

## Item 5

| <b>DOCKETED</b>         |   |
|-------------------------|---|
| <b>Docket Number:</b>   | 19-AAER-04  |
| <b>Project Title:</b>   | General Service Lamps   |
| <b>TN #:</b>            | 229679-1  |
| <b>Document Title:</b>  | Proposed Negative Declaration and Initial Study for General Service Lamps Appliance Efficiency Rulemaking |
| <b>Description:</b>     | N/A   |
| <b>Filer:</b>           | Patrick Saxton  |
| <b>Organization:</b>    | California Energy Commission  |
| <b>Submitter Role:</b>  | Commission Staff  |
| <b>Submission Date:</b> | 9/6/2019 10:51:12 AM  |
| <b>Docketed Date:</b>   | 9/6/2019  |

**CALIFORNIA ENERGY COMMISSION**

1516 Ninth Street  
Sacramento, California 95814

Main website: [www.energy.ca.gov](http://www.energy.ca.gov)  
CEC-57 (Revised 1/19)

**PROPOSED NEGATIVE DECLARATION AND INITIAL STUDY FOR GENERAL SERVICE LAMPS APPLIANCE EFFICIENCY RULEMAKING**

Docket No. 19-AAER-04

**PROPOSED NEGATIVE DECLARATION****PROJECT NAME AND LOCATION**

This project is a statewide rulemaking proceeding titled General Service Lamps Appliance Efficiency Rulemaking, CEC Docket # 19-AAER-04.

**PROJECT PROPONENT**

California Energy Commission

**PROJECT DESCRIPTION**

The project proposes statewide regulations revising the definition for a general service lamp (GSL) and incorporating a federal statutory 45 lumens-per-watt (lpw) minimum efficacy standard for GSLs, complementing the existing 45 lpw minimum efficacy standard in the regulations. For lamps not already covered by California efficiency standards, the proposed regulations and minimum efficacy standard would apply to all general service lamps sold or offered for sale in California on or after January 1, 2020.

The proposed performance regulations do not mandate proprietary technology or equipment. Instead, the proposed regulations require all general service lamps, regardless of light source technology, to meet a minimum efficacy standard. Because low-efficiency lamps, such as incandescent, including halogen, cannot meet this requirement, they would not be lawful for sale or offer for sale in California on or after January 1, 2020. High-efficiency lamps, primarily light-emitting diode (LED) lamps are readily available and currently produced in large volumes by numerous manufacturers.

The proposed regulations incorporate a revised definition for general service lamps (GSLs) and other supplemental definitions from U.S. Department of Energy (DOE) final rules published on January 19, 2017<sup>1</sup>, align existing test procedures with new and updated DOE test procedures, and reinstate a severability clause into the regulations. The proposed regulations incorporate the federal minimum 45 lpw efficiency standard for GSLs that exists in federal law and also incorporate it as a state regulation that is

---

<sup>1</sup> 82 FR 7276 (Jan. 19, 2017) and 82 FR 7322 (Jan. 19, 2017).

identical to the federal law to ensure implementation of the regulations if repealed at the federal level. California has an exemption from state preemption in U.S. Code, Title 42, Section 6295(i)(6)(A)(vi). For lamps not already covered by California efficiency standards, the proposed regulations and minimum efficacy standard would apply to all general service lamps sold or offered for sale in California on or after January 1, 2020.

The proposed regulatory language is available at <https://efiling.energy.ca.gov/getdocument.aspx?tn=229452>, and summarized further in the notice of proposed action available at <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-AAER-04>.

## **BACKGROUND**

The California Energy Commission (CEC) was established in 1974 by the Warren-Alquist Act to develop and implement energy policy for the State of California. One of the CEC's mandates is to promote water and energy efficiency through a variety of means, including efficiency standards for appliances. (Public Resources Code § 25402(c)(1)). The CEC adopted its first appliance efficiency standards in 1976 and has periodically revised those standards, as well as adopted new regulations. The current regulations include provisions on testing of appliances to determine efficiency, reporting of data by manufacturers to the CEC, mandatory minimum efficiency levels, and compliance and enforcement procedures, as well as general provisions on the scope of the regulations and definitions.

The California Environmental Quality Act (CEQA) requires public agencies to identify and consider the potential environmental effects of actions that meet the definition of "project" under the statute, and, when feasible, to reduce any related adverse environmental consequences. Adoption of the proposed regulations is a discretionary decision undertaken by a public agency and has the potential to result in direct or indirect physical changes in the environment. Thus, it constitutes a project under CEQA. (See Pub. Resources Code § 21065.) Therefore, the CEC has prepared this initial study to assess the potential significant effects of the proposed regulations on the environment.

The proposed regulations are meant to ensure utility bill cost savings to the California consumer and lower statewide energy use take place, regardless of potential changes to the requirements for GSLs at the federal level. The federal requirements would save between 2,290 and 4,600 gigawatt-hours of electricity in California the first year the standard is in effect. After existing stock fully turns over, the federal requirements would have an annual electricity savings in California between 4,000 and 13,600 gigawatt-hours. The annual electricity savings equate to a value between \$736 million and \$2.4 billion in annual savings, after stock fully turns over, to California businesses and individuals. No additional energy savings benefits or incremental costs will result directly from the proposed regulations beyond those that would result from federal law and regulations effective January 1, 2020.

Based on the initial study, attached, staff concludes that the regulations will not have a significant impact on the environment, and, in fact, will benefit the environment by resulting in reductions in air pollution. Therefore, a negative declaration is the appropriate environmental document.

All the documents relevant to the propose regulations are available on the CEC's website <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?doctnumber=19-AAER-04>, or by phone at (916) 654-4147, or by electronic mail from the CEC's Appliances Office, by submitting a request to [Angelica.Romo@energy.ca.gov](mailto:Angelica.Romo@energy.ca.gov).

## **ENERGY AND ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT**

### **ENERGY IMPACTS**

An existing minimum 45 lpm efficacy standard in the California Appliance Efficiency Regulations applies to A-shape lamps (aka light bulbs) manufactured on or after January 1, 2018. Low-efficiency incandescent and halogen lamps are not able to meet this required level of efficacy and cannot lawfully be sold or offered for sale in California. This standard has since been augmented by federal law, which has expanded the definition of GSL to include more appliances subject to the standard; the regulations proposed by the CEC will adopt the federally expanded definition, both memorializing it as an existing federal law, and adopting it as a state regulation identical to the federal law. Thus, if the federal law is ever repealed, the state law will remain in effect and enforceable by California. California has an exemption from state preemption in U.S. Code, Title 42, Section 6295(i)(6)(A)(vi).

The specific benefits from the requirements, whether federal or state, would be utility bill cost savings to the consumer and lower statewide energy use. No additional energy savings benefits or incremental costs will result directly from the proposed regulations beyond those that would result from federal law and regulations effective January 1, 2020. The estimated savings below are those expected to occur in California, due to federal law and regulations effective January 1, 2020, for lamps not already covered by California efficiency standards. The estimated savings are highly dependent on the current population of efficient lamps in California. Because this cannot be known with certainty, a range of savings is estimated between a low population (0 to 20 percent) of efficient lamps and a higher population (30 to 50 percent) of efficient lamps. The federal requirements would save between 2,290 and 4,600 gigawatt-hours of electricity in California the first year the standard is in effect. After existing stock fully turns over, the federal requirements would have an annual electricity savings in California between 4,000 and 13,600 gigawatt-hours. The annual electricity savings equate to a value between \$736 million and \$2.4 billion in annual savings, after stock fully turns over, to California businesses and individuals.

### **ENVIRONMENTAL IMPACTS**

The proposed regulations are meant to ensure reductions in electricity consumption derived from federal requirements will take place regardless of potential changes to GSL requirements at the federal level. The reduced electricity consumption will have a

significant positive impact on the environment through energy efficiency gains and avoiding greenhouse gas emissions and criteria pollutant emissions associated with the generation of electricity from fossil fuels.

The proposed regulations do not mandate proprietary technology or equipment. The proposed regulations require a minimum 45 lpw efficacy level for GSLs sold or offered for sale on or after January 1, 2020. The 45 lpw requirement can only be met with LED lamps or compact fluorescent lamps (CFLs). Although CFLs can meet the proposed requirements, their market share has significantly declined and it is not anticipated to expand due to the proposed regulations.<sup>2</sup> The main effect of the proposed regulations will be the elimination of sales of incandescent and halogen incandescent GSLs and the increase in sales of LED GSLs. Because LEDs and CFLs have significantly longer lifetimes than incandescent and halogen lamps, the number of failed lamps being disposed of will be reduced under the proposed regulations. No additional environmental benefits, beyond those from the federal requirements, are expected as a result of the proposed regulations.

Because compliant lamps meeting the minimum 45 lpw requirement are already readily available, the proposed regulations are not likely to change industry practice, design, or the material composition of compliant lamps. Environmental impacts from the production of compliant LED lamps were previously analyzed in the CEC's October 2015 *Initial Study and Proposed Negative Declaration for Small-Diameter Directional Lamps and General Service Light-Emitting-Diode (LED) Lamps*.<sup>3</sup> That analysis reached the conclusion of no significant effect on the environment and a negative declaration was prepared.

The proposed regulations will lead to improved environmental quality in California by reducing electricity consumption, which will have a significant positive impact on the environment through energy efficiency gains and avoiding greenhouse gas emissions and criteria pollutant emissions associated with the generation of electricity from fossil fuels.

### **CALIFORNIA NATIVE AMERICAN TRIBAL CONSULTATIONS**

The CEC provided invitations for consultation, per Public Resources Code section 210803.1, on the proposed regulations to 164 tribal entities.<sup>4</sup> No requests for consultation have been received by the CEC.

