



ENERGY STAR

Imaging Equipment Stakeholder Webinar

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ENERGY STAR Program



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Webinar Details



- Webinar slides and related materials will be available on the Imaging Equipment Web page:
 - www.energystar.gov/revisedspecs
 - Follow link to “Imaging Equipment”
- Audio provided via teleconference:
 - Call in:** +1 (877) 423-6338 (U.S.)
+1 (571) 281-2578 (International)
 - Code:** 436598#
 - Phone lines will remain open during discussion
 - Please mute line unless speaking
 - Press *6 to mute or un-mute your line
 - Refer to the agenda for approximate discussion timing

Agenda



- Introduction
- Changes to Test Method
- Test Method Comment Review
- Specification Update
- Next Steps

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- **Introduction**
- Changes to Test Method
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Version 2.0 Revision Timeline



March 11, 2011	Revision Announced Discussion Document Published
April 13, 2011	Kickoff Webinar
July 8, 2011	Draft Test Method Published
August 4, 2011	Test Method Webinar
November 9, 2011	Draft 2 Test Method Published
December 8, 2011	Test Method Webinar
December 2011	Test Method Finalized
January 2012	Draft 1 Specification Released
April 2012	Version 2.0 Specification Finalized
January 2013	Version 2.0 Specification Effective

Webinar Goals



- Update stakeholders on the specification and test method revision process
- Respond to comments on the Draft 2 Test Method
- Resolve any outstanding concerns prior to Test Method finalization
- Provide an update on the status of the Draft 1 Specification

EPA–DOE Memorandum of Understanding (MOU)



- On September 30, 2009, EPA and DOE signed a memorandum of understanding (MOU) designed to enhance and strengthen the ENERGY STAR program

EPA: Brand Manager	DOE: Technical Support
<ul style="list-style-type: none">• New Products• Performance Levels• Marketing & Outreach• Product Database• Monitoring & Verification	<ul style="list-style-type: none">• Test Methods• Metrics• Monitoring & Verification

EPA-DOE ENERGY STAR Team



- As part of the MOU, DOE is the lead for writing and updating ENERGY STAR test methods
- Navigant is contracted by DOE to write new test methods and validate and/or update existing test methods
- DOE team will provide overview and support of findings related to the test method

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- **Changes to Test Method**
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Justification for Changes



- Changes based on stakeholder comments received after the:
 - Draft 2 Test Method published on November 9
 - Stakeholder webinar held on August 4
- DOE and EPA conducted internal reviews to address the comments

Changes to the Draft 2 Test Method



Area of Test Method	Summary of Change
Draft Mode Definition	<ul style="list-style-type: none"> • Requested suggested definitions
IEC 62301	<ul style="list-style-type: none"> • Removed references relating to OM power measurement
Low Voltage Dc-powered Products	<ul style="list-style-type: none"> • Replaced with explicit instructions
Product Speed for Calculation	<ul style="list-style-type: none"> • Expanded test setup instructions
Product Speed for Calculation	<ul style="list-style-type: none"> • Clarified speeds for testing and calculations / qualification
Monochrome Printing	<ul style="list-style-type: none"> • Proposed reporting both speeds
Monochrome Printing	<ul style="list-style-type: none"> • Reiterated that testing will not be done in color, only in black (monochrome)
Network Connections	<ul style="list-style-type: none"> • Consolidated network connection protocol to one order of preference for all product types
Network Connections	<ul style="list-style-type: none"> • Added a requirement that service / maintenance modes be disabled prior to testing if possible
Service and Maintenance Modes	<ul style="list-style-type: none"> • Manufacturers must provide instructions on how to disable these modes
Service and Maintenance Modes	<ul style="list-style-type: none"> • Added a requirement that service / maintenance modes be disabled prior to testing if possible
Fax Machines	<ul style="list-style-type: none"> • Augmented test method to allow for line simulators for testing fax machines
Fax Machines	<ul style="list-style-type: none"> • Augmented test method to allow for line simulators for testing fax machines

Changes to the Draft 2 Test Method (cont.)



