparatory studies and eventual adoption of implementing measures.

The working plan should build on the work that has been done since mid-2005 for the transitional priority product groups listed in Article 16(2) of the original 2005 Ecodesign Directive[2] on Energy-using Products (EuPs) and on the first working plan for the period 2009-2011[3] (adopted by the Commission in 2008).

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1 Ecodesign Directive (2009/125/EC), Energy Labelling Directive (2010/30/EU)

2 Directive 2005/32/EC of the European Parliament and of the Council of 6 July 2005 establishing a framework for the setting of ecodesign requirements for energy-using products

3 Communication from the Commission to the Council and the European Parliament - Establishment of the working plan for 2009-2011 under the Ecodesign Directive COM/2008/0660 final

– 2. MECHANISMS OF THE ECODESIGN DIRECTIVE

The Ecodesign Directive is a framework directive. This means that the Directive itself solely lays down the conditions and criteria for adopting implementing measures which set out binding ecodesign requirements specific to each product group.

The preparation and adoption processes are complex, involve many different stakeholders and require many consultations. The process starts with the identification of **broad product groups** to be considered as priorities for the adoption of implementing measures. The listed product groups are divided into several **lots** which correspond to particular types of products. Products with similar technical, economic and environmental features are, in principle, studied together, with a subdivided analysis, whenever relevant, of market structure, use patterns, environmental and economic impact or potential for improvement.

Furthermore, a **preparatory study** for each type of product investigates possible ecodesign requirements on the basis of technical, economic and environmental analyses and identifies cost-effective solutions to improve their overall environmental performance. A subsequent Impact Assessment considers the different options to achieve the identified policy objectives in the most efficient way. If deemed necessary, the Commission then adopts an **implementing measure** for a particular type of product under the regulatory procedure with scrutiny.

Implementing measures may be adopted for a particular product, provided that the preparatory study and impact assessment proved that there is:

- significant impact on the environment, coupled with:
- a high volume of sales and trade on the internal market; and
- a clear potential for the improvement without entailing excessive costs.
- Furthermore, implementing measures are considered only when no valid self-regulatory initiative has been taken by industry.

– 3. STATE OF PLAY

The **product groups that were so far identified as priorities** for the adoption of implementing measures were laid out in:

- Article 16 of the 2005 Ecodesign Directive (8 product groups)
- The First working plan for the period 2009-2011 (10 product groups)

Therefore, a total of **18 broad indicative product groups** have been identified so far. The Commission has launched **37 preparatory studies** and has adopted **17 implementing measures** for specific types of products (12 ecodesign regulations and 5 energy labelling regulations).[4] Furthermore, **39 standardisation mandates** have been launched for these product groups. A more detailed explanation of these implementing measures can be found in sections 3.1 and 3.2, as well as Annex I.

The increasing number of measures being adopted, together with their follow-up, requires growing attention. Each implementing measure adopted implies the development of transitional calculation methods and measurement standards, implementation guidelines, and the monitoring and support of market surveillance activities. These activities are important to ensure that projected savings are actually realised as well as to ensure the credibility of EU legislation.

[4] In addition, it has adopted 1 tyre labelling regulation and 1 implementing directive on hot-water boilers

– 3.1 PRODUCT GROUPS COVERED IN THE TRANSITIONAL PERIOD (2005-2008)

Article 16(2) of the 2005 Ecodesign Directive identified **eight broad product groups** for the adoption of implementing measures in the "transitional period", i.e. the period between the entry into force of the Directive (2005) and the adoption of the first working plan (2009-2011). These product groups were:

- Heating and water-heating equipment (boilers and water heaters only)
- Electric motor systems
- Lighting in the domestic and tertiary sectors
- Domestic appliances
- Office equipment in both the domestic and tertiary sectors
- Consumer electronics
- HVAC (heating/ventilating/air conditioning) systems (domestic); and
- Electronic and electrical products operating in stand-by modes.

These eight broad product groups were broken down into 26 different preparatory studies. All **26 preparatory studies** needed to prepare the implementing measures have already been finalised. Subsequently, the Commission has so far adopted in total **17 ecodesign and energy labelling implementing measures** (12 ecodesign and 5 energy labelling measures) related to 12 products covered by the transitional period. By the end of 2014, the Commission plans to conclude the work on a further 18 implementing measures (12 ecodesign and 6 energy labelling measures) for these product groups, and to possibly recognise 2 voluntary agreements concluded by industry.

3.2 PRODUCT GROUPS COVERED IN THE FIRST WORKING PLAN (2009-2011)

On 21 October 2008 the Commission adopted the first working plan (for the period 2009-2011) setting out an indicative list of product groups taking into account the work done in the transitional period (2005-2008).

