

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



OFFICE OF  
AIR AND RADIATION

October 13, 2009

Dear Audio/Video Equipment Manufacturer or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) welcomes your input on the attached Final Draft Version 2.0 ENERGY STAR Audio/Video specification. With this revision, EPA (1) establishes new energy efficiency criteria for products currently covered by the ENERGY STAR Version 1.0 Audio/DVD specification. These new requirements will ensure that the ENERGY STAR mark continues to represent the top performers in terms of energy efficiency; and (2) adds efficiency criteria for a broader set of Audio/Video products than previously addressed by the ENERGY STAR program. EPA plans to finalize this specification on November 16, 2009.

On August 10, 2009, EPA released the Draft 2 Version 2.0 Audio/Video specification to the stakeholder community. This was followed on September 10, 2009 by a second document in which EPA proposed qualification criteria for audio amplifiers. EPA received many comments on the Draft 2 specification both via email and during a subsequent conference call. The feedback has been used to inform the development of this Final Draft document.

Important modifications in the Final Draft document include:

- The Version 2.0 specification is now broken into three tiers:
  - Tier 1, which will become effective immediately upon finalization of the specification, introduces qualification criteria for commercial AV products. Note that under Tier 1, consumer AV products will be subject to the same standby power requirements that were previously in place in the Version 1.0 ENERGY STAR Audio/DVD specification.
  - Tier 2, effective on July 30, 2010, will require all AV products, regardless of their status under Tier 1, to meet the same On mode, Sleep mode, Auto Power Down, and Amplifier efficiency requirements, as applicable.
  - Tier 3, effective on March 30, 2012, will require all AV products to meet more stringent on mode requirements.
- Product Classifications have been updated to define product categories that will be subject to unique requirements under this specification. EPA has defined "AV Product" as the general purpose definition for the majority of products on the market today. The "Commercial/Prosumer Audio Amplifier" category definition has been removed from the document. A specific exception is still in place for Dedicated Audio DSP Devices.
- The definition for Auto Power Down (APD) has been revised and a detailed list of static device functions provided to specify additional device operations which do not constitute primary functions. Loss of Signal (LOS) criteria have also been revised.

- Manufacturers are allowed to select default APD timing from 30 minutes to 2 hours, though any product with an APD setting of greater than 30 minutes must meet Idle state power consumption requirements. Further, while APD must function on all available AV inputs, only one input must be tested and verified for purposes of ENERGY STAR qualification.
- The equation to determine amplifier Idle power has been updated to reference output power, rather than mains input power, to avoid penalizing higher-efficiency amplifiers.
- Amplifier test procedures have been revised to reference “full-spectrum” versus “limited-bandwidth” audio amplifiers, in accordance with industry terminology. The test procedure for limited-bandwidth amplifiers has been revised so that each channel can be measured independently. The most power consumptive channel is then used as a reference channel for determining 1/8 MUP for the amplifier as a whole.
- The lower screen resolution limit for high-resolution displays has been revised and a definition for Status Display has been added per suggestions received from stakeholders.
- A third category has been added to the On mode requirements table for optical disc players, to capture “upconversion” disc players which process a SD source for output to a HD device. The On mode limits for all optical disc players have been relaxed from the previous draft based on stakeholder feedback.
- Finally, a flow chart has been added to the specification as Appendix A. This flow chart is intended to help manufacturers determine applicable testing and qualification criteria for their AV products.

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 Final Draft Version 2.0 specification to [AudioVideo@energystar.gov](mailto:AudioVideo@energystar.gov) by **October 28, 2009**.

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](http://www.energystar.gov/RevisedSpecs). Please direct any specific questions to Kathleen Vokes, EPA, at [vokes.kathleen@epa.gov](mailto:vokes.kathleen@epa.gov) or 202-343-9019, or Stephen Pantano, ICF International, at [spantano@icfi.com](mailto:spantano@icfi.com) or 202-862-1551.

Thank you for your continued support of ENERGY STAR.

Sincerely,



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