Area of Test Method	Note
Accessories/Paper Source	<ul style="list-style-type: none"> Deleted “however, their use in the test is at the manufacturer’s discretion (e.g., any paper source may be used)”
Driver Settings	<ul style="list-style-type: none"> Clarified that key driver settings used during testing must correspond to the defaults upon shipment
Battery-operated Products	<ul style="list-style-type: none"> Further clarified the pre-test initialization of battery-operated products
Pre-conditioning for EP Products	<ul style="list-style-type: none"> Extended the initial pre-conditioning time to 2 hours prior to any testing of EP models to account for drum warming/cooling times
Auto-off	<ul style="list-style-type: none"> Clarified that Auto-off must be disabled prior to testing
Digital Front End (DFE) Testing	<ul style="list-style-type: none"> Added a requirement that manufacturers directly report the dc power to the DFE and report DFE power in Sleep Mode

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Summary of Comments Received



- DOE and EPA received comments from six stakeholders
- Most comments focused on nine areas:
 1. Draft Mode Definition
 2. Reference to IEC 62301
 3. Product Speed for Calculation
 4. Monochrome Printing
 5. Network Connections
 6. Service and Maintenance Modes
 7. Accessories/Paper Source
 8. Driver Settings
 9. Auto-off
- The team wishes to discuss and resolve outstanding issues

Comments Supporting Draft 2 Changes



- DOE and EPA received the following comments in support of changes to the test method:
 - Change from referencing IEC 62301 directly to adding specific guidance to relevant sections
 - Use of one network connection during the test
 - Use of monochrome test patterns

Stakeholder Discussion:

Draft Mode Definition



Change from Draft 1 to Draft 2 (Line 10): Requested definition proposals from stakeholders

Stakeholder Comments	Response
<p>Proposed Draft Mode definition:</p> <p>Fastest print mode that enables previewing of work and may be useful for rush jobs. Visual inspection shall not detect defects that deter from readability and basic concept previewing.</p>	<p>Propose using the definition:</p> <p>The fastest print mode, which produces a product that is fully readable and does not include defects, but produces a print that is of lesser quality than one printed in a non-draft mode.</p>

- DOE and EPA are interested in stakeholders' input on the proposed definition for Draft Mode

Stakeholder Discussion:

Reference to IEC 62301



Change from Draft 1 to Draft 2 (Line 58): Removed references relating to OM power measurement; Replaced with explicit instructions

Stakeholder Comments	Response
<ul style="list-style-type: none">Stakeholder requests use of IEC 62301, Ed. 2 uncertainty requirementsStakeholder supports Draft 2 revision of uncertainty requirementsStakeholder unsure if uncertainty measurements can be implemented as part of the annual equipment calibration	<ul style="list-style-type: none">Will use IEC 62301, Ed. 2 uncertainty requirements, using ENERGY STAR language included in Draft 2Uncertainty measurements can be made as part of the annual equipment calibration

Stakeholder Discussion:

Product Speed for Calculation



Change from Draft 1 to Draft 2 (Line 82): Clarified speeds for testing and calculations / qualification; Proposed reporting of both speeds

Stakeholder Comments	Response
<ul style="list-style-type: none">• Product speed should be the highest speed• Stakeholder suggests an edit to the text to include: <i>When a manufacturer intends to get a product qualified in a certain market by making use of existing test results already conducted for the product in another market using other sizes of paper...</i>	<ul style="list-style-type: none">• The product speed for calculation shall be the highest speed• DOE and EPA will maintain the text included in Draft 2

Stakeholder Discussion:

Monochrome Printing



Change from Draft 1 to Draft 2 (Line 112): Reiterated that testing will not be done in color, only in black (monochrome)

Stakeholder Comments	Response
<ul style="list-style-type: none">• Support the use of monochrome test patterns for TEC testing• No direction is given for testing a color product that is incapable of printing in black text	<ul style="list-style-type: none">• Monochrome test patterns shall be used for testing• In the case where a unit does not have black ink, a black monochrome print should be created using composite black

Stakeholder Discussion:

Network Connections



Change from Draft 1 to Draft 2 (Line 122): Consolidated network connection protocol to one order of preference for all product types

Stakeholder Comments	Response
<ul style="list-style-type: none">• Split Table 6 to allow for separate prioritizations for 1) Standard-format Ink Jet and Impact Printers and MFDs and 2) All Other TEC and OM Products• Use one prioritization list for all products• Network prioritization should be based on the connections that are enabled at product shipment	<ul style="list-style-type: none">• Table 6 will remain as one list of prioritized network connections for all products• Products should be tested using the highest priority network connection in Table 6

Stakeholder Discussion:

Network Connections (cont.)



