

ENERGY STAR® Qualified Imaging Equipment Specification Revision

October 14, 2005 Stakeholder Meeting

Discussion Topics Briefing

Introduction

To assist stakeholders in preparing for the October 14 imaging equipment (IE) industry meeting, EPA has developed this briefing document that outlines the six key topics we will discuss. By using this opportunity to explain the background of each topic and share the comments EPA has received to date, we hope to enable our October 14th discussion to be as thorough and productive as possible. EPA asks that participants review this document in advance, and come to the meeting prepared to contribute to the discussion on each of the following topics.

Partner Commitments

Labeling

One goal of ENERGY STAR is to provide value to purchasers by enabling them to easily identify energy-efficient products that have earned the ENERGY STAR. In addition, clear and consistent use of the ENERGY STAR mark increases awareness among consumers, ensures that partners receive recognition for their efforts, and maintains the integrity of the brand. Over 60 percent of Americans recognize and more than 1,200 partners leverage the benefits of the ENERGY STAR mark. With this rationale, the Draft 1 specification proposed that partners must display the ENERGY STAR mark: 1) on the top/front of the product, 2) on product packaging, 3) in product literature, such as user manuals and specification sheets, and 4) on the manufacturer's Internet site where information about ENERGY STAR qualified models is displayed.

Several stakeholders commenting on the Draft 1 specification were opposed to various elements of the labeling requirement. The following alternatives were offered:

- Require that partners select at least two of the four labeling opportunities presented in the Draft 1 specification.
- Allow partners to substitute the product and packaging labeling requirements with incorporation of the mark in the user-interface software at start-up.
- Require nothing and allow partners to determine the most effective means for leveraging the value of the mark.
- Allow partners to substitute the product labeling requirement by either:
 - Using a removable label affixed to the product's exterior;
 - Displaying the mark via the product operator panel during device power up; or
 - Choosing an alternate technique, proposed by the partner and approved by ENERGY STAR.

EPA understands that IE products are sold through multiple distribution channels and that manufacturers may have different desires regarding labeling. However, with the transition to the ENERGY STAR Partnership Agreements, all partners must meet minimum web, product, and product collateral labeling requirements. Flexibility regarding how partners meet these minimum requirements does exist.

Discussion Questions

What are the minimum requirements? In areas where there is flexibility, what are partners' preferences?

EPA's Goal for the Discussion

Clarify basic requirements. Understand industry's concerns and discuss areas where flexibility exists.

Collection of Unit Shipment Data

EPA and DOE strive to set ENERGY STAR specifications that truly distinguish the market for energy-efficient products. The specification levels typically represent approximately the top quartile of products currently available at the time the specification is initially set. In order to ensure that ENERGY STAR remains a differentiator, to identify when investments in marketing to promote ENERGY STAR products are needed, and to quantify the impacts of the program, EPA needs to understand how ENERGY STAR market penetration changes from year to year. To facilitate this, the Draft 1 specification relayed that partners would be required to provide annual unit shipment data (USD) to EPA, segmented by meaningful product characteristic.

Three partners have expressed concern over confidentiality and potential costs associated with providing this data to EPA, and have asked that alternatives be considered. While EPA is sensitive to these concerns, this requirement already has been instituted for all other ENERGY STAR product categories within the Partnership Agreement because it has been found that partners are the best source for this information. Many industry publications or market research firms do not collect information on a product's ENERGY STAR status. In addition, obtaining this market data, when it is available, could be very costly for EPA.

To ensure partners' information is protected, EPA has built the following considerations into the annual USD collection process:

- Information is not sent to EPA, but rather to a third party such as an industry trade association or ICF Consulting. The third party immediately records that a given partner has met their commitment, and then aggregates the data with the complete set, masking the identity of the individual submitter. Only aggregated data is provided to EPA.
- As an alternative, though less preferred option, partners are given the opportunity to mark submittals as confidential business information (CBI). If EPA receives a Freedom of Information Act (FOIA) request, all CBI will be redacted and EPA will argue that CBI is exempt from the request.

Discussion Questions

What other alternatives can industry suggest for providing EPA with this market penetration information? Are there additional steps EPA can take to safeguard data provided by partners? Are the associations present today willing to act as a third party aggregator for members? For non-members as well?

