

DOCKETED	
Docket Number:	23-FDAS-01
Project Title:	Pool Controls Rulemaking
TN #:	254739
Document Title:	Notice of Approval of the Regulatory Action by the Office of Administrative Law
Description:	The document contains the notice of approval, the final form 400 and the final approved regulatory language of regulatory action for pool controls, OAL Matter Number 2024-0105-01.
Filer:	Nicholaus Struven
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	2/29/2024 11:16:19 AM
Docketed Date:	2/29/2024

**State of California
Office of Administrative Law**

In re:
California Energy Commission

Regulatory Action:

Title 20, California Code of Regulations

Adopt sections: 1690, 1690.1, 1691, 1692,
1693, 1694, 1695, 1696,
1697

Amend sections:

Repeal sections:

**NOTICE OF APPROVAL OF REGULATORY
ACTION**

Government Code Section 11349.3

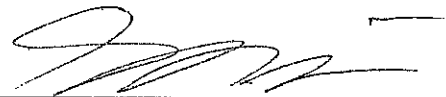
OAL Matter Number: 2024-0105-01

OAL Matter Type: Regular (S)

In this rulemaking action, the California Energy Commission (CEC) adopts new regulations governing Flexible Demand Appliance Standards. CEC adopts definitions, requirements, and enforcement provisions applicable to Flexible Demand Appliances generally and adopts definitions, requirements, and standards specific to flexible demand pool controls.

OAL approves this regulatory action pursuant to section 11349.3 of the Government Code. Sections 1690, 1690.1, 1691, 1692, 1694, 1695, 1696, and 1697 of this regulatory action become effective on 4/1/2024. Section 1693 of this regulatory action becomes effective on September 29, 2025.

Date: February 20, 2024



**Sam Micon
Attorney**

For: Kenneth J. Pogue
Director

Original: Drew Bohan, Executive Director
Copy: Corrine Fishman

REGULAR

(See instructions on reverse)

For use by Secretary of State only

STD. 400 (REV. 10/2019)

OAL FILE NUMBERS

NOTICE FILE NUMBER

Z-2023-0214-03

REGULATORY ACTION NUMBER

2024-0105-015

EMERGENCY NUMBER

For use by Office of Administrative Law (OAL) only

OFFICE OF ADMINISTRATIVE LAW
Electronic Submission
RECEIVED DATE 02/14/2023
PUBLICATION DATE 02/24/2023

OFFICE OF ADMIN. LAW
2024 JAN 5 PM 12:54

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

FEB 20 2024

TK
1:55 PM

NOTICE

REGULATIONS

AGENCY WITH RULEMAKING AUTHORITY
California Energy Commission

AGENCY FILE NUMBER (if any)
23-FDAS-01

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

1. SUBJECT OF NOTICE: Flexible Demand Appliances Standards
TITLE(S): 20
FIRST SECTION AFFECTED: 1690
2. REQUESTED PUBLICATION DATE: February 24, 2023
3. NOTICE TYPE: [X] Notice re Proposed Regulatory Action
4. AGENCY CONTACT PERSON: Corrine Fishman
TELEPHONE NUMBER: (916) 805-7452
OAL USE ONLY: [X] Approved as Submitted
NOTICE REGISTER NUMBER: 2023 8-2
PUBLICATION DATE: 2/24/23

B. SUBMISSION OF REGULATIONS (Complete when submitting regulations)

1a. SUBJECT OF REGULATION(S): Flexible Demand Appliance Standards for Pool Controls
1b. ALL PREVIOUS RELATED OAL REGULATORY ACTION NUMBER(S):

2. SPECIFY CALIFORNIA CODE OF REGULATIONS TITLE(S) AND SECTION(S)
SECTION(S) AFFECTED: Chapter 4.1, Article 1, Sections 1690, 1690.1, 1691, 1692, 1693, 1694, 1695, 1696 and 1697
TITLE(S): 20

3. TYPE OF FILING
[X] 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.
[] Emergency Readopt (Gov. Code, §11346.1(h))
[] Changes Without Regulatory Effect (Cal. Code Regs., title 1, §100)
[] File & Print
[] Print Only
[] 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)
June 23 through July 10, 2023, September 1 through September 18, 2023

5. EFFECTIVE DATE OF CHANGES (Gov. Code, §§ 11343.4, 11346.1(d); Cal. Code Regs., title 1, §100)
[X] 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, Regulations manager
TELEPHONE NUMBER: 916-805-7452
FAX NUMBER (Optional):
E-MAIL ADDRESS (Optional): corrine.fishman@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: Drew Bohan, Executive Director
DATE: 11/8/23

For use by Office of Administrative Law (OAL) only

ENDORSED APPROVED

FEB 20 2024

Office of Administrative Law

Final Regulatory Language

Title 20. Public Utilities and Energy
Division 2. State Energy Resources Conservation and Development Commission
New Chapter 4.1. Flexible Demand
New Article 1. Flexible Demand Appliance Standards
New Sections 1690, 1691, 1692, 1693, 1694, 1695, 1696, and 1697

Adopt Chapter 4.1, Article 1, and the following new sections 1690, 1691, 1692, 1693, 1694, 1695, 1696, and 1697 into Title 20, California Code of Regulations.

Section 1690. Scope.

(a) This Article applies to the following types of new appliances sold or offered for sale, rented, imported, distributed, or leased for use in California regardless of the physical location of the seller and includes, without limitation transactions conducted over telephone or the internet. Unless otherwise specified, each provision applies only to units manufactured on or after the effective date of the provision.

(1) Pool controls that are consumer products designed to use single-phase AC power as input power.

Note:

Authority cited: Sections 25213, 25218, 25402(f) and 25402.11, Public Resources Code.

Reference: Sections 25216.5(d), 25402(f) and 25402.11, Public Resources Code.

