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### BEFORE THE CALIFORNIA ENERGY COMMISSION

Petition to Adopt Order Instituting Rulemaking Pursuant to California Code of Regulations § 1221

Petition/Docket No. (Filed February 26, 2025)

### CONSUMER TECHNOLOGY ASSOCIATION PETITION TO ADOPT ORDER INSTITUTING RULEMAKING PURSUANT TO CALIFORNIA CODE OF REGULATIONS § 1221

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February 26, 2025

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## CONSUMER TECHNOLOGY ASSOCIATION PETITION TO ADOPT ORDER INSTITUTING RULEMAKING PURSUANT TO CALIFORNIA CODE OF REGULATIONS § 1221

Pursuant to 20 California Code of Regulations § 1221,<sup>1</sup> the Consumer Technology

Association ("CTA" or "Petitioner") respectfully requests that the California Energy Commission ("CEC" or "Commission") institute a rulemaking to amend the data reporting requirements for televisions in its Modernized Appliance Efficiency Database System (MAEDbS) set forth in 20 California Code of Regulations § 1606, Table X. CTA's sole objective for such a rulemaking is to urge the Commission to effect what the Commission had stated was its intent in its prior rulemaking – to align with the federally-mandated rules of the United States Department of Energy (DOE) set out at 10 C.F.R. Part 430, Subpart B, Appendix H. The existing rule adopted by the Commission in 2024 failed to align with the DOE test method by including additional information expressly excluded by DOE, the reporting of which

<sup>&</sup>lt;sup>1</sup> 20 CCR §§ 1221(b), 1221(a)(1)-(4). *See* 20 CCR § 1222(a) ("The commission may, upon its own motion or upon granting a petition filed pursuant to section 1221 of these regulations, adopt an order to institute a rulemaking proceeding in accordance with the procedures of Sections 11346.4, 11346.5, 11346.7, and 11346.8 of the Government Code."). *See also* Pub. Res. Code § 25213 (directing Commission to adopt rules and regulations).

unnecessarily undermines the purpose of MAEDbS, harms consumers by creating confusion, and inflicts competitive harm on television manufacturers.

#### I. Information about Petitioner<sup>2</sup>

CTA is North America's largest technology trade association. CTA's members are the world's leading innovators, from startups to global brands, helping support more than 18 million American jobs. CTA also owns and produces CES® -- the most influential tech event in the world. CTA members operate in a competitive marketplace to produce innovative products that provide enormous benefits to consumers and power the economy. CTA represents a significant majority of the companies that design, manufacture and sell the televisions that are available for purchase in California.

CTA appreciates the importance of the Warren-Alquist Act and the Commission's Appliance Efficiency Regulations. CTA has long supported state, federal, and international energy efficiency initiatives related to the consumer technology industry, particularly for TVs, as part of the industry's longstanding and ongoing commitment to environmental sustainability.

In furtherance of this commitment, CTA led the implementation of the Voluntary Agreement for Ongoing Improvement to the Energy Efficiency of Televisions (the "Voluntary Agreement"), announced at the 2023 CES by then-U.S. Secretary of Energy Jennifer Granholm. The Voluntary Agreement establishes transparent and verifiable commitments by leading manufacturers to improve the energy efficiency of their televisions sold in the United States and Canada.<sup>3</sup> The agreement was negotiated with the Natural Resources Defense Council (NRDC)

<sup>&</sup>lt;sup>2</sup> In compliance with 20 CCR § 1221(a)(1), CTA states that it is headquartered at 1919 S. Eads St., Arlington, Virginia 22202, with a telephone number of 703-907-7600.

