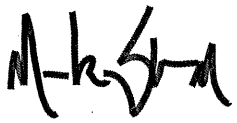
State of California
Office of Administrative Law

In re: **California Energy Commission** **Regulatory Action:** **Title 20, California Code of Regulations** **Adopt sections:** **Amend sections: 1604, 1605.1** **Repeal sections:**	**NOTICE OF APPROVAL OF CHANGES WITHOUT REGULATORY EFFECT** **California Code of Regulations, Title 1, Section 100** **OAL Matter Number: 2025-0630-01** **OAL Matter Type: Nonsubstantive (N)**

This action, without regulatory effect, (1) adds version dates to existing California Code of Regulations cross-references to federal appliance test methods found in the Code of Federal Regulations (CFR); and (2) updates outdated appliance performance standards to align with the current CFR.

OAL approves this change without regulatory effect as meeting the requirements of California Code of Regulations, title 1, section 100.

Date: August 12, 2025



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Date: 2025.08.12 14:24:48 -07'00'

Mark Storm
Senior Attorney

For: Kenneth J. Pogue
Director

Original: Drew Bohan, Executive Director
Copy: Ross Daley

STATE OF CALIFORNIA—OFFICE OF ADMINISTRATIVE LAW

NOTICE PUBLICATION/REGULATIONS SUBMISSION

NONSUBSTANTIVE

STD. 400 (REV. 10/2019)

For use by Secretary of State only

OAL FILE NUMBERS	NOTICE FILE NUMBER	REGULATORY ACTION NUMBER	EMERGENCY NUMBER
	Z-	2025-0630-01N	

For use by Office of Administrative Law (OAL) only

OFFICE OF ADMIN. LAW
2025 JUN 30 PM 3:30

NOTICE | REGULATIONS

ENDORSED - FILED
in the office of the Secretary of State
of the State of California

AUG 12 2025

3:27 PM

AGENCY WITH RULEMAKING AUTHORITY
California Energy Commission

AGENCY FILE NUMBER (If any)
25-ED-02

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

1. SUBJECT OF NOTICE	TITLE(S)	FIRST SECTION AFFECTED	2. REQUESTED PUBLICATION DATE

3. NOTICE TYPE	4. AGENCY CONTACT PERSON	TELEPHONE NUMBER	FAX NUMBER (Optional)
☐ Notice re Proposed Regulatory Action ☐ Other			

OAL USE ONLY	ACTION ON PROPOSED NOTICE	NOTICE REGISTER NUMBER	PUBLICATION DATE
	☐ Approved as Submitted ☐ Approved as Modified ☐ Disapproved/ Withdrawn		

B. SUBMISSION OF REGULATIONS (Complete when submitting regulations)

1a. SUBJECT OF REGULATION(S)
Appliance Efficiency Regulations

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
1604, 1605.1

TITLE(S)
20

REPEAL

3. TYPE OF FILING

- ☐ Regular Rulemaking (Gov. Code §11346)
- ☐ Resubmittal of disapproved or withdrawn nonemergency filing (Gov. Code §§11349.3, 11349.4)
- ☐ Emergency (Gov. Code, §11346.1(b))
- ☐ 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.
- ☐ Resubmittal of disapproved or withdrawn emergency filing (Gov. Code, §11346.1)
- ☐ Emergency Readopt (Gov. Code, §11346.1(h))
- ☐ File & Print
- ☐ Other (Specify) _____
- ☒ Changes Without Regulatory Effect (Cal. Code Regs., title 1, §100)
- ☐ Print Only

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	TELEPHONE NUMBER	FAX NUMBER (Optional)	E-MAIL ADDRESS (Optional)
Ross Daley	916-980-7949		Ross.Daley@energy.ca.gov

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

DATE
6/28/2025

TYPED NAME AND TITLE OF SIGNATORY
Drew Bohan, Executive Director

For use by Office of Administrative Law (OAL) only

ENDORSED APPROVED

AUG 12 2025

Office of Administrative Law

EXPRESS TERMS – Section 100

California Code of Regulations, Title 20, Division 2, Chapter 4, Article 4, Sections 1601-1609: Appliance Efficiency Regulations

The new language appears as a single underline (example) and deletions appear as a single strikeout (~~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.

…[skipping sections 1601 through 1603]

Section 1604. Test Methods for Specific Appliances.