Section 1690.1. Rules of Construction

(a) The following rules of construction apply to this Article:

1. Where the context requires, the singular includes the plural and the plural includes the singular.
2. The use of "and" in a conjunctive provision means that all elements in the provision must be complied with or must exist in order to make the provision applicable. "Or" (rather than "and/or") is used where compliance with one or more elements suffices, or where the existence of one or more elements makes the provision applicable.
3. "Shall" is mandatory and "may" is permissive.

Note:

Authority cited: Sections 25213, 25218, 25402(f) and 25402.11, Public Resources Code.

Reference: Sections 25216.5(d), 25402(f) and 25402.11, Public Resources Code.

Section 1691. Definitions.

In this Article the following definitions apply.

(a) General Definitions.

(1) "Accessible place" means a place on an appliance that can be easily seen without the need for tools to remove any covering.

(2) "Authorized entities" means the owner of the equipment, the user of the equipment, or the owner's or user's delegated agent.

(3) "Authentication" means a method of verifying the authority of a user, process, or device to access resources in a connected device.

(4) "Basic model" means all units of a given type of appliance (or class thereof) that are manufactured by the same manufacturer or manufacturers, have the same primary energy source, and have the same electrical, physical, or functional characteristics that affect compliance with a flexible demand standard.

(5) "Communication layers" mean the organization of communication into separate functional components that interact in a sequential and hierarchical way.

(6) "Communication link" means the mechanism for bidirectional data transfers between the connected device and one or more external applications, devices, or systems.

(7) "Connected device" means any device that can wirelessly communicate via open standards with entities outside the device by means of integrated or separate communications hardware or software. A device that is able to receive but not send communication is not a connected device.

(8) "Connected ready device" means a device that is designed to perform as a connected device by means of separate communications hardware or software, where any separate hardware or software needed for communication is not included with the device and must be purchased or acquired separately. For the purpose of this Article a device that includes all communications hardware and software needed to perform as a connected device is not considered connected ready; a device including all hardware and software needed for connectivity is a connected device, even if the included hardware or software is separable or requires installation. See also "connected device".

(9) "Consent" means permission or agreement to use the capabilities of an appliance subject to this Article to schedule, shift, or curtail its use. Consent may be express or implied.

(10) "Consumer" means the end user of an appliance; a consumer may also be a customer of an electric utility. See also "customer".

(11) "Consumer product" means any appliance or device that consumes energy, controls the energy consumption of another device or appliance, or charges a battery and is distributed in commerce for personal use by individuals.

(12) "Customer" means a purchaser of service from an electric utility; a customer may also be the consumer of an appliance. See also "consumer".

(13) "Energy Commission" means the State Energy Resources Conservation and Development Commission.

(14) "Executive Director" means the executive director of the Energy Commission or their designee.

(15) "FAD" means the Flexible Appliance Database established pursuant to section 1695(c) of this Article and maintained by the Energy Commission.

(16) "Flexible demand" means the capability to schedule, shift, or curtail the electrical demand of a load-serving entity's customer through direct action by the customer or through action by a third party, a load-serving entity, or a grid balancing authority, with the customer's consent.

(17) "Load-serving entity" means an electrical corporation as defined in Section 218 of the Public Utilities Code, an electric service provider as defined in Section 218.3 of the Public Utilities Code, or a community choice aggregator as defined in Section 331.1 of the Public Utilities Code. "Load-serving entity" does not include any of the following:

(A) A local publicly owned electric utility;

(B) The State Water Resources Development System commonly known as the State Water Project; or

(C) Customer generation located on the customer's site or providing electric service through arrangements authorized by Public Utilities Code section 218, if the customer generation, or the load it serves, meets one of the following criteria:

1. It takes standby service from the electrical corporation on a California Public Utilities Commission-approved rate schedule that provides for adequate backup planning and operating reserves for the standby customer class;

2. It is not physically interconnected to the electrical transmission or distribution grid, so that, if the customer generation fails, backup electricity is not supplied from the electrical grid; or
3. There is physical assurance that the load served by the customer generation will be curtailed concurrently and commensurately with an outage of the customer generation.

(18) "Local publicly owned electric utility" has the meaning specified in Section 224.3 of the California Public Utilities Code.

(19) "Logical" means accessible through a hardware or software interface.

(20) "Manufacturer" means any person engaged in the production or assembly of an appliance or commercial and industrial equipment, or any person that has responsibility for the production or assembly of an appliance, including but not limited to private brand packagers and re-assemblers.

(21) "Model" means any collection of appliance units to which the manufacturer has assigned the same model number.

(22) "Model number" means a combination of letters, digits, or characters representing the manufacturer, brand, design, or performance of an appliance.

(23) "Open standards" means standards adopted or published, individually or jointly, by one or more of the following organizations: the National Institute of Standards and Technology (NIST), American National Standards Institute (ANSI), International Organization for Standardization (ISO), International Electrotechnical Commission (IEC), International Telecommunication Union (ITU), Institute of Electrical and Electronics Engineers (IEEE), or Internet Engineering Task Force (IETF).

(24) "Personal information" has the meaning specified in California Civil Code Section 1798.140(v).

(25) "Security feature" means a collection of functions used to protect the connected device from unauthorized use or unauthorized disclosure of data.

(26) "Sold or offered for sale in California" means any sale of or offer to sell an appliance for end use in the state, regardless of the seller's physical location, and includes, without limitation, internet, telephone, and mail order transactions. For purposes of this Article, the Uniform Commercial Code--Sales (Division 2 (commencing with Section 2101) of the Commercial Code) does not define "sold or offered for sale" or determine where sales or offers for sale occur.

(27) "Special character" means any non-alphanumeric character that can be rendered on a standard, American-English keyboard, and includes the following ASCII special characters: !"#\$%&'()*+,-./:;<=>?@\|^`{}~

(b) Pool Control Definitions.

(1) "Dedicated-purpose pool pump motor" has the meaning specified in 10 CFR 431 Subpart Z (2021).

