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Additional submitted attachment is included below.

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Docket # 19-AEER-04

Submitted By:

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On behalf of the Natural Resources Defense Council (NRDC) and its more than 3 million members and on-line activists, we submit these comments in support of the California Energy Commission's prompt adoption of its proposal dated August 23, 2019 to amend the state's regulations for general service lamps (GSLs, also more commonly known as everyday light bulbs). Adoption of these standards will deliver billions of dollars in annual electric bill savings for California consumers and businesses and prevent millions of tons of CO2 emissions.

We support CEC's proposal to update its definition for general service lamps and to apply a minimum efficacy level of 45 lumens per watt (LPW).

The CEC's current definition of general service lamps (GSLs) is inadequate as it fails to cover the bulbs that go into almost half of the sockets in California households. The CEC's proposal to adopt the updated definitions for GSLs published by the Department of Energy (DOE) on January 17, 2017 makes a lot of sense as it brings common household bulbs such as: 3-way; round globe bulbs commonly used in bathroom vanities; reflector bulbs used in recessed cans, flood lights and track lighting; and candle and flame shaped bulbs often used in chandeliers and sconces into the scope of California's Title 20 efficiency standards for GSLs. (Note throughout this document we will also use the more commonly used term bulbs instead of lamps.)

In addition to expanding the scope of the bulbs covered by the CEC's definition for GSLs, the CEC is also proposing to apply a minimum efficiency

standard of 45 LPW to these bulbs. This will complete the phaseout of inefficient incandescent and halogen bulbs as intended by Congress back in 2007 when they drafted the lighting section of the Energy Independence and Security Act. Once the new CEC regulations are in effect, CA consumers will be choosing between CFL and LED light bulbs, with the vast majority of purchases being LEDs due to their superior performance, greater efficiency and longer lifetimes. (While the standards are technology neutral and allow for the ongoing sale of incandescents and halogens, we are unaware of any market ready versions that can meet the 45 LPW minimum efficiency level.)

As NRDC has previously testified at the CEC, LED bulbs are widely available in a broad variety of shapes, base types, and brightness levels, from a wide range of manufacturers, and from retailers across the state and on the internet.

The standards are needed to accelerate and complete the transition to energy efficient lighting

While the sale of LED light bulbs has accelerated dramatically, some consumers still opt for the less efficient incandescent or halogen offering. This is due to the lower purchase price and failure by the consumer to account for the future energy costs of their purchase and/or familiarity with incandescent lighting and reluctance to try something "new". This is particularly true for many of the decorative bulbs covered by this proposal.

Adoption of the CEC's amendment to its GSL regulations, will ensure that all common light bulbs sold in the state are energy efficient as of January 1, 2020, thereby accelerating the shift to these dramatically more efficient light bulbs.

LED light bulbs use much less energy than incandescent light bulbs to deliver the same amount of light. For example, the LED bulb that replaces the flame shaped 40 watt incandescent only uses 5 watts to deliver the same amount of light and lasts a lot longer, thereby avoiding the cost and hassle of roughly annual bulb changes required for most incandescent and halogen bulbs. Due to their dramatically superior efficiency and longer life, the LED bulbs are an extremely cost-effective replacement with typical pay back periods in California of around 6 months. Depending on the bulb's wattage and lifetime, each LED light bulb will save the consumer $25 to $100 over its 10 to 25-year lifetime.

Per an analysis from the Appliance Standards Awareness Project (ASAP), a typical household in California will save roughly $150 per year in 2025 due to the CEC's updated GSL standards (expanded definition and minimum efficacy of 45 LPW).

We support CEC's proposal to align with the federal test procedures for GSLs

DOE has recently updated its test procedures for measuring the energy use and efficiency (light level divided by measured power) of GSLs. CEC's proposal to adopt DOE's updated test procedures will bring CEC's regulations up to date and in alignment with the federal regulations.

The energy savings from this update to California's GSL will provide multiple societal benefits.

Per the CEC analysis, the updated GSL scope and efficiency requirements will save between 4,000 and 13,600 gigawatt-hours per year once the current stock of bulbs has turned over. These electricity savings translate to between $736 million to $2.4 billion in annual savings. (The exact figure will depend upon the percentage of sockets that still contain an incandescent or halogen bulb as of 12/31/2019.)

These energy savings will result in millions of tons of avoided annual CO2 emissions and we look forward to seeing updated projected CO2 savings numbers from the CEC in the future.

It should also be pointed out that much of the energy use tied to GSLs occurs during the evening when the sun is no longer shining and solar power is not being generated. As such, the electricity saved by more efficient lighting will be increasingly valuable as the state shifts to more renewable power sources and the challenges associated with balancing supply and demand throughout the day increase.

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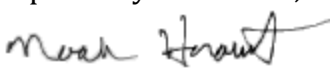
In closing we express our strong support for the CEC's proposed action and urge the CEC to adopt this proposal as soon as possible to lock in these critically important energy and carbon savings.

Respectfully submitted,



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