EPA's Goal for the Discussion

Understand industry's concerns and explore all ways in which collection of USD can be made as secure as possible.

Digital Front Ends (DFEs)

The following clarifies which ENERGY STAR specifications should be referenced when qualifying combination IE-DFE products.

- A. An externally-powered DFE sold independently from IE – The DFE must meet the ENERGY STAR computer specification in order to be qualified as an ENERGY STAR qualified computer.
- B. An externally-powered DFE sold independently from IE, without which, the IE cannot function – The combined IE and computer product must meet the ENERGY STAR IE specification, regardless of whether the DFE meets the ENERGY STAR computer specification.
- C. An IE product sold with an externally-powered DFE where the product combination is marketed as a single model – The DFE must meet the ENERGY STAR computer specification and the IE must meet the ENERGY STAR IE specification in order for the model be qualified. If either the DFE or IE is unable to meet the respective specification, neither the DFE nor the IE may be considered ENERGY STAR qualified. For this case, the IE product should be measured with the DFE connected as the presence of the DFE may affect the performance of the IE product.
- D. An IE product that makes use of a functionally integrated DFE that lacks its own power cord – The IE with the integrated DFE must meet the ENERGY STAR IE specification in order to be qualified.

In two of the above scenarios, the power or energy consumption of the DFE is included when evaluating the IE product against the ENERGY STAR IE specification. In general, EPA wants to ensure that comparable products are treated consistently. EPA recognizes that higher-functionality products that make use of an integrated DFE or print controller may require different consideration, but would be interested in receiving data that supports such different consideration.

Discussion Questions

What does the data tell us about the power used by the integrated DFE or print controller? Is there a reasonable way to meter the power of the integrated DFE or print controller separately? How do DFEs and print controllers impact a product's ability to sleep? What alternatives exist for setting specification limits for products with DFE's and print controllers?

EPA's Goal for the Discussion

Identify means of securing data that portray the power used by the integrated DFE or print controller. Outline the alternatives for addressing IE products with non-integrated DFEs, integrated DFEs and print controllers.

Recovery Time

Power management disabling is a prevalent problem that prevents some energy efficient IE from delivering the energy savings it is capable of achieving. In addition, the practice of changing power management default delay times to the maximum possible setting, e.g., 240 minutes, also greatly reduces the time products spend in low-power modes.

The Typical Electricity Consumption (TEC) test procedure measures the energy products use throughout a typical duty cycle when configured at their recommended settings. The Draft 1 specification explains that partners should report to ENERGY STAR the default delay-times to various power management modes, as well as the incremental recovery time as measured during the TEC test procedure. EPA is planning to monitor these values and partners' recommended settings on their Web sites, to determine if a recovery time criterion should be included in the next revision of the specification.

Some stakeholders continue to raise concerns that the current TEC test procedure and Draft 1 specification do not address the possibility of long recovery times, which could lead to unwanted user behavior. While EPA is reluctant to change the TEC test procedure at this point, or mandate a specific recovery time for all products as both may negatively impact design flexibility, invalidate previous testing, or could reference proprietary technology, there may be other alternatives. Following are some suggestions to begin the discussion:

- As proposed in Draft 1 and the final TEC test procedure, require that partners test products as shipped and recommended for use. Require that partners submit statements from product literature that explain to consumers the default delay times to power management settings. Require the measurement of incremental recovery time as specified in the TEC test procedure and require that the values are reported to EPA.
- Require partners to develop a box insert or section in a user manual that explains the importance of power management modes, the implications of lengthening the time setting, and the recovery times associated with the various settings.
- Commit to a dedicated review of reported incremental recovery times one year after the specification's effective date, combined with a survey of disabling rates. Determine the appropriate course of action for a possible specification revision at that time.

Discussion Questions

What are the specific concerns with the method EPA has proposed to date? How can recovery time be addressed without taking away design flexibility, invalidating previous testing, or referencing proprietary technology?

EPA's Goal for the Discussion

Fully understand why some stakeholders feel the method proposed in Draft 1 is insufficient and develop a list of viable alternatives.

Differentiating Ink Jet Products

EPA recognizes the wide variety in the functionality, intended purpose, and targeted markets of Ink Jet IE. The ENERGY STAR IE specification will need to differentiate among these products so that power limits can be applied fairly, without disadvantaging high-function or high-speed products.

