

**CALIFORNIA ADOPTS ENERGY EFFICIENCY RULES FOR COMPUTERS,
COMPUTER MONITORS, AND SIGNAGE DISPLAYS**

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The California Energy Commission (CEC) has adopted important mandatory energy efficiency requirements for computers, computer monitors, and signage displays.

Unless preempted by federal rules, which seems unlikely under the new Administration, these new requirements will not be the last. CEC has indicated it will adjust the requirements as needed to ensure that the projected energy savings are achieved, and will consider amendments for new technologies or features. Any person may petition CEC to request a rulemaking to that end. Industry should be vigilant.

There are already longstanding voluntary Energy Star programs for computers and monitors. But CEC's are the first mandatory efficiency standards for computers and computer monitors in the United States. ***They could well become de facto national and even global standards.*** The clout of the California requirements is enhanced by CEC's sanctions regime, which includes civil penalties of up to \$2,500 per unit. The U.S. Department of Energy (DOE) could preempt these standards by adopting its own standards for these products. And DOE has tentatively determined that that computer and battery backup systems qualify as covered products under the Energy Policy and Conservation Act. But that would require the new Administration to adopt new energy efficiency standards, something that it may well not wish to do.

Computers. The CEC rule includes provisions for a broad variety of computers. In addition to those discussed below, it includes high expandability computers, mobile gaming systems, and portable all-in-ones. The term "computer" does not include tablets, gaming consoles, televisions, small computer devices (like smart phones), servers other than small-scale servers, or industrial computers. The CEC test method for computers is the March 2016 revision of the Energy Star test procedure for computers, with specified modifications.

Desktops and thin-clients. The CEC rule provides that desktop computers and thin-clients with an "expandability score" (ES) of 250 or less, manufactured on or after January 1, 2019, will be required to have a maximum total energy consumption of 50 kWh/yr, plus a maximum kWh/yr for applicable adders -- such as system memory, Energy-Efficient Ethernet, certain storage devices, and integrated display. (ES is a measure of power supply capacity.) These products generally would also need to be shipped with power management settings that (i) transition the computer into either the sleep mode or off mode within 30 minutes of user inactivity; and (ii) transition connected displays into sleep mode within 15 minute of user inactivity. The model would not be required to comply with (i) and (ii) if it is shipped with a limited capability operating system or without an operating system per the purchaser's request.

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Comparable standards apply to products with a higher ES, on January 1, 2019, and a second tier of standards on July 1, 2021.

Notebooks. The CEC requirements for notebook computers generally track the foregoing requirements for desktops and thin-clients with an ES of 250 or less, except that the maximum total energy consumption for notebooks would be 30 kWh/yr, plus a maximum kWh/yr for applicable adders.

Small scale servers and workstation computers. The CEC rule requires that small scale servers and workstation computers manufactured on or after January 1, 2018, be powered by an internal or external power supply that meets specified requirements. They are also required to incorporate Energy-Efficient Ethernet functionality; transition connected displays into sleep mode within 15 minutes of user inactivity; and transition themselves into a sleep mode within 30 minutes of user inactivity.

Exemption for small volume manufacturers. There is a limited exemption for computers manufactured on or after January 1, 2019, by “small volume manufacturers.” These are manufacturers with gross revenues of \$2 million or less in the preceding 12 months and that assemble and sell computers at the same location. They must comply with power management setting requirements but are exempt from all other requirements for computers unless they produce more than 50 units of a similar system.

Computer monitors. The CEC rule provides that computer monitors manufactured on or after July 1, 2019, must meet maximum power requirements in watts for on mode, sleep mode, and off mode. The standards are based on diagonal screen size and resolution. Enhanced performance displays manufactured on or after July 1, 2019, need to comply with on mode power allowances; an additional tier of requirements for allowances apply on January 1, 2021.

Computer monitors with touchscreen capability will be allowed an additional 1 watt allowance per mode in modes where touch functionality is enabled.

In addition, computer monitors manufactured on or after the effective date must be shipped with a screen luminance less than or equal to 200 cd/m² ± 35 percent.

The term “computer monitor” does not include (i) displays with integrated or replaceable batteries designed to support primary operation without AC mains or external DC power (e.g., electronic readers, mobile phones, tablets, battery-powered digital picture frames); or (ii) televisions or signage displays.

The test procedure for computer monitors is the September 2015 Energy Star test procedure for displays, with specified modifications.

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Signage displays. The CEC rule includes requirements for signage displays. These are analog or digital devices designed primarily for the display of a computer generated signal and are not marketed for use as a computer monitor or television. Signage displays manufactured on or after January 1, 2006 and 2013 are required to meet certain CEC standards specified for televisions. These include maximum standby-passive mode power usage, maximum on mode power usage, and/or minimum power factor. There is an exception for professional signage displays.

The test procedure for signage displays is the DOE test procedure for television sets.

Filing requirements. The CEC rule imposes significant information filing requirements on manufacturers for computers, computer monitors, and signage displays sold or offered for sale in California. This includes a declaration that a product complies with the applicable standards.

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