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

(1) The test methods for non-commercial refrigerators designed for the refrigerated storage of food at temperatures above 32°F and below 39°F, configured for general refrigerated food storage, non-commercial refrigerator-freezers, miscellaneous refrigeration products, and non-commercial freezers are 10 C.F.R. sections 430.23(a) (Appendix A to subpart B of part 430) (January 19, 2025) and 430.23(b) (Appendix B to subpart B of part 430) (January 19, 2025).

(2) The test methods for commercial refrigerators, commercial refrigerator-freezers, and commercial freezers are shown in Table A-1.

Table A-1
Commercial Refrigerator, Refrigerator-Freezer, and Freezer Test Methods

Appliance	***Test Method***
Automatic commercial ice makers	10 C.F.R. sections 431.133 (January 19, 2025) and 431.134 (January 19, 2025)
Refrigerated bottled or canned beverage vending machines	10 C.F.R. sections 431.293 (January 19, 2025) and 431.294 (January 19, 2025)
Refrigerated buffet and preparation tables	ANSI/ASTM F2143-01
Other commercial refrigerators, refrigerator-freezers, and freezers, with doors	10 C.F.R. sections 431.63 (January 19, 2025) and 431.64 (January 19, 2025)
Other commercial refrigerators, refrigerator-freezers, and freezers, without doors	10 C.F.R. sections 431.63 (January 19, 2025) and 431.64 (January 19, 2025)
Walk-in coolers and walk-in freezers	10 C.F.R. sections 431.303 (January 19, 2025) and 431.304 (January 19, 2025)

(3) When a refrigerator, refrigerator-freezer, or freezer can be operated using either alternating current electricity or one or more other sources of primary power, the test shall be performed using alternating current electricity only.

(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.

(b) Room Air Conditioners, Room Air-Conditioning Heat Pumps, Packaged Terminal Air Conditioners, and Packaged Terminal Heat Pumps.

The test methods for room air conditioners, room air-conditioning heat pumps, packaged terminal air conditioners, and packaged terminal heat pumps are shown in Table B-1.

Table B-1
Room Air Conditioner, Room Air-Conditioning Heat Pump, Packaged Terminal Air Conditioner, and Packaged Terminal Heat Pump Test Methods

Appliance	*Test Method*
Room air conditioners and room air-conditioning heat pumps	10 C.F.R. section 430.23(f) (Appendix F to subpart B of part 430) (January 19, 2025)
Packaged terminal air conditioners and packaged terminal heat pumps	10 C.F.R. sections 431.95 (January 19, 2025) and 431.96 (January 19, 2025)

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

(1) The test methods for central air conditioners are shown in Table C-1 and include but not limited to provisions on alternative efficiency determination method (AEDM) and additional testing requirements concerning selection of models to be tested if an AEDM is to be applied, in 10 C.F.R. sections 429.12 (January 19, 2025), 429.16 (August 1, 2025), and 429.70 (August 1, 2025).

(2) For each basic model of central air conditioner and heat pump, test the individual model and combination as required in 10 C.F.R. section 429.16(b)(2) (August 1, 2025).

Table C-1
Central Air Conditioner Test Methods

Appliance	*Test Method*
Computer Room Air Conditioners	
evaporatively cooled	ANSI/ASHRAE 127-2001
air-cooled, glycol-cooled, water-cooled	10 C.F.R. sections 431.95 (January 19, 2025) and 431.96 (January 19, 2025)
Other electric-powered unitary air-conditioners and electric-powered heat pumps	
air-cooled air conditioners and air-source heat pumps	
< 65,000 Btu/hr, single-phase	