### **FINDING OF NO SIGNIFICANT ENVIRONMENTAL EFFECT**

The CEC finds that the General Service Lamps Appliance Efficiency Rulemaking will not have any significant adverse effect on the environment. The attached initial study

---

<sup>2</sup> See market penetration chart at <https://www.nema.org/Intelligence/Pages/Lamp-Indices.aspx>.

<sup>3</sup> Available at <https://efiling.energy.ca.gov/GetDocument.aspx?tn=229652&DocumentContentId=61071>.

<sup>4</sup> See letters available at <https://efiling.energy.ca.gov/GetDocument.aspx?tn=229428&DocumentContentId=60834>.

supports this finding. This finding and analysis reflects the CEC's independent judgment.

**WHERE DOCUMENTS LISTED IN THE NEGATIVE DECLARATION MAY BE VIEWED**

The Proposed Negative Declaration, Initial Study, and all documents referenced therein, are available from the California Energy Commission's (CEC's) website at <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-AAER-04>. The documents may also be viewed in person at the CEC at 1516 Ninth Street, Sacramento, California, 95814. The custodian of these documents, and all documents that constitute the record of this proceeding, is Angelica Romo-Ramos, who can be reached at (916) 654-4147 or via email at [Angelica.Romo@energy.ca.gov](mailto:Angelica.Romo@energy.ca.gov).

## INITIAL STUDY

The following is the CEC's analysis of the potential impacts of the proposed project using the initial study environmental checklist.

|   |   |
|---|---|
| <b>Project Title</b>  | General Service Lamps Appliance Efficiency Rulemaking, Docket # 19-AAER-04  |
| <b>Lead Agency/Project Sponsor Name and Address</b>   | California Energy Commission, 1516 Ninth Street–MS 25, Sacramento, California, 95814  |
| <b>Contact Person and Phone Number</b>  | Patrick Saxton, Appliances Office, Efficiency Division,<br><a href="mailto:Patrick.Saxton@energy.ca.gov">Patrick.Saxton@energy.ca.gov</a> ,<br>(916) 654-4274   |
| <b>Project Location and Environmental Setting</b>   | The regulations would be applicable statewide   |
| <b>Project Description</b>  | The project is a proposal for statewide regulations to incorporate a revised definition for general service lamps (GSLs) and other supplemental definitions from U.S. Department of Energy (DOE) final rules, align existing test procedures with new and updated DOE test procedures, and reinstate a severability clause into the regulations. The proposed regulations incorporate the federal minimum 45 lumen-per-watt (lpw) efficiency standard for general service lamps that exists in federal law and also incorporate it as a state regulation that is identical to the federal law to ensure implementation of the regulations if repealed at the federal level. |
| <b>Responsible Agencies</b>   | None  |
| <b>Other public agencies whose approval is required</b> (e.g., permits, financing approval, or participation agreement)   | None  |
| <b>Have California Native American Tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1?</b> | No  |

|   |  |
|---|--|
| <b>Names of persons who prepared or participated in the initial study</b> | Patrick Saxton, Senior Electrical Engineer |
|---|--|

Source: 2019 CEQA Guidelines Appendix G and California Energy Commission

### **ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

For each of the environmental factors checked below, there is likely to be a positive environmental impact due to the decrease in electricity generation associated with reduced electrical demand by the use of more efficient appliances. The CEC's analysis reveals no significant adverse impacts.

**Table 2: Potentially Affected Areas**

| <b>Potential Positive Impact Determined</b> | <b>Environmental Factor</b>            | <b>Potential Positive Impact Determined</b> | <b>Environmental Factor</b>             |
|---|--|---|---|
|   | I. Aesthetics                          |   | XII. Mineral Resources                  |
|   | II. Agriculture and Forestry Resources |   | XIII. Noise                             |
| X   | III. Air Quality                       |   | XIV. Population/Housing                 |
|   | IV. Biological Resources               | X   | XV. Public Services                     |
|   | V. Cultural Resources                  |   | XVI. Recreation                         |
| X   | VI. Energy                             |   | XVII. Transportation                    |
|   | VII, Geology/Soils                     |   | XVIII. Tribal Cultural Resources        |
| X   | VIII. Greenhouse Gas Emissions         | X   | XIX. Utilities/Service Systems          |
| X   | IX. Hazards & Hazardous Materials      | X   | XX. Wildfire                            |
|   | X. Hydrology/Water Quality             |   | XXI. Mandatory Findings of Significance |
|   | XI. Land Use/Planning                  |   |   |

Source: 2019 CEQA Guidelines Appendix G and California Energy Commission

## Evaluation of Environmental Impacts

Table 3 lists specific potential issues for each of the factors presented in Table 2.

**Table 3: Specific Potential Issues**

| Issues  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <u>I. AESTHETICS.</u> Except as provided in Public Resources Code Section 21099 would the project:  |                                |  |                              |           |
| a) Have a substantial adverse effect on a scenic vista?   |                                |  |                              | X         |
| b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?   |                                |  |                              | X         |
| c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? |                                |  |                              | X         |
| d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?  |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no impact to aesthetics and no impact on any of the specific concerns listed above.   |                                |  |                              |           |

| Issues  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <p>II. <b>AGRICULTURE AND FORESTRY RESOURCES.</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</p> |                                |  |                              |           |
| <p>a) Convert Prime farmland, Unique farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>   |                                |  |                              | X         |
| <p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>   |                                |  |                              | X         |
| <p>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?</p>   |                                |  |                              | X         |
| <p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>   |                                |  |                              | X         |
| <p>e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</p>   |                                |  |                              | X         |
| <p>COMMENT: The proposed regulations will have no impact to agricultural and forestry resources and no impact on any of the specific concerns listed above. These regulations do not require land, including forest or agriculture land, to convert to other uses.</p>  |                                |  |                              |           |

| Issues  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <p>III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:</p>   |                                |  |                              |           |
| a) Conflict with or obstruct implementation of the applicable air quality plan?   |                                |  |                              | X         |
| b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?  |                                |  |                              | X         |
| c) Expose sensitive receptors to substantial pollutant concentrations?  |                                |  |                              | X         |
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?   |                                |  |                              | X         |
| <p>COMMENT: The proposed regulations will have no adverse impact to the air quality concerns listed above. The proposed efficiency standards will result in reduced electricity consumption, which will have a significant positive impact on the environment through energy efficiency gains and avoiding greenhouse gas emissions and criteria pollutant emissions associated with the generation of electricity from fossil fuels.</p> |                                |  |                              |           |

| Issues   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| <u>IV. BIOLOGICAL RESOURCES.</u> Would the project:  |                                |  |                              |           |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? |                                |  |                              | X         |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?   |                                |  |                              | X         |
| c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?   |                                |  |                              | X         |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?   |                                |  |                              | X         |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?  |                                |  |                              | X         |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?   |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no impact on biological resources and no impact on the specific concerns listed above. The proposed regulations do not require land, including wetlands or habitat, to convert to other uses, either directly or indirectly.   |                                |  |                              |           |

| Issues  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <u>V. CULTURAL RESOURCES.</u> Would the project:  |                                |  |                              |           |
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to in Section 15064.5?  |                                |  |                              | X         |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?  |                                |  |                              | X         |
| c) Disturb any human remains, including those interred outside formal cemeteries?   |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no impact on any cultural resources and no impact on any of the specific concerns listed above. The proposed regulations do not require land, including burial grounds or archaeological/paleontological sites, to convert to other uses. |                                |  |                              |           |

| Issues   | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| <u>VI. Energy.</u> Would the project:  |                                |  |                              |           |
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?  |                                |  |                              | X         |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?  |                                |  |                              | X         |
| COMMENT: The proposed regulations are part of state policy to reduce energy consumption through more efficient use of energy through appliance efficiency standards. The proposed regulations would reduce statewide energy consumption by reducing electricity consumption associated with general service lamps. |                                |  |                              |           |

| Issues   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| VII. GEOLOGY AND SOILS. Would the project:   |                                |  |                              |           |
| a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:   |                                |  |                              | X         |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. |                                |  |                              | X         |
| ii) Strong seismic ground shaking?   |                                |  |                              | X         |
| iii) Seismic-related ground failure, including liquefaction?   |                                |  |                              | X         |
| iv) Landslides?  |                                |  |                              | X         |
| b) Result in substantial soil erosion or the loss of topsoil?  |                                |  |                              | X         |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?   |                                |  |                              | X         |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?  |                                |  |                              | X         |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?   |                                |  |                              | X         |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?  |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no impact to geology and soils and no impact on the specific concerns listed above. The proposed regulations do not require changes to land use that might affect its seismic or stability characteristics.                                |                                |  |                              |           |

| Issues   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| <u>VIII. GREENHOUSE GAS EMISSIONS.</u> Would the project:  |                                |  |                              |           |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?  |                                |  |                              | X         |
| b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?  |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no adverse impact to the greenhouse gas emissions concerns listed above and will not result in any greenhouse gas emissions, either directly or indirectly. The proposed efficiency standards will result in reduced electricity consumption, which will have a significant positive impact on the environment through energy efficiency gains and avoiding greenhouse gas emissions and criteria pollutant emissions associated with the generation of electricity from fossil fuels. |                                |  |                              |           |

