



April 5, 2017

Ms. Verena Radulovic
Product Manager
ENERGY STAR for Consumer Electronics
United States Environmental Protection Agency
Office of Air and Radiation
Washington DC, 20460

Dear Ms. Radulovic,

LG Electronics appreciates the opportunity to provide comments, and we respectfully request that the EPA take these comments into consideration for the next draft.

Automatic Brightness Control (ABC) feature

The average luminance at 3, 12, 35, and 100 lux with ABC enabled be greater than or equal to 50% of the TV's luminance in the Brightest Selectable Preset Picture Setting and that the luminance at 3 lux in the Default Picture Setting, with ABC enabled, is greater than or equal to 150 nits (cd/m²) as recommended by the Imaging Science Foundation for dark room viewing.

[Proposal 1]

We would like to kindly request for an allowance for luminance deviation with regards to the brightness data of the screen. Due to brightness deviation caused by each module's brightness and light sensor, we think that it is desirable and appropriate to give luminance tolerance of about 22% to the suggested numbers above.

Spec-wise, each module has approximately 20% of brightness deviation, and it affects the overall screen brightness along with deviation generated from light sensors (ABC). Therefore, if an appropriate level of tolerance is not allowed, margin management effort by manufacturers will have to take brightness deviation into account in order to meet the required specification.

That means if manufacturers are forced to meet the 150nits at 3 lux, we have to manage the brightness level to be over 190 nits on the shipping mode considering module/ light sensor deviation, which puts many manufacturers in an extremely challenging position to meet the required specification.

[Proposal 2]

We suggest to adjust the 150 cd/m² at 3 lux requirement to more acceptable level of brightness, and bring it to 80 nits in order to provide the user energy consumption benefit and, at the same time, to keep minimum brightness level that is required to maintain appropriate brightness level for the user that will offer a comfortable and not-too-dim viewing experience.



150 cd/m² at 3 lux will make the light sensor curve almost flat so the energy saving effect by ABC feature will be little or very limited. Moreover, LG firmly believes that there will be a greater customer benefit for the user by enabling ABC they can enjoy the energy savings from various luminance conditions.

In fact, if the average luminance in the Default Picture Setting shall be greater than or equal to 50% of the TV's luminance in the Brightest Selectable Preset Picture Setting, it will increase overall energy consumption by elevating brightness at 12,35,100 lux all together including 3 lux luminance conditions.

Furthermore, if the luminance at 3 lux in the Default Picture Setting shall also be greater than or equal to 150 nits (cd/m²) along with the requirement above, it means EPA's proposed standards enforce double regulation to manufacturers.

For some Full HD models, the module brightness spec is natively low, so that they cannot meet the 150nits, and therefore will be excluded from consideration as ENERGY STAR-certified TVs. It doesn't seem fair if the variance in TV module brightness is not considered and if the fixed spec of 150 nits is applied across all kinds of TVs. In this regard, we suggest applying a common standard which can be applied across all TV models with different brightness.

We fully understand EPA's concern that the user might tend to turn off the light sensor in the home if the default picture setting is dimmer than dark room picture modes such as Cinema, or ISF Dark Room Mode. However, we still think that the EPA's suggestion of 150 nits is, indeed, way too bright in a dark viewing environment.

As we are on the completely same page with EPA regarding the necessity of encouraging the persistence of ABC feature, LG ensured that the luminance in the Default Picture Setting at 3 lux is brighter than Cinema, and ISF(Dark room) mode by approximately 25~100% on our 2017 TV and seeks to maintain the optimized viewing experience for the user by keeping appropriate brightness level in the dim luminance condition at 3 lux.

Also, we ensure the brightness level in the Default Picture Setting at 3 lux to be greater than approximately 20% of the Brightest Selectable Picture Setting under the same luminance condition on our TV.

We expect that the current ENERGY STAR V 8.0 Draft 1 revision will cause most of the manufactures not to meet ENERGY STAR specifications in order to be listed as a certified energy efficient model. As such, we would like to kindly request for the relaxation of your proposed approach.

As a proud long-time ENERGY STAR partner, LG Electronics strongly supports the ENERGY STAR program, and we look forward to working with the agency on the important TV specifications going forward.

Sincerely,



LG Electronics USA, Inc.

1000 Sylvan Avenue
Englewood Cliffs, NJ 07632

Tony Ye

Senior Manager, Regulatory Compliance

Regulatory and Environmental Affairs

LG Electronics USA, Inc.

1000 Sylvan Ave.

Englewood Cliffs, NJ 07632

201-266-2421

tony.ye@lge.com