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WPGA Comments on 2028 Energy Code Pre-Rulemaking

Please see letter for comments.

Additional submitted attachment is included below.

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California Energy Commission
715 P Street
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VIA ONLINE SUBMISSION

RE: Western Propane Gas Association Comments: 2028 Energy Code Pre-Rulemaking Draft Regulatory Text and Appendices (Docket No. 25-BSTD-03)

The Western Propane Gas Association (WPGA) is pleased to submit comments on the California Energy Commission (CEC)'s pre-rulemaking draft regulatory text and appendices for the 2028 Building Energy Efficiency Standards (2028 Energy Code) cycle. WPGA appreciates the CEC's work on these issues, including the provision of pre-rulemaking drafts for comment. These comments follow our initial comments on the pre-regulatory workshops from July 17, 2026.

WPGA represents propane marketers, producers, and equipment manufacturers serving millions of California households, farms, and businesses—many in rural, mountainous, and other hard-to-electrify communities that are not served by natural gas infrastructure. Our members provide clean-burning and critical energy to residential, commercial, and industrial customers across the state. California boasts a robust propane market, with more than 791,000 retail accounts, 449,000 primary home-heating customers, and contributing more than $4.3 billion annually to the state economy.[1] Propane not only serves as cost-effective solution in grid-stressed areas of California, propane based R-290 is an ultra-low GWP refrigerant that can operate effectively to reduce emissions at data centers while at the same time result in potential overall water savings and concurrent climate benefits associated with reduced water usage and renewable propane.

Overall, our comments below center on the following topics:

- Recognition of the lifecycle emissions benefits of renewable propane as distinct from conventional propane;
- Clarification that the pool and spa heater efficiency alternative pathway applies to both new and altered pools;
- A request for additional analysis of the expansion in the rooftop HVAC heat pump requirements from the June proposal to the October language;
- Additional CASE team analysis of the 300-ton limit on air cooled chilling at data centers and crafting of two targeted exceptions to the upper limit for water stressed areas and ultra-low GWP refrigerants; and
- Clarifying amendments to the Controlled Environment Horticulture provisions to ensure efficient propane heating remains a viable pathway.

BENEFITS OF RENEWABLE PROPANE IN NEED OF RECOGNITION

Renewable propane offers an opportunity to reduce lifecycle greenhouse gas emissions while preserving the efficiency, reliability, and operational benefits of existing propane technologies. Renewable propane is produced from non-petroleum resources and can have substantially lower lifecycle carbon intensity, depending on its production pathway. California already recognizes

[1] *Propane's Impact on Economy: 2021 California,* National Propane Gas Association, https://www.npga.org/wp-content/uploads/2024/04/California_2024.pdf

renewable propane as a distinct fuel under the California Air Resources Board's Low Carbon Fuel Standard (17 CCR § 95481), but the proposed Energy Code does not adequately distinguish it from conventional propane or provide a mechanism to recognize its environmental benefits. Just as the CEC already recognizes that natural gas may be produced from renewable biomass, it should apply the same technology-neutral approach to propane by distinguishing renewable propane produced from non-petroleum renewable resources from conventional liquified petroleum gas (LPG) and providing comparable recognition of its verified renewable attributes.

WPGA therefore recommends the following revisions that establish a consistent definition of renewable propane, provide a verifiable pathway for recognizing its lifecycle emissions reductions in compliance calculations, and ensure that qualifying renewable propane receives equitable treatment under applicable prescriptive and performance requirements. These changes would support California's greenhouse gas reduction objectives, promote technology-neutral compliance options, and preserve the Code's underlying energy efficiency and safety standards.