(2) "Direct load control switch" means a switch device that is designed, marketed, or sold to start or stop the operation of pool filter pumps or electric pool heaters.

(3) "Electric pool heater" means an appliance designed for heating non-potable water contained at atmospheric pressure, including heating water in swimming pools, spas, hot tubs, and similar applications. The heat source is electricity.

(4) "Heater switch" means a switch device that is designed, marketed, or sold to start or stop the operation of electric pool heaters.

(5) "Pool equipment" means electrical appliances used to provide services or features to pools.

(6) "Pool control" means equipment with the capability to start, stop, or otherwise control the operation of a pool filter pump and includes, but is not limited to, a pool timer, pool pump switch, heater switch, direct load control switch, or any component or group of components, including software, that has the capability to schedule the operation or control the start or stop times of a pool filter pump. Pool controls may control other pool equipment in addition to a pool filter pump.

(A). Pool control excludes:

1. controls marketed exclusively for use as a control for pool filter pumps with a rated hydraulic horsepower (hhp) greater than 2.5 hhp; or

2. safety interlock or shutoff controls; or

3. controls integral to a single pool filter pump or pump motor that are capable of controlling only that pump or motor.

(7) "Pool filter pump" means a product using a dedicated purpose pool pump motor or other type of end suction pump motor for the purpose of circulating pool water through a filter or strainer.

(8) "Pressure cleaner booster pump" means an end suction dry rotor pump designed and marketed for pressure-side pool cleaner applications.

(9) "Pool pump switch" means a switch device that is designed, marketed, or sold to start or stop the operation of a pool filter pump.

(10) "Pool timer" means a device that is designed, marketed, or sold to start or stop the operation of pool filter pumps or electric pool heaters.

The following documents are incorporated by reference in section 1691:

<u>Number</u>	<u>Title</u>
<u>FEDERAL STATUES AND REGULATIONS</u>	
<u>Code of Federal Regulations Title 10, Part 431, Subpart Z (2021)</u>	<u>Energy Efficiency Program for Certain Commercial and Industrial Equipment Subpart Z—Dedicated-Purpose Pool Pump Motors</u>
<u>Copies available from:</u>	<u>SUPERINTENDENT OF DOCUMENTS</u>
	<u>U.S. GOVERNMENT PRINTING OFFICE</u>
	<u>WASHINGTON, DC 20402</u>
	<u>www.ecfr.gov</u>

Note:

Authority cited: Sections 25213, 25218, 25402(f) and 25402.11, Public Resources Code.

Reference: Sections 25216.5(d), 25402(f) and 25402.11, Public Resources Code.

Section 1692. General Requirements.

(a) Testing. If section 1693 of this Article requires that a specific appliance type be tested, then the manufacturer shall cause the testing of units of each basic model of appliance within the scope of this Article and comply with the applicable provisions of this section.

(1) The testing shall be at a laboratory that:

(A) has conducted tests using the applicable test method within the previous 12 months;

(B) agrees to and does interpret and apply the applicable test method set forth in section 1693 of this Article precisely as written;

(C) has, and keeps properly calibrated and maintained, all equipment, material, and facilities necessary to apply the applicable test method precisely as written;

(D) agrees to and does maintain copies of all test reports, and provides any such report to the Executive Director on request, for all basic models that are still in commercial production; and

(E) agrees to and does allow the Executive Director to witness any test of such an appliance on request, up to once per calendar year for each basic model.

(b) Marking. The following information shall be permanently, legibly, and conspicuously displayed on an accessible place on each unit of every appliance within the scope of this Article.

(1) manufacturer's name or brand name or trademark;

(2) model number; and

(3) date of manufacture, indicating (i) year and (ii) month or smaller (e.g., week) increment.

If the date is in a code, the manufacturer shall immediately, on request, provide the code to the Energy Commission.

(c) Cybersecurity. Where applicable, appliances subject to this Article shall meet or exceed the requirements of state laws relating to reliability and cybersecurity, and shall comply, at a minimum, with the following North American Electric Reliability Corporation's (NERC) Critical Infrastructure Protection standards:

(1) Device Identification. The manufacturer shall assign a unique logical identifier to the connected device.

(A) The device identification shall be in a logical location accessible to authorized entities.

(2) Device Configuration. The configuration of the connected device's software shall be changed by authorized entities only.

(A) The connected device shall include the capability to allow the authorized entities to restore the device's default settings.

(3) Data Protection. The connected device shall provide customer or consumer data protection for any and all collected personal information, consistent with state and federal law.

(A) The connected device shall not collect categories of personal information unrelated to or not necessary for the function of the device, nor shall the connected device transmit or use personal information collected for purposes other than for the function of the device.

(4) Authentication. The connected device shall contain a security feature that requires a user to generate a new means of authentication before access is

granted to the device for the first time, and if a plain text-based password is used it shall support the use of passwords meeting the password strength requirements listed below:

- (A) The device shall support passwords of six characters or longer.
- (B) The device shall support passwords that consist of a combination of alpha, numeric, and special characters.

(5) Software Update. The manufacturer shall have an update policy that informs the customer or the consumer how the manufacturer will support software updates and informs the customer or the consumer that the device is capable of being updated whenever new vulnerabilities are discovered.

(A) Connected devices shall provide the customer or the consumer with the ability to check for updates from the manufacturer's update service and to download, verify, and apply any available patches.

(B) The manufacturer shall provide an estimated security expiration date or end of life policy that informs the customer or the consumer when the manufacturer will be discontinuing device support.

(6) Restart Settings. Upon device restart, the device shall automatically restore the most recently programmed settings, including reconnection to a network.

(7) Automatic Rejoin. When physical or logical communication is lost, the connected device shall automatically attempt to rejoin the physical or logical communication.

(8) Override Function. The connected device shall allow the customer or the consumer to change the event responses and event response settings at any time.

(d) See section 1693 of this Article for additional requirements for specific appliances.

