

**State of California
Office of Administrative Law**

In re:
California Energy Commission

Regulatory Action:

Title 02, California Code of Regulations

Adopt sections:

Amend sections: 1601, 1602, 1604, 1605,
1605.1, 1605.2, 1605.3,
1606, 1607

Repeal sections:

NOTICE OF APPROVAL OF REGULATORY
ACTION

Government Code Section 11349.3

OAL Matter Number: 2020-1218-02

OAL Matter Type: Regular (S)

This action by the California Energy Commission amends appliance efficiency regulations by repealing the self-contained lighting control requirements, making updates to confirm with federal law, removing outdated minimum lumen output requirements for portable luminaires and modifies data submittal requirements for certain appliances.

OAL approves this regulatory action pursuant to section 11349.3 of the Government Code. This regulatory action becomes effective on 3/16/2021.

Date: March 16, 2021



Kevin D. Hull
Senior Attorney

For: Kenneth J. Pogue
Director

Original: Drew Bohan, Executive Director
Copy: Corrine Fishman

REGULAR

STATE OF CALIFORNIA—OFFICE OF ADMINISTRATIVE LAW

NOTICE PUBLICATION/REGULATIONS SUBMISSION

(See instructions on reverse)

For use by Secretary of State only

STD. 400 (REV. 10/2019)

OAL FILE NUMBERS	NOTICE FILE NUMBER Z-2020-0929-03	REGULATORY ACTION NUMBER 2020-1218-02	EMERGENCY NUMBER 5
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ENDORSED - FILED
in the Office of the Secretary of State
of the State of California

MAR 16 2021

1:23 PM

OFFICE OF ADMINISTRATIVE LAW

Electronic Submission

RECEIVED DATE PUBLICATION DATE
09/29/2020 10/9/2020

NOTICE

2020 DEC 18 P 3:46
OFFICE OF ADMINISTRATIVE LAW

REGULATIONS

AGENCY WITH RULEMAKING AUTHORITY
California Energy Commission

AGENCY FILE NUMBER (If any)
20-AAER-01

A. PUBLICATION OF NOTICE (Complete for publication in Notice Register)

1. SUBJECT OF NOTICE Repeal Self-Contained Lighting & Amendments		TITLE(S) 20	FIRST SECTION AFFECTED 1601	2. REQUESTED PUBLICATION DATE October 9, 2020
3. NOTICE TYPE <input checked="" type="checkbox"/> Notice re Proposed Regulatory Action <input type="checkbox"/> Other		4. AGENCY CONTACT PERSON Corrine Fishman		TELEPHONE NUMBER 916-690-5000
OAL USE ONLY <input type="checkbox"/> Approved as Submitted <input type="checkbox"/> Approved as Modified <input type="checkbox"/> Disapproved/Withdrawn		NOTICE REGISTER NUMBER		PUBLICATION DATE

B. SUBMISSION OF REGULATIONS (Complete when submitting regulations)

1a. SUBJECT OF REGULATION(S) Repeal of Self-Contained Lighting and other amendments		1b. ALL PREVIOUS RELATED OAL REGULATORY ACTION NUMBER(S)
2. SPECIFY CALIFORNIA CODE OF REGULATIONS TITLE(S) AND SECTION(S) (Including title 26, if toxics related)		
SECTION(S) AFFECTED (List all section number(s) individually. Attach additional sheet if needed.)	ADOPT	
	AMEND	
TITLE(S) 20	REPEAL 1601, 1602, 1604, 1605, 1605.1, 1605.2, 1605.3, 1606, 1607,	

3. TYPE OF FILING			
<input checked="" type="checkbox"/> Regular Rulemaking (Gov. Code § 11346)	<input type="checkbox"/> Certificate of Compliance: The agency officer named below certifies that this agency complied with the provisions of Gov. Code §§ 11346.2-11347.3 either before the emergency regulation was adopted or within the time period required by statute.	<input type="checkbox"/> Emergency Readopt (Gov. Code, § 11346.1(h))	<input type="checkbox"/> Changes Without Regulatory Effect (Cal. Code Regs., title 1, § 100)
<input type="checkbox"/> Resubmittal of disapproved or withdrawn nonemergency filing (Gov. Code §§ 11349.3, 11349.4)	<input type="checkbox"/> Resubmittal of disapproved or withdrawn emergency filing (Gov. Code, § 11346.1)	<input type="checkbox"/> File & Print	<input type="checkbox"/> Print Only
<input type="checkbox"/> Emergency (Gov. Code, § 11346.1(b))	<input type="checkbox"/> Other (Specify) _____		

