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Rheem Manufacturing Company Comment T24-2028

Additional submitted attachment is included below.

November 5, 2026

Michael Sokol
Director for Efficiency Division
California Energy Commission
Docket Unit, MS-4
715 P Street
Sacramento, CA 95814

Re: Rheem Comments on Pre-Rulemaking Draft Regulatory Text for the 2028 Energy Code, Docket No. 25-BSTD-03

Dear Mr. Sokol,

These comments are submitted by Rheem Manufacturing Company in response to the pre-rulemaking text of proposed changes to the 2028 edition of Title 24, shared on the California Energy Commission's website on October 12, 2026. In addition to the comments in this letter, Rheem is a member company of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) and the Pool and Hot Tub Alliance (PHTA) and developed comments with those groups on this topic as well. With the Commission entering the rulemaking process at the start of next for the 2028 Title 24 code changes, Rheem appreciates the opportunity to comment on the proposed changes related to space cooling/heating (Air-conditioners [AC], heat pumps [HP], and furnaces), water heating (gas, electric [ER], and heat pump [HPWH]), and pool heating.

For over 100 years, Rheem has stood as a trusted partner for residential and commercial innovations. From its humble beginnings in 1925, Rheem has grown into a leading global manufacturer of heating, cooling, water heating, and commercial refrigeration solutions. Rheem is committed to sustainability, and enriching lives through innovative design, technology, and enduring quality.

WATER HEATING

Overly Prescriptive Ventilation Requirements in Section 500.3.3.7.3 undermine manufactures instructions and industry efforts to establish installation Guidelines. Rheem agrees that these provisions are overly prescriptive, including the mandate on the direction of HPWH exhaust airflow, which has no noted efficiency impact, and the reliance on compressor capacity data under AHRI Standard 540 that is not published or available to

contractors. More specifically, section 500.3.3.7.3.1 provides a pathway for complying with installation with

manufacturer's instructions, but it prescriptively requires the installation meet or exceed

the requirements of the other installation pathways. Rheem also shares AHRI's concern that these provisions could also undermine the industry's ongoing work on AHRI Guideline U and urges the Commission not to pursue them.

Remove JA 14.6 Requirements for Unitary Commercial HP/ER Water Heaters.
The sizing conditions in JA 14.6.1 rely on parameters for which no test method exists, are not part of the applicable test procedure, are too open-ended, or may require disclosure of proprietary information. The resulting 20% capacity derate is unduly burdensome, and Rheem supports AHRI's recommendation to delete this section.

Revise Section 501.3.5 – Split heat pump water heating systems with recirculation
As drafted, these requirements can only be met with single-pass HPWHs. Rheem supports amending the section to also allow multi-pass HPWHs, preserving design development options and consumer choice, or deleting it.

SPACE COOLING/HEATING

[New] Section 401.2.2.10 – HVAC Fault Detection and Diagnostics (FDD)
Appendix JA6 – HVAC System Fault Detection and Diagnostic (FDD) Technology
The Commission's proposed additions in the highlighted new section related to HVAC FDD appear confusing in both execution and in relation to existing language for HVAC FDD in *Appendix JA6.* Consistent with AHRI, Rheem does not support the proposed list HVAC faults outlined in 401.2.2.10.2, specifically because they are not always technically faults:

- *401.2.2.10.2.1* HVAC operating outside of scheduled hours and outside of permitted user override
- *401.2.2.10.2.6* Building HVAC control fan motor command at 100% or placed in manual override

Rheem recommends this new section either be removed entirely or clarified for manufacturers to effectively comply in time for code adoption in the applications listed (mostly air handling units/systems with > 300 kBTU/h of heating or cooling capacity). In order to help clarify FDD requirements, Rheem recommends updates to Appendix JA6 to match the list in *401.2.2.10*.2. In the latest text, several faults were added to section *401.2.2.10*, but those additional faults were not added to the existing *Appendix JA6*, which

covers HVAC FDD and only includes specific sections about economizers and saturation temperature.

Update minimum efficiency tables to the latest metrics and test procedure
Several AC and HP categories in the proposed efficiency tables 400.5(1) and 400.5(2) for unitary AC and HP equipment still list minimum efficiencies using integrated energy efficiency ratio (IEER), energy efficiency ratio (EER) and coefficient of performance (COP). These are rated under AHRI Standard 340/360. Rheem is concerned that these tables will be out of date on the day the 2028 Title 24 code takes effect.