Note:

Authority cited: Sections 25213, 25218, 25402(f) and 25402.11, Public Resources Code.

Reference: Sections 25216.5(d), 25402(f) and 25402.11, Public Resources Code.

Section 1693. Appliance Specific Standards and Requirements.

(a) Every unit of every appliance within the scope of this Article shall comply with the applicable provisions of this section.

(b) Pool controls.

(1) Effective date. The standards for pool controls shall be effective with respect to products manufactured on or after September 29, 2025.

(2) Flexible demand appliance standards.

(A) Communication Requirements.

1. Pool controls shall be connected devices.

(B) Clock Requirements.

1. Pool controls shall have the following capabilities:

a. in the event of a loss of power, the system settings, including operating schedules, and local clock, shall be retained for at least 72 hours; and

b. pool controls shall have the ability to automatically and continuously synchronize their system clock to the local time.

2. Pool controls shall provide local manual control of the pool filter pump start and stop operations, and the start and stop operations of any controlled electric pool heaters or pressure cleaner booster pumps that rely on the circulation provided by the pool filter pump for their operation.

3. Pool controls shall support setup, selection, and update of its operating schedule via a user interface.

a. The user interface may be located on a separate device able to communicate with the pool control via a wireless communications format.

(C) Default Operating Schedule.

1. Pool controls shall be preprogrammed with a preconfigured or default operating schedule that shall:

a. start no earlier than 9 a.m. local time and finish no later than 3 p.m. local time for the following operations:

(i) any automatic operation of the pool filter pump at more than 50 percent of the maximum operating speed of the pool filter pump,

(ii) any operation of the pressure cleaner booster pump, and

(iii) any operation of the electric pool heater; and

b. not automatically operate the pool filter pump, pressure cleaner booster pump, or electric pool heater between 4 p.m. local time and 9 p.m. local time.

- (3) Testing. There are no testing requirements for pool controls.
- (4) Marking. The general marking requirements shown in section 1692(b) of this Article shall be met. There are no additional marking requirements specific to pool controls.
- (5) Cybersecurity. The general cybersecurity standards in section 1692(c) of this Article shall be met. There are no additional cybersecurity standards specific to pool controls.
- (6) Communication.
- (A) Manufacturers of pool controls subject to the standards stated in section 1693 shall comply with section 1694.
- (B) Pool controls shall communicate with entities outside the device using open standards for all communication layers for the customer and consumer consent functions listed in section 1694.
- (C) Pool controls shall be capable of communicating their current operating status, at a minimum meaning whether the device is operating or not operating the pool filter pump, and their stored schedule.
- (D) Pool controls that are capable of communicating additional information, including but not limited to real-time power draw, shall do so only to authorized entities and only with customer or consumer consent.

Note:

Authority cited: Sections 25213, 25218, 25402(f) and 25402.11, Public Resources Code.

Reference: Sections 25216.5(d), 25402(f) and 25402.11, Public Resources Code.

Section 1694. Customer and Consumer Consent.

- (a) Manufacturers of appliances that are connected devices subject to this Article or of components that enable connectivity in connected ready devices subject to this Article shall provide mechanisms for obtaining consent that maximizes use of the appliances' flexible demand capabilities. These mechanisms shall include, but need not be limited to, the following:
- (1) providing notifications with the device's packaging materials that describe its flexible demand capabilities, including, where applicable, that the device includes features that allow energy providers or other entities to control the device's flexible demand capabilities with the customer's or consumer's consent.
- (2) providing information on the manufacturer's website of the device's flexible demand capabilities.

(3) providing electronic consent functions, opt-in, or opt-out features for flexible demand capabilities required by this Article.

(4) obtaining consent prior to the collection of customer or consumer data.

(5) providing information on the manufacturer's website describing the acceptable use policies of data collected by the device.

(b) Appliances that are connected devices and are subject to this Article shall be capable of receiving, acting upon, and responding to authorized remote requests via a communication link, that schedule, shift, or curtail appliance operations with customer or consumer consent. At a minimum, the appliance shall be capable of acting upon and responding to authorized signals received via a communication link requesting:

(1) the start or stop of operation; and

(2) changes to equipment operation or schedule.

Note:

Authority cited: Sections 25213, 25218, 25402(f) and 25402.11, Public Resources Code.

Reference: Sections 25216.5(d), 25402(f) and 25402.11, Public Resources Code.

Section 1695. Certification Requirements.

(a) Filing of Statements.

(1) Each manufacturer shall electronically file with the Executive Director through the Flexible Appliance Database (FAD) a statement for each appliance that is sold or offered for sale in California.

(2) The manufacturer statement shall contain the following information:

(A) each statement shall be a single and complete line of data for a specific model and end-use, containing all the data required in section 1696 of this Article for that appliance type.

(B) Asterisks in Model Numbers. In filing any statement, the manufacturer may use asterisks as a substitute for letters, numbers, blanks, or other characters in the model number, provided that an asterisk:

1. shall be used only for a part of the model number that does not indicate flexible demand appliance design or performance;

2. shall represent a single letter, number, blank, or other character at the asterisk's location in the model number; and

3. shall not be used for any of the first four letters, numbers, blanks, or other characters in the model number.

(C) the name, address, telephone number, e-mail address, and, if available, fax number and URL (web site) address of the manufacturer; provided, however, that if a parent entity is filing on behalf of a subsidiary entity, if a subsidiary entity is filing on behalf of a parent entity, or if an affiliate entity is filing on behalf of an affiliate entity, then each entity shall be clearly identified, and the information shall be provided for both entities.

(D) the name, address, telephone number, e-mail address, and, if available, fax number of the individual to contact concerning the statement pursuant to section 1695(a)(2)(H) of this Article.

(E) the name, address, telephone number, e-mail address, and, if available, fax number of the person signing the declaration pursuant to section 1695(a)(2)(H) of this Article.

