Lexmark International, Inc.
740 West New Circle Road
Lexington, Kentucky 40550
USA

Mr. Chris Kent
ENERGY STAR Office Equipment Program Manager
Office of Air and Radiation
US Environmental Protection Agency

Subject: Comments on the ENERGY STAR Draft 2, V2.0 Imaging Equipment Specification

Dear Mr. Kent:

Lexmark offers the following comments on the Draft 2, V2.0 Imaging Equipment Specification

Maturity of IE Equipment

Lexmark and others have been working with ENERGY STAR on voluntarily reducing product energy for almost 20 years. Over the 20 years, substantial improvement has occurred in both our products and that of our competition in reducing energy consumption. This has been a substantial reduction in emissions and energy used by imaging equipment during these 2 decades. Given this level of improvement, Lexmark offers the following comments on the state of the marketplace:

- The "low hanging fruit" for further efficiency gains is gone for imaging equipment. Future energy efficiency changes will result in lower features, lower responsiveness, and/or lower customer satisfaction with our products.
- Any further efficiency gains will be much more expensive, take more time, and be resource intensive.
- We would like Energy Star to comment on conditions for sun setting the IE standard.

IT/Imaging Equipment as a green catalyst and the emergence of the cloud

- IT products are the catalyst for reducing the environmental impact of other industries. While there is a need for an Energy Star brand that focuses on the better products, this needs to be managed to not hinder improvements these products are making for other industries
- The emergence of the cloud and 24/7 IT management/interaction means that devices are becoming more connected, not less. The V2.0 Draft 1 proposal encourages Imaging Equipment to become less connected rather than supporting smart connections. This is contrary to where the market is headed.

Timelines for Transition to V2.0

Lexmark believes that the current 9 month timeline is insufficient to re-certify a significant number of products to ENERGY STAR Imaging Equipment V2.0. According to ENERGY STAR dataset, there were 3800 Imaging Equipment Models. If 25% of those models are registered, then 950 products would be certified. If we assume the CB takes 4 hour to make a certification, this is 475 working days to certify the new products. And this certification process cannot start until the standard is finalized and is unlikely to start the first 3 months of the 9 month transition period. While this will be split over multiple CBs, the cumulative effect of certifying new products in Monitors, PCs and Imaging at the same time with the same CBs will be overwhelming and cause manufacturers delays in certifying existing products for ENERGY STAR.

- Lexmark recommends at least a 1 year transition period from the finalization of V2.0 to the enforcement date.

Toxicity and Recyclability Requirements

Lexmark is strongly opposed to adding non energy requirements to Energy Star. Despite EPA Management's perspective, Energy Star is the accepted worldwide standard for energy efficiency of imaging equipment and other IT products. Adding non-energy criteria dilutes the Energy Star brand in our industry and makes the program less usable by our customers. Lexmark strongly recommends removing these criteria

However, since Energy Star has made is clear that these requirements are not up for debate or discussion, we reiterate that any ROHS like requirements must be aligned with the EU ROHS scheme as this is worldwide standard used by industry for hazardous materials restrictions. While the language in Draft 2 attempts to align with ROHS, we request that the language used specifically reference the EU ROHS rather than the more generic ROHS category.

ENERGY STAR's Direction in dictating product design and functionality

Lexmark remains concerned with the direction that ENERGY STAR is taking in dictating how products function in sleep mode. The original sleep mode was designed by both manufacturers and ENERGY STAR to be responsive to customer input at a low power

level. This sleep mode became the industry standard for design if Imaging Products. While a manufacturer could choose to design a product with less functionality, it was assumed the product was not required to limit functionality in order to meet the specifications. We continue to believe that this is at risk with the specifications proposed for Imaging Equipment V2.0

ENERGY STAR continues to make several assumptions in how the products are used by our customers. These assumptions lead ENERGY STAR to instruct manufacturers on how to design the interfaces for our products. We see this as a clear violation of ENERGY STAR Principle #2 (Product performance maintained or enhanced with increased energy efficiency). In this instance, the EPA is proposing manufacturers shut off interfaces except those used in the ENERGY STAR testing to comply with the low allowable power levels. This recommendation is a violation of principle #2. Turning off features in Sleep may also diminish product usability.

ENERGY STAR's Expectations for Manufacturer's Response to new limits

Industry has heard complaints from ENERGY STAR about the high compliance rate in the product category. This is surely due to the market requirements and the ingenuity of engineers and programmers to reduce product energy levels in a short period of time. However, we believe the assumption that industry can quickly meet any new requirement is shortsighted and naive.

- Many levels would require new product platforms. The Development period for a new product is 2-4 years. ENERGY STAR has indicated a desire to change levels every 2-3 years, making the investment in ultra low energy efficiency risky at best.
- The only short term options to quickly make efficiency gains will reduce features, functionality and responsiveness. These changes are not likely to meet the low requirements while also meeting the market requirements

Technical Comments

We also offer the following specific comments on V2.0 Draft 1.0.

Section	Current text	Proposed Changes	Reasons of our change
Pg 12, Line 412	Speed range for Monochrome MFD	Last line should read "> 80" rather than ">90"	
Pg 12, Line 412	TEC Limits in Table 4	None	Lexmark appreciates the differentiation in TEC limits between Single Function and Multi-Function Products.
Pg 12, Line 414	EPA intends to display the TEC values of ENERGY STAR qualified Imaging Equipment in both the kilowatt-hours per year and kilowatt-hours per week on the qualified products list (QPL) for easier comparison to other ENERGY STAR products, which typically express energy consumption in annual terms.	Keep TEC values kwh/week	Lexmark does not support use of the TEC metric as an annual electricity value without disclaimers about the high usage assumptions in the TEC test. We are concerned that the high printing assumption as well as the disabling of auto-off features for testing will artificially increase the energy estimates of Imaging Equipment when compared to other equipment.
Pg 13, Line 432	Since recovery time (Active1 time) and Default Delay Time to Sleep are useful to consumers and potentially a useful parameter for evaluating the impact of the Version 2.0 requirements on usability, EPA proposes to require reporting of both recovery time (Active1 time) and Default Delay Time to Sleep for all TEC products.	Add Active 0 and Active 2 times also	If the EPA is intent on publishing Active 1 times, Lexmark recommends publishing Active 0 and Active 2 times also. This gives the consumers a full comparison of product data.

Pg 13, line 453	Default Delay Time: Measured Default Delay Time to Sleep (t_{SLEEP}) shall be less than or equal to the Maximum Default Delay Time to Sleep (t_{SLEEP_MAX}) requirement specified in Table 5, subject to the following conditions:		Two terms are used interchangeably and they are not the same and need some clarification. "Default Delay Time to Sleep" – is used as the factory default setting for the Sleep Mode timeout "Maximum Default Delay Time to Sleep" – is the maximum allowed value for the Default Delay Time to Sleep as given in the Eligibility Criteria "Maximum Delay time to Sleep" – is the maximum value that the user can set the sleep timeout. It is set to 4 hours by the eligibility criteria.
Pg 18, Line 578	Added a touch panel adder. This is only intended to the capacitive touch functionality of small displays included with imaging equipment and does not apply to other displays covered by the ENERGY STAR Displays program.		Lexmark recommends that this adder apply to any touch panel and not specifically the capacitive technology of touch panels. Please also define what a small display includes.

Regards,

Chris Saunders
Lexmark ENERGY STAR Program Coordinator