July 30, 2012

To: imagingequipment@energystar.gov

U.S. Environmental Protection Agency (EPA)

Subject: Kodak comments on Draft 2 Version 2.0 ENERGY STAR Imaging Equipment Specification, June 29, 2012

Dear Sir/Madam:

Eastman Kodak Company (Kodak) is submitting comments regarding Draft 2 Version 2.0 ENERGY STAR Imaging Equipment Specification issued June 29, 2012. Kodak sells printers, scanners and multifunction devices that are qualified under the current Energy Star Imaging Equipment specifications and will be affected by the proposed changes to the specifications. These comments focus on functional adders, non energy requirements, and implementation timing.

Larger allowances are needed for functional adders , particularly WiFi responsiveness during sleep.

Kodak is concerned that the proposed changes to the primary and secondary functional adder allowances are too extreme and not supported by any data made public by EPA. The current Version 1.2 Imaging Equipment Specification provides primary and secondary functional adder allowances to accommodate the power consumption in sleep mode for additional capabilities such as data and network interfaces. In Version 2.0, EPA proposes eliminating allowances for secondary functional adders, revising down the allowances for primary functional adders, and only including one primary functional adder. EPA justifies the reductions on the basis of improvements in energy efficiency. However EPA supplies no data to support this drastic reduction. Kodak agrees that imaging equipment has improved efficiency, but does not believe that reductions that in some cases can be over 80% are readily achievable.

With the proposed changes, Kodak believes that EPA will be providing an advantage to equipment that contains few features that must be maintained during sleep or quickly activated from sleep. EPA has typically reduced the allowable energy in the range of 30-40% from one version to the next and Kodak believes that primary functional adder reductions that are in that range are more reasonable and consistent with past policies.

A 30-40% reduction in allowances for functional adders will be effective in significantly reducing energy consumption by imaging equipment.

Of particular concern is the statement that there will be no allowance for functional adders that are not active during the test (line 150). "Active" as used here implies the interface is connected and information is being exchanged. However circuitry to support other interfaces is also operating at a quiescent level, ready to be connected during sleep mode. The responsiveness of disconnected interfaces during sleep is a major element of high product quality, which is one of EPA's guiding principles. Without responsiveness, the device could not be kept in the sleep state under many user scenarios, defeating the goal of reducing energy consumption. Functional adder power allocation is necessary to enable quiescent operation, including a WiFi radio module in a product where USB is the primary connection. It is reasonable for ES to allocate 0.75W for WiFi quiescent power consumption during sleep mode. Lack of functional adders for quiescent states may have a substantial impact on the ability to quickly recover and will result in either sacrificing function or reducing the time the user keeps the device in sleep mode.

Flash memory card readers and camera connections should be non-interface adders.

ES currently defines Flash Memory card readers and cameras connections as an interface in Table 7 of the draft 2 spec. The behavior and methods for accessing content on a memory card or attached camera are not the same as a communication interface. It is more akin to accessing a local memory location rather than communicating over a network with another device. Both fax and flash memory need to be available simultaneously during sleep to cause the MFD to wake-up and handle incoming faxes and inserted memory cards, so they require separate adders. Flash memory card readers and camera connections should be non-interface adders, because of the method of access and requirement for availability during sleep. This is an important distinction because only two interface adders are allowed in the draft specification.

The Sleep Mode power consumption allowance should be extended to all imaging equipment, not just MFDs.

In Section 3.4.4. Sleep Mode Power Consumption, Table 7, Sleep Mode Power Allowances for Functional Adders are limited only to MFDs. There are other product types with a modem besides MFDs. Therefore, this allowance should apply to all product categories having a modem as an interface.

Energy Star should maintain its simple focus on energy efficiency to maintain it's clear brand message.

Kodak believes Energy Star does an excellent job of informing consumers which products meet energy efficiency standards. Energy Star is well known and has easily understood standards throughout the US, the EU, and Japan. In order to maintain this reputation, Kodak believes Energy Star should maintain its focus on energy efficiency and not become an all purpose ecolabel. There are many other ecolabels (i.e. EPEAT) that deal with non-energy issues and it is prudent for Energy Star to continue its primary focus on energy and let the other ecolabels deal with the broader range of environmental issues for which they are designed. Unfortunately in this specification, EPA is proposing that these non-energy issues become part of Energy Star.

While Kodak understands the desire to ensure that products qualified through Energy Star are also leaders in other environmental areas, this complicates the standards, the qualification process, and the meaning of the Energy Star label. These additional non-energy requirements, many of which are vague, create verification problems for the individual products and the complete ES program. If certain requirements can be demonstrated clearly and others cannot, it will be easy for critics of the Energy Star program to point out that requirements are unverifiable and the program should not be trusted. Kodak already has health, safety, and environmental standards that exceed regulatory standards to deal with the types of issues in this proposal. Kodak's internal standards include the elimination of restricted materials from the supply chain, proper end of life disposition, design for disassembly, sustainable packaging, and supplier responsibility. Although Kodak supports the intention of these ES programs, ES is neither the most effective or most efficient way to deal with these issues. It is better that Energy Star continue to excel at energy efficiency recognition, rather than do a mediocre job in multiple areas.

