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Comment Received From: Christopher Granda
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Additional submitted attachment is included below.

Appliance Standards Awareness Project
Northeast Energy Efficiency Partnerships
American Council for an Energy Efficient Economy

Commissioner McAllister
California Energy Commission
Dockets Office, MS-4
Re: Docket No. 14-AAER-2
1516 Ninth Street
Sacramento, CA 95814-5512

October 19, 2016

Dear Commissioner McAllister,

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP), the Northeast Energy Efficiency Partnerships, and the American Council for an Energy Efficient Economy on the California Energy Commission's (CEC) appliance efficiency rulemaking for computers, computer monitors, and signage displays, Docket No. 14-AAER-2. We strongly support the CEC's efforts to develop computer and display standards that build on the Commission's successful track record establishing standards for other electronic products. The large and cost-effective potential savings from CEC computer and display standards promise both energy bill savings for consumers and businesses and significant environmental benefits.

We congratulate the CEC on its energy efficiency standards leadership.

We commend the CEC and the other stakeholders in this process for their hard work and consistent efforts and look forward to a successful conclusion. Previous CEC standards for electronic products (e.g., external power supplies, TVs, battery chargers) were met more cost-effectively than expected, ahead of schedule, and with no negative impacts on the market. California has long provided leadership in energy efficiency standards well beyond its borders. ASAP is particularly interested in this rulemaking because we believe that it will have a substantial impact on energy consumption by computers and monitors in California, across the US, and possibly around the world.

We support the proposed standards for computers and monitors, with adjustments.

While ASAP supports the proposed California state standards for computers and monitors, we also believe that they could be improved to better guarantee savings. The projected annual savings to Californians are significant: 2,332 GWH/yr, $370 million in utility bill savings and 730,000 metric tons of CO_2 emission avoided. We support the draft standards' performance-based approach which allows each manufacturer maximum flexibility to find their best and most cost-effective compliance pathway. While we would have liked to see more ambitious effective dates in both the proposed computers and monitors standards, we respect the collaborative process and support the results.

However, we are concerned that allowances and exemptions in the proposed standards create a significant risk to the projected energy savings from future changes in both computer and monitor technologies and changes in

the relative popularity of these products. Computer and monitor energy efficiency is challenging to address through minimum efficiency standards because the technologies evolve so rapidly that it is difficult to project what products and features will dominate in the market place over the length of the relevant standards cycle. If history is any indicator, over 3-4 years for Tier 1 and over 5-6 years for Tier 2 (from market data analysis to effective date as proposed in the standards) we should expect technology for monitors and computers to change significantly. Increases in technical capability enables new applications, which in turn drive increases in market share for more powerful and often more energy-consumptive computers and monitors. For example, in the late 2000s, the advent of powerful graphics cards and graphics-rich computer games caused a rapid increase in computer energy use, due to lack of power management in idle mode.

The functional allowances and exemptions for monitors and computers and the potential effects of the proposed categorizations for computers included in the proposed standards would allow significant growth in power consumption under various scenarios. A specific level of risk is difficult to quantify, but if the proposed adders, exemptions and categorizations were to undercut the projected savings from the standards by half, over six years Californians would spend more than an additional $1 billion on electricity, and emit more than an additional 2 million tons of CO_2. The effect at the national level would be, of course, much greater.

Functional allowances make standards more flexible, but when functional allowances are overly generous they can also distort markets. More energy consumptive-products covered by such allowances can gain a market advantage over less energy-consumptive products that are not covered. To illustrate, when minimum energy efficiency standards for general service fluorescent lamps were set under the federal Energy Policy and Conservation Act (EPCA), it was expected that it the relatively inefficient class of T12 linear fluorescent lamps would be eliminated from the market by today. However, EPCA included an exemption for linear fluorescent lamps with color rendering index greater than 87. Such lamps were rare at the time EPCA was passed and “high CRI” linear fluorescent lamps were expensive and sold primarily for niche applications. Today T12 lamps with CRIs above 87 are common in the market and available at low prices. The National Electrical Manufacturers Association (NEMA) reports that as of 2016QTR1 (a year after the standards went into effect) T12 lamps still accounted for over 14% of the market for linear fluorescent lamps. Inexpensive high CRI T8 lamps have also begun to appear. The rated efficiencies of these exempt, high CRI fluorescent lamps are often significantly below the minimum standards levels for their non-exempt competitors. For rapidly evolving technologies, like lighting or computers, price is heavily influenced by the volume of sales, and past market shares and prices are often not indicative of the future.

We recommend specific adjustments to the proposed standards.

We ask that the CEC take reasonable steps to ensure the success of these proposed standards by limiting the proposed functional allowances and exemptions for monitors and functional allowances, exemptions and number of categories for computers. We also strongly recommend that the CEC add market tracking and regulatory response mechanisms to the proposed standards. The monitor and computer manufacturers have demonstrated an excellent ability to simultaneously improve both the performance and the energy efficiency of their products. We have no doubt that they will be able to thrive under a California state standard that more conservatively manages the risk of standards under-performance.

ASAP supports the comments of the Natural Resources Defense Council to this docket with regard to specific recommendations for addressing concerns related to functional allowances and exemptions for monitors and functional allowances, exemptions and category definitions for computers. We particularly support the concept of a “post-adoption off-ramp.” Building market monitoring and regulatory triggers into minimum energy efficiency standards is a proven way to make standards more relevant to rapidly changing technologies. For

example, a market monitoring requirement and regulatory trigger are part of the 2007 Energy Independence and Security Act (EISA). Vibration service lamps were exempted from regulation as general service lamps under the original statute. Sales of vibration service lamps were small then but it was recognized that they provided service similar to more popular lamps that fell under the proposed standards. EISA required market tracking to make sure that sales of vibration service lamps did not grow to the point that they undercut the standards for general service lighting. Production and sale of vibration service lamps did grow strongly and earlier this year shipments reached the trigger level in EISA, as a result DOE announced that it would initiate a rulemaking to set standards for this lamp type.

Thank you for the opportunity to comment on these proposed standards. We commend the CEC and participants on this collaborative process and look forward to a conclusion by the end of 2016.

Sincerely,

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