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COMMISSION STAFF WORKING DOCUMENT

EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT

Accompanying the document

Commission Regulation

implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household tumble driers

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implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household tumble driers

Lead DG: ENER

Associated DG: ENTR

Other involved services: CLIMA, COMP, ECFIN, ENV, INFSO, LS, MARKT, RTD, SANCO, SG, TRADE

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EXECUTIVE SUMMARY

Household electric tumble driers are currently addressed in Commission Directive 95/13/EC implementing Council Directive 92/75/EC with regard to energy labelling of household electric tumble driers[1]. They are not subject to requirements regarding minimum energy efficiency or other performance aspects.

Directive 2009/125/EC of the European Parliament and of the Council (the Ecodesign Directive) lays down a framework for the Commission, assisted by a Regulatory Committee, to set ecodesign requirements for energy-related products. Its implementation contributes to the objective of decoupling economic growth from the use of resources, set out in the Europe 2020 strategy (COM(2010) 2020) under the flagship initiative 'Resource Efficient Europe'.

The approach to developing the proposed ecodesign implementing measure for household tumble driers and its impact assessment is set out here in four steps:

Step 1: assessment of the legal base for an ecodesign implementing measure as set out in Article 15(2)(a)–(c) of the Ecodesign Directive, taking into account the ecodesign parameters listed in Annex I and the method for setting specific requirements laid down in Annex II to the Ecodesign Directive;

Step 2: consideration of relevant EU initiatives, market forces and disparities in the environmental performance of equipment on the market with equivalent functionality, as set out in Article 15(2) of the Ecodesign Directive;

Step 3: establishing policy objectives, including the desirable level of ambition, the policy options to achieve them, and the key elements of the ecodesign implementing measure as required by Annex VII to the Ecodesign Directive;

Step 4: assessment of the impact on the environment, consumers and industry, with a view to the criteria for implementing measures set out in Article 15(5) to the Ecodesign Directive.

[1] Combined washer-driers are covered by implementing Directive 96/60/EC. Both Directives are limited to electric mains-operated driers only; gas-fired appliances are excluded from their scope.

Step 1: Legal base for an implementing measure: compliance with the Ecodesign Directive, Article 15

In order to assess compliance with the criteria for adopting ecodesign implementing measures as set out in Article 15(2) of the Ecodesign Directive, the Commission carried out a technical, environmental and economic analysis ('preparatory study') of household tumble driers[2] in accordance with Article 15(4)(a) and Annexes I and II to the Ecodesign Directive.

The study has shown, as illustrated in Table A, that (1) household tumble driers are placed on the EU market in large and growing quantities (unsaturated market), and (2) the environmental impact of household tumble driers is to a large extent due to the consumption of energy (electricity or gas) during use, and remains significant despite ongoing improvements.

As regards the improvement potential for household tumble driers, (3) there appears to be a wide variation in the energy consumption of household tumble driers, but addressing this may not necessarily be cost-effective. According to the preparatory study, the market is considered to be already close to the least life-cycle cost point for consumers (corresponding to current energy efficiency class C). Beyond average efficiency, the preparatory study identified a substantial potential for improvement (products using best available technologies (BAT), like heat pump driers, could consume up to 50 % less than current class A) albeit at higher life-cycle costs, mainly because of high initial costs (high purchase price).

Table A: Total household tumble driers in the EU-27 in 2005 and 2020

Article 15(2)(a):	Annual sales volume in the EU	2005: 5.1 million units per year [3], representing an economic value of EUR 2.2 billion [4] 2020: 5.9 million units per year
Article 15(2)(b):	Economic and environmental impact (BaU scenario [5])	Electricity / Greenhouse gas emissions: – 2005: 20.7 TWh or 9.5 million t CO_2 equivalent [6] – 2020: 31.3 TWh or 14.3 million t CO_2 equivalent
Article 15 (2)(c):	Improvement potential (savings)	Between 3.3 and 3.7 TWh in 2020 depending on the options compared to the BaU scenario

Step 2: Existing initiatives and capacity of market forces to address the issue

Household tumble driers are currently not covered by EU minimum energy efficiency requirements (unlike household refrigerators and freezers) but have been subject to mandatory energy labelling since 1995[7]. Since the introduction of the energy label, household tumble

[2] Ecodesign of laundry driers — Preparatory study for ecodesign requirements of Energy-using-Products (EuP) — Lot 16, Final Report, March 2009, France. Coordinator: Clement Lefevre, Price Water House Coopers Advisory (France). Available on: www.ecodriers.org.

