



March 26, 2010

Ms. Kathleen Vokes  
U.S. Environmental Protection Agency  
ENERGY STAR for Set-Top Boxes  
1200 Pennsylvania Ave., N.W.  
Washington, DC 20460

**Re: ENERGY STAR Program Requirements for Set-Top Boxes.**

Dear Ms. Vokes:

Thank you for this opportunity to comment on the Draft 1 Version 3.0 ENERGY STAR Set-Top Box (STB) specification ("Draft 1"). Motorola provides below specific comments and suggestions relating to Draft 1.

1) Logo Placement (line 22):

Motorola believes that further clarification of label placement would be beneficial. Draft 1 provides detailed guidance on logo placement when the STB is sold to Service Providers that are ENERGY STAR partners (lines 42 et seq.) and when the STB is sold to Service Providers that are not ENERGY STAR partners (lines 50 et seq.). The guidance starting on line 22 relating to the display of the ENERGY STAR label on qualified STBs is helpful, but it is still unclear where the label can appear on qualified STBs. Motorola seeks further guidance on this issue.

2) Definition of "Additional Tuners -- Terrestrial/IP" (line 183)

Motorola seeks clarification regarding the proposed definition for Additional IP Tuners, which appears to cover only physical tuners separate and apart from the primary tuner in the STB. In contrast, the definition for Additional IP Tuners in the Version 2.0 specifications includes either a physically separate tuner *or* a primary tuner that can stream a second source of media. Motorola makes two requests in this regard. First, it seeks clarification that the proposed definition in Draft 1 continues to cover a primary tuner that can handle multiple content streams (as is the case with the Ethernet interface on Motorola's IP STBs). Second, Motorola seeks clarification as to how the proposed definition applies to an IP tuner that also supports home-networking functionality. For example, the MoCA interface on certain Motorola STBs may qualify as both a Home Networking Interface (which Draft 1 proposes to include in the base allowance for STBs) and an Additional IP Tuner (which Draft 1 proposes to count as an additional allowance).

3) Definition of “Multi-room STB” (line 204)

The definition of “Multi-room STB” in Draft 1 is limited to STBs that only output to Thin-client/Remote STBs, rather than *any* STB. However, DVRs and other Multi-room STBs perform the same or similar function whether they are outputting to a Thin-client/Remote STB or another type of STB. Motorola suggests that the definition be modified to delete the phrase “thin-client remote” and to read as follows: “A Cable, Satellite, IP or Terrestrial STB that is capable of distributing simultaneous, independent streams of video content to multiple STBs or displays within a single family dwelling. For the purposes of this specification, a connected display must have a resolution of no less than 480i. Products that provide gateway services in multi subscriber scenarios are not considered multi-room STBs under this specification.”

4) Allowances for Thin-client/Remote STBs (Table 1, line 352):

Motorola suggests two modifications to the allowances for Thin-client/Remote STBs. First, the base allowance for such devices should include the Tier 2 Additional Allowance for Home Networking Interface in the Version 2.0 specifications (10 kWh/year). Consequently, the total base allowance for Thin-client/Remote STBs should equal 32 kWh/year (*i.e.*, 22 kWh/year + 10 kWh/year). Draft 1 clearly contemplates that these devices will be used in a home network with other STBs, so including the Home Networking allowance will reasonably account for this functionality. Second, Motorola suggests an additional allowance be made available for Thin-client/Remote STBs that support advanced video processing. This additional allowance should equal the Tier 2 allowance for Advanced Video Processing in the Version 2.0 specifications (12 kWh/year). To be clear, this additional allowance would *not* be included in the base allowance for the Thin-client/Remote STB, but would only be available if the device has advanced video processing capability.

5) Advanced Home Networking Interface (Table 2, line 384):

While the Home Networking Interface allowance has been incorporated into the Base Functionality allowance for STBs (as explained at line 312 et seq.), Motorola suggests allocating an additional allowance for STBs that support either multiple home networking interfaces or higher power interfaces, such as 802.11n wireless technology. These types of interfaces can consume up to two times more energy than traditional interfaces, so an additional allowance would appear to be appropriate.

6) Test Procedures (line 523):

Motorola suggests modifications to the testing procedures for STBs as set forth in Appendix A of Draft 1. Motorola’s specific concern relates to the “Applicability” section in Appendix A, which states (at line 523) that: “Partners must test products in their ‘as-shipped’ configuration.” A STB differs from many other ENERGY STAR products in that it can be upgraded for feature enhancements via software downloads after being deployed. Certain advanced features can be supported in the hardware, but may not be supported in the “as-

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shipped” software package. There are a variety of reasons why this might be the case. Software exists that has been tested and completed, but not yet field released, that can support all hardware capabilities in Motorola STBs, but different operators may elect different software feature packages in their STBs. Also, operators typically roll out new features over a period of time rather than via a single software download. An additional consideration for operators and manufacturers is that advanced functionalities can increase device complexity and power utilization.

The current reference to testing a product in its “as-shipped configuration” (line 523) does not appear to accommodate the possibility of field upgrades to the STB over time. To address this limitation, Motorola suggests that product testing should be done on a STB with *all* hardware and software-supported features enabled. Motorola believes that allowing these functions to be evaluated as part of the ENERGY STAR test promotes more advanced design without penalizing the manufacturers for incorporating these features. Such evaluation also will serve the best interests of the ENERGY STAR program by helping to accelerate design changes needed for reduced power consumption.

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We are strongly committed to the ENERGY STAR program, and look forward to further discussions with the EPA about the Draft 1 specifications. Please contact me if you have any questions regarding this matter.

Sincerely,

/s/ Jason E. Friedrich

Jason E. Friedrich

Senior Director, Broadband Policy

Motorola Global Government Affairs

1455 Pennsylvania Ave., N.W., Suite 900

Washington, DC 20004