4. ALL BEGINNING AND ENDING DATES OF AVAILABILITY OF MODIFIED REGULATIONS AND/OR MATERIAL ADDED TO THE RULEMAKING FILE (Cal. Code Regs. title 1, § 44 and Gov. Code § 11347.1)

5. EFFECTIVE DATE OF CHANGES (Gov. Code, §§ 11343.4, 11346.1(d); Cal. Code Regs., title 1, § 100)

Effective January 1, April 1, July 1, or October 1 (Gov. Code § 11343.4(a)) Effective on filing with Secretary of State \$100 Changes Without Regulatory Effect Effective other (Specify) _____

6. CHECK IF THESE REGULATIONS REQUIRE NOTICE TO, OR REVIEW, CONSULTATION, APPROVAL OR CONCURRENCE BY, ANOTHER AGENCY OR ENTITY

Department of Finance (Form STD. 399) (SAM § 6660) Fair Political Practices Commission State Fire Marshal

Other (Specify) _____

7. CONTACT PERSON Corrine Fishman, Regulation Manager	TELEPHONE NUMBER 916-690-5000	FAX NUMBER (Optional)	E-MAIL ADDRESS (Optional) corrine.fishman@energy.ca.gov
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8. I certify that the attached copy of the regulation(s) is a true and correct copy of the regulation(s) identified on this form, that the information specified on this form is true and correct, and that I am the head of the agency taking this action, or a designee of the head of the agency, and am authorized to make this certification.

SIGNATURE OF AGENCY HEAD OR DESIGNEE Drew Bohan	DATE
TYPED NAME AND TITLE OF SIGNATORY Drew Bohan, Executive Director	

For use by Office of Administrative Law (OAL) only

ENDORSED APPROVED

MAR 16 2021

Office of Administrative Law

Proposed Regulatory Language

**California Code of Regulations
Title 20. Public Utilities and Energy
Division 2. State Energy Resources Conservation and Development Commission
Chapter 4. Energy Conservation
Article 4. Appliance Efficiency Regulations
Sections 1601-1609**

Proposed new language appears as underline (example) and proposed deletions appear as ~~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.

§ 1601. Scope.

This Article applies to the following types of new appliances, if they are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles, or other mobile equipment. Unless otherwise specified, each provision applies only to units manufactured on or after the effective date of the provision.

NOTE: For the applicability of these regulations to appliances installed in new building construction, see sections 110.0 and 110.1 of part 6 of Title 24 of the California Code of Regulations.

...[skipping (a) through (k)]

- (l) Emergency lighting, which is illuminated exit signs, ~~and self-contained lighting controls.~~

...[skipping the rest of section 1601]

Note: Authority cited: Sections 25213, 25218(e), 25401.9, 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, 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. Definitions.

(a) General.

In this Article the following definitions apply. If a term is not defined here, the applicable definition in NAECA, EPart, the EPart 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 “Color rendering index (CRI)”]

“Commercial and industrial equipment” means an article of equipment, regardless of whether it is in fact distributed in commerce for industrial or commercial use, of a type which:

- (1) In operation consumes, or is designed to consume energy;

- (2) To any significant extent, is distributed in commerce for industrial or commercial use; and
- (3) Is not a consumer product, as defined in section 1602(a) of this Article.

...[skipping the rest of (a)]

...[skipping (b)]

(c) Air Conditioners, Air Filters, and Heat Pump Water-Heating Packages.

...[skipping "Air conditioner" through "Air-source heat pump"]

"Basic model" of a federally regulated central air conditioner or central air conditioning heat pump means all units of a given type of central air conditioner or central air conditioning heat pump (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency. With respect to central air conditioners and central air conditioning heat pumps, essentially identical electrical physical, and functional (or hydraulic) characteristics means:

