NRDC Comments on EPA's Revisions to ENERGY STAR STB Version 4.1 Draft 2 Specification

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On behalf of the Natural Resources Defense Council (NRDC) and our more than 1.3 million members and electronic activists, we respectfully submit these comments on EPA's August 29, 2013 letter that included proposed changes to their Draft 2 Version 4.1 specification for Set-Top Boxes (STBs). NRDC has actively participated in all of ENERGY STAR's specification setting processes for STBs and shares the Agency's goals of driving continuous improvement in STB design and reducing the energy consumed by this category.

1. **NRDC Supports EPA's proposed modification to the deep sleep language in the specification**. – As NRDC has stated throughout its prior comments, the biggest energy savings can be achieved by dramatically reducing the amount of power STBs consume when consumers are not watching or recording a show. As we understood EPA's proposed changes, the final specification would:

a) *require the STB to be deployed with a deep sleep scheduler set by default between 1 and 5 am.* We fully support this additional requirement as it will help ensure that the sizable 20% TEC credit ENERGY STAR provides for deep sleep will result in real energy savings. Draft 2 merely required the presence of a deep sleep button which most consumers would not use as it would result in unacceptably long resume times when they returned and few if any savings would be achieved. By having the STB go into deep sleep only between 1 and 5 in the morning, it is unlikely that this feature will negatively impact consumers, and should result in significant energy savings. In addition, we understand BSkyB in Europe is already in the process of instituting this feature for many of their customers providing further validation for this concept.

b) *would modify the definition of deep sleep to allow STB to have recovery times greater than 30 seconds while in deep sleep, but require the box to wake within 5*

minutes after the scheduled deep sleep period ends and for the transition to on mode to occur within 30 seconds or less. NRDC agrees with this concept directionally and suggests a minor modification to ensure consumers have a good user experience. We'd recommend changing the language around timing such that the STB is fully functional within 30 seconds of the end of the scheduled deep sleep period --not 5 minutes after it ends. For example if the user sets the deep sleep to end at 5 am, then the STB should be ready to go at 5 am, not 5 minutes and 30 seconds later. If the STB requires up to 8 minutes to provide full on mode service, then the STB should have a timer that begins to wake up at 4:52 in the morning. This becomes even more critical for those users who program their STBs to go to sleep for longer period, such as while they are work between 8 am and 6 pm. When they return at 6, the STB should be ready to go and not have to recover for 5 plus minutes.

c) *require STBs to be able to wake to record a prescheduled show or receive an update while in deep sleep and then return to deep sleep when finished*. NRDC strongly supports this requirement. If users decide to program their DVR to record a show in the middle of the night, for example a sports event that occurs in a different time zone such as the Olympics or a West Coast baseball game, they expect the show to be there when they want to view it. If it's not, many users will disable the deep sleep feature and none of the 20% savings will be achieved.

As we stated previously, we believe EPA should encourage implementation of deep sleep and the 20% credit provides a very large incentive to do so. Lets make sure manufacturers and service providers get this right in order to earn the ENERGY STAR label. As this type of change is likely to yield some of the lowest cost and most cost effective energy savings, we expect many manufacturers to utilize it. One should also remember that VCRs from 20 years ago were able to go into standby mode, yet were smart enough to wake to record a show and then go back to sleep. Today's hi-tech DVRs should be able to do this to.

Lastly, we continue to support EPA's stated commitment to incorporate additional deep sleep requirements in the next specification update that will further drive down STB energy use when not in use. Ideally future designs will result in the STBs operating in deep sleep states for longer periods of the day and offer very quick resume times when the user hits the power button on their remote.

2. NRDC supports the usage of lower energy consuming thin clients and DTAs – EPA has elected to increase the base allowance and some adders that relate to thin clients and DTAs. These devices are often used on the 2nd and 3rd TVs in a home and represent a reduction in energy use compared to a standard STB or DVR for those secondary TVs. Today's thin clients however continue to draw near full power when in sleep mode and significant savings opportunities remain. As thin clients do not need to maintain regular connection to the head end when not in use and should have fast recovery time, much lower sleep mode levels are achievable. While we are not opposing the increases EPA made for this version of the specification, we look to

ENERGY STAR to continue to drive down the energy use of thin clients in future revisions such that these incremental savings are being achieved.

3. **NRDC supports EPA's proposal on multi-room DVRs**– We concur with ENERGY STAR's decision not to increase the allowances for shared DVR systems further. For a voluntary program such as ENERGY STAR, we think true multi-room solutions whereby the DVR provides both live and recorded TV to the thin clients servicing second and third TV's yields the most energy efficient whole home solutions. As such we agree with ENERGY STAR's decision not to create a new adder for DVRs that are not capable of providing live TV to second and third TVs in the home. This type of implementation would give away much of the potential savings because a standard STB, which consumes a lot more energy than a thin client, would be used instead on the secondary TVs.

4. Closing - In closing, we appreciate ENERGY STAR's extensive investigation of the energy use of STBs and the various features inside them, and the opportunities to bring down the energy use both of individual STBs as well as overall household STB energy use. ***We urge EPA to finalize the specification as soon as possible.*** The existence of a final specification provides stakeholders with a clear target and goal to design towards and provides utility program administrators with the clarity needed to design potential programs to accelerate adoption of STBs that meet and exceed the latest version of ENERGY STAR for STBs.