	10 C.F.R. section 430.23(m) (Appendix M to subpart B of part 430) (for models manufactured before January 1, 2023, only) (August 1, 2025) 10 C.F.R. section 430.23(m) (Appendix M1 to subpart B of part 430) (for models manufactured on or after January 1, 2023, only) (August 1, 2025)
< 65,000 Btu/hr, three-phase	10 C.F.R. sections 431.95 (January 19, 2025) and 431.96 (January 19, 2025)
≥ 65,000 and < 760,000 Btu/hr	10 C.F.R. sections 431.95 (January 19, 2025) and 431.96 (January 19, 2025)
evaporatively cooled air conditioners < 240,000 Btu/hr	10 C.F.R. sections 431.95 (January 19, 2025) and 431.96 (January 19, 2025)
water-cooled air conditioners and water-source heat pumps	
< 240,000 Btu/hr	10 C.F.R. sections 431.95 (January 19, 2025) and 431.96 (January 19, 2025)
ground water-source heat pumps	ARI/ISO-13256-1:1998
ground-source closed-loop heat pumps	ARI/ISO-13256-1:1998
Variable Refrigerant Flow Multi-split Systems	10 C.F.R. sections 431.95 (January 19, 2025) and 431.96 (January 19, 2025)
Single Package Vertical Air Conditioners and Single Package Vertical Heat Pumps	10 C.F.R. sections 431.95 (January 19, 2025) and 431.96 (January 19, 2025)
Gas-fired air conditioners and gas-fired heat pumps	ANSI Z21.40.4-1996 as modified by CEC, Efficiency Calculation Method for Gas-Fired Heat Pumps as a New Compliance Option (1996)

…[skipping the rest of (c)]

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

(1) The test methods for portable air conditioners, evaporative coolers, ceiling fans, ceiling fan light kits, whole house fans, residential exhaust fans, dehumidifiers, residential furnace fans, and commercial and industrial fans and blowers are shown in Table D-3.

Table D-3
Testing Requirements for the following Appliances

Appliance	***Test Method***
Spot Air Conditioners	ANSI/ASHRAE 128-2001
Single-Duct and Dual-Duct Portable Air Conditioners	10 C.F.R. section 430.23(dd) (Appendix CC to subpart B of part 430) (January 19, 2025)

Ceiling Fans[1]	10 C.F.R. section 430.23(w) (Appendix U to subpart B of part 430) (January 19, 2025)
Ceiling Fan Light Kits	10 C.F.R. section 430.23(x) (Appendix V to subpart B of part 430) (January 19, 2025)
Evaporative Coolers[2]	ANSI/ASHRAE 133-2008 for packaged direct evaporative coolers and packaged indirect/direct evaporative coolers; ANSI/ASHRAE 143-2007 for packaged indirect evaporative coolers
Whole House Fans	HVI-Publication 916 29 September 2015 HVI Airflow Test Procedure, as specified in section 5.2. Use setups for whole house comfort ventilators.
Dehumidifiers	10 C.F.R. section 430.23(z) (Appendix X to subpart B of part 430, active mode portion only)
Portable Dehumidifiers and Whole-Home Dehumidifiers Manufactured On or After June 13, 2019	10 C.F.R. section 430.23(z) (Appendix X1 to subpart B of part 430) (January 19, 2025)
Residential Exhaust Fans	HVI-Publication 916 29 September 2015 HVI Airflow Test Procedure, as specified in section 5.2.
Residential Furnace Fans	10 C.F.R. section 430.23(cc) (Appendix AA to subpart B of part 430) (January 19, 2025)
Commercial and Industrial Fans and Blowers	10 C.F.R. section 431.174 (Appendix A to Subpart J of Part 431)[3] (January 19, 2025)

[1] Very small-diameter ceiling fans are not required to be tested, unless those fans also meet the definition of "low-speed small-diameter ceiling fan" found in section 1602(d) of this Article.
[2] Not including evaporative coolers whose fans or blowers are within the scope of the testing requirements for commercial and industrial fans and blowers.
[3] Including but not limited to provisions on alternative efficiency determination method (AEDM) and additional testing requirements concerning selection of models to be tested if an AEDM is to be applied, in 10 C.F.R. sections 429.69 (January 19, 2025) and 429.70 (August 1, 2025).

(e) Space Heating Products.

(1) **Space Heating Products.** The test methods for space heating products are shown in Table E-1.

(2) **Natural Gas and LPG Space Heaters.** Gas space heaters intended for use either with natural gas or LPG may be tested with natural gas and the results applied to both fuel types.

(3) **Combination Space-Heating and Water-Heating Appliances.** The test method for combination space-heating and water-heating appliances is ANSI/ASHRAE 124-2007.

