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SUBJECT: Draft 2 of version 1.1 for ENERGY STAR™-qualified Imaging Equipment

The Information Technology Industry Council (ITI) has reviewed the referenced new draft for Imaging Equipment (IE) issued by EPA on July 16, 2008. ITI remains a strong supporter of the ENERGY STAR program, and welcomes this opportunity to once again share our members' insights with EPA and the European Commission.

We wish to note that EPA's 2003 ENERGY STAR Guiding Principles require that product specifications be developed in such a manner so that the energy efficiency objectives can be achieved via several technology options, including at least one option that is not proprietary. ITI respectfully requests that EPA verify that this principle has been adhered to in developing the proposed Draft 2 Imaging Equipment criteria.

ITI also has general questions on the process utilized to establish the criteria for the Typical Electricity Consumption (TEC) limits contained in tables 1-4. We request that EPA provide detailed information to stakeholders regarding the processes that were used to create the limit curves, and request that the agency schedule a stakeholder webinar to discuss this and other matters relative to Draft 2.

ITI offers the following specific comments regarding Draft 2:

Line 193 – The term “Thermal Inkjet” should not be used since it is not defined. Only the term “Ink Jet” is defined and we believe that it should be used in the definition of High Performance Inkjet. In addition, the document should be consistent with the use of the term “Ink Jet.” Finally, there are several instances where Ink Jet is written incorrectly as “Inkjet.”

Line 308 – ITI offers recommendations on the definitions of Digital Front Ends later on in these comments.

Line 401 – The requirement for External Power Supplies (EPS) includes an in-force date of April 1, 2009 for using EPS that meet the ENERGY STAR V2.0 Limits. ITI assumes that this is an

editorial error and that the date should be July 1, 2009, as has been previously agreed. We strongly oppose different enforcement dates for the referenced ENERGY STAR standards and the Imaging Equipment specification.

Line 642 – Given the high possibility of future changes to the test procedures, ITI recommends that ENERGY STAR assign revision values to the ENERGY STAR test procedures.

Line 765 – ITI is neither for nor against the usage of a Typical Electricity Consumption (TEC) metric on Operational Mode (OM) products. Stakeholders should note, however, that the current TEC usage patterns are not applicable to OM products and, therefore, a new test metric would need to be developed for such.

Line 771 – ITI has long supported ENERGY STAR as a voluntary program intended to achieve reductions in carbon emissions through improvements in product energy efficiency. This approach and singular focus has helped spur manufacturer participation in the program, and has helped make ENERGY STAR the leading such program worldwide. Accordingly, ITI believes that it would be a mistake to tamper with the highly successful ENERGY STAR formula. Please see our more detailed comment in the section entitled “Future Specification Revisions: Additional Energy Impacts” at the end of this document.

Line 778 – In some cases, it is not sufficient to only report 230V test data to demonstrate conformance with ENERGY STAR requirements. However, ITI would support the reporting of only the highest power consumption of the three worldwide test voltages. This could result in a substantial reduction in amount of data that manufacturers must collect and submit to EPA, and is consistent with the goals and intent of the U.S. Paperwork Reduction Act. We would be happy to provide additional comments on this during the requested webinar.

Line 790 – ITI strongly cautions against revising the test procedures for the TEC test. A revision of the test procedure would strongly limit the ability to historically monitor and evaluate the energy efficiency of Imaging Equipment under ENERGY STAR.

ITI Comments on DFE's

Line 309 – We propose the following revision to the definition for “Digital Front End.” The proposed new text is in bolded blue italics:

Digital Front-end (DFE) – A functionally-integrated, network-attached server or desktop-derived server that hosts other computers and applications and acts as an interface to imaging equipment. A DFE provides greater functionality to the imaging product. ***DFE will be defined as:***

- ***Type 1 DFE:*** A DFE that draws its DC power from its own AC power ***supply (internal or external style) which is separate from the power supply that powers the imaging equipment. This DFE may draw its AC power directly from a wall outlet, or it may draw it from the AC power associated with the imaging product's internal power supply.***

- **Type 2 DFE:** A DFE that draws its DC power from the *same power supply as the imaging equipment with which it operates* is defined as a **Type 2** DFE.
- A DFE also offers **at least three** of the following advanced features:
 - Network connectivity in various environments;
 - Mailbox functionality;
 - Job queue management;
 - Machine management (e.g., waking the imaging equipment from a reduced power state);
 - Advanced graphic user-interface (UI);
 - Ability to initiate communication with other host servers and client computers (e.g., scanning to email, polling remote mailboxes for jobs); or
 - Ability to post-process pages (e.g., reformatting pages prior to printing).

COMMENT: ITI understands that EPA is considering adopting more stringent internal power supply (IPS) requirements as they would apply to what we refer to as a Type 1 DFE (ref: draft Computer V5.0 specification). ITI thinks the EPA should retain usage of the existing specifications associated with the Computer V4.0 specification as it applies to these IPS. It is very late in the update process of the v1.1 Imaging specification to be proposing a major change like this. Also, it would seem that EPA would not have evaluated the impacts of these stricter rules on DFEs and, therefore, such products would not have been considered in deriving the most recent TEC and OM product energy and power limits. For these and other reasons that we will be happy to discuss during the proposed webinar, we recommend not including this proposed change in v1.1.

