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



OFFICE OF AIR AND
RADIATION

March 7, 2019

Dear ENERGY STAR® Displays Partner or Other Interested Stakeholder:

The U.S. Environmental Protection Agency (EPA) is pleased to share with you the [ENERGY STAR Displays Final Draft Version 8.0 specification](#). 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 has carefully considered all stakeholder comments on Draft 2 released in August 2018. Commenters expressed support for key criteria but also requested numerous modest refinements. Highlights of these refinements to the Final Draft specification are provided below and are discussed in noteboxes throughout the document. All other comments are responded to in the accompanying [Draft 2 Comment Response Document](#).

Maximum Total Energy Consumption for Monitors

In response to Draft 2, several stakeholders commented that the Total Energy Consumption (TEC) requirements for monitors were too stringent for models with screen area greater than 300 square inches and Full HD resolution. In response and per further review of the ENERGY STAR dataset as of October 2018, EPA has revised the requirements for four separate size bins, resulting in better representation across various sizes, resolutions, and features.

Enhanced Performance Displays

In response to the allowance proposed for Enhanced Performance Displays (EPDs) in Draft 2, several stakeholders pointed out that the allowance function did not account for Color Gamut power demand scaling with screen area. EPA has revised the EPD allowance in the Final Draft to address this by calculating the EPD allowance proportionately to maximum TEC.

Per closer review of the data, EPA agrees with a stakeholder's suggestion that WUXGA (2.3 total megapixels) resolution is still a premium segment of the market, thereby warranting eligibility for an EPD allowance. Accordingly, EPA has reverted to the original resolution requirement which recognizes WUXGA.

Monitors with High Dynamic Range (HDR)

In response to stakeholder requests for an allowance for monitors with High Dynamic Range (HDR) capability, EPA includes in this Final Draft allowances of 5% and 10%. These allowances are intended to account for modest systematic power increases associated with the higher peak brightness capability of models supporting HDR. By setting modest allowances, EPA seeks to recognize only those HDR monitors that scale down power, peak brightness, and processing functions in a content-based manner such that the monitor is saving power when displaying images for applications such as web browsing and word processing, which are the uses best accounted for by the ENERGY STAR Test Method.

Additional Allowances for Monitors

Per stakeholder feedback, EPA has increased the monitor TEC allowances for Touch Functionality and Curved Screens to 17% and 15%, respectively, and added an allowance of 0.7 kWh for monitors with USB-C ports.

Signage Displays

EPA has updated the definitions of Signage Displays and Tiled Display Systems in the Final Draft, including the maximum pixel density criterion for Signage Displays and the definitions of Embedded and Plug-in Modules. EPA has also introduced an allowance for Signage Displays with Embedded Modules.

Through two drafts, numerous stakeholder meetings, and careful consideration of all comments and data, this Final Draft specification balances recognizing energy savings and preserving the features that consumers seek. Approximately 30% of monitors in a variety of size bins from a wide selection of brand owners meet the Final Draft levels. EPA did receive an additional request to ease the TEC requirements for monitors. EPA evaluated this request and found that accommodating it would result in more than 50% of available models meeting the eased levels. In the interest of recognizing products demonstrating leadership, EPA has not made this requested change.

Any comments on the Final Draft specification should be submitted no later than **March 21, 2019**. Please send comments via e-mail to displays@energystar.gov. All comments received will be posted to the ENERGY STAR Product Development website, unless the submitter specifically requests otherwise.

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 products specification and to review comments, please visit the Product Development Web site at www.energystar.gov/RevisedSpecs and click on "[Version 8.0 is in development](#)" under "Displays."

Thank you for taking the time to review this draft specification. Please contact me at Kwon.James@epa.gov or (202) 564-8538 or Théo Keeley-LeClaire at ICF, Theo.Keeley-LeClaire@icf.com or (571) 373-5471 with any questions or concerns. For any test method questions, please contact Jeremy Domm, U.S. Department of Energy, Jeremy.Domm@EE.Doe.Gov, or (202) 586-9870. For any other Displays-related questions, please contact displays@energystar.gov. Thank you for your continued support of the ENERGY STAR program.

Sincerely,



James Kwon, Product Manager
U.S. Environmental Protection Agency
ENERGY STAR for Consumer Electronics

Enclosures:

[ENERGY STAR Displays Final Draft Version 8.0 Specification](#)

[ENERGY STAR Displays Final Draft Test Method](#)

[ENERGY STAR Displays Draft 2 Version 8.0 Comment Response Document](#)

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