Initial analyses of current qualified product data submitted by partners does not show a direct correlation between product speed and sleep power. This has led EPA to propose two important changes in how these products' energy consumption is evaluated, which impacted the final draft OM test procedure and Draft 1 specification.

First, EPA removed the "ENERGY STAR speed" test from the OM test procedure. This test was designed as a way to measure the speed of Ink Jet products consistently, rather than referencing the manufacturer's claimed speed. This test established a speed benchmark that could be relied upon as a consistent foundation for comparing results. This speed test was dropped when it was determined that differentiating Ink Jet products by speed may not be the best method of comparison.

Secondly, the Draft 1 specification proposed product functionality as a means of differentiating products and assigning sleep power limits. Using this method, certain additional features are given a specific amount of additional power consumption. Several stakeholders have indicated support for this method and have suggested that the following features warrant additional power:

- Fax capability
- Scanning capability
- Wired interfaces (e.g., USB, parallel, Ethernet)
- Wireless interfaces (e.g., Bluetooth, 802.11, infrared)
- Paper handling (e.g., extra paper feeders, auto-duplexers, output/finishing devices)
- Memory/storage (e.g., disk drives, memory upgrades)
- External ports (e.g., memory card readers, camera interfaces, smart card readers)
- Enhanced displays/control panels (e.g., larger displays)
- Paper size capabilities (e.g., letter vs. 11"x17", A0 vs. A2)
- Heaters

Discussion Questions

Is there an approach that offers greater simplicity and longevity than the "functional adder" approach for setting Ink Jet sleep power limits? If not, what are the benefits and concerns with using this "functional adder" approach? What additional features need to be considered in the above list, and how can EPA obtain data to assign sleep power values to each feature? Is there a way to simplify or combine the number of adders to reduce specification complexity? How can longevity be built into this method so that newly-developed features are accommodated? If this method is viable, do elements of it need to be incorporated to products using other marking technologies? What value is there to retaining the ENERGY STAR speed test if speed is not the determinant of sleep power? What implications does this have for the OM test procedure (e.g., network interfaces being active in sleep)?

EPA's Goal for the Discussion

Identify means of securing data that portray the sleep power values for the above listed features. Explore means of addressing the needs of these features including the "functional-adder" approach.

Standby Power (Off Mode) for Products under OM

Efficient performance in off mode is a focus of EPA, FEMP, and international program implementers. Therefore, the Draft 1 specification proposed a one-watt standby power allowance.

Several stakeholders have commented that one-watt in off mode is not realistic for some products including:

- Ink Jet fax machines;
- Large-format devices; and
- Products with an integrated DFE or print controller.

Discussion Questions

What does the data tell us about the power used by these products? Are there other products that would have difficulty achieving one watt?

EPA's Goal for the Discussion

Identify means of securing data that portray power values for these products. Compile a list of products for which one watt in off mode is difficult to achieve. Discuss recommendations for an appropriate off mode criterion for these products.

Remanufactured Products

EPA recognizes the environmental benefits of the growing industry practice of remanufacturing or newly-manufacturing products. Some stakeholders have suggested that remanufactured products should be permitted to retain the ENERGY STAR qualification status earned under the current specifications. They have explained that it will be too costly to reengineer the product to meet the revised imaging equipment specification. While EPA does not want to create a disincentive for the practice of remanufacturing, other stakeholders have countered that separate specifications for remanufactured products would result in consumer confusion. Others have urged that EPA should either recognize all environmental benefits offered by a product, or remain focused on direct electricity consumption.

While EPA has eliminated grandfathering with the move to Partnership Agreements, there may be other alternatives for accommodating remanufactured products in a modified way in the revised specification. One suggestion is to implement a delayed effective-date for remanufactured products.

Discussion Questions

Can we quantify the energy-saving benefits of remanufacturing? Can we characterize the extent to which remanufacturing takes place with copiers/other products? When could these products be engineered to meet the proposed specification? What other options exist for addressing remanufactured products?

EPA's Goal for the Discussion

Understand the energy-saving benefits of this practice as well as the prevalence of it among certain products. Explore how revised timing of an effective date for certain products could enable them to meet the proposed specification. Identify any other ways in which the government can avoid creating disincentives to remanufacturing without devaluing the ENERGY STAR label.