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# CONSUMER INTERESTS IN ECO-DESIGN OF GAME CONSOLES

PRELIMINARY COMMENTS ON THE PROPOSAL FOR A  
VOLUNTARY INDUSTRY AGREEMENT

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## Summary

In the context of the implementation of the Eco-design of Energy-related Products Directive, the manufacturers of game consoles proposed to increase the energy efficiency of these products with a voluntary self agreement (VA).

In this paper we question the suitability of a voluntary agreement to improve the energy efficiency of game consoles and we request a higher level of ambition than the one put forward by the industry's proposal as well as adequate information made available to consumers.

We fear that this VA falls currently short to meet the requirements of Annex VIII of the Eco-design Directive on VAs. Therefore, we call on the Commission to establish mandatory Eco-design requirements for game consoles.

We also propose requirements on the technical design of these products in order to decrease negative environmental impacts and improve consumers' use experience.

## Mandatory requirements for game consoles

In November 2012, the European Commission consulted stakeholders on a proposal for a Voluntary Industry Agreement (VA) on game consoles. With this initiative, manufacturers seek to contribute to more energy efficient appliances without being subject to an EU Regulation setting mandatory Eco-design requirements for placing game consoles on the market.

Video game consoles are manufactured by only three companies:

- Sony (Playstation)
- Nintendo (WII)
- Microsoft (XBox)

From a technological perspective the product group is quite similar to computers as they are also equipped with a power supply, motherboard, CPU, graphic and sound-card, hard disk drive and optical drive. Nevertheless, as many video games require significant graphical data processing, power consumption during video game consumption is often significantly beyond those of desktop- or notebook-computers. Typical power consumption in idle mode ranges from well below 50W (Nintendo WII) to well above 150W (Sony Play station). Furthermore, game consoles operate in a variety of modes:

Video game consoles offer a platform to play video games from other sources, e.g. DVD, blu-ray and internet. Thus, all current devices have internet connectivity and a blu-ray drive.

In this paper, we have outlined the main shortcomings related to the proposal of the VA. As we fear that the minimum requirements for a Voluntary Agreement based on the Eco-design Directive are incomplete and do not reach their full potential, we call on the European Commission to establish binding legal minimum criteria for video game consoles.

### **No measures should be taken before data gap is addressed**

For the typical user behaviour, the Preparatory Study assumes an average daily active use of around 30 minutes, which is likely to increase in the future, 1.4 hours in idle mode and 10 hours in standby. However, according to the information of manufacturers, the active use time per day is estimated to be 2.2h. This means that in reality the energy consumption of these devices can be higher than estimated and therefore also the savings potential which could be achieved with an ambitious measure can be higher especially taking into account the other functions provided by game consoles e.g. use as a media player.

Before moving forward to any kind of regulatory measures, we request more data regarding the use phase to become available.

### **Minimum requirements for all Voluntary Agreements**

The proposal as described in the industry's document fails to provide clarity regarding the functioning and the structure of the possible self-commitment. More specifically, the proposal does not adequately cover a number of issues such as monitoring and reporting, evaluation, revision of the measures and involvement of civil society. Therefore, we call for a harmonized, overarching framework which will set minimum requirements for all Voluntary Agreements and will ensure a level playing field where product requirements are satisfied. Furthermore, we would like to see more environmental aspects than energy efficiency being covered such as resource efficiency, recyclability and potential hazardous substances. Under these conditions we have severe doubts that the text of the VA can be improved as much as needed in order to become acceptable.

### **Energy related requirements cannot be set with the current available data**

There are various potential ways to formulate energy related requirements for game consoles. These include:

- Maximum power levels for all relevant modes;
- A TEC-approach, i.e. to set Total Energy Consumption requirements which define one benchmark that has to be achieved by tuning the various mode consumptions with a view on total device efficiency.

In addition, these two approaches can vary according to the metric of measurement, which can be expressed in

- Power consumption (W or Wh);
- Graphic computational power (gigaFLOPS) per electricity consumption (W) in a certain mode.

Generally it has to be made sure that the proposed benchmark is based on a sound and transparent market- and BAT-evaluation, which allow stakeholders to analyse and comment on the ambition level of benchmarks.

We recommend basing the structure, metric and ambition level of energy requirements on a sound and transparent analysis so that stakeholders can analyse and comment properly on the ambition level.

### **Auto Power Down is important to save energy**

Auto Power Down (APD) is a feature that transforms a game console into a mode (e.g. sleep mode) with significantly lower power consumption after a certain default time without any user interaction (the Preparatory Study suggests a 30-minute period). The problem with game consoles is the fact that the software of the majority of games does not support APD. In addition, APD might be a problem for user acceptance if the state of a game is interrupted and cannot be restored by the user after the console being activated by the user again. This can be achieved by so called AutoSave function.

In addition, consumer acceptance of APD also depends on the resume time to application, which should ideally not exceed a few seconds. If powering up from sleep takes much longer, there is the risk that users will become impatient and simply disable the Auto Power Down (APD) function.

We recommend that in case the VA will be endorsed, Auto Power Down mode coupled with AutoSave should be mandatory and that the resume time back to the application is less than a few seconds.

### **Secondary- / Non-game functionalities**

The game consoles on the market offer additional functionalities such as DVD- or blu-ray playback. The preparatory study point out that:

“These additional functionalities are less demanding in terms of computing performance requirements but are still provided through the same components and circuitry as those which facilitate gaming. This means that the components are over specified for these additional nongame playing functionalities which results in significantly increased power consumption in comparison with stand alone devices offering the same functionality. For example average power demand for DVD playback for video players and recorders is approximately 20W whilst one of the higher specification gaming consoles consumes 148W for the same functionality. Industry has suggested that the addition of DVD dedicated components<sup>1</sup> could cost around €13. With prices of some DVD players as low as €14 in some EU member states it is suggested that the €13 cost of adapting the current games consoles might be overestimated. Inclusion of dedicated DVD components at the 13 Euros price margin could result in savings to the consumer of €6.50 over a 5 year lifetime.” (Preparatory Study, p. 118).

We therefore highly recommend that scalable chips are made mandatory should the VA go forward and be accepted. In particular, the use of the optical drive alone (without using any other function) should not consume more than 20W.

### **Consumer information on secondary functions to be improved**

From consumers' perspective, it will be important that game console manufacturers provide transparent information on the power consumption of secondary functions, such as media playback options, and indicate that this power consumption is much higher compared to that of stand-alone devices.

The information requirements need to be clearly set in any future agreement on game consoles.

END.

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<sup>1</sup> This is mostly referred to as „scalable chips“.