<sup>&</sup>lt;sup>3</sup> The Voluntary Agreement has been signed by manufacturers Funai, Hisense, LG, Roku, Samsung, Sony, TCL, and Vizio. The agreement was also signed by Google, which, along with

and the American Council for an Energy-Efficient Economy (ACEEE), which act as the program's energy efficiency advocates to ensure the rigor and the effective implementation of the manufacturers' commitments.<sup>4</sup>

The first phase of the Voluntary Agreement commits that at least 90% of all new Televisions sold by signatories will meet a 2W limit in standby mode by 2026, which is expected to save at least 10 TWh/year once fully realized through the footprint of all TVs in consumer homes sold by all major manufacturers.<sup>5</sup> The parties are also currently engaged in developing additional commitments for on mode power consumption. The Voluntary Agreement features third-party lab testing and auditing to verify performance, with results publicly posted in annual reports issued by an independent administrator, D+R International, Ltd. The first report published by D+R in 2024 provides data that will help to develop a benchmark for the energy efficiency of televisions and found that more than 70% of new models already meet the standby power commitments set to take effect in 2026.

Roku, supports the ability of the manufacturer partners to meet Voluntary Agreement commitments using their operating systems. The Voluntary Agreement is modeled on the successful voluntary agreements for cable set-top boxes and small network equipment.

<sup>&</sup>lt;sup>4</sup> NRDC is one of the world's leading nonprofit environmental organizations. ACEEE is an independent nonprofit research organization that develops policies to reduce energy waste and combat climate change. ACEEE has engaged in federal appliance standards and test procedure rulemakings for the full range of covered products since the program's inception.

<sup>&</sup>lt;sup>5</sup> See Voluntary Agreement, <u>www.energy-efficiency.tv</u>. See also April 2023 – March 2024 Annual Report at 7 ("Based upon data and analysis from the Energy Advocates, [the Independent Administrator] estimates that the early implementation of the standby commitment has already reduced power consumption by approximately 500 GWh/year in comparison to the period prior development of the Voluntary Agreement, although this figure is subject to ongoing verification testing.").

## II. Background: The Commission's Attempt to Align with the New Federal Test Method for Televisions

Effective September 11, 2023, DOE adopted a new test method for ascertaining energy usage of televisions based upon the ANSI/CTA-2037-D test method developed under CTA's leadership and collaboration with the non-governmental energy efficiency advocates. This new method more accurately reflects actual TV energy usage than did the prior test method, particularly for network-connected smart TVs that now represent most sales. That prior method did not detect the power usage when smart TVs were not being watched but were in an active standby state ready to receive voice or other commands. As a result, under the old method, two smart TVs with significantly different actual standby power usage could appear to have similar usage. The new test method features modernized and improved provisions for measuring standby power, automatic brightness control (ABC), motion detection dimming, High Dynamic Range (HDR), the persistence of default efficiency related settings, and screen-average luminance testing.

Less than two weeks after DOE adopted its new television test method, the Efficiency Division of the Commission's Appliances Branch issued a Regulatory Advisory recognizing that television manufacturers would be "temporarily unable to submit new product certifications to the CEC's Modernized Appliance Efficiency Database System (MAEDbS)" until the Commission revised its reporting requirements to "to conform to the federal updates."<sup>6</sup> When opening the rulemaking, the Commission reiterated that its "specific purpose is to … align with

<sup>&</sup>lt;sup>6</sup> California Energy Commission, Bulletin: Indoor Television and Signage Displays, Temporary Changes to Certification Requirements and Related Actions (Sep. 22, 2023).

current federal law."<sup>7</sup> The adopted rules specifically incorporate the federal test method as prescribed by DOE as the test method to be used for MAEDbS reporting.<sup>8</sup>

Unfortunately, the Commission's rule overshot its target by requiring reporting on a

number of data points (found in Annex B of the ANSI/CTA-2037-D method)<sup>9</sup> that DOE

explicitly *excluded* from the test method adopted in the federal rules.<sup>10</sup> The DOE order adopting

the new test method states that "only enumerated provisions of ANSI/CTA-2037-D are

applicable to this appendix, as follows:

- (a) Section 5 as referenced in section 2 of this appendix;
- (b) Sections 6 and 8 through 11 as referenced in section 3 of this appendix;
- (c) Section 7 as referenced in sections 3 and 4 of this appendix; and
- (d) Appendix A as referenced in section 4 of this appendix."<sup>11</sup>

Annex B, which lists certain additional technical specifications to guide the tester

regarding the setup for and execution of the test, was intentionally excluded by the DOE and its

elements are not reported by manufacturers in the DOE's Compliance Certification Database.