| Issues  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <u>IX. HAZARDS AND HAZARDOUS MATERIALS.</u> Would the project:  |                                |  |                              |           |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?   |                                |  |                              | X         |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?   |                                |  |                              | X         |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?   |                                |  |                              | X         |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?  |                                |  |                              | X         |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?   |                                |  |                              | X         |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?   |                                |  |                              | X         |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?   |                                |  |                              | X         |
| <p>COMMENT: The proposed regulations will have no impact on hazards and hazardous material. While the proposed regulations may require the use of materials to produce compliant lamps, the regulations do not prescribe their use or require these materials to be used. Compliant lamps are readily available and currently produced in large volumes. Producing additional compliant lamps will not change current industry practice, design, or the material composition of compliant lamps. Environmental impacts from the production of compliant LED lamps were previously analyzed in the CEC's October 2015 Initial Study and Proposed Negative Declaration for Small-Diameter Directional Lamps and General Service Light-Emitting-Diode (LED) Lamps, pp. 2-9. That analysis reached the conclusion of no significant effect on the environment and a negative declaration was prepared. The proposed regulations do not alter the ways in which materials or lamps are disposed.</p> |                                |  |                              |           |

| Issues   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| <u>X. HYDROLOGY AND WATER QUALITY.</u> Would the project:  |                                |  |                              |           |
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?   |                                |  |                              | X         |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?                                  |                                |  |                              | X         |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: |                                |  |                              | X         |
| (i) result in substantial erosion or siltation on- or off-site;  |                                |  |                              | X         |
| (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;  |                                |  |                              | X         |
| (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or                            |                                |  |                              | X         |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?  |                                |  |                              | X         |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?  |                                |  |                              | X         |
| COMMENT: The proposed regulations do not require land, including flood zones and drainage, to be altered. The proposed regulations do not alter existing water supply, usage, or discharge.                            |                                |  |                              |           |

| Issues  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <u>XI. LAND USE AND PLANNING.</u> Would the project:  |                                |  |                              |           |
| a) Physically divide an established community?  |                                |  |                              | X         |
| b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?  |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no impact to land use and planning and no impact on any of the specific concerns listed above. The proposed regulations do not require land, including habitat and community development sites, to convert to other uses. The project would not have any effect on, and would be consistent with, existing zoning, plans, and other applicable land use controls. |                                |  |                              |           |
| <u>XII. MINERAL RESOURCES.</u> Would the project:   |                                |  |                              |           |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?  |                                |  |                              | X         |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?   |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no adverse impact to mineral resources and no impact on any of the concerns listed above. The proposed regulations do not require land, including mineral-rich land, to convert to other uses.  |                                |  |                              |           |

| Issues  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <u>XIII. NOISE.</u> Would the project result in:  |                                |  |                              |           |
| a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?   |                                |  |                              | X         |
| b) Generation of excessive groundborne vibration or groundborne noise levels?   |                                |  |                              | X         |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no noise impact and no impact on the specific concerns listed above.  |                                |  |                              |           |
| <u>XIV. POPULATION AND HOUSING.</u> Would the project:  |                                |  |                              |           |
| a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?   |                                |  |                              | X         |
| b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?   |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no impact on population and housing and no impact on any of the concerns listed above.  |                                |  |                              |           |

| Issues  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <u>XV. PUBLIC SERVICES.</u>   |                                |  |                              |           |
| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: |                                |  |                              | X         |
| Fire protection?  |                                |  |                              | X         |
| Police protection?  |                                |  |                              | X         |
| Schools?  |                                |  |                              | X         |
| Parks?  |                                |  |                              | X         |
| Other public facilities?  |                                |  |                              | X         |
| COMMENT: The proposed regulations will not require the construction or alteration of governmental buildings in a way that will cause significant negative environmental impact. The proposed efficiency standards will result in reduced electricity consumption, which will also result in a reduced need to site and construct new power plants.  |                                |  |                              |           |
| <u>XVI. RECREATION.</u>   |                                |  |                              |           |
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?  |                                |  |                              | X         |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?  |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no impact on recreation and no impact on any of the specific concerns listed above. The proposed regulations do not require park or recreational land to convert to other uses.   |                                |  |                              |           |

| Issues   | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| <u>XVII. TRANSPORTATION.</u> Would the project:  |                                |  |                              |           |
| a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?         |                                |  |                              | X         |
| b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?  |                                |  |                              | X         |
| c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? |                                |  |                              | X         |
| d) Result in inadequate emergency access?  |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no impact on transportation and no impact on any of the specific concerns listed above.                              |                                |  |                              |           |

| Issues  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <u>XVIII. TRIBAL CULTURAL RESOURCES.</u>  |                                |  |                              |           |
| a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:                            |                                |  |                              | X         |
| i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or  |                                |  |                              | X         |
| ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no impact on landscape, sacred places, or objects with cultural value to a California Native American tribe.  |                                |  |                              |           |

| Issues  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <u>XIX. UTILITIES AND SERVICE SYSTEMS.</u> Would the project:   |                                |  |                              |           |
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?  |                                |  |                              | X         |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?   |                                |  |                              | X         |
| c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the providers' existing commitments?   |                                |  |                              | X         |
| d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?   |                                |  |                              | X         |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?  |                                |  |                              | X         |
| COMMENT: The proposed regulations will have no adverse impact on any of the concerns listed above. The proposed regulations will have beneficial effects on energy utilities by reducing the need to procure additional electricity generation. The proposed regulations do not require replacement of existing, non-compliant light bulbs and will not increase the rate of solid waste disposal or total solid disposal of non-compliant bulbs. Compliant light bulbs, primarily LEDs, have significantly longer lifetimes than non-compliant bulbs. After the existing stock of non-compliant bulbs is replaced by compliant bulbs, the total amount of solid waste will be reduced because there will be fewer failed bulbs requiring disposal. |                                |  |                              |           |

| Issues   | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| <u>XX. WILDFIRE.</u> If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:  |                                |  |                              |           |
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan?   |                                |  |                              | X         |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?   |                                |  |                              | X         |
| c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?   |                                |  |                              | X         |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?  |                                |  |                              | X         |
| <p>COMMENT: The proposed regulations will have no impact on any of the concerns listed above. Improvements in the efficiency of general service lamps resulting from the proposed standards will result in beneficial environmental impacts including reduced electricity consumption, which will have a significant positive impact on the environment through energy efficiency gains and avoiding greenhouse gas emissions and criteria pollutant emissions associated with the generation of electricity from fossil fuels. Additionally, the reduced electricity consumption is likely to lead to reduced power plant operation and a reduced need to build power plants and power lines in the future. Less electrical infrastructure or reduced use of existing electrical infrastructure may reduce potential wildfire risk.</p> |                                |  |                              |           |

| Issues  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| <b>XXI. MANDATORY FINDINGS OF SIGNIFICANCE.</b>   |                                |  |                              |           |
| a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?  |                                |  |                              | X         |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?  |                                |  |                              | X         |
| c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?  |                                |  |                              | X         |
| <p>COMMENT: The proposed regulations will have no adverse impact on any of the concerns listed above. No potential exists for any adverse impacts on any animal or human populations, and none of the impacts are cumulatively considerable. Improvements in the efficiency of general service lamps resulting from the proposed standards will result in beneficial environmental impacts including reduced electricity consumption, which will have a significant positive impact on the environment through energy efficiency gains and avoiding greenhouse gas emissions and criteria pollutant emissions associated with the generation of electricity from fossil fuels. Additionally, the reduced electricity consumption is likely to lead to reduced power plant operation and a reduced need to build power plants and power lines in the future.</p> |                                |  |                              |           |

Source: 2019 CEQA Guidelines Appendix G and California Energy Commission

**SUMMARY OF PROPOSED CHANGES TO APPLIANCE EFFICIENCY STANDARDS AND RESULTING ENERGY AND ENVIRONMENTAL EFFECTS**

**Table 4** summarizes the proposed changes and the resulting energy and environmental effects for general service lamps.

**Table 4: Summary of Proposed Changes**

| No. | Existing Standard   | Proposed Standard   | Energy Effects  | Potential Environmental Issues  |
|-----|---|---|---|---|
| 1   | There is an existing minimum efficacy standard for A-shape general service lamps. Federal regulations revise the definition for general service lamps and apply an identical minimum efficacy standard to those lamps not already covered by California efficiency standards and that are sold on or after January 1, 2020. | The proposed regulations would memorialize this federal standard and codify it into California law. | None if the federal standard remains in effect. If it is repealed, however, the regulations would save between 4,000 and 13,600 gigawatt-hours of electricity, after existing stock of GSLs fully turns over. | None if the federal standard remains in effect. If it is repealed, however, lower electricity consumption as a result of these regulations will have a significant positive impact on the environment through energy efficiency gains and avoiding greenhouse gas emissions and criteria pollutant emissions associated with the generation of electricity from fossil fuels. |

Source: California Energy Commission

## REFERENCES

- California Energy Commission. (August 16, 2019). Initial Statement of Reasons (ISOR) for General Service Lamps. *Docket # 19-AAER-04, TN# 229454*. Retrieved from <https://efiling.energy.ca.gov/getdocument.aspx?tn=229454>
- California Energy Commission. (August 16, 2019). Notice of Proposed Action (NOPA) for General Service Lamps. *Docket # 19-AAER-04, TN# 229453*. Retrieved from <https://efiling.energy.ca.gov/getdocument.aspx?tn=229453>
- California Energy Commission. (August 16, 2019). Proposed Regulatory Language for Appliance Efficiency Regulations for General Service Lamps. *Docket # 19-AAER-04, TN# 229452*. <https://efiling.energy.ca.gov/getdocument.aspx?tn=229452>
- Harinder, S. (October 15, 2015). Initial Study and Proposed Negative Declaration for Small-Diameter Directional Lamps and General Service Light-Emitting- Diode (LED) Lamps. *Docket # 19-AAER-04, TN# 229652*. <https://efiling.energy.ca.gov/GetDocument.aspx?tn=229652&DocumentContentId=61071>
- Saxton, P. (August 3, 2018). Analysis of General Service Lamps (Expanded Scope). *Docket # 19-AAER-04, TN # 229456*. Retrieved from <https://efiling.energy.ca.gov/getdocument.aspx?tn=229456>
- Saxton, P. (August 16, 2019). Supplemental Staff Analysis for General Service Lamps (Expanded Scope). *Docket # 19-AAER-04, TN # 229471*. Retrieved from <https://efiling.energy.ca.gov/getdocument.aspx?tn=229471>

