

DOCKETED

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Project Title:	2025 CALGreen Rulemaking
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Document Title:	Public Comments and Responses to the Proposed Revisions to 2025 Title 24, Part 11 (CALGreen)
Description:	Collected public comments and responses to the proposed revisions to the 2025 Green Building Standards Code, Title 24, Part 11 (CALGreen).
Filer:	Michael Shewmaker
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Introduction

This workbook includes comments received to 24-BSTD-02

<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=24-BSTD-02>

Please reach out to Michael Shewmaker at michael.shewmaker@energy.ca.gov with any questions.

[45-Day Comment Period](#)

[Lead Commission Hearing](#)

[15-Day Comment Period](#)

[Business Meeting](#)

Comment Number	Commenter	Comment(s)	The Commission's Response to Comment	Date Submitted	Phase	Link to Comment
256862.001	CBIA	<p>Introduction The California Building Industry Association (CBIA) is a statewide trade association representing over 3,000 member companies involved in residential and light commercial construction. CBIA member companies are responsible for over 85% of the new single-family homes built in California annually.</p> <p>The California Apartment Association is the largest statewide rental housing trade association in the country. It represents over</p>	Introductory remarks - no response needed.	6/14/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=256862&DocumentContentId=92675
256862.002	CBIA	<p>Background During the June 5th Lead Commissioner Hearing, CEC Staff provided a detailed overview of the proposed changes to the California Green Building Standards Appendices A4.2 and A5.2. Included in this discussion were the proposed changes to the Requirements for Alterations to Existing Buildings, specifically the requirements that would be applied when the owner of a single-family dwelling replaces an old air conditioner (Part 11, Section A4.204.1.1).</p> <p>As indicated in our June 5th testimony, we supported the proposed change. Still, we suggested an editorial change consistent with other residential green building measures to reduce confusion in the field. For example, the Department of</p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	6/14/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=256862&DocumentContentId=92675
256862.003	CBIA	<p>We would suggest the Energy Commission consider making a similar clarification to the following section title:</p> <p>A4.204.1.1 Altered Space-Conditioning System Serving Existing Single-Family Dwellings – Mechanical Cooling</p> <p>This clarification of staff intent would avoid misapplication of this measure to other residential occupancies not intended by the Energy Commission.</p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	6/14/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=256862&DocumentContentId=92675
257455.001	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>Proposal for Thermal Energy Storage</p> <p><i>See docketed comment for copy of proposal.</i></p>	This proposal is outside the scope of this rulemaking and there is insufficient time for staff to review and properly vet the information to be considered for adoption as part of the 2025 CALGreen update. However, staff will retain this information and will reconsider it as part of the 2028 code cycle update.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257455&DocumentContentId=93330

257472.001	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>Proposal for Nonresidential Air Leakage Verification.</p> <p><i>See docketed comment for copy of proposal.</i></p>	<p>This proposal is outside the scope of this rulemaking and there is insufficient time for staff to review and properly vet the information to be considered for adoption as part of the 2025 CALGreen update. However, staff will retain this information and will reconsider it as part of the 2028 code cycle update.</p>	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257472&DocumentContentId=93348
257476.001	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>Thank you for the opportunity to participate in the update to California's 2025 voluntary energy efficiency standards located in CALGreen (Title 24, Part 11), section A4.2 and A5.2. The Statewide Utility Codes and Standards Enhancement (CASE) Team and utility Compliance Improvement (CI) Team appreciate the California Energy Commission (CEC) providing an opportunity for stakeholders to engage in the rulemaking process.</p> <p>The utility-sponsored Statewide Reach Codes Program encourages and supports cities interested in adopting CALGreen and reach codes. Since most buildings in the state are existing, older vintage buildings with massive potential for saving energy and reducing greenhouse gas (GHG) emissions, the Statewide CASE Team is highly motivated to improve coordination between Title 24, Part 6 and Part 11 and increase adoption and enforcement of statewide standards for existing buildings.</p> <p>CI Team subject matter experts work closely with the CASE</p>	<p>Introductory remarks - no response needed.</p>	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.002	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>Recommended Revisions</p> <p>Recommended revisions and justifications are provided in the table below. These revisions include suggested language to improve the clarity and enforceability for both the pool and lighting requirements. Highlights include:</p> <ul style="list-style-type: none"> • The comments on the lighting section explain some of the challenges with the current section using terms and metrics that will be difficult for local jurisdictions to enforce. They also point out the potential confusion regarding what type of luminaires are required to meet the requirements by referring users back and forth between Title 24, Part 6 and Title 24, Part 11 for the exceptions. • The proposed code changes to the pool section address the potential of solar and electric heat pump technology to drive increases in efficiency and significant greenhouse gas (GHG) 	<p>Thank you for your comments. Staff with review and respond to each individual comment below.</p>	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352