Table E-1
Space Heating Product Test Methods

Appliance	***Test Method***

Central furnaces < 225,000 Btu/hr, single phase	10 C.F.R. section 430.23(n) (Appendix N to subpart B of part 430) (January 19, 2025)
< 225,000 Btu/hr, three phase	10 C.F.R. section 430.23(n) (Appendix N to subpart B of part 430) (January 19, 2025) or 10 C.F.R. sections 431.75 (January 19, 2025) and 431.76 (January 19, 2025) (at manufacturer's option)
≥ 225,000 Btu/hr	10 C.F.R. sections 431.75 (January 19, 2025) and 431.76 (January 19, 2025)
Infrared gas space heaters patio heaters high-intensity infrared heaters low-intensity infrared heaters	 ASTM F2644-07 ANSI Z83.19-2001 ANSI Z83.20-2001
Gas duct furnaces	ANSI Z83.8-2002
Boilers < 300,000 Btu/hr	10 C.F.R. section 430.23(n) (Appendix N to subpart B of part 430) (January 19, 2025)
≥ 300,000 Btu/hr	10 C.F.R. sections 431.85 (January 19, 2025) and 431.86 (January 19, 2025)
Vented home heating equipment	10 C.F.R. section 430.23(o) (Appendix O to subpart B of part 430) (January 19, 2025)

(f) Water Heaters.

(1) **Residential Water Heaters:** The test method for residential water heaters is 10 C.F.R. section 430.23(e) (Appendix E to subpart B of part 430) (August 1, 2025).

(2) **Water heaters that are Regulated Under subpart G of 10 C.F.R. part 431.**

The test methods for water heaters that are regulated under subpart G of 10 C.F.R. part 431 are found at 10 C.F.R. sections 431.105 (January 19, 2025) and 431.106 (January 19, 2025).

(3) **Dual-Fuel Models.** Water heaters intended for use either with natural gas or LPG may be tested with natural gas and the results applied to both fuel types.

(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.

(1) **Test Methods for Pool Heaters.**

The test method for fossil fuel-fired pool heaters, electric resistance pool heaters, and electric heat pump pool heaters is 10 C.F.R. section 430.23(p) (Appendix P to subpart B of part 430) (January 19, 2025).

(2) **Test Method for Portable Electric Spas.**

(A) The test method for portable electric spas is ANSI/APSP/ICC-14 2019.

(B) Test lab report requirements for portable electric spas. In addition to the requirements of section 5 and Appendix D of ANSI/APSP/ICC-14 2019 and section

1606 Table X of this Article, test lab reports shall include: minimum and maximum water temperatures settings; copy of the label(s) per section 1607(d)(13)(B) of this Article; 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.

(3) **Test Methods for Pumps, Dedicated-Purpose Pool Pumps, and Replacement Dedicated-Purpose Pool Pump Motors.**

(A) The test method for pumps, except for dedicated-purpose pool pumps, is 10 C.F.R. section 431.464(a) (Appendix A to subpart Y of part 431) (August 1, 2025).

(B) The test method for dedicated-purpose pool pumps manufactured on or after July 19, 2021 and served by single-phase or polyphase input power, is 10 C.F.R. 431.464(b) (Appendix C to subpart Y of part 431) (January 19, 2025).

…[skipping the rest of (g)]

(h) Plumbing Fittings.

(1) **Commercial Pre-Rinse Spray Valves.** The test method for commercial pre-rinse spray valves is 10 C.F.R. sections 431.263 (January 19, 2025) and 431.264 (January 19, 2025).

(2) **Showerheads.** The test methods for showerheads are:

(A) Maximum flow rate test. The test method for determining maximum flow rate of a showerhead is 10 C.F.R. section 430.23(t) (Appendix S to subpart B of part 430) (January 19, 2025).

(B) Minimum flow rate test. The test method for determining minimum flow rates of a showerhead is as stated in ASME A112.18.1-2018 / CSA B125.1-2018.

(C) Showerheads with multiple nozzles. Showerheads with multiple nozzles shall be tested with all nozzles in use at the same time.

(3) **Other Plumbing Fittings.** The test method for other plumbing fittings is 10 C.F.R. Section 430.23(s) (Appendix S to subpart B of part 430) (January 19, 2025).

(4) **Showerhead-tub spout diverter combinations.** Showerhead-tub spout diverter combinations shall have both the showerhead and tub spout diverter tested individually.

(5) **Tub Spout Diverters.** A tub spout diverter manufactured on or after June 1, 2016 shall be tested in accordance with ASME A112.18.1-2012/CSA B125.1-12, Section 5.3.6 for the rate of leakage conducted prior to life cycle testing and Section 5.6.1.5 for the rate of leakage conducted after life cycling testing.

