



ENERGY STAR® Set-top Boxes Final Draft Specification Webinar

May 10, 2016

ENERGY STAR Products Labeling Program



Webinar Details

- Webinar slides and related materials will be available on the STB Product Development Web page:
 - https://www.energystar.gov/products/spec/set_top_box_specification_version_5_0_pd
- Audio provided via teleconference:
 - Call in:** +1 (877) 423-6338 (U.S.)
+1 (571) 281-2578 (International)
 - Code:** 198-920 #
 - Phone lines will remain open during discussion
 - Please mute line unless speaking
 - Press *6 to mute and *6 to un-mute your line



Introductions

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Background

- Five Stakeholders (ARRIS, AT&T, CableLabs, NRDC, Technicolor) sent written comments to EPA on STB Version 5 Final Draft Specification.
 - Posted on STB Product Development [Webpage](#).
- EPA has considered all comments carefully and intends to finalize the STB Version 5 specification at the end of this week.
- This call is intended to provide stakeholders an additional opportunity to discuss comments with EPA and DOE before these documents are finalized.



Webinar Agenda

- Open Discussion:
 - HEVP
 - Mesh Network
- EPA and DOE Comment Responses:
 - Adders:
 - DOCSIS 3.0/3.1, MIMO High Power
 - Sleep Mode(s):
 - Auto Power Down, 12 Hour Option
 - Sleep Mode, 15 Second Recovery Time
 - Sleep Mode vs Scheduled Sleep vs Deep Sleep
 - Thin Client Base Level, Effective Date
 - Test Method:
 - Least Efficient Configuration
- Open Comment



Adders: HEVP

- Comments Received:
 - Two stakeholders commented that the HEVP adder should not require UHD, due to consumer benefits independent of UHD including reduced bandwidth, more channels, and higher quality channels.
 - One stakeholder recommended the benefits of HEVP extend into the home, by reducing the Wi-Fi bandwidth for client-server content delivery.
- Questions for discussion:
 - When are HEVP HD STBs expected to be deployed?
 - What are current power requirements of HEVP decoding?
 - Is this expected to decrease in the near future?



Mesh Network

- Comments Received:
 - Two stakeholders requested that EPA consider a Version 5.1 specification to address Mesh Network technology once the energy consumption and duty cycle information in the market is known, prior to 2018.
- EPA response:
 - EPA agrees that further exploration and work with stakeholders is warranted.
 - Will engage stakeholders on this topic through a brief Version 5.1 process.



Adders: DOCSIS 3.0 and DOCSIS 3.1

- Comments Received:
 - Two stakeholders expressed concerns that the additional power consumption requirements of DOCSIS 3.1 was not addressed by the DOCSIS 3.X adder.
- EPA response:
 - Modified language in the specification to reduce confusion.
 - Intends the DOCSIS 3.0 adder to be available to potential DOCSIS 3.1 devices, until a refined DOCSIS 3.1 adder levels can be established once energy use information is available.
 - Stakeholders are encouraged to send data on DOCSIS 3.1 energy use as it becomes available.



Adders: MIMO High Power

- Comments Received:
 - Would make the ENERGY STAR specification difficult to compare against the Small Network Equipment (SNE) Industry Voluntary Agreement (VA) and additionally the EU Broadband CoC, both of which allocate additional allowance to for high power MIMO.
 - MIMO adders were already aggressive before the change.
 - High power transmitters idle at a higher power level than low power transmitters, such that high power devices would not qualify.
- EPA response:
 - SNE VA testing was determined to be comparable to ENERGY STAR testing showing that output power is limited for high-power devices and confirming that the VA high-power allowances are appropriate. EPA plans to restore these high-power allowances.



Sleep Mode(s): APD 12 Hour Timeout

- Comments Received:
 - Two stakeholders expressed concerns that updating the APD software and deploying to customers would likely take longer than the effective date would allow.
 - The 12 Hour option would not change the need for some commercial end-users to opt out of APD.
 - The 12 hour option may result in less energy savings by causing users that currently set APD at 4 hours to extend to 12 hours.
- EPA response:
 - Removed the 12 hour requirement due to potential risks of users extending the APD timing beyond 4 hours and the fact that commercial customers, like restaurants, that may not be able to accommodate APD, work with Service Providers to get special APD settings that meet their needs.



Sleep Mode(s): 15 Second Recovery Time

- Comments Received:
 - One stakeholder questioned the shorter recovery time requirement for Sleep (and therefore applicable to Deep Sleep), by noting that current STBs that can recover in 15 seconds do not have power values consistent with Deep Sleep.
- EPA response:
 - EPA acknowledges that most STBs today will not be able to meet Deep Sleep requirements.
 - Scheduled Sleep is a pathway intended to provide extra time for intensive component level sleep, for STBs that may not be able to meet Deep Sleep requirements now.
 - However, the 15 second recovery time for Sleep is indicative of consumer expectations and will ensure success of Deep Sleep.



Sleep Mode(s): Deep Sleep

- Comments Received:
 - Two stakeholders requested that EPA provide more clarity regarding Deep Sleep.
 - One questioned the need for a Deep Sleep state given it is included with Sleep Mode and not used explicitly in the calculation of TEC.
 - The other requested a timeline for the applicability of Deep Sleep requirements to non-Thin Client STBs.
- EPA response:
 - Sees significant value from including both sleep and deep sleep as deep sleep offers additional savings over sleep and will those savings will be reflected in TEC. It is also offered an incentive in the Service provider partner agreement.
 - Anticipates that requiring Deep Sleep in Thin Clients will drive down costs and reduce barriers, enabling implementation in other STB types.
 - Will watch the market closely to gain insight into Deep Sleep criteria for other STB Types in next specification revision.



