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CEC-057 (Revised 1/21)

FINAL STATEMENT OF REASONS

Federal and Administrative Updates

UPDATE OF THE INITIAL STATEMENT OF REASONS

In response to comments received during the 45-day public comment period, the following changes were made to the proposed regulatory language and provided for 15-day public comments March 8 through March 24, 2024:

Section 1602:
- 1602(a): "*Alternate efficiency determination method (AEDM)*". Adding this as a new general definition to align with federal law in 10 C.F.R. section 429.70. This replaces the need to have specific AEDM definitions for each relevant appliance type.

- 1602(a): *"Retailer"*. For this proposed new definition, making an edit to use the term "appliances" rather than "goods" for consistency with related definitions.

- 1602(c): "*Alternate efficiency determination method or AEDM, means, with respect to a central air conditioner…*". Removing this as a proposed new definition. Rather than having appliance specific AEDM definitions, now adding a general AEDM definition to section 1602(a) for clarity.

- 1602(c): *"Unitary dedicated outdoor air system (DOAS)".* Adding this as a new definition to align with federal law in 10 C.F.R. section 431.92.

- 1602(d): *"High-speed small-diameter (HSSD) ceiling fan"*. Addressing a typographical error. Adding a period at the end of the last sentence.

- 1602(d): *"Safety fan"*. Addressing a typographical error. Changing a period to a hyphen to accurately reflect the document name.

- 1602(s): *"Alternate efficiency determination method or AEDM, means, with respect to an electric motor…"*. Removing this existing definition. Rather than having appliance specific AEDM definitions, now adding a general AEDM definition to section 1602(a) for clarity.

- 1602(s): *"Alternate efficiency determination method or AEDM, means, with respect to a state-regulated compressor…"*. Removing this existing definition. Rather than having

appliance specific AEDM definitions, now adding a general AEDM definition to section 1602(a) for clarity.

Section 1603
- 1603(a)(4): Adding a new subsection (a)(4)(A) to expressly state that the requirement to provide “test reports” includes providing equivalent supporting documentation when an AEDM is used, consistent with federal law in 10 C.F.R. sections 429.70 and 71.

- 1603 Documents Incorporated by Reference: Adding the document 10 C.F.R. section 429.71 to the list of documents incorporated by reference. This document is being refenced in the proposed new subsection 1603(a)(4)(A).

Section 1604
- 1604(p)(1): Making additional edits to align with federal law. For clothes washers that are consumer products both Appendices J and J2 of 10 C.F.R. section 430.23(j) are applicable.

- 1604(w)(1): Making additional edits for clarity and to align with federal law. For federally regulated battery chargers and federally regulated uninterruptible power supplies, both Appendices Y and Y1 of 10 C.F.R. section 430.23(aa) are applicable. Also, removing the proposed new subsection (w)(1)(A) related to wireless chargers. Wireless chargers are a type of federally regulated battery charger and there is no need to specifically reference wireless chargers alone.

Section 1605.1:
- 1605.1(c)(1): Making clarification edits to reflect the new tables and values being added to subsection (c)(1).

- 1605.1(c)(1) Table C-3: Making additional edits to Table C-3 to further clarify and align with the federal standards in 10 C.F.R. section 430.32(c) that were in effect from January 1, 2015, to January 1, 2023, and fixing a typographical error in the last column (The correct subscript should be *“w,off”* not *“w.pff”*).

- 1605.1(c)(1) Table C-4: Addressing a typographical error. In the last column, the correct subscript should be *“w,off”* not *“w.pff”*.

- 1605.1(e)(2) Table E-4: Making formatting edits to Table E-4, splitting cells that were previously merged.

- 1605.1(h)(4)(C): No longer proposing to remove the cross-reference to the state standards for commercial pre-rinse spray valves. The state standards are no longer proposed to be removed (see change in section 1605.3(h)), so the cross-reference is still needed.

Section 1605.3
- 1605.3(h): No longer proposing to remove the state minimum spray force standard for commercial pre-rinse spray valves. Federal preemption does not apply to this requirement due to an explicit exemption from preemption and the existing state standard will in place. Also, as a result of this new change, staff are no longer proposing the subsequent renumbering change and the change regarding the cross-reference to section 1605.1(h).

- 1605.3(k)(1)(A): Removing the historical state standards (including the existing Table K-8) for general service lamps that were in effect before January 1, 2020. There is no longer a need to list these outdated standards.

- 1605.3(k)(2): Renumbering the existing Table K-9, as a result of the proposed removal of Table K-8 from section 1605.3(k)(1)(A). Also, adding a missing comma in subsection (k)(2)(B).

Section 1606:
- 1606(a): Adding a sixth "Exception" for single and dual duct portable air conditioners with variable speed motors. On May 14, 2023, the U.S. Department of Energy (DOE), published a final rule for portable air conditioners that both amended Appendix CC and introduced a new test procedure for portable air conditioners in Appendix CC1. The amendments to Appendix CC expand the scope of testing to include equipment with variable-speed motors. Due to the phrasing of section 1606, this federal expansion of scope would automatically cause an identical expansion of the scope of state testing and reporting requirements, contrary to the requirements of the Administrative Procedures Act. This exception ensures that certification requirements set in 20 CCR section 1606 are applicable only to portable air conditioners that use single-speed electric motors, consistent with the original scope at adoption.

- 1606(a)(3)(A): Generalizing the language in the first Exception to this section and removing duplicative, appliance specific versions of the same Exception for consistency with the proposed adoption of a general definition of "AEDM" in place of several appliance specific definitions of the same term. Also, adding a "1" after "EXCEPTION" in the heading to indicate that it's the first of three exceptions.

- Table X: For the field *"Regulatory status"* within "All Appliances", adding "other" as a new possible answer for this field. While the current options specified in Table X provide an appropriate, broad generalization regarding whether the certified data demonstrates compliance with one or more federal or non-federal standards, commenters expressed concerns that these generalizations do not fully or accurately reflect the status of their products. For example, products may be subject to both federal and state standards, as with commercial pre-rinse spray valves being subject to federal water efficiency standards and state spray force standards. Or, manufacturers may elect to certify data for their products prior to (and in anticipation of) an applicable effective date, where at the time of certification stating that the product is subject to standards would not be

accurate. For commenter's product of general service lamps, California has express exception from preemption that allows for state standards to be applied while at the same time these products also remain within the scope of federal appliance law in other states, meaning that it would not be accurate to describe the products as exclusively subject to federal standards or exclusively subject to non-federal standards.

The purpose of the "other" status code is therefore to create the ability to assign accurate descriptions of regulatory status where the broad generalizations of the other categories lack sufficient nuance for the appliance or situation. Using pre-rinse spray valves as an example, "Other" more accurately describes their regulatory status as subject to both federal and state standards. Similarly, "Other" can be utilized by manufacturers who wish to voluntarily submit compliance data before the effective date of that data submittal requirement. These changes are necessary both to address concerns that manufacturers are expected to make inaccurate statements about their products as a part of certification (by ensuring that these descriptors are able to capture any nuance needed for accuracy) and to improve the clarity of listing information published by the CEC.

- Table X (D): Removing the last three fields for "Commercial and Industrial Fans and Blowers" *("Is the model a Series tested fan?", "Associated Series Tested Fan Model Number",* and *"Method used to determine FEPact of test method in section 1604(d)(2)…"*). Reporting of this information does not assist sellers or users in determining compliance or assessing efficiency, and the information is available to staff on an as-needed basis via requests for supporting documentation. Removing these fields addresses concerns by commenters regarding potential confusion in how to categorize and report AEDM data.

- Table X (P): For clothes washer that are consumer products, adding the new field *"corrected remaining moisture content"*. This field is found in the required test method stated in section 1604(p) and is needed to help verify the information submitted. For commercial clothes washers, no longer proposing to remove the field *"remaining moisture content"*. This field should be kept along with *"corrected remaining moisture content"* and is needed to help verify the information submitted.

- Table X (V): Adding and amending multiple fields for the new proposed appliance type called "Televisions (manufactured on or after September 11, 2023, and within the scope of 10 C.F.R. section 430)". The data from the new and amended fields are all captured by performing the required test method stated in section 1604(v) and provide useful information regarding the product performance.

- 1606(a)(4)(A)4.i. and j.: Making edits to subsection (a)(4)(A)4.i. and removing subsection (a)(4)(A)4.j. to clarify the language regarding AEDM use. Rather than calling out specific appliances, now using general language that's applicable to any appliance subject to an AEDM.

Section 1607:
- 1607(d)(12)(C): Renumbering the existing Table K-10, as a result of the proposed removal of Table K-8 from section 1605.3(k)(1)(A).

- 1607(d)(12)(E): Removing this subsection (E) regarding making claims for the *"California Quality LED Lamp Specification"*. California Quality Light Emitting Diode (LED) Lamp Specification version 3.0 aligned with mandatory Title 20 appliance efficiency standards adopted by the CEC and effective on January 1, 2018. The goal of this alignment was to prepare the market in advance of mandatory efficiency standards. Because the adopted standards are currently in full effect, this specification is now obsolete and should be removed from the regulations and references.

- 1607 Documents Incorporated by Reference: Removing the document *"California Energy Commission Voluntary California Quality Light Emitting Diode (LED) Lamp Specification (December 2017)"* from the list of documents incorporated by reference since its reference is proposed to be removed from section 1607(d)(12). This document is not referenced anywhere else in the regulations.

Section 1608:
- 1608(a): Adding a sixth "Exception" for single and dual duct portable air conditioners with variable speed motors (See change in section 1606(a), this list is intended to mirror the list in section 1606(a)).

Additional Corrections Not Included in the 15-day Language:

The CEC has made the following non-substantive and typographical edits after the release of the 15-day language.

First, in section 1604(d) Table D-3, a period has been added at the end of the sentence in footnote number 3.

Second, in section 1605.1(e)(2) Table E-2, a typographical error has been corrected. The table states minimum performance standards for certain heating appliances based on appliance type and capacity. For these appliances there is a small increase in expected performance reflecting improved economies of scale in larger-capacity models. The table therefore specifies an AFUE applicable at or below a specified capacity and a slightly higher AFUE applicable above that capacity. The lowest capacity row for gravity wall furnaces is missing the "≤" symbol, and this change re-adds that symbol. (The symbol is strongly implied by the overall context of the table and of the regulations as a whole, and it is unlikely that a reader would have understood the row as applying only to models with exactly 27,000 btu/hour capacity.)

Third, a clarification edit has been made in section 1605.1(e)(2) Table E-4. A table title has been added to communicate the table's contents.

Fourth, typographical errors have been corrected in section 1605.1(w) Table W-2 covering the performance standards for uninterruptible power supplies. The table incorrectly states a date of June 10, 2022, instead of the correct date, January 10, 2022, for the effective date in the table. The regulatory language just before the table which explains the table, includes the correct date. This correction to the table is non-substantive because the January 10, 2022, date is already in federal law and the compliance date has already passed. The other typographical corrections are to replace the hyphens in Table W-2 scientific notation with minus signs, (e.g. “-1.20E-06”), and to add periods at the end of each equation.

Fifth, in section 1605.3(e)(1)(A)(2), a clarification edit has been made. The word “unit” has been removed as it is superfluous and potentially misleading. The regulations define the term “duct furnace” and separately the term “unit heater”, the former being “designed to be installed within a duct” and the latter being “designed to be installed without ducts”. The word “unit” has no regulatory effect where stated and may imply a relationship to unit heaters that does not exist.

Lastly, in section 1607(d)(12)(D), a typographical error has been addressed. The word “retain” should be “retail”, creating the phrase “retail packaging” in the one place it occurs.

LOCAL MANDATE DETERMINATION

The California Energy Commission has determined that this action will not result in a local mandate on local agencies or school districts.

CONSIDERATION OF ALTERNATIVE PROPOSALS

For proposed changes to regulatory language that comport with federal law, no alternative is available other than the proposed incorporation of federal language.

For proposed language relating to state standards the Energy Commission determined pursuant to Government Code Section 11346.9(a)(4) that no alternative before it would be more effective in carrying out the purpose for which this action is proposed; no alternative would be as effective as and less burdensome to affected persons than the adopted regulation; and no alternative would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

The adopted regulations will not have a significant adverse economic impact on small business and no alternatives were proposed that would lessen any adverse economic impact on small business.