Draft location	Technical issue	Recommended revision / placement
§ 201; JA1[2]	The draft classifies all LPG as energy from depletable sources; JA1 similarly includes liquefied petroleum products within "fossil fuels," while expressly recognizing that natural gas may be produced from biomass.	Add a § 201 definition of RENEWABLE PROPANE aligned with CARB definition; exclude qualifying renewable propane from categorical treatment as fossil/depletable LPG. Make the parallel clarification in JA1.
§ 201 ENERGY OBTAINED FROM DEPLETABLE SOURCES	The definition of "depletable sources" does not differentiate between LPG and renewable propane.	Revise the existing definition so its reference to "liquefied petroleum gases" reads "*liquefied petroleum gases, other than qualifying RENEWABLE PROPANE."*
JA1 Definitions: DEPLETABLE SOURCES	JA1 contains a separate "DEPLETABLE SOURCES" definition; amending only JA1 "FOSSIL FUELS" (below) would leave a conflict.	Add to the JA1 definition: "*For purposes of this definition, liquefied petroleum gases do not include qualifying RENEWABLE PROPANE as defined in Section 201 of Part 6*."
JA1 Definitions: FOSSIL FUELS	The existing definition does not distinguish between LPG and renewable propane. Amend to distinguish renewable propane by feedstock/production pathway while preserving propane's chemical identity and combustion-safety treatment.	Retain the existing general definition, including its qualification regarding natural gas produced from biomass, and add: "*For purposes of this definition, liquefied petroleum products do not include qualifying RENEWABLE PROPANE as defined in Section 201 of Part 6.*"

[2] California Energy Commission (CEC), Pre-Rulemaking Draft Regulatory Text for the 2028 Energy Code, TN 273088 (Oct. 12, 2026) (hereinafter TN 273088) § 201, "ENERGY OBTAINED FROM DEPLETABLE SOURCES," p. 2-24. CEC, Pre-Rulemaking Draft Regulatory Text for the 2028 Reference Appendices, TN 273089 (Oct. 12, 2026) (hereinafter TN 273089) Joint Appendix JA1, definition of "FOSSIL FUELS" (Appendix JA1, F-definitions); see also Cal. Code Regs. tit. 17, § 95481(a) (definition of "Renewable Propane").

Draft location	Technical issue	Recommended revision / placement
§ 102.5.1.1 Long-Term System Cost	Closes the gap created when qualifying renewable propane is removed from the depletable-source category. LSC treatment should be explicit rather than left to inference.	Add at the end of the applicable propane-factor provision: "*Qualifying RENEWABLE PROPANE shall be evaluated using the propane hourly factors as adjusted pursuant to Section 102.5.1.3 and the Commission-approved compliance methodology."*
§ 102.5.1.3 Qualifying Renewable Propane	Adds pathway necessary for a verifiable benefit.	Add: "*For purposes of Long-Term System Cost calculations, qualifying RENEWABLE PROPANE may use Commission-approved adjustment factors reflecting verified lifecycle greenhouse-gas intensity where the Commission determines that such factors are consistent with the applicable LSC methodology.*
JA3.1–JA3.2 and applicable JA3 tables	Conforming amendments for LSC classification.	Add a renewable propane-specific factor/adjustment method or an explicit cross-reference to Section 102.5.1.3. Require fuel-pathway-specific adjustments rather than one assumed carbon intensity for every renewable-propane supply and specify the treatment of blended renewable/conventional propane.
Applicable ACM Reference Manuals/ approved compliance software	Conforming amendments for LSC adjustment.	Establish what constitutes acceptable evidence (e.g., CARB-certified fuel pathway or approved CA-GREET analysis); approved stationary-use adaptations; quantity and renewable-fraction accounting; chain of custody; ownership/retirement of environmental attributes; double-counting protections; and software inputs for qualifying renewable propane. Allow a CEC-approved exceptional/alternative calculation when software lacks the necessary input.
§ 401.3.2; § 401.3.3.1; § 401.3.3.2[3]	Prescriptive HVAC pathways are technology-specific and § 401.3.3.2 requires electric-resistance supplemental heating for the AWHP loop.	Preserve the performance path and add an express alternative allowing high-efficiency propane or qualifying renewable propane supplemental heat where the proposed design satisfies applicable LSC and source-energy budgets.

[3] TN 273088 § 401.3.2, pp. 4-93 to 4-94; proposed §§ 401.3.3.1-.2, pp. 4-94 to 4-96. Section 401.3.3.2 specifies an electric-resistance boiler for supplemental AWHP-loop heat, p. 4-96.