(i) Plumbing Fixtures.

The test methods for plumbing fixtures are:

(1) **Water Closets.** The test method for testing gallons per flush of water closets is 10 C.F.R. Section 430.23 (u) (Appendix T to subpart B of part 430) (January 19, 2025). See section 1604(i)(3) of this Article for the required waste extraction test.

(2) **Urinals.** The test method for testing gallons per flush of urinals is 10 C.F.R. section 430.23(v) (Appendix T to subpart B of part 430) (January 19, 2025).

(3) **Waste Extraction Test for Water Closets.** The waste extraction test method for water closets is Section 7.10 of ASME A112.19.2/CSA B45.1-2013.

(j) Fluorescent Lamp Ballasts and Deep-Dimming Fluorescent Lamp Ballasts.

(1) **Fluorescent Lamp Ballasts Except Deep-Dimming Fluorescent Lamp Ballasts.** The test method for fluorescent lamp ballasts is 10 C.F.R. section 430.23(q) (Appendix Q to subpart B of part 430) (January 19, 2025).

(2) **Deep-Dimming Fluorescent Lamp Ballasts.** Deep-dimming fluorescent lamp ballasts shall be tested using 10 C.F.R. Section 430.23(q) (Appendix Q to subpart B of part 430) (January 19, 2025) (referred to as the "federal test method" in the following subsections), modified as follows:

…[skipping the rest of (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) (January 19, 2025).

(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) (August 1, 2025).

(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) (August 1, 2025). For certification, compliance, and enforcement purposes, the sampling provisions in 10 C.F.R. section 429.56 (August 1, 2025) 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)(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 (August 1, 2025) shall be used.

…[skipping the rest of (k)(4)]

(5) 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) (August 1, 2025).

(l) Emergency Lighting.

Emergency Lighting. The test method for illuminated exit signs is 10 C.F.R. section 431.204(b) (January 19, 2025).

(m) Traffic Signal Modules.

Traffic Signal Modules. The test method for traffic signal modules for vehicle or pedestrian control is 10 C.F.R. section 431.224 (January 19, 2025).

…[skipping (n)]

(o) Dishwashers.

The test method for dishwashers is 10 C.F.R. section 430.23(c) (Appendix C1 to subpart B of part 430) (January 19, 2025).

(p) Clothes Washers.

(1) **Clothes Washers That Are Consumer Products.** Manufacturers must use the results of testing under the test method for clothes washers that are consumer products on or after July 1, 2022, using either 10 C.F.R. section 430.23(j) (Appendix J to subpart B of part 430) (August 1, 2025) or 10 C.F.R section 430.23(j) (Appendix J2 to subpart B of part 430) (August 1, 2025), as appropriate under federal law.

(2) **Commercial Clothes Washers.** The test method for commercial clothes washers is 10 C.F.R. section 431.154 (January 19, 2025).

(q) Clothes Dryers.

The test methods for clothes dryers are 10 C.F.R. section 430.23(d) (Appendix D1 or Appendix D2 to subpart B of part 430) (August 1, 2025). Manufacturers must use a single appendix for all representations, including certifications of compliance, and may not use appendix D1 for certain representations and appendix D2 for other representations.

(r) Cooking Products and Food Service Equipment.

The test methods for cooking products and food service equipment are shown in Table R-1.

Table R-1
Cooking Product and Food Service Equipment Test Methods

Appliance	***Test Method***
Microwave ovens	10 C.F.R. section 430.23(i) (Appendix I to subpart B of part 430) (January 19, 2025)
Conventional cooktops and combined cooking products	10 C.F.R. section 430.23(i) (Appendix I1 to subpart B of part 430) (January 19, 2025)
Commercial hot food holding cabinets	ANSI/ASTM F2140-01 (Test for idle energy rate-dry test) and US EPA's Energy Star Guidelines, "Measuring Interior Volume" (Test for interior volume)
Commercial convection ovens	ANSI/ASTM F1496-99 (Test for energy input rate and idle energy consumption only)
Commercial range tops	ANSI/ASTM F1521-96 (Test for cooking energy efficiency only)

(s) Electric Motors and Compressors.