Line 408 – It should be ENERGY STAR’s intent that whenever possible, the power associated with the DFE (Type 1 or 2) be excluded or subtracted from the TEC energy and OM power measurements. See the following edits

- Products designated to operate with a Type 1 DFE: To qualify as ENERGY STAR under Imaging Equipment Version 1.1 specifications, an imaging equipment product manufactured after July 1, 2009 that is sold with a Type 1 DFE must use a DFE that meets the ENERGY STAR Imaging Equipment Digital Front End Power Supply Efficiency Requirements listed in Section 3 C.
- Products designated to operate with a Type 2 DFE: To qualify as ENERGY STAR under Imaging Equipment Version 1.1 specifications, an imaging equipment product manufactured after July 1, 2009 that is sold with a Type 2 DFE, manufacturers should subtract the DFE’s energy consumption in Ready mode for TEC products or be excluded when measuring Sleep *and Standby* for OM products. Section 3a provides further detail

on adjusting TEC values for DFEs for TEC products and Section 3B provides further detail for on excluding DFEs from OM sleep levels.

Line 594 – See the following edited text (additions and edits in bolded blue italics):

Note: Currently, the Imaging Equipment specification does not address the energy efficiency of a Type 2 DFE product but instead has the manufacturer subtract the DFE energy consumption in ready mode for TEC products and excluded when measuring *Sleep* and *Standby* for OM products. Tier 2 of the Imaging Specification is not suggesting changing this aspect of the specification for DFEs that get their DC power from the imaging product with which it operates...

Type 1 DFEs Using an Internal AC-DC Power Supply: A DFE that gets *its DC* power from an *its own* internal AC-DC power source must meet the power supply efficiency established under the Computer 4.0 specification development process: 80% minimum efficiency at 20%, 50%, and 100% of rated output and Power Factor ≥ 0.9 at 100% of rated output.

Type 1 DFEs Using an External Power Supply: A DFE that ~~draws~~ *gets* its *DC* power from *its own AC external* power supply must be ENERGY STAR qualified or meet the no-load and active mode efficiency levels provided in the ENERGY STAR V2.0 Program Requirements for Single Voltage AC-AC and AC-DC External Power Supplies. The ENERGY STAR specification *and qualified product list* can be found at:

http://www.energystar.gov/ia/partners/prod_development/revisions/downloads/eps_spec_v2.pdf

ii. *DFE Test Procedures:* Manufacturers are required to perform tests and self-certify those models that meet the ENERGY STAR guidelines.

- In performing these tests, partner agrees to use the test procedures provided in Table 4, below.
- The test results must be reported to EPA or the European Commission, as appropriate.

Line 614 – comment: ENERGY STAR will need to review the on-line product submittal tool to ensure consistency of requested DFE information with the new text and definitions defined in the final V1.1 rules

Line 636 – comment: Since table 4 applies to DFE, the title should be changed to make this clearer, e.g., “Table 4: Type 1 DFE Test Procedures.”

Future Specification Revisions: Additional Energy Impacts

ITI opposes the consideration of “additional energy impacts” as part of the future versions of the ENERGY STAR specification for imaging equipment. This proposal would result in a wide

range of new and unclear factors and detract from the traditional focus of the ENERGY STAR program on the energy consumption of products as it impacts product users.

The consideration of additional energy impacts would necessitate a complex evaluation of a multitude of factors in order to account for the full picture of related energy impacts associated with a product. Among others, these would include the energy impacts associated with:

- Manufacturing operations
- Supply chain management
- Recycled or recovered content in products
- Product distribution
- Product packaging
- Telework programs for employees
- Recycling programs at the product end-of-life

The process of quantifying and measuring these impacts would be highly complex. The success of the ENERGY STAR label is due in large part to the fact that it is objectively measurable and verifiable. By focusing solely on the attribute of energy consumption of a particular product model, ENERGY STAR offers product purchasers an objective means of evaluating the energy efficiency of a product. Including other environmental considerations will dilute this benefit and introduce the consideration of complex impacts based on largely on poor data quality. ENERGY STAR would evolve into a multi-attribute ecolabel based on vague criteria and an unknown means of verification.

These same problems also impact the issue of consumables used in imaging equipment. First, the process for calculating the energy impacts of consumables is unclear. Moreover, EPA appears to assume erroneously that the various types of consumables – OEM, remanufactured, refilled, etc. – achieve the same levels of performance. Quality studies demonstrate that third party remanufactured or refilled consumables do not achieve the same performance, quality and reliability as OEM products, and therefore these products result in increased energy impacts (e.g., wasted paper, product failures, the absence of recycling programs) and increased costs (time, IT help desk assistance, paper consumption, etc.). As a result, consideration of the energy impacts of consumables could impair the value of the ENERGY STAR label by failing to achieve consistency with many core principles of the program, including ensuring that product performance is enhanced or maintained, the purchaser's investment is recovered, and that energy consumption can be measured and verified. See "The ENERGY STAR® Label: A Summary of Product Labeling Objectives and Guiding Principles" (March 18, 2003).

EPA should maintain the focus of the ENERGY STAR program for imaging equipment (and other IT products as well) and set specifications based solely on the energy consumption of products as used by the purchaser, without regard for other "additional energy impacts."