INCORPORATION BY REFERENCE

The CEC proposes to incorporate by reference the following documents which include references to federal standards that preempt state law as set forth in 42 U.S.C. § 6297(a)-(c):

- ANSI/AMCA Standard 214-21 *"Test Procedure for Calculating Fan Energy Index (FEI) for Commercial and Industrial Fans and Blowers"*
- ANSI/AMCA Standard 240-15 *"Laboratory Methods of Testing Positive Pressure Ventilators for Aerodynamic Performance Rating"*
- ASME A112.18.1 2018/CSA B125.1-18 *"Plumbing Supply Fittings"*
- 10 C.F.R. section 429.12
- 10 C.F.R. section 429.16
- 11 C.F.R. section 429.32(a)
- 10 C.F.R. section 429.69
- 10 C.F.R. section 429.70
- 10 C.F.R. section 430.23(i) (Appendix I1 to subpart B of part 430)
- 10 C.F.R. section 430.23(j) (Appendix J to subpart B of part 430)
- 10 C.F.R. section 430.23(m) (Appendix M1 to subpart B of part 430)
- 10 C.F.R. section 430.23(aa) (Appendix Y1 to subpart B of part 430)
- 10 C.F.R. section 431.92
- 10 C.F.R. section 431.154
- 10 C.F.R. section 431.174
- 10 C.F.R. section 431.174 (Appendix A to Subpart J of Part 431)

The documents are incorporated by reference because it would be cumbersome, unduly expensive, and impractical to publish in the California Code of Regulations. The documents were made available upon request directly from the Energy Commission throughout the course of this rulemaking action.

SUMMARY OF RESPONSES TO PUBLIC COMMENTS RECEIVED

All responses to public comments, including acceptance of recommendations and justification when recommendations were not accepted, are hereby incorporated by reference to this Final Statement of Reasons, and included in the final record.

CALIFORNIA ENERGY COMMISSION

CALIFORNIA NATURAL RESOURCES AGENCY

Responses to Comments Received: Federal and Administrative Updates Rulemaking Docket: 22-AAER-04

Contents

Comments Received

List of Commentors

Written Comments - 45-day Comment Period (November 24, 2023 – January 8, 2024)

Commenter(s) Name(s)	Organization	Date Submitted	Comment Number
Steve Uhler	Self	11/20/2023 & 11/21/2023	1
CRESCOR	CRESCOR	11/27/2023	2
Michael L. Wolf, PE	Greenheck Group	1/8/2024	3
Michael Ivanovich	Air Movement and Control Association (AMCA) International	1/5/2024	4
Patrick Eilert , Christopher Malotte, Kate Zeng	California Investor-Owned Utilities (CA IOUs)	1/8/2024	5
Laura Petrillo-Groh	Air-Condition, Heating, and Refrigeration Institute (AHRI)	1/8/2024	6
Alex Baker	National Electrical Manufacturers Association (NEMA)	1/8/2024	7
Michael Weems	American Lighting Association (ALA)	1/8/2024	8
Jacob Cassady	Association of Home Appliance Manufacturers (AHAM)	1/17/2024	9

Verbal Comments - January 9, 2024, Public Hearing

Commenter(s) Name(s)	Organization	Comment Number
Laura Petrillo-Groh	Air-Condition, Heating, and Refrigeration Institute (AHRI)	10
Alex Baker	National Electrical Manufacturers Association (NEMA)	11
Jacob Cassady	Association of Home Appliance Manufacturers (AHAM)	12

Written Comments - 15-day Comment Period (March 8 – 25, 2024)

Commenter(s) Name(s)	Organization	Date Submitted	Comment Number
Laura Petrillo-Groh	Air-Condition, Heating, and Refrigeration Institute (AHRI)	3/22/2024	13
Meredith Birkhead	Association of Home Appliance Manufacturers (AHAM)	3/22/2024	14
Tony Bacon	Hunter Fan Company	3/22/2024	15
Alex Baker	National Electrical Manufacturers Association (NEMA)	3/24/2024	16
Michael Ivanovich	Air Movement and Control Association (AMCA) International	3/23/2024	17
Michael Burger, Christopher Malotte, Kate Zeng	California Investor-Owned Utilities (CA IOUs)	3/25/2024	18

45-Day Comments and Responses

Comment Number	Comments/ Suggested Revisions	Response
1.1	AAER-2022-04 Records request for Form 400, and unique number assigned by OAL Please provide Form 400 as submitted to the Office of Administrative Law pursuant to 1 CCR section 5. Please provide Form 400 as approved by the Office of Administrative Law pursuant to 1 CCR section 5. Please provide the unique number assigned by the Office of Administrative Law pursuant to section 11341 of the Government Code.	No changes made. This records request is not a comment on the express terms or other rulemaking documents. The requested document, the Form 400, was posted to the CEC's docket and is publicly available in docket 22-AAER-04, TN 253282.

Comment Number	Comments/ Suggested Revisions	Response
1.2	AAER-2022-04 Mailing list fails to notify pursuant to GOV 11346.4 "CEC Initial Rulemaking Interest (Announcing Newly Established Rulemaking)" mailing list has not notified me pursuant to GOV 11346.4 for the 22-AAER-04 rulemaking. A person should not be required to check every CEC docket for notices of proposed action for a newly established rulemaking. The memo to request a new docket be opened for the 2022 Amendments to the Title 20 Appliance Efficiency Regulations (22-AAER-04) states "Please notify the above recipients once the docket has been opened. Do not notify in any subscription lists, the notification will be done once the NOPA is published.". This overlooks the use of "CEC Initial Rulemaking Interest (Announcing Newly Established Rulemaking)" mailing list required to meet the requirement to notify the public of particular regulatory actions such newly established rulemaking pursuant to GOV 11346.4. The "Initial Rulemaking Interest (Announcing Newly Established	No changes made. The CEC has complied with the requirements of section 11346.4 of Title 2 of the Government Code as described in the Notice of Proposed Action (NOPA). All interested parties that have subscribed to the General Rulemaking or Appliance Efficiency subscription list were notified when the NOPA and other rulemaking documents were filed which initiated this rulemaking. The subscription list can be viewed on the CEC's "subscriptions" webpage.

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	Rulemaking)" list serve is reserved for announcing new rulemaking dockets. Once the docket is created and the Notice of Proposed Action (NOPA) is posted then the Initial Rulemaking Interest list serve is removed. Perhaps "Initial Rulemaking Interest (Announcing Newly Established Rulemaking)" subscription list was not notified of the docket 22-AAER-04, or "Initial Rulemaking Interest (Announcing Newly Established Rulemaking)" was removed before the Notice of Proposed Action (NOPA) was posted. Please ensure to notify pursuant to GOV 11346.4, all who subscribed to "Initial Rulemaking Interest (Announcing Newly Established Rulemaking)".	
2.1	**Proposed action on 20 CCA ADC sub-section 1602 (r)** Currently in California 20 CCA ADC sub-section 1602 (r) The term "heated glass merchandizing cabinet" is defined as: "Heated glass merchandising cabinet" means an appliance with a heated cabinet constructed of glass or clear plastic doors which, with 70% or more clear area, is designed to display and maintain the	No changes made. EnergyStar is an elective program, meaning that it does not preempt state regulatory language. For this existing definition of *"heated glass merchandising cabinet"*, the CEC set a specific threshold in order to ensure the regulations were clear and enforceable. Staff is not proposing any amendments to section 1602(r) and the existing definition of "*heated glass merchandizing cabinet*" and therefore comments on this section are outside the scope of the rulemaking.

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	temperature of hot food that has been cooked in a separate appliance. ENERGY STAR definition is: D. Heated Transparent Merchandising Cabinets: An appliance with a heated compartment that is designed to display and maintain the temperature of hot food that has been cooked in a separate appliance. The CEC definition deviates materially from the Federal definition. It is "not aligned", "not consistent", "conflicting" and "incompatible" with current Federal regulation as the Federal regulation defining a "heated transparent merchandising cabinet" does not include (nor defines) a specific % requirement of "clear area". Is it 70% of the total cabinet surface? 70% of the front door area? The rear door area? Top and bottom? 1,2,3 or 4 sides? What is the concrete specific guidance on how this requirement is considered to have been met? How it is to be enforced?	Staff disagrees with the characterization of the definition as "lacking proper rationale" and "capricious", as it is existing language developed through the Administrative Procedure Act process and approved by OAL.

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	This indicates that the definition is not clearly defined, regulatorily uncertain and lacking proper rationale and places the burden on the manufacturer to guess what and how it is implemented. It also imposes a misguided barrier to innovation. To achieve "heated glass merchandising cabinet" status, it is not enough to meet current federal regulation, but assuming that the 70% clear area is meant to be total area, the result would be a highly inefficient appliance than what federal regulations currently seek to encourage to allow. It is the opposite of what the energy efficiency regulation seeks to achieve. We believe that due to its lack of engineering detail and technical guidance, or scientific justification for the additional "clear area" mandate, it has the effect of making illegal for sale in California, merchandizing cabinets that are currently, and legally in use across the US, designed to "display and maintain the temperature of hot food that has been cooked in another appliance", but that may	

Comment Number	Comments/ Suggested Revisions	Response
	not have a 70% or more of an undefined clear area. The same issue arises with the advent of innovative hot food vending machines, services such as Door Dash and others; the cabinets/appliances designed to keep food warm for a short time (under 30 minutes) is up to interpretation as to which definition applies. The "clear area " requirement added by CEC is in our opinion capricious, does not communicate the regulation in a clear and precise manner; is not founded on solid engineering facts, or clearly defined, making it an obstacle for small business by becoming burdensome to interpret design and manufacture. We request that the 70% added requirement for "Heated Glass Merchandizing Cabinet." be deleted from the current 20 CCA ADC sub-section1602 (r), so that it can be in line with Federal Regulations definition, until such time as remediation of the listed flaws are corrected	

Comment Number	Comments/ Suggested Revisions	Response
3.1	With the recent pre-publication of the Department of Energy's proposed energy standard for fans and blowers (10 CFR Parts 429 and 431, EERE-2022-BT-STD-0002), Greenheck recommends that the California Energy Commission (CEC) pause implementation of its regulation on Commercial and Industrial Fans and Blowers to fully evaluate the implications and substantial differences between the Title 20 rulemaking and the proposed federal rulemaking. Differing state and federal regulations covering the same products can lead to industry confusion, unrealistic timing expectations, and unnecessary financial burden to consumers, supply chains and manufacturers. These are critical considerations that must be addressed upfront when evaluating regulatory impacts.	No changes made. Staff amended the effective date of the testing, marking, and reporting requirements for Commercial and Industrial Fans and Blowers to coincide with a federal compliance extension issued by the U.S. Department of Energy (DOE). Staff does not find that suspending implementation or enforcement of adopted requirements based on speculative future actions by DOE to be appropriate, as doing so delays, potentially indefinitely, the benefits of adopted requirements with no certainty regarding timeline(s) or outcome(s) of DOE activity. Staff can address future DOE actions in future rulemakings.
3.2	To minimize confusion and burden for the market, Greenheck suggests the CEC focus on leveraging the existing energy savings requirements and fan system efficiencies already outlined in Title 24. Specifically, rely on the current requirement for fans to meet a fan energy	No changes made. The adopted amendments to the previously adopted regulations for Commercial and Industrial Fans and Blowers in Title 20 minimize confusion by aligning with the federal test procedure, maintaining the scope exclusion of "embedded fans", and removing a redundant labeling font size requirement.

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	index (FEI) value of 1.00 or greater. This allowance aligns with the energy saving goals of Title 20, while reducing additional burden on manufacturers and the CEC. It would also provide time to fully assess the proposed federal DOE regulations related to fan efficiency. The goal should be balancing energy savings with feasibility for the industry. Overly stringent or conflicting state-level requirements risk confusion, compliance challenges, and inadequate lead time for California consumers.	The amendments do not change stringency; fans are required to report the maximum thresholds for operating at an FEI of one (1) or greater, consistent with the commenter's request. In addition, Title 20 and Title 24 address two separate points of energy and water efficiency. Title 20 covers the sale and offer for sale of appliances in California to ensure only efficient products are sold in the state allowing consumers to obtain the energy and water efficiency without the burden of researching which products are efficient, while Title 24 covers building codes and the installation of energy and water efficiency appliances and deployment of efficient building features. Therefore, relying on only one set of regulations would be inconsistent with the CEC's mandate to end the wasteful use of energy set forth in Public Resources Code section 25402.
3.3	AEDM as "possible answer" - Table X, FEP_{act} Greenheck recommends adding Alternative Efficiency Determination Methods (AEDMs) as a "possible answer" in Table X, Section 1606 for FEP_{act}. Allowing AEDM as a "possible answer" for FEP_{act} will streamline compliance for manufacturers by aligning with existing federal certification allowances. Specifically, the Department of Energy permits AEDM usage for regulatory ratings under 10 CFR sections 429.69 and 429.70. Additionally, Footnote 3 in Table	Changes made to section 1606 Table X (D). The data fields: *"Is the model a Series Tested Fan?", "Associated Series Tested Fan Model Number"*, and *"Method used to determine FEPact of test method in section 1604(d)(2), (ANSI/AMCA Standard 214-21)"* are removed from the certification requirements listed in section 1606 Table X for commercial and industrial fans and blowers. This change means that information regarding AEDM use is not required to be submitted as part of the data submittal process, avoiding concerns regarding how AEDM usage would need to be reported to the CEC and ensuring products using an AEDM to determine characteristics are treated identically to other products.

