UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
WASHINGTON, D.C. 20460

February 11, 2008

Thomson comments on Draft 3 ENERGY STAR Program Requirements for Manufacturers V_2 1-14-08

1. **Table of Contents:** Please update the page numbers. They are not correct.

2. **Line 276:** In the EPA's response to Draft 2 comments, it was made clear that the allowance for High Definition only applies to STBs that have a HD output and not to STBs that can decode HD but only output SD. Please update the definition of High Definition Resolution to indicate "Video output with resolutions greater than 480i/p."

3. **Lines 290-291:** The term "Gateway" should be clarified or changed. Some systems that provide service to hundreds of customers also use the term "gateway" (e.g., DIRECTV MFH3™: http://www.directv.com/images/assets/mdu/DIRECTV_MFH3.pdf). The DirecTV MFH3 system consists of a gateway (or head end) that contains many tuners and distributes the signals via IP multicast over Local Area Network technologies such as Ethernet, MOCA, or something else. The application is for Apartment buildings or Multi Dwelling Units (MDUs). It should be made clear that "gateway" in the context of these requirements is not referring to these commercial gateways, which are either part of the service provider's infrastructure (similar to DSLAMs) or are owned by a MDU Dealer.

4. **Lines 369-374:** Perhaps Gateways, such as used in DIRECTV MFH3™, DSLAMs, and other infrastructure should be explicitly excluded in this section. See comment on lines 290-291 above.

5. **Lines 401-407**: We would like some clarification. According to the definitions in "B) Base Functional Allowance," STBs that include satellite tuners in a DIRECTV MFH3™ system (see comment on lines 290-291 above) would be considered satellite boxes. Even though they principally receive their video signal over an IP network, STBs that include HDDs also include tuners in case the customer someday moves to a house and wants to keep their stored content. In cases where there is no satellite tuner, the STBs would be considered IP STBs. Is this the proper interpretation?

6. **Table 1:** In our Draft 2 comments, we asked what type of video was being processed by the STB when determining the base allowance and were told to check

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the details in Appendix C of the Tiax report. We did that. The Tiax report only says to display "live video." This is not a complete answer. Power draw will vary depending on standard definition versus high definition, sports (high motion) versus talk show (low motion), and MPEG-2 versus MPEG-4. Would it be possible to specify a reference stream to use for testing as is done for DVD players?

7. **Table 2:** In the EPA response to Draft 2 comments, it was stated that both standalone and gateway network allowances are included in Draft 3 (see the EPA document STB_Spec_Comments_Matrix_1-14-07.pdf, page 3, line 410 Home Network Interface, Response column). However, we cannot find the standalone allowance given in Draft 3. Please add an allowance for devices that support a home network interface (MoCA, Ethernet, etc.) but are not considered "gateways". The suggested Tier 1 allowance is 15 kWh/year.

8. **Table 2:** The definition for Out-Of-Band tuners is given in the Additional Functionalities section (Item P, line 278). This definition seems to imply that DOCSIS could be considered an "other similar type of technology." However, no allowance for an Out-Of-Band tuner is given in Table 2. Please add a corresponding Out-Of-Band tuner allowance to Table 2 that will also cover DOCSIS.

9. **DOCSIS:** As was stated in the 05-FEB-2008 call, manufacturers who are building a retail class cable STB are required to put in both legacy OOB (SCTE 55) and DOCSIS interfaces. At the time of manufacture, it is unknown on which cable service provider the box will eventually be used. An allowance needs to be given for out-of-band communication. It is agreed that the modes of out-of band communication will be mutually exclusive; only one mode will be used at a time.

10. **Line 481:** Why can't a STB that meets Energy Star requirements but its external power supply does not still be an ENERGY STAR box? Shouldn't the requirement be that the total package of STB and EPS meet the allowance? Otherwise, STBs with an EPS are disadvantage over an STB with an integrated power supply. A box with an inefficient internal supply but very low STB power draw will pass, but the same combination with an external supply will fail.

    After today's call (05-FEB-2008) and the discussion on internal versus external power supplies, power supply designers were consulted. They commented that external supplies typically have to be more concerned about efficiency and heat dissipation because of their smaller totally enclosed design. It is not easy to dissipate heat from an external supply and meet UL surface temperature requirements.

    So to repeat from above, the total power draw of the EPS and STB package should be required to meet the allowance and place no additional burdens on an EPS for active load efficiency. Otherwise STBs with internal and external supplies are being held to different standards.

It would be agreeable to specify that an EPS must have a low no-load power draw.

11. **Lines 497-515:** It should be made clear that these requirements do not apply to Gateways used for distributing signals to multiple dwellings such as the DIRECTV MFH3™ system (see comment on lines 290-291 above). Obviously, a gateway used for service distribution, that has at least 32 tuners and supports hundreds of STBs will not be meeting these requirements.