Following a Commission study[5] and discussions with stakeholders, and based on the set of criteria laid down in Article 15 of the 2005 Ecodesign Directive, an indicative list of **ten broad product groups** (in addition to the 8 product groups already covered by the transitional period) was adopted for the undertaking of preparatory studies, comprising:

- Air-conditioning and ventilation systems (commercial and industrial)
- Electric and fossil-fuelled heating equipment
- Food preparing equipment
- Industrial and laboratory furnaces and ovens
- Machine tools
- Network, data processing and data storing equipment

[5] EPTA Ltd, Greece; PE International, Germany; NTUA, Greece: Study for preparing the first Working Plan of the Ecodesign Directive, Report for tender No: ENTR/06/026, Revised Final Report: 06/12/2007: http://ec.europa.eu/enterprise/eco_design/workingplan.htm.

- Refrigerating and freezing
- Sound and imaging equipment
- Transformers; and
- Water-using equipment.

These ten broad product groups have resulted in **11 preparatory studies** being launched. Furthermore, the Commission is in the process of preparing the first ecodesign regulations for these product groups. By the end of 2014, 13 implementing measures (10 ecodesign and 3 energy labelling measures) are planned to be adopted, and 2 voluntary agreements are likely to be concluded by the industry.

– 4. INDICATIVE LIST OF PRODUCT GROUPS FOR THE WORKING PLAN 2012-2014

Under the Ecodesign Directive, the Commission is required to prepare a working plan for the period 2012 – 2014. The Ecodesign working plan will have direct implications for the work regarding energy labelling, given the complementary nature of the two Directives concerned. In preparation for this working plan, the Commission has funded a study to identify energy-related products that have significant potential, and which were not covered either by the transitional period or by the first working plan.

Based on the Prodcom 2009 list, the study focused on the functions of energy-related products, that is, both products which actively use energy, as well as products which indirectly affect energy consumption. The study made a quantitative estimation of the energy savings potential resulting from improvements in the overall energy efficiency of each product group analysed. Additionally, a qualitative assessment of other environmental impacts mentioned in the Ecodesign Directive was made, as well as an assessment of the existing regulatory coverage of all impacts. The final reports for the different tasks in the study are available on a dedicated website[6].

Furthermore, the Commission undertook an assessment exercise of the product groups, with a view to prioritisation based on the set of criteria laid down in Article 15 of the Ecodesign Directive and the associated Annex VII.

Moreover, the Commission checked to what extent other existing Community legislation is applicable to product groups assessed. In addition, each preparatory study will identify if any other legislation should be taken into account for any specific environmental impact of the products investigated, e.g. the WEEE Directive for recycling[7].

Following this assessment procedure, the Commission has established the following indicative list of **twelve broad product groups** to be considered between 2012 and 2014 for the adoption of implementing measures. According to the principle of better regulation, preparatory studies will collect evidence, explore all policy options and recommend the best policy mix (ecodesign and/or labelling and/or self-regulation measures), if any, to be deployed on the basis of the evidence and stakeholder input. For some of the identified product groups, there is the possibility that overlaps exist with a number of ongoing preparatory studies and regulations due for review. This is the reason why the list of product groups has been split into a **priority list** and a **conditional list**.

Therefore, the indicative list of **priority product groups** covered by this working plan is:

[6] http://www.ecodesign-wp2.eu/documents.htm

[7] Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE) (OJ L 37, 13.2.2003, p. 24).

- Window products
- Steam boilers[8] (< 50MW)
- Power cables
- Enterprises' servers, data storage and ancillary equipment
- Smart appliances/meters
- Wine storage appliances (c.f. Ecodesign regulation 643/2009)
- Water-related products

Wine storage appliances have been added to the priority list, as there is a legal obligation under Ecodesign regulation 643/2009[9] to assess the need to adopt ecodesign requirements for this product group.

It has been estimated that the combined energy savings potential of the priority product groups covered by this working plan would amount to just under 3000 PJ per year by 2030.

The list of conditional product groups, where launching a preparatory study is dependent on the outcome of ongoing regulatory processes and/or reviews, comprises the following groups:

- Positive displacement pumps
- Fractional horse power motors under 200W
- Heating controls
- Lighting controls/systems
- Thermal insulation products for buildings

Whilst a significant energy savings potential has been identified for these product groups, at the time of writing this working plan it remains to be seen whether they will be covered by ongoing regulatory work, or by dedicated ecodesign implementing measures.