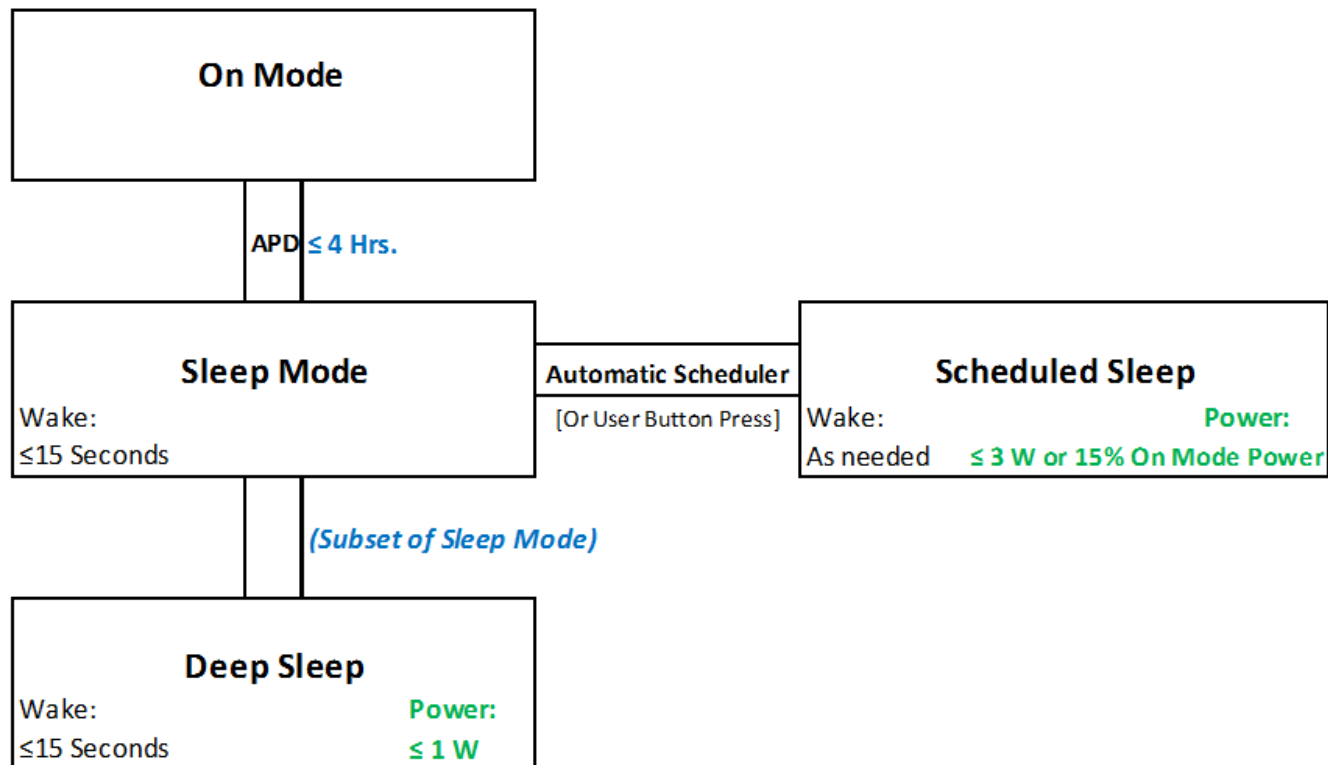
Sleep Mode(s): Scheduled Sleep

- Comments Received:
 - One stakeholder requested that the Scheduled Sleep requirements include the presence of a ""scheduler"" user interface as well as reporting requirements that allow EPA to track the persistence of Scheduled Sleep.
 - Similarly, the stakeholder requested tracking the persistence of Deep Sleep.
- EPA response:
 - EPA sees the consumer value of the proposed changes that further ease-of-use and transparency. However, these changes warrant further work with stakeholders to refine and the quantity of deployed STBs with Scheduled Sleep is not yet substantial enough to effectively determine how to approach these. EPA will consider these suggestions going forward.
 - The specification process is also valuable in this case for creating requirements that provide this scheduler on STBs while maintaining flexibility in design.



Sleep Modes Diagram

- A stakeholder requested clarification with the different requirements for Sleep Mode, Deep Sleep, and Scheduled Sleep.





Thin Client Base Levels – Effective Date

- Comments Received:
 - One stakeholder expressed support for the Thin Client effective date and recommended EPA make no changes to the timeline.
 - Another stakeholder expressed concerns that the current specification timeline was too short to modify existing products.
- EPA response:
 - Maintained the current Thin Client TEC levels at 7 kWh, with an extended transition time to V5 until Jan 1, 2018. These requirement levels are consistent with EPA's long-held goal of incentivizing deep sleep among STBs, and already achieved by comparable electronic products such as Internet-connected TVs.



Test Method: Least Efficient Configuration

- Comments Received:
 - One stakeholder commented that defaulting to the least efficient option given to consumers is not realistic, as their market data suggests consumers are much more likely to use the default or first option.
 - Another stakeholder expressed concerns that an effort to modify the menu options of STBs currently deployed by that company may take longer than the time to the effective date of STB Version 5.
- DOE Response:
 - Retesting of currently certified ENERGY STAR STBs under the new STB Test Method is not necessary.
 - Clarified this requirement to explain that ‘saved changes’ are set to the most consumptive option while ‘temporary changes’ (specific for a given viewing session) are set to default.



Open Comment



Thank you!

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Thank you for participating!

