

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



OFFICE OF  
AIR AND RADIATION

April 4, 2014

Dear Set-top Box Equipment Manufacturer, Service Provider or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) is pleased to share with you the final ENERGY STAR® Version 4.1 specification for set-top boxes (STBs). EPA would like to acknowledge the ENERGY STAR stakeholders who have invested time and effort to ensure the successful completion of the Version 4.1 specification. EPA has considered all stakeholder feedback carefully in developing this final specification. This letter summarizes the Agency's final decisions regarding these new requirements and outlines the schedule for qualifying products using Version 4.1. This specification will take effect on December 19, 2014.

This specification raises the bar for the full suite of cable, satellite, internet protocol (IP), terrestrial, and over-the-top STBs and keeps pace with a quickly evolving market by adding requirements for displayless gateways as well as enhanced functionality like high efficiency video processing (HEVP) and ultra high definition (UltraHD) content transmission, both of which support transmission of ever richer content. This final specification also adapts the Agency's approach to incentivizing energy saving multi-room configurations and deep sleep to reflect today's and near future STBs and establishes a test method for ENERGY STAR that harmonizes with the Voluntary Agreement for Ongoing Improvement to the Energy Efficiency of Set-top Boxes (VA), reducing partner testing—all while delivering meaningful consumer and national savings. If all STBs sold in the United States were ENERGY STAR certified, the cost savings would grow to more than \$1.8 billion each year and more than 24 billion pounds of annual greenhouse gas emissions would be prevented, equivalent to the emissions from over 2 million vehicles.

EPA has made a small number of changes in response to a limited set of comments on the Final Draft. In particular, the Agency:

- Added a requirement that Deep Sleep be enabled by default or an initial software download to take advantage of the Deep Sleep credit.
- Reordered the base types so that STBs can take advantage of their full base allowance.
- In response to detailed conversations with stakeholders regarding the shared work of Servers and Thin Clients in delivering UltraHD content and a review of current and anticipated near-term qualification rates, provided a new Thin Client HEVP adder of 5 kWh and also allowed Thin Clients with UltraHD capability to access the UltraHD adder while restricting displayless gateways from claiming the HEVP adder.

- Clarified a few minor issues such as the definition of DVR (must permit storage of signals for playback) and single-voltage external power supplies (higher efficiency than Level V is allowable).

Lastly, in follow-up to a supplemental proposal specific to certification of STBs, EPA has refined the certification requirements for STBs such that ENERGY STAR STBs must be tested under worst case in terms of configurations and service provider networks. Partners may certify STBs that cannot meet the ENERGY STAR requirements in some configurations or on some networks if they assign a unique model identifier to the STBs that do meet depending on compliance with requirements on specific networks. With this approach, EPA worked to balance the interests of stakeholders and reflect the reality of the market while protecting the interests of consumers.

#### Version 4.1 Deployment Timeline

EPA shares its Partners' desire for a smooth transition from one ENERGY STAR specification version to the next, with the objective of meeting consumer expectations that products on the market when the new specification takes effect meet the latest ENERGY STAR requirements. With this in mind and consistent with its approach for other product categories, EPA has established the following timeline for STBs:

- Effective immediately, manufacturers may elect to have their Certification Body (CB) certify their eligible products to the Version 4.1 requirements.
- As of August 1, 2014, CBs will be instructed to stop certifying new product submittals to Version 3.0. Note, however, that existing certifications to Version 3.0 will remain valid for the purposes of ENERGY STAR qualification until December 19, 2014.
- As of December 19, 2014, any product shipped with an ENERGY STAR label must meet Version 4.1 requirements. All certifications of products to the Version 3.0 specification will be invalid for purposes of ENERGY STAR qualification and CBs will only submit product models certified to Version 4.1 to EPA.

Please direct any specific questions regarding this draft to Katharine Kaplan, at [kaplan.katharine@epa.gov](mailto:kaplan.katharine@epa.gov), or 202-343-9120, or Matt Malinowski, ICF International, at [matt.malinowski@icfi.com](mailto:matt.malinowski@icfi.com) or 202-862-2693. Please direct any questions regarding ENERGY STAR testing of set-top boxes to Jeremy Domm, DOE, at [jeremy.domm@ee.doe.gov](mailto:jeremy.domm@ee.doe.gov) or 202-586-9870.

On behalf of EPA, I appreciate your participation in this specification development process and look forward to working with you as you certify and deploy efficient STBs. Thank you for your continued support of ENERGY STAR.

Sincerely,

A handwritten signature in cursive script that reads "Katharine Kaplan".

Katharine Kaplan  
Manager, ENERGY STAR Product Development and Program Administration

Enclosure:  
Final ENERGY STAR Version 4.1 Specification for Set-top Boxes (STBs)  
Comment Summary and Response