[3] This figure includes gas drier sales. According to industry estimates, gas drier sales may be between 5 000 or 10 000 units per year, which is 0.3 % of total drier sales.

[4] Based upon an average purchase price of EUR 438 the economic value of the market is EUR 2.2 billion (2005).

[5] This scenario assumes an overall EU average penetration rate of 36 %.

[6] This represents 0.8 % of the total EU electricity consumption of about 2760 TWh in 2005.

[7] Commission Directive 95/13/EC implementing Directive 92/75/EEC with regard to energy labelling of household electric tumble driers. Washer-driers are also covered by a labelling scheme under Directive

driers have improved their energy efficiency by some 12 % in the last 15 years[8]. The EU energy label is believed to have been one of the most important market drivers for this improvement in efficiency.

The overwhelming majority of household tumble driers are currently in classes B and C (in 2008, around 95 %), leaving little choice for consumers and giving firms in the industry little opportunity to differentiate themselves from their competitors. New technologies (in this case the use of heat pumps) allow the placing on the market of household tumble driers in energy class A. As these appliances may consume up to 58 % less than class B limit values[9], the actual savings are much larger than the single class step from class B to A suggests.

Appliances representing the best available technology (equivalent to class A) made up only 0.5 % of sales in 2005, the reference year for the preparatory study, increasing to approximately 1.5 % in 2010. The market transformation observable over the past years indicates that the market mechanism driving the energy efficiency of household tumble driers operates only for condenser driers moving from class C to class B. The market transformation for vented driers has come to a halt, with hardly any vented drier beyond class C. The reason for the limited growth in the market share of class A driers is that the only driers able to reach class A are heat-pump condenser driers, which are currently significantly more expensive to produce.

Consumers appear unwilling to pay a significant price premium for a gain of only one or two classes. As highlighted above, the price difference between BAT products and average products is not reflected in the difference in energy label performance on the current label. What appears as one class step actually represents a much larger difference in energy consumption: the relative savings potential of BAT technology (i.e. heat pump driers and gas-fired driers) is therefore not adequately communicated to consumers[10]. As a consequence, manufacturers, in the absence of classes above class A, appear unwilling to invest further in heat pump technology, which would in return reduce its production costs.

This can be called a **regulatory failure**, as the outdated label means that there are no market incentives for consumers to focus on the most efficient technologies and for manufacturers to further invest in the energy efficiency of household tumble driers and use the energy label as a marketing tool.

Another market failure is related to the fact that not all environmental costs for society are included in energy prices. Since low electricity prices do not reflect environmental costs for society, consumers are not able to consider the full life-cycle cost of household tumble driers (**negative externality**).

In addition, consumer choice is based mainly on the purchase price. Few people realise that the use-phase represents over 90 % of the total life-cycle cost of household tumble driers (**asymmetric information**).

Against this background, and taking into account that market actors have become too scattered for proper and fair implementation of voluntary agreements within the EU, the

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96/60/EC, but they are not included in this impact assessment. Note that there is as yet no regulation implementing the Ecolabel Regulation (EC) No 66/2010 for household laundry driers.

8 In 1995 the average condenser drier consumed some 0.79 kWh/kg (GEA study, 1995), which is approximately 0.69 kWh/kg according to current standards. In 2010, the average condenser drier was assumed to consume 0.61 kWh/kg, corresponding to a reduction of around 12 %.

9 In the current energy label, the B-class threshold is set at 0.64 kWh/kg (condenser drier) and the A class threshold at 0.55 kWh/kg, a 14 % reduction. However, the 'market best' heat pump drier consumes 0.27 kWh/kg, which is 58 % less than for a B-class drier.

10 See footnote 9.

industry has announced that it does not intend to make any voluntary commitments to promote new more efficient technologies.