## ACRONYMS AND GLOSSARY

| <b><u>Term</u></b> | <b><u>Description</u></b>            | <b><u>Definition</u></b>   |
|--------------------|--------------------------------------|--|
| CEQA               | California Environmental Quality Act | A statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. |
| GWh                | Gigawatt-hour                        | One thousand megawatt-hours, or one million kilowatt-hours, or one billion watt-hours of electrical energy.  |
| PRC                | Public Resources Code                |  |

# Proposed Regulatory Language

---

**California Code of Regulations**  
**Title 20. Public Utilities and Energy**  
**Division 2. State Energy Resources Conservation and Development Commission**  
**Chapter 1. General Provisions**  
**Article 1. Construction of Regulations**  
**Section 1004**  
**and**  
**Chapter 4. Energy Conservation**  
**Article 4. Appliance Efficiency Regulations**  
**Sections 1601 - 1609**  
**as related to General Service Lamps**  
**August 16, 2019**

Proposed new language appears as underline (example) and proposed deletions appear as strikethrough (~~example~~). Existing language appears as plain text. Three dots or “...” represents the substance of the regulations that exists between the proposed language and current language.

## **§ 1004. ~~Partial Invalidation~~Severability.**

Each part of this division shall be deemed severable, and in the event that any provision of this division is held to be invalid, the remainder of this division shall continue in full force and effect.

Note: Authority cited: Sections 25213 and 25218(e) Public Resources Code.

Reference: Section 25213 Public Resources Code.

## **§ 1601. Scope. [No changes]**

## **§ 1602. Definitions.**

### **(a) General.**

In this Article the following definitions apply. If a term is not defined here, the applicable definition in NAECA, EPCA, the EPCA 2005, EISA, or the test methods listed in section 1604 of this Article shall apply where it is reasonable to do so.

...[skipping “AC” through “Consumer product”]

“Correlated color temperature (CCT)” means the color appearance, or actual color of the lamp in accordance with IES LM-16-1993.

...[skipping “CSA” through “Gas”]

“General lighting application” means lighting that provides an interior or exterior area with overall illumination.

...[skipping through the end of (a)]

...[skipping (b)-(j)]

**(k) Lamps.**

**(1) General Service Lamps Sold Before January 1, 2020, and All Other Lamps.**

...[skipping “Appliance Lamp” through “Voltage Range”]

**(2) General Service Lamps Sold On or After January 1, 2020.**

“Black light lamp” means a lamp that is designed and marketed as a black light lamp and is an ultraviolet lamp with the highest radiant power peaks in the UV-A band (315 to 400 nm) of the electromagnetic spectrum.

“Bug lamp” means a lamp that is designed and marketed as a bug lamp, has radiant power peaks above 550 nm on the electromagnetic spectrum, and has a visible yellow coating.

“Colored lamp” means a colored fluorescent lamp, a colored incandescent lamp, or a lamp designed and marketed as a colored lamp with either of the following characteristics (if multiple modes of operation are possible [such as variable CCT], either of the below characteristics must be maintained throughout all modes of operation): (1) A CRI less than 40, as determined according to the method set forth in CIE Publication 13.3; or (2) A CCT less than 2,500K or greater than 7,000K.

“Designed and marketed” means exclusively designed to fulfill the indicated application and, when distributed in commerce, designated and marketed solely for that application, with the designation prominently displayed on the packaging and all publicly available documents (e.g., product literature, catalogs, and packaging labels).

“General service incandescent lamp” means a standard incandescent or halogen type lamp that is intended for general service applications; has a medium screw base; has a lumen range of not less than 310 lumens and not more than 2,600 lumens or, in the case of a modified spectrum lamp, not less than 232 lumens and not more than 1,950 lumens; and is capable of being operated at a voltage range at least partially within 110 and 130 volts; however this definition does not apply to the following incandescent lamps—

(1) An appliance lamp;

(2) A black light lamp;

(3) A bug lamp;

(4) A colored lamp;

(5) A G shape lamp with a diameter of 5 inches or more as defined in ANSI C79.1-2002;

- (6) An infrared lamp;
- (7) A left-hand thread lamp;
- (8) A marine lamp;
- (9) A marine signal service lamp;
- (10) A mine service lamp;
- (11) A plant light lamp;
- (12) An R20 short lamp;
- (13) A sign service lamp;
- (14) A silver bowl lamp;
- (15) A showcase lamp; and
- (16) A traffic signal lamp.

“General service lamp” means a lamp that has an ANSI base; is able to operate at a voltage of 12 volts or 24 volts, at or between 100 to 130 volts, at or between 220 to 240 volts, or of 277 volts for integrated lamps, or is able to operate at any voltage for non-integrated lamps; has an initial lumen output of greater than or equal to 310 lumens (or 232 lumens for modified spectrum general service incandescent lamps) and less than or equal to 3,300 lumens; is not a light fixture; is not an LED downlight retrofit kit; and is used in general lighting applications. General service lamps include, but are not limited to, general service incandescent lamps, compact fluorescent lamps, general service light-emitting diode lamps, and general service organic light-emitting diode lamps. General service lamps do not include:

- (1) Appliance lamps;
- (2) Black light lamps;
- (3) Bug lamps;
- (4) Colored lamps;
- (5) G shape lamps with a diameter of 5 inches or more as defined in ANSI C79.1-2002;
- (6) General service fluorescent lamps;
- (7) High intensity discharge lamps;
- (8) Infrared lamps;
- (9) I, JC, JCD, JCS, JCV, ICX, ID, JS, and JT shape lamps that do not have Edison screw bases;
- (10) Lamps that have a wedge base or pefocus base;

(11) Left-hand thread lamps;

(12) Marine lamps;

(13) Marine signal service lamps;

(14) Mine service lamps;

(15) MR shape lamps that have a first number symbol equal to 16 (diameter equal to 2 inches) as defined in ANSI C79.1-2002, operate at 12 volts, and have a lumen output greater than or equal to 800;

(16) Other fluorescent lamps;

(17) Plant light lamps;

(18) R20 short lamps;

(19) Reflector lamps that have a first number symbol less than 16 (diameter less than 2 inches) as defined in ANSI C79.1-2002 and that do not have E26/E24, E26d, E26/50x39, E26/53x39, E29/28, E29/53x39, E39, E39d, EP39, or EX39 bases;

(20) S shape or G shape lamps that have a first number symbol less than or equal to 12.5 (diameter less than or equal to 1.5625 inches) as defined in ANSI C79.1-2002;

(21) Sign service lamps;

(22) Silver bowl lamps;

(23) Showcase lamps;

(24) Specialty MR lamps;

(25) T shape lamps that have a first number symbol less than or equal to 8 (diameter less than or equal to 1 inch) as defined in ANSI C79.1-2002, nominal overall length less than 12 inches, and that are not compact fluorescent lamps;

(26) Traffic signal lamps.

“General service light-emitting diode (LED) lamp” means an integrated or non-integrated LED lamp designed for use in general lighting applications and that uses light-emitting diodes as the primary source of light.

“General service organic light-emitting diode (OLED) lamp” means an integrated or non-integrated OLED lamp designed for use in general lighting applications and that uses organic light-emitting diodes as the primary source of light.

“Infrared lamp” means a lamp that is designed and marketed as an infrared lamp; has its highest radiant power peaks in the infrared region of the electromagnetic spectrum (770 nm to 1 mm); has a rated wattage of 125 watts or greater; and which has a primary purpose of providing heat.

“Integrated lamp” means a lamp that contains all components necessary for the starting and stable operation of the lamp, does not include any replaceable or interchangeable parts, and is connected directly to a branch circuit through an ANSI base and corresponding ANSI standard lamp-holder (socket).

“LED downlight retrofit kit” means a product designed and marketed to install into an existing downlight, replacing the existing light source and related electrical components, typically employing an ANSI standard lamp base, either integrated or connected to the downlight retrofit by wire leads, and is a retrofit kit. LED downlight retrofit kit does not include integrated lamps or non-integrated lamps.

“Left-hand thread lamp” means a lamp with direction of threads on the lamp base oriented in the left-hand direction.

“Light fixture” means a complete lighting unit consisting of light source(s) and ballast(s) or driver(s) (when applicable) together with the parts designed to distribute the light, to position and protect the light source, and to connect the light source(s) to the power supply.

“Marine lamp” means a lamp that is designed and marketed for use on boats and can operate at or between 12 volts and 13.5 volts.

“Marine signal service lamp” means a lamp that is designed and marketed for marine signal service applications.

“Mine service lamp” means a lamp that is designed and marketed for mine service applications.

“Non-integrated lamp” means a lamp that is not an integrated lamp.

“Other fluorescent lamp” means low pressure mercury electric-discharge sources in which a fluorescing coating transforms some of the ultraviolet energy generated by the mercury discharge into light and include circline lamps and include double-ended lamps with the following characteristics: Lengths from one to eight feet; designed for cold temperature applications; designed for use in reprographic equipment; designed to produce radiation in the ultra-violet region of the spectrum; impact-resistant; reflectorized or aperture; or a CRI of 87 or greater.

“Pin base lamp” means a lamp that uses a base type designated as a single pin base or multiple pin base system.