Change from Draft 1 to Draft 2 (Line 122): Consolidated network connection protocol to one order of preference for all product types

Stakeholder Comments	Response
<ul style="list-style-type: none">• Move Wi-Fi to a higher priority• Reference 10 Mb/s and show it in the table as: Ethernet – 100/10 Mb/s.• No communication should take place on OSI level 5 over the network, apart from the print jobs that need to be sent• Limiting testing to only LAN connections is an overly restrictive requirement	<ul style="list-style-type: none">• Wi-Fi will remain where it is listed in Draft 2• 10 Mb/s will be added to Table 6• No specification will be made about communication over the network beyond the test setup requirements• The UUT may be tested against a live WAN. The test setup is a minimum configuration, not a requirement.

Stakeholder Discussion:

Service and Maintenance Modes



Change from Draft 1 to Draft 2 (Line 130): Added requirement that service / maintenance modes must be disabled prior to testing; Manufacturers must provide instructions on how to disable these modes

Stakeholder Comments	Response
<ul style="list-style-type: none">• Support change to disable maintenance and calibration modes prior to testing• Stakeholder suggests removing the requirement for providing instructions detailing how to disable service and maintenance modes	<ul style="list-style-type: none">• All UUTs must be tested with the service and maintenance modes disabled, if possible• Manufacturer must provide instructions that guide the tester in disabling these modes• Test method provides instructions if service/maintenance modes cannot be disabled

Stakeholder Discussion:

Accessories/Paper Source



Change from Draft 1 to Draft 2 (Line 162): Deleted “however, their use in the test is at the manufacturer’s discretion (e.g., any paper source may be used)”

Stakeholder Comments	Response
<ul style="list-style-type: none">Suggested edit to the accessories/paper source requirement: Accessories such as paper source and finishing hardware that are intended to be installed or attached by the end-user shall be installed; <i>however, their use in the test is at the manufacturer’s discretion (e.g., any paper source may be used).</i>	<ul style="list-style-type: none">Keep Draft 2 requirements to maintain consistency in testing.

Stakeholder Discussion:

Driver Settings



Change from Draft 1 to Draft 2 (Line 164): Clarified that key driver settings used during testing must correspond to the defaults upon shipment

Stakeholder Comments	Response
<ul style="list-style-type: none">• Product drivers used for product introduction will not always be available for testing• Unclear about what specific driver “settings” should be documented.	<ul style="list-style-type: none">• Use latest print driver available for testing• Manufacturers must document the driver used and the particular “settings” used during the test• Include any settings that are different than the default settings

Stakeholder Discussion:

Auto-off



Change from Draft 1 to Draft 2 (Line 190): Clarified that Auto-off must be disabled prior to testing

Stakeholder Comments	Response
<ul style="list-style-type: none">• Question why an energy saving feature (Auto-off) must be disabled during the test• Interested in the logic behind allowing Auto-off to be considered on OM products as well as for TEC products without print capability, but not for TEC products with print capability.	<ul style="list-style-type: none">• Auto-off must be disabled during testing so print jobs can be received over the network when UUT is in low power mode (i.e., sleep)¹

¹ According to the ENERGY STAR definitions, units are not network ready while in Auto-off mode

Stakeholder Discussion



- Any other topics that stakeholders would like to discuss that weren't covered during the comment review discussion?

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Specification Update



- Draft 1 going through internal ENERGY STAR management review
- Next Steps:
 - Intend to distribute to stakeholders in early January 2012
 - Comments will be due to EPA by late January
 - EPA seeks input on a face-to-face meeting in early February, probably in Washington, DC
- Based on this schedule, the specification could be finalized in April 2012, with an effective date of January 2013

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