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**COMMISSION STAFF WORKING DOCUMENT**

**EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT**

***Accompanying the document***

**Commission Regulation**

**amending Commission Regulation (EC) No 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Commission Regulation (EC) No 642/2009 with regard to ecodesign requirements for televisions**

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**Lead DG**: DG ENER

**Associated DG:** DG ENTR

**Other involved services**: SG, LS, DG ENV, DG COMP, DG ECFIN, DG INFSO, DG MARKT, DG SANCO, DG TRADE, DG RTD.

**Executive summary**

The Ecodesign Directive 2009/125/EC[1] of the European Parliament and of the Council lays down a framework for the Commission, assisted by a Regulatory Committee, to set eco-design requirements for energy-related products.

Networked standby had been already addressed by the preparatory study for energy consumption of standby/off mode in household and office equipment of 2008[2]. The study had shown that network connectivity was to become a common feature of household and office equipment. However, it was agreed that the technical basis of that study was not sufficient to set ecodesign requirements on low-power operating conditions providing networked connectivity ("networked standby") and that a dedicated preparatory study for networked standby should be carried out. Networked standby was identified as a priority in the Ecodesign Working Plan 2009[3].

The Commission, in close collaboration with national experts and stakeholders, proposed to address networked standby through an amending act to the existing Commission Regulation (EC) 1275/2008 ("Standby Regulation"). As networked connectivity is a feature of a large range of products, including products being introduced in the future, it was found to be the right option to maintain the "horizontal" approach of the Standby Regulation. In particular, the same product scope as defined in the Standby Regulation should be kept, as the approach in 1275/2008 has been proven to be a practical way to distinguish between household and office equipment (in the scope) and "professional" equipment (out of scope).

1 Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products Official Journal L 285 , 31/10/2009 P. 0010 - 0035

2 EuP Preparatory Study Lot 6 -Standby and Off-mode Losses, TREN/D3/91-2007-Lot6

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

As a consequence, it is suggested to complement the Standby Regulation by definitions, power management requirements related to networked standby, power consumption levels for the operating conditions and transition periods.

This Impact Assessment is structured along the following four steps:

Step 1: Assessment of the criteria for an ecodesign implementing measure set out in Article 15(2a)-15(2c) of the Ecodesign Directive, taking into account the ecodesign parameters identified in Annex I of the Ecodesign Directive;

Step 2: Consideration of relevant Community initiatives, market forces and environmental performance disparities of the equipment on the market with equivalent functionality, as laid down 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 by the Ecodesign Directive;

Step 4: environmental, economic and social assessment of the impacts, with a view to the criteria on implementing measures set out in Article 15(5) of the Ecodesign Directive.

**Step 1**

In order to assess the criteria for ecodesign implementing measures as set out in Article 15(2) of the Ecodesign Directive, the Commission has carried out a technical, environmental and economic study for networked standby ("preparatory study").

With regard to the criteria set out in Article 15(2) of the Ecodesign Directive, the preparatory study has established the following results for products with networked standby condition operated/sold in the Community:

| | | |
|---|---|---|
| Article 15 (2a): | Annual sales volume in the Community: | 400 Mio[4] |
| Article 15 (2b): | Environmental impact: energy consumption related to conditions having networked standby | 90 TWh in 2020 (without active mode)<br>= 27 Mio t CO2 |
| Article 15 (2c): | Improvement potential (applying cost effective existing technology) | 36 TWh in 2020<br>= 11,7 Mio t CO2 |

The improvement potential is due to the fact that

- more and more products in a household will provide network connectivity which by definition is not covered by the standby mode in the current Standby Regulation,
- network connectivity so far is provided out of on- and idle modes whereas
- technical solutions exist which reduce the electricity consumption in conditions having networked standby while providing the same functionality and which reduce the life-cycle cost for the end-user.

[4] Exact data is not available. Basis for the estimate is the stock data (in average around 2 Billion product units on stock) and an assumed average life time of 5 years.

Network connectivity in modes having networked standby results in an overall annual electricity consumption which is higher than the power consumption of Belgium; the total improvement potential is in the order of the power consumption of Denmark[5]. This trend will continue towards 2025: The annual electricity consumption only related to networked standby is expected to be 108,7 TWh (= approximately the power consumption of the Netherlands today) and the savings potential 59,4 TWh (= approximately the power consumption of Austria).[6]

**Step 2**

There is little or no incentive for purchasers and manufacturers to make small, if any, additional investments into technologies leading to low electricity consumption in networked standby modes. This is due to the fact that there is little consumer awareness about these operating conditions and their functionalities and accordingly the energy consumption related to these. This barrier prevents the normal market up-take of cost-effective technologies with improved environmental performance.

On Community level several programmes that include networked standby have been launched, as e.g. the Energy Star programme for office equipment, the Ecolabel and the Commission's Codes of Conduct. However, these programmes are of voluntary nature and address only a limited subset of products which contribute to electricity consumption in networked standby, and only a limited number of manufacturers take part in them. In any case, such initiatives alone cannot solve the problem leading to market failure. Furthermore, the Ecodesign Directive implies that legislative action on networked standby cannot be taken on Member State level, and the Member States expect that a harmonised legislative framework is set, the legal basis being Article 95 of the Treaty.

