

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



OFFICE OF  
AIR AND RADIATION

February 3, 2016

Dear ENERGY STAR® Set-top Box Partner or Other Interested Stakeholder:

The U.S. Environmental Protection Agency (EPA) welcomes your input on the attached Draft 2 Version 5.0 ENERGY STAR Set-top Box (STB) specification. The U.S. Department of Energy (DOE) and EPA have also attached for your review a Draft 2 test method. A brief summary of changes reflected in these drafts is included below.

EPA published the Draft 1 specification on November 16, 2015. In response to this draft and the associated dataset, EPA received comments on base and functional adder allowances. Stakeholders also requested updates to the EPA dataset based on their current suite of products and their capabilities. In response to this feedback, EPA has updated its dataset and analysis. EPA expects the updated draft to reflect a good balance between ambitious energy efficiency requirements and choice of models for customers.

Key updates included in the Draft 2 specification:

- **Adder Allowances:** To better reflect the energy consumption of MIMO, DOCSIS, and networking (Router and Access Point) functions, EPA is proposing updated allowances for those features based on the U.S. Small Network Equipment and STB Industry Voluntary Agreements (VAs). Also, per stakeholder comments regarding the energy demands of picture-in-picture, EPA is proposing to bring back the Multi-stream allowance and also extend it to Thin Clients. Other allowances have also seen minor updates to better reflect the energy required by features.
- **Base Allowances:** Following updates to the adder allowances, EPA set the base allowances to permit a variety of products to meet, while also recognizing progress in efficiency since Version 4.1. EPA is proposing to keep base allowance for Satellite and Cable STBs equal due to the similarities in design, but has increased the allowances relative to those for Cable Digital Transport Adapter (DTA) and Internet Protocol STBs due to the additional complexity of Cable and Satellite STBs. EPA is delaying the effective date of Version 5.0 for Thin Clients, thereby retaining the Version 4.1 requirements for Thin Clients through 2017 with the intention of encouraging brand owners to focus on achieving low latency Deep Sleep.
- **Deep Sleep:** Due to concerns with usability and savings offered by the previously defined Deep Sleep state, EPA is redefining Deep Sleep State be a state within Sleep Mode (i.e., latency less than 30 seconds, no required schedule) that offers significant savings. Later

in the specification, EPA has revised the TEC requirements for Thin Client STBs such that Deep Sleep State, or another mechanism that achieves similar reductions, would need to be deployed by 2018. The state formerly known as Deep Sleep has been renamed to “Scheduled Sleep” and is incentivized through changes to the TEC weighting, as in Version 4.1.

- **Service Provider Partner Commitments:** As designed, Service Provider Partner Commitments specific to purchase and fleet requirements, are reviewed each time eligibility requirements for set-top boxes are revised to ensure Service Provider requirements are challenging yet achievable based on the stringency of the hardware requirements. Accordingly, EPA has reviewed the Service Provider purchase and fleet requirements against the Draft 2 specification, and proposes a re-set of the Service Provider requirements such that Service Provider partners must ensure that 25% of all new set-top box purchases in a calendar year are ENERGY STAR qualified or that at least 15% of all set-top boxes deployed to subscribers at the end of a calendar year are ENERGY STAR qualified. These updated requirements can be found in the associated Service Provider Partner Commitments document attached.

Key updates included in the Draft 2 test method:

- **Displayless Video Gateway (DVG):** DOE has combined the testing requirements for DVGs with those required for Multi-Room STBs. The test requirements for DVGs continue to be the same.
- **Multiple Streams over HNI:** For STBs that offer concurrent operation of integrated HNIs, DOE has aligned the requirement to be the same as that specified in the VA based on stakeholder feedback during the Draft 1 webinar.

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 the Draft 2 Version 5.0 specification to [STBs@energystar.gov](mailto:STBs@energystar.gov) by **March 2, 2016**. All comments received will be posted to the ENERGY STAR Product Development website, unless the submitter specifically requests otherwise.

EPA will host a webinar on **February 23, 2016**, at **12–2 pm Eastern Time** to answer stakeholder questions on the Draft and receive initial feedback. EPA welcomes stakeholder participation and encourages stakeholders to [RSVP](#) to receive meeting details.

To track EPA’s progress in revising the specification for STBs, visit the ENERGY STAR Product Development web site at [www.energystar.gov/RevisedSpecs](http://www.energystar.gov/RevisedSpecs). Please direct any specific questions to Katharine Kaplan, EPA, at [kaplan.katharine@epa.gov](mailto:kaplan.katharine@epa.gov) or Matt Malinowski, ICF International, at [matt.malinowski@icfi.com](mailto:matt.malinowski@icfi.com). For questions on the test method, please contact Jeremy Dommu, DOE, at [Jeremy.Dommu@EE.Doe.Gov](mailto:Jeremy.Dommu@EE.Doe.Gov).

Thank you for your continued support of ENERGY STAR.

Kind regards,

A handwritten signature in cursive script that reads "Katharine Kaplan". The signature is written in a dark ink and has a fluid, connected style.

Katharine Kaplan  
Manager, ENERGY STAR Product Development and Program Administration