* * *

As highlighted above, the market is considered to be already close to the least lifecycle cost point for consumers (corresponding to current energy efficiency class C). However, the above analysis indicates that regulatory failure may partly explain the additional costs of better-than-average household tumble driers. In addition, recent market developments indicate that the least life-cycle cost point for condenser driers is closer to class B. Against this background, market forces alone are not likely to lead to the market take-up of more efficient products.

To overcome the stagnation in innovation, stakeholders, including industry and consumer organisations, are now unanimously asking for the combined introduction of ecodesign requirements and a revised labelling scheme for household tumble driers[11].

Step 3: Policy objectives and levels of ambition

This impact assessment considers policy options with the aim of triggering a market transformation that will contribute to further energy efficiency improvements, leading to increased security of supply and reduced costs for society. Annex II to the Ecodesign Directive provides that the level of ambition for improving environmental performance and electricity consumption is to be determined by an analysis of the least lifecycle cost for the end-user.

The policy options considered include (1) revision of the energy labelling scheme and, considering the strong interrelationship between the energy labelling scheme and ecodesign requirements, and given stakeholders' request for a coordinated revision of the existing legislation, (2) the combined adoption of a revised labelling scheme and minimum energy efficiency requirements. The following options have been considered but were discarded for the reasons indicated:

– **Voluntary agreement**: This option was discarded since the industry opposes such a commitment;

– **Ecodesign requirements (MEPS) only:** This option involves setting ecodesign requirements for minimum energy efficiency, effectively removing the most energy consuming appliances from the market. This option was discarded since it does not address the regulatory failure identified above.

Step 4: Environmental, economic and social impact assessment

An assessment of economic, environmental and societal impacts was carried out for the following policy options:

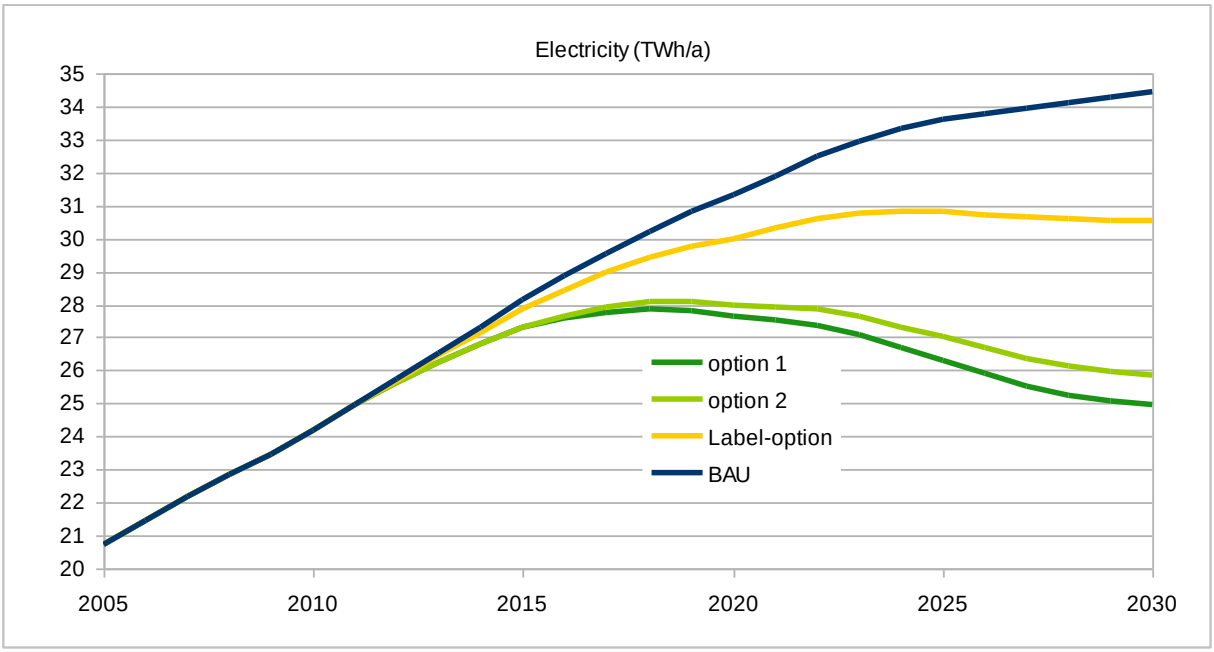
- Revision of the energy label only (see 'label option' on the graph).
- Revision of the energy label together with adoption of ecodesign requirements (**MEPS + Label**). Two options for ecodesign requirements were analysed, both calling for the removal of class D to G in a first stage. For the second stage,
    - the first option considers the removal of all driers in class C (see 'option 1' on the graph),

