August 16, 2019

Mr. Ryan Fogle
ENERGY STAR Program – Product Labeling
U.S. Environmental Protection Agency
Ariel Rios Building 6202J
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Subject: Version 8 ENERGY STAR Computer Specification Draft 2 Comments

Dear Mr. Fogle:

This letter comprises the comments of the Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric (SDG&E), and Southern California Edison (SCE) in response to the United States (U.S.) Environmental Protection Agency's (EPA) request for further information on desktop computer categorization.

The signatories of this letter, collectively referred to herein as the California Investor Owned Utilities (CA IOUs), represent some of the largest utility companies in the Western U.S., serving over 32 million customers. As energy companies, we understand the potential of appliance efficiency standards to cut costs and reduce consumption while maintaining or increasing consumer utility of the products. We have a responsibility to our customers to advocate for standards that accurately reflect the climate and conditions of our respective service areas, so as to maximize these positive effects.

We appreciate this opportunity to provide comments to EPA as it develops the ENERGY STAR® Computer Specification Version 8. This letter outlines comments regarding Draft 2 of the Specification.

The CA IOUs support the EPA's effort to recognize efficient computers on the market, and support some of the updates proposed in Draft 2 of Version 8. In particular, we support:

- **Updated adders based on new mode weightings –** The adders proposed in Draft 2 reflect the new mode weightings and maintain the relative proportions of base allowance and adders in the total energy consumption (TEC) allowance of the prior Version 7 Specification.
- **Adding ten percent load efficiency requirement** – The CA IOUs support the addition of a ten percent load requirement and encourage EPA to continue to push the market toward increasing low-load efficiency in future versions of the specification.
- **Maintaining 80 Plus Gold equivalent efficiency requirements for power supplies greater than 500 watts** – The CA IOUs encourage EPA to continue to evaluate cost-effectiveness of power supplies and increase stringency for smaller supplies when shown to be cost-effective.

The CA IOUs have noted some areas to improve the specification. Our key recommendations are summarized below, followed by a more detailed discussion:

Summary Recommendations

1. **Reduce pass rates to anticipate U.S. market improvement and maintain relevance in states that have adopted the California Energy Commission (Energy Commission) standard –** Under EPA's Draft 2 proposal, systems that have been on the market since as long ago as 2014 would qualify for ENERGY STAR. At a minimum, EPA should anticipate market improvements and set requirements that target a 25 percent pass rate of systems sold on or after the effective date in July 2020. However, CA IOU analysis of systems available for sale in California shows that 51 percent of desktops, 49 percent of integrated desktops, and 94 percent of notebooks would pass the Draft 2 proposal. If ENERGY STAR is to maintain relevance in markets that have adopted the Energy Commission standard and anticipate changes in the U.S. market as a result of greater market share of efficient products, pass rates must be reduced significantly.

2. **Require Energy Efficient Ethernet (EEE) to be enabled by default** – CA IOUs support EPA's Draft 1 proposed requirement that all Gigabit Ethernet ports are EEE enabled when shipped, rather than the Draft 2 proposal that would require only that Gigabit Ethernet ports be EEE compatible.

3. **Eliminate full network connectivity incentive** – CA IOUs support EPA's Draft 1 proposal to eliminate the full network connectivity incentive. The Draft 2 proposal, which maintains the incentive and raises the allowable sleep-mode power from 2 watts to 2.5 watts, is overly generous to systems that implement full connectivity in sleep mode.

Detailed Recommendations Discussion

1. **EPA should reduce pass rates to anticipate U.S. market improvement and maintain relevance in states that have adopted Energy Commission standard.**

   ENERGY STAR aims to target the top 25 percent of the market at the effective date of a new specification. However, the Draft 2 proposal would, for most desktop and integrated desktop categories, allow over 25 percent of the systems in the EPA's data and analysis package to pass (Figure 1).[1] Systems in the data package are available on the market today, and some have been on the ENERGY STAR Qualified Products List for several years. However, the computer market has historically achieved continuous efficiency improvements, and today's systems are unlikely to represent those available to consumers by the Version 8 proposed effective date in July 2020. To create a Version 8 specification that recognizes consumers' best choice for efficient models, EPA should craft allowances and adders that result in pass rates in the 15 to 20 percent range, as suggested by the Natural Resources Defense Council in a previous comment.[2]

   At the beginning of 2019, minimum efficiency requirements for computers took effect in California, and as of August 2019 over 600 desktops, 200 integrated desktops, and 1,400 notebooks computer systems have been registered to the Modernized Appliance Efficiency Database System (MAEDbS), a public database that tracks consumer goods that comply with California's appliance efficiency standards. Analysis of these computer systems in the MAEDbS

[1] Because the EPA data and analysis package contains systems that have insufficient information to determine adders, we present a range in pass rates for this discussion. The low pass rate assumes that systems with insufficient information receive no adders related to the missing information (e.g., if the type of storage is missing, the system is assumed to receive no storage adder). The high pass rate excludes systems that do not have sufficient information to determine adders.