(F) the name and address and, if available, telephone number, fax number, URL (web site) address, and e-mail address of the laboratory or other institution where the testing required by section 1692 of this Article was performed.

(G) the statement shall include testing and performance information required for that appliance as listed in section 1696 of this Article.

(H) each statement shall include a declaration, executed under penalty of perjury of the laws of California, that:

1. all the information provided in the statement is true, complete, accurate, and in compliance with all applicable provisions of this Article;

2. the requirements of section 1695(a)(2) of this Article have been and are being complied with;

3. for appliances for which there is a flexible demand appliance standard in section 1693 of this Article, that the appliance complies with the applicable standards in this Article;

4. the appliance was tested under the applicable test method specified in section 1693 of this Article. If section 1693 of this Article provides more than one test method that may be used, the manufacturer shall identify which method was used; and

5. all units of the appliance are marked as required by section 1693 of this Article.

(I) identifiers, when referenced in relation to section 1696 of this Article for data submittal requirements, means those fields shown in section 1696 of

this Article for each specific appliance type that, when taken in combination for a specific model of a specific appliance type, represent the criteria for designating a model. At a minimum, each specific appliance type's model "identifiers" will include (a) manufacturer, (b) brand, and (c) model number. Individual appliance types may include additional fields as identifiers. All identifiers are represented in section 1696 of this Article by an asterisk ("**"). For purposes of compliance with section 1695(e)(1) of this Article, the identifiers represent fields that cannot be modified

(3) Any electronic filing to the FAD constitutes a representation by the person making the filing that:

(A) the person will electronically acknowledge receipt through the FAD of all electronic communications concerning the filing from the Executive Director through the FAD to the person;

(B) all electronic communications concerning the filing from the Executive Director through the FAD to the person shall be deemed received by the person upon notification to the Executive Director, by the computer from which the Executive Director communication has been sent, that the communication has been sent; and

(C) all electronic communications concerning the filing from the person to the Executive Director shall be deemed received by the Executive Director only upon actual receipt.

(b) Review of Statements by the Executive Director.

(1) The Executive Director may determine whether a statement is complete, accurate, and in compliance with all applicable provisions of this Article, and whether the appliance for which the statement was submitted complies with all applicable standards in section 1693 of this Article.

(2) In this subsection, "manufacturer" also includes a third-party certifier filing a statement under section 1695(f) of this Article.

(3) Complete and Accurate Statement. If the Executive Director determines that the statement is complete and accurate and that the appliance complies with all applicable standards, the Executive Director shall:

(A) immediately include the appliance in the FAD; and

(B) inform the manufacturer's FAD-designated contact person or the third-party certifier's FAD-designated contact person electronically of the determination within 30 calendar days after receipt by the Executive Director.

(4) Incomplete Statement. If the Executive Director determines that a statement is not complete, or that the statement does not contain enough information to determine whether it is accurate or whether the appliance complies with an applicable standard:

(A) the Executive Director shall return the statement through the FAD to the manufacturer's FAD-designated contact person with an explanation of its defects and a request for any necessary additional information within 30 calendar days after receipt by the Executive Director.

(B) the manufacturer shall refile the statement through the FAD with all information requested by the Executive Director.

(C) the Executive Director shall review the refiled statement.

(5) Statement is Inaccurate or Appliance Does Not Comply. If the Executive Director determines that the statement is inaccurate or that the appliance does not comply with an applicable standard:

(A) the Executive Director shall reject the statement and return it through the FAD to the manufacturer's FAD-designated contact person with an explanation of its defects within 30 calendar days after receipt by the Executive Director, to the extent practicable.

(B) the manufacturer may submit a revised statement through the FAD for the appliance.

(c) Flexible Demand Database of Appliance Models.

(1) The Executive Director shall maintain a database of appliance models complying with flexible demand standards known as the "Flexible Appliance Database" or "FAD" and consisting of two parts:

(A) "Approved FAD." The Approved FAD shall contain information on all appliances that are currently in production, for which complete and accurate statements have been received and approved pursuant to this Article, and that have not been removed from the FAD pursuant to sections 1695(c)(2), 1695(d)-(e), or 1697 of this Article.

(B) "Archived FAD." The Archived FAD shall contain, at least, information on all appliances that:

1. are no longer in production, for which complete and accurate statements have been received pursuant to section 1695(a) of this Article; or

2. have been removed from the Approved FAD pursuant to sections 1695(c)(2) or 1695(e)(2) of this Article.

(2) Confirmation of FAD Listings. The Executive Director may, by electronically writing to the most recent electronic address filed pursuant to section 1695(a)(2)(D) of this Article and request each manufacturer of an appliance listed in the FAD to confirm the validity of the information in each of its FAD listings.

(A) If within 30 calendar days of the electronic mailing there is no such reply, the appliance may be removed from the Approved FAD and moved into the Archived FAD.

(B) If the lack of compliance with any requirements of this Article is strictly limited to non-compliance with standards adopted since the most recent filing by the manufacturer:

1. all affected models may be moved from the Approved FAD to the Archived FAD. After the models have been moved, all affected manufacturers will be notified through the FAD or via email.

2. the effective date for moving such affected models to the Archived FAD will be the effective date of the new standard.

(3) Records Retention. Notwithstanding any other provision of this Article, FAD listings that have not been confirmed within ten (10) years of original submittal or subsequent confirmation shall be presumed to be for products no longer in production and shall be automatically removed from the Approved FAD and moved into the Archived FAD.

(d) Assessment of Completeness, Accuracy, and Compliance of Manufacturer Statements.

(1) If the statement is incomplete or inaccurate, or if the Executive Director determines that the statement otherwise fails to comply with any of the requirements of this Article then the Executive Director may, no sooner than ten working days after providing electronic notice to the person designated in section 1695(a)(2)(D) of this Article, remove the appliance from the FAD.

(e) Modified and Discontinued Appliances.

(1) Modified Appliances.