In May 2024, DOE revised standards for commercial unitary air ACs and HPs:

1. It published a final rule creating a new federal test procedure, Appendix A1 to 10 CFR Part 431, Subpart F.[1] This procedure references AHRI 1340-2023 and adopts two new metrics: integrated ventilation, economizer, and cooling (IVEC), and integrated ventilation and heating efficiency (IVHE).
2. It adopted amended energy conservation standards in terms of IVEC and IVHE, in a direct final rule (89 FR 44052) that DOE confirmed took effect September 17, 2024.[2] Compliance is required on and after January 1, 2029.

Testing to IVEC and IVHE is required once compliance with those standards begins.

January 1, 2029 is also the effective date of the 2028 Title 24 code. From the first day the code applies, federal minimum efficiencies, manufacturer certifications and product ratings for this equipment will be stated in IVEC and IVHE under AHRI 1340, not in IEER and COP under AHRI 340/360.

The two sets of metrics are not interchangeable. DOE found that AHRI 340/360 doesn't capture operating modes and test conditions that are central to IVEC and IVHE. These include ventilation and economizer operation, part-load heating, higher external static pressure and crankcase heater operation. As a result, a product's IEER or COP rating can't be reliably converted into an IVEC or IVHE rating. IVEC and IVHE can only be determined by testing to AHRI 1340.

[1] DOE, Energy Conservation Program: Test Procedure for Air-Cooled, Evaporatively-Cooled, and Water-Cooled Commercial Package Air Conditioners and Heat Pumps, Final Rule, 89 FR 43986 (May 20, 2024)
[2] DOE, Energy Conservation Program: Energy Conservation Standards for Air-Cooled Commercial Package Air Conditioners and Heat Pumps, Final Rule, 89 FR 79374 (September 30, 2024)

The proposed text is also inconsistent with itself. AHRI 1340 doesn't appear in the efficiency tables, yet the indoor grow section (908.1.6.2.2.2.2) already names it as the rating standard for commercial unitary HP and AC equipment. So the draft code points to two different rating standards for the same equipment class.

Rheem respectfully recommends that the Commission:

1. Restate the 400.5 efficiency levels for the affected unitary AC and HP categories in IVEC and IVHE.
2. Cite AHRI 1340-2023 as the rating standard. DOE incorporates this edition by reference in Appendix A1.
3. Set the IVEC and IVHE levels equal to the federal minimums, consistent with federal preemption of state standards for this covered equipment.

These changes would align Title 24 with DOE, remove the internal inconsistency in the code, and give manufacturers and one clear basis for compliance from January 1, 2029.

POOLS AND SPAS

Retain 90 percent high-efficiency gas and propane pathway in Section 801

Rheem supports retaining the standalone natural gas and propane compliance pathway under proposed Section 801, with its 90 percent minimum thermal efficiency, as a full and independent option that does not require additional solar or HP systems. We also support retaining the provision allowing multiple-heater systems to comply through an input capacity-weighted average thermal efficiency of at least 90 percent. Many existing facilities face constraints that make other technologies impractical, and high-efficiency gas heaters deliver reliable capacity and rapid recovery using existing infrastructure.

Clarify applicability to equipment replacements

Rheem agrees that the Commission should clarify how the requirements apply when existing equipment is replaced, including whether the 90 percent weighted average applies to all heaters serving a pool or spa or only to equipment installed or replaced under the permitted project, and how the requirements apply to combined pool-and-spa heating systems. Clear direction will promote consistent implementation and avoid forcing premature replacement of functional equipment when only one unit is replaced, which would raise costs for operators and could discourage timely efficiency upgrades.

Evaluate federal preemption and correct cross-references

Because residential-type pool heaters subject to federal appliance efficiency standards may also be installed in nonresidential settings, Rheem supports the request that the Commission evaluate how the proposed requirements would apply to that equipment and whether clarification or an exemption is needed under the federal Energy Policy and Conservation Act. We likewise urge the Commission to correct the overlapping references to Sections 801.5 and 801.6 before formal rulemaking; legal certainty and consistent regulatory text are essential for manufacturers and the customers they serve.

Rheem appreciates the opportunity to provide these comments to the Commission ahead of the rulemaking process beginning next year. If you have any questions regarding this submission, please do not hesitate to contact me directly by email or phone.

Sincerely,



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