The inclusion of non-energy requirements destroys the equivalency between the US, EU and Japanese ES programs. July 6th comments filed by the European Commission in regards to Draft 1 Line 337 – Toxicity, "We consider that in the context of EU ENERGY STAR, preparatory work should remain focused on energy consumption in the use phase." As a company that sells in many markets, Kodak supports this request to maintain international harmonization.

Kodak's detailed concerns with the non-energy requirements are discussed below.

The ROHS requirements should not be included in the Energy Star Imaging equipment Partner Commitments.

EPA has proposed EU RoHS-like material standards for imaging equipment, noting that "products that currently meet the EU RoHS Directive would satisfy this toxicity

requirement." EPA states their intention to do this, but needs to add more clarity to this proposal to be consistent with this goal. The following changes would meet this goal.

"The European Union's generally accepted material restriction of hazardous substances ~~(RoHS)~~ regulations (RoHS Directive 2011/65/EC), including all exemptions in force…"

EPA notes that most imaging equipment is already meeting RoHS, undercutting the justification for an additional requirement. EPA has presented no data showing that an ES RoHS requirement would provide any improvement over the current situation. However, it can be guaranteed that this requirement will cost additional time and money to demonstrate compliance. Therefore Kodak recommends removal of the RoHS requirement. If EPA chooses to keep this requirement, Kodak's proposed clarification of language should be included.

The design for ease of dissassebly requirement is not central to the Energy Star mission, not consistent with safety requirements, too vague to be verified, and should not be part of the Energy Star Partners Agreement.

Under the partner Commitments, #3, EPA requires, "The generally acceptable attributes of a recyclable product at the date of product manufacture: where products shall be designed for ease of disassembly and recyclability where external enclosures, sub-enclosures, chassis and electronic subassemblies are easily removable with commonly available tools, by hand, or by a recycler's automated processes." This is a vague requirement (what is generally acceptable to whom?) without specific technical and safety exceptions. It is not easy to determine whether equipment is in compliance with this requirement. In fact, the words, "at the date of product manufacture," imply that the standards will continuously change and could be different at the time of manufacture than at the time of design. There are also many safety requirements and other issues that prohibit ease of disassembly in certain situations, but are not addressed as exemptions in this simple statement.

EPA notes that this standard is harmonized with IEEE 1680.1. However the ease of disassembly requirements in 1680.1 are only applicable to institutional products and only address external enclosures which can generally be removed without entering devices with electrical, mechanical, chemical or radiation hazards where unskilled disassembly may create safety issues. A more recent IEEE draft 1680.2 Imaging standard has requirement for ease of disassembly **except in situations where it is not technically or legally feasible**. IEEE 1680.1 is also being revised so it is unclear if the same type of requirement will be in the next draft. It is unlikely that any imaging equipment could meet the ease of disassembly requirement without exemptions for electrical, mechanical, chemical or radiation hazards.

In conclusion, Kodak recommends that the non-energy requirements not be part of Energy Star. While the desire to improve all the products environmental impacts is admirable and consistent with Kodak programs, this Energy Star proposal leads to unnecessary complexity, reducing the clarity of the Energy Star label, increasing costs

of qualification, creating confusion over qualification criteria and verification requirements, and risking the Energy Star program reputation.

Timelines for Transition to V2.0

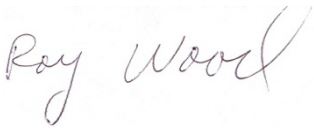
The current 9 month timeline is generally insufficient to redesign products to meet new Energy Star requirements. As compared with version 1.2, the test methods for OM and specifications will be drastically changed in version 2.0. Products being manufactured in 9 months are generally completely designed at this time. If the goal is not just to identify top performing units, but to push design changes, Kodak recommends a 1 ½ year transition from the finalization of V2.0 to the enforcement date.

EPA should clearly define default delay time to sleep.

The beginning of the default delay time to sleep is not clearly defined either in Section 3.4.3 of Imaging Equipment Draft 2 Version 2.0 Specification or Step 4, p.14 of Table 10 Operational Mode Test Method, Imaging Equipment Final Version 2.0 Test Method. Since certain job operations do not complete until after the usable output is generated (e.g. mechanism reset, per job maintenance, etc), we would suggest the end of a job (and the start of the Delay Time to Sleep) be defined as the soonest time at which a new job could first be initiated.

If you have questions or would like to discuss any of these comments, please contact myself at Roy.Wood@Kodak.com or 585-588-7538 or Gerry Brown at 858-673-2845 or Gerald.M.Brown@Kodak.com.

Sincerely,



Roy W. Wood

Kodak Health Safety and Environment