“Plant light lamp” means a lamp that is designed to promote plant growth by emitting its highest radiant power peaks in the regions of the electromagnetic spectrum that promote photosynthesis: Blue (440 nm to 490 nm) and/or red (620 to 740 nm), and is designed and marketed for plant growing applications.

“Reflector lamp” means a lamp that has an R, PAR, BPAR, BR, ER, MR, or similar bulb shape as defined in ANSI C78.20-2003 and ANSI C79.1-2002 and is used to provide directional light.

“Showcase lamp” means a lamp that has a T shape as specified in ANSI C78.20-2003 and ANSI C79.1-2002, is designed and marketed as a showcase lamp, and has a maximum rated wattage of 75 watts.

“Sign service lamp” means a vacuum type or gas-filled lamp that has sufficiently low bulb temperature to permit exposed outdoor use on high-speed flashing circuits, is designed and marketed as a sign service lamp, and has a maximum rated wattage of 15 watts.

“Silver bowl lamp” means a lamp that has an opaque reflective coating applied directly to part of the bulb surface that reflects light toward the lamp base and that is designed and marketed as a silver bowl lamp.

“Specialty multifaceted reflector (MR) lamp” means a lamp that has an MR shape as defined in ANSI C79.1-2002, a diameter of less than or equal to 2.25 inches, a lifetime of less than or equal to 300 hours, and that is designed and marketed for a specialty application.

“Traffic signal lamp” means a lamp that is designed and marketed for traffic signal applications and has a lifetime of 8,000 hours or greater.

...[skipping (l)-(m)]

**(n) Luminaires and Torchieres.**

...[skipping “Art work luminaire” through “Automatic daylight control”]

~~“Correlated Color temperature (CCT)” means the color appearance, or actual color of the lamp in accordance with IES LM-16-1993.~~

...[skipping through the end of the section]

Note: Authority cited: Sections 25213, 25218(e), 25401.9(b), 25402(a)-25402(c), and 25960, Public Resources Code; and sections 16, 26, and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015).

Reference: Sections 25216.5(d), 25401.9(b), 25402(a)-25402(c), 25402.5.4, and 25960, Public Resources Code; and section 16, Governor's Exec. Order No. B-29-15 (April 1, 2015).

**§ 1602.1. Rules of Construction. [No changes]**

**§ 1603. Testing: All Appliances. [No changes]**

## § 1604. Test Methods for Specific Appliances

...[skipping (a)-(j)]

### (k) Lamps.

- (1) The test method for ~~federally regulated general service fluorescent lamps, federally regulated general service incandescent lamps, and federally regulated incandescent reflector lamps,~~ and federally regulated general service fluorescent lamps is 10 C.F.R. section 430.23(r) (Appendix R to subpart B of part 430).
- (2) ~~The test method for state regulated small diameter directional lamps that use incandescent filament technology is 10 C.F.R. section 430.23(r) (Appendix R to subpart B of part 430).~~
- (3) The test method for ~~medium base compact fluorescent lamps~~ is 10 C.F.R. section 430.23(y) (Appendix W to subpart B of part 430).
- (4) The test methods for integrated LED state-regulated small diameter directional lamps and state-regulated LED lamps are is 10 C.F.R. section 430.23(ee) (Appendix BB to subpart B of part 430) shown in Table K-1. For certification, compliance, and enforcement purposes, the sampling provisions in 10 C.F.R. section 429.56 shall be used.
- (4) The optional test methods for state-regulated small diameter directional lamps and state-regulated LED lamps are shown in Table K-1. Optional test procedures are conditionally required depending on manufacturer claims of performance as described in sections 1607(d)(13) of this Article and 1606 Table X of this Article. For certification, compliance, and enforcement purposes, the sampling provisions in 10 C.F.R. section 429.56 shall be used.

**Table K-1**  
**Optional Test Methods for State-Regulated LED Lamps and LED State-Regulated Small Diameter Directional Lamps**

| <i>Measurement</i>   | <i>Test Procedure</i>   | <i>Required or Optional</i> |
|--|---|-----------------------------|
| Input power, Lumen output, LPW, Correlated Color Temperature, Duv, Color Rendering Index, Power Factor | <del>IES LM-79 (2008) with additional requirements provided in 10 C.F.R. section 430.23(ee) (Appendix BB to subpart B of part 430).</del>   | Required                    |
| Lumen Maintenance and Time to Failure  | <del>IES LM-84 (2014) and TM-28 (2014) with additional requirements provided in 10 C.F.R. section 430.23(ee) (Appendix BB to subpart B of part 430).</del>  | Required                    |
| Standby Power  | <del>10 C.F.R. section 430.23(ee) (Appendix BB to subpart B of part 430).</del>   | Required                    |
| Flicker  | Title 24, part 6, Joint Appendix 10 (2015), tested at both 100% percent and 20% percent output. Lamps with a percent amplitude modulation (percent flicker) less than 30 percent at frequencies less than 200 Hz shall report "yes" | Optional                    |

|  |   |          |
|--|---|----------|
|  | for “reduced flicker operation” described in section 1606 of this Article, otherwise report “no”.   |          |
| Lumen Maintenance, Rated Life, and Survival Rate for Compliance with Title 24 Joint Appendix 8 and minimum dimming level | Title 24, part 6, Joint Appendix 8 (2015).  | Optional |
| Audible Noise  | ENERGY STAR Recommended Practice – Noise (2013) with the following modification: measurements shall be taken at 100 percent output as well as at 20 percent output if dimmable. | Optional |

\* Required test procedures must be conducted per section 1603(a) of this Article for each basic model of lamp. Optional test procedures are conditionally required depending on manufacturer claims of performance as described in sections 1607(d)(1312) of this Article and 1606 Table X of this Article:

- (5) ~~There are no federally prescribed test methods for federally regulated organic light-emitting diode (OLED) lamps; federally regulated candelabra base incandescent lamps; or federally regulated intermediate base incandescent lamps. The test method for general service lamps that are other than lamp types described in sections 1604(k)(1) through 1604(k)(3) of this Article is 10 C.F.R. section 430.23(gg) (Appendix DD to Subpart B of part 430).~~

...[skipping (l)-(y)]

The following documents are incorporated by reference in section 1604.

...[skipping CALIFORNIA ENERGY COMMISSION TEST METHODS]

FEDERAL TEST METHODS

C.F.R., Title 10, section 429.56

C.F.R., Title 10, section 430.23, and 10 C.F.R. Appendixes A, B, C1, D1, D2, E, F, H, I, J1, J2, M, N, O, P, Q, R, S, T, U, V, W, X, S1, Y, Z, AA, BB, ~~and CC,~~ and DD of subpart B of part 430

...[skipping through the end of the section]

Note: Authority cited: Sections 25213, 25218(e), 25401.9(b), 25402(a)-25402(c), and 25960, Public Resources Code; and sections 16, 26, and 30, Governor’s Exec. Order No. B-29-15 (April 1, 2015). Reference: Sections 25216.5(d), 25401.9(b), 25402(a)-25402(c) and 25960, Public Resources Code; and section 16, Governor’s Exec. Order No. B-29-15 (April 1, 2015).

**§ 1605. Energy Performance, Energy Design, Water Performance, and Water Design Standards: In General. [No changes]**

**§ 1605.1. Federal and State Standards for Federally Regulated Appliances.**

...[skipping (a)-(j)]

**(k) Lamps.**

...[skipping (k)(1)]

(2) ~~Federally Regulated Incandescent Reflector Lamps Manufactured On or After July 15, 2012.~~

~~(A) The average lamp efficacy of federally-regulated incandescent reflector lamps with a rated lamp wattage between 40-205 watts, and manufactured on or after July 15, 2012, and sold before January 1, 2020, shall be not less than the applicable values shown in Table K-3, subject to the following:~~

~~(A) The standards specified in Table K-3 shall apply with respect to:~~

- ~~1. ER incandescent reflector lamps, BR incandescent reflector lamps, BPAR incandescent reflector lamps, and similar bulb shapes on and after January 1, 2008; and~~
- ~~2. Incandescent reflector lamps with a diameter of more than 2.25 inches, but not more than 2.75 inches, on and after June 15, 2008.~~

**EXCEPTION to Section 1605.1(k)(2)(A).** The standards specified in Table K-3 shall not apply to the following types of incandescent reflector lamps:

- (1) Lamps rated at 50 watts or less that are ER30, BR30, BR40, or ER40;
- (2) Lamps rated at 65 watts that are BR30, BR40, or ER40 lamps; or
- (3) R20 incandescent reflector lamps rated 45 watts or less.

**Table K-3  
Standards for Federally Regulated Incandescent Reflector Lamps Manufactured On or After July 15, 2012, and Sold Before January 1, 2020**

| <i>Lamp Spectrum</i>                          | <i>Lamp Diameter (inches)</i> | <i>Rated Voltage</i> | <i>Minimum Average Lamp Efficacy (LPW)<sup>1</sup></i> |
|---|-------------------------------|----------------------|--|
| Standard Spectrum                             | > 2.5                         | ≥ 125                | 6.8 x P <sup>0.27</sup>                                |
|   |                               | < 125                | 5.9 x P <sup>0.27</sup>                                |
|   | ≤ 2.5                         | ≥ 125                | 5.7 x P <sup>0.27</sup>                                |
|   |                               | < 125                | 5.0 x P <sup>0.27</sup>                                |
| Modified Spectrum                             | > 2.5                         | ≥ 125                | 5.8 x P <sup>0.27</sup>                                |
|   |                               | < 125                | 5.0 x P <sup>0.27</sup>                                |
|   | ≤ 2.5                         | ≥ 125                | 4.9 x P <sup>0.27</sup>                                |
|   |                               | < 125                | 4.2 x P <sup>0.27</sup>                                |
| <sup>1</sup> P = Rated Lamp Wattage, in Watts |                               |                      |  |

(B) See sections 1605.1(k)(6) and 1605.3(k)(1)(B) for energy efficiency standards for incandescent reflector lamps that are general service lamps and sold on or after January 1, 2020.

