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*Subject* **Océ comments on Draft2 ENERGY STAR  
program requirements for imaging  
equipment v1.1 and DFE-related issues**

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## **1 Introduction**

Océ welcomes the opportunity for continued participation in the discussions regarding the revision of the ENERGY STAR requirements for imaging equipment. We analyzed both the Draft 2 requirements as distributed on July 16 and the additional document with DFE-related definitions and requirements. Both will be treated in this paper, in separate sections.

The input in this paper may be shared with other ENERGY STAR imaging equipment stakeholders, in order to stimulate open discussion and progress towards final v1.1 requirements.

## **2 Detailed comments on Draft2 requirements**

Comments will be provided referring to the line-numbers of the text as used in the draft 2 document. Comments related to DFE-issues are treated in the next section.

### Line 558-559 and 588-589:

Océ welcomes the fact that EPA recognizes the basic modules of large format MFDs (printer, scanner, optional DFE). As EPA rightfully states, MFD sleep power is built-up from the sleep power of the print-engine, plus some sleep power for the scanner module. Based on design practice (see next section) for large format scanner modules, an additional sleep power allowance of 6W would be needed for these, putting the total proposed sleep power of OM1 products to 20W.

### Line 582-583:

The required sleep power level for scanners proposed in Draft 2, still seems to be based on mainly desktop scanning products. As pointed out previously in our comments, large format scanners require more power for operation than desktop scanners (bigger lamp in order to scan originals up to ±40 inch wide, motor to drive paper transport), which would result in a higher sleep power for large format scanners. In line with the proposal on OM1, we propose to define a functional adder for large format scanners (A0 document size or equivalent US paper size) to the effect that they are allowed to use 6 W in sleep mode.

### Line 745-793:

A general remark on a number of the issues designated for future specification revisions: the nature of the issues such as “recovery time, OM products under TEC, revising TEC procedure” is such, that the implementation of them will require thorough analysis and

product testing by manufacturers before EPA can determine the appropriate levels of requirements (the 25% best-levels). Therefore, Océ urges EPA to define sufficient time lines for revisions of this nature, in order to avoid unwanted effects of new requirements.

Line 771-777:

Océ opposes the inclusion of additional energy impacts in the ENERGY STAR requirements. The issues put forward by EPA are currently subject of complicated scientific discussions (e.g. in the framework of the EuP programme in Europe) and it is certainly not straightforward to link these issues to energy consumption. It has always been one of the strong advantages (for customers) of the ENERGY STAR program to focus on straightforward energy consumption, which is unambiguously and directly measurable and of undisputed environmental relevance. Any additional requirement should at least support this strong advantage of the ENERGY STAR program.

Line 778-782:

Océ supports the idea of reporting data at 230V. It will save a lot of additional testing and measuring effort, which indeed mainly serves to confirm ENERGY STAR compliance at different voltages, that was already demonstrated at 230V. Being a global company, all our products are sold in the European market (next to the other markets) and are thus measured at 230V by default.

### **3 Comments on proposed DFE-related definitions and requirements**

First of all, Océ wants to ask for confirmation that the sections outlined in the document "ENERGY STAR IE DFE Power Supply Efficiency Requirement redux.doc" are intended to replace the corresponding sections in the Draft2 IE v1.1 requirements document received July 16.

Further comments are provided per section (referred to by means of the line numbers from Draft 2 IE v1.1):

Line 408:

Type 2B in the table seems to be obsolete: it is largely the same as type 1B, further the 2B definition is contradictory to the definition under line 309: in the table, type 2B DFEs are said to draw AC power, while the proposed definition under line 309 says that "A DFE that draws its DC power from the imaging equipment product with which it operates is defined as a type 2 DFE". Océ proposes to remove type 2B and replace the definition of type 1B by the following:

Type 1B: "Draws AC power from a receptacle on/in the imaging equipment or from being hard-wired to the imaging equipment".

Type 1A and 1B are functionally identical, but they differ in the implementation of the connection of the DFE to the power grid.

Type 2A then could be called simply type 2.

Apart from the text in the word-document sent July 31<sup>st</sup>, 2 references in the Draft2 document need to be aligned with the definitions in the DFE-document: the sections under lines 439 and

477 in the Draft2 IE v1.1 document. Océ proposes the following wordings:

Line 439: (changed text in red)

For imaging products with a ~~functionally-integrated type 1B or type 2 DFE that relies on the imaging product for its power~~, manufacturers should subtract the DFE's energy consumption in Ready mode from the product's total TEC result before comparing the product's TEC to the criteria limits below. In order to take advantage of this allowance, the DFE must meet the definition in Section 1.CC. and be a separate processing unit that is capable of initiating activity over the network.

Line 477: (changed text in red)

For imaging products with a ~~functionally-integrated type 1B or type 2 DFE that relies on the imaging product for its power~~, the power consumption of the DFE should be excluded when comparing the product's measured Sleep to the combined marking-engine and functional-adder criteria limits below ~~and when comparing the products measured Standby power to the limits in Table D~~. The DFE must not interfere with the ability of the imaging product to enter or exit its lower-power modes. In order to take advantage of this exclusion, the DFE must meet the definition in Section 1.CC. and be a separate processing unit that is capable of initiating activity over the network.

Océ understands that measuring energy consumption for an imaging product with a type 1A DFE can be done by excluding the DFE completely from the energy measurements. This is straightforward because this type of DFE has it's own wall plug.

Power supply efficiency levels (80-plus or 80-plus bronze).

Océ proposes not to use the 80-plus bronze PSU-efficiency requirements (85% at 50% load, 82% at 20 and 100% load) for the v1.1 IE requirements. The reason is not a technical one, but merely a question of timely availability of computer systems with 80-plus bronze level power supplies. Because DFE's are rather specific computer systems, the power supplies that are used for them are produced in rather small numbers (compared to power supplies for mainstream PC's) and have longer product life cycles. Océ thinks that current availability of 80-plus bronze power supplies is not sufficient to design and engineer DFE systems for ENERGY STAR compliance in July 2009. Instead this will probably take approximately another year, so we propose to keep the 80-plus bronze PSU efficiency requirements for a next revision of the IE requirements. We are convinced that the additional energy savings achieved by 80-plus bronze level PSU's are not so big that requiring this immediately is needed for the current revision if ENERGY STAR IE requirements.

#### **4 Follow-up**

Océ is prepared to contribute to further constructive discussions on especially the DFE definitions and requirements. Further we urge EPA to take into account the arguments provided in section 2 on the remainder of the Draft 2 IE v1.1 requirements.