<sup>10</sup> 10 CFR 430.23(h).

<sup>&</sup>lt;sup>7</sup> See California Energy Commission, Initial Statement of Reasons for Title 20 Update, Docket No. 22-AAER-04, 2022 Amendments to the Appliance Efficiency Regulations, at p. 32 (Nov. 20, 2023). See also id. at 2 ("The proposed changes will ensure the CEC's Appliance Efficiency Regulations reflect current state and federal law"); *id.* at 3 ("The purpose of this rulemaking is to provide federal alignment.").

<sup>&</sup>lt;sup>8</sup> 20 CCR § 1604(v)(2) ("Televisions and Signage Displays. The test method for televisions manufactured on or after April 24, 2014 is 10 C.F.R. section 430.23(h) (Appendix H to subpart B of part 430). The test method for signage displays manufactured on or after April 24, 2014, is 10 C.F.R. Section 430.23(h) (Appendix H to subpart B of part 430) (January 1, 2014).").

<sup>&</sup>lt;sup>9</sup> The portion of the Commission's TV reporting requirement that is from the excluded Annex B is shown in Exhibit 1.

<sup>&</sup>lt;sup>11</sup> 10 CFR Part 430, Subpart B, Appendix H (emphasis added). *See also* 88 FR 16082, Final rule: Energy Conservation Program, Test Procedure for Television Sets (Mar. 15, 2023).

As demonstrated below, the Commission should correct its prior action for at least three reasons: (1) to conform to federal law, as originally intended; (2) because the overinclusion of the hypertechnical Annex B information undermines the purpose of MAEDbS to provide clear and understandable information to retailers and consumers, and undermines the Commission's stated purpose of streamlining MAEDbS reporting; and (3) the publication of the Annex B information harms manufacturers by providing to their competitors an easily-accessible encyclopedia of technical details that can reveal engineering and business strategies.

### **III.** THE COMMISSION SHOULD AMEND TV REPORTING REQUIREMENTS<sup>12</sup>

# A. The Commission Should Effectuate its Original Intent to Conform to Federal Law

As discussed above, the Commission's original intent revising its TV reporting requirements going into its prior rulemaking was to align with the new DOE test method. DOE carefully considered which portions of the ANSI-CTA-2037-D test method should be included, and which should be excluded, from the federal rule. The Commission should therefore follow DOE's exclusion of the Annex B information to accomplish what it originally set out to do.

The revision is necessary not only to effectuate the Commission's intentions but also to comply with federal law. The federal Energy Policy and Conservation Act (EPCA) preempts any state requirement that "requires disclosure of information with respect to the energy use, energy efficiency, or water use of any covered product other than information required under section 6294 of this title."<sup>13</sup> Because the Annex B information is not required to be provided by

<sup>&</sup>lt;sup>12</sup> This section sets forth the "substance of the ... amendment requested" and the "reasons for the request" as required by 20 CCR § 1221(a)(2)-(3).

<sup>&</sup>lt;sup>13</sup> 42 U.S.C. § 6297(a)(1)(B). (Televisions are a "covered product" pursuant to 42 U.S.C. § 6292(a)(12).

the Federal Trade Commission labels established pursuant to section 6294, public disclosure of such information cannot lawfully be compelled by a state. The Commission therefore cannot lawfully enforce a requirement to include Annex B information in the public MAEDbS – not unlike when the Commission observed in September 2023 that manufacturers were "temporarily unable to submit new product certifications" to MAEDbS until the Commission revised its reporting requirements to "to conform to the federal updates."