**(3) Medium Base Compact Fluorescent Lamps.**

(A) A bare lamp or covered lamp (no reflector) medium base compact fluorescent lamp manufactured on or after January 1, 2006, and sold before January 1, 2020, shall meet the requirements set forth in Table K-4.

**Table K-4  
Standards for Medium Base Compact Fluorescent Lamps Manufactured On or After January 1, 2006, and Sold Before January 1, 2020**

| <i>Factor</i>  | <i>Requirements</i>  |
|--|--|
| <i>Labeled Wattage (Watts) and Configuration<sup>1</sup></i>   | <i>Measured Initial Lamp Efficacy: lumens/watt must be at least:<sup>2</sup></i>   |
| <i>Bare Lamp:</i>  |  |
| Labeled Wattage < 15   | 45.0   |
| Labeled Wattage ≥ 15   | 60.0   |
| <i>Covered Lamp (no reflector)</i>   |  |
| Labeled Wattage < 15   | 40.0   |
| 15 ≥ Labeled Wattage < 19  | 48.0   |
| 19 ≥ Labeled Wattage < 25  | 50.0   |
| Labeled Wattage ≥ 25   | 55.0   |
| Lumen Maintenance at 1,000-hours   | ≥90%   |
| Lumen Maintenance at 40% of Lifetime <sup>2</sup>  | 80%  |
| Rapid Cycle Stress Test  | Each lamp must be cycled once for every two hours of lifetime. <sup>2</sup> At least 5 lamps must meet or exceed the minimum number of cycles. |
| Lifetime <sup>2</sup>  | ≥ 6,000  |
| <sup>1</sup> Use labeled wattage to determine the appropriate efficacy requirements in this table; do not use measured wattage for this purpose. |  |
| <sup>2</sup> Lifetime refers to lifetime of a compact fluorescent lamp as defined in section 1602(k) of this Article.                            |  |

(B) See sections 1605.1(k)(6) and 1605.3(k)(1)(B) for energy efficiency standards for compact fluorescent lamps that are general service lamps and sold on or after January 1, 2020.

**(4) ~~Federally Regulated~~ General Service Incandescent Lamps and Modified Spectrum General Service Incandescent Lamps.**

(A) The energy consumption rate of federally regulated general service incandescent lamps and modified spectrum general service incandescent lamps, manufactured on or after the effective dates shown and sold before January 1, 2020, shall be no greater than the maximum rated wattage shown in Tables K-5 and K-6.

~~(A)~~1. These standards apply to each lamp that:

~~1.a.~~ 1.a. is intended for a general service or general illumination application (whether incandescent or not);

~~2.b.~~ 2.b. has a medium screw base or any other screw base not defined in ANSI C81.61-2006; and

~~3.c.~~ 3.c. is capable of being operated at a voltage at least partially within the range of 110 to 130 volts; ~~and~~

~~4.~~ 4. is ~~manufactured or imported after December 31, 2011.~~

~~(B)~~2. Each lamp described in section 16045.1(k)(4)(A)1. of this Article shall have a color rendering index that is greater than or equal to:

~~1.a.~~ 1.a. 80 for nonmodified spectrum lamps; or

~~2.b.~~ 2.b. 75 for modified spectrum lamps.

**Table K-5  
Standards for Federally Regulated General Service Incandescent Lamps Manufactured On or After the Effective Date Shown Below, and Sold Before January 1, 2020**

| <i>Rated Lumen Ranges</i> | <i>Maximum Rate Wattage</i> | <i>Minimum Rate Lifetime</i> | <i>Effective Date</i> |
|---------------------------|-----------------------------|------------------------------|-----------------------|
| 1490-2600                 | 72                          | 1,000 hours                  | January 1, 2012       |
| 1050 – 1489               | 53                          | 1,000 hours                  | January 1, 2013       |
| 750 – 1049                | 43                          | 1,000 hours                  | January 1, 2014       |
| 310 – 749                 | 29                          | 1,000 hours                  | January 1, 2014       |

**Table K-6**  
**Standards for Federally Regulated Modified Spectrum General Service Incandescent Lamps**  
**Manufactured On or After the Effective Date Shown Below, and Sold Before January 1, 2020**

| <i>Rated Lumen Ranges</i> | <i>Maximum Rate Wattage</i> | <i>Minimum Rate Lifetime</i> | <i>Effective Date</i> |
|---------------------------|-----------------------------|------------------------------|-----------------------|
| 1118-1950                 | 72                          | 1,000 hours                  | January 1, 2012       |
| 788-1117                  | 53                          | 1,000 hours                  | January 1, 2013       |
| 563-787                   | 43                          | 1,000 hours                  | January 1, 2014       |
| 232-562                   | 29                          | 1,000 hours                  | January 1, 2014       |

(B) See sections 1605.1(k)(6) and 1605.3(k)(1)(B) for energy efficiency standards for general service incandescent lamps that are general service lamps and sold on or after January 1, 2020.

**(5) Candelabra Base Incandescent Lamps and Intermediate Base Incandescent Lamps.**

(A) The energy consumption rate of federally regulated candelabra base incandescent lamps and intermediate base incandescent lamps, manufactured on or after January 1, 2012, and sold before January 1, 2020, shall be no greater than the maximum rated wattage shown in Table K-7.

**Table K-7**  
**Standards for Federally Regulated Candelabra Base Incandescent Lamps and Intermediate**  
**Base Incandescent Lamps Manufactured On or After January 1, 2012, and Sold Before**  
**January 1, 2020**

| <i>Lamp Base Type</i> | <i>Maximum Rated Wattage</i> |
|-----------------------|------------------------------|
| Candelabra            | 60                           |
| Intermediate          | 40                           |

(B) See sections 1605.1(k)(6) and 1605.3(k)(1)(B) for energy efficiency standards for candelabra base incandescent lamps and intermediate base incandescent lamps that are general service lamps and sold on or after January 1, 2020.

**(6) General Service Lamps.** General service lamps sold on or after January 1, 2020, shall have a minimum lamp efficacy of 45 lumens per watt.

...[skipping through the end of the section]

Note: Authority cited: Sections 25213, 25218(e), 25401.9(b), 25402(a)-25402(c), and 25960, Public Resources Code; and sections 16, 26, and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015).

Reference: Sections 25216.5(d), 25401.9(b), 25402(a)-25402(c), and 25960, Public Resources Code; and section 16, Governor's Exec. Order No. B-29-15 (April 1, 2015).

**§ 1605.2. State Standards for Federally Regulated Appliances. [No changes]**

**§ 1605.3. State Standards for Non-Federally-Regulated Appliances.**

...[skipping (a)-(j)]

**(k) Lamps.**

~~(1) Incandescent Reflector Lamps. See section 1605.1(k)(2) for standards for federally regulated incandescent reflector lamps.~~

~~(2)(1) Standards for State-Regulated LED Lamps and General Service Lamps.~~

~~(A) General service lamps manufactured on or after January 1, 2018, and sold before January 1, 2020, shall meet the standards shown in Table K-8. ~~The energy consumption rate of state-regulated LED lamps with a lumen output of 150 lumens or greater for candelabra bases, or 200 lumens or greater for other bases, manufactured on or after the effective dates shown in Table K-9 shall meet the standards shown in that table.~~~~

**Table K-8  
Standards for ~~State-Regulated~~ General Service Lamps -- Tier II**

| <i>Lumen Ranges</i> | <i>Minimum Lamp Efficacy</i> | <i>Minimum Rated Lifetime</i> | <i>Effective Date</i>  |
|---------------------|------------------------------|-------------------------------|--|
| 310-2600            | 45 lumens per watt           | 1,000 Hours                   | <u>Manufactured on or after January 1, 2018, and sold before January 1, 2020</u> |

~~(B) General service lamps sold on or after January 1, 2020, shall have a minimum lamp efficacy of 45 lumens per watt.~~

**(2) State-Regulated LED Lamps.**

(A) State-regulated LED lamps with lumen output of 150 lumens or greater for ~~candelabra~~E12 bases, or 200 lumens or greater for ~~other~~E17, E26, and GU24 bases, and manufactured on or after January 1, 2018, shall meet all of the standards shown in Table K-9 and shall have the following:

~~(i)~~1. A color point that meets the requirements in Table B1 of Annex B of ANSI C78.377-2015 for color targets and color consistency.

~~(ii)~~2. A CRI (Ra) of 82 or greater.

~~(iii)~~3. Individual color scores of R1, R2, R3, R4, R5, R6, R7, and R8 of 72 or greater.

- ~~(iv)~~4. A power factor of 0.7 or greater.
  - ~~(v)~~5. A rated life of 10,000 hours or greater as determined by the lumen maintenance and time to failure test procedure.
  - ~~(vi)~~6. State-regulated LED lamps that have an ANSI standard lamp shape of A shall meet the omnidirectional light distribution requirements of ENERGY STAR's Product Specification for Lamps Version 2.0 (December 2015).
  - ~~(vii)~~7. State-regulated LED lamps that have an ANSI standard lamp shape of B, BA, C, CA, F, or G shall meet the decorative light distribution requirements of ENERGY STAR's Product Specification for Lamps Version 1.1 (August 2014).
- (B) In addition to the requirements in section 1605.3(k)(2)(A) of this Article, state-regulated LED lamps manufactured on or after July 1, 2019 shall have a standby mode power of 0.2 watt or less.