Some stakeholders have requested the inclusion of the product group power generating equipment in the working plan. The study funded by the Commission did not assess the energy savings potential of this product group; however the Commission has indications that the savings potential may be substantial. Therefore a specific study assessing the potential of power generating equipment under 50MW will be launched in order to investigate the opportunity of establishing ecodesign and energy labelling requirements for this product group.

The Commission consulted the Consultation Forum, as required by Article 18 of the Ecodesign Directive, to take into account comments from the Member States' representatives and stakeholders when establishing this working plan, and the indicative list of product groups[10].

The above prioritisation assessment by the Commission may be subject to change after a full quantitative assessment is carried out, subsequent to additional preparatory studies. These

[8] The savings potential of steam boilers over 50 MW is covered by Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (Recast)

[9] Commission Regulation (EC) No 643/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for household refrigerating appliances

[10] Minutes of the Consultation Forum of 20 January 2012: http://ec.europa.eu/enterprise/eco_design/workingplan.htm

studies will investigate in more detail the potential for environmental improvement for each of the product groups, and will provide the elements for the identification of policy options in the subsequent impact assessments.

In the preparation of eventual implementing measures laying down ecodesign requirements, the Commission is bound by the criteria laid out in Article 15.5 of the Directive.

– 5. OUTLOOK

Between 2012 and 2014, the Commission will focus on the completion and implementation of the Regulations adopted under the 2005 Ecodesign Directive and the first Working Plan. However, the Commission intends to start the preparatory work for the adoption of implementing measures for product groups identified in this working plan.

Since the recast of the Ecodesign Directive in 2009, the EC has adopted the Europe 2020 flagship 'A Resource Efficient Europe[11] and the Roadmap to a Resource Efficient Europe[12] to define its objectives and means. The Roadmap calls for boosting the material resource efficiency of products and set material efficiency requirements in the framework of the Ecodesign Directive. In this respect, increased attention will be paid to the identification of ecodesign requirements on material resource efficiency in forthcoming preparatory product studies and reviews, when these aspects are found to be significant, as foreseen in Annex I of the Directive.

Therefore, the outlook for the regulatory work to be completed is as follows:

Transitional period (2005-2008)

- The Commission plans to adopt by the end of 2014, further 18 implementing measures (12 ecodesign and 6 energy labelling) and recognise 2 voluntary agreements concluded by the industry, for the product groups from the transitional period (see Annex I).
- 11 ecodesign and energy labelling measures will be revised by 2014. These reviews will be performed using the newly established methodology for energy-related products (MEErP)[13].

First working plan (2009-2011)

- The Commission plans to complete all preparatory studies launched for product groups from the first working plan[14].
- The Commission plans to adopt by the end of 2014, some 13 implementing measures (10 ecodesign and 3 energy labelling measures) and recognise 2 voluntary agreements that may be concluded by the industry, for the product groups from the first working plan.

Second working plan (2012-2014)

[11] http://ec.europa.eu/resource-efficient-europe/

[12] idem

[13] See http://www.meerp.eu/documents.htm

[14] Information regarding the timeline for preparatory studies and implementing measures will be disseminated to all stakeholders for each product group via the websites of the Commission services in charge of the Ecodesign Directive and via stakeholder meetings and websites organised by contractors conducting preparatory studies.

- The Commission will initiate preparatory studies building on the indicative list of product groups identified in this working plan[15] which will end with the study on water related products.
- Depending on the outcome of the preparatory studies and the results of the impact assessments, as well as respecting the condition that no valid self-regulatory measures are proposed, the Commission will adopt ecodesign and/or energy labelling implementing measures.

Furthermore, the Commission invites proposals for self-regulation measures on any product group, which could deliver the policy objectives faster or in a less costly manner than mandatory requirements in line with the Ecodesign Directive and with the Commission's "Better Regulation" strategy[16] and its rolling simplification programme.

15 Idem.

16 See http://ec.europa.eu/governance/better_regulation/key_docs_en.htm

- **ANNEX**

– **ANNEX I: STATE OF ADOPTION OF IMPLEMENTING MEASURES (2005 - 2011)**

8 product groups from Article 16 of the Ecodesign Directive (2005/32/EC) 2005- 2008					
Product Groups (Lot number and responsible DG)		**State of play**	**Foreseen date of adoption**	**Revisions (until 2014)**	**Standardisation work IM – individual mandate M/495 horizontal mandate**
1. Heating and water heating equipment					
	Boilers and combi-boilers – (ENER Lot 1)	To be adopted	2012 (labelling) & (ecodesign)		M/495
	Water heaters and storage tanks – (ENER Lot 2)	To be adopted	2012 (labelling) & (ecodesign)		M/495
2. Electric motor systems					
	Circulators – (ENER Lot 11)	Adopted	2009	(amendment 2012)	IM/469
	Electric motors – (ENER Lot 11)	Adopted	2009	(amendment 2012)	IM/470 + IM/476
	Electric Pumps – (ENER Lot 11)	To be adopted	2012 (ecodesign)		IM/498 + IM/476
	Fans – (ENER Lot 11)	Adopted	2011		IM/488 + IM/476

