

Appliance Standards Awareness Project

May 30, 2012

Comments for Version 6.0 ENERGY STAR Televisions ABC Proposal

On January 19, 2012 the DOE released a Notice of Proposed Rulemaking (77 FR 2830) for a test procedure for television sets. These comments are submitted on behalf of the Appliance Standards Awareness Project (ASAP) with regards to a recent proposal regarding the adoption of this test procedure for the ENERGY STAR program. In addition to the comments submitted below, ASAP would like to inform ENERGY STAR of its formal support for comments submitted by the Natural Resources Defense Council (NRDC).

ASAP understands this proposal to be motivated by two primary reasons: 1) *addressing issues of high qualification rates under v5.0*; 2) *the desire to continue to incentivize the use of Automatic Brightness Controls (ABC)*. These two factors have led ENERGY STAR to consider adopting a proposed Department of Energy (DOE) test procedure, with temporary modifications. The proposed test procedure is in the final stages of development and many issues have been addressed, but appropriate handling of power measurements when ABC is enabled have not been resolved.

To address the first issue ENERGY STAR has proposed to implement v6.0 in April 2013, in time for the new specification to be a meaningful differentiator of 2013 TV models. This implementation timeline is critical. ASAP acknowledges that even in the absence of a full ABC-enabled test procedure the proposed modification will continue to incentivize reductions in on-mode power consumption.

While ASAP acknowledges that reductions in on-mode power consumption is generally positive, this is not a complete solution. Technologies, such as ABC, allow products to adapt to their surroundings enabling larger energy savings without adversely affecting the consumer experience. Therefore, it is of critical importance that the proposed modification captures the spirit of a properly implemented ABC control system. A couple specific points are made below for emphasis:

1. The spirit of the ABC was to allow for the screen brightness to adjust more gradually in response to changing room illuminance levels, thereby capturing additional energy savings. This gradual response, as discussed at the DOE public meeting (held on March 22, 2012), might also lead to a better consumer experience. With a more gradual response, the viewer may not be aware of screen brightness changes and therefore may not attempt to disable any ABC settings or manually adjust brightness controls. This would be a favorable outcome.
2. The 10% adder, as proposed, by ENERGY STAR may provide the incentive to build in an elementary ABC sensor. DOE's review of the ABC test procedure is motivated by data that shows these elementary sensors do not function in the spirit of a fully functioning ABC system. **ENERGY STAR should consider additional criteria that**

would need to be met in order for a TV to obtain the 10% adder. The current proposal would allow a TV to get the adder simply if an ABC sensor is present, independent of its functionality. We would recommend that tests at different ambient light conditions be conducted to measure the power response of the TV. The measured power levels should, if the ABC sensor is fully functioning, decrease in an *approximately* linear relationship with ambient lux levels. If this is true, ENERGY STAR should consider allowing the TV to claim the 10% adder during this interim period. As we commented to DOE, we would recommend tests to be performed at a low light condition (~10 lux), two intermediate levels (50 and 100 lux), and at sensor saturation (300 lux).

In summary, ENERGY STAR should direct the interim specification to incentivize properly functioning ABC control system instead of just the inclusion of ABC sensors.

Thank you for considering these comments.

Sincerely,



Adam Christensen, PhD
Staff Engineer
Appliance Standards Awareness Project