(1) **Electric Motors, Except Small Electric Motors.** The test methods for electric motors are 10 C.F.R. sections 431.15 (January 19, 2025), 431.16 (January 19, 2025), and

431.18 (January 19, 2025), including but not limited to provisions on testing laboratories, recognition of accreditation bodies, and recognition of certification programs.

(2) **Small Electric Motors.** The test methods for small electric motors are 10 C.F.R. sections 431.443 (January 19, 2025), 431.444 (January 19, 2025) and 431.445 (January 19, 2025), including but not limited to provisions on alternative efficiency determination method (AEDM) and additional testing requirements concerning selection of models to be tested if an AEDM is to be applied.

(3) **Compressors.** The test method for compressors is 10 C.F.R. section 431.344 (Appendix A to Subpart T of 10 C.F.R., § 431) (August 1, 2025), including but not limited to provisions on alternative efficiency determination method (AEDM) and additional testing requirements concerning selection of models to be tested if an AEDM is to be applied, in 10 C.F.R. section 429.63 (January 19, 2025) and 10 C.F.R. section 429.70 (August 1, 2025).

(t) Distribution Transformers.

The test method for distribution transformers is 10 C.F.R. section 431.193 (Appendix A of subpart K) (August 1, 2025).

(u) External Power Supplies.

(1) The test method for federally regulated direct operation external power supplies and federally regulated indirect operation Class A external power supplies is 10 C.F.R. section 430.23(bb) (Appendix Z to subpart B of part 430) (January 19, 2025).

(2) The test method for state-regulated external power supplies is US EPA "Test Method for Calculating the Energy Efficiency of Single-Voltage External AC-DC and AC-AC Power Supplies" dated August 11, 2004, except that the test voltage specified in Section 4(d) of the test method shall be only 115 volts, 60 Hz.

(v) Computers, Computer Monitors, Televisions, Signage Displays, and Consumer Audio and Video Equipment.

(1) **Consumer Audio and Video Equipment.** The test method for standby-passive mode consumer audio and video equipment is International Electrotechnical Commission (IEC) 62087:2002(E) – "Methods of Measurement for the Power Consumption of Audio, Video, and Related Equipment."

(2) **Televisions and Signage Displays.**

(A) The test method for televisions manufactured on or after April 24, 2014, and prior to September 11, 2023, is 10 C.F.R. section 430.23(h) (Appendix H to subpart B of part 430) as it appeared in 10 C.F.R. section 430 edition revised as of January 1, 2023.

(B) The test method for televisions within the scope of 10 C.F.R. section 430 and manufactured on or after September 11, 2023, is 10 C.F.R. section 430.23(h) (Appendix H to subpart B of part 430) (January 19, 2025).

(C) The test method for signage displays or televisions outside the scope of 10 C.F.R. section 430, and manufactured on or after April 24, 2014, is 10 C.F.R. section 430.23(h) (Appendix H to subpart B of part 430) as it appeared in 10 C.F.R. section 430 edition revised as of January 1, 2023.

…[skipping the rest of (v)]

(w) Battery Chargers and Battery Charger Systems.

(1) **Test Method for Federally Regulated Battery Chargers and Federally Regulated Uninterruptible Power Supplies.** Manufacturers must use the results of testing under the test method for federally regulated battery chargers and federally regulated uninterruptible power supplies, using either 10 C.F.R. section 430.23(aa) (Appendix Y to subpart B of part 430) (August 1, 2025) or 10 C.F.R section 430.23(aa) (Appendix Y1 to subpart B of part 430) (January 19, 2025), as appropriate under federal law.

(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).

(A) Multi-port battery charger systems shall be tested for 24-hour efficiency and maintenance mode with a battery in each port.

(B) For single port small battery charger systems, the highest 24-hour charge and maintenance energy, maintenance mode, and no battery mode results of the test procedure shall be used for purposes of reporting and determining compliance with section 1605.3(w)(2), Table W-4 of this Article.

(C) For purposes of computing the small battery charger system standard, the number of ports included in a multi-port charger system shall be equal to the number ports that are separately controlled. For example, a multi-port charger system that charges eight batteries by using two charge controllers that charge four batteries in parallel would use two for “N” as described in section 1605.3(w)(2), Table W-4 of this Article.

(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 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.

(3) **Test Method for Battery Backups and Non-Federally Regulated Uninterruptible Power Supplies.** The test method for battery backups and 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, 2016).