Draft location	Technical issue	Recommended revision / placement
§§ 503.2.4-.5; §§ 602.2.2.2, 603.2.4.1; JA15[4]	Gas/propane installations trigger electric-ready circuits, panel capacity, reserved equipment space, and related infrastructure. These requirements can create substantial incremental cost where service upgrades are necessary.	Add an infeasibility/service-capacity exception, modeled on the pool alteration hardship/efficiency concept, where required readiness would cause a material electrical service upgrade and a verified qualifying renewable-propane pathway is used.
§ 904.1.4 Biomass Exception for Process Steam Boilers	Proposed § 904.1.4[5] exempts certain process steam boilers from the new stack-economizer requirement when they are designed to burn biomass derived from facility processes or waste materials, including woody biomass, digester gas, landfill gas, and animal fat, but the draft does not explain the basis for distinguishing these fuels or address renewable propane	CEC should clarify whether this exception is based on technical characteristics of the listed fuels or on their renewable status. If the distinction is intended to reflect renewable-fuel policy rather than a specific equipment constraint, CEC should consider adopting technology-neutral language that provides equivalent treatment for qualifying renewable fuels, including renewable propane, rather than limiting the exception to an enumerated list of biomass fuels.
Proposed § 102.1.2	Existing provisions may recognize renewable or low-carbon environmental attributes for some fuels without extending equivalent treatment to other qualifying energy sources.	Add a technology-neutral provision requiring equivalent treatment where a fuel demonstrates the same qualifying renewable content, lifecycle emissions, or environmental attributes using an approved verification methodology. Preserve distinctions justified by equipment performance, safety, or other technical requirements, and do not independently create new compliance credits.

PROPANE POOL & SPA HEATING PATHWAY SHOULD EXTEND TO NEW INSTALLATIONS

WPGA appreciates the CEC's amendment from its previous proposal to recognize the efficiency benefits of certain propane pool and spa heaters. However, we noticed that while the pool alterations section made this change, this option was not extended to new pool installations. On the basis of the same efficiencies, we recommend that the CEC duplicate this option in the new pool & spa applications in addition to alterations.

Draft location	Technical issue	Recommended revision / placement
§ 800.3; § 801.6.2.1.1[6]	Existing pool alterations permit efficient propane heaters, but the proposed new-pool pathways lack a comparable express option.	Add a new-pool compliance option for high-efficiency propane and qualifying renewable propane, subject to applicable efficiency and verification requirements. Also, retain the Executive Director equivalency pathway.

[4] TN 273088 §§ 503.2.4-.5, pp. 5-26 to 5-27; proposed § 602.2.2.2, "Heat pump space heater ready"; § 603.2.4.1, "Central heat pump water heater ready." TN 273089, Joint Appendix JA15.1-JA15.2, Appendix JA15-1 et seq.
[5] TN 273088 § 904.1.4, p. 9-25.
[6] TN 273088 § 800.3, pp. 8-2 to 8-3; § 801.5.2.1.1 p. 8-2, including Item 4 allowing a gas or propane pool heater with minimum 90 percent thermal efficiency.

ADDITIONAL ANALYSIS NEEDED ON THE COST EFFECTIVENESS OF ROOFTOP HVAC HEAT PUMP REQUIREMENTS

The October 12, 2026 pre-rulemaking draft substantially expands the rooftop HVAC alteration requirements presented during the June 23, 2026 pre-rulemaking workshop. The original proposal applied to retail and sit-down restaurant buildings constructed before 1997. Proposed § 401.5.2.2.1.2 and Table 401.5(3) extend the requirements to restaurant, retail, and library buildings constructed before 2006, expanding both the applicable building vintages and occupancy types.[7] WPGA requests that the Commission provide additional technical and economic analysis supporting this expansion beyond the scope presented to stakeholders. In particular, the Commission should identify the basis for including newer buildings and library occupancies, clarify whether the broader "Restaurant" designation is intended to encompass additional restaurant types, and demonstrate that the expanded requirements are cost-effective across the affected building types and climate zones. This analysis should address equipment availability, installation and operating costs, electrical service capacity and potential infrastructure upgrades, and the continued feasibility of high-efficiency propane-fired alternatives. To the extent the Commission has not evaluated these additional applications, WPGA recommends retaining the scope presented during the pre-rulemaking workshops until the expanded requirements are supported by sufficient technical and cost-effectiveness analysis.