**Table K-9  
Standards for State-Regulated LED Lamps**

| <i>Effective Date</i>   | <i>Minimum Compliance Score</i> | <i>Minimum Efficacy Lumens Per Watt</i> |
|---|---------------------------------|---|
| January 1, 2018   | 282                             | 68                                      |
| July 1, 2019  | 297                             | 80                                      |
| This compliance score shall be calculated as the sum of the efficacy and 2.3 times the CRI of a lamp. |                                 |   |

- (3) **State-regulated Small Diameter Directional Lamps.** State-regulated small diameter directional lamps manufactured on or after January 1, 2018 must have a rated life of 25,000 hours or greater as determined by the lumen maintenance and time to failure test procedure and meet one of the following requirements:
- (A) have luminous efficacy of at least 80 lumens per watt.
  - (B) have a minimum luminous efficacy of 70 lumens per watt or greater and a minimum compliance score of 165 or greater, where compliance is calculated as the sum of the luminous efficacy and CRI.
- (4) **GU24 Base Lamps.** GU24 base lamps shall not be incandescent lamps.
- (5) See section 1605.1(k) of this Article for energy efficiency standards for federally regulated lamps.

**...[skipping through the end of the section]**

Note: Authority cited: Sections 25213, 25218(e), 25401.9(b), 25402(a)-25402(c), and 25960, Public Resources Code; and sections 16, 26, and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015).

Reference: Sections 25216.5(d), 25401.9(b), 25402(a)-25402(c) and 25960, Public Resources Code; and section 16, Governor's Exec. Order No. B-29-15 (April 1, 2015).

## **§ 1606. Filing by Manufacturers; Listing of Appliances in the MAEDbS.**

### **(a) Filing of Statements.**

Each manufacturer shall electronically file with the Executive Director through the MAEDbS a statement for each appliance that is sold or offered for sale in California. The statement shall contain all of the information described in paragraphs (2) through (4) of this subsection and shall meet all of the requirements of paragraph (1) of this subsection and all other applicable requirements in this Article.

The effective dates of this section shall be the same as the effective dates shown in section 1605.1, 1605.2 or 1605.3 of this Article for appliances for which there is an energy efficiency, energy consumption, energy design, water efficiency, water consumption, or water design standard in section 1605.1, 1605.2, or 1605.3 of this Article. For appliances with no energy efficiency, energy consumption, energy design, water efficiency, water consumption, or water design standard in section 1605.1, 1605.2, or 1605.3 of this Article, the effective date of this section shall be one year after they are added to section 1601 of this Article, unless a different effective date is specified.

**EXCEPTIONS to Section 1606(a) of this Article:** Section 1606(a) of this Article is not applicable to:

1. external power supplies,
2. small electric motors,~~or~~
3. à la carte chargers meeting the EXCEPTION noted in section 1605.3(w)(2) of this Article; or
4. general service lamps.

...[skipping (a)(1)(A) through (a)(3)]

...[skipping to Table X]

**Table X**  
**Data Submittal Requirements**

| <i>Appliance</i> | <i>Required Information</i> | <i>Permissible Answers</i>   |
|------------------|-----------------------------|--|
| All Appliances   | * Manufacturer's Name       |  |
|                  | * Brand Name                |  |
|                  | * Model Number              |  |
|                  | Date model to be displayed  |  |
|                  | Regulatory Status           | Federally regulated consumer product, federally regulated commercial and industrial equipment, non-federally regulated |

**...[skipping A through K]**

|   |   |   |  |
|---|---|---|--|
| K | Federally-regulated general service fluorescent lamps                               | *Type   | 4-foot medium bipin general service fluorescent lamp, 2-foot U-shaped general service fluorescent lamp, 8-foot slim line general service fluorescent lamp, 8-foot high output general service fluorescent lamp, 4-foot miniature bipin standard output general service fluorescent lamp, 4-foot miniature bipin high output general service fluorescent lamp |
|   |   | Rated Color Rendering Index   |  |
|   |   | Correlated Color Temperature (for lamps manufactured on or after July 15, 2012) |  |
|   |   | Minimum Average Lamp Efficacy (LPW)   |  |
|   | Federally regulated incandescent reflector lamps <u>sold before January 1, 2020</u> | Minimum Average Lamp Efficacy   |  |
| K | Federally regulated Medium Screw Base Compact Fluorescent                           | Lamp Power (Watts)  |  |
|   |   | Minimum Efficacy (LPW)  |  |
|   |   | Lamp Configuration  | Bare or Covered (no reflector)   |

|  |   |   |
|--|---|---|
| <u>Lamps sold before January 1, 2020</u>   | 1,000 Hour Lumen Maintenance                                  | True, False   |
|  | Lumen Maintenance Requirements                                | True, False   |
|  | Rapid Cycle Stress Test                                       | True, False   |
|  | Average Rated Lamp Life                                       | True, False   |
| <u>Federally regulated Medium Screw Base General Service Incandescent and OLED Lamps; <del>OLEDs</del> sold before January 1, 2020</u> | Type  | General Service Incandescent, <del>LED</del> , OLED                 |
|  | Voltage Range   |   |
|  | Rated Lumen Range   |   |
|  | Maximum Rate Wattage  |   |
|  | Minimum Rate Lifetime   |   |
|  | Color Rendering Index   |   |
|  | Minimum Efficacy (LPW) (required on or after January 1, 2018) |   |
|  | Modified Spectrum   | True, False   |
|  | Bulb Finish (incandescent only)                               | Clear, frost, soft white  |
|  | ANSI-designated Bulb Shape                                    | A15, A19, A21, A23, A25, PS25, PS30, BT14.5, BT15, CP19, TB19, CA22 |
| <u>Federally regulated Candelabra Base and Intermediate Base Incandescent Lamps sold before January 1, 2020</u>                        | Base Type   | Candelabra, intermediate  |
|  | Maximum Rated Wattage   |   |
| <u>Federally regulated Medium Screw Base Modified Spectrum General Service Incandescent Lamps sold before January 1, 2020</u>          | Type  |   |
|  | Rated Voltage   |   |
|  | Rated Lumen Range   |   |
|  | Maximum Rate Wattage  |   |
|  | Minimum Rate Lifetime   |   |
|  | Color Rendering Index   |   |
| <u>State-regulated medium screw base general service Compact</u>   | Rated lumens  |   |
|  | Rated lamp wattage  |   |

|  |   |                                   |
|--|---|-----------------------------------|
| Fluorescent lamps                                | Average lamp efficacy   |                                   |
| State-regulated small diameter directional lamps | Base Type   |                                   |
|  | Lamp Type (examples PAR16, MR11, MR16, R)                                       |                                   |
|  | Lamp Power (Watts)  |                                   |
|  | Lamp Output (Lumens)  |                                   |
|  | Beam Angle  |                                   |
|  | Center Beam Candle Power (CBCP)   |                                   |
|  | Efficacy (Lumens per watt)  |                                   |
|  | Color Rendering Index (CRI)   |                                   |
|  | Combined CRI + Efficacy (only applies where efficacy < 80 LPW)                  |                                   |
|  | Correlated Color Temperature  |                                   |
|  | Rated Lifetime Test Completed   | True, False                       |
|  | Estimated Rated Lifetime (hours) (when "Rated Lifetime Test Completed" = False) |                                   |
|  | Rated Lifetime (hours) (when "Rated Lifetime Test Completed" = True)            |                                   |
| State-regulated Light Emitting Diode (LED) lamps | *Base Type  | E12, E17, E26, GU24, retrofit kit |
|  | Lamp Shape  | A, B, BA, C, CA, F, G, Other      |
|  | Dimmable  | True, False                       |
|  | Minimum Dimming Level (%) (if when "Dimmable" = True)                           |                                   |
|  | Reduced Flicker Operation (if when "Dimmable" = True)                           | True, False                       |
|  | Correlated Color Temperature  |                                   |
|  | Duv   |                                   |
|  | Rated Lifetime Test Completed   | True, False                       |
|  | Estimated Rated Lifetime (hours) (when "Rated Lifetime Test Completed" = False) |                                   |

|                         |  |  |
|-------------------------|--|--|
|                         | Rated Lifetime (hours) (when "Rated Lifetime Test Completed" = True)     |  |
|                         | Lifetime test environment temperature <sup>2</sup>                       | Ambient, Elevated  |
|                         | Lamp Power (Watts)   |  |
|                         | Lumen Output (Lumens)  |  |
|                         | Efficacy (Lumens per watt)   |  |
|                         | Color Rendering Index (Ra)   |  |
|                         | Compliance Score   |  |
|                         | Power Factor   |  |
|                         | Standby Mode   | True, False  |
|                         | Standby Power (watts) (if applicable)                                    |  |
|                         | Connected network type (if applicable)                                   | Wi-Fi, ZigBee, ANT, Bluetooth, RF, Wired, Other-(specify)  |
|                         | R <sub>1</sub>   |  |
|                         | R <sub>2</sub>   |  |
|                         | R <sub>3</sub>   |  |
|                         | R <sub>4</sub>   |  |
|                         | R <sub>5</sub>   |  |
|                         | R <sub>6</sub>   |  |
|                         | R <sub>7</sub>   |  |
|                         | R <sub>8</sub>   |  |
|                         | R <sub>9</sub> <sup>2</sup>  |  |
|                         | Meets applicable luminous intensity distribution requirements            | ENERGY STAR Omnidirectional, ENERGY STAR Decorative, none- |
|                         | Audible Noise at 100% output (decibels) (ifwhen "Dimmable" =equals True) |  |
|                         | Audible Noise at 20% output (decibels) (ifwhen "Dimmable" =equals True)  |  |
| Start Time <sup>2</sup> |  |  |

|  |  |   |   |
|--|--|---|---|
|  |  | 6000 hour lumen maintenance <sup>2</sup>  |   |
|  |  | 6000 hour survival rate <sup>2</sup>  |   |
|  |  | Projected time to L70 <sup>2</sup>  |   |
|  |  | Dimming Control Compatibility ( <u>#when</u><br>“_Dimmable_” <u>==</u> True)  | Forward, Phase cut control, reverse<br>phase cut, powerline carrier, digital,<br>0-10 VDC, other- |
|  |  | NEMA SSL 7A Compatible <sup>2</sup> (If compatible<br>with forward phase cut dimmer control<br>answer “True,” If not answer “False.”) | True, False   |

\* “Identifier” information as described in section 1602(a) of this Article.