- (1) for split systems manufactured by outdoor unit manufacturers: all individual combinations having the same model of outdoor unit, which means comparably performing compressor(s) [a variation of no more than five percent in displacement rate (volume per time) as rated by the compressor manufacturer, and no more than five percent in capacity and power input for the same operating conditions as rated by the compressor manufacturer], outdoor coil(s) [no more than five percent variation in face area and total fin surface area; same fin material; same tube material], and outdoor fan(s) [no more than ten percent variation in air flow and no more than twenty percent variation in power input];
- (2) for split systems having indoor units manufactured by independent coil manufacturers: all individual combinations having comparably performing indoor coil(s) [plus or minus one square foot face area, plus or minus one fin per inch fin density, and the same fin material, tube material, number of tube rows, tube pattern, and tube size]; and
- (3) for single-package systems: all individual models having comparably performing compressor(s) [no more than five percent variation in displacement rate (volume per time) rated by the compressor manufacturer, and no more than five percent variations in capacity and power input rated by the compressor manufacturer corresponding to the same compressor rating conditions], outdoor coil(s) and indoor coil(s) [no more than five percent variation in face area and total fin surface area; same fin material; same tube material], outdoor fan(s) [no more than ten percent variation in outdoor air flow], and indoor blower(s) [no more than ten percent variation in indoor air flow, with no more than twenty percent variation in fan motor power input];
- (4) except that:
 - (A) for single-package systems and single-split systems, manufacturers may instead choose to make each individual model/combination its own basic model provided the testing and represented value requirements in 10 C.F.R. section 429.16 are met; and
 - (B) For multi-split, multi-circuit, and multi-head mini-split combinations, a basic model may not include both individual small-duct, high velocity (SDHV) combinations and non-SDHV combinations even when they include the same model of outdoor unit. The manufacturer may choose to identify specific individual combinations as additional basic models.

...[skipping the rest of (c)]

(d) Portable Air Conditioners, Evaporative Coolers, Ceiling Fans, Ceiling Fan Light Kits, Whole House Fans, Residential Exhaust Fans, Dehumidifiers, and Residential Furnace Fans.

...[skipping “Adjusted cooling capacity at 83°F conditions” through “Evaporative cooler”]

“Evaporative cooler efficiency ratio (ECER)” means a measure of the cooling efficiency defined in Table D-3 of section 1604(d) of this Article.

...[skipping the rest of (d)]

(e) Gas and Oil Space Heaters and Electric Residential Boilers.

...[skipping “Annual fuel utilization efficiency (AFUE)” through “Central furnace”]

“Combination space-heating and water-heating appliance” means an appliance that is designed to provide both space heating and water heating from a single primary energy source.

“Combined annual efficiency (CAE)” means $[(SHF \times Eff_{y_{hs}} / 100) + (WHF \times Eff_{y_{ss}} / 100) + (R \times NHF \times EF)]$ divided by $[SHF + WHF + (R \times NHF)]$ as defined in the applicable test method in section 1604(e)(3) of this Article.

“Combustion efficiency of a space heater” means a measure of the percentage of heat from the combustion of gas or oil that is transferred to the space being heated or lost as jacket loss, as determined using the applicable test method in section 1604(e) of this Article.

“Combination space-heating and water-heating appliance” means an appliance that is designed to provide both space heating and water heating from a single primary energy source.

“Combustion efficiency for a commercial packaged boiler” means the efficiency descriptor for packaged boilers, determined using test procedures prescribed under 10 C.F.R. section 431.86 and is equal to 100 percent minus percent flue loss (percent flue loss is based on input fuel energy).

“Combustion efficiency of a space heater” means a measure of the percentage of heat from the combustion of gas or oil that is transferred to the space being heated or lost as jacket loss, as determined using the applicable test method in section 1604(e) of this Article.

...[skipping the rest of (e)]

(f) Water Heaters.

...[skipping “Activation lock” through “Gas-fired instantaneous water heater” that is a federally regulated consumer product”]

“Gas-fired instantaneous water heater” that is federally regulated commercial and industrial equipment means a water heater that uses gas as the main energy source, and has a rated input both greater than 200,000 Btu/h and not less than 4,000 Btu/h per gallon of stored water.

...[skipping the rest of (f)]

...[skipping (g) through (k)]

(I) Emergency Lighting and Self-Contained Lighting Controls.

