



March 23, 2010

Kathleen Vokes
ENERGY STAR Set Top Box Program
U.S. Environmental Protection Agency
1310 L Street, NW
Washington, DC 20460

Subject: ENERGY STAR Set-top Box Version 3.0 Specification Comments

Dear Ms. Vokes:

EchoStar Technologies L.L.C. is pleased to provide comments on the currently proposed Version 3.0 Draft 1 specification. We would request the Energy Star staff to pay particular attention to our comments concerning the Base Functionality Allowances for base types "Satellite" and "Thin-Client /Remote". We have concluded there is possibly an error in the assumptions or the calculations for this allowance based on our own estimates for these configurations. We have received the Version 3.0 Tier 2 proposal and we will be working to provide comments by Friday, April 9, 2010 as requested.

Sincerely,

Gary Langille
Alliance and Standards Management

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EchoStar Technologies L.L.C.

<u>Section</u>	<u>Comment and/or Suggested New Text</u>
<p>1.0 Definitions A) <u>Base Type:</u></p>	<p>The Based Type definitions should distinguish between STBs operated from a MPVD (<u>M</u>ulti <u>P</u>rogram <u>V</u>ideo <u>D</u>istributor) or, alternatively, SP (Service Provider) <u>managed network</u> versus those that are connected to a <u>non-managed service</u> (e.g. consumer ISP, free-to-air satellite, etc.). MPVD STBs often have additional feature requirements (e.g. live broadcast capable, conditional access, etc.) and often must meet federal and state regulations (e.g. closed captioning, emergency alerts, parental controls, etc.) that do not always apply to non-MPVD devices. Additionally, base types that use a CA (conditional access) system should be identified due to the impact on base energy allowance for these devices. Distinguishing between a managed IPTV network STB (e.g. ATT) and a non-managed ISP STB (e.g. Netflix, Roku, Boxee, etc) is also proposed by adding an additional base type STB definition called "Internet STB".</p> <p>Suggested New Text (in bold typeface):</p> <ol style="list-style-type: none"> 1) <u>Cable STB</u>: ...receive television signals from a MPVD managed broadband hybrid fiber/coaxial, or... 2) <u>Satellite STB</u>: ...receive television signals from a MPVD managed satellite system with conditional access (CA) and deliver... 3) <u>Cable/Satellite Digital Transport Adapter (DTA)</u>: ...receive television signals from a MPVD managed (1) broadband...or (2) satellite distribution system, both with conditional access (CA) and deliver an analog signal to a ... 4) <u>Internet Protocol IPTV STB</u>: ...receive television/video signals encapsulated in IP packets from a MPVD managed IPTV network and deliver them... 5) (OK as is) 6) <u>Thin-client/Remote STB</u>: ...for access to content and without conditional access (CA). Any STB that... 7) <u>Internet STB: A STB whose principal function is to receive content from the internet and deliver the content to a consumer display, thin-client/remote STB, and/or recording device.</u>

<p>1.0 Definitions B) <u>Additional functionality:</u></p>	<p>We propose that <u>Additional Tuners – Terrestrial/IP</u> be changed to <u>Additional Tuners – Terrestrial</u> and that the associated allowance be additive to the TEC allowance for the STB even in the presence of the <u>Additional Tuners</u> allowance. Since the current V2 Home Network allowance is now rolled into the V3 base allowance an additional functionality adder is no longer required for IP tuner.</p>
<p>3.2 TEC Allowance Table 1</p>	<p>The <u>SATELLITE</u> base type <u>was</u> 18 KWh/y higher than <u>CABLE</u> base type in the current V2 specification due to the fact that a satellite STB must include in its base configuration the equivalent functionality of a “CABLECARD”. It appears that the power consumption for this CA capability has been dropped from the <u>SATELLITE</u> base allowance in the proposed V3 specification.</p> <p>We propose either of the following to address the issue: Option 1: Increase the base allowance for SATELLITE by 15 KWh/y. Option 2: Change the name of the existing CABLECARD additional functionality allowance in <u>3.2 TEC Allowance - Table 2</u> to “<u>REPLACEABLE CONDITIONAL ACCESS</u>” and allow the adder for either Cable or Satellite STB types.</p>
<p>3.2 TEC Allowance Table 1</p>	<p><u>THIN-CLIENT/REMOTE</u> STBs need an allowance that accounts for current <u>V2 Advanced Video Processing</u> and <u>V2 Home Network Interfaces</u> allowances that were rolled into the proposed <u>CABLE</u> and <u>SATELLITE</u> V3 base allowances. These STB types still will be required to decode AVC (MPEG4) and other advanced (e.g. VC-1) content streams and they will be required to output HD video and advanced multi-channel audio to HDTVs through the HDMI port.</p> <p>We propose that the <u>THIN-CLIENT/REMOTE</u> Tier 1 Allowance be increase to <u>44 KWh/y</u> (i.e. Base@22 + AVP@12 + HNW@10 = 44)</p>

<p>3.2 TEC Allowance Table 2</p>	<p>The need for a Terrestrial Tuner decreases over time as more local channels are offered directly by MPVDs thereby eliminating the need for a local signal antennae. Options to support a terrestrial tuner in a STB are either to integrate it directly into all STBs or implement a field installable optional module powered by the STB and used only when needed. In either case it is added functionality over and above any additional satellite or cable tuners already present in the STB. EchoStar has not experienced a significant incremental power difference in a Terrestrial Tuner versus a Satellite or Cable tuner so we are also recommending that the allowance values for all tuners be the same.</p> <p>We propose the following:</p> <ul style="list-style-type: none"> - The allowance for the <u>Additional Tuners – Terrestrial</u> be identical to the <u>Additional Tuners</u> allowance of 16 kWh - The <u>Additional Tuners – Terrestrial</u> allowance be additive to the <u>Additional Tuners</u> allowance when implemented as an field installable optional module
<p>3.2 TEC Allowance Table 2</p>	<p>An <u>Additional Functionality</u> allowance should be added for a <u>High Performance Home Network (HPHN)</u> . A HPHN is required to achieve client-server architectures and to support whole-home content sharing between STBs. MoCA, HPNA and Wi-Fi are examples of HPHNs that are currently in use by service providers. Other wire replacement technologies like Wireless USB, Wireless HDMI, etc. using various UWB technologies are also examples of HPHNs. We do not believe that a 1 Gbps/s Cat5 should qualify for the extra allowance as it is generally available as part of the STB SOC and does not require separate hardware.</p> <p>We propose the following:</p> <ul style="list-style-type: none"> - A <u>High Performance Home Network (HPHN)</u> is defined as a home network with a minimum net throughput rate of 150 Mbps/s and can be wired or wireless. - A <u>High Performance Home Network (HPHN)</u> allowance of 20 KWh/y is added to Table 2

<p>APPENDIX A:</p>	<p>A general statement should be included in <u>Appendix A: Energy Star Test Procedure for Set-top Boxes</u> describing how to test a STB that has features that do not have an allowance. An example is a new function that has not reached enough market penetration to be added to the Energy Star specification. Another example is how to test when there are more than two (2) Satellite or Cable tuners contained in the STB.</p>
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