



Lexmark™

September 11, 2017

To: Ryan Fogle, EPA Manager, ENERGY STAR for IT and Data Center Products;
Matt Malinowski, ICF International

Re: Lexmark Comments on ENERGY STAR Imaging Equipment V3.0 Draft 1 Test Method Document

Lexmark thanks the US EPA and Energy Star for the opportunity to comment on The Energy Star Imaging Equipment V3.0 Draft 1 Test Method document. Lexmark continues to believe that collaboration between industry, Energy Star and other stakeholders provides the best specification.

General Comments and Timing

Lexmark has reviewed the EPA's timeline and believes that given the proposed changes, the timeline as given on the August 24th Webinar is too aggressive and needs to be increased. Two factors would require additional time

1. The addition of the network activity testing will required the setup and creation of testing infrastructure and potentially retesting of products.
2. The change in the connectivity order to elevate WIFI above USB will require the retesting of numerous models to obtain test data with which to create correct limits.

Network Activity

Lexmark is not against the attempt to measure network activity, but cautions the EPA against creating a quick solution that is not thought out. History has shown that when the EPA creates metrics and test methods, the results of those methods are assumed by the public to be accurate representations of real world results. That has been the case with the Typical Electricity Consumption and Active 0/1/2 times. So it behooves the EPA to spend the time to get this test method change correct and accurate.

To that end, Lexmark offers the following comments on the network activity test method.

1. The test method needs to be straightforward, repeatable and able to be automated or scripted. Lexmark and other OEMs have automated the testing for repeatability and quality measures and need to be able to remove human decision making and interaction as much as possible.
2. The EPA refers to wanting devices to avoid "wake-ups" in networked imaging equipment. Lexmark would like the EPA to expound on what that term means.
3. Changing SNMP settings in a driver in mid test is not simple or automated. In addition, this step may not very dependant on OS and may not be repeatable. Lexmark recommends removing this step in favor of using other tools that can cover the SNMP protocols
4. Results for network traffic energy use are not easily repeatable and will vary depending on settings on the computer and network.

5. Lexmark believes that more detailed information and specification is needed for the test method.
 - a. Tools should be explicitly stated rather than left up to the test house
 - b. How long each tool needs to be operated need to be specified.
 - c. The OS and OS version need to be specified

Lexmark believes an additional test method revision is needed followed up data analysis by OEMS and test labs to verify the use and repeatability of the test method change

Lexmark believes that the only use of the network activity sleep power in V3.0 should be for data collection. Lexmark does not support additional power limits or disclosure of data without a further vetting of the test method and results.

Wi-Fi Connection Priority

Lexmark is fine with the EPA’s proposal. We also urge the EPA to provide more clarification about expectations with Wi-Fi connectivity in similar fashion to what has been done with wired networking.

Print Speed

Lexmark proposes using the ESAT value rounded down an integer value based on corporate or external testing. Lexmark does not support this testing being incorporated into the Test method.

Paper Use Assumptions

Lexmark has no comments on the EPA’s proposal to reduce the daily job energy by 1/4. However, the formula provided in the webinar needs one more adjustment. Currently, the Daily job Energy (E_{Job_Daily}) is reduced by 4 but the number of print jobs (N_{Jobs}) used to calculate the amount of time in sleep is keep the same. So the calculation does not represent an entire 168 hr week. For products 32 ppm or greater, ther, there are 32 hours of the week that are now calculated as “0.00 wh. To fill this time with sleep time, the formula needs to be updated to be “ $N_{Jobs} / 16$ ” instead of “ $N_{Jobs} \times 0.25$ ”

Equation 6. TEC Calculation for Printers, Fax machines, Digital Copiers with Print Capability, and MFDs with Print Capability

$$TEC_3 = 5 \times \left[\frac{E_{JOB_DAILY}}{4} + (2 \times E_{FINAL}) + [24 - (N_{JOBS} \times 0.25) - (2 \times t_{FINAL})] \times \frac{E_{SLEEP}}{t_{SLEEP}} \right] + 48 \times \frac{E_{SLEEP}}{t_{SLEEP}},$$

Regards,

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