

ENERGY STAR Version 8.0 Televisions Launch Comment Summary and Response

Topic	Stakeholder Comment	EPA Response
<p>Preset Picture Settings Power Consumption</p>	<p>Four stakeholders commented that power in non-default Preset Picture Settings should be taken into consideration. One stressed that the Default Picture Setting results should hold much more weight than non-default picture settings because people do not often change out of default. Another suggested that EPA should use the average of the power in the most power consumptive Preset Picture Setting and the Default Preset Picture Setting. Finally, a third stakeholder suggested variable weighting of results based on persistence of energy saving features.</p>	<p>For this revision, EPA is focusing on addressing the persistence of ABC across multiple Preset Picture Settings in order to ensure greater energy savings.</p> <p>As such, EPA has proposed the following requirements:</p> <ol style="list-style-type: none"> <li>1. To qualify with Automatic Brightness Control (ABC) enabled, TVs must have ABC enabled in a specified amount of non-default Preset Picture Settings,</li> <li>2. An alert to users that a Preset Picture Setting change will disable ABC if the setting does not have ABC enabled,</li> <li>3. A requirement that ABC remain enabled with any manual picture parameter change for products certified with ABC enabled by default.</li> <li>4. Minimum luminance requirements for ABC to ensure that TVs certified with ABC enabled by default do not ship too dim.</li> </ol>
<p>Addressing HDR</p>	<p>Three stakeholders were in favor of testing HDR content with one supporting testing both native and translated/upscaled HDR content, another supporting testing with the CLASP HDR clip for informational purposes at a minimum, and the third supporting using the CLASP HDR clip in the interim but stressing the importance of developing a representative future IEC test clip.</p>	<p>As an increasing number of televisions are able to translate or upscale SDR content to an HDR-like image, EPA is proposing to measure the power use with HDR upscaling enabled as a separate test - both in the Default Preset Picture Setting and also in a separate Preset Picture Setting that has HDR upscaling, if available.</p> <p>EPA is not proposing testing with native HDR content at this time due to a lack of popularity of this content in the market and lack of an industry standard test clip.</p>
<p>Standby Power</p>	<p>Two stakeholders supported updating the standby power test method for smart TVs to reflect that continuous Internet connectivity yields greater power consumption than is currently being measured. One stakeholder also recommended measuring the latency or resume time between when a television is switched on and when it is fully ready to be used.</p>	<p>In the Version 8.0, EPA is focused on requirements that encourage persistence of energy saving Preset Picture Settings and features like ABC.</p>

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<p>Automatic Brightness Control (ABC)</p>	<p>One stakeholder supported maintaining the current V7.0 method of ABC testing and stressed the importance of not requiring energy saving features, like ABC, to remain on in certain intentionally bright picture settings such as Store Mode.</p> <p>Three stakeholders supported changing the ABC requirements. Two of these stakeholders supported minimum luminance levels while one suggested alternate weighting of the illuminance levels. Another supported capping the credit received for ABC and requiring persistence of ABC to receive credit. Finally, one stakeholder suggested that EPA require persistence of ABC across all Preset Picture Settings.</p>	<p>For the Version 8.0 specification, EPA seeks to ensure the persistence of ABC, an energy saving feature, across as many Preset Picture Settings possible. As a result, EPA is proposing that if the TV has up to four Preset Picture Settings, the TV shall only be permitted to have one (or none) of the Preset Picture Settings without ABC enabled by default, or, if the TV has more than four Preset Picture Settings, the TV shall only be permitted to have two or fewer Preset Picture Settings without ABC enabled by default. If the TV does not meet this requirement, then the model would not be permitted to certify a product with ABC enabled by default. EPA considers that this proposed approach both encourages the persistence of quality implementations of ABC and provides flexibility in implementing ABC. It is important to note that EPA proposed to exclude the picture setting in the Retail configuration from the number of picture settings required to have ABC enabled by default in order to certify a product using ABC because Retail configurations are intended for non-home viewing environments.</p> <p>In addition, to encourage users to maintain use of the Default Preset Picture Setting, EPA is proposing two luminance requirements to ensure that implementation of ABC is not too dim and thus result in users disabling ABC. The first requirement is that the average luminance at the 3, 12, 35, and 100 lux illuminance conditions, with ABC enabled, shall be greater than or equal to 50% of the TV's luminance in the Brightest Selectable Preset Picture Setting. This will ensure that the luminance in the Default Picture Setting is acceptable to users.</p> <p>The second requirement states that the luminance at 3 lux in the Default Picture Setting, with ABC enabled, shall be greater than or equal to 150 <math>\text{cm}^2/\text{m}^2</math>. EPA tested a number of TVs with ABC enabled by default and the results demonstrate that models with ABC enabled in the Default Preset Picture Setting are much dimmer and use much less power than in a picture setting that is intended for viewing in a darkened room in the same conditions.</p>
<p>Persistence of Additional Energy Saving Features</p>	<p>A stakeholder supported limiting the effect of MDD on power results.</p>	<p>EPA has included language in the specification prohibiting certification of TVs as ENERGY STAR if they have enabled energy saving features during testing with the IEC test clip that do not offer comparable savings when tested with content that reflects a variety of typical viewing experiences.</p> <p>EPA understands that certain features besides ABC are employed in some TVs and may not consistently deliver energy savings. To illustrate this point, EPA examined data, where three organizations tested a number of televisions containing a feature termed Motion Detection Dimming (MDD), enabled by default. The data show energy savings with MDD enabled to be greater using the IEC clip than with the non-IEC test clips reflecting a range of content and typical viewing experiences.</p> <p>To address these concerns, EPA is not allowing TV certification with energy saving features enabled unless the manufacturer is confident of comparable energy savings in typical viewing experiences. As always, EPA encourages manufacturers to engage with EPA regarding new energy saving features for TVs to enable proper treatment of them in the ENERGY STAR Television specification.</p>

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UHD Adder	Two stakeholders supported eliminating or greatly reducing the UHD adder, while another supported keeping the adder equal to at least 40% and gradually reducing it if it must be changed.	In the Version 8.0, EPA is focused on requirements that encourage persistence of energy saving Preset Picture Settings and features like ABC.