UPDATE CASE TEAM ANALYSIS ON AIR-COOLED VS. WATER-COOLED SYSTEMS USING MODERN GRID AND DATA CENTER-SPECIFIC DATA

California's rapid growth in data center development is creating significant new electricity demand. At the same time, it is placing increasing demand on water availability due to the use of water-cooled chillers and evaporative cooling. As part of the 2028 regulatory process, the CEC asked the CASE team to re-visit the 300-ton limit on air-cooled chillers at data centers, citing the need to address water usage in water stressed areas.[8] In June 2026, the CASE team issued its summary of the history of this limit from the 2025 code cycle. Although the CASE team summarized the previous data, it has not yet undertaken an updated analysis to reflect modern grid realities or data-center specific assumptions, instead generalizing from commercial office buildings. Given this code cycle's emphasis on data center-specific upgrades and potential water usage issues, the CEC should specifically request that the CASE team undertake an updated analysis of alteration of the 300-ton air cooled chiller limitations. At minimum, the following data assumptions should be updated:

1) The underlying analysis evaluated air-cooled chillers for commercial office buildings rather than data centers, which operate under significantly different parameters. For example, the original source for the 300-ton air-cooled chiller limitation was a 2002 study of commercial office buildings.[9] Although the CASE team updated commercial office building air-cooled chiller performances using 2019 data, some modern data centers often operate at a substantially higher temperature (65-75 degrees) which can improve efficiency and expand opportunities for compressor-free cooling. These higher operating temperatures can materially affect cooling efficiency, free-cooling opportunities, and the comparative life-cycle costs of air-cooled and water-cooled systems, warranting reconsideration of the original 300-ton threshold for data center applications.

[7] TN 270994 (June 25, 2026), June 23 Pre-Rulemaking Workshop Presentation; TN 270685 (June 17, 2026), Existing Building Alterations: Large Single Zone Heat Pump Rooftop Units; and TN 273088 (Oct. 12, 2026), § 401.5.2.2.1.2, p. 4-139, and Table 401.5(3), pp. 4-142–4-143.

[8] TN 271010, "HVAC-300 Ton ACC Limit for Data Centers Final CASE Team Comment Letter" (June 25, 2026), discussing the prior proposal and cost-effectiveness analysis; see also 2025 Title 24 Draft Cooling Tower Efficiency CASE Report (May 2023), at 91 (electricity-generation mix and water-consumption assumptions), https://title24stakeholders.com/wp-content/uploads/2023/05/2025_T24_CASE-Report-DRAFT_Cooling-Tower-Efficiency-1.pdf

[9] https://title24stakeholders.com/wp-content/uploads/2017/10/2005_CASE-Report_Code-Change-Proposal-for-Cooling-Towers.pdf

2) The 2023 CASE analysis, summarized in the CASE team's 2026 letter, relied on a 2021 electricity generation mix and a 2011 thermoelectric water-consumption factor. California's continued transition toward renewable generation warrants reassessment of those assumptions, particularly because the reduced reliance on thermoelectric generation may diminish both the indirect water-consumption and greenhouse gas impacts associated with air-cooled chillers' additional electricity demand. The Commission should update its analysis using current and projected electricity-generation characteristics, including hourly marginal electricity emissions and water consumption, to determine whether the historical energy-water tradeoff continues to justify the 300-ton limitation for data centers.

3) The 2023 CASE analysis relied on population-weighted average water and wastewater rates for California's ten most populous cities that may not reflect current costs or the higher value of water in water-constrained regions. These assumptions may understate the economic benefits of air-cooled chillers, particularly for data centers with substantial cooling demands. The Commission should update its analysis using current water and wastewater rates, regional water availability, and the costs associated with securing and maintaining sufficient water supplies for evaporative cooling.

