



EUROPEAN COMMISSION

Regulatory Scrutiny Board

Brussels,

Ares(2018)

## **Opinion**

### **Title: Impact Assessment / Eco-design requirements for servers and data storage products**

(version of 6 December 2017)\*

### **Overall opinion: POSITIVE WITH RESERVATIONS**

#### **(A) Context**

A number of legislative instruments translate the EU energy and climate policy goals into policy actions. The moderation of energy demand is one of the 5 dimensions of the Energy Union Framework Strategy.

The Ecodesign Directive sets design requirements for energy-using products. The Commission establishes these requirements in implementing legislation. This impact assessment looks at the energy use and material efficiency of enterprise servers, data storage and ancillary equipment.

The current initiative on servers and data storage implements the Commission's Eco-design Working Plan.

#### **(B) Main considerations**

**The report contains significant shortcomings that need to be addressed. As a result, the Board expresses reservations and gives a positive opinion only on the understanding that the report shall be adjusted in order to integrate the Board's recommendations on the following key aspects:**

- (1) The description of the problem linked to the market failure is not well-specified, which makes it difficult to define the exact scope of the intervention.**
- (2) The baseline scenario requires more details and justifications on the assumptions with regard to market developments and to changes in the related policies.**
- (3) The criteria for comparing the options are not clear, making the choice of the preferred solutions unjustified in view of the analysis.**

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\* Note that this opinion concerns a draft impact assessment report which may differ from the one adopted.

### **(C) Further considerations and adjustment requirements**

(1) The report should be more explicit about the context and the conditions set by the Eco-design Directive for the adoption of an implementing regulation.

(2) The report should be more specific about the segment of the market the initiative is focusing on. It should provide more evidence on the market failure in that segment of the market. In addition, the overall context should present the energy saving potential of the analysed product group and to what extent it may contribute to the overall EU energy efficiency and climate targets for the period up to 2030.

(3) The baseline scenario should be more explicit on the fundamental assumptions linked to the envisaged market developments (like the take-up of cloud services, the split between smaller collocation services and big data centres, and the autonomous decline in average power consumption of servers). The report should be explicit about the future market share of data service suppliers for whom the regulation will be relevant, given trends in market concentration and location of dominant suppliers. It should also refer to related policy developments. This includes the proposal on the Free Flow of Data and the (probable) expiry of the EU-US agreement on the Energy Star programme.

(4) The report should describe in greater detail and analyse the proposed provisions on material efficiency for servers and data storage products, in particular as regards their enforceability.

(5) The report should further explain and justify the criteria for comparing options and their relative importance. The analysis currently presented in the report points to option 3.3 as bringing the largest benefits by 2030 in terms of net cost savings, energy efficiency gains, GHG emission reductions and employment gains. At the same time, the choice of the preferred options seems to be based on the short-term cost-efficiency for the server industry, rather than based on the 2030 horizon. The report needs to explain this point and adapt the current incoherencies accordingly. It needs to demonstrate that notwithstanding the longer-term advantages of option 3.3, the preferred option 3.2 is the most consistent with regard to the objectives of the initiative.

(6) As the modelling results heavily depend on the baseline assumptions, the report would benefit from a more elaborated sensitivity analysis. It should go beyond the analysis of the different levels of the thermal operation standards and test the effects of other important assumptions, such as on the cloud penetration. Because the pace of developments in the server and data storage industry is largely unpredictable, such a broader sensitivity analysis would show the robustness of the impact assessment.

The Board takes note of the quantification of the various costs and benefits associated to the preferred option of this initiative, as assessed in the report considered by the Board and summarised in the attached quantification tables.

*Some more technical comments have been transmitted directly to the author DG.*

### **(D) RSB scrutiny process**

**The lead DG shall ensure that the recommendations of the Board are taken into account in the report prior to launching the interservice consultation.**

**The attached quantification tables may need to be adjusted to reflect any changes in the choice or the design of the preferred option in the final version of the report**

Full title	Commission Regulation implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to eco-design requirements for servers and data storage products
Reference number	2017/GROW/041
Date of RSB meeting	10/01/2018

**ANNEX: Quantification tables extracted from the draft impact assessment report submitted to the Board on 6/12/2017**

(N.B. The following tables present information on the costs and benefits of the initiative in question. These tables have been extracted from the draft impact assessment report submitted to the Regulatory Scrutiny Board on which the Board has given the opinion presented above. It is possible, therefore, that the content of the tables presented below is different from that in the final version of the impact assessment report published by the Commission as the draft report may have been revised in line with the Board's recommendations.)

