



NRDC Comments on ENERGY STAR Specification for Set-top Boxes – Final Draft Version 5.0

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On behalf of the Natural Resources Defense Council (NRDC) and its 2 million members and online activists we respectfully submit our comments on ENERGY STAR’s Final Draft Version 5.0 eligibility criteria for set-top boxes (STBs). Our comments supplement our previously submitted comments on ENERGY STAR drafts 1 and 2 dated December 18, 2015 and March 3, 2016, respectively.

NRDC is very supportive of ENERGY STAR’s final draft and we believe the recent modifications EPA made to its draft reflect careful consideration of stakeholder input and are well thought out and appropriate. Below we provide some additional comments on some of the changes that were made since Draft 2 and further recommendations on how best to implement scheduled sleep in the final specification.

- 1. *Thin Clients and “Sleep”*** – One of biggest improvements within the Version 5.1 specification is the much lower power that thin clients will be allowed to consume when in sleep mode, i.e. when not in use. As thin clients are not connected to the “head end”, new designs that employ current technology are capable of drawing very low levels of standby power while providing very fast reboot times (i.e., <15 seconds).

As such, we strongly support EPA’s establishment of a 7 kWh/yr base allowance for these devices, changing the maximum resume time from sleep to wake from 30 to 15 seconds, and agree with its decisions to extend the effective date for this part of the specification from January 1, 2017 to January 1, 2018. This provides almost 2 years since these levels were proposed for the industry to make the changes that may be necessary.

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We do not think it's appropriate however to extend this time any further, as some stakeholders have suggested, as ENERGY STAR remains a voluntary program and this target date should serve as an incentive for motivated manufacturers to meet this deadline or to accelerate efforts to bring qualifying products to the market shortly thereafter. Those manufacturers that are able to meet this date should be able to earn the ENERGY STAR label and the benefits that come with successful product certification. In addition manufacturers have been put on notice by EPA of this future low power sleep requirement since the publication of Version 4.1 back in October 2014.

2. ***Getting Scheduled Sleep Right*** – We support EPA's decision to retain the concept of scheduled sleep in its specification, except for thin clients which are treated separately as discussed above. The concept of this feature or mode is that consumers have the ability to put their boxes into a low power state when they are not home or at times like 2 in the morning when they are unlikely to watch TV, with recognition that it may take an extended period of time, in some cases a minute or more for the device to fully wake if the user tries to turn on the device and watch live TV during those hours.

As the specification process and qualification process works, this feature must be shipped as enabled when it leaves the manufacturer and is received by the service provider. The specification qualification and verification processes cannot however ensure that either: a) the service provider's installer does not encourage or decide to disable this feature during installation without such a request by the consumer; or b) that the consumer may on their own disable this feature on their own at later time.

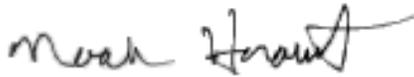
As such we think there is not enough data at this time to justify inclusion of specific duty cycle into the TEC equation for boxes that ship with a scheduled sleep feature enabled. We think a better solution for scheduled sleep would be:

- a) Provide a service provider credit towards their total procurement requirements.
- b) In order to receive this credit, the service provider must agree to and provide annual reports to EPA on the percent of units in the field that still had scheduled deep sleep enabled post installation. It is our understanding that with today's boxes, service providers are able to remotely diagnose the STBs installed in a customer's homes and to determine if features such as scheduled sleep are enabled or not. In

addition, if service providers are able to retrieve information on the actual hours per day their boxes are programmed to go into scheduled sleep; this information should be reported as well. This information will help EPA assess the success of the scheduled sleep option and inform future specification revisions.

- c) STBs that have a scheduled sleep function should be required to have a built in “scheduler” which allows the user to create a customized user profile whereby the user can select the time periods for each day of the week that they wish to have their box go into and exit from scheduled sleep. This way a household where the residents are at work from 9 to 5 on Monday to Friday can add these hours to their scheduled sleep profile and cut the energy use of their DVR and regular set top box from around 20 Watts to <3 Watts for large portions of the day. This is a very simple way to dramatically reduce the annual energy use of non thin-client set top boxes in the home by those that may be interested in doing so. We therefore recommend EPA further tighten the language currently provided in lines 217-219 in its latest draft.

Respectfully submitted,



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