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Via E-Mail

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The Consumer Electronics Association (CEA) appreciates the opportunity to submit comments to EPA on its Draft 1 Version 7.0 ENERGY STAR TV specification. CEA is the preeminent trade association promoting growth in the \$208 billion US consumer electronics industry. CEA represents more than 2,000 companies across the consumer electronics industry, including most of the companies which design, manufacture and sell televisions.

For many years, CEA has been on the vanguard of energy efficiency initiatives related to the consumer electronics industry, particularly televisions, at the state, federal and international levels and has supported advanced energy efficiency as part of the industry's broader commitment to environmental sustainability. CEA's comprehensive approach to energy efficiency includes initiatives related to public policy, consumer education, research and analysis, and industry standards. CEA's and industry's involvement in the successful ENERGY STAR program is over 20 years old. CEA studies and data are cited by EPA and DOE in their activities. CEA also interacts regularly with FTC on television and other consumer electronics matters.

Particularly relevant to EPA's consideration is CEA's leading role in the development of the consensus energy consumption test procedures for televisions ANSI/CEA-2037-A and the recently finalized IEC 62087-3. They are largely the basis for the DOE test procedure. We strongly believe that wherever possible well-conceived, recognized consensus standards such as these should be relied on to the maximum extent possible by governments around the world, including EPA and DOE. To the extent EPA unnecessarily departs from these standards international disharmony, trade barriers and additional testing burdens and confusion are the results.

In general, CEA supports the substance of Draft 1, Version 7.0. More specifically:

- On Mode – CEA believes that the proposed On Mode requirements are too stringent and unjustified. They appear to particularly penalize larger televisions. The specifications should be adjusted, in particular to accommodate that product segment.

- Ultra HD – CEA members indicate that the Ultra HD addressable TV requirements are unrealistic. CEA recommends and that further analysis needs to be undertaken for that category.
- Standby-Active, Low Mode – CEA members report that the 1 W Standby-Active, Low Mode requirement for TVs with full network conductivity is inadequate. CEA suggests that additional data be gathered.
- Harmonization and updating definitions - There are several examples where ANSI/CEA-2037-A should be adopted to enhance harmonization
- Effective date - At this point, the 2015 effective date for the new requirements is not feasible, particularly for specifications that may not be published until close to the end of the year. A 2016 model products application effective date is more reasonable.

Detailed information can be found in the attached matrix.

As always, CEA and its members look forward to working with EPA on the development of this latest version of the TV specification. Please direct any questions to Bill Belt at [bbelt@CE.org](mailto:bbelt@CE.org)

cc: Ms. Verena Radulovic, EPA

LINES	CEA COMMENTS
4 - 9	OK
11 - 18	OK
29	No Comment
37 - 40	The distinction between hospitality TVs and consumer TVs is still necessary. Hospitality TVs as defined employ proprietary communication protocols and software to interface with Video-On-Demand systems or a digital media player designed for hospitality-specific applications. They often utilize coaxial cables, RJ11, etc. for physical network connections. Their measurement of Standby-active, low mode requires different test and verification methods than is presently defined for consumer TVs connected via Wi-Fi or Ethernet using Internet Protocol.
44 - 66	The definition of Power Overhang State should not be removed. This concept may prove useful in future discussions about Standby power, Quick Start, etc.
83 - 92	No Comment
103 - 114	EPA should consider adding an allowance for energy saving achieved by using technologies such as DNLA, MoCA, and RVU to communicate with server devices and therefor allow consumers to eliminate traditional set top boxes.
117 - 124	CEA members believe that CableCARD technology deployment is falling and likely to continue this decline.
127 - 132	Reporting the availability of High Efficiency Video Processing is unnecessary.
140 - 155	It is confusing for the EPA to include two categories of Standby-Active, Low Mode with and without Full Network Connectivity (Section 3.5). The definition of Standby-Active, Low Mode requires network connectivity in order to switch the TV into another mode with an external signal. Accordingly there should only be a single power criteria for Standby-Active, Low Mode. We agree that this capability should be verified according to Section 4.2 which references the CEA-2037-A verification procedure. However, some provision should be made for Hospitality TVs which communicate over coaxial cable, RJ11, etc. interfaces using proprietary protocols. The Section 4.2 test is limited to Wi-Fi or Ethernet using Internet Protocol.
159 - 162	We would prefer to see this categorized as a special function. After all, it is not a function required for viewing TV.
172 - 177	Will consideration be given if these features can be used to save energy if they can help determine if a viewer is no longer present?
196 - 203	CEA is still checking if definitions are harmonized.
222 - 224	OK
231 - 242	We support the concept of Effective Vertical Resolution, and believe it should include "8K" in addition to "4K" resolution. This may be useful in providing an alternative method for classifying UHD and higher resolution TVs in order to qualify for an added offset to the On Mode power maximum.

