

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



OFFICE OF
AIR AND RADIATION

May 17, 2016

Dear ENERGY STAR Television Brand Owner Partner:

With this letter, the Environmental Protection Agency (EPA) is providing additional guidance concerning ENERGY STAR[®] certification of televisions (TVs) with features that adjust screen luminance.

Automatic Brightness Control

Automatic Brightness Control (ABC), which adjusts screen luminance depending on ambient light conditions, is a special function that can deliver significant energy savings and is accommodated by the ENERGY STAR television specification. TVs that ship with ABC, defaulted on may be tested with this special function enabled for purposes of ENERGY STAR certification as long as the user is not subsequently prompted to disable it (see Section 5.5 of the [ENERGY STAR Test Method](#)). EPA's intention is that ABC remain engaged, although ENERGY STAR recognizes the need to preserve means for the consumers to disable the function if they choose to. Further, it is EPA's expectation that consumers be notified of the energy implications of their choices as stated in Section 3.2.4 of the ENERGY STAR television specification, which requires that if consumers have the option of changing picture settings, the product will display on-screen information making clear the default picture setting is the setting under which the product qualified for ENERGY STAR.

Accordingly, for televisions certified with ABC or an equivalent energy saving function, it is not acceptable for the product to automatically disable the function under any circumstance. That is, no matter the consumer-selected deviation from the default tested mode or picture setting, ABC must remain enabled unless the consumer actively seeks to disable it without prompting from the TV. This disabling restriction applies to small changes to individual picture settings like backlight, brightness, and contrast or changes from one display mode (standard, sports, movie, dynamic, etc.) to another.

To ensure televisions certified with ABC perform consistently with the intent of the ENERGY STAR specification, ENERGY STAR certification bodies (CBs) will be asked, going forward, to confirm that ABC remains engaged when changes to picture settings (either at the master setting or the sub-setting level) are made. This will include changes from home/default mode to dynamic mode, for example, or adjustments to the brightness or other settings.

Other Screen Luminance Dimming Features

Since the last ENERGY STAR television specification revision, EPA has learned of a new feature that can temporarily reduce screen luminance in response to frequent scene changes or

rapid motion in video content. This feature can be known as "motion lighting" or "motion eye care" or by other names, and is distinct from the techniques many high-refresh-rate televisions use to reduce blur in moving images or to interpolate content between frames. Until the energy implications of this type of feature are better understood, EPA is requiring that it be disabled in setup menus for purposes of ENERGY STAR certification testing.

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If you have questions or concerns, please contact Katharine Kaplan at Kaplan.Katharine@epa.gov.

Thank you for your continued support of ENERGY STAR.

Sincerely,

A handwritten signature in black ink, appearing to read "Ann Bailey". The signature is fluid and cursive, with the first name "Ann" and last name "Bailey" clearly distinguishable.

Ann Bailey, Chief
ENERGY STAR Labeling Branch
US Environmental Protection Agency

Sample Draft 2 Cover Letter

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



**OFFICE OF
AIR AND RADIATION**

August 10, 2009

Dear Audio/Video Equipment Manufacturer or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) welcomes your input on the attached Draft 2 Version 2.0 ENERGY STAR Audio/Video specification ("Draft 2"). EPA is revisiting the ENERGY STAR specification for audio/video equipment to (1) set new energy efficiency criteria for products that are currently covered by the ENERGY STAR Version 1.0 Audio/DVD specification, in order to ensure that the ENERGY STAR mark continues to represent the top performers in terms of energy efficiency; and (2) include energy efficiency criteria for a broader set of Audio/Video products previously not included in the Version 1.0 specification.

On May 22, 2009, EPA released the Draft 1 Version 2.0 Audio/Video specification and test procedure to the stakeholder community. A revised test procedure was subsequently released on

July 15, 2009. EPA received many constructive comments on the Draft 1 specification and a limited amount of product test data over the past two months. The feedback and test data have been used to inform the development of this Draft 2 document.

Important modifications from Draft 1 to Draft 2 include:

- Auto Power Down (APD), Primary Function, and Idle state definitions have been added or modified to address several stakeholder concerns, and to meet the EPA's intention to encourage systems to turn off when they are not in use. EPA is requesting suggestions for how to define "loss of signal" criteria to trigger APD for audio and video input signals generated by external sources.
- The list of excluded products now includes (1) products which include an IP video tuner and are not sold under a service contract, as these will be addressed in the next revision of ENERGY STAR for Set Top Boxes, (2) whole-house AV systems, which will be considered by EPA separately in 2010 in the context of "home controls," and (3) videoconferencing systems and wireless microphone systems, as insufficient test data was received to inform the development of ENERGY STAR requirements.
- On and Sleep mode power consumption limits for various product functions have been proposed based on an analysis of AV test data recently submitted by stakeholders and from previous ENERGY STAR data collection efforts. EPA is still waiting for clarification on amplifier test data, and will propose power consumption limits for audio amplification upon receipt of additional information.
- Unique On mode requirements for stand-alone, dedicated audio digital signal processor (DSP) devices have been included in the specification. Based on stakeholder feedback, there is an opportunity for ENERGY STAR to achieve significant energy savings by defining APD requirements and Sleep mode power consumption limits for these products. However, the "audio signal processing" function that is the sole function of a DSP device is a generic function of many products in the Audio/Video market. EPA believes that providing a separate allowance for this generic function would be inappropriate, since power consumption due to basic signal processing in other AV products will be included in the modal power limits for other product functions.
- Detailed test setup and instrumentation requirements have been removed from the test procedure. Test setup and instrumentation for both On mode and Sleep mode tests are now required to conform to the requirements in the internationally-recognized IEC 62301 test standard.
- IEC-62087 standard video content is now specified as the source content for various optical media player test procedures.
- Effective dates for product qualification for both Tier 1 and Tier 2 Version 2.0 Audio/Video specification have been proposed, along with details about qualifying products that are currently eligible for qualification under the Version 1.0 ENERGY STAR Audio/DVD program.

On and Sleep mode power allowances for several of the product functions proposed in earlier drafts of this document have been removed from the specification since test data indicates that these functions do not require additional power. To build a more complete set of test data, EPA continues to encourage stakeholders to take a more active role in the specification development process by testing their products and submitting test data for consideration.

As always, the exchange of ideas and information among EPA, industry, and other interested parties is critical to the success of ENERGY STAR. Manufacturers are strongly encouraged to e-mail feedback on Draft 2 Version 2.0 specification to AudioVideo@energystar.gov by **September 11, 2009**.

EPA plans to host a conference call to discuss the Draft 2 specification on **September 15, 2009**. Call-in information and an agenda will be distributed prior to the meeting.

To track EPA's progress in revising the specification for audio/video products, visit the ENERGY STAR Product Development Web site at www.energystar.gov/RevisedSpecs. Please direct any specific questions to Kathleen Vokes, EPA, at vokes.kathleen@epa.gov or Stephen Pantano, ICF International, at spantano@icfi.com.

Thank you for your continued support of ENERGY STAR.

Sincerely,

A handwritten signature in black ink, appearing to read "Kathleen Vokes", with a long horizontal flourish extending to the right.

Kathleen Vokes
US Environmental Protection Agency
ENERGY STAR for Audio/Video