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	D-3, Section 1604(d) of the CEC Title 20 regulations also provides for AEDM usage, stating: (See Figure 1) Allowing AEDM as a "possible answer" in Table X provides clarity and prevents confusion for companies selecting this methodology allowed under both DOE and Title 20 provisions. AEDM inclusion benefits manufacturers and the CEC through straightforward code interpretation while still meeting efficiency verification objectives.	Staff notes that the CEC remains able to request test reports from the manufacturer which will contain the relevant information on the use of an AEDM, if determined to be necessary for a compliance or enforcement action.
3.4	Greenheck urges review and incorporation of the practical, experience-based suggestions put forth by AMCA and AHRI around critical aspects of the proposed Commercial and Industrial Fans and Blowers regulations. As a leading manufacturer in the space, we fully support the associations' positions and believe addressing their counsel will lead to balanced rulemaking that spurs technology innovation while allowing companies to responsibly meet requirements. AMCA International and AHRI possess tremendous industry expertise and have provided technical guidance utilized in	No changes made. Comment acknowledged. All comments received will be reviewed and taken into consideration; staff's responses to the AMCA and AHRI comments are listed under their respective submitters.

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	establishing standards, building codes, and product rating procedures globally for decades. The input and feedback shared in their formal CEC commentary represent key stakeholder perspectives that warrant thoughtful analysis.	

Comment Number	Comments/ Suggested Revisions	Response
4.1	AMCA is concerned the proposed language's "possible answers" for FEPact in Table X do not include the reference to alternative efficiency-determination methods (AEDM) included in Footnote 3 of Title 20 Section 1604d Table D-3. As proposed, the possible answers are limited to 10 CFR Section 431.174 (Appendix A to Subpart J of Part 431) Table 1 (10 CFR Table 1) of the DOE test procedure. Ten (10) CFR Table 1 references sections of ANSI/AMCA Standard 214, *Test Procedure for Calculating Fan Energy Index (FEI) for Commercial and Industrial Fans and Blowers*, manufacturers can use to calculate fan energy index (FEI). The DOE excluded the sections of ANSI/AMCA Standard 214 for fans tested without drives. As a result, manufacturers must include drives when testing fans or use an AEDM for FEPact. Given the reference to AEDM in Table D-3 of the proposed language, AMCA believes it is the intent of the CEC to allow AEDM for FEPact for fans tested without drives. For clarity, AMCA proposes that AEDM be included in Table X as a possible answer for how FEPact is calculated.	(Same as comment 3.3) Changes made to section 1606 Table X (D) The data fields: *"Is the model a Series Tested Fan?", "Associated Series Tested Fan Model Number"*, and *"Method used to determine FEPact of test method in section 1604(d)(2), (ANSI/AMCA Standard 214-21)"* are removed from the certification requirements listed in section 1606 Table X for commercial and industrial fans and blowers. This change means that information regarding AEDM use is not required to be submitted as part of the data submittal process, avoiding concerns regarding how AEDM usage would need to be reported to the CEC and ensuring products using an AEDM to determine characteristics are treated identically to other products. Staff notes that the CEC remains able to request test reports from the manufacturer which will contain the relevant information on the use of an AEDM, if determined to be necessary for a compliance or enforcement action.

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5.1	The CEC's proposed updates to Title 20 Appliance Efficiency Regulations are essential to ensure consistency with federal text where federal regulations preempt the CEC from setting standards. These updates clarify intentional variations between state and federal standards where preemption is not an issue. The proposed administrative changes will improve clarity and compliance with these regulations. The U.S. Department of Energy (DOE) is engaged in proposing changes affecting many of the products and equipment in this update, including electric motors, air compressors, fans, commercial and central air conditioners and heat pumps, refrigeration equipment, and white goods. To ensure these federal standards remain in effect as state standards, and data collection and enforcement efforts persist for federally regulated products, we encourage the CEC to update Title 20 by the end of 2024 when DOE will finalize many of those rules.	No changes made. Comment acknowledged. Staff notes that the amendments to align with DOE included in this rulemaking were adopted prior to the end of 2024, consistent with the commenter's request, and staff will track additional federal action for inclusion in future alignment efforts.

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5.2	Air cleaners are newly regulated products that improve indoor air quality by removing, destroying, or deactivating particulates, pollutants, and microorganisms. DOE finalized a test procedure for air cleaners on March 6, 2023, and published a direct final rule establishing new energy conservation standards on April 11, 2023. DOE confirmed these standards on August 30, 2023, with the compliance date of December 31, 2023. DOE is creating a rulemaking to establish certification requirements for air cleaners. The proposed Title 20 updates do not include these newly regulated products. The CA IOUs recommend the CEC add air cleaners to the Title 20 regulations update. This inclusion will permit California to collect data through the Modernized Appliance Efficiency Database System (MAEDbS) and lock in energy savings for these products should the federal standard be repealed or become inoperable, inapplicable, or otherwise invalid as federal law.	No changes made. Staff acknowledge that it would be appropriate, if not preferable, to include air cleaners alongside other federally regulated appliances in the Title 20 Appliance Efficiency Regulations as a matter of consistency and uniformity. Due to the need for completion of this rulemaking with the publication of the many updates to Title 20, staff will not be able to further delay this proceeding by making the suggested changes. Staff will consider inclusion of air cleaners in the scope of Title 20 in potential future rulemaking. In the event the federal standard is repealed, staff will consider developing a state standard for this product class.
5.3	DOE last updated its efficiency standards for commercial pre-rinse spray valves in	Changes made to section 1605.3(h).

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	2016. In 2022, DOE issued a final determination that an amendment to the current standards is unnecessary because the risk of increased energy and water usage outweighs any potential benefits. CEC last updated its commercial pre-rinse spray valve regulations in 2018, incorporating the recently amended DOE standards for these products. At the time of that rulemaking, CEC updated the requirement for minimum spray force to align with the changes in the test procedure, which incorporated ASTM Standard F2324 and otherwise conformed to the federal rule. CEC's requirement that commercial pre-rinse spray valves have a minimum spray force of 4.0 ounces-force ensures proper performance for pre-rinse spray valves that fall into Product Class 1 category. Without this requirement, manufacturers of commercial pre-rinse spray valves could comply with the maximum flow rate by reducing spray force, thereby reducing the utility of the product and damaging the consumer experience with efficiency standards. DOE does not have any	Staff determined that federal preemption does not apply to the spray force requirement due, in part, to an explicit exemption from preemption. Staff therefore left in place the spray force requirement, consistent with this comment. No change is necessary.

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	minimum design requirements for these products. In this rulemaking, the CEC proposes eliminating the requirement for minimum spray force, stating that federal standards preempt these requirements. The CA IOUs recommend keeping the minimum spray force requirement, as the provision is not preemptive. Under the Energy Policy & Conservation Act (EPCA) (42 U.S.C. § 6297(c)(7)), California is exempt from preemption for "a regulation concerning standards for commercial pre-rinse spray valves adopted by the California Energy Commission before January 1, 2005," and an amendment to that regulation "that was developed to align California regulations with changes in American Society for Testing and Materials Standard F2324." In the 2018 rulemaking updates, the CEC design requirements for pre-rinse spray valves changed from a cleanability test to a minimum spray force requirement because: . . . the state 'cleanability' requirement is not a parameter in the current federal test procedure (10 C.F.R. section 431.264) for commercial pre-rinse spray valves.	

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	Instead, the federal test procedure calculates a spray force value, which is now reflected in the proposed changes to section 1605.3(h)(4)(A). California regulations adopted the amendment to the commercial pre-rinse spray valves with a provision for minimum spray force values before January 1, 2005, to align with changes in the applicable test procedure; therefore, CEC may maintain this requirement as an exception to preemption, as it did during its 2018 updates rulemaking.	
5.4	Title 20, Section 1606, Table X-P mandates manufacturers to report their consumer and commercial clothes washers' "remaining moisture content" (RMC). According to the MAEDbS product listing, manufacturers report this RMC as the uncorrected RMC derived from the test procedure. DOE requires manufacturers to provide the "corrected remaining moisture content" on the product certification report. DOE and CEC's databases do not require reporting of the test cloth lot, the information necessary to translate the uncorrected RMC to the corrected RMC. If the CEC proceeds with its proposed	Changes made to section 1606 Table X (P). The existing field named "*remaining moisture content"* will remain in place for both residential (consumer) and commercial clothes washers. Also, the new field *"corrected remaining moisture content"* will be added to both residential and commercial clothes washers. These fields align with the federal test methods for the respective appliance types; providing both fields maximizes transparency to consumers and other interested parties.

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	changes to require the corrected RMC instead of the uncorrected RMC, stakeholders will lose the sole source of determining the uncorrected RMC. DOE relied on this data to evaluate energy savings as part of the 2011 and 2022 clothes dryer energy-conservation standards analyses; therefore, the CA IOUs recommend that CEC continue to collect uncorrected RMC. As an alternative, we ask that CEC require reporting of the test cloth lot number (also part of the DOE test procedure) in addition to the corrected RMC so that stakeholders may calculate the uncorrected RMC. The proposed language appears to Impact only the commercial clothes-washer data submittal requirements. The CA IOUs recommend the CEC treat consumer and commercial clothes washers equally with this reporting requirement.	
5.5	The CA IOUs understand the preemptive effect of the amended federal test procedure under 42 U.S.C. § 6297(a) is a driving factor behind the CEC's proposed changes to its television regulations. The CEC's regulatory advisory also states that manufacturers are not able to certify compliance for televisions sold in	No changes made. Staff determined that the updated federal test method does not generate the data necessary to determine compliance with existing television standards. A requirement to enter standby after 15 minutes (or any length of time) would need to be verified through testing that documents compliance with the requirement. The creation of new or modified performance standards for televisions is outside the scope of this rulemaking, and staff is not able to

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	California due to modifications to the federal test procedure. However, CEC's current standards, which require televisions sold in California to automatically enter standby mode after 15 minutes of inactivity, could still be enforced, as no testing is needed, and the test procedure uses consistent terminology with this requirement. The "standby mode" may refer to all three standby modes identified in the test procedure: "Standby with Smart Wake Enabled," "Standby with Internet Connection," and "Standby without Internet Connection," as defined in CTA-2037D. A reporting requirement inserted into Table X could enforce this requirement without requiring any testing. This modification would preserve the portion of the CEC's television standard that requires televisions to reduce power consumption when not in use. It would also encourage television manufacturers to continue improving the efficiency of their products with minimal economic impact. The CA IOUs recommend preserving this requirement. Our proposed changes to section 1605.3(v)(3) are (using underline	adopt modification to the federal test that supports the prior standby requirement. Staff will consider inclusion of minimum standards for televisions, based on the data generated by the federal test method, in potential future rulemaking.

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	and strike out for CEC's proposed text, and blue double underline and red strike-out for our proposed changes): (3) Televisions and Signage Displays Manufactured On or After January 1, 2011. In addition, televisions and signage displays manufactured on or after January 1, 2011, shall meet the requirements shown in sections 1605.3(v)(3)(A), 1605.3(v)(3)(B), and 1605.3(v)(3)(C) of this Article. (A) A television or signage display shall be capable of automatically entering TV standby ~~passive~~ ~~mode or standby-active~~ mode after a maximum of 15 minutes without video or audio input on the selected input mode. (B) A television or signage display shall enter TV standby-passive mode when turned off by remote or integrated button/switch. (C) The peak luminance of the product in "home" mode, or in the default mode as shipped, shall not be less than 65% of the peak luminance of the "retail" mode, or the	

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	brightest selectable preset mode, of the product. . . . EXCEPTION 2 to Sections 1605.3(v)(2), 1605.3(v)(3)(B), and 1605.3(v)(3)(C) of this Article: The standards found in sections 1605.3(v)(2), 1605.3(v)(3)(B), and 1605.3(v)(3)(C) of this Article do not apply to televisions within the scope of 10 C.F.R. section 430 and manufactured on or after September 11, 2023. Our proposed changes to section 1606(a), Table X-V, are to add the following: (See Figure 2)	
5.6	As indicated in its regulatory advisory, the CEC intends to analyze amended efficiency standards for televisions. The CA IOUs recommend modifying Section 1606(a), Table X-V to include the following information for televisions manufactured on or after September 11, 2023, and within the scope of 10 C.F.R. section 430) to better position the CEC to conduct a thorough analysis:	Changes made to section 1606 Table X (V). Staff added fields to the data submittal requirements for televisions within the scope of 10 C.F.R. section 430, consistent with this commenter's request.