…[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

All C.F.R. documents listed below are the January 19, 2025, versions, unless otherwise stated:

C.F.R., Title 10, sections 429.12, 429.16 (August 1, 2025), 429.56 (August 1, 2025), 429.63, 429.69, and 429.70 (August 1, 2025)
C.F.R., Title 10, section 430.23 (August 1, 2025), and 10 C.F.R. Appendixes A, B, C1, D1 (August 1, 2025), D2 (August 1, 2025), E (August 1, 2025), F, H, H (January 1, 2023), I, I1, J (August 1, 2025), J2 (August 1, 2025), M (August 1, 2025), M1 (August 1, 2025), N, O, P, Q, R, S, T, U, V, W (August 1, 2025), X, S1, Y (August 1, 2025), Y (January 1, 2016), Y (January 1, 2017), Y1, Z, AA, BB (August 1, 2025), CC, and DD (August 1, 2025) of subpart B of part 430
C.F.R., Title 10, sections 431.15, 431.16, 431.17, 431.18, 431.19, 431.20, and 431.21
C.F.R., Title 10, sections 431.63 and 431.64
C.F.R., Title 10, sections 431.75 and 431.76
C.F.R., Title 10, sections 431.85 and 431.86
C.F.R., Title 10, sections 431.95 and 431.96
C.F.R., Title 10, sections 431.105 and 431.106
C.F.R., Title 10, sections 431.133 and 431.134
C.F.R., Title 10, section 431.154
C.F.R., Title 10, section 431.174, Appendix A to Subpart J of 10 C.F.R., § 431
C.F.R., Title 10, section 431.193
C.F.R., Title 10, section 431.204(b)
C.F.R., Title 10, section 431.224
C.F.R., Title 10, sections 431.263 and 431.264
C.F.R., Title 10, sections 431.293 and 431.294
C.F.R., Title 10, sections 431.303 and 431.304
C.F.R., Title 10, section 431.344, Appendix A to Subpart T of 10 C.F.R., § 431 (August 1, 2025)
C.F.R., Title 10, sections 431.443, 431.444, and 431.445
C.F.R., Title 10, section 431.464(a) Appendix A to Subpart Y of 10 C.F.R., § 431 (August 1, 2025)
C.F.R., Title 10, section 431.464(b), Appendix C to Subpart Y of 10 C.F.R., § 431
C.F.R., Title 10, section 431 subpart G

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…[skipping the rest of section 1604]

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) and 25960, Public Resources Code; and Section 16, Governor’s Exec. Order No. B-29-15 (April 1, 2015).

…[skipping section 1605]

Section 1605.1. Federal and State Standards for Federally Regulated Appliances.

…[skipping (a) through (n)]

(o) Dishwashers.

The maximum energy use and maximum water use of dishwashers that are consumer products manufactured on or after the effective dates shown shall meet the applicable values shown in Table O-1 and Table O-2.

Table O-1
Standards for Dishwashers Manufactured on or After May 30, 2013, but Before April 23, 2027

Appliance	*Effective May 30, 2013*	
	Maximum Energy Use (kWh/year)	*Maximum Water Use (gallons/cycle)*
Compact dishwashers	222	3.5
Standard dishwashers	307	5.0

Table O-2
Standards for Dishwashers Manufactured on or After April 23, 2027

Dishwasher Product Class	*Maximum Annual Energy Use (kWh/year)*	*Maximum Water Use (gallons/cycle)*
Standard-size[1] (≥ 8 place settings plus 6 serving pieces)[2]	223	3.3
Compact-size (< 8 place settings plus 6 serving pieces)[2]	174	3.1

[1] The energy conservation standards in this table do not apply to standard-size dishwashers with a cycle time for the normal cycle of 60 minutes or less.
[2] Place settings and the test load are as specified in the dishwasher testing requirements shown in section 1604(o) of this Article.

(p) Clothes Washers.

(1) **Standards for Residential Clothes Washers.** Clothes washers that are consumer products manufactured on or after the effective dates shown shall meet the ~~have an integrated modified energy factor not less than, and an integrated water factor not greater than the~~ applicable values shown in Table P-1 and Table P-2.