The CASE team reported that the earlier measure was dropped after the draft stage on cost-effectiveness grounds; however, its June 2026 summary also states that the modeled measure was "cost effective in every climate zone" when the identified water and equipment costs were considered. WPGA requests that the Commission reconcile those findings and re-evaluate the 300-ton limitation using updated data-center-specific energy, water, and cost-effectiveness assumptions.

EXCEPTIONS TO THE 300-TON LIMIT ON AIR-COOLED CHILLERS AT DATA CENTERS

If the CEC does not choose to lift the cap in general, WPGA recommends that the CEC adopt two targeted exceptions to the 300-ton limit: (1) data centers facing documented water-supply constraints and (2) qualifying air-cooled chillers using ultra-low GWP refrigerants, subject to performance and safety safeguards. European facilities demonstrate the feasibility of some relevant non-evaporative and R-290 cooling configurations, although U.S. approvals and Energy Code compliance must be evaluated separately.[10]

Water-Stressed Data Center Exception

Given California's concern with water usage at data centers, the CEC should craft a narrow water stressed exception to the 300-ton air cooled chiller limit as follows:

Add the following to § 401.3.12

Exception [number to be assigned]: *Where the water supply available at the building site is insufficient to meet the projected makeup water requirements for the use of water-cooled chillers primarily serving computer rooms or data centers, or where such use is materially restricted by applicable water supply limitations, as documented by one or more of the following:*

1. *Written documentation from the water supplier that it cannot supply the projected makeup water demand or that such supply is subject to material restrictions;*
2. *An applicable state or local ordinance or regulation that prohibits or materially restricts the use of water for evaporative heat rejection; or*
3. *Restrictions on groundwater withdrawals from a basin designated by the California Department of Water Resources as critically overdrafted, where that basin supplies the building site.*

[10] Penta Infra., Hamburg facility overview (Jan. 25, 2026), https://penta-infra.com/data-centers/hamburg/; see also Eurammon, "Penta Infra HAM01 – Propane-Based Cooling for a Hamburg Colocation Data Center, https://eurammon.com/case-study/penta-infra-ham01-–propane-based-cooling-for-a-hamburg-colocation-data-center

The conditions in the exception limit usage to sites with a documented water shortage, if its water supplier provides written documentation that it cannot fully serve cooling tower demand, or if a local ordinance restricts water for evaporative cooling. This exemption is consistent with existing Exception 1 to Section 401.3.12, which already exempts sites where water quality is unsuitable for water-cooled chillers, and the proposal extends that principle from water quality to water availability.

Ultra-Low GWP Refrigerant Exception

The CEC should recognize an exception pathway for "ultra-low GWP refrigerants." Ultra-low GWP refrigerants may offer low direct refrigerant emissions in appropriately designed data center cooling systems. The CEC's existing treatment of transcritical CO_2 refrigeration, including technology-specific exceptions and alternative efficiency requirements, already provides a precedent for accommodating ultra-low GWP refrigerants within the Energy Code. The CEC's proposed 2028 revisions further demonstrate its willingness to reconsider prescriptive cooling restrictions to accommodate low GWP technologies, water conservation, and evolving equipment performance, while maintaining appropriate energy-efficiency safeguards.

The CEC already defines Low GWP refrigerants in proposed § 201 as below 150. The below proposed ultra-low GWP refrigerant category, defined as a refrigerant with a 100-year GWP of less than 10, is consistent with existing California law and established CEC practice. California Health and Safety Code Section 39736(c)(3) already expressly defines "ultra-low GWP" as GWP of less than 10, distinguishing it from "low GWP," defined as less than 150. The CEC independently recognizes this distinction in its Equitable Building Decarbonization Direct Install Program Guidelines and has employed the same threshold in research solicitations involving large-building heating, ventilation, and air-conditioning systems. The classification is further supported by California Public Utility Commission (CPUC)-sponsored research and published technical literature identifying commercially used natural and synthetic refrigerants below this threshold.[11]

WPGA recommends the following language:

Add the following to § 401.3.12:

Exception [number to be assigned]: Air-cooled chillers primarily serving computer rooms or data centers that use an ultra-low-global-warming-potential refrigerant, as defined in Section 201, provided that:

(a) the refrigerant is permitted under the U.S. Environmental Protection Agency's Significant New Alternatives Policy (SNAP) program; and
(b) the equipment and installation comply with all applicable California refrigerant safety, equipment listing, and approval requirements, including the California Mechanical Code and California Fire Code.