# **B.** Simplifying Reported Data Will Better Support the Purpose of MAEDbS Reporting

The purpose of MAEDbS is simple: to enable retailers to confirm which devices comply with the Commission's minimum efficiency standards. The inclusion of hypertechnical Annex B sabotages that purpose because its data are irrelevant to the determination of whether a TV complies with California law. Moreover, the data is inscrutable and of no use to sophisticated retailers, much less consumers, even for other purposes. CTA respectfully asks the Commission to review below a set of Annex B data for a television and ask itself how this information could be of any use to retailer or consumer:

HighDynamicRange10Capable_HDR10	Т
AutomaticBrightnessControlCapable_ABC	Т
QuickStartCapable	F
QuickStartDefaultEnabled	F
InternetConnectionCapable	Т
SmartWakeCapable	Т
Default_SDR_PPS_ABCDefaultEnabled	Т
DfSDR_DfABC_ABCOff_DfBL_OnPwr_watts	141.60
DfSDR_DfABC_ABCOff_DfBL_DyLumin_cdm2	73.2
DfSDR_DfABC_ABCOn_4lux_OnPwr_watts	48.90
DfSDR_DfABC_ABCOn_17lux_OnPwr_watts	60.10
DfSDR_DfABC_ABCOn_50lux_OnPwr_watts	91.20
DfSDR_DfABC_ABCOn_140lux_OnPwr_watts	141.50

DfSDR_DfABC_ABCOn_4lux_DyLumin_cdm2	14.10
DfSDR_DfABC_ABCOn_17lux_DyLumin_cdm2	23.60
DfSDR_DfABC_ABCOn_50lux_DyLumin_cdm2	43.80
DfSDR_DfABC_ABCOn_140lux_DyLumin_cdm2	73.70
Brightest_SDR_PPS_ABCDefaultEnabled	F
BrSDR_NoDfABC_ABCOff_DfBL_OnPwr_watts	225.10
BrSDR_NoDfABC_ABCOff_MinBL_OnPwr_watts	47.30
BrSDR_NoDfABC_ABCOff_MidBL_OnPwr_watts	127.10
BrSDR_NoDfABC_ABCOff_DfBL_DyLumin_cdm2	124.60
BrSDR_NoDfABC_ABCOff_MinBL_DyLumin_cdm2	14.10
BrSDR_NoDfABC_ABCOff_MidBL_DyLumin_cdm2	72.70
Default_HDR_PPS_ABCDefaultEnabled	Т
DfHDR_DfABC_ABCOff_DfBL_OnPwr_watts	170.30
DfHDR_DfABC_ABCOff_DfBL_DyLumin_cdm2	46.00
DfHDR_DfABC_ABCOn_4lux_OnPwr_watts	102.50
DfHDR_DfABC_ABCOn_17lux_OnPwr_watts	113.50
DfHDR_DfABC_ABCOn_50lux_OnPwr_watts	136.60
DfHDR_DfABC_ABCOn_140lux_OnPwr_watts	171.10
DfHDR_DfABC_ABCOn_4lux_DyLumin_cdm2	27.90
DfHDR_DfABC_ABCOn_17lux_DyLumin_cdm2	31.60
DfHDR_DfABC_ABCOn_50lux_DyLumin_cdm2	38.00
DfHDR_DfABC_ABCOn_140lux_DyLumin_cdm2	46.50
StandbyModeTypeTested	SSWE

This information serves no legitimate or useful public purpose, but instead merely clutters the database with unnecessary information, contrary to the Commission's stated intent for its prior rulemaking to "streamline the CEC's product compliance review."<sup>14</sup>

The Commission's reporting requirements for other appliances generally avoid such unnecessary overcomplication. For example, computer monitor manufacturers are not required to report maximum luminance even though that measurement is collected during testing but is not part of the demonstration of compliance.

<sup>&</sup>lt;sup>14</sup> See California Energy Commission, Initial Statement of Reasons for Title 20 Update, Docket No. 22-AAER-04, 2022 Amendments to the Appliance Efficiency Regulations, at p. 2 (Nov. 20, 2023).