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	• **Screen Resolution**: We recommend using the “pixels (horizontal) x pixels (vertical)” format for possible answers, e.g., a 4K display can have a resolution of 3840 x 2160 or 4096 x 2160. This recommended format ensures precise technical specifications of television differences that could affect their efficiency and avoids reporting ambiguity. • **High Dynamic Range (HDR) capable**: In HDR display technology, three main formats exist: HDR10, HDR10+ and HLG. A television might support a single or multiple HDR formats. As HDR10 is the chosen format for test clips used in CTA-2037, an HDR-capable television that does not support HDR10 will be unable to playback the HDR10 test clips. Therefore, we recommend using the term “HDR10 capable” for clarification. • **On-Mode power and Dynamic Luminance (when Automatic Brightness Control (ABC) is enabled by default):** We recommend including measurements under all ambient light conditions (140 lux, 50 lux, 17 lux, 4 lux)	

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	instead of focusing solely on the 50-lux light condition. Extending the analysis beyond the common lighting condition of 50 lux would make the data more representative of real-world use cases, enabling a more complete understanding of potential efficiency metrics. As all lighting conditions are measured and recorded under the amended federal test procedure, requesting this additional data would not have any economic impact on manufacturers or increase their test or reporting burden. • **Power Consumption in Standby mode:** Under the amended federal test procedure, power consumed in standby mode power is measured based on the status of the internet and smart wake features. Consequently, consumption data is recorded in one mode only, which is associated with one of the three labels: “Standby with Smart Wake Enabled,” “Standby with Internet Connection,” and “Standby without Internet Connection.” We advocate for a single data entry to represent power consumption in standby mode. The additional proposed data entries, namely “Smart Wake Capable”	

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	and “Internet Connection Capable,” would furnish information to identify the condition of the standby mode.	
5.7	Should the CEC adopt Exception 2 to Section 1605.3(v)(2) and 1605.3(v)(3)—an addition made in response to DOE’s test procedure federally preempting the established CEC test procedure standard—it would lead to a lack of efficiency requirements for new televisions. In practical terms, this means televisions exhibiting high power consumption in On and Standby Modes and devoid of power-saving features would be permitted entry into the California market. To avoid a sudden influx of highly inefficient televisions in California, the CA IOUs suggest that the CEC promptly initiate an Order Instituting Rulemaking or an Order Instituting Informational Proceeding to provide stakeholders and the public with a detailed schedule for revised energy efficiency standards. A well-defined timeline would emphasize the importance of energy efficiency in televisions, motivating manufacturers to uphold energy efficiency features even	No changes made. Staff determined that the updated federal test method does not generate the data necessary to determine compliance with existing television standards, necessitating a sunsetting of said standards. The creation of new or modified California performance standards for televisions is outside the scope of this rulemaking. Staff will consider inclusion of minimum standards for televisions, based on the data generated by the federal test method, in potential future rulemaking (consistent with the commenter’s request).

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	without standards. Simultaneously, it would demonstrate the CEC's dedication and prioritization toward this product, otherwise known for high-energy consumption. The CA IOUs acknowledge that this recommendation for an additional rulemaking proceeding might exceed the boundaries of this rulemaking. Nonetheless, we hope that CEC appreciates the value of taking this unusual step to ensure that its efforts to improve television efficiency continue to yield benefits for the state.	
5.8	The proposed regulatory language for section 1604(d)(1), in Table D-3, provides for the use of an AEDM for purposes of testing commercial and industrial fans and blowers: 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 and 429.70. However, in Section 1606(a), Table X-D, the "Possible Answers" for "Method used	(Same as comment 3.3) Changes made to section 1606 Table X (D). The data fields: *"Is the model a Series Tested Fan?", "Associated Series Tested Fan Model Number"*, and *"Method used to determine FEPact of test method in section 1604(d)(2), (ANSI/AMCA Standard 214-21)"* are removed from the certification requirements listed in section 1606 Table X for commercial and industrial fans and blowers. This means that information regarding AEDM use is not required to be submitted as part of the data submittal process, avoiding concerns regarding how AEDM usage would need to be reported to the CEC and ensuring products using an AEDM to determine characteristics are treated identically to other products.

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	to determine FEP_{act} [Fan Electrical Power] of test method in Section 1604" for commercial and industrial fans and blowers does not include the ability to certify using an AEDM. Additionally, the proposed change to the text in the "possible answer to this provision" removes the explicit references to Sections 6.1, 6.2, 6.3, and 6.4 in AMCA 214-21, Test Procedure for Calculating Fan Energy Index (FEI) for Commercial and Industrial Fans and Blowers (AMCA 214). Instead, the text refers the user to Table 1 of Appendix A to Subpart J of 10 CFR 431, which permits using those same sections of AMCA 214. The CA IOUs suggest listing the AMCA 214 sections in Table X, making this clearer for Title 20 readers. Finally, the CA IOUs propose that if the CEC requires manufacturers to include the name of the AEDM, it provides a separate text field specifically for that name. We note that DOE does not require reporting the name of the AEDM. Our proposed changes based on the above recommendations are:	As noted by the commenter, staff finds that this approach is also more consistent with DOE reporting requirements.

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	(See Figure 3)	
5.9	DOE is currently undertaking a rulemaking to establish energy conservation standards for commercial and industrial fans and blowers. In DOE's pre-publication notice of proposed rulemaking (NOPR), DOE proposes to set the minimum Fan Energy Index (FEI) at higher than 1.00 for most fan classes. Under EPCA, manufacturers ordinarily cannot make representations of test results that are inconsistent with DOE's test procedures. In the May 2023 Final Rule establishing test procedures for commercial and industrial fans and blowers, DOE clarified that upon the effective date of energy conservation standards, "Manufacturers would not be allowed to publish performance data at non-compliant operating points." However, in the December 2023 pre-publication NOPR, DOE proposes to allow representations at non-compliant duty points, provided that the representation includes a disclaimer that sale at those duty points violates EPCA and grays out at those duty points in tables or graphs.	No changes made. The federal rulemaking is not final and the current draft language indicates that any adopted changes will not be effective until five or more years from publication. Staff therefore finds it appropriate to maintain the fields previously adopted supporting a state disclosure of maximum thresholds for an FEI of one or greater, at least until such time as DOE requirements are finalized. Staff does not find that adoption of the proposed language allowing for substitution of a federal FEI value to be appropriate at this time, as the risk of confusion, in part by implying existence of federal requirements that may not see adoption or may not be effective for many years, outweighs the benefit of avoiding the need to include appropriate language in future rulemaking, (Staff anticipates engaging in multiple rulemaking efforts in the upcoming five years.) Staff is able to revisit the language in a future rulemaking once the final language by DOE is published and prior to that language's effective date in order to avoid commenter's concerns regarding confusion among the industry.

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	Title 20, Section 1607(d)(16), requires manufacturers to provide a label showing the maximum airflow, maximum pressure, and maximum speed at which the Fan Energy Index is greater than or equal to 1.00. Although DOE would allow for these representations even where the federal standard is set higher than an FEI of 1.00, the representations would need to include the additional disclaimers required by DOE, adding complexity to the label and potentially leading to customer confusion. Therefore, to align CEC's labeling requirements with potential future federal standards, the CA IOUs recommend the CEC amend the marking requirements to allow manufacturers to substitute the federal FEI minimum once federal energy conservation standards take effect. This would still allow manufacturers to make other representations consistent with DOE's proposal provided that the manufacturer includes the additional disclaimers that DOE would require, but would maintain simplicity in CEC's label by aligning with the federal FEI standards to achieve the CEC's goal of providing	

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	important efficiency information to customers. Our proposed changes are: (16**) Commercial and Industrial Fans and Blowers**. Each commercial and industrial fan or blower, manufactured on or after ~~November 16, 2023~~ April 29, 2024, shall be marked, permanently and legibly on an accessible and conspicuous place on the unit, ~~in characters no less than ¼ inch in~~ ~~tabular form~~ (as shown below): (A) For Commercial and Industrial fans and blowers the label shall include the following information: Fan Energy Index ≥ 1.00 Efficiency boundaries; a. maximum air flow (CFM); b. maximum fan speed (RPM); c. maximum pressure (inches water gauge); and d. type of pressure (“static” or “total”). NOTE: Operation outside of these boundaries will result in an energy inefficient operation. (B) If the fan or blower is subject to a federal energy conservation standard, and the minimum Fan Energy Index is greater	

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	than 1.00, manufacturers shall be permitted to substitute that value.	
5.10	Section 1605.1(f)(3)(B) and Table F-5 contain the federal standards for residential-duty commercial water heaters. Although the CEC proposes to update the references to the commercial water heater standards in this rulemaking, the CEC omits to include the updated standards for gas-fired residential-duty commercial water heaters, which apply to equipment manufactured on or after October 6, 2026. The CA IOUs recommend that CEC update Table F-5 of Section 1605.1(f) to be consistent with DOE's final standards, as follows: (See Figure 4) Oil-fired storage and electric instantaneous residential-duty commercial water heaters have the same efficiency standards, so no further changes are needed to the table or the footnotes.	No changes made. While investigating this suggested change, staff determined that it is not only residential-duty commercial water heaters with updated federal standards going into effect in October 2026, but commercial water heaters generally. The scale of changes needed to incorporate these upcoming standards is large and would include potential changes to Tables F-3, F-4, F-5, multiple subsections throughout section 1605.1(f), and both terminology and cross reference updates in sections 1605.2(f), and 1605.3(f). New terminology defining several subtypes of commercial water heater are introduced, including ““circulating water heater, “tabletop water heater, “low-temperature water heater”, and ““split-system heat pump water heaters”; staff would need to amend the scope specified in Section 1601 to incorporate some or all of these terms in order to ensure all regulated federal products are within the scope of California’s regulations. The scope and scale of these amendments far exceeds those of the other changes proposed for this rulemaking, necessitating the need to include these updated federal standards in a future rulemaking prior to the October 6, 2026, effective date.

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5.11	The proposed regulatory text contains minor discrepancies and errors from translating between the federal regulations and Title 20. These include the following: **a.** Section 1602(c) contains a new definition for "Alternative efficiency determination method" or AEDM for central air conditioner or central heat pump. However, the metrics included under that AEDM (IEER, COP, SCOP) are not applicable to central air conditioners or central air conditioning heat pump AEDMs. In addition, there is no definition in the text for a "central heat pump," which instead is described as a "central air conditioning heat pump." The CA IOUs recommend clarifying the language to either apply to a broader scope of consumer and commercial products or to remove the examples that are relevant to commercial, but not consumer, products.	Changes made to section 1602(a) and (c). This proposed new definition has been removed from section 1602(c). Rather than creating appliance-specific definitions, staff drafted a general AEDM definition in section 1602(a). Staff finds that this addresses the commenter's concern regarding scope, while also providing additional clarity to readers.
5.12	**b.** In section 1602(d), the term "High-speed small-diameter (HSSD) ceiling fan" should have a period at the end of the sentence.	Change made to section 1602(d). A period has been added, consistent with the commenter's observation.

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5.13	**c.** In section 1602(d), the term “Safety fan” references AMCA 240.15 instead of AMCA 240- 15.	Change made to section 1602(d). The period has been changed to a hyphen, consistent with the commenter’s observation.
5.14	**d.** In section 1605.1(c)(1), the CA IOUs recommend the following changes to Table C-3: (See Figure 5) The rationale for modifications to restore the SEER requirements to 14 is located in 10 C.F.R. § 430.32(c)(3), as emphasized: In addition to meeting the applicable requirements in paragraph (c)(1) of this section, products in product classes (i) and (iii) of paragraph (c)(1) of this section (i.e., split systems—air conditioners and single-package units—air conditioners) that are installed on or after January 1, 2015, and before January 1, 2023, in the States of Arizona, California, Nevada, or New Mexico **must have a Seasonal Energy Efficiency Ratio (SEER) of 14 or higher** and have an Energy Efficiency Ratio (EER) (at a standard rating of 95 °F dry bulb outdoor temperature) not less than the following: [Table omitted.] The changes to consolidate split-system heat pumps are for clarity only to match the federal tables.	Changes made to section 1605.1(c)(1). Made changes to Table C-3 by correcting one of table cells to accurately reflect the federal standards, removing duplicate text, correcting a typo, and updating the footnote text to clarify the federal installation requirement for these units. These changes incorporate the updated information requested by the commenter.

