



William D. Wallace
Assistant General Counsel

1320 North Courthouse Road,
9th Floor
Arlington, VA 22201
(703) 351-3176 (telephone)
(703) 351-3658 (facsimile)
E-mail: bill.wallace@verizon.com

July 10, 2013

Ms. Katharine Kaplan
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: ENERGY STAR® Version 4.1 Set-Top Box Specification Draft 2

Dear Ms. Kaplan:

Verizon¹ appreciates the opportunity to comment on the EPA's Draft 2 of ENERGY STAR® Specification 4.1 for Set-Top Boxes (STBs). While Draft 2 made some improvements in the specification over Draft 1, a few additional improvements, outlined below, are necessary to accurately reflect STB power usage and to encourage approaches, such as whole-home approaches, that improve efficiency.

Allowances for Advanced Video Processing (AVP) and High Definition (HD) Resolution. EPA eliminated from Draft 1 Version 4.1 the allowances for AVP (8 kWh/year) and HD (16 kWh/year),² although it already reduced the allowances from Version 3.0 (12 kWh/year and 25 kWh/year, respectively).³ As EPA clearly recognized in Version 3.0 and Draft 1 Version 4.1, AVP and HD add nontrivial power consumption to STBs. EPA appears to assume that "widespread adoption" of these features permits it to eliminate the allowances altogether.⁴ But, since EPA included allowances for AVP and HD in specifications Version 3.0 and Draft 1 Version 4.1, it is unclear how it can reach any conclusion that allowances for these features should be eliminated altogether, unless EPA simultaneously increases the basic standard to include the energy usage associated with these two features by a corresponding amount. Verizon recommends that EPA restore the AVP and HD allowances that were included in Draft 1 Version 4.1.

Allowance for Transcoding. In addition to restoring the allowance for AVP, Verizon agrees with Motorola Mobility (now ARRIS) that it should be further increased. Motorola pointed out in its comments on Draft 1 Version 4.1 that transcoding adds even more to the power

¹ The Verizon companies participating in this filing are the regulated, wholly-owned subsidiaries of Verizon Communications Inc. (collectively, "Verizon").

² Compare Draft 1 Version 4.1, at 9, line 316 with Draft 2 Version 4.1, at 9, line 341.

³ ENERGY STAR® Program Requirements: Product Specification for Set-top Boxes, Version 3.0, at 8 (Oct. 2012).

⁴ U.S. EPA, Draft 2 Version 4.1, at 2, lines 56-58.

consumption of STBs than AVP features encoding and decoding.⁵ Many multi-room devices rely on transcoding; therefore, providing sufficient allowance for this feature will encourage whole-home configurations, which can reduce overall energy consumption. In declining an additional allowance for transcoding in Draft 2, EPA simply commented that the feature is not being tested.⁶ However, the fact that transcoding is not tested does not mean that the feature does not add to the power consumption of the STB. Accordingly, Verizon agrees with Motorola's original recommendation that an additional allowance of 10 kWh/year over the Draft 1 Version 4.1 allowance, to 18 kWh/year, should be included in specification Version 4.1 for AVP. In the alternative, EPA could adopt a stand-alone allowance for transcoding for at least the same amount.

MIMO Wi-Fi HNI. EPA includes an allowance in Draft 2 Version 4.1 for MIMO Wi-Fi HNI with two data streams at 2.4 GHz and 5 GHz. However, it is restricted to systems that are tested "with the Wi-Fi providing the primary video transport for the device."⁷ It is unclear why EPA restricts the source of the video stream. STBs come in configurations with multiple network interfaces, and Verizon understands that it is not EPA's mission to direct the specific configuration for STBs by allowing additional energy allowances for some configurations but not others. The two radios provide power consumption whether they provide video or data. Verizon recommends that EPA eliminate this restriction on "primary video transport."

Multi-Room Allowances. EPA imposed two new restrictions on the multi-room allowance from Draft 1 Version 4.1 in Draft 2 Version 4.1. First, it restricts the multi-room allowance "to STBs that can provide live content and head-end interaction for Thin Client STBs."⁸ Second, it states that the multi-room allowance will not apply to "STBs that only serve as whole home DVRs."⁹ Both these restrictions have the effect of discouraging whole home configurations, which actually save on energy consumption and should be encouraged, as EPA itself recognizes: "EPA agrees with stakeholders that multi-room STBs provide a method of saving energy across the entire home."¹⁰ A multi-room DVR allows the consumer to eliminate multiple DVRs in the home, and thin clients are not the only equipment that can interact with the STB. EPA recognized these potential configurations in Draft 1 Version 4.1.¹¹ Verizon recommends that EPA return to the Draft 1 language without these restrictions on the multi-room allowance.

In addition to the comments above, Verizon supports the comments submitted by the Consumer Electronics Association.

Thank you again for the opportunity to comment.

⁵ Letter from Jason E. Friedrich, Motorola Mobility, to Ms. Katharine Kaplan, U.S. EPA, at 2-3 (Apr. 15, 2013).

⁶ U.S. EPA, Draft 1 Version 4.1 Set-top Box Comment Summary, at 1.

⁷ U.S. EPA, Draft 2 Version 4.1, at 9 lines 334-35.

⁸ U.S. EPA, Draft 2 Version 4.1, at 8 lines 323-25.

⁹ *Id.*

¹⁰ U.S. EPA, Draft 1 Version 4.1 Set-top Box Comment Summary, at 1

¹¹ U.S. EPA, Draft 1 Version 4.1, at 3, lines 77-79.

Ms. Katharine Kaplan
July 10, 2013
Page 3

Michal E. Glover,
Of Counsel

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "W D Wallace", with a horizontal line underneath it.

William H. Johnson
William D. Wallace
1320 N. Courthouse Road, 9th Floor
Arlington, VA 22201
(703) 351-3176

Attorneys for Verizon