Table P-1
Standards for Residential Clothes Washers Manufactured ~~On~~ on or After ~~March 7, 2015~~ January 1, 2018, but Before March 1, 2028

Appliance	*Minimum Integrated Modified Energy Factor*		*Maximum Integrated Water Factor*	
	~~March 7, 2015~~	*January 1, 2018*	*~~March 7, 2015~~*	*January 1, 2018*
Top-loading, Compact	~~0.86~~	1.15	~~14.4~~	12.0
Top-loading, Standard	~~1.29~~	1.57	~~8.4~~	6.5
Front-loading, Compact	~~1.13~~	1.13	~~8.3~~	8.3
Front-loading, Standard	~~1.84~~	1.84	~~4.7~~	4.7

Table P-2
Standards for Residential Clothes Washers Manufactured On or After March 1, 2028

Product Class	***Minimum Energy Efficiency Ratio (lb/kWh/cycle)***	***Minimum Water Efficiency Ratio (lb/gal/cycle)***
Automatic Top-Loading Ultra-Compact (less than 1.6 ft^3 capacity)	3.79	0.29
Automatic Top-Loading Standard-Size (1.6 ft^3 or greater capacity)[1]	4.27	0.57
Automatic Front-Loading Compact (less than 3.0 ft^3 capacity) [2]	5.02	0.71
Automatic Front-Loading Standard-Size (3.0 ft^3 or greater capacity) [3]	5.52	0.77
Semi-Automatic Clothes Washers	2.12	0.27

[1] The standards in this table do not apply to top-loading standard-size clothes washers with an average cycle time less than 30 minutes.

[2] The standards in this table do not apply to front-loading clothes washers with a capacity greater than or equal to 1.6 ft^3 and less than 3.0 ft^3 with an average cycle time of less than 45 minutes.

[3] The standards in this table do not apply to front-loading standard-size clothes washers with an average cycle time less than 45 minutes.

(2) **Commercial Clothes Washers.** Commercial clothes washers manufactured on or after the effective dates shown shall have a modified energy factor not less than, and a water factor not greater than, the applicable values shown in Table ~~P-2~~ P-3.

Table ~~P-2~~ P-3
Standards for Commercial Clothes Washers

Appliance	***Minimum Modified Energy Factor***	***Maximum Water Factor***
	Effective January 8, 2013	***Effective January 8, 2013***
Top-loading clothes washers	1.60	8.5
Front-loading clothes washers	2.00	5.5
	Modified Energy Factor (MEF) ft^3/kWh/cycle	***Integrated Water Factor (IWF) gal./ft^3/cycle***
	Effective January 1, 2018	***Effective January 1, 2018***
Top-loading clothes washers	1.35	8.8
Front-loading clothes washers	2.00	4.1

…[skipping (q)]

(r) Cooking Products and Food Service Equipment.

(1) **Energy Design Standard for Gas Cooking Products.**

(A) **Gas Cooking Products Equipped with an Electrical Supply Cord.** Gas cooking products that are consumer products and that are equipped with an electrical supply cord shall not be equipped with a constant burning pilot light.

(B) **Gas Cooking Products Not Equipped with an Electrical Supply Cord.** Gas cooking products that are consumer products manufactured on or after April 9, 2012 and that are not equipped with an electrical supply cord shall not be equipped with a constant burning pilot light.

(2) **Microwave Ovens ~~Manufactured On or After June 17, 2016~~.**

Microwave-only ovens, countertop convection microwave ovens, built-in microwave ovens, and over-the-range convection microwave ovens manufactured on or after the effective dates shown ~~June 17, 2016~~ shall not exceed the average standby power rating (watts) shown in Table R-2 and Table R-3.

Table R-2
Standards for Microwave Ovens Manufactured ~~On~~ on or After June 17, 2016, but Before June 22, 2026

Appliance	***Maximum Standby Power (Watts)***
Microwave-only oven	1.0
Countertop convection microwave oven	1.0
Built-in microwave oven	2.2
Over-the-range convection microwave oven	2.2

Table R-3
Standards for Microwave Ovens Manufactured On or After June 22, 2026

Appliance	***Maximum Standby Power (Watts)***
Microwave-only oven	0.6
Countertop convection microwave oven	0.6
Built-in microwave oven	1.0
Over-the-range convection microwave oven	1.0

…[skipping the rest of (r)]

…[skipping the rest of section 1605.1]

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) and 25960, Public Resources Code; and Section 16, Governor's Exec. Order No. B-29-15 (April 1, 2015).

…[skipping sections 1605.2 through 1609]