(A) If any of the appliance characteristics listed in FAD do not match the characteristics of the appliance being sold or offered for sale, rented, imported, distributed or leased for use in California the manufacturer shall file a new statement for the appliance, including all the characteristics needing update.

(B) Upon receipt of such a statement, the Executive Director shall review the statement under section 1695(b) of this Article. If the statement is

complete, accurate, and in compliance with all applicable standards, the Executive Director shall modify the FAD.

(2) Discontinued Appliances.

(A) After any appliance has ceased being sold or offered for sale, rented, imported, distributed, or leased for use in California, the manufacturer shall file a statement only containing the identifiers shown in section 1696 of this Article for the appliance.

(B) Upon receipt of such a statement, the Executive Director shall review the statement under section 1695(b) of this Article. If the statement is complete, accurate, and in compliance with all applicable provisions of this Article, the Executive Director shall move the appliance from the Approved FAD to the Archived FAD.

(f) Filing by Third-Party Certifier.

(1) A third party may file a statement on behalf of a manufacturer as required in section 1695(a) of this Article.

(2) Whether a manufacturer files information required by this section by itself or via a third-party certifier, the manufacturer remains responsible for the truth, accuracy, completeness, and timeliness of all required filings.

(3) Upon a finding of noncompliance with an applicable provision of this Article, the Executive Director may suspend a third-party certifier from making filings, allow continued filings under specific conditions, or remove affected appliances from the FAD.

Note: Authority cited: Sections 25213, 25218, 25402(f) and 25402.11, Public Resources Code. Reference: Sections 25216.5(d), 25402(f), 25402.11, 25534.2 Public Resources Code.

Section 1696. Data Submittal Requirements.

The data submittal requirements shown in this section are required pursuant to section 1695 of this Article.

(a) All appliances.

(1) The data submittal requirements shown in Table A-1 are required for all appliances subject to this Article.

Table A-1: Data Submittal Requirements for All Appliances

<u>Required Information</u>	<u>Possible Answers</u>
<u>*Manufacturer's Name</u>	
<u>*Brand Name</u>	
<u>*Model Number</u>	
<u>Manufacture date</u>	
<u>Is a connected device or connected ready device</u>	<u>Connected Device, Connected Ready Device, Neither</u>

***Identifier information as described in section
1695(a)(2)(I) of this Article.**

**(2) The data submittal requirements shown in Table A-2 are required for any
appliance that is a connected device, as defined in section 1691 of this
Article.**

Table A-2: Data Submittal Requirements for All Connected Devices

<u>Required Information</u>	<u>Possible Answers</u>
<u>Unit has a unique logical identification accessible to authorized entities</u>	<u>True, false</u>
<u>Only authorized entities are allowed to change the software configuration</u>	<u>True, false</u>
<u>Unit has data protection for personal information</u>	<u>True, false</u>
<u>Unit requires a user to generate a new means of authentication before access is granted to the device for the first time</u>	<u>True, false</u>
<u>Device supports plain text passwords</u>	<u>True, false</u>
<u>Plain text passwords, if supported, can be six characters or longer</u>	<u>True, false, not applicable</u>
<u>Plain text passwords, if supported, can include a combination of alpha, numeric, and special characters</u>	<u>True, false, not applicable</u>
<u>Unit allows authorized entities to check for software updates from the manufacturer, and to receive and apply available updates</u>	<u>True, false</u>
<u>Manufacturer provides security update policy and end of security support date</u>	<u>True, false</u>
<u>At restart, unit automatically restores recently saved settings</u>	<u>True, false</u>
<u>At restart, unit automatically restores recently saved network connection</u>	<u>True, false</u>
<u>Unit automatically attempts to reconnect after loss of connection</u>	<u>True, false</u>
<u>Unit allows the local users to override the schedule and/or delay timer</u>	<u>True, false</u>
<u>The unit allows authorized entities to change its settings</u>	<u>True, false</u>
<u>Unit allows the user to restore default settings</u>	<u>True, false</u>

(b) Pool controls.

The data submittal requirements shown in Table B-1 are required for pool controls.

Table B-1: Data Submittal Requirements for Pool Controls

<u>Required Information</u>	<u>Possible Answers</u>
<u>Unit communicates using open standards</u>	<u>True, false</u>
<u>Local control provides for start and stop of pool filter pump and dependent booster pumps and heaters</u>	<u>True, false</u>
<u>Integrated or separate user interface is provided for setup, selection, and update of the operating schedule</u>	<u>True, false</u>
<u>Unit retains memory for at least 72 hours without external power</u>	<u>True, false</u>
<u>System clock has ability to sync with local time automatically</u>	<u>True, false</u>
<u>The pool control is preprogrammed with a default operating schedule setting</u>	<u>True, false</u>
<u>Default operation of pool filter pump at $\geq 50\%$ of max rpm starting no earlier than 9 a.m. and ending by 3 p.m. local time</u>	<u>True, false</u>
<u>Default operation of pressure cleaner booster pump starting no earlier than 9 a.m. and ending by 3 p.m. local time</u>	<u>True, false</u>
<u>Default operation of electric pool heater starting no earlier than 9 a.m. and ending by 3 p.m. local time</u>	<u>True, false</u>
<u>No default operation between 4 p.m. and 9 p.m. local time</u>	<u>True, false</u>
<u>Unit is marked with its manufacturer's name, its brand name, or its trademark; its model number; and its date of manufacture</u>	<u>True, false</u>

Note:

Authority cited: Sections 25213, 25218, 25402(f) and 25402.11, Public Resources Code.

Reference: Sections 25216.5(d), 25402(f) and 25402.11, Public Resources Code.

Section 1697. Compliance, Enforcement, and Administrative Civil Penalties.

(a) Compliance and Enforcement.