	Pumps for private and public waste water and for fluids with high solids content – (ENER Lot 28)	To be adopted	Preparatory study to be launched 2012 + adoption in 2015 (ecodesign)		tbd
	Pumps for private and public swimming pools, ponds, fountains and aquariums, as well as clean water pumps – (ENER Lot 29)	To be adopted	Preparatory study to be launched 2012 + adoption in 2015 (ecodesign)		tbd
	Motors outside the scope of the Regulation 640/2009 on electric motors – (ENER Lot 30)	To be adopted	Preparatory study to be launched 2012 + adoption in 2015 (ecodesign)		tbd
	Compressors - (ENER Lot 31)	To be adopted	Preparatory study to be launched 2012 + adoption in 2015 (ecodesign)		tbd
3. Lighting in both the domestic and tertiary sectors					
	Domestic lighting I (light bulbs) – (ENER Lot 19)	Adopted	2009	2014	M/495
	Domestic lighting II (reflector lamps and luminaires) – (ENER Lot 19)	To be adopted	2012 (ecodesign) & (labelling)		M/495
	Tertiary sector lighting I (lamps and ballasts) – (ENER Lots 8,9)	Adopted	2010	2014	IM/485
	Tertiary sector lighting II (luminaries or lighting systems) - (ENER Lots 8,9)	Under consideration	2013 (labelling)		tbd
4. Domestic / professional appliances					

	Commercial refrigeration – (ENER Lot 12)	To be adopted	tbd		M/495
	Domestic refrigeration – (ENER Lot 13)	Adopted (+ labelling)	2009	2014 (ecodesign and labelling)	IM/459
	Domestic dishwashers – (ENER Lot 14) Domestic washing machines – (ENER Lot 14)	Adopted (+ labelling) Adopted (+ labelling)	2010	- 2014 (ecodesign and labelling) - 2014 (ecodesign and labelling)	IM/481 IM/458
	Solid fuel small combustion installation (ENER Lot 15)	To be adopted	2013 (ecodesign)		M/495
	Household tumble driers – (ENER Lot 16)[17]	To be adopted	2012 (ecodesign) & (labelling)		M/495
	Vacuum cleaners – (ENER Lot 17)	To be adopted	2012 (ecodesign) & (labelling)		IM/353
	Professional washing machines, dryers and dishwashers – (ENER Lot 24)	To be adopted	2013		M/495
5. Office equipment in both the domestic and tertiary sectors					
	Personal computers and displays – (ENER Lot 3)	To be adopted	Computers: 2012 (ecodesign) PC displays: 2012 (ecodesign)		M/495
	Imaging equipment – (ENER Lot 4)	Voluntary agreement signed	Commission Recommendation – 2012		IM/462
	External power supplies – (ENER Lot 7)	Adopted	2009	2013	IM/450 + IM/455

[17] The vote on the regulation on household tumble driers was postponed until 2012 in order to take into account recent changes on the market, and particularly an increased application by industry of a new technology, i.e. heat pump driers (which potentially consume only half of the energy of conventional tumble driers).

6. Stand-by losses for a group of products					
	Standby and off-mode losses - (ENER Lot 6)	Adopted	2008		IM/439
7. Consumer electronics					
	Televisions – (ENER Lot 5)	Adopted (+ labelling)	2009	2012 (only ecodesign)	IM/477
	Complex set top boxes – (ENER Lot 18)	Voluntary Agreement signed	Commission Recommendation – 2012		M/495
	Simple set top boxes - (ENER Lot 18)	Adopted	2009	2014	IM/451
8. HVAC (heating, ventilation and air conditioning) systems					
	Airco (air conditioning) and ventilation – (ENER Lot 10) Airco + comfort fans Domestic ventilation/kitchen hoods	 - Labelling adopted - To be adopted	 2011 (ecodesign) 2013		M488
Product groups covered by the 1st Ecodesign Working Plan 2009- 2011					
Product Groups (Lot number and responsible DG)		**State of play**	**Foreseen adoption**	**Revisions (up to and including 2014)**	**Standardisation work** **IM individual mandate** **M/495 horizontal mandate**
9. Air-conditioning and ventilation systems					

