<u>EchoStar Comments – ENERGY STAR STB Requirements - Draft 3 – Version 2.0</u>

Line(s)	Comment
89-91	We recommend that the ENERGY STAR mark be displayed on the GUI used to control the auto power down features (e. g. on/off and delay time) and NOT at the actual time the auto power down function is initiated. The use of the ENERGY STAR mark, along with explanatory text, on
221	the GUI can be used to alert the user that the defaults set at the factory maximize energy savings. We recommend the text change from "other output" to "other output device"
262	We would like to clarify the definition of an "IP Tuner" by example; If a Cable or Satellite STB also has an Ethernet port (RJ-45) so it can access an additional source of media content, either downloaded or streamed, over the Internet for purposes of displaying on a connected TV this would meet the definition of an "IP Tuner." True or False
290	We recommend the term "Gateway" be changed to "Multi-TV" or "Multi-Room".
418	We propose that the current document be revised to become the ENERGY STAR Tier 1 Requirements only and that a separate ENERGY STAR Tier 2 Requirements document be issued in draft form. The reasons for this are as follows: 1. We believe that it is highly likely that the Tier 2 allowances, timeframe, definitions and test plan will change as ENERGY STAR and its Partners gain experience from the implementation of the Tier 1 program. 2. It will be difficult for a Partner to sign the current agreement, as currently written, since it commits the partner to meet the Tier 2 goals now despite ENERGY STAR plans to review and possibly adjust allowances. 3. A separate ENERGY STAR Tier 2 document (in draft form) can be used to communicate the goals of Tier 2 but allow for further revisions as agreed to by ENERGY STAR and Partners as they gain Tier 1 experience and adapt to the market conditions for the Tier 2 timeframe. 4. The aggressive Tier 2 goals might not be met without the STB having two-way communications capability and significant systems redesign. Partners have been very focused on the short term Tier 1 requirements and require more time to understand the implication of Tier 2.

441	We propose an allowance for a "Home NW (HNW)" of 35 KWh/y should be added for non-Gateway STBs. A standard Ethernet RJ-45 HNW port could be considered part of the base functionality; however any HNW port of the type HPNA, MoCA, WiFi or WiMax should be able to claim the allowance.
442	We recommend that the following note be added to the "Gateway" allowance: Note: For "Gateways" that do not require Thin Clients (TCs) STBs; the TEC reported
	should be the calculated actual TEC for the total "Gateway" STB divided by the number of
	TVs supported by the "Gateway" STB.
	This is the only valid method for assuring that a "Gateway STB that <u>does not</u> require Thin Clients" results in an accurate TEC for comparison to other STB types. The current allowance method fails to pass a "Gateway STB that <u>does not</u> require Thin Clients" even though it is using less power in the home than the equivalent "Gateway that <u>does</u> require Thin Clients". This note will also assure that a "Gateway STB that <u>does not</u> require Thin Clients" will be compared accurately to individual STBs at each TV location.
595	"Table 3: Duty Cycle" needs further explanation of the "Additional Tuner Usage" column. We recommend that a separate table be created to cover any duty cycle requirements for "Additional Tuners". We also recommend an example be added for "Additional Tuners"
651	From "Seep" to "Sleep"
653	As discussed in the stakeholders meeting, the time allowed for exiting sleep mode should be an average daily time over a month of operation instead of the current 2 hrs over 24 hours. This will allow maximum flexibility for Partners to meet the requirement.
671-691	We recommend that the Tier 2 dates be included in a separate Tier 2 document as we commented earlier.

<u>EchoStar Comments - ENERGY STAR Service Provider Requirements - Draft 3 - Version 2.0</u>

Line(s)	Comment
37	As discussed at the stakeholders meetings; the definition of a "Refurbished STB" must include an STB that is deployed in a subscriber's home and has received a software upgrade that brings the STB into compliance with the ENERGY STAR requirements. An STB "Refurbished" in this manner should apply to the "Purchased" and "Deployed" percentages. This provides an incentive to service providers and STB manufacturers to invest in upgrading their installed base of STBs since they can be counted toward meeting the ENERGY STAR requirements.
78-80	As discussed in the stakeholders meeting, the time allowed for exiting sleep mode should be an average daily time over a month of operation instead of the current 2 hrs over 24 hours. This will allow maximum flexibility for Partners to meet the requirement.
86-87	Recommend a change to: "at every opportunity, install ENERGY STAR qualified Thin Clients, if required, when an installation includes a Gateway STB installed;
100-102	We recommend that the ENERGY STAR mark be displayed on the GUI used to control the auto power down features (e. g. on/off and delay time) and NOT at the actual time the auto power down function is initiated. The use of the ENERGY STAR mark, along with explanatory text, on the GUI can be used to alert the user that the defaults set at the factory maximize energy savings.