(1) Any unit of any appliance subject to this Article may be sold or offered for sale, rented, imported, distributed or leased for use in California regardless of the physical location of the seller and includes, without limitation, transactions conducted over telephone or the internet, only if it complies with the requirements of this Article, including, but not limited to the following:

(A) the appliance appears in the most recent active FAD established pursuant to section 1695(c) of this Article;

(B) the manufacturer has:

1. tested the appliance as required by section 1693 of this Article;
2. marked the unit as required by section 1693 of this Article;
3. for any appliance for which there is an applicable standard in section 1693 of this Article, certified under section 1695(a) of this Article that the appliance complies with the standard;

(C) the unit has the same components, design characteristics, and all other features that affect flexibility, as applicable, as the units that were tested under section 1693 of this Article or for which information was submitted under section 1695(a) of this Article; and

(D) for any appliance for which there is an applicable standard in section 1693 of this Article, the unit complies with the standard.

(2) The Executive Director and Energy Commission may take any action authorized by statute or Energy Commission regulations to address or prevent any violation of this Article.

(3) All Appliances: Submittal of Reports of Manufacturers' Certification Testing.

(A) For any appliance, the Executive Director may at any time request from a manufacturer a copy of the test report that describes the results of the testing that was performed pursuant to section 1692 of this Article and that

provides the basis for the information submitted under section 1695(a) of this Article.

(B) The request shall be sent to the e-mail address designated in section 1695(a)(2)(D) of this Article.

(C) If the Executive Director includes with the request information that, in their opinion, constitutes evidence that the appliance or the manufacturer:

1. is not in compliance with an applicable provision of this Article, or

2. that the flexibility of the appliance is not as certified under section 1695(a) of this Article, or

3. is not as required by an applicable standard in section 1693 of this Article, then

4. the manufacturer shall provide a copy of the applicable test report to the Executive Director within 5 working days of the manufacturer's receipt of the request.

(D) If the Executive Director does not receive the test report within the required time, the Executive Director may remove the appliance from the FAD.

(E) If the test report indicates that the appliance model does not comply with an applicable standard in section 1693 of this Article, the Executive Director shall, ten working days after providing electronic notice via e-mail or directly through the FAD to the person designated in section 1695(a)(2)(D) of this Article, remove the model from the FAD.

(4) Inspection by the Executive Director of Appliances Subject to Flexible Demand Appliance Standards, Certification, Marking, and Other Requirements of this Article.

(A) The Executive Director may periodically inspect appliances sold or offered for sale, rented, imported, distributed or leased for use in California, to determine whether they conform with the applicable flexible demand appliance standards, certification, marking, and other requirements of this Article.

(B) Inspection of an appliance may consist of inspection of one or more units.

1. If the inspection indicates that the unit or units comply with the applicable requirements, the matter may be closed.

2. If the inspection indicates that the unit or units do not comply with an applicable requirement, the Executive Director and Energy Commission may take any actions that are authorized by statute or

Energy Commission regulations to address or prevent any violation of this Article, including removing the appliance from the FAD.

(b) Administrative Civil Penalties.

(1) No person, including a manufacturer, retailer, contractor, importer, distributor, or lessor, may sell, rent, import, distribute, lease, or offer for sale, rent, import, distribution, or lease for use in California, regardless of the physical location of the seller or whether the transaction takes place over telephone or the internet, a new appliance subject to this Article unless it meets the requirements of this Article. No person shall violate the cybersecurity requirements of this Article. Violations of this Article are subject to an administrative civil penalty not to exceed two thousand five hundred dollars (\$2,500) for each violation each unit of the appliance is involved in.

(2) Notices of Violation.

The Executive Director may send a written Notice of Violation by certified mail (registered mail to non-U.S. destinations) or other means that provide actual notice to the person in violation of this Article. The Notice of Violation shall contain the following information:

(A) the name and address of the person responsible for the violation;

(B) a statement indicating the statute, regulation, order, or decision upon which the Notice of Violation is based, including any provisions relating to the assessment of administrative civil penalties;

(C) a statement of facts upon which the Notice of Violation is based, including a description of the appliances or units of appliances at issue and a reference to model numbers.

(3) Settlement.

(A) Consistent with California Government Code Section 11415.60, the Energy Commission, or upon delegation, the Executive Director, may at any time issue a decision by settlement with a responsible person. The settlement agreement may include appropriate sanctions and remedies to address violations and promote compliance.

(4) Administrative Proceedings.

(A) No earlier than 30 calendar days after issuing a Notice of Violation, the Executive Director may initiate an adjudicative proceeding to impose administrative civil penalties if the Executive Director determines that the responsible person has not made sufficient progress in addressing the violations identified in the Notice of Violation.

(B) The proceeding shall be initiated by filing and serving a complaint as specified in California Code of Regulations, title 20, section 1233.1. The complaint shall include an assessment of penalties based on the factors set forth in Public Resources Code section 25402.11 and may include other information from the Notice of Violation.

(C) The proceeding shall be conducted in a manner consistent with California Code of Regulations title 20, section 1233.1.

(D) The proceeding shall be heard directly by the Energy Commission as set forth in Public Resources Code sections 25210 and 25211.

(E) After the hearing referenced in this Article, the Energy Commission shall issue or adopt a decision on whether a violation of this Article has been committed, and assess penalties based on application of the factors set forth in section 25402.11 of the Public Resources Code.

(5) Other Enforcement Procedures.

The Executive Director and the Energy Commission may take any actions that are authorized by statute or Energy Commission regulations to address or prevent any violation of this Article.

(6) Judicial Review.

An order of the Energy Commission imposing an administrative civil penalty shall be subject to judicial review pursuant to Public Resources Code Sections 25534.2(a) and 25534.2(b).

Note: Authority cited: Sections 25213, 25218, 25402(f) and 25402.11, Public Resources Code. Reference: Sections 25216.5(d), 25402(f), 25402.11, 25534.2 Public Resources Code.

This content is from the eCFR and is authoritative but unofficial.

