

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF
AIR AND RADIATION

July 8, 2011

Dear ENERGY STAR® Imaging Equipment Partner or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) have developed a revised test method as part of the ENERGY STAR imaging equipment specification revision and seek your comments on the enclosed draft.

The development of the draft test method was a joint effort between EPA and DOE conducted in response to comments received during and after the March 11 framework document online meeting. Please see below for the key modifications.

Proposed Modifications to the Test Method

The draft test method incorporates the following key modifications from the Version 1.2 Test Method, dated December 2010:

- **Network Connections**– Products capable of being network- or data-connected as-shipped shall be connected to **only one** network or data connection for the test, as specified in Table 6. (See p. 6.)
- **Energy-Efficient Ethernet (EEE)**– Products that are tested with an Ethernet connection and capable of supporting EEE (Clause 78 of IEEE 802.3az) shall be connected to a network switch or router that also supports EEE for the duration of the test. (See p. 6.)
- **Telephone Line**– Fax machines and products incorporating fax machines that connect to a telephone line shall be connected to a telephone line for the duration of the test. (See p. 7.)
- **Driver Settings**– For products connected to a computer during the test, the computer shall run the manufacturer's default driver using settings corresponding to the default settings upon shipment. (See p. 8.)
- **Unit Preconditioning**– ENERGY STAR is considering extending initial pre-conditioning time to 2 hours prior to any testing to ensure that all products begin testing with their internal temperature equal to that of the ambient air. (See p. 8.)
- **Duplex Testing**– Products shall be tested in duplex mode if the speed of duplex mode output is greater than the speed of simplex mode output. (See p. 10.)
- **Typical Energy Consumption (TEC) Testing**– For TEC products, the duration of time until the UUT has reached its final sleep or auto-off mode may be specified by the manufacturer to reduce ambiguity. (See p. 13.)
- **Digital Front-end (DFE) Testing**– Manufacturers shall directly report the dc power to the DFE without adjusting for any power supply inefficiency. (See p. 15.)
- **IEC 62301**– References to IEC standard 62301 Edition 1.0, have been updated to Edition 2.0, in sections concerning test setup, instrumentation, and measurement accuracy. (See pp. 2-4, 10, 13.)

Functional Adders for Operational Mode (OM) Products

In addition, EPA is proposing a revised approach to functional adders for OM products. The current Version 1.2 Imaging Equipment Specification provides primary and secondary functional adder allowances to accommodate the power consumption in sleep mode of additional capabilities such as data and network interfaces. The allowance values were determined during the Version 1.0 specification

development. Primary functional adders include interfaces active during the test. Secondary functional adders include interfaces not active during the test as well as non-interface functions such as storage, memory, power supply, etc.

Recognizing recent advancements in the energy efficiency of imaging products, EPA proposes eliminating allowances for secondary functional adders and revising down the allowances for primary functional adders. The proposed power allowances for the primary functional adders are listed in Table 1. EPA welcomes your comments on these proposed allowances.

Table 1. Proposed power allowances for primary functional adders.

Primary Adder Category	Current Sleep Allowance (W)	Proposed Sleep Allowance (W)	Current description
A. Wired < 20 MHz	0.3	0.1	A physical data- or network-connection port present on the imaging product that is capable of a transfer rate < 20 MHz. Includes USB 1.x, IEEE488, IEEE 1284/Parallel/Centronics, RS232, and/or fax modem.
B. Wired ≥ 20 MHz and < 500 MHz	0.5	0.2	A physical data- or network-connection port present on the imaging product that is capable of a transfer rate ≥ 20 MHz and < 500 MHz. Includes USB 2.x, IEEE 1394/FireWire/i.LINK, and 100Mb Ethernet.
C. Wired ≥ 500 MHz	1.5	0.5	A physical data- or network-connection port present on the imaging product that is capable of a transfer rate ≥ 500 MHz. Includes 1G Ethernet.
D. Wireless LAN	3.0	0.5	A data- or network-connection interface present on the imaging product that is designed to transfer data via radio-frequency wireless means. Includes Bluetooth and 802.11.
E. Wired card/camera/storage	0.5	0.1	A physical data- or network-connection port present on the imaging product that is designed to allow the connection of an external device, such as flash memory-card/smart-card readers and camera interfaces (including PictBridge).
G. Infrared	0.2	0.1	A data- or network-connection interface present on the imaging product that is designed to transfer data via infrared technology. Includes IrDA.

EPA is also proposing to test and qualify models with **only one** primary functional adder, due to the proposed test procedure interface changes as mentioned above, and that the sleep mode power allowances for the **base marking engine** will also be revised when setting performance levels, as part of this specification development.

Non-qualified Product Data

Following the finalization of the test method, EPA will begin revisions to the qualification requirements (i.e., specification levels) for imaging equipment. To aid this process, EPA would welcome information on any non-ENERGY STAR qualified models from imaging equipment partners (including type, size format, marking technology, color capability, speed, and markets and dates available). These data will help ensure a representative dataset for specification development.

Next Steps

EPA welcomes written comment from stakeholders on the modifications to the test method and the proposed approach to functional adders through **Friday, July 29, 2011**. Please send all comments and supporting information to imagingequipment@energystar.gov. All documents will also be posted to the

ENERGY STAR Imaging Equipment Specification Revision page for your reference. To access them, please go to www.energystar.gov/revisedspecs and click on "Imaging Equipment".

On **Thursday, August 4, 2011**, EPA will hold an online stakeholder meeting to discuss EPA's proposed approach to the Version 2.0 test method and receive stakeholders' comments and concerns. **Please RSVP to imagingequipment@energystar.gov by Monday, August 1, 2011, to receive call-in information.**

Thank you for your continued support of ENERGY STAR. Please contact me at (202) 343-9046 or kent.christopher@epa.gov, or Matt Malinowski, ICF International, at (202) 862-2693 or mmalinowski@icfi.com with any questions or comments regarding this specification revision.

Sincerely,



Christopher Kent, EPA Product Manager
ENERGY STAR Product Specification Development

Enclosures:

ENERGY STAR Imaging Equipment Version 2.0 Draft Test Method
ENERGY STAR Imaging Equipment Specification Non-Qualified Data Form