The Commission's data reporting obligations should be consistent with, and focused on, supporting the purposes of MAEDbS reporting, and therefore should be amended to exclude the irrelevant Annex B information.

### C. Public Disclosure of Annex B Information Will Result in Competitive Harm

The TV manufacturing business is highly competitive, and leading manufacturers invest millions of dollars to develop innovative products. Annex B data contains competitively-sensitive information about manufacturers' design of their products. While some manufacturers may test competitors' TVs to learn such information, doing so requires a significant amount of work and resources. The Commission should not force manufacturers to reveal engineering and business strategies about every single one of their models and make such information effortlessly and readily available to competitors, especially when doing so serves no benefit to consumers or to the Commission.

#### IV. CONCLUSION

For the foregoing reasons, the Commission's should initiate a rulemaking to amend 20 CCR § 1606 Table X by removing the unnecessary, distracting, and harmful requirement to report Annex B information that was excluded by DOE from the federal test method. Pursuant to 20 CCR § 1221(c), CTA requests a response within thirty days.<sup>15</sup>

<sup>&</sup>lt;sup>15</sup> 20 CCR § 1221(b) ("Such petition shall be filed with the executive director who shall within seven (7) days after its filing determine whether the petition contains the information specified in subsection (a)."); 20 CCR § 1221(c).

Respectfully submitted,

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February 26, 2025

## <u>Exhibit 1</u>

The deleted text highlighted with red strikethrough shows the portion of the Commission's current requirement that should be removed because it is from the Annex B that DOE excluded from its test method.

	Appliance	Required Information	Permissible Possible Answers
V	V Televisions (manufactured on or after September 11, 2023, and within the scope of 10 C.F.R. section 430)	Display Technology Type	OLED, Laser, LCoS, LCD (flourescent <b>[sic]</b> backlight), LED (TN), LED (IPS/PLS), LED (VA), QLED, Mini- LED, Micro-LED, DLP, Plasma, CRT, Other
		Viewable Screen Area (total square inches)	
		Screen Size (diagonal inches)	
		Screen Resolution (horizontal pixel	
		count)	
		Screen Resolution (vertical pixel count)	
		High Dynamic Range 10 (HDR10) Capable	True, False
		Automatic Brightness Control (ABC) Capable	True, False
		Quick Start Capable	True, False
		Quick Start Enabled by Default	True, False
		Internet Connection Capable	True, False
		Smart Wake Capable	<del>True, False</del>
		Default SDR PPS: ABC Enabled by	<del>True, False</del>
		Default	
		Default SDR PPS: If ABC Enabled	
		by Default, On Mode Power (watts)	
		at the Default Backlight Level with	
		ABC off	
		Default SDR PPS: If ABC Enabled	
		by Default, Dynamic Luminance	

