

**Discussion Guide for ENERGY STAR®  
Digital-to-Analog Converter Boxes Stakeholder Meeting 10/25/06**

EPA sees the October 25, 2006 digital-to-analog converter box (DTA) stakeholder meeting as an excellent opportunity to work collaboratively with industry towards making decisions on a number of key outstanding issues related to development of a Draft1 ENERGY STAR specification for DTAs. Various questions for stakeholders were included in the DTA specification framework document distributed on October 2, 2006. This document is intended to summarize those questions and serve as a roadmap for discussions at the October 25, 2006 meeting.

It continues to be EPA's goal to develop and finalize an ENERGY STAR specification for DTAs by December 2006.

**Definitions**

EPA included key definitions related to DTAs in its framework document, including product and relevant operational mode definitions, which are provided below.

Digital Television Adapter (DTA): Receives terrestrial, (over the air) digital signals and converts them to an analog output suitable for analog TVs. Does not provide digital signal output, and thus does not work with a digital TV. The DTA category does not include converters that work with satellite or cable digital signals, nor does it cover devices with multi-functionality such as a DVD player with digital to analog conversion capability.

Auto Power Down: A feature that operates similarly to power management features in computers, and would require the DTA to enter Standby Passive Mode after a certain pre-set number of hours of user inactivity (e.g., no channel changes being made).

On Mode: The appliance is connected to a power source and fulfills its main function, e.g., receiving and converting a digital TV signal and repacking it in standard definition analog NTSC format.

Standby Active Mode: The appliance is connected to a power source, does not fulfill the main function but can be switched into another mode with the remote control unit or an internal signal. A DTA in this mode can also be switched into another mode with an external signal, and can be exchanging/receiving data with/from an external source. For DTAs, this operational mode would most typically include program guide updates.

Standby Passive Mode: The appliance is connected to a power source, does not fulfill the main function but can be switched into another mode with the remote control unit or an internal signal. This mode is typically the lowest power consuming mode that a DTA has while plugged in.

Discussion questions to answer:

- Do stakeholders agree with the definitions provided? If not, which definitions need to be modified, and why?
- Are there any other terms relevant to DTAs that should be defined in the specification?

## **Proposed Energy Efficiency Specifications**

EPA proposed two alternate approaches to an ENERGY STAR specification for DTAs; a modal approach and a duty-cycle approach. Neither approach had power consumption levels associated with them, as EPA wanted to solicit stakeholder input on a preferred approach prior to conducting additional research to determine (i) levels that would be both achievable and cost-effective, and (ii) appropriate duty-cycles for DTAs.

Discussion questions to answer:

- Do stakeholders have an initial preference for either a modal approach or a duty-cycle approach to the ENERGY STAR specification for DTAs?
- For a modal approach, do stakeholders have suggestions for proposed wattage levels in On Mode and Standby Mode that are achievable cost-effectively, yet ensure energy and monetary savings for the consumer?
  - If yes, what are these suggestions based on, e.g., development of prototype models, analysis of high-efficiency components, etc?
- For a modal approach, is four hours of user inactivity an appropriate length of time after which the DTA should automatically power down?
- Do stakeholders have any input on whether 50% is an accurate estimation of the percentage of users that will turn off their DTAs when turning off their TVs?
- For a duty-cycle approach, do stakeholders have any information available regarding typical American TV viewing patterns?

## **Test Procedures**

EPA is currently considering various test procedures for measuring the power consumption of DTAs, one of which is IEC 62087: Methods of Measurement for the Power Consumption of Audio, Video, and Related Equipment. However, EPA believes that this test procedure may fail to accurately address certain aspects of DTA power consumption. Another test procedure under consideration is CEA 2013-A.

Discussion questions to answer:

- Do stakeholders consider IEC 62087: Methods of Measurement for the Power Consumption of Audio, Video, and Related Equipment an appropriate test procedure for measuring DTA power consumption?
  - Are there any clarifications that would need to be made to IEC 62087 to accurately address all aspects of DTA power consumption?
- Do stakeholders consider CEA 2013-A an appropriate test procedure for measuring the power consumption of DTAs?
- Are there any other test procedures that stakeholders believe more appropriate for measuring the power consumption of DTAs?