

Organizati	Topic	Subtopic	Comment	EPA and DOE Responses
Summary	Adders	DOCSIS 3.X	Two stakeholders expressed concerns that the additional power consumption requirements of DOCSIS 3.1 were not addressed by the DOCSIS 3.X adder.	EPA appreciates this feedback and has modified language in the specification to reduce confusion. EPA intends the DOCSIS 3.0 adder to be available to potential DOCSIS 3.1 devices, but intends to refine DOCSIS 3.1 adder levels once energy use information is available. EPA welcomes stakeholder data on DOCSIS 3.1 energy use.
Summary	Adders	HEVP	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 also commented that the benefits of HEVP extend into the home, by reducing the Wi-Fi bandwidth necessary for client-server content delivery.	Based on the additional consumer benefits provided by HEVP independent of UHD, including more or higher-quality channels and similar power requirements regardless of resolution, EPA has amended the specification to make the HEVP adder available independent of UHD.
Summary	Adders	MIMO	Multiple stakeholders expressed concerns with the removal of the high-power MIMO adders. Two stakeholders noted that this change would make the ENERGY STAR specification difficult to compare against the Small Network Equipment Industry Voluntary Agreement and additionally the EU Broadband Code of Conduct, both of which allocate additional allowance to for high-power MIMO. Other comments from these stakeholders included concerns about these adders being removed late in the specification process, concerns that the MIMO adders were already aggressive before the change, and a technical argument that high-power transmitters idle at a higher power level than low-power transmitters, such that high-power devices would not qualify.	EPA appreciates the feedback on the high-power MIMO Adders and following another review of the SNE Voluntary Agreement acknowledges that SNE testing is comparable to ENERGY STAR testing in that output power is limited for high-power devices, such that the VA high-power allowances are appropriate. EPA is therefore restoring these high-power allowances.
Summary	APD	12 Hr Timeout	Two stakeholders expressed concerns with the addition of the 12 Hour APD timeout, both noting that updating the software and deploying to customers would likely take longer than the effective date would allow. Both stakeholders also commented that the 12 Hour APD Timeout would not change the need for some commercial end-users to opt out of APD. One stakeholder also commented that 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 has removed the 12 hour requirement due to potential risks of users extending the APD timing beyond 4 hours and special settings provided to commercial customers, like restaurants, that may not be able to accommodate APD.
Summary	Base Levels	Thin Client	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, requiring the creation of new Thin Client STBs and forcing the early obsolescence of current generation Thin Clients.	EPA has maintained the current Thin Client TEC levels at 7 kWh, with a delayed Jan 1, 2018 effective date. 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.

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Summary	Deep Sleep	Timing for Application of Deep Sleep to other STBs	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, while the other requested a timeline for the applicability of Deep Sleep requirements to non-Thin Client STBs.	EPA anticipates that requiring Deep Sleep in Thin Clients will drive down costs and reduce barriers, enabling implementation in other STB types. EPA will watch the market closely to gain insight into Deep Sleep for other STB types and will incorporate requirements that would require the use of Deep Sleep across most other STB types in three years, by 2019.
Summary	New Technology	Mesh Network	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 agrees that this is an area that warrants further exploration and work with stakeholders. EPA will engage stakeholders on this topic through a brief Version 5.1 process.
Summary	Scheduled Sleep	Scheduler and Tracking	One stakeholder requested that the Scheduled Sleep require 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 appreciates this feedback, and has updated the Scheduled Sleep requirement to clarify the need for a way for users to adjust the schedule for each day of the week. Regarding tracking, EPA notes that the quantity of deployed STBs with Scheduled Sleep is not yet substantial enough to establish a framework for reporting.
Summary	Sleep Mode	Recovery Time	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. Furthermore, the stakeholder noted that even Scheduled Sleep allows for longer recovery time.	EPA notes that 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. Therefore, it should not be compared directly to Deep Sleep and its rapid recovery time requirements, which are based on other consumer electronics products and ensure the most positive end-user experience with energy efficient STB products. Finally, EPA has clarified that the 15 second requirement in the Sleep Mode and Deep Sleep definitions is independent of any television recovery time.
Summary	Test Method	Least Efficient Config.	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.	The Final Test Method has been updated to add clarity for the configuration of special functions. It requires that if a menu prompt option makes a 'saved change' (that is retained from one viewing session to another) during setup or on mode operation, then the most power consumptive option must be selected. However, if the message prompt options are such that they only impact the current session, the default option must be selected or the option that aligns with the test being performed must be selected (e.g., for the On Mode test, select the option that keeps the STB in On Mode. Likewise, for an APD test, select the option that will allow the STB to transition to Sleep Mode).