~~“Astronomical time-switch control” means an automatic time-switch control device capable of controlling lighting based on the time of day and astronomical events such as sunset and sunrise, accounting for geographic location and date of the year.~~

~~“Automatic daylight control” means a self-contained lighting control device that automatically adjusts lighting levels by using one or more photosensors to detect changes in daylight illumination and then changing the electric lighting level in response to the changes in daylight.~~

~~“Automatic time-switch control” means a self-contained lighting control device that controls lighting based on the time of day.~~

~~“Average Luminance” means the arithmetic mean of all points measured on a surface.~~

~~“Dimmer” means a self-contained lighting control device that varies the electric light lumen output in order to change the level of illumination and energy use.~~

~~“DIP switch” means one of a set of small on-off switches mounted inside a self-contained lighting control that modifies the functionality of the lighting control.~~

~~“Edge-lit exit sign” means an illuminated exit sign in which lettering etched into a glass, plastic, or similar panel is illuminated through the edge of the panel and in which the lettering and the background are luminous.~~

~~“Electroluminescent light source” means a solid-state device which produces light when an electric current is passed through a phosphor-impregnated material.~~

~~“Face” means an illuminated side of an illuminated exit sign.~~

~~“Illuminated exit sign” means a sign that:~~

- ~~(1) is designed to be permanently fixed in place to identify an exit; and~~
- ~~(2) consists of:
 - ~~(A) an electrically powered integral light source that illuminates the legend “EXIT” and any directional indicators; and~~
 - ~~(B) provides contrast between the legend, any directional indicators, and the background.~~~~

~~“Input power” means the rate of electricity consumption, in watts, of an illuminated exit sign.~~

~~“Input power demand” means the amount of power required to continuously illuminate an exit sign model, measured in watts. For exit sign models with rechargeable batteries, input power demand shall be measured with batteries at full charge.~~

~~“Lighting control system” means a lighting control in which two or more components are required to be installed in the field to provide all of the functionality required to make a~~

fully functional and compliant lighting control. Lighting control systems are regulated under sections 119 and 134 of the Title 24 of the California Code of Regulations.

“Luminance” means a measure of the brightness of a luminous surface.

“Luminance contrast” means the relative brightness of an object against its background.

“Matrix illuminated exit sign” means an illuminated exit sign that uses an array of small light sources, such as LEDs, to form the lettering of a sign.

“Maximum to minimum luminance ratio” means the ratio of maximum to minimum luminance where the luminance should be uniform.

“Occupant sensing device” means a self-contained lighting control that automatically controls light, allows for complete manual operation, and includes the following devices:

- (1) “Motion sensor,” which means an occupant sensing device that is used outdoors, automatically turns lights off when an area is vacated, and automatically turns the lights on when the area is occupied.
- (2) “Occupancy sensor,” which means an occupant sensing device that is used indoors and automatically turns lights off when an area is vacated and is capable of automatically turning lights on when an area is occupied.
- (3) “Partial off,” which means a motion sensor or occupancy sensor that automatically turns off part of the lighting load when an area is vacated and is capable of automatically turning on the lighting load when an area is occupied.
- (4) “Partial on,” which means a motion sensor or occupancy sensor that automatically turns lights off when an area is vacated and is capable of automatically and manually turning on part of the lighting load when an area is occupied.
- (5) “Vacancy sensor,” which means an occupant sensing device that automatically turns lights off when an area is vacated but requires lighting loads to be turned on manually.

“Panel-type exit sign” means an illuminated exit sign in which a translucent panel diffuses a light source and in which both the lettering and background are luminous.

“Photo control” means an automatic daylight control device that automatically turns lights on and off, or automatically adjusts lighting levels, in response to the amount of daylight that is available. A photo control may also be one component of a field assembled lighting system, the component having the capability to provide a signal proportional to the amount of daylight to a lighting control system for the purpose of dimming the electric lights.

“Photometric measurements” means the measurements of luminance levels made on the face of the sign.

“Self-contained lighting control” means a unitary lighting control module where no additional components are required for it to be a fully functional lighting control. Self-contained lighting control includes an astronomical time-switch control; an automatic daylight control; an automatic time-switch control; a dimmer; a lighting photo control; or an occupant sensing device.

“Stencil illuminated exit sign” means an illuminated exit sign in which an opaque panel conceals the light source and in which only translucent lettering is luminous.

“Wall box dimmer” means a dimmer manufactured and intended to be mounted inside an electrical box within a wall.

[end of (l)]

...[skipping (m) through (x)]

The following documents are incorporated by reference in section 1602.