	Large air conditioners > 12 kW Water-cooled air conditioners Large ventilation systems – (ENER Lot 6)	To be adopted	2013 (ecodesign, together with ENER Lot 10 and Lot 21)		M/495
10. Electric and fossil fuelled heating equipment					
	Local room heating systems – (ENER Lot 20) Central heating products using hot air to distribute heat (other than combined heat and power [CHP]) – (ENER Lot 21)	To be adopted	2013 (ecodesign) 2013 (ecodesign)		M/495
11. Food-preparing equipment					
	Domestic and commercial ovens including when incorporated in cookers – (ENER Lot 22) Domestic and commercial hobs and grills, include. when incorporated in cookers – (ENER Lot 23) Non-tertiary coffee machines – (ENER Lot 25)	- To be adopted - To be adopted - To be adopted	2013 (labelling) & (ecodesign) 2013 (labelling) & (ecodesign) 2012 (labelling) & (ecodesign)		M/495 M/495 M/495
12. Industrial and laboratory furnaces and ovens					
	Laboratory and industrial equipment (furnaces and ovens) – (ENTR Lot 4)	To be adopted	2014 (ecodesign)		M/495

13. Machine tools					
	Machine tools – (ENTR Lot 5)	Under consideration			M/495
14. Network, data processing and data storing equipment					
	Networked standby appliances – (ENER Lot 26) Uninterruptible power supply (UPS) – (ENER Lot 27)	- To be adopted - To be adopted	2012 (Ecodesign) Study to be launched 2013 (Ecodesign)		M/495
15. Refrigerating and freezing equipment					
	Professional refrigerating equipment – (ENTR Lot 1)	To be adopted	2013 (Ecodesign)		M/495
16. Sound and imaging equipment					
	Video players and recorders Projectors Game consoles - (ENTR Lot 3)	Under consideration	Possible Voluntary Agreement for game consoles in 2012		M/495
17. Transformers					
	Distribution transformers Power transformers	To be adopted	2013 (Ecodesign)		M/495

	Small transformers – (ENTR Lot 2)				
18. Water-using equipment					
	Water-cleaning appliances Irrigation equipment	Under consideration			

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– **ANNEX II: NON-EXHAUSTIVE ASSESSMENT OF THE PRODUCT GROUPS ON THE INDICATIVE LIST FOR THIS WORKING PLAN**

Product group	**Estimated energy savings potential (in PJ/year as of 2030)**	**Considerations for inclusion in the working plan**
Priority list		
Water-related products (e.g. showers and taps)	885	Large savings potential (both energy and water) representing an opportunity for an EU labelling scheme
Window products for buildings	785	Large savings potential and opportunity for an energy labelling scheme
Steam boilers (< 50 MW) (e.g., oil-fired boilers, stoker (coal) fire boilers)	177	Relatively large savings potential, even if the potential of boilers with a power over 50MW is likely to be covered by the Industrial Emissions Directive (IED). For boilers under 50MW of power, there seems to be an absence of EU legislation applicable to ecodesign requirements. The savings potential would need to be verified by a dedicated preparatory study.
Power cables	182	There are indications that a substantial improvement potential can be realised by introducing minimum efficiency levels at EU level. There is also an opportunity to introduce the EU energy labelling scheme.
Enterprise servers, data storage and equipment	135	There are indications that a substantial improvement potential can be realised by introducing minimum efficiency levels at EU level. The savings potential would need to be verified by a dedicated preparatory study.
Smart meters/appliances	802	Large savings potential identified in the impact assessment of the Energy Efficiency Directive (June 2011)
Conditional list		
Positive displacement pumps	270	Large savings potential identified, but potential overlap with ongoing regulatory work on pumps Opportunity to introduce EU energy labelling scheme

Product group	**Estimated energy savings potential (in PJ/year as of 2030)**	**Considerations for inclusion in the working plan**
(e.g., piston pumps Screw pumps)		
Fractional HP motors (< 200MW) (e.g., Split-phase AC induction motors, brushless DC motors)	258	Potential regulatory overlap with products in which Fractional HP motors are used that are already subject to ecodesign measures. Potential option of introducing ecodesign requirements.
Lighting controls/systems	610	Large savings potential identified, but potential regulatory overlap with lighting in both domestic and tertiary sectors.
Heating controls	319	Large savings potential identified, but potential regulatory overlap with water heaters and storage tanks.
Thermal insulation products for buildings	1500	Large savings potential identified, but regulatory overlap with the EPBD and CPR needs to be avoided. Savings are likely to be achieved at the level of buildings (affected energy system) and relate to characteristics of the building components, in which insulation materials are used.