Title 10 –Energy

Chapter II –Department of Energy

Subchapter D –Energy Conservation

Part 431 –Energy Efficiency Program for Certain Commercial and Industrial Equipment

Authority: 42 U.S.C. 6291–6317; 28 U.S.C. 2461 note.

Source: 64 FR 54141, Oct. 5, 1999, unless otherwise noted.

Subpart Z Dedicated-Purpose Pool Pump Motors

§ 431.481 Purpose and scope.

§ 431.482 Materials incorporated by reference.

§ 431.483 Definitions.

§ 431.484 Test procedure.

431.485 xxx

Subpart Z—Dedicated-Purpose Pool Pump Motors

Source: 86 FR 40774, July 29, 2021, unless otherwise noted.

§ 431.481 Purpose and scope.

Link to an amendment published at 88 FR 67041, Sept. 28, 2023.

- (a) **Purpose.** This subpart contains definitions and test procedures requirements for electric motors that are dedicated-purpose pool pump motors, pursuant to Part A–1 of Title III of the Energy Policy and Conservation Act, as amended, 42 U.S.C. 6311–6317. It also identifies materials incorporated by reference in this part. This subpart does not cover other “electric motors,” which are addressed in subpart B of this part, nor does it cover “small electric motors,” which are addressed in subpart X of this part.
- (b) **Scope.** The requirements of this subpart apply to dedicated-purpose pool pump motors, as specified in paragraphs 1.2, 1.3 and 1.4 of UL 1004–10:2020 (incorporated by reference, see § 431.482).
- (c) **Incorporation by reference.** In § 431.482, DOE incorporates by reference entire standards for use in this subpart; however, only the provisions of the document enumerated in an approved section are applicable within § 431.482.

§ 431.482 Materials incorporated by reference.

Link to an amendment published at 88 FR 67041, Sept. 28, 2023.

Link to a correction published at 88 FR 71990, Oct. 19, 2023.

- (a) **General.** Certain material is incorporated by reference into this subpart with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, DOE must publish a document in the FEDERAL REGISTER and the material must be available to the public. Standards can be obtained from the sources in this section. All approved material is available for inspection at the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, sixth Floor, 950 L'Enfant Plaza SW, Washington, DC 20024, (202) 586-2945, <https://www.energy.gov/eere/buildings/appliance-and-equipment-standards-program>, and may be obtained from the other sources in this section. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fedreg.legal@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.
- (b) **CSA.** Canadian Standards Association, Sales Department, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, L4W 5N6, Canada, 1-800-463-6727, or <https://www.csagroup.org/store>.
- (1) CSA C747-09 (Reaffirmed 2014) ("CSA C747-09"), "Energy efficiency test method for small motors" as revised through August 2016, including Update No. 1; IBR approved for § 431.484.
- (2) [Reserved]
- (c) **UL.** Underwriters Laboratories, 333 Pfingsten Road, Northbrook, IL 60062, (841) 272-8800, or go to <https://www.ul.com>.
- (1) UL 1004-10 (1004-10:2020), "Standard for Safety for Pool Pump Motors," First Edition, Dated February 28, 2020; IBR approved for §§ 431.481 and 431.483.
- (2) [Reserved]

§ 431.483 Definitions.

Link to an amendment published at [88 FR 67041](#), Sept. 28, 2023.

The definitions applicable to this subpart are defined in Section 2 "Glossary" of UL 1004-10:2020 (incorporated by reference, see § 431.482).

§ 431.484 Test procedure.

- (a) **Scope.** Pursuant to section 343(a) of EPCA, this section provides the test procedures for measuring the efficiency of dedicated-purpose pool pump motors. (42 U.S.C. 6314) For purposes of this part and EPCA, the test procedures for measuring the efficiency of dedicated-purpose pool pump motors shall be the test procedure specified in paragraph (b) of this section.
- (b) **Testing and calculations.** At such time as compliance is required with a labeling requirement or an energy conservation standard, the full-load efficiency of each dedicated-purpose pool pump motor model (inclusive of the drive, if the dedicated-purpose pool pump motor model is placed into commerce with a drive, or is unable to operate without the presence of a drive) is determined in accordance with CSA C747-09, Section 1.6 "Scope", Section 3 "Definitions", Section 4 "General requirements", Section 5, "General test requirements", and Section 6 "Test method" (incorporated by reference, see § 431.482).

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Link to an amendment published at [88 FR 67041](#), Sept. 28, 2023.



UL 1004-10

STANDARD FOR SAFETY

Pool Pump Motors

MARCH 24, 2022 - UL1004-10

tr1

UL Standard for Safety for Pool Pump Motors, UL 1004-10

First Edition, Dated February 28, 2020

Summary of Topics

This revision of ANSI/UL 1004-10 dated March 24, 2022 adds a glossary term for "Factory Default Setting"; 2.7A.

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The new requirements are substantially in accordance with Proposal(s) on this subject dated January 28, 2022.

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FEBRUARY 28, 2020
(Title Page Reprinted: March 24, 2022)



ANSI/UL 1004-10-2022

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UL 1004-10

Standard for Pool Pump Motors

First Edition

February 28, 2020

This ANSI/UL Standard for Safety consists of the First Edition including revisions through March 24, 2022.

The most recent designation of ANSI/UL 1004-10 as an American National Standard (ANSI) occurred on March 24, 2022. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <https://csds.ul.com>.

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2 Glossary

2.1 For the purpose of this Standard, the following definitions apply.



2.3 **DEDICATED-PURPOSE POOL PUMP (DPPP) MOTOR** – An electric motor that is single-phase or poly-phase and is designed and/or marketed for use in dedicated-purpose pool pump (DPPP) applications.



2.5 **DESIGNED AND/OR MARKETED** – Designed to fulfill the intended DPPP application and/or is designated and marketed for DPPP application, with the DPPP designation on the packaging and/or any publicly available documents (e.g., product literature, catalogs, and packaging labels).