October 14, 2011

To: displays@energystar.gov
U.S. Environmental Protection Agency (EPA)

Subject: Kodak comments on Energy Star Displays Version 6.0 Draft 2 Specifications, Test Method, Partner Commitments and Cover Memo, September 20, 2011

Dear Sir/Madam:

Eastman Kodak Company (Kodak) is submitting comments regarding the Energy Star Displays Version 6.0 Draft 2 Specifications, Test Method, Partner Commitments and Cover Memo dated September 20, 2011. Kodak sells digital picture frames that are qualified under the current Energy Star Imaging Equipment specifications and will be affected by the proposed changes. These comments focus on the non-energy aspects of these requirements and the sleep energy consumption of digital picture frame displays that have occupancy sensor energy saving technology.

The sleep energy allowance should be greater for displays that have active energy saving sensors in sleep mode.

A digital picture frame is a unique type of display because it's purpose it to produce an ongoing image for the viewer without the viewer turning the device on. This requires the monitor to be on whenever someone is viewing it, not just when someone is interacting with it. Picture frames without active occupancy sensor can meet the 0.5 watt sleep requirement. However frames that include an active energy saving occupancy sensor that causes the frame to go into sleep mode when no one is viewing it, require extra energy in the sleep mode to maintain this sensor capability. The net energy consumption for most users is reduced by this energy saving technology because the frame spends a significant greater time in sleep mode. As shown on the attached spreadsheet, *Kodak Digital Picture Frame Energy Star Data.xls*, which is Kodak data taken directly from the Energy Star Displays website, the average sleep energy consumption for Kodak frames without sensors is 0.23 watts and the average for frames with sensors is 0.78 watts, an increase of 0.55 watts. The total energy consumption is also shown to be less. Therefore it is reasonable to increase the sleep allowance by 0.5 watts for frames with occupancy sensors from 0.5 to 1.0 watts.

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 the September 20th Energy Star Displays proposal, EPA is proposing that these non-energy issues become part of Energy Star.

EPA states that they do not "aim to create product differentiation around non-energy requirements;" but this will be the effect of this new program. EPA's proposed approach will lead the program to become the Energy/Materials/Packaging/Disassembly Star program, losing its clarity for the consumer and driving up costs for qualification. 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. EPA has stated in meetings that they do not intend for these non-energy requirements to be third party certified. However there is nothing in the proposal which clarifies third party verifier responsibilities. In the absence of clarity, most verifiers will choose the most conservative approach and demand clear verification of all requirements including those that are rather vague. 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 are not needed, are not consistent with EU RoHS, and should not be included in the Energy Star Display specifications.

In Specification 4.1.1, EPA has proposed EU RoHS-like material standards for Displays, noting that "products that currently meet the EU RoHS Directive would satisfy this toxicity requirement." However this statement is not true for several reasons. First, the proposed mercury level is only 10% of the EU RoHS mercury requirement. Second, the EU RoHS exemptions are not currently included. A better statement is that products that meet EU RoHS will meet this Energy Star requirement if:

1. The mercury standard is harmonized with EU RoHS as EPA has verbally stated it will.
2. All the appropriate exemptions are added to the Energy Star RoHS requirement. Displays have used the following and possibly other exemptions:
   a. Lead contained in electronic ceramic parts
   b. Lead contained in glass used for electronic components
   c. Copper alloy containing up to 4% lead by weight

   Unless all EU RoHS exemptions are included, it will not be an equivalent requirement.
3. Any future changes to EU RoHS are immediately picked up by Energy Star
4. The compliance requirements, which are not clearly outlined, are interpreted to be the same as RoHS. Will it be clear to third party verifiers that they do not have to obtain the full supply chain RoHS restricted material declarations?

EPA notes that most displays are 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. This proposal shows that a similar requirement can be very different. At a minimum all RoHS exemptions should be included, so that the requirement is identical to the EU RoHS requirements.

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.

Specification, 4.1.2 states,"Display 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. Products shall identify and provide ease of access to, and removal of, materials with special handling needs." This is a vague requirement without specific technical and safety exceptions. It is not easy to determine whether a Display is in compliance with this requirement. 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 the electronics 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 display could meet the ease of disassembly requirement without exemptions for electronics.

In addition to the need for technical and safety exceptions, there is no indication of how this requirement will be demonstrated and verified. This concern is magnified because EPA now requires third party verifiers, creating another level of interpretation of this vague requirement.

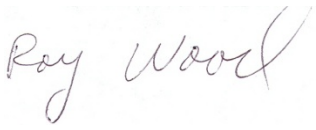
The packaging requirement is not necessary and too vague to be included in the Energy Star packaging commitment. Partner Commitment #11 requires meeting two of the eight packaging requirements. The requirements are so vague that it is not be possible to confirm that they are or they are not being met. While these packaging requirements are good directional goals, they are too vague to serve as a requirement. It is not clear what type of demonstration of compliance could be required or how the requirement will be interpreted by the third party verifier.

The LCD F-GHG requirement is not central to the Energy Star mission, is not needed, and should not be included in the Energy Star Partners Commitments. The requirement for products with LCD panels to source LCD components from suppliers who have demonstrated that, for manufacturing processes that emit fluorinated greenhouse gas emissions (F-GHGs), they are recovering or destroying on an annual basis at least 90 percent of the F-GHGs is another requirement that is not energy-related. As EPA states, LCD suppliers are moving to achieve this already, so it is not clear why EPA needs to add this requirement to the Energy Star Partner Commitments. This brings additional compliance and verification issues that should not be part of Energy Star.

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.

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.

Sincerely,



Roy W. Wood

Kodak Health Safety and Environment