Number

Title

...[skipping "FEDERAL STATUTES AND REGULATIONS" through "ADOBE SYSTEMS INCORPORATED"]

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI C78.1-1991 (R1996)	Dimensional and Electrical Characteristics of Fluorescent Lamps, Rapid Start Types
ANSI C78.3-1991 (R1996)	Dimensional and Electrical Characteristics of Fluorescent Lamps, Instant Start and cold Cathode Types
ANSI C78.21-1989	Incandescent Lamps - PAR and R Shapes
ANSI C78.20-2003	<u>American National Standard for eElectric Hlamps - A, G, PS, and Similar Shapes with E26 Medium Screw Bases</u>
ANSI C78.81-2003	<u>American National Standard for Electric Lamp Bases Electric Lamps - Double-Capped Fluorescent Lamps - Dimensional and Electrical Characteristics</u>

...[skipping the rest of "AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)"]

...[skipping the rest of section 1602]

Note: Authority cited: Sections 25213, 25218(e), 25401.9, 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, 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.

(a) Refrigerators, Refrigerator-Freezers, and Freezers.

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

- (4) The test method for water dispensers is EPA Energy Star Program Requirements for Bottled Water Coolers (2004).

EXCEPTION to Section 1604(a)(4) of this Article: Water dispensers equipped with an integral, automatic timer. Water dispensers equipped with an integral, automatic timer shall not be tested using Section 4)D, "Timer Usage," of the referenced test method.

[end of (a)]

...[skipping (b) through (f)]

(g) Pool Heaters; Portable Electric Spas; Residential Pool Pump and Motor Combinations, and Replacement Residential Pool Pump Motors; and Pumps, Dedicated-Purpose Pool Pumps, and Replacement Dedicated-Purpose Pool Pump Motors.

...[skipping (g)(1)]

(2) Test Method for Portable Electric Spas.

...[skipping (2)(A) through (2)(B)]

(C) Test lab report requirements for portable electric spas manufactured on or after June 1, 2019. In addition to the requirements of section 5 of ANSI/APSP/ICC-14 2014 and section 1606 Table X, test lab reports shall include: date of test; minimum and maximum water temperatures settings; copy of the label(s) per section 1607(d)(~~14~~)(13)(B); minimum, maximum, and average water temperatures during test; minimum, maximum, and average ambient air temperatures during test; length of test (in hours); record and plot ambient air temperature (in degrees Fahrenheit), water temperature (in degrees Fahrenheit), current (in amps), and voltage (in volts) at a maximum interval of five minutes during test; and, for inflatable spas, a list of the accessories that were tested with the spa.

...[skipping the rest of (g)]

...[skipping (h) through (j)]

(k) Lamps.

- (1) The test method for general service incandescent lamps, 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 compact fluorescent lamps is 10 C.F.R. section 430.23(y) (Appendix W to subpart B of part 430).
- (3) The test method for integrated LED lamps is 10 C.F.R. section 430.23(ee) (Appendix BB to subpart B of part 430). 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~~)(12) 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.

...[skipping the rest of (k)]

(l) Emergency Lighting and Self-Contained Lighting Controls.

- (1) **Emergency Lighting.** The test method for illuminated exit signs is 10 C.F.R. section 431.204(b).
- (2) **Self-Contained Lighting Controls.** There is no test method for self-contained lighting controls.

[end of (l)]

...[skipping (m)]

(n) Luminaires and Torchieres.

...[skipping (n)(1) through (n)(3)]

(4) Portable Luminaires.

- (A) The test methods for LED luminaires using LED lamps are shown in ~~Table K-1~~ of section 1604(k)~~(4)~~(3) of this Article.

...[skipping the rest of (n)]

...[skipping (o) through (v)]

(w) Battery Chargers and Battery Charger Systems.

...[skipping (w)(1)]

- (2) **Test Method for Small Battery Charger Systems.** The test method for small battery charger systems that are not federally regulated battery chargers, federally regulated uninterruptible power supplies, battery backups, or non-federally regulated uninterruptible power supplies is 10 C.F.R. section 430.23(aa) (Appendix Y to subpart B of part 430) (Jan. 1, 2017).

...[skipping (2)(A) through (2)(C)]

- (D) Small battery charger systems that are not consumer products may use the battery manufacturer's recommended end of discharge voltage in place of values in 10 C.F.R. section ~~420.23~~430.23(aa) (Appendix Y to subpart B of part 430) (Jan.1, 2017), Table 3.3.2, where the table's values are not applicable.

...[skipping the rest of (w)]

...[skipping (x)]

The following documents are incorporated by reference in section 1604.

...[skipping CALIFORNIA ENERGY COMMISSION TEST METHODS]

FEDERAL TEST METHODS

C.F.R., Title 10, sections 429.56, 429.63, and 429.70

...[skipping the rest of FEDERAL TEST METHODS]