Add the following § 201 Definition

ULTRA-LOW GWP REFRIGERANT is a LOW GWP REFRIGERANT with a GWP VALUE of less than 10.

[11] Cal. Health & Safety Code § 39736(c)(2)–(3); CEC *Equitable Building Decarbonization Direct Install Program Guidelines*, CEC-400-2023-003-CMF, at 14 n.21 (Oct. 2023); CEC, *Electric Program Investment Charge 2023 Annual Report*, CEC-500-2024-028, at 61 (Apr. 2024); DNV GL, *A Roadmap for Accelerating the Adoption of Low-Global Warming Potential HVAC Refrigerants*, at 14 (May 2021) available at https://www.calmac.org/publications/CPUC_HVAC_Refrigerants_-_PDS_05032021_FinalReport.pdf; Brad Hoover, Bryan Kilgore & Christina Torok, *Refrigerants, Taking the Chill Out of Heat Pumps*, 2024 ACEEE Summer Study on Energy Efficiency in Buildings, at 2 tbl.1 (identifying ultra-low-GWP refrigerants, including R-290) available at https://www.aceee.org/wp-content/uploads/ssb2024/20240722160821125_d5e08544-1392-4f70-83dd-cab5934a66e5.pdf.

Amend the following § 201 Definition
GLOBAL WARMING POTENTIAL VALUE (GWP Value) is the 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in either its Second Assessment Report (SAR) (IPCC, 1995), or its Fourth Assessment A-3 Report (AR4) (IPCC, 2007) *or its Sixth Assessment Report (AR6) (IPCC, 2021)*.[12] Both the 1995 IPCC SAR values and the 2007 IPCC AR4 values are published in Table 2.14 of the 2007 IPCC AR4. The SAR GWP values are found in column "SAR (100-yr)" of Table 2.14.; the AR4 GWP values are found in column "100 yr" of Table 2.14*"; the AR6 GWP values are found in column "GWP-100" of Table 7.SM.7 of the Supplementary Material to Chapter 7 of the IPCC's AR6, Working Group I (2021).*

These changes will allow the CEC to recognize a limited exception for ultra-low GWP refrigerants with the potential for increased water savings and cost-effectiveness

CONTROLLED ENVIRONMENT HORTICULTURE: PRESERVE PROPANE HEATING AND MAKE NECESSARY COMPLIANCE CLARIFICATIONS

The proposed Controlled Environment Horticulture (CEH) requirements in Section 908.1.6 appropriately emphasize heat recovery, equipment efficiency, and coordinated heating and dehumidification controls. Importantly, the draft expressly permits supplemental combustion heating where recovered heat cannot satisfy the required heating load. WPGA supports retaining this approach and recommends several narrowly tailored amendments to ensure that propane-fired heating remains available for these applications. Preserving efficient supplemental heating options, rather than unnecessarily requiring equipment replacement or restricting fuel choice is consistent with the CEC's objectives.

Draft location	Technical issue	Recommended revision / placement
§ 908.1.6.2.4	Proposed Section 908.1.6.2.4 permits supplemental combustion heating where recovered heat cannot meet the necessary heating load.13 Because propane is an established heating fuel in horticultural applications, WPGA requests a minor clarification expressly confirming its eligibility. This amendment would not change the requirement to prioritize recovered heat or limit supplemental heating to residual loads.	Proposed revision to § 908.1.6.2.4: "*2.4. Supplemental heating. If used, electric resistance heating or combustion heating equipment, including equipment using natural gas or liquefied petroleum gas, shall comply with the following:"*

[12] This proposed amendment updates the GWP Value definition to reflect more recent IPCC adoption. Propane R-290, for example, has a GWP of .02 under the AR6 values; the older value commonly cited for R-290 is approximately 3, also below the proposed 10 threshold.
[13] TN 273088 § 908.1.6.2.4, p. 9-42; § 201 (GAS HEATING SYSTEM), p. 2-31.