LINES	CEA COMMENTS
245 - 247	<p>CEA continues to revise and update it's definition of Ultra HD as the technology evolves. The latest CEA difinition is: <b>Ultra High-Definition Display Characteristics:</b>  A display system may be referred to as Ultra High-Definition if it meets the following minimum performance attributes:  <b>Display Resolution</b>—Has at least 8 million active pixels, with at least 3840 horizontally and at least 2160 vertically.  <b>Aspect Ratio</b>—The width to height ratio of the display’s native resolution is 16:9 or wider.  <b>Upconversion</b> – The display is capable of upscaling HD video and displaying it at Ultra High-Definition display resolution.  <b>Digital Input</b> – Has one or more HDMI inputs supporting at least 3840x2160 native content resolution at 24p, 30p, &amp; 60p frames per second. At least one of the 3840x2160 HDMI inputs shall support HDCP v2.2 or equivalent content protection.  <b>Colorimetry</b> – Processes 2160p video inputs encoded according to ITU-R BT.709 color space, and may support wider colorimetry standards.  <b>Bit Depth</b> – Has a minimum bit depth of 8 bits.</p>
251 - 267	OK
272 - 275	OK
285 - 292	No Comment
299 - 307	CEA supports EPA removal of the scope exclusion
309 - 316	OK
320	OK
337 - 340	OK
375 - 382	<p>There remains disagreement among key CEA members on the EPA proposal to require on-screen information for Stanby-Passive Mode and Stanby-Active, Low Mode settings that may be altered by the consumer via a menu. CEA will continue internal discussions and if a consensus opinion is reached, we will communicate it to the EPA.</p>
383 - 387	<p>EPA should not attempt to get so deeply involved in user interface and menu interface designs. Selection of discrete times for operation of quick-start functionality should not be required, but should be encourage by providing an allowance if implemented. Also, some TVs may not have internal clocks which stay active when the TV loses power. At times, interface designs are experimental - to gauge consumer acceptance. Manufacturers should decide what is the best way to incorporate certain functions.</p>
395 - 401	<p>We support the adoption of a Thin Client Capability within a television, however it will be quite difficult to adequately report all of the relevant features in the context of the ENERGY STAR database. There are so many possible implementations and features associated with Thin Client Capability, resulting in a very complex reporting requirement.</p>
406 - 429	<p>CEA opposes requiring the automatic return to the default as-tested Standby-Active, Low Mode following a firmware update or other maintenance operation in Standby Active, High Mode within 15 minutes. The proposed requirement does not take into account TVs designed to enter alternate modes such as Standby-passive and other settings following these update/maintenance operations. This may limit older TVs from being updated to include newer features.</p>
442 - 471	<p>The impressive power consumptions reductions which have been implemented over the past several years are slowing. Past reduction rates are not an accurate indicator of future possible reductions. The proposed On Mode power requirements are too strict with only 15% of the HD televisions in the ENERGY STAR V6 certified products database projected to qualify.</p>

LINES	CEA COMMENTS
472 - 495	The Ultra HD data contained in the current ENERGY STAR database cannot be verified since these TVs are not sold in the United States. Accordingly, more data must be collected for the measured On Mode power of Ultra HD TVs. To keep the ENERGY STAR specification relevant to rapid consumer adoption of new technologies like UHD, CEA urges ENERGY STAR to consider appropriate wattage “adders” and other accommodations to facilitate Ultra HD TV qualification to the Version 7.0 spec.
497 - 498	CEA agrees with EPA that the that the Power Overhang State requirements be removed
504 - 506	CEA supports the EPA proposal to lower the Standby-Passive Mode power limit to 0.5 Watts.
513 - 529	TVs with full network connectivity will require substantially more than 1.0 Watts in Standby-Active, Low Mode to maintain a network presence. Accordingly, the EPA proposal to limit power of such TVs to 1.0 Watts in Standby-Active, Low Mode is much too low. We recommend that ENERGY STAR harmonize with the European Union (EU) Regulation No. 801/2013 (Networked Standby of 6 Watts in Jan 1, 2015; 3 Watts in Jan 1, 2017). Additionally, if Standby-Active, Low Mode is disabled by default, its power should be measured and reported, but not be subject to the power requirements of Section 3.5.
530 - 540	Gesture recognition and voice recognition are evolving features which have the potential to greatly enhance accessibility to TVs by persons with disabilities. These features should therefore be allowed. Quick Start is a function that reduces boot times. Accordingly, energy-efficient implementations of Quick Start features should be allowed. Thin client capability should be encourage via an adder.
541 - 550	We cannot find section 3.5.3 in either Versions 6 or 6.1. However, we agree that this should not be included in Version 7.
555 - 557	CEA continues to believe that luminance ratio testing is unnecessary and burdensome and again urges the EPA to delete these testing requirements.
566 - 596	We agree that the TEC equations 4 and 5 are not needed.
627 - 631	We agree with the inclusion of this test. Please note that the CEA-2037-A test is actually Section 6.7.5 (not 6.6.5). We do have an concern that Hospitality TVs with coaxial cable, RJ11, etc. network connections appear to be not covered by this test which only specifies Wi-Fi or Ethernet connections implementing IP communications. Perhaps the easiest way to test Standby-Active, Low Mode for hospitality televisions is to simply stop the DAM communication during the DAM test. The network should stay connected, but the downloading/uploading of data (DAM) will not be occurring in the Standby-Active, Low Mode.
636 - 637	CEA supports the EPA proposal to use CEA Procedure for DAM Testing, Rev. 0.3, Sept. 2010 for Hospitality TVs.
643 - 652	CEA supports compliance with the different unit sampling plans by both EPA and DOE.
665 - 666	We believe that there is not sufficient lead time between the final specification publication (Fall 2014) and the proposed effective date (late Summer 2015), particularly if Ultra HD technology is to be accommodated by the specification in a meaningful way. Also, there are several proposed changes to power levels, functionality, and user interfaces which will require more time to design and implement. TFinally, the proposed effective date does not align with manufacturer production cycles. We propose that January 2016 is more realistic and will encompass the introduction of the 2016 models.
676 - 677	No comment