## Excerpt from 20 CCR §1606, Table X Section V – Data Submittal Requirements

r		1
	(cd/m2) at the Default Backlight	
	Level with ABC Off	
	Default SDR PPS: If ABC Enabled	
	by Default, On Mode Power (watts)	
	at Approximately 4, 17, 50, and 140	
	lux Ambient Light with ABC On	
	Default SDR PPS: If ABC Enabled	
	by Default, Dynamic Luminance	
	(cd/m2) at Approximately 4, 17, 50,	
	and 140 lux Ambient Light with ABC	
	On	
	Default SDR PPS: If ABC Not	
	Enabled by Default, On Mode	
	Power (watts) at Default Backlight	
	Level, Minimum Backlight Level,	
	and Approximately Halfway	
	Between Minimum and Default	
	Level with ABC Off	
	Default SDR PPS: If ABC Not	
	Enabled by Default, Dynamic	
	Luminance (cd/m2) at Default	
	Backlight Level, Minimum Backlight	
	Level, and Approximately Halfway	
	Between Minimum and Default	
	Between Minimum and Default Level with ABC Off	True, False
	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled	<del>True, False</del>
	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default	<del>True, False</del>
	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled	True, False
	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts)	<del>True, False</del>
	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at the Default Backlight Level with	True, False
	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at the Default Backlight Level with ABC Off	True, False
	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled	True, False
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	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled by Default, Dynamic Luminance	True, False
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	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled by Default, Dynamic Luminance (cd/m2) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at Approximately 4, 17, 50, and 140	True, False
	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled by Default, Dynamic Luminance (cd/m2) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at Approximately 4, 17, 50, and 140 lux Ambient Light with ABC On	True, False
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	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled by Default, Dynamic Luminance (cd/m2) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at Approximately 4, 17, 50, and 140 lux Ambient Light with ABC On Brightest SDR PPS: If ABC Enabled by Default, Dynamic Luminance (cd/m2) at Approximately 4, 17, 50,	True, False
	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled by Default, Dynamic Luminance (cd/m2) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at Approximately 4, 17, 50, and 140 lux Ambient Light with ABC On Brightest SDR PPS: If ABC Enabled by Default, Dynamic Luminance	True, False
	Between Minimum and Default Level with ABC Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled by Default, Dynamic Luminance (cd/m2) at the Default Backlight Level with ABC Off Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at Approximately 4, 17, 50, and 140 lux Ambient Light with ABC On Brightest SDR PPS: If ABC Enabled by Default, Dynamic Luminance (cd/m2) at Approximately 4, 17, 50,	True, False
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	Between Minimum and Default Level with ABC-Off Brightest SDR PPS: ABC Enabled by Default Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at the Default Backlight Level with ABC-Off Brightest SDR PPS: If ABC Enabled by Default, Dynamic Luminance (cd/m2) at the Default Backlight Level with ABC-Off Brightest SDR PPS: If ABC Enabled by Default, On Mode Power (watts) at Approximately 4, 17, 50, and 140 lux Ambient Light with ABC-On Brightest SDR PPS: If ABC Enabled by Default, Dynamic Luminance (cd/m2) at Approximately 4, 17, 50, and 140 lux Ambient Light with ABC	True, False

Power (watts) at Default Backlight Level, Minimum Backlight Level, and Approximately Halfway Between Minimum and Default Level with ABC Off	
and Approximately Halfway Between Minimum and Default Level with ABC Off	
Between Minimum and Default Level with ABC Off	
Level with ABC Off	
Brightest SDR PPS: If ABC Not	
Enabled by Default, Dynamic	
Luminance (cd/m2) at Default	
Backlight Level, Minimum Backlight	
Level, and Approximately Halfway	
Between Minimum and Default	
Level with ABC Off	
Default HDR PPS: ABC Enabled by True, False	
Default	
Default HDR PPS: If ABC Enabled	
by Default, On Mode Power (watts)	
at the Default Backlight Level with	
ABC Off	
Default HDR PPS: If ABC Enabled	
by Default, Dynamic Luminance	
(cd/m2) at the Default Backlight	
Level with ABC Off	
Default HDR PPS: If ABC Enabled	
by Default, On Mode Power (watts)	
at Approximately 4, 17, 50, and 140	
lux Ambient Light with ABC On	
Default HDR PPS: If ABC Enabled	
by Default, Dynamic Luminance	
(cd/m2) at Approximately 4, 17, 50,	
and 140 lux Ambient Light with ABC	
On	
Default HDR PPS: If ABC Not	
Enabled by Default, On Mode	
Power (watts) at Default Backlight	
Level, Minimum Backlight Level,	
and Approximately Halfway	
Between Minimum and Default	
Level with ABC Off	
Default HDR PPS: If ABC Not	
Enabled by Default, Dynamic	
Luminance (cd/m2) at Default	
Backlight Level, Minimum Backlight	
Level, and Approximately Halfway	
Between Minimum and Default	
Level with ABC Off	

Type of Standby Mode Tested	Standby with Smart Wake Enabled, Standby with Internet Connection, Standby without Internet Connection
Power Consumption in Standby	
Mode (watts)	
Average On Mode Power (watts)	