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5.15	**e.** In section 1606(a)(4)(j), the provision should refer to “central air conditioning heat pumps” instead of “central heat pumps” for consistency with defined terms.	Changes made to sections 1606(a)(4)(A)4.i. and j. Rather than including appliance specific text regarding the use of AEDMs, subsection i. is amended to describe general use of an AEDM, for any relevant appliance. Subsection j is therefore removed. Staff finds that this addresses the commenter’s concern regarding terminology, while also providing additional clarity to readers.
6.1	Section 1602. Definitions (a) General. • Distributor. The Department of Energy’s (DOE) definition of Distributor is more specific than what CEC has proposed. DOE only includes a definition in 42 U.S. Code § 6291 and it is specific to consumer products, “(14) The term “distributor” means a person (other than a manufacturer or retailer) to whom a consumer product is delivered or sold for purposes of distribution in commerce.” A similar definition is not included in the federal commercial/industrial counterpart (Part A-1 – 42 U.S. Code § 6311) definitions. DOE’s definition is limited to consumer products for the purposes of CAC/HP	No changes made. The CEC’s proposed definition of *“distributor”* is not required to align with the federal statutory definition. Staff’s definition of the term “*distributor*” includes the concept of fulfillment to account for e-commerce entities mediating the sale of products from sellers who outsource the actual selling process and logistics. This will ensure a fair market place and by preventing non-compliant products from being moved through intermediary companies to end users in California consistent with the enforcement requirements of sections 1608 and 1609.

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	Regional Standards Enforcement. If Distributor is referenced for any other commercial/industrial product other than “Commercial pre-rinse spray valve” (Title 20 1602 (h)), then AHRI requests CEC reconsider the proposed changes and harmonize with the DOE.	
6.2	(c) Air Conditioners, Air Filters, and Heat Pump Water-Heating Packages • **Alternative efficiency determination method (AEDM).** AHRI is confused by the addition of a definition for AEDM with metrics for consumer central air conditioner (CAC) or heat pump (HP). AEDMs are used in lieu of actual testing to simulate the energy consumption or efficiency of certain basic models of covered equipment under DOE's test procedure conditions, not just CAC/HP. Title 20 currently has two definitions for AEDM – one specific to electric motors and one for state-regulated compressors. 10 CFR § 429.70 includes provisions for use an AEDM in §§ 429.14 through 429.69, which includes products beyond consumer CAC/HP. Indeed, in proposed regulatory language, Section 1604 (c)(1), AEDM is included in new underlined text,	(Same as comment 5.11) Changes made to sections 1602(a) and (c). This proposed new definition has been removed from section 1602(c). Rather than creating appliance specific AEDM definitions, a new general AEDM definition is now proposed to be added to section 1602(a).

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	"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, 429.16, and 429.70." All products in Table C-1 are permitted to use AEDMs, but there are many different metrics. Footnote 3 to Table D-3 also cites AEDMs for commercial and industrial fans and blowers. Fans do not use the same metrics as CAC/HP, so there is a conflict between the footnote and the narrowly proposed AEDM definition.	
6.3	AHRI recommends CEC adopt a definition for Commercial HVAC, Refrigeration, and WH Equipment AEDM that does not reference specific product metrics. AHRI notes that AEDMs are also permissible and critical for commercial fan representations. Should CEC opt to include product-specific AEDM definitions, there should be one for commercial fans as well to support text included in Footnote 3 to Table D-3.	(Same as comment 5.11) Changes made to sections 1602(a) and (c). This proposed new definition has been removed from section 1602(c). Rather than creating appliance specific AEDM definitions, a new general AEDM definition is now proposed to be added to section 1602(a).

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6.4	Direct expansion-dedicated outdoor air system (DX–DOAS). AHRI supports the proposed DX-DOAS definition, but notes it is a subcategory of *Unitary dedicated outdoor air system*, or *unitary DOAS*. In 10 CFR § 431.92, DOE defines *unitary DOAS* to be *"*a category of small, large, or very large commercial package air-conditioning and heating equipment that is capable of providing ventilation and conditioning of 100- percent outdoor air and is marketed in materials (including but not limited to, specification sheets, insert sheets, and online materials) as having such capability." AHRI recommends adding a definition for unitary DOAS or including the requirements for capability of providing ventilation and conditioning of 100-percent outdoor air and marketing in the DX-DOAS definition to be completely consistent with DOE.	Change made to section 1606(c). Staff added the federal definition of *"unitary dedicated outdoor air system"* to align with federal law, consistent with the commenter's recommendation.
6.5	(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 or Blowers	No changes made. Staff appreciates the commenter's support for the noted regulatory language.

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	• **Commercial and industrial fan or blower.** AHRI supports the proposed modifications to the definition, particularly as it relates to embedded fans (1)(I) and (1)(J). These two exceptions clearly maintain CEC's existing regulatory scope. Embedded fans have complex testing, labeling, and enforcement implications. Further, the data from fan suppliers to properly evaluate impact on embedded fans is not yet available. AHRI also appreciates CEC's attention to the continued exclusion of replacement embedded fans in (1)(J). Existing HVACR and water-heating equipment is built, tested, and certified as a completed design that is reliant on a specific set of components. Continued access to replacement embedded fans is critical to California consumers and businesses.	
6.6	Section 1605.1. Federal and State Standards for Federally Regulated Appliances. **Table E-4. Standards for Commercial Boilers.** Several categories of products, such as Oil-fired Steam Boilers > 2,500,000 Btu/h have federal standards not reflected in Title 20. On September 19,	Formatting changes made to section 1605.1(e) Table E-4. DOE updated the boiler standards in 2020. Title 20 was not updated to reflect those new standards at that time. DOE then rescinded their updated standards before staff was able to update Title 20. This means that the standards present in Title 20 are once again in effect. As a result, staff determined that the existing standards shown in Title 20 align with current federal law.

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	2023, DOE issued a technical amendment final rule for Energy Conservation Standards for Commercial Packaged Boilers with current federal standards. AHRI recommends modifying Table E-4 to properly reflect federal standards for commercial boilers in Title 20.	However, an unrelated minor formatting change has been made to Table E-4. Now unmerging some of the cells to help prevent formatting issues when published.
6.7	Section 1606. Filing by Manufacturers; Listing of Appliances in the MAEDbS. **Table X. Data Submittal Requirements.** AHRI appreciates work by CEC staff to harmonize MAEDbS with DOE federal certification requirements and encourages this to continue. DOE recently solicited stakeholder feedback in response to the September 29, 2023 Notice of Proposed Rulemaking (NOPR) on Certification Requirements, Labeling Requirements, and Enforcement Provisions for Certain Consumer Products and Commercial Equipment, Docket No. EERE-2020-BT-STD-0007. Of the many products DOE sought feedback on, AHRI members manufacture Air Cleaners; Central Air Conditioners and Heat Pumps (CAC/HP); Pool Heaters; Computer Room Air Conditioners (CRAC); Direct Expansion-Dedicated Outdoor Air Systems (DX-	No changes made. The CEC is obligated under the Administrative Procedures Act to complete rulemakings in a 1-year window. Staff determined that it would be better to create as much alignment as possible with federal regulations as they exist now, via adoption of the proposed language, than to delay alignment until all pending DOE actions are concluded and in doing so risk needing to restart the rulemaking process. Staff can address future DOE actions in future rulemakings.

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	DOAS); Air Cooled; Three-Phase, Small Commercial Air Conditioners and Heat Pumps with a Cooling Capacity of Less Than 65,000 Btu/h (3-ph Small CAC/HP) and Air-Cooled, Three-Phase, Variable Refrigerant Flow Air Conditioners and Heat Pumps with a Cooling Capacity of Less Than 65,000 Btu/h (3-ph Small VRF); Commercial Water Heating Equipment (CWH); Automatic Commercial Ice Makers (ACIM); Walk-In Coolers and Freezers (WICF); and Single Package Vertical Units (SPVU). We recommend that CEC publish 15-day language after DOE has published the final rule so that federal and state certification submissions are harmonized. AHRI comments, submitted November 28, 2023, are attached for reference.) (Link to full comment to view AHRI letter to DOE TN#253827)	
7.1	Within section 1605.3 State Standards for Non-Federally Regulated Appliances, it is unclear why section 1605.3(k)(1)(A) is to be maintained given that it refers solely to dates before January 1, 2020. This is likely a simple oversight; we recommend it be removed.	Change made to section 1605.3(k)(1)(A). Staff removed the historical state standards (including the existing Table K-8) for general service lamps that were in effect before January 1, 2020, consistent with the commenter's recommendation. Staff determined that there is no longer a need for, or benefit to, retaining this section's language given that it is no longer in effect.

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7.2	Within section 1606(i) Retention of Records, the proposal to move unconfirmed products from the Approved MAEDbS to the Archived MAEDbS after ten years is sensible. Presumably CEC will inform manufacturers of currently certified products about the new policy. We request that manufacturers also be made aware of this record retention plan upon certifying new products and provided at least 30 days' notice prior to product archiving.	No changes made. Regulatory language was not determined to be necessary to include notifying language in public-facing materials that appliances are listed for ten years by default, and staff will include notification language in its online submittal system and in instruction files. Staff notes that part of the purpose and necessity of this change is to remove dependency on manufacturers for data maintenance. Notice may not be possible to provide for manufacturers who cease to exist as business entities or fail to maintain accurate contact information. A regulatory requirement to provide separate notice immediately prior to archiving would therefore be contrary to the intent of the change, as it could create a situation where staff are unable to archive records because they cannot contact the manufacturer. With that said, staff will explore use of existing tools to generate routine, automatic communication to manufacturers when these database actions are triggered.
7.3	Within section 1607 Marking of Appliances, NEMA members question the continued incorporation by reference of the *California Energy Commission Voluntary California Quality Light Emitting Diode (LED) Lamp Specification (December 2017)*. It is unclear to us what purpose this serves. We encourage CEC staff to review the *Purpose of the Updated*	Changes made to section 1607(d)(12)(E) and to the section 1607 Documents Incorporated by Reference. Section 1607(d)(12)(E) requirement has been removed, consistent with the commenter's recommendation. As a result of this change, staff also removed the document *"California Energy Commission Voluntary California Quality Light Emitting Diode (LED) Lamp Specification (December 2017)"* from the list of documents incorporated by reference.

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	Specification section within the 2017 document and clarify during this rulemaking process the purpose of this document with regards to regulating the California lamp market. If the purpose is not clear, we ask that the reference be removed.	
7.4	The Commission provides a mailing address to obtain a copy of the *Quality* specification, but accessing the document online is far more likely. Searching the internet for this document currently produces multiple versions hosted on the www.energy.ca.gov website, published on several dates from 2014 onward. Below the Abstract section, the December 2017 version (labeled "3.1") includes the following citation, which, if incorporated, would lend appropriate specificity to the subject regulatory language: Soheila Pasha, Peter Strait, and Patrick Saxton. 2017. Voluntary California Quality Light-Emitting Diode (LED) Lamp Specification 3.1. California Energy Commission. Publication Number: CEC-400-2017-015-SF.	Changes made to section 1607 Documents Incorporated by Reference. This document reference has been removed. (See response to comment 7.3)

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7.5	Since the 8 July 2022 effective date of the Department of Energy's ruling on definitions for general service lamps, NEMA members have faced an unresolved problem certifying lamps through the Commission's MAEDbS. The origin of the problem is the California statute itself, thus the current rulemaking presents an opportunity for the Commission to make necessary corrections. Within section 1606(a) Filing of Statements, clause (4) Declaration begins: "(A) 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;" NEMA members take regulatory compliance seriously and need no direction to provide truthful, complete, accurate and compliant information to federal and state regulators. Penalties for failing to do so in California are made clear in the statute, above. Effectively requiring lamp manufacturers to certify (incorrectly) that any and all lamps	Change made to Table X (A). For the field *"Regulatory status"* within *"All Appliances"*, *"other"* has been added as a new possible answer for this field. *"Other"* will help to distinguish appliances subject to unique regulatory statuses that are not covered under the existing options, consistent with resolving the issue expressed by the commenter. The option of "other" will permit staff to accurately specify their regulatory status in documents and forms, and will also address other unique or unusual circumstances (for example, voluntary early reporting of data). Staff's rationale is fully explained in the Final Statement of Reasons for the addition of the "Other" status code to Table X. Staff notes that 42 USC Section 6295(i)(6) provides express language with respect to California regarding federal preemption of standards for general service lamps, and that the commenter's recommendation to amend Title 20 language to exclude general service lamps from the definitions of "state-regulated light emitting diode (LED) lamp" and "state-regulated small diameter directional lamp" would potentially not be accurate with respect to California's ability to apply state regulations to general service lamps. Staff therefore determined that allowing a description of regulatory status specific to these products was a more appropriate remedy than potentially inaccurately deeming these products not to be subject to state regulations.

