

NRDC Comments on ENERGY STAR Final Draft Program Requirements for Set-Top Boxes (Version 2.0)

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On behalf of our more than 1 million members and e-activists, NRDC respectfully submits its comments on the March 14 draft of the proposed updated specification for set top boxes (STBs). **We are very supportive of the levels shown in the specification and EPA's decision to establish a relatively modest specification for Tier 1, coupled with a dramatically more stringent specification for Tier 2.** Tier 2 includes a generous, yet appropriate 3-year lead time which will provide effected stakeholders the necessary time to make the R&D, middleware development and set top box production changes that may be necessary to meet these new levels which will yield incremental savings of 50% or greater.

Our comments below focus on recommended minor changes that we believe are necessary to add greater clarity to the specification and test procedure documents, and will help EPA achieve the energy savings that it is seeking.

Linking STB Qualification to the Service Provider

As we have stated throughout the spec setting process, NRDC believes it is critical to explicitly tie or link qualification to both the STB and the service provider. While a cable STB may be built by the manufacturer to be ENERGY STAR compliant, it may only achieve those levels on certain cable providers and not others. This STB might use more power than intended by the manufacturer because: a) the service provider has not made the necessary head end or middleware changes needed to achieve the power savings, or b) the service provider intentionally chooses to disable certain power saving features in the box prior to deployment.

Once again we urge EPA to address this issue in its specification documents. As currently drafted, neither the STB test procedure nor the service provider partner agreement explicitly makes this linkage. From our point of view, we think it is much more important to get this point right than to require partners to test 5 samples of the same model as part of the qualification process. (The 5 samples are intended to address the potential power use variability within a given model, even though there is no historical reason to expect wide discrepancies between samples.). Below we reference the document sections that would benefit from further clarification on testing tied to a specific service provider's signal. If there is resistance to our recommendation due to the additional testing required, NRDC is completely comfortable with EPA relaxing the 5 samples per model requirement.

No provision in the Test Procedure requires service providers to confirm qualification using their unique programming/update duty cycle and head end equipment (or equivalent simulation.). To remedy this situation Section 5.2.2.f in the Test Procedure document should be amended to include a requirement that a source signal be representative of the duty cycle offered by the service provider by whom the box is deployed. Section 5.2.3 should be amended to allow a true duty cycle that would accurately report the variations between service providers.

Ability to Disable Unwanted Video Downloads

We appreciate EPA's inclusion of our recommendation for a user menu-option to disable speculative recording. We continue to believe a similar requirement is warranted to allow users to disable unwanted Service Provider-initiated movie downloads. This is because some of the satellite providers today "push" movies to all their customers in the middle of the night with the hope that they will access this content at a later time. These downloads have the potential to cause millions of set top boxes that would be in a low power sleep mode to wake up and use considerably more power for several hours each week. With the shift to high definition movies and their greater file size, the download times are expected to increase significantly . We believe a sizable portion of users will acquire their movies through other outlets and as such should have the ability to turn this feature off. From a societal point of view, users should be provided the choice to "opt out" as a means to help cut their electric bill and reduce their overall "carbon footprint".

We believe our proposal provides a reasonable middle ground as we are not recommending a more stringent proposal which would require the service provider to install the boxes with the "automatic" service provider initiated movie download feature Off, and for user to have to opt-in for these downloads if truly interested. We recognize a certain percent of users will choose to access movies pushed onto their STBs and that pay per view movies represent an important profit center for service providers.

A reasonable alternative is to add to Section H) Movie Downloads Lines 505-508 of the Program Requirements for Set-top Boxes Partner Commitments:

"Service Providers who schedule non-user-initiated downloads of movies must provide an easy to access menu option which allows the user to decline or disable this feature until they elect to turn it back on." Although it might be argued that this function is included in the 2-hour per day allowance on lines 115 -122 of the Service Providers Partner Commitments document Version 1.0, there is no reason to require users who do not use this feature to consume the additional kWh required.

If the user at a later date changes their mind they can always go back into the menu and turn this feature back on.

Power Consumed by the "Other Box" in IPTV Systems

As currently deployed, we understand IPTV subscribers have a Optional Network Terminal (ONT) installed when they sign up for their service. The comments in the EPA document state that ONT power use has not been included in the Tier 1 specification. We believe further study of ONT power use is warranted and that despite the multi-function nature of the ONT (ONTs frequently serves as a gateway not only for TV service but also for hi-speed internet and/or phone service), additional power savings opportunities may exist. For example, it may be possible to reduce the ONT power use when the user is not watching or recording a show, without interfering with the other ONT functions. The results of EPA's study of these systems should be incorporated into the final Tier 2 specification for this category.

For example, while IPTV may appear to be one of the lower energy consuming options on the market, this may be due to the fact that some of the power consumption is happening at the other box, and this incremental power use is not accounted for. In a Total Energy Consumption calculation, the exclusion of ONT may result in an under-reporting of IPTV electricity use, relative to satellite or cable. This would create an unfair competitive advantage for IPTV, especially when service providers begin to differentiate and market their products based on their environmental attributes, as is already happening in Europe.

Clarification of Additional Tuner Power Allowance

In the Eligibility Requirements document, Table 2, line 420, there should be explanatory language to clarify that the 53kWh allowance for "Additional tuners" and the 14kWh allowance for "Additional Tuners--Terrestrial/IP" is a total amount to cover all tuners, not per additional tuner.

Making Sure the Box Really Goes Back to a Low Power Sleep Mode

Although the test procedure Section 5.4.2 (no line numbers) verifies that the unit under test (UUT) automatically powers down, there is no procedure for verifying that a STB indeed returns back to sleep within 15 minutes after a download, scan, or user-scheduled activities, as described in the Partner Commitments document on lines 115-122. We recommend adding a new section "Section 5.4.3 Return to Sleep", with procedures for verifying that the box does, in the test environment, return to sleep within 15 minutes of completing one of the activities described on lines 115-122 of the Partner Commitments document.

Low Noise Block Power Use

We are not fully clear on how the power consumed by satellite Low Noise Block (LNB) modules is treated in the specification. In the Test Procedure document, Section 5.2.4 a, is the allowance to deduct LNB permitted because LNB is included in the base allowance for satellite STBs? If not, please provide justification for this deduction.