Conclusion of Step 1 and Step 2

Products with network connectivity are increasingly placed in large quantities on the Community market. The electricity consumption related to conditions having networked standby is significant and significant cost-effective improvement potentials exist while maintaining the network connectivity.

On the other hand, market forces and initiatives on Community and Member States level do not systematically address electricity consumption in networked standby.

It is concluded that the criteria for ecodesign implementing measures set out in Article 15(2) of the Ecodesign Directive are met, and networked standby should be covered by an ecodesign implementing measure pursuant to Article 15(1) of the Ecodesign Directive.

**Step 3**

Further to Annex II of the Ecodesign Directive, the level of ambition for improving the power consumption in networked standby modes is determined on the basis of an analysis of the least life-cycle cost of products for the end-user. Furthermore, benchmarks for technologies yielding best performance have been considered. The results are reflected in the defined level of ambition setting out power limits and transitional periods to realise the improvement potentials in the most cost-effective, socio-economically balanced and at the same time quickest way.

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5 EU energy and transport figures, 2007, Statistical Pocketbook 2010.

6 Ibid.

The policy options considered and assessed include "no action", self-regulation, product-specific ecodesign requirements, labelling, and a horizontal ecodesign regulation.

**Comparison of options**

| Option/Impacts | Economic | SMEs | Social/Jobs | Environ-mental | Internal Market | Admin Burden |
|---|---|---|---|---|---|---|
| No action | + - - | + - | + - | - - - | - | + - |
| Self-regulation | + - | + - | + - | + | + - | - |
| Vertical ecodesign | ++ - | + - | + - | ++ | + + + | - |
| Labelling | + - | + - | + - | + | + - | - - |
| Horizontal ecodesign | +++- | + - | + - | + + + | + + + | - |

**Step 4**

An assessment of the proposed implementing measure was carried out. In particular, sub-options for the intensity of the measure, i.e. the power limits and the timing of the transitional periods towards setting ecodesign requirements, have been analysed. The analysis took into account the criteria established in Article 15(5) of the Ecodesign Directive and the impacts on manufacturers, including SMEs.

Conclusion of Step 3 and Step 4

A comparison of the options shows that the appropriate policy option for realising cost-effective improvement potentials is a regulation setting ecodesign requirements for networked standby operating conditions for a broad range of products ("horizontal").

Four sub-options were assessed: The provisions as laid down in the Commission Working Document (Sub-option 1); the proposal of a Member State, supported by environmental NGOs (Sub-option 2); the proposal from industry/DigitalEurope (Sub-option 3); and finally the provisions on the basis of the Commission Working Document taking into account stakeholder feedback (Sub-option 4).

The comparison of sub-options shows that sub-options 1and 2 might bear some risk of additional costs, usually affecting affordability and sometimes employment. On the other hand, sub-option 4 shows that a decent combination of parameters allows for major savings and at the same time very little or no negative impact on costs and jobs.

| | Electricity/$CO_2$/ cost savings | Additional Costs for manufacturers | Impact on jobs in SMEs |
|---|---|---|---|
| Sub 1 | + | +/- | +/- |
| Sub 2 | +++ | - | +/- |
| Sub 3 | ++ | + | + |
| Sub 4 | +++ | + | + |

+++ very strong positive impact ⇔ very strong negative impact - - -

The requirements of the regulation should include:

- two stages, 2015 and 2017 (i.e. two years and four years after the regulation has entered into force);
- two categories of network availability with power consumption levels at 12/6 and 8/3 Watts
- a relatively short default delay time (20 minutes).

This approach ensures:

- that potentials to improve the electricity consumption of products in networked standby are realised in a cost-effective way, leading to important electricity and $CO_2$ savings, while reducing the life-cycle costs for the end-user;
- that by 2020 the annual electricity consumption will be reduced by approx. 35,5 TWh compared to a business-as-usual/no-action scenario, corresponding to accumulated electricity savings of approx. 118 TWh, electricity cost savings of 25 billion EURO and 39 Mt CO2 emission savings
- that by 2025 the annual electricity consumption will be reduced by approx. 49 TWh compared to a business-as-usual/no-action scenario, corresponding to accumulated electricity savings of approx. 340 TWh, electricity cost savings of 77 billion EURO and 98 Mt CO2 emission savings.
- a clear legal framework providing a level playing field for manufacturers, ensuring fair competition;
- that requirements for networked standby are harmonized in the Community, leading to a minimization of administrative burdens and costs for the economic operators;
- that no disproportionate burdens for manufacturers are created due to transitional periods which duly take into account re-design cycles;
- that additional energy savings will be triggered outside the Community because a broad range of the equipment covered are produced to identical specifications for the world market.

Monitoring of the impacts will mainly be done by market surveillance carried out by Member State authorities ensuring that the requirements are met. The appropriateness of scope, definitions and concepts will be monitored by the on-going dialogue with stakeholders and Member States.