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	presented to the Commission for certification in its database are “Non-Federally Regulated” has become status quo for the MAEDbS, at the direction of CEC staff. Requiring manufacturers to declare to the Commission what they know to be untrue is an untenable situation that the Commission should rectify immediately. Central to this concern is what appears to be CEC staff confusion on the topic of federal preemption. A recent NEMA member attempt at certifying two lamp types known to be federally regulated general service lamps generated MAEDbS error messages directing the user to recode their lamp entries using Code N. Indeed, this is codified in the Commission’s instruction documents as detailed in Figures 1 and 2. (See Figure 6a and Figure 6b) With the MAEDbS current build: version 3.0.24, deployed 04/24/2023 and accessed on the MAEDbS account login page today, Code N is the only option available to an MAEDbS user attempting to certify a lamp to CEC; as shown above, “other entries not shown in the table… will be unsuccessful.”	

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	Consequently, all users are made to choose between declaring federally regulated general service lamps as "non-federally regulated", or not certifying their lamps for sale in the State of California at all. This is a choice with no correct answer, creating not only regulatory confusion but putting our members at legal risk. It should be remedied immediately.	
7.6	NEMA member outreach to Commission staff for clarification on the above MAEDbS problem generated two conflicting responses. The Commission's representative responded that federally regulated lamps need not be reported in the database as per the exceptions listed in Section 1606(a) including "4. general service lamps". Yet in the same response, staff stated that "*State-regulated Small Diameter Directional Lamp and State-regulated Light Emitting Diode, are state regulated product types and as such MUST be submitted as "Non-federally Regulated."* " Our member then attempted to confirm: "*The two lamps I was attempting to certify are general service lamps and federally regulated, so even though one is an LED*	Changes made to Table X (A). See response to comment 7.5. Upon adoption and full implementation of this proposed rulemaking, these lamps will be able to select *"other"* as the regulatory status when certifying the information to MAEDbS.

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	lamp and the other is a small reflector lamp I don't need to certify anything in MAEDBs prior to sale for use in the State." The response received pointed again to the State's definitions of *State-regulated Small Diameter Directional Lamp* and *State regulated Light Emitting Diode Lamp*.	
7.7	The State's two definitions (*State-regulated Small Diameter Directional Lamp* and *State-regulated Light Emitting Diode Lamp*) currently overlap the scope of federal general service lamp definitions. In the Proposed Regulatory Language for Title 20 Update document, the proposed amendments to section 1602(k) skip over these definitions. A straightforward remedy is available, inserting the underlined bolded text into those existing definitions as follows: "State-regulated Light Emitting Diode (LED) lamp" means a lamp capable of producing light with Duv between -0.012 and 0.012, and that has an E12, E17, E26, or GU24 base, including LED lamps that are designed for retrofit within existing recessed can housings that contain one of the preceding bases. State-regulated LED	No changes made. These state-regulated lamps fall within the federal definition for *"general service lamp"*. It is true that there is overlap; for this reason, staff provided an additional code for regulatory status to account for their unique context. However, these products must comply with state performance standards. The existing definitions in Title 20 are therefore accurate, and amending them as suggested by the commenter would not be accurate.

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	lamp does not include a **general service lamp or** a lamp with a brightness of more than 2,600 lumens or a lamp that cannot produce light with a correlated color temperature between 2200K and 7000K. “State-regulated small diameter directional lamp” means a directional lamp that meets all of the following criteria: (1) Capable of operating at 12 volts, 24 volts, or 120 volts; (2) Has an ANSI ANSLG C81.61-2009 (R2014) compliant pin base or E26 base; (3) Is a non-tubular directional lamp with a diameter of less than or equal to 2.25 inches; (4) Has a lumen output of less than or equal to 850 lumens, or has a wattage of 75 watts or less; and (5) Has a rated life greater than 300 hours. State-regulated small diameter directional lamp includes incandescent filament, LED, and any other lighting technology that falls within this definition. State-regulated small diameter directional lamp does not include **general service lamps or** directional	

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	lamps with an E26 base that utilize light emitting diodes (LEDs) and are covered under the definition of state-regulated Light Emitting Diode Lamps." Amending these definitions in this manner would properly scope in only lamps that are outside of the federal definition. This is a straightforward modification consistent with other proposed changes in the current rulemaking that would allow the Commission to maintain its scope outside of the federal definition including lower output lamp types (*i.e.*, under 310 lumens) and recessed downlight retrofit kit products. Consistent with a central tenet of the Energy Policy and Conservation Act of 1975 that federal regulations preempt states from regulating the same products, NEMA manufacturers seek regulatory certainty to support the continuing development of lighting products serving the needs of California consumers. Through its proposed amendments, the Commission has clearly articulated other product categories for which it considers state regulations to have been preempted by federal regulations. For general service	

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	lamps, a clear declaration of preemption by the CEC, or, barring that, the definitional changes recommended above would provide the regulatory certainty manufacturers need to confidently introduce better lamp products in the California market and accurately certify those products to the Commission beforehand.	
7.8	Noting the Commission's recent decision to deregulate portable luminaires, and given the exceedingly few lamp types not regulated by the Department of Energy, CEC now has an opportunity before it to begin redirecting resources away from regulating lamp markets. The CEC, DOE, EPA, and NEMA member manufacturers, along with other entities have transformed these markets with nearly all products now based on solid-state lighting technologies. With no other technologies in development to provide additional energy savings or other benefits beyond those afforded by solid-state lighting, there is a strong argument to redirect California taxpayer resources to other product categories with much greater energy savings potential than lighting products.	No changes made. The repealing of state lighting regulations is not in the scope of this current rulemaking but can be considered for future rulemaking efforts.

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7.9	The procedural timing of this rulemaking has raised concern among NEMA members that we missed procedural steps or communications that would have provided more advanced notice of CEC's proposed amendments docketed on 20 November. The publication of such proposals immediately before Thanksgiving with a comment period concluding shortly after the new year makes it very challenging for regulated parties – NEMA members included – to carefully consider the proposals and offer thoroughly and thoughtfully developed commentary. Likewise, scheduling the public hearing after closure of the public comment period eliminates manufacturers' ability to glean new understanding from the public hearing that might better inform their submitted comments. Prior to publication of the proposed amendments, were other public communications on this rulemaking issued since the Order Instituting Rulemaking was published in mid-September 2022? What is the reason for holding the public hearing after closure of the public comment period, and should	No changes made. The process followed for this rulemaking is like other CEC rulemaking proceedings and compliant with the Administrative Procedures Act. This rulemaking started with an order from the CEC issued at the September 14, 2022, business meeting to consider updating the CEC's regulations to among other things, update language to comport with recent changes to federal standards. The order was publicly docketed on September 16, 2022, which facilitated public awareness of the proceeding. Because most of the changes are related to incorporating federal language and none of the changes are related to the development of new state efficiency standards or test methods, staff determined that extensive pre-filing engagement with stakeholders, conducting a workshop, or the drafting of a staff technical report was not necessary because any inaccuracies of the proposed federal text could be adequately address during the required comment periods. The 45-day comment period ran from November 24, 2023, through January 8, 2024, with a 15-day comment period covering March 8, 2024, through March 24,2024. In addition to the comment periods, stakeholders had an opportunity to provide comments at the public hearing on January 9, 2024, and the business meeting where the regulations were adopted on April 10, 2024. Consistent with Government Code section 11346.8, the CEC typically holds the public hearing after the end of the comment period to provide time for the public to be able to review the rulemaking information and formulate relevant comments at the

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	manufacturers expect this reordering in the future?	hearing. This also allows staff to understand issues in advance of the public hearing. For more complex rulemakings that entail developing standards and test methods for a new class of products, CEC staff may hold one or more workshops in advance of or during the comment period.
8.1	ALA's twenty-three ceiling fan manufacturing members design, engineer, test, source, market and sell the majority of small-diameter residential ceiling fans. These manufacturers are committed to exceeding consumer expectations with regards to style, design, utility and efficiency. As it relates to efficiency, ALA's members are dedicated to preserving and expanding access to ceiling fans for families with middle and fixed incomes, especially in California. The ability to be successful in those efforts is determined by the number of regulatory burdens that industry must deal with. By harmonizing the definitions, test procedures, efficiency standards and certification requirements with those already finalized by the U.S. Department of Energy, the Commission has effectively ensured the opportunity for manufacturers	No changes made. General comment of support.

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	to be successful in meeting the needs of consumers. ALA commends the Commission for not increasing the regulatory burdens on ceiling fan manufacturers and for recognizing the federal preemption for ceiling fans.	
8.2	ALA agrees with and supports the comments submitted by AMCA regarding commercial and industrial fans and blowers. Furthermore, ALA supports the comments NEMA submitted regarding a multitude of topics from the proposal. ALA urges the Commission to review these comment documents carefully and to address the concerns raised by both organizations.	No changes made. Comment acknowledged. All comments received will be reviewed and taken into consideration; staff's responses to the AMCA and NEMA comments are listed under their respective submitters.
9.1	As an overarching recommendation, AHAM continues to urge the CEC to extend its references of the federal regulations to definitions in Section 1601 – 1609 to ensure continuity and clarity. AHAM appreciates and agrees with CEC's updated testing methods for home appliances citing federal regulations, i.e., Appendices to 10 C.F.R. subpart B of part 430. Each of these appendices also	No changes made. The purpose of listing out individual state and federal definitions in section 1602 of Title 20 is to provide the reader with the relevant information necessary to understand California's regulatory requirements within the body of the regulations themselves. This benefit would be lost if all the federal definitions were removed and replaced with citations. Also, including the language in the CEC's regulations maintains the status quo in the event any definitions are repealed by the Department of Energy.

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	include definitions applicable to the tested product and are the exact same definitions. Instead of updating definitions one by one under Section 1601, referencing federal regulations would automatically update them when the DOE changes definitions.	
9.2	Section 1604 Test Methods for Specific Appliances (r) Cooking Products and Food Service Equipment. Table R-1 “Cooking Products and Food Service Equipment Test Methods” appears to reference an outdated test procedure for commercial cooktop efficiency. The latest version is ASTM F1521-12R18. CEC should revise its reference to this latest version.	No changes made. This suggested change is outside the scope of this rulemaking. While this rulemaking includes numerous updates to use more current versions of test procedures, said updates are non-substantive changes to align with preemptive federal law. The test procedure for this equipment category is not subject to preemptive federal law; updating this test procedure would require substantive analysis of impacts and justification, and in that respect would be more than an administrative change. However, staff agrees in principle with updating to the most current version of the referenced test procedure. Staff will consider incorporation of the newer test procedure in place of the currently referenced test procedure in a potential future rulemaking.
9.3	Section 1604 Test Methods for Specific Appliances. **1604(p)(1):** proposes to update its references to the test procedures for clothes washers. The proposal is to amend the language as follows: ***1604(p)(1):***	Changes made to section 1604(p)(1). For clothes washers that are consumer products, both Appendices J and J2 of 10 C.F.R. section 430.23(j) are applicable. Changes have been made to reflect this along with a note to clarify that federal law dictates which Appendix to use. These new proposed

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	For clothes washers that are consumer products, these are changes to update the text to reflect the federal test methods and to add subsections (1)(A) and (1)(B) to clarify the effective dates of each test method. The test methods are "10 C.F.R. section 430.23(j) (Appendix J to subpart B of Part 430)" and "10 C.F.R. section 430.23(j) (Appendix J2 to subpart B of Part 430)". These changes are necessary to align with current federal law. To align with current federal law and avoid federal preemption under EPCA, the CEC should clarify that the clothes washers test procedure implementation date is aligned with the DOE timeline and that the test procedure will not be required by California prior to the federal test procedure implementation date. AHAM anticipates that the DOE will adopt a compliance date for test procedures in Appendix J in 2028. CEC must not require compliance with the revised Federal test procedures prior to DOE requiring its use. To do so would violate the Energy Policy and Conservation Act of 1975, as amended (EPCA) requirement that representations be made according to the	changes align the CEC with the DOE, consistent with the commenter's request for clarification and alignment.

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	required test procedure. We assume that CEC does not intend to require earlier use of the amended clothes washer test procedures than DOE, but wanted to be clear on that point in these comments.	
9.4	AHAM agrees that the reporting requirements for commercial and residential clothes washers should be as common as possible. CEC should only require corrected remaining moisture content (RMC) to be reported. Corrected RMC is what is used to calculate IMEF for residential clothes washers and to calculate MEF for commercial clothes washers and is thus the relevant metric to use to confirm claims. Uncorrected RMC is not relevant for any other purpose relevant to CEC and providing additional information not required by DOE should be minimized so as to reduce reporting burden.	Changes made to Table X (P) . Staff has left in the existing field of *"remaining moisture content"* as a required field for both commercial and consumer clothes washers, as this field provides transparency to interested parties and is useful for validation purposes. The field *"corrected remaining moisture content"* has been added for both consumer and commercial clothes washers as a new field. No information has been presented supporting the contention that continuing to provide data reflecting remaining moisture content presents a burden to manufacturers. This is especially so given the information is generated by the test procedure and present in test reports. Thus, no additional action is required by the manufacturer.