Draft location	Technical issue	Recommended revision / placement
§ 908.4.1	Proposed Section 908.4.1 extends the new heating, cooling, and dehumidification requirements to certain alterations of existing indoor growing facilities.14 A cooling or dehumidification equipment replacement could therefore trigger additional compliance requirements even where the existing propane heating equipment is not being altered. WPGA requests clarification that such projects do not automatically require removal or replacement of existing combustion heating equipment that can continue to serve permissible supplemental heating loads. This would avoid unnecessary equipment replacement costs while preserving the proposed heat-recovery and control requirements.	*Proposed addition to § 908.4.1: "Existing combustion heating equipment that is not replaced or altered as part of the project shall not be required to be replaced solely as a result of compliance with this section and may continue to serve supplemental heating loads where controlled in accordance with Section 908.1.6.2.4 and otherwise compliant with applicable mandatory requirements."*
§ 908.1.6	The draft expressly recognizes desiccant dehumidification systems as an eligible integrated space-conditioning technology under Section 908.1.6.2.2.1.1.3.15 However, recovered heat may not always be available at the temperature or capacity necessary to regenerate the desiccant media. WPGA recommends clarifying that supplemental combustion heating, including propane-fired equipment, may serve the remaining regeneration load where recovered heat is technically insufficient. This would preserve the efficiency benefits of heat recovery while allowing a recognized dehumidification technology to operate under its required conditions.	Proposed addition to § 908.1.6: "*Supplemental desiccant regeneration heat. For desiccant dehumidification systems, supplemental regeneration heat may be provided by electric or combustion heating equipment where available recovered heat is insufficient in temperature or capacity to satisfy required desiccant regeneration conditions, provided that available recovered heat is utilized first to the extent technically feasible and supplemental equipment is controlled to operate only to meet the remaining regeneration load."*
§ 908.1.6; Appendix NA7.21.3	The applicable indoor-growing space-conditioning load and equipment-sizing methodology appears in proposed Reference Nonresidential Appendix NA7.21.3, not NA9.16 Because these calculations establish the permissible supplemental-heating capacity, accurate cross-references are necessary to ensure consistent design and enforcement of the provisions allowing propane-fired supplemental heat.	WPGA requests that CEC replace the erroneous references to NA9 and NA.9 in Section 908.1.6 with NA7.21.3, and make the corresponding correction to the outdated NA9.2 reference within NA7.21.3 itself.17 These limited amendments would preserve the Commission's proposed efficiency requirements while avoiding unnecessary restrictions on existing and supplemental propane heating applications.

[14] TN 273088 § 908.4.1, pp. 9-43–9-44.
[15] TN 273088 § 908.1.6.2.2.1.1.3, p. 9-41; § 201 (INTEGRATED SPACE-CONDITIONING SYSTEM), p. 2-36.
[16] TN 273088 § 908.1.6, pp. 9-40–9-42; Draft Appendix TN 273089 (Oct. 12, 2026), NA7.21.3, pp. NA7.21-8–NA7.21-12.
[17] TN 273089, NA7.21.3, § 3.1.2.1 (referencing NA9.2 for canopy square footage), p. NA7.21-9.

CONCLUSION

WPGA thanks the CEC for its continued engagement and work on this revision. In summary, we request the following:

1) Recognition of the lifecycle emissions benefits of renewable propane as distinct from conventional propane;
2) Clarification that the pool and spa heater efficiency alternative pathway applies to both new and altered pools;
3) Additional analysis of the expansion in the rooftop HVAC heat pump requirements from the June proposal to the October language;
4) Additional CASE team analysis of the 300-ton limit on air-cooled chiller capacity at data centers and crafting of two targeted exceptions to the upper limit for water stressed areas and ultra-low GWP refrigerants; and
5) Clarifying amendments to the Controlled Environment Horticulture provisions to ensure efficient propane heating remains a viable pathway.

We welcome the opportunity to discuss these proposals further with staff or to provide any technical assistance that would be helpful in developing the draft language.

Sincerely,



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