

## **ENERGY STAR Computer Specification v.6.1 – Comments on Proposed Specification**

This document includes comments from the European Commission on the proposed amendments to the ENERGY STAR v6.0 specification for computers leading to the ENERGY STAR v6.1 specification for computers. We base the comments on the letter from the US EPA (5 December 2013) and on the webinar held on 17 December 2013 (slides and comments provided during the webinar).

### **Overall recommendation**

We recommend that the amendments to the v.6.0 are kept simple and only regard the absolute necessary adjustments for including slate/tablets in order to keep the development process short and not opening up further topics, which belong to a larger revision. Any other topics should await the v7.0 specification development process, which naturally can be started already now.

### **Comments on Battery Charging Efficiency**

We understand that the US EPA has conducted a review of battery charging efficiencies and found that there is insufficient differentiation in the marketplace to warrant the development of specifications covering this issue. We support this stance but recommend that other initiatives that may set measures in this area are continually reviewed during the course of the ENERGY STAR v6.1 specification.

### **Inclusion of Slates/Tablets**

We support the inclusion of slates/tablets into the ENERGY STAR computer specification, which we also recommended during the preparation of version 6.0.

Given the difficulties in separating low powered and higher powered slates/tablets, within a short timeframe, and combined with the fact that they are, in general, efficient devices we also support allowing these products to be categorised using the notebook computer performance calculations. We recognise that this will allow a significant number of slates/tablets to meet the ENERGY STAR specifications, but understand that this will allow further analysis and possible tightening of specifications in future ENERGY STAR specifications.

We also note that the EU Ecodesign regulation allows both “slate computers” and “tablet computers” to be categorised in the same way as more traditional notebook computers. The EU regulation defines a notebook computer as having a viewable diagonal screen size of at least 22.86 cm (9 inches), which differs from the EPA-proposed cut-off of 6.5 inches.

### **EPA Proposed definitions**

We see the proposed definitions as a good start for defining the new products to be included, however, some adjustments and clarifications are needed.

### **Harmonization of definitions with EU Ecodesign regulation**

The current nomenclature of “slates/tablets” could potentially cause confusion with the EU Ecodesign Regulations (No 617/2013, [www.eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:175:0013:0033](http://www.eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:175:0013:0033))

:EN:PDF), which uses the term “slate computers” to define products without permanently attached keyboards and “tablet computers” to define products with attached physical keyboards. We recognise that the definitions within the EU Ecodesign regulations were adopted before the term “tablets” became the most widely used term for slate/tablet type devices. However, given that the Ecodesign Regulation is now in force we think that ENERGY STAR should attempt to harmonise the product definitions for “slates/tablets”. At the very least, to avoid confusion in the marketplace and between the environmental initiatives we suggest naming the product group either “slates/tablets”, “slates” or “slate computers”.

### **Two-in-one Computers vs slate/tablets**

It is not clear how two-in-one computers differ from slate/tablets with a detachable physical keyboard (factory). As such we are unclear about why it should be necessary to include a separate two-in-one computer group. The terminology should be considered in relation to typical use of the term “two-in-one computers”; it seems that it is used for both a computer with a detachable display and a tablet with an attached keyboard, see e.g. [www.amazon.com/b?node=6369631011](http://www.amazon.com/b?node=6369631011).

Regarding the requirement “The physical keyboard base must contain processing capability typically found in a Notebook Computer.”, we would like to request information from the US EPA on examples of products with both processing capability in the display (acting as an independent Slate/Tablet when disconnected) and in the keyboard base. We have only been able to identify products with additional battery capacity and other accessory components, but not processing capability.

We understand that the above issues will largely be resolved if all types of slates/tablets/two-in-one computers are required to comply with the notebook computer requirements in the same manner as traditional notebook computers.

### **Display size**

We note that the US EPA is proposing to exempt products that have displays smaller than 6.5 inches (16.5 cm) in order to ensure that smartphones are not in scope. We would like to point out that there are products on the market that provide both tablet and phone functionalities that have displays larger than 6.5 inches (16.5 cm) (e.g. Asus Fonepad 7). These products tend to be marketed as both “phone” and “tablet”. We believe that the trend is towards devices, which are tablets in size and functions but also include traditional cellular phone capabilities.

