

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



OFFICE OF  
AIR AND RADIATION

June 14, 2012

Dear Displays Partner or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) is pleased to share with you the attached Final Draft Version 6.0 ENERGY STAR® Displays specification and Final Draft ENERGY STAR Displays Test Method. EPA would like to thank the many stakeholders who have invested time and effort over the past year to contribute feedback that has informed this product specification process. EPA plans to finalize this Displays Version 6.0 specification in July 2012, where it would take effect in April 2013.

All of the feedback received aided the revision of this draft specification. The Final Draft Version 6.0 ENERGY STAR Displays specification includes the following modifications from Draft 3:

- **On Mode Power:** With this Final Draft, EPA proposes retaining the levels proposed in the addendum issued on March 6, which reflected greater qualification rates in key popular sizes while still recognizing top performing display models at a cost effective price. For **enhanced-performance displays**, EPA proposes to increase the adder to 30 percent of the On Mode power requirement, up from 20 percent. Doing so will capture the same subset of enhanced-performance displays less than 27", but provide more opportunity for larger products to meet the proposed On Mode power requirements. EPA proposes to grant this adder to displays that meet all of the criteria for an enhanced-performance display.
- **Resolution:** To better account for currently available products that deliver higher resolution image quality than is typical, EPA now proposes to base its allowance structure for higher resolution products on megapixel per square inch, or in other words, pixel density. A power allowance not to exceed 6 Watts per megapixel is established based on a device with a resolution of 14,000 pixels per square inch. This change from a megapixel approach more appropriately ties the upper limit to resolution in relation to screen size and is consistent with the overall specification framework which ties allowances to both resolution and screen area. It translates into a slightly larger allowance for products with a very high pixel density than proposed in Draft 3. EPA will continue to monitor the market to understand if and how resolution may increase, especially among larger products, and to determine its impacts on power consumption.
- **Power Management:** According to stakeholder feedback on the power management behavior of monitors when they are disconnected from a computer without being turned off, most monitors on the market today enter Sleep Mode after the connection to a host is discontinued. As such, EPA proposes to require this power management feature for all ENERGY STAR qualified computer monitors.

- **Power Allowances in Sleep Mode for Data or Network Capabilities:** In response to stakeholder comments requesting consideration of the typical physical layer power consumption, EPA proposes to raise the power allowance for Gigabit Ethernet from 0.5 W to 1.0 W and for Fast Ethernet from 0.1 W to 0.2 W. EPA understands that doing so will allow such networking features to continue to function during Sleep Mode.
- **Toxicity and Recyclability:** While energy efficiency remains the basis upon which top performers are selected, EPA addresses attributes related to other aspects of product performance in ENERGY STAR specifications as applicable to ensure that overall product performance is maintained relative to a non-qualifying product. By including additional attributes, the ENERGY STAR program seeks to avoid associating the label with models of poor quality or models with features that are not compatible with broadly held consumer or societal interests, thereby preserving the influence of the label in the market. In response to significant stakeholder concern that placement of toxicity and recyclability requirements in the product eligibility criteria would hinder international harmonization, EPA is proposing that these criteria reside instead in the ENERGY STAR Displays Partner Commitment document, which is unique to the US market. As such, EPA has removed section 3.7, Toxicity and Recyclability requirements, from the displays eligibility criteria. Further, in response to feedback, EPA notes in the Partner Commitment document that it is the Agency's intention to harmonize with EU RoHS, and that the toxicity and recyclability requirements are not subject to third-party certification.
- **Test Method:** The Department of Energy (DOE) presents the Draft Final Test Method, which provides additional clarifications and modifications from the Draft 4 Test Method. DOE proposes that testing of all Automatic Brightness Control (ABC) enabled products shall be performed using a standard spectrum halogen flood reflector lamp, that there shall be no test room surface within 2 feet of the center of the Unit Under Test's (UUT's) ABC Sensor, and that power and power factor measurements shall be logged at an interval greater than or equal to 1 reading per second.

**Stakeholders are requested to provide comments on the Draft Final specification and test method no later than June 29, 2012. Please send comments via e-mail to [displays@energystar.gov](mailto:displays@energystar.gov).** All comments received will be posted to the ENERGY STAR Product Development website unless the submitter specifically requests that his or her comments remain confidential.

The exchange of ideas and information between EPA, industry, and other interested parties is critical to the success of ENERGY STAR. To track EPA's progress in revising the ENERGY STAR Displays specification and to review the summary of stakeholder comments in response to Drafts 1, 2, and 3, please visit the Product Development website at [www.energystar.gov/RevisedSpecs](http://www.energystar.gov/RevisedSpecs) and click on "Displays."

Thank you for taking the time to review this draft specification. Stakeholders with questions or concerns about the specification can contact me directly at [Radulovic.Verena@epa.gov](mailto:Radulovic.Verena@epa.gov). Stakeholders with concerns about the test method should contact Ashley Armstrong, Department of Energy, at [Ashley.Armstrong@ee.doe.gov](mailto:Ashley.Armstrong@ee.doe.gov).

Best Regards,

A handwritten signature in black ink, reading "Verena Radulovic". The signature is fluid and cursive, with the first name "Verena" and last name "Radulovic" clearly distinguishable.

Verena Radulovic  
ENERGY STAR for Consumer Electronics

Enclosures:  
Final Draft Version 6.0 ENERGY STAR Displays Specification  
Final Draft ENERGY STAR Displays Test Method  
Draft Partner Commitments