[2] https://www.energystar.gov/sites/default/files/NRDC%20Comments_11.pdf

indicate that 51 percent of desktops, 49 percent of integrated desktops, and 94 percent of notebooks would pass the Draft 2 proposal (Figure 1). Although this dataset may not represent the current U.S. market, it does represent the likely shift in the market as additional states adopt the computers standard. Three other states have already adopted the standard: Vermont (effective in 2020), Colorado (effective in 2021), and Washington (effective in 2021).[3] These markets, which represent almost 20 percent of U.S. gross domestic product, are likely to drive the U.S. market toward more efficient models in the future.

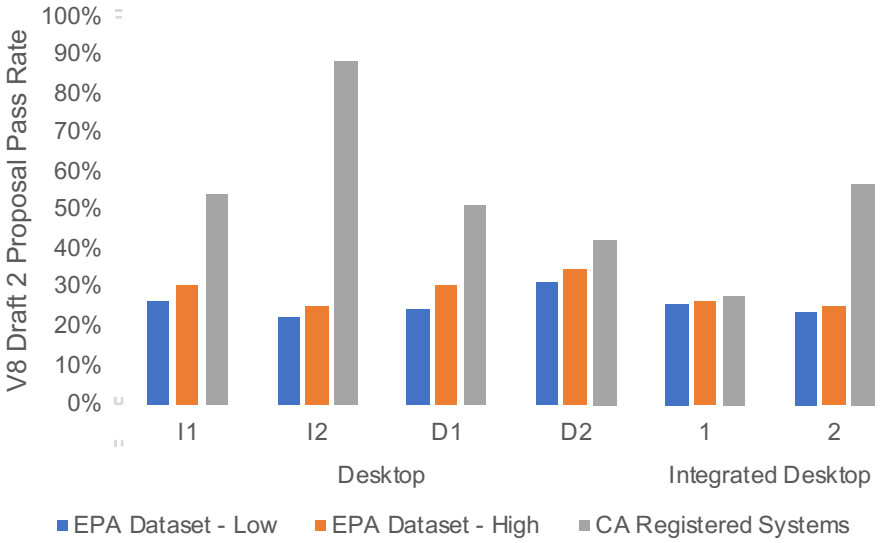

Figure 1: Pass rates of desktops and integrated desktops in EPA dataset and the California MAEDbS by category.[4]
Source: CA IOU analysis of EPA data and analysis package[5] and systems reported to MAEDbS.[6]

2. **EPA should require EEE to be enabled by default.**

The CA IOUs support EPA's Draft 1 proposed requirement that all Gigabit Ethernet ports are EEE enabled when shipped, rather than backtracking to the Draft 2 proposal that would require only that Gigabit Ethernet ports be EEE compatible. EEE is a mature energy savings technology that has been available in products since 2010 and has been incentivized in ENERGY STAR's computer specification since Version 6 (effective date 2014). CA IOU's analysis shows that 89 percent of systems in MAEDbS are EEE compatible.

EEE is extremely low-cost to enable in a compatible port via an update in the system's software. Although industry claims that Draft 1 of this requirement would exclude one third of systems,

[3] https://appliance-standards.org/product/computers-and-computer-systems
[4] Desktop systems in categories I1 and I2 contain integrated or switchable graphics; I1 includes systems with a performance score (P) of 8 or less, and I2 includes systems with P greater than 8. Desktops in categories D1 and D2 include discrete graphics; D1 includes systems with P of 8 or less, and D2 includes systems with P greater than 8. Integrated desktop systems with P of 8 or less are included in category 1, and those with P greater than 8 are in category 2. P is calculated from system attributes and is the product of the number of CPU cores and the CPU clock speed in gigahertz.
[5] EPA data and analysis package for Computers Specification Version 8 Draft 2: https://www.energystar.gov/sites/default/files/ENERGY%20STAR%20Version%208_0%20Computers%20Draft%202%20Specification%20Data%20Analysis%20Package_0.xlsx
[6] 80 PLUS certified power supplies: https://cacertappliances.energy.ca.gov/Pages/Search/AdvancedSearch.aspx

since enabling EEE by default is simple and nearly cost-free, the CA IOUs see no reason to delay implementing this requirement.

3. **EPA should eliminate the full network connectivity incentive.**

   The CA IOUs encourage EPA to move to eliminate the full network connectivity incentive, which gives a 12 percent TEC allowance for desktops that have full network capability or proxying, and allows a maximum sleep-mode power of 2.5 watts. The CA IOUs agree with the EPA's previous assessment in Draft 1 that this incentive is no longer necessary. Analysis of the MAEDbS shows that 67 percent of systems that meet full network capability requirements would pass the proposed levels without an adder. In addition, an increased maximum sleep-mode power of 2.5 watts in Draft 2 from 2 watts in the previous Draft does not appear justified according to the CA IOU analysis of MAEDbS. Average sleep-mode power of the systems that meet the full network capability requirements is 1.4 watts, and only 11 percent of systems draw more than 2 watts in connected sleep mode.

The CA IOUs thank EPA for the opportunity to be involved in the ENERGY STAR Computer Specification Version 8 revision process, and we look forward to discussing how the suggestions above may be incorporated into the next draft.

Sincerely,

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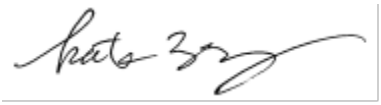

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