1 = Voluntary for federally-regulated appliances

2 = Voluntary for state-regulated appliances

...[skipping remaining text in Table X through end of section 1606]

Note: Authority cited: Sections 25213, 25218(e), 25401.9(b), 25402(a)-25402(c), and 25960, Public Resources Code; and sections 16, 26, and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015).

Reference: Sections 25216.5(d), 25401.9(b), 25402(a)-25402(c), 25402.5.4, and 25960, Public Resources Code; and section 16, Governor's Exec. Order No. B-29-15 (April 1, 2015).

**§ 1607. Marking of Appliances. [no changes]**

**§ 1608. Compliance, Enforcement, and General Administrative Matters.**

**(a) General Requirements for the Sale or Installation of All Appliances.**

Any unit of any appliance within the scope of section 1601 of this Article may be sold or offered for sale in California only if:

- (1) the appliance appears in the most recent MAEDbS established pursuant to section 1606(c) of this Article, unless the only reason for the appliance's absence from the MAEDbS is its failure to comply with an applicable standard in section 1605.1 of this Article;
- (2) the manufacturer has:
  - (A) tested the appliance as required by sections 1603 and 1604 of this Article;
  - (B) marked the unit as required by section 1607 of this Article;
  - (C) for any appliance for which there is an applicable standard in section 1605.2 or 1605.3 of this Article, certified under section 1606(a) of this Article that the appliance complies with the standard;

- (3) the unit has the same components, design characteristics, and all other features that affect energy or water consumption or energy or water efficiency, as applicable, as the units that were tested under sections 1603 and 1604 of this Article and for which information was submitted under section 1606(a) of this Article; and
- (4) for any appliance for which there is an applicable standard in section 1605.2 or 1605.3 of this Article, the unit complies with the standard.

**EXCEPTIONS to Sections 1608(a)(1) and 1608(a)(2)(C) of this Article.** Sections 1608(a)(1) and 1608(a)(2)(C) of this Article are not applicable to:

1. external power supplies,
2. small electric motors, ~~or~~
3. à la carte chargers meeting the EXCEPTION noted in section 1605.3(w)(2) of this Article, ~~or~~
4. general service lamps.

...[skipping through the end of the section]

Authority cited: Sections 25213, 25218(e), 25402(a)-(c) and 25960, Public Resources Code.

Reference: Sections 25216.5(d), 25402(a)-(c) and 25960, Public Resources Code).

**§ 1609. Administrative Civil Penalties. [No changes]**

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

*IN THE MATTER OF:*

**GENERAL SERVICE LAMPS  
APPLIANCE EFFICIENCY  
RULEMAKING**

**Docket No. 18-OIR-02**

**[PROPOSED] RESOLUTION  
ADOPTING REGULATIONS**

WHEREAS, on August 15, 2019, the State Energy Resources Conservation and Development Commission (CEC) mailed and posted on the CEC's website a Notice of Proposed Action (NOPA) formally notifying the public of the CEC's intent to adopt proposed regulations for general service lamps, the Express Terms of the proposed regulations, an Initial Statement of Reasons (ISOR) describing the rationale for the proposal, the staff report and the document proposed to be incorporated by reference; and

WHEREAS, on August 16, 2019, the NOPA was published in the California Regulatory Notice Register; and

WHEREAS, on August 23, 2019, the CEC mailed a Revised NOPA to all the recipients specified in Government Code section 11346.4(a)(1)-(4) and posted it on the CEC's website, and

WHEREAS, on September 6, 2019 the CEC published an Initial Study and Proposed Negative Declaration for General Service Lamps and published and submitted to the State Clearinghouse a Notice of Availability, concluding that the proposed regulations would result in energy savings and reductions in air pollution and GHG emissions, and there would be no significant adverse impacts to the environment as a result; and

WHEREAS, on October 7, 2019, the 45-day comment period established by the Revised NOPA closed; and

WHEREAS, on October 3, 2019, the CEC postponed the Public Hearing noticed in the NOPA and, on October 23, 2019 published a notice rescheduling the Public Hearing to November 6, 2019; and

WHEREAS, on November 6, 2019, the CEC held a Public Hearing to hear comments on the proposed regulations; and

WHEREAS, on November 1, 2019, the CEC provided notice designating November 13, 2019 as the date for the hearing to consider adoption of the proposed regulations and

on this date the CEC held a public hearing to receive comments on the proposed regulations and to consider its adoption and did so adopt the regulations.

THEREFORE, THE CALIFORNIA ENERGY COMMISSION FINDS:

With regard to the California Environmental Quality Act:

- The California Energy Commission has considered the application of the California Environmental Quality Act (CEQA) to the proposed regulations and concluded that the proposed energy efficiency regulations for general service lamps will not have any direct, indirect, or cumulatively considerable significant adverse effect on the environment; and

With regard to the Warren-Alquist Act:

- The proposed regulations will reduce the wasteful, uneconomic, inefficient, and unnecessary consumption of energy for appliances that require a significant amount of energy on a statewide basis; and
- The proposed regulations are technologically feasible and attainable; and
- The proposed regulations do not result in any added total costs to the consumer over the designed life of the appliances concerned; and

With regard to the Administrative Procedure Act:

- The proposed regulations are unlikely to create new businesses or eliminate existing businesses, will not result in the expansion of businesses currently doing business in California, and are unlikely to result in a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states; and
- The proposed regulations are unlikely to create or eliminate jobs within California; and
- The proposed regulations will impose no direct costs, or direct or indirect requirements or mandates, on state agencies, local agencies, or school districts; and
- The proposed regulations will result in no costs or savings in federal funding to the State of California; and
- The proposed regulations will result in no costs or savings to any state agency; and
- The proposed regulations will result in no nondiscretionary costs or savings to local agencies or school districts; and
- The proposed regulations will have no impact on housing costs; and
- The proposed regulations will have no significant, statewide adverse economic impact on businesses in general or small businesses in particular; and

- The proposed regulations will result in no cost impacts to representative private persons or businesses in reasonable compliance with the regulations; and
- The proposed regulations will not adversely impact the health and welfare of California residents, worker safety, or the state's environment; and
- The proposed regulations have no alternatives that would be more effective in carrying out the purposes of the Warren-Alquist Act, that would be as effective and less burdensome to affected private persons in carrying out those purposes, or that would be more cost effective to affected private persons and equally effective in implementing those purposes; and
- The proposed regulations will not have a significant adverse economic impact on small business and no alternatives were proposed that would lessen any adverse economic impact on small business; and
- The proposed regulations will not require completion of any report; and
- None of the comments received during the comment period or at the public hearing or adoption hearing, and nothing else in the record, justified any changes to the proposed regulations as published on August 15, 2019.

THEREFORE BE IT RESOLVED, after considering the Initial Study, and all related materials in the record, the CEC finds that (1) there is no substantial evidence that the adoption of the proposed amendments to the Appliance Efficiency Regulations will have a significant effect on the environment, and (2) the Negative Declaration reflects the Commission's independent judgment and analysis. The Commission hereby adopts the Negative Declaration and Initial Study published on September 6, 2019. Documents and other materials that constitute the record of proceedings upon which the decision to adopt the negative declaration is based can be found at the California Energy Commission, 1516 9<sup>th</sup> Street, Sacramento, California, 95814 in the custody of the Docket Unit.

FURTHER BE IT RESOLVED, additionally, after considering all comments received and the staff's responses, and based on the entire record of this proceeding, the CEC hereby adopts the amendments to its appliance efficiency regulations, as set forth in the express terms that were published on August 15, 2019 (Cal. Code of Regs., tit. 20, §§ 1004, and 1602-1608).

The CEC takes this action under the authority of sections 25213 and 25218(e) of the Public Resources Code, which authorize the CEC to adopt rules or regulations, as reasonable and necessary, to implement, inter alia, Public Resources Code sections 25216.5(d) and 25402(a)-(c), 42 U.S.C. section 6295(i)(6)(A), which grants California an exception to preemption, as well as other state and federal statutory, regulatory and case law authorizing this action; and

FURTHER BE IT RESOLVED, that documents and other materials that constitute the rulemaking record can be found at the California Energy Commission, 1516 9<sup>th</sup> Street, Sacramento, California, 95814 in the custody of the Docket Unit; and

FURTHER BE IT RESOLVED, the CEC delegates the authority and directs CEC staff to take, on behalf of the CEC, all actions reasonably necessary to have the proposed regulations go into effect, including but not limited to making any appropriate non-

substantive changes to the regulations; preparing all appropriate documents, such as the Final Statement of Reasons; compiling and submitting the rulemaking file to the Office of Administrative Law (OAL); making any changes to the rulemaking file required by OAL; and preparing and filing the Notice of Determination with the State Clearinghouse.

### **CERTIFICATION**

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on November 13, 2019.

AYE:

NAY:

ABSENT:

ABSTAIN:

---

Cody Goldthrite  
Secretariat