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IOUs Electronic Displays 15-day Language CASE Response

Additional submitted attachment is included below.

Electronic Displays

Codes and Standards Enhancement (CASE) Initiative
For PY 2016: Title 20 Standards Development

Response to CEC 15-day Express Terms for
Computer Monitors and Signage Displays

Docket # 16-AAER-02

December 13, 2016

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The Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE), Southern California Gas (SCG), San Diego Gas & Electric (SDG&E) Codes and Standards Enhancement (CASE) Initiative Project seeks to address energy efficiency opportunities through development of new and updated Title 20 Standards. Energy use in California from electronic displays – computer monitors and signage displays – is significant and has been growing in some sectors. Computer monitors are ubiquitous in homes, offices, and other commercial settings. They are increasingly used as second screens with notebooks and in extended desktop display setups in home and office environments. Additionally, higher resolutions and feature-rich models are being introduced on the market. These models can consume as much as five times as much power as similarly sized regular high-definition models. The California Investor Owned Utilities (CASE Team) has provided robust testing, market, and performance data analysis to support this CEC rulemaking since 2013.[1] The CASE Team generally supports adoption of the first-in-the-nation energy efficiency standards for computer monitors proposed by the California Energy Commission (CEC) in the 15-day Language Express Terms.

The CASE Team also strongly supports the resolution adopted by the CEC to closely track the market to ensure that the regulations achieve the energy savings projected for that market. Based on industry estimates, Table 1.1 outlines the market share of certain monitors that will receive allowances, exemptions, or lenient on mode requirements due to limited market shares.[2] If market shares for these monitors increase significantly, thereby reducing the energy savings realized from the regulations, CEC should act swiftly to update the regulations. For instance, based on model count, gaming monitors are already 18% of all new monitors available from a popular retailer.[3]

Table 1.1 Industry Estimated Market Share of Certain Computer Monitors

Monitor Type	Industry Estimated Market Share (thru 2022)
Very High Performance Monitor	< 1%
KVM/KMM Monitors[4]	< 1%
Medical Monitors	< 1%
Touch Monitors	2%
Enhanced Performance Display with a color gamut support of 38.4% of CIELUV or great	3%
Enhanced Performance Display with a color gamut support of 32.9% of CIELUV or great (99% or more of defined sRGB colors)	8%
OLED Monitors	2%

[1] Docket 12-AAER-2A

[2] Docket 16-AAER-02; TN 214561(Docketed 11/23/16): http://docketpublic.energy.ca.gov/PublicDocuments/16-AAER-02/TN214561_20161123T145401_Addl_Documents_Relied_Upon_15day.pdf

[3] Best Buy website. Accessed on December 12, 2016. http://www.bestbuy.com/site/computers-pcs/computer-monitors/abcat0509000.c?id=abcat0509000

[4] KVM = keyboard, video, and mouse; KMM = keyboard, mouse, and monitor

Monitor Type	Industry Estimated Market Share (thru 2022)
Gaming Monitors	5%
Curved Monitors	6%
Large Monitors (30-inches and greater)	None provided
Small Monitors (20-inches and lower)	None provided

Source: CEC

In addition to the monitors that are receiving extra allowances or exemptions, there are two provisions in the test method that deviate from the current industry-accepted ENERGY STAR® test method and will add to manufacturers' testing burden:

1. CEC is proposing that features and functions not specifically addressed by the test method "shall be turned off or disconnected."[5] ENERGY STAR requires that these features and functions must be configured in the as-shipped power configuration.[6]
2. CEC is proposing that USB hubs be turned off,[7] whereas ENERGY STAR has required network and hub connections to be present during testing for years.

As with the market monitoring provisions, it will be important for CEC to track these features that are being disabled only for the CEC test method, but enabled upon shipping, to ensure there is no resulting loss of energy savings to the consumer. Additionally, for compliance testing, it will be important for the CEC to require the reporting of which features were disabled for the test method in Table X.

To realize further technically-feasible, cost-effective energy savings for the consumer, CEC should consider recommendations previously docketed by the CASE Team in future updates to these regulations,[8] namely: more stringent on mode power limits for monitors 30-inches and greater to align with the currently effective (Version 7) ENERGY STAR level (Section 4.1); the ability to apply multiple adders to a single unit (Section 4.3); and elimination of on mode adders altogether due to leniency of current adders (Section 4.2).

Incorporating these elements into a future standards update will allow California to even further address some of the statewide policy objectives of the Zero Net Energy California Long Term Energy Efficiency Strategic Plan and AB32 energy efficiency goals. We appreciate careful consideration of these recommendations.

[5] Title 20. Section 1604(v)(4)(C)
[6] ENERGY STAR Program Requirements for Displays Section 5.2 (c)(1)(g)
[7] Title 20. Section 1604(v)(4)(D)
[8] Docket 16-AAER-02; TN 214155(Docketed 10/24/16)