[11] Some Member States have also launched (fiscal) incentive programmes to foster the market take-up of energy-efficient appliances, and would benefit from a revised labelling scheme allowing the differentiation of energy-efficient products beyond class A.

- the second option considers the removal of condenser driers in class C but not vented driers (see 'option 2' on the graph).

The following graph illustrates the possible energy savings for each policy option.

Figure A: EU-27 total electricity consumption of household tumble driers for options 1 and 2 in TWh/year (electric) (EU-27 demand in 2005: 2760 TWh)



Source: Input to this impact assessment from VHK

The graph shows that the energy consumption of household tumble driers is expected to increase in the business-as-usual scenario. This is due to the fact that this market is not yet saturated and sales outweigh the savings achieved by more efficient appliances.

Compared with 1990 — the reference year for climate change policy — the annual energy consumption and carbon emissions of household tumble driers in 2020 will be 3.5 times as high in the BaU scenario (1990: 8.9 TWh. 2020: 31.3 TWh). The estimated savings for options 1 and 2 are 12 and 11 %, respectively, with respect to the baseline scenario in 2020. In 2030, savings are projected to be around 25-28 % per year (compared to BaU 2030).

The analysis demonstrates that the combined introduction of ecodesign requirements and review of the labelling scheme will achieve the most energy savings. It was also the policy option which received the support of all stakeholders. Option 2, even though it was estimated to lead to less energy savings than option 1, appeared the best option because it does not withdraw vented driers from the market. Option 2 thereby complies with the criteria set out in points (c) and (d) of Article 15(5), according to which the ecodesign requirements should not have significant negative impacts on industry's competitiveness and on consumers, in particular as regards affordability. This approach ensures that:

– ongoing energy improvements are maintained and fostered by setting a transparent legislative framework that will provide industry with the long-term security it needs to invest in innovative technology;

– fair competition and product differentiation continues to promote energy improvements by providing consumers with an effective and reliable tool to compare the energy consumption of products in the context of strong market demand for energy-efficient appliances;

– by 2020, relative energy savings of 11 to 12 % can be achieved compared with the business-as-usual scenario in 2020. ;

– the cost-effective annual energy-savings potential is achieved, i.e. around 3.3-3.7 TWh/a in 2020 compared to the BaU scenario, increasing to 8.6-9.5 TWh in 2030; due to market inertia (i.e. the full replacement of old models by new ones takes about 15 years), the effects of the new measures up to 2020 will be limited with respect to the baseline scenario but will greatly increase by 2030;

– more energy-consuming products are quickly removed from the market, securing electricity and CO_2 savings in the EU while reducing the life-cycle costs of household tumble driers for consumers[12];

– a level playing field for all manufacturers is guaranteed, ensuring fair competition and free movement of products;

– manufacturers from different Member States are evenly impacted by the measure[13];

– disproportionate burdens for manufacturers are avoided due to transitional periods that duly take into account redesign cycles.

[12] Calculated in terms of 'net present value' (EUR 2005), consumer expenditure in the BaU scenario — i.e. annual purchase and running costs for the EU27 population — will increase from around € 5.8 bn in 2005 to € 6.6 bn in 2020 and approximately € 6.5 bn in 2030 (mainly due to increased penetration). With the adoption of ecodesign and labelling measures, expenditure in 2020 will show modest savings around 3%, but increasing to 23-25% in 2030 (all values recalculated to net present value with 4% discount), after slightly higher expenditure (1.9%) around 2015.

[13] Most manufacturers currently have access to heat pump technology, and vented and condenser driers are produced by all manufacturers. Some southern European manufacturers, however, sell a higher proportion of vented driers. Policy option 1 'removing class C, including vented driers' would affect those manufacturers more than others, while option 2 should have the same impact on all manufacturers.