Public Hearing (January 9, 2024) Comments and Responses

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10.1	I will say that AHRI written comments highlight a few questions or considerations that we might have on some of the proposed changes, particularly with respect to commercial and industrial fans. The adopted definition, or proposed adopted definition, for AEDM under the air conditioners, air filters, and heat pump water heating packages is specific to residential central air conditioners and heat pumps, but there is a new definition for AEDM under fans, and we want to make sure that the AEDM provisions are preserved for the stand-alone fans. It's very important that this federal test procedure permits the use of AEDMs for fans. And also that -- the definition that's currently proposed, there's a little conflict there. The definition that's currently proposed is site-specific residential, air conditioner, and heat-pump metrics, and there are many other products under a federal efficiency standard that do permit the use of AEDMs. So we have proposed two ways to rectify this in our comments. Either adopt a broader definition of AEDM that does not reference specific metric, but really just the portions of the federal code that outline which products are permitted in the AEDM provisions in federal law. Alternatively, to add AEDM definitions that	(Same as comment 5.11) Changes made to sections 1602(a) and (c). This proposed new definition has been removed from section 1602(c). Rather than creating appliance specific AEDM definitions, a new general AEDM definition is now proposed to be added to section 1602(a).

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	are specific to all the products that are federally regulated that permit the use of AEDMs. So those were just -- I just wanted to highlight there that we support the use of AEDMs for commercial and industrial fans and for all federally regulated products that currently use AEDMs.	
10.2	And then the other, I think, pressing issue that we wanted to note today has to do with several -- has to do with a federal rule that is currently being conducted right now, which is the DOE had sought feedback on a notice of proposed rulemaking on certification requirements, labor requirements, and enforcement provisions for consumer and commercial equipment, and AHRI provided incident feedback to the Department of Energy on that proposal. And we would -- those comments were attached with our CEC comments because we want to make you and your team aware of those changes that may -- in federal law -- that may also need to be reflected in Title 20, and then onto the made submission forms. So we're hoping that you all will be able to work with DOE and ensure that there's consistent and harmonized reporting requirements for federally regulated products without the need to -- go through multiple rulemaking cycles	(Same as comment 6.7) No changes made. The CEC is obligated under the Administrative Procedures Act to complete rulemakings in a 1-year window. Staff determined that it would be better to create as much alignment as possible with federal regulations as they exist now, via adoption of the proposed language, than to delay alignment until all pending DOE actions are concluded and in doing so risk needing to restart the rulemaking process. Staff can address future DOE actions in future rulemakings.

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11	Following along today, we entered a letter with our commentary on the proposed amendments. We have one question: the ordering of the process here. We're sort of accustomed to having the public hearing precede the end of the comment period. And we're just wondering, is this a change that we should expect to see in future rulemakings as well? … I would just say that we've found it helpful in the past to be part of the public hearing in advance, because it often aids our understanding in what the commission's intent is, and then it informs our comments that we submit later.	No changes made. See response to comment 7.9.
12.1	I want to just start out by echoing NEMA's comments. I completely have everything ready to submit, and I will admit on the record I didn't. I thought this workshop would help just kind of guide -- just making sure we have what the commission is looking for. If there is any way for an extension, I humbly request it. As I said, things are ready to go.	No changes made. See response to comment 7.9.

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12.2	There's really only two things that I want to point out. One is, it appears that for commercial cooking…, that the cooking section appears to reference an outdated test procedure for commercial cooktop efficiency. … The latest version is ASTM F1521-12R18.	(Same as comment 9.2) No changes made. This suggested change is outside the scope of this rulemaking. While this rulemaking includes numerous updates to use more current versions of test procedures, said updates are non-substantive changes to align with preemptive federal law. The test procedure for this equipment category is not subject to preemptive federal law; updating this test procedure would require substantive analysis of impacts and justification, and in that respect would be more than an administrative change. However, staff agrees in principle with updating to the most current version of the referenced test procedure. Staff will consider incorporation of the newer test procedure in place of the currently referenced test procedure in a potential future rulemaking.

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12.3	And then I just want -- with the clothes washers under §1604(1)(j), my understanding is it's not used by manufacturers until the 2028 DOE compliance date.	(Same as comment 9.3) Changes made to section 1604(p)(1). For clothes washers that are consumer products, both Appendices J and J2 of 10 C.F.R. section 430.23(j) are applicable. Changes have been made to reflect this along with a note to clarify that federal law dictates which Appendix to use. These new proposed changes align the CEC with the DOE.

15-Day Comments and Responses

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13.1	We appreciate CEC's consideration and adoption of AHRI's feedback to the 45-day language. AHRI commends CEC for the care it has taken with proposed modification to Title 20 for the many products included in the scope of this rulemaking.	No changes made. General comment of support.
13.2	(Identical to comment 6.7)	No changes made. (See response to comment 6.7)
14.1	(Identical to comment 9.1)	No changes made. (See response to comment 9.1)
14.2	(Identical to comment 9.2)	No changes made. (See response to comment 9.2)
14.3	AHAM appreciates CEC's efforts to align the references proposed in [Section 1604(p)(1)] to the federal test procedures for clothes washers. As previously noted, CEC must not require compliance with the revised Federal test procedures prior to DOE requiring its use. To do so would violate the Energy Policy and Conservation Act of 1975, as amended (EPCA) requirement that representations be made according to the required test procedure.	No changes made. Comment acknowledged.

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14.4	AHAM agrees that the reporting requirements for commercial and residential clothes washers should be as common as possible. CEC should only require corrected remaining moisture content (RMC) to be reported. Corrected RMC is what is used to calculate IMEF for residential clothes washers and to calculate MEF for commercial clothes washers and is thus the relevant metric to use to confirm claims. Uncorrected RMC is not relevant for any other purpose relevant to CEC and providing additional information not required by DOE should be minimized so as to reduce reporting burden.	No changes made. See response to comment 9.4.
15.1	To clarify the distinction between air circulating fans and ceiling fans, the DOE updated its definition of a ceiling fan (87 Fed. Reg. 50396 (August 17, 2022). This distinction is crucial due to the varied mounting possibilities of air circulating fans, including ceiling installations. After collaborative efforts with the industry, a specific parameter—the ratio of fan blade span to maximum rotation rate—was chosen to differentiate these products effectively. We urge the CEC to revise the Title 20 definition of a ceiling fan accordingly, enhancing clarity for both the industry and consumers, and facilitating straightforward compliance enforcement. The current DOE definition, found under 10 CFR 430.2, states:	No changes made. Staff recognizes that the definition of *"ceiling fan"* did not incorporate all current federal text. Both definitions are identical in reading, "*Ceiling fan* means a nonportable device that is suspended from a ceiling for circulating air via the rotation of fan blades." The federal definition then appends the following: "For the purpose of this definition: (1) Circulating air means the discharge of air in an upward or downward direction. A ceiling fan that has a ratio of fan blade span (in inches) to maximum rotation rate

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	Ceiling fan means a nonportable device that is suspended from a ceiling for circulating air via the rotation of fan blades. For the purpose of this definition: (1) Circulating air means the discharge of air in an upward or downward direction. A ceiling fan that has a ratio of fan blade span (in inches) to maximum rotation rate (in revolutions per minute) greater than 0.06 provides circulating air. (2) For all other ceiling fan related definitions, see appendix U to this subpart.	(in revolutions per minute) greater than 0.06 provides circulating air. (2) For all other ceiling fan related definitions, see appendix U to this subpart." At this point in time staff needs to complete this rulemaking which will provide for vastly improved alinement with federal regulatory language. Staff can consider revisiting the text of this definition, in coordination with DOE, in a future rulemaking.
15.2	We also recommend that the CEC maintain the exclusion of ceiling fans from the commercial and industrial fans and blowers section to prevent confusion. The proposed amendments (shown below) suggest removing this clarification, which could lead to misunderstandings about the applicability of these standards to ceiling fans, which are separately regulated by the CEC. This confusion often extends to consumers, who may erroneously seek compliance evidence from manufacturers. Explicit exclusion, as practiced by the DOE, eliminates such misunderstandings for all parties involved.	No changes made. The proposed changes to the commercial and industrial fans and blowers definition were made to align with DOE. The scope of these products is specifically for commercial and industrial units. As no consumer products fall under the scope of commercial and industrial fans and blowers, it is potentially misleading to list specific consumer products that are exempt. Therefore, while staff agrees that consumer ceiling fans are excluded under federal law, express exclusion of

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	(1) Commercial and industrial fans and blowers do not include: (A) a radial housed unshrouded fan with blade diameter at tip less than 30 inches or a blade width of less than 3 inches; ~~safety fans as defined in Section 1602(d) of this Article;~~ (B) a safety fan; ~~ceiling fans as defined in 10 CFR 430.2;~~	consumer ceiling fans is not necessary within this definition.
16.1	We appreciate removal of the reference to the "California quality" specification, and the outdated language in §1605.3 (k)(1)(a).	No changes made. General comment of support.
16.2	In our 8 January 2024 letter, we advised that the State's definitions for State-regulated Small Diameter Directional Lamp and State-regulated Light Emitting Diode Lamp currently overlap federal general service lamp definitions and detailed our concern that the section 1602(k) proposed amendments skipped over those definitions. We also documented how the State's MAEDbS product certification system requires manufacturers to either enter false information or forgo certifying products and selling them in California. We offered a straightforward solution, to explicitly exclude "general service lamps" within those definitions. Mr. Peter Strait's 6 February email gave us hope of alignment with the Commission: "*We are still researching the regulatory status question; we are committed to accurate federal alignment and do not want to put manufacturers in a situation of feeling like they are instructed or required to certify inaccurate*	No changes made. These state-regulated lamps fall within the federal definition for *"general service lamp"*. It is true that there is overlap; for this reason, staff provided an additional code for regulatory status to account for their unique context. However, they must comply with state performance standards. The existing definitions in Title 20 are therefore accurate, and amending them as suggested by the commenter would not be accurate. Regarding certification, it would be inaccurate to identify these as exclusively "federally regulated" or "non-federally regulated". The new proposed option of *"other"* for the field *"Regulatory status"* will allow staff to more accurately describe

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	statements about their products. Thus, we are likely to make amendments that are in line with the broad recommendations from NEMA though we have not yet determined what specific verbiage would be most appropriate to use." Yet the 15-day language again skips over these definitions, indicating the solution we offered will not be implemented. We maintain hope that this is a simple oversight. Otherwise, it appears the California Energy Commission does not intend to align with federal regulations as previously stated. We noted the addition of "other" as a new "Possible Answer" for regulatory status at the top of Table X. NEMA members would not agree with applying that term to lamps. Lamps are either federally regulated, or they are not, and we believe CEC regulations and product certification processes should reflect that reality. We again urge the Commission to address your definitional overlap with now well-established federal energy conservation standards.	them, as described in the Final Statement of Reasons (Also, see response to comment 7.5).
16.3	As you give final consideration to the 15-day language, we request the following editorial corrections to Table W-2: • We believe the title of this table lists the incorrect date. For alignment with the §1605.1 (w)(2) language above it, the title should instead reference January 10, 2022.	Changes made to section 1605.1(w)(2) Table W-2 These errata and other formatting corrections will be identified in the FSOR and incorporated into the final express terms.

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	• In the rightmost column, please ensure each expression ends with a period as found in the federal rule, and that erroneous hyphens are replaced with minus signs.	
17.1	AMCA International supports the elimination of the bottom three rows of Table X, as proposed on Page 91. Figure 1 below is a screen capture of the Table X section for fans and blowers. One benefit of the elimination of the rows is that if/when the U.S. Department of Energy (DOE) modifies the federal test procedure, as it ostensibly is in the process of doing, as discussed below, CEC will not have to modify Table X to accommodate the changes.	No changes required. General comment of support.
17.2	AMCA International requests that CEC grant a second extension of the effective date for commercial and industrial fans and blowers, which could be accomplished by modifying the dates at the top of Table X (See Figure 7) and in Section 1607 (d)(12)(C) (See Figure 8). The first extension was granted to accommodate CEC replacing the Title 20 test procedure with the federal test procedure, which DOE published after the Title 20 rulemaking was finalized. The first extension, to April 29, 2024, coincided with the 180-day extension of an Oct. 30, 2023, deadline for the federal test procedure DOE granted to 34 fan manufacturers. The reason for the manufacturers'	No changes made. There is not yet a final action from DOE indicating that extensions will be granted or for what duration, and without that material in the record staff did not find sufficient justification for an additional extension to the effective date for these requirements.