**Table 1 Overview of Benefits (total for all provisions) – Preferred Option (3.2)**

<i>I. Overview of Benefits (total for all provisions) – Preferred Option (3.2)</i>		
<i>Description</i>	<i>Amount</i>	<i>Comments</i>
<i>Direct benefits</i>		
Energy savings	3.2Twh	Energy savings at product (server and data storage product) level
Material efficiency improvements	10% increase in the recovery rate (both reuse and recycle) of servers and data storage products	Total benefit stemming from the implementation of the four proposed material efficiency requirements (disassembly, firmware availability, data deletion software and CRM information) described in chapter <b>Error! Reference source not found.</b>
Awareness on environmental aspects of servers and data storage products	Much improved	For quantitative analyses, please refer to Annex 4, in the 'effect of information requirements' section.
Extra revenues for OEM	59MEur	As from estimates of chapter <b>Error! Reference source not found.</b>
Extra revenues for OEM	41MEur	As from estimates of chapter <b>Error! Reference source not found.</b>
<i>Indirect benefits</i>		
Energy savings	5,7Twh	Energy savings at infrastructure (i.e. data center/server room) level

**Table 2 Overview of costs – Preferred option (3.2)**

<i>II. Overview of costs – Preferred option (3.2)</i>		
<i>Reason</i>	<i>Cost</i>	<i>Affected stakeholder</i>
Improvement cost associated with achieving higher PSU efficiency (for servers and data storage products)	- €10 per PSU unit to improve from 80 PLUS class Silver to Gold - €17 from Gold to Platinum and € 23 to achieve Titanium <sup>1</sup>	Business
Improvement cost associated with increased operating temperature (for servers and data storage products)	Cost associated with improving operating temperature is assumed € 150 per sale unit, which is approx. the price of a high performance fan kit <sup>2</sup> .	Business

<sup>1</sup> Improvement costs via email correspondence with Ecova, March 2016, supported by Digital Europe inputs, June 2016

<sup>2</sup> Expert estimation based on online research, July 2016.

Improvement cost associated with idle power reduction (for servers)	an additional of 0.2% up to 0.35% of the server price for improving CPU efficiency <sup>3</sup>	Business
Testing cost (for servers) <sup>4</sup>	approx. €21,000 per company with 15 server models for SMEs. For large companies, it is estimated that the testing cost would be approx. €30,000 per company, for companies with 25 server models <sup>5</sup>	Business
Testing cost (for servers) <sup>4</sup>	approx. €1,100 per server model	Market Surveillance authorities
Cost associated to material efficiency requirements	The Cost associated with material efficiency requirements is estimated to be dominated by acquiring data deletion software and hosting firmware update on website. The maximum cost of data deletion software is € 2 - 4 per drive <sup>6</sup> , which may be much cheaper for large companies; the price will be decreasing as more software become available. It costs as little as less than € 1 to host firmware for 10 years <sup>7</sup> , therefore the estimated cost for material efficiency requirement is approx. € 8 per server or storage product.	Business
Costs related to the enforcement of the Ecodesign Regulation	Market surveillance cost	Market Surveillance authorities

<sup>3</sup> Expert estimation based on online research of price difference between servers with various idle power, July 2016.

<sup>4</sup> In case, for the declaration of the operating temperature, a thermal chamber is used, the related costs should be added.

<sup>5</sup> Calculation based on testing cost of approx. 700 EUR/unit for SMEs and 300 EUR/unit for large companies, August 2016.

<sup>6</sup> Online research: <https://www.whitecanyon.com/wipedrive-niap-certification>, January 2017.

<sup>7</sup> Calculation based on expert assumption on firmware size, power consumption, etc. January 2017.