SAMSUNG

May 24, 2017

Verena Radulovic EPA ENERGY STAR Environmental Protection Agency 1200 Pennsylvania Avenue, N.W. Washington, DC 20460

Sent by e-mail to televisions@energystar.gov

Re: Environmental Protection Agency's ENERGY STAR Draft 2 Version 8.0 Televisions Specification

Dear Ms. Radulovic:

Samsung Electronics America, Inc. ("Samsung") respectfully submits these comments on the EPA's ENERGY STAR Draft 2 Version 8.0 Television Specification ("Version 8.0").

Samsung is a world leader in technology and has been the top television manufacturer in the US and globally for over ten years. Committed to providing energy efficient televisions to U.S. consumers, Samsung is the winner of the ENERGY STAR Partner of the Year Award for Sustained Excellence in 2013, 2014, 2015 and 2016.

Samsung appreciates the opportunity to comment on this updated specification and respectfully submits the comments below.

I. Luminance Requirements: 3.6.3 and 3.6.4

Version 8.0 outlines new requirements for luminance in Sections 3.6.3 and 3.6.4. However, the Automatic Brightness Control ("ABC") function will have its greatest effect at the lowest ambient lighting condition, 3 lux. Therefore, EPA should consider simplifying the testing and setting a ratio between luminance with ABC enabled at 3 lux and luminance in the Brightest Selectable Preset Picture Setting. We recommend a ratio of approximately thirty percent as appropriate and technologically feasible. Additionally, there would be great challenges with the proposal to require a fixed minimum luminance of 125 cd/m2. Any fixed minimum luminance creates a potential burden of testing not just each model of television, but every unit of every model. This is because—unlike the ratio of luminance at the brightest level to the level with ABC enabled, which would typically be a constant ratio across all units of a TV model—the absolute value of luminance may vary significantly from unit to unit. Instead of only testing the ratio once for a given model to ensure that it complied with the specified ratio, it would become necessary to test every unit to ensure it met the fixed minimum, at least for models that are close to the limit. A ratio alone is far more practical and less burdensome to test.

Additionally, EPA cited testing that gathered 6 test subjects to "assess subjective luminance preferences," which was described during EPA's webinar on May 15, 2017. The study found that the average preferred luminance level among the test subjects was $\sim 200 \text{ cd/m}^2$. Samsung strongly believes that such a small sample size is not sufficient to make any determinations about representative consumer preferences. Additionally, EPA should consult with experts and draw upon technical resources much more broadly, beyond the ISF study the agency has referenced, before determining such an impactful specification.

II. Energy Saving Features: 3.2.3

Version 8.0 encourages manufacturers seeking greater assurance that their energy-saving features are acceptable to EPA to share their assessment of any new energy saving features with EPA for approval prior to certification after taking into account manufacturer's concerns regarding the variability of "typical viewing experiences." EPA would expect to see performance data demonstrating savings over a range of typical viewing content and for energy saving features dependent on content displayed, EPA stated that using any common length of popular programming over a variety of genres should be adequate to determine if the features deliver similar savings across different content.

This proposed requirement is unworkable because the IEC test method is the only standardized methodology for manufacturers to determine "typical viewing experiences." Viewing experiences can vary widely from consumer to consumer, and different manufacturers may have different notions of what a typical viewing experience is. The goal of the IEC test method is to provide a uniform standard that is representative of real-world viewing. If EPA believes the IEC test method is inappropriate, EPA should offer suggestions to revise it and participate in the revision process. Once the IEC test method is revised, it can then be possible to test the energy consumption of the television in a repeatable way.

III. ABC in Preset Picture Settings

EPA has proposed that almost all Preset Picture Settings, excluding Retail and ones that may only be visible with true HDR content, must be implemented with ABC activated by default. However, consumers are already being notified about whether ABC and other features that affect energy consumption are enabled in various picture settings based on information in user manuals and other means. Moreover, the proposed Version 8.0 would go further and would require consumers to receive an additional alert if the activation of any Special Function disables an energy savings feature such as ABC. Accordingly, because consumers are already being made aware of whether or not they are watching their television in the ENERGY STAR qualified mode, and if the additional notifications that Version 8.0 would require are also provided, then the goal of ensuring that ABC is being used properly has been achieved. Therefore, no further requirements are needed to address the EPA's concern about ABC.

Samsung appreciates the opportunity to comment on EPA's ENERGY STAR Televisions Draft 2 Version 8.0 specification. We would gladly welcome the opportunity to discuss these matters further.

Respectfully submitted,

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