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	extension request was the hardships the manufacturers are experiencing as a result of DOE omitting several sections of ANSI/AMCA Standard 214-21, Test Procedure for Calculating Fan Energy Index (FEI) for Commercial and Industrial Fans and Blowers, it deemed would yield ratings less conservative than wire-to-air testing. The consequence to industry of DOE omitting the sections of ANSI/AMCA Standard 214-21 is having to develop alternative efficiency-determination methods (AEDM, models validated by testing) to replace ratings that had only required calculations as instructed in AMCA Standard 214. CEC, in adopting the DOE regulation, omitted the same sections in lieu of AEDM or wire-to-air testing. Even with a 180-day extension, which is the maximum DOE could grant by statute, meeting the deadline will be challenging to industry, with subject-matter expertise and testing resources (laboratories and staff) for AEDM scarce, especially among smaller manufacturers. Adding to the difficulty of these circumstances, on Jan. 2, 2024, DOE published a notice of proposed rulemaking (NOPR) for an energy standard for general fans and blowers (GFB)2 that has provisions seeking to amend the GFB test procedure. The proposed changes would establish calculation-only methods for FEI ratings, thus, alleviating the engineering and testing	

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	burdens of an AEDM that continue to challenge fan manufacturers. While the proposed changes are welcomed by industry, the relief promised in the NOPR cannot be realized in time to meet California and DOE regulatory deadlines of April 29, 2024. Essentially, the proposed changes cannot be implemented until a final rule on the NOPR is published, which will be well past April 29. AMCA International requested relief from DOE in a letter dated March 1, 2024. In the letter, AMCA International requests that DOE accelerate the issuance of a final rule on the proposals to amend the test procedure, set a new deadline for complying with the test procedure so industry can absorb the changes (note that updating sizing/selection software alone can take 120 days because of the complexity of the software and rigorous testing, verification, and documentation procedures), and delay enforcing the test procedure until the start of the new extension so manufacturers will not be in legal peril while the test-procedure changes are being absorbed. AMCA International's letter to DOE is provided below as Appendix 1. In its response to AMCA International (Appendix 2) (Link to full comment to view appendices TN#255245), DOE states it will consider AMCA International's requests in conjunction with other input on the NOPR. DOE's response does not seem to recognize the concerns of AMCA International and its	

Number	Comments/ Suggested Revisions	Response
	members, namely that adjusting the GFB test procedure has repercussions on manufacturers seeking to meet the DOE test procedure and Title 20 regulation. DOE action to defer providing clarity and possibly relief until after CEC and DOE deadlines have passed leaves industry in regulatory and compliance limbo and confusion, with manufacturers legitimately concerned about their legal peril. AMCA International simply asks that CEC grant a specified deadline that would likely cover the time it takes for DOE to issue a final rule on its test-procedure changes plus 180 days for industry to absorb the changes. With the DOE final rule for the energy standard not taking effect until five years after it is published, CEC would not lose any significant energy savings by granting industry the relief it needs.	
18.1	We thank the CEC for updating Title 20 with changes made to the 15-day language. We especially support the effort to collect data that will support the implementation of state and federal efficiency standards for clothes washers, televisions, and fans. We look forward to the adoption of these changes.	No changes required. General comment of support.
18.2	The U.S. Department of Energy (DOE) is proposing changes that will impact many of the products and equipment in this update, including electric motors, air compressors, fans, commercial and central air conditioners and heat pumps, refrigeration equipment,	No changes required. Comment acknowledged.

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	and white goods. After these modifications are confirmed, we encourage the CEC to begin a rulemaking process in late 2024 to make additional updates to Title 20. These revisions will ensure the alignment of state and federal standards and facilitate consistent data collection and compliance of these federally regulated products.	

Appendix

Figure 1

Commercial and Industrial Fans and Blowers	10 C.F.R. section 431.174 (Appendix A to Subpart J of Part 431)[3]

[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 and 429.70

Figure 2

Appliance	***Required Information***	***~~Permissible~~ Possible Answers***
Televisions (manufactured on or after September 11, 2023, and within the scope of 10 C.F.R. section 430)	Capable of automatically entering standby mode after 15 minutes or less without video or audio input on the selected input mode.	True, False

Figure 3

Appliance	*Required Information*	*~~Permissible~~ Possible Answers*
Commercial and Industrial Fans and Blowers manufactured on or after ~~November 16, 2023~~ April 29, 2024	Method used to determine FEP_{act} of test method in section 1604(d)~~(2), (AMCA 214-21)~~ of this Article	~~Section 6.1, 6.2, 6.3, 6.4, or 6.5 of the test method in section 1604(d)(2), (AMCA 214-21)~~ ~~Applicable section(s)~~ Section 6.1, 6.2, 6.3, or 6.4 of AMCA 214-21 per Table 1 of 10 C.F.R. ~~section 431.174~~ ~~(~~Appendix A to Subpart J of Part 431~~)~~ or AEDM
	Name of the AEDM	

Figure 4

Product Class	***Specifications[a]***	***Draw Pattern***	***Minimum Uniform Energy Factor[b]***	
			Equipment manufactured before October 6, 2026	***Equipment manufactured on or after October 6, 2026***
Gas-fired Storage	> 75 kBtu/h and ≤ 105 kBtu/hr and ≤ 120 gallons	Very small	0.2674 – (0.0009 x V_r)	0.5374 – (0.0009 x V_r)
		Low	0.5362 – (0.0012 x V_r)	0.8062 – (0.0012 x V_r)
		Medium	0.6002 – (0.0011 x V_r)	0.8702 – (0.0011 x V_r)
		High	0.6597 – (0.0009 x V_r)	0.9297 – (0.0009 x V_r)

Figure 5

Product Class	*Minimum Efficiency Effective January 1, 2015*			
	Minimum SEER	*Minimum HSPF*	*Minimum EER*	*Average Off-Mode Power Consumption $P_{w~~off~~ off}$ (watts)*
Split system air conditioners with rated cooling capacity < 45,000 Btu/hour[1]	~~14.0~~ ~~13.0~~ 14.0	--	12.2	30
Split system air conditioners with rated cooling capacity ≥ 45,000 Btu/hour[1]	~~14.0~~ ~~13.0~~ 14.0	--	11.7	30
Split system heat pumps ~~with rated cooling capacity < 45,000 Btu/hour[1]~~	14.0	8.2	--	33
~~Split system heat pumps with rated cooling capacity ≥ 45,000 Btu/hour[1]~~	~~14.0~~	~~8.2~~	~~--~~	~~33~~
Single package air conditioners[1]	14.0	--	11.0	30
Single package heat pumps	14.0	8.0	--	33
Space constrained air conditioners ~~– split system~~	12.0	--	--	30
Space constrained heat pumps	12.0	7.4	--	33
Small duct, high velocity air conditioner systems	12.0	--	--	30
Small duct, high velocity heat pump systems	12.0	7.2	--	30
[1] See 10 C.F.R. section 430.32(c) for less stringent federal standards applicable to these units that are manufactured on or after January 1, 2015, and installed in states other than Arizona, California, Nevada, or New Mexico.				

Figure 6a

- **Regulatory Status [RegulatoryStatus]:**

E: Enter the appropriate code representing the regulatory status. Other entries not shown in the table below will be unsuccessful.

M: Select the appropriate code from the dropdown menu of options in the table below.

Code	Regulatory Status
N	Non-Federally Regulated

Figure 6a: When attempting to certify a product currently in scope of the State-Regulated Small Diameter Directional Lamp (SDDL) definition, a model known to be a federally regulated general service lamp, the MAEDbS response requires the user to instead certify the lamp with Code N: “Non-Federally Regulated”, as reflected in this excerpt from the Commission’s publication: “Instructions for State-regulated Small Diameter Directional Lamp (SDDL) Appliance Data (Last Updated February 2020)”. These Instructions and the MAEDbS itself preclude coding any general service lamp as federally regulated.

Figure 6b

- **Regulatory Status [RegulatoryStatus]:**

E: Enter the appropriate code representing the regulatory status. Other entries not shown in the table below will be unsuccessful.

M: Select the appropriate code from the dropdown menu of options in the table below.

Code	Regulatory Status
N	Non-Federally Regulated (California-Regulated) Note: This code is the only valid choice once Tier 2 of the mandatory CA Title 20 standards takes effect on 7/1/2019. Although the Voluntary Specification period has ended, models listed using a "V" prior to 7/1/2019 and meeting Tier 2 requirements will remain listed as Active models and do not need to be resubmitted.

Figure 6b: When attempting to certify a product currently in scope of the State-Regulated Light Emitting Diode (LED) Lamp definition, a model that is known to be a federally regulated general service lamp, the MAEDbS response requires the user to instead certify the lamp with Code N: "Non-Federally Regulated", as reflected in this excerpt from the Commission's publication: "Instructions for State-regulated Light Emitting Diode (LED) Lamp Appliance Data (Last Updated July 2021)". These Instructions and the MAEDbS itself preclude coding any general service lamp as federally regulated. Relative to §1607, the above Note acknowledges that the Voluntary Specification period has ended.

Figure 7

Table X Continued - Data Submittal Requirements

	Appliance	*Required Information*	*~~Permissible~~ Possible Answers*
D	Commercial and Industrial Fans and Blowers manufactured on or after ~~November 16, 2023~~ April 29, 2024	Fan type	Centrifugal housed, centrifugal inline, centrifugal unhoused, centrifugal PRV supply, centrifugal PRV exhaust, axial inline, axial PRV, inline mixed-flow, power roof/wall ventilators, axial panel, radial housed
		Fan impeller diameter (in.)	
		Type of Motor (if fans sold with a motor)	None, Single-phase induction, Polyphase induction, Synchronous DC (including ECM), Permanent magnet AC, or Other
		Motor nameplate horsepower (if fan sold with an induction motor) (hp)	
		Pressure type	S = Static pressure T = Total pressure
		Transmission type (if fan is sold with a transmission)	Direct, V-belt, synchronous-belt, flexible coupling, none
		Type of Controller (if fan sold with controller)	None, Variable frequency drive, or Other
		Maximum fan speed (RPM)	
		Airflow at maximum fan speed (CFM)	
		Pressure at maximum fan speed (inches water gauge)	
		FEP_{act} at maximum fan speed (kW)	
		FEP_{ref} at maximum fan speed (kW)	
		Maximum pressure (inches water gauge)	
		Airflow at maximum pressure (CFM)	
		Fan speed at maximum pressure (RPM)	
		FEP_{act} at maximum pressure (kW)	
		FEP_{ref} at maximum pressure (kW)	
		Maximum air flow (CFM)	
		Pressure at maximum airflow (inches water gauge)	
		Fan speed at maximum airflow (RPM)	
		FEP_{act} at maximum airflow (kW)	
		FEP_{ref} at maximum airflow (kW)	
		~~Is the model a Series tested fan?~~	~~Yes, No~~
		~~Associated Series Tested Fan Model Number (if not a series tested fan)~~	~~Fan product line and model, (Field is N/A if it is a Series tested fan)~~
		~~Method used to determine FEP_{act} of test method in section 1604(d)(2), (AMCA 214-21) of this Article~~	~~Section 6.1, 6.2, 6.3, 6.4, or 6.5 of the test method in section 1604(d)(2), (AMCA 214-21)~~ Applicable section(s) of AMCA ~~214-21 per Table 1 of 10 C.F.R. section 431.174 (Appendix A to Subpart J of Part 431)~~

FIGURE 1. Proposed changes to Table X impacting commercial and industrial fans and blowers in the 45-day and 15-day express terms. Changes reflected in the 15-day express terms are in the bottom three rows and designated by heavy strikeout font.

Figure 8

(16) **Commercial and Industrial Fans and Blowers**. Each commercial and industrial fan or blower, manufactured on or after ~~November 16, 2023~~ April 29, 2024, shall be marked, permanently and legibly on an accessible and conspicuous place on the unit, ~~in characters no less than 1/4 inch in tabular form (~~as shown below~~)~~:

(A) For Commercial and Industrial fans and blowers the label shall include the following information:

Fan Energy Index ≥ 1.00 Efficiency boundaries

a. maximum air flow (CFM);
b. maximum fan speed (RPM);
c. maximum pressure (inches water gauge); and
d. type of pressure ("static" or "total").

NOTE: Operation outside of these boundaries will result in an energy inefficient operation.

FIGURE 2. Proposed changes to the Title 20 permanent label for commercial and industrial fans and blowers. Note: All changes are from the 45-day express terms.