There are a considerable number of other devices on the market with displays larger than 6.5 inches (16.5 cm) that could potentially fall into scope (e.g. e-readers, satellite navigation units etc.) if the definition for slates/tablets is not sufficiently detailed. It is suggested that these products continue to be explicitly excluded within the scope section of the specification.

In any case, at current state we do not see other, simple ways of defining the line to phones than a lower limit of the display size.

### **Mobile All-In-One Desktop Computers**

The term Mobile All-In-One Desktop Computers was brought up during the EPA webinar, which we understand is used for the devices brought to the market which resemble large tablets (sizes around 18–27 inches

are seen on the market) and portable all-in-one desktop computers. They include batteries and to our understanding are based on mobile components.

We support the continued inclusion of “mobile all-in-one desktop computers” into the ENERGY STAR v6.1 specification. We are aware that some computers that would meet the definition of a notebook computer in ENERGY STAR v5.2, ENERGY STAR v6.0 and the EU Ecodesign Regulations are being marketed as “mobile all-in-one desktop computers” (e.g. HP ENVY Rove 20-k01, Lenovo IdeaCentre Horizon 27 and the Dell XPS 18 Portable All-in-One Desktop ). As some of these products are able to be powered from an internal battery for over five hours and tend to include notebook style CPUs, we are of the opinion that they are notebook computers or slate/tablet computers rather than integrated desktop computers.

We do not believe it would be appropriate to establish definitions of “limited portability” vs “portability” as brought up during the webinar.

We also note that the large display size of these products would attract a relatively large display allowance (especially if an enhanced performance display is included in the product). We recognise that there may be a potential to separate these products from other notebook/slate/tablet computers based on their overall screen size. However, we would suggest that further research is conducted on the power demands of these products and the coming development of capabilities of these products prior to deciding how these products may be addressed under ENERGY STAR in a future specification i.e. v7.0.

Without any additional power demand data to inform the decision making process, we would suggest that in order to obtain the ENERGY STAR label these mobile all-in-one desktop computers should be tested under the notebook computer test conditions and be able to meet the appropriate notebook computer allowances.

## **Relation to non-PC based POS products**

The popular slate/tablet products on today’s market would not fall under the non-PC based POS products scope exclusion. Some Apple and Android-based tablets are being used for POS applications with specific enabling add-on hardware.

## **Testing of Slates/Tables**

It is understood that a significant number of slates/tablets on the market have internal batteries that cannot easily be removed for testing. This is however covered by the test method (IEC 62623 5.2 Test setup, a4).

There were suggestions that the use profiles for slates/tablets should not be the same as those used for notebook computers due to different usage patterns and the removal of some power modes. We would urge caution against changing the use profiles as some slates/tablets provide levels of functionality akin to notebook computers and as such their usage profiles could be expected to be similar to those assigned to notebook computers.

Similarly, some higher specification slates/tablets appear to offer the same power management functionality as found in more traditional types of notebook computers. As such, we suggest that further research is conducted to identify whether or not it is suitable to allow all, some or no slates/tablets to be exempt from the power management requirements.

We support the ability to test slates/tablets in long idle mode in place of sleep mode where no sleep mode exists on the product. However, it should be noted that the EU Ecodesign Regulation on computers requires that notebook computers (slates/tablets with displays larger than 9 inches (22.86 cm) and long-idle mode power demand higher than 6 W will fall under the notebook computer definition) have a low power mode, that the product is capable of entering automatically after a period of inactivity or by manual selection, no higher than 3 W. We recommend that the US EPA ensure that any product bearing the ENERGY STAR label is also able to meet the mandatory energy efficiency requirements in the EU.

Furthermore, the efficiency and operation of the battery charger largely dictates the power consuming behaviour of these products. Applicability of TEC metric testing in each of the listed Modes (Sleep, Long Idle, Short Idle and Off Mode) to slates/tablets would need to be researched further.

We also suggest that attention is paid to the way in which products with detachable displays, and potentially with two batteries, are tested.