257476.003	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>Our comments are noted in the table below; where noted in the table, see the Appendix in this document for additional mark-up language and/or explanation.</p> <p>Thank you for considering these comments, which we believe will help improve user's experience with CALGreen. The Statewide CASE Team is prepared to offer our assistance to CEC staff to resolve concerns or outstanding issues that will improve clarity and enforceability, leading to sustained energy savings and</p>	Thank you for your comments. Staff with review and respond to each individual comment below.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.004	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>The current language in A4.204.1.1V does not allow any exceptions for attics with existing levels of higher insulation or where there are safety or accessibility concerns. The CASE Team suggests including this exception to allow for flexibility.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	For an existing alteration CEC staff disagree with the suggestion to include exceptions for attics with existing levels of higher insulation, the modifications by the contractor in the field should account for existing conditions.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.005	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>A4.204.1.1VI references Section 150.2(b)1Jii which only requires air sealing in select CZs. Propose to include the requirements directly in Part 11 language rather than by reference.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	Referencing existing sections allows for consistency and coherence within the Energy Code, ensuring that updates to air sealing requirements in Section 150.2(b)1Jii are reflected in Part 11 without the need for redundant revisions.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.006	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>Missing words/improper grammar</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.007	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>Suggest rephrasing to make clear that the even when a new AC would require a service upgrade, it doesn't exempt the additional requirements of b.I - b.VI.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.008	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>This section indicates that this section only applies to Alterations. This would apparently exclude additions, and we question whether or not that is the intent. Furthermore, we observe that this measure would only to apply to alterations that "increases the building's conditioned area, volume or size" per Section 301.1.1 of CALGreen. Municipalities should be aware of this and consider their own amendments to CALGreen in their local ordinances if they intend this measure to apply to all AC alterations.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	<p>Thank you for your comment. Yes, it was staff's intent to exclude additions from this proposal. Staff would also like to clarify that here we are using the term "Alteration" as it is defined in Chapter 2, Section 202 of CALGreen (Title 24, Part 11), so it is not limited to alterations that "increase he building's conditioned floor area, volume, or size".</p> <p>ALTERATIONS OR ALTER. Any construction or renovation to an existing structure other than repair for the purpose of maintenance or addition.</p>	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352

257476.009	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>No cost-effectiveness report has been submitted supporting these compliance margins. We note that such cost-effectiveness would need to be demonstrated by the municipality to support the adoption of a local ordinance energy code. Presumably, the Commission has done their own internal analysis to support these particular margins and encourage that analysis to be published to aid in Reach Code development.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	<p>A supporting document for this proposal was posted to the rulemaking docket (24-BSTD-02) on 5/16/24, TN#256432-1, which includes a cost-effectiveness analysis.</p>	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.010	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>We note that for mild climate zones-- specifically Climate Zones 1, 3, 5, and 16 as well as others depending on site specific factors, the Prescriptive Solar Heat Gain target of 0.23 is often deleterious to energy efficiency when using Performance path. Furthermore, we note that CZ's 2, 6, 7 were also deemed by the CEC in separate studies to have minimal mechanical cooling in new construction, which indicates that this measure may not produce positive savings in those Climate Zones as well.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	<p>Staff agrees that a higher SHGC can be advantageous in the milder climate zones and have repealed the SHGC requirement from climate zones 1, 3, 5, and 16 in alignment with the Energy Code's prescriptive requirements.</p> <p>The SHGC of 0.23 was found to be cost-effective in both climate zones 6 and 7, and can be traded off using the performance approach.</p>	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.011	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>Measure includes the following language: Outdoor building-mounted luminaires intended solely to illuminate any surface including walls and signs. The use of the word 'intended' makes this measure difficult to enforce as intent is not readily verifiable by code enforcement.</p> <p>Also-- measure uses the word 'should', which is not mandatory language.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	<p>Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.</p>	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.012	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>New terms are added for Long-term system cost (LSC), On-site recovered energy, and solar pool heating system. Existing text says the terms are defined in chapter 2. No proposed changes to chapter 2 are shown in 45-day language. A check of current CALGreen chapter 2 has no definitions for these terms.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	<p>Thank you for your comment. These definitions were added to the 15-Day Express Terms.</p>	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352

257476.013	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	The section strikes out energy design rating (EDR), Energy design rating, Energy Efficiency, Energy design rating, solar electric generation and demand flexibility, Energy Design rating total, Time dependent valuation (TDV) energy. Do the definitions for these terms need to be struck from chapter 2? <i>See docketed comment for recommended change/marked-up language.</i>	Thank you for your comment. These definitions were repealed in the 15-Day Express Terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.014	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	New term "Long-Term System Cost (LSC)" as shown in section A4.202.1 is not consistent in replacing the terms related to Energy Design Rating (EDR). The proposal needs to be reviewed to remove EDR, EDR1, EDR2... an example is A4.203.1.3 <i>See docketed comment for recommended change/marked-up language.</i>	Thank you for the comments. Staff acknowledge the nonsubstantive errors and will identify this edit to the California Building Standards Commission to address consistent with the rulemaking process.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.015	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	Amend this section so that the requirements for both the heater sizing and the newly proposed heat pump pool heater control requirements are mandatory. <i>See docketed comment for recommended change/marked-up language.</i>	This change is not necessary because we are not adding a new section for heat pump pool heater control. Instead, the reference has been updated to 110.4(d).	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.016	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	en The CASE Team offered comments in TN 256484 to docket 24-BTSD-01 for the 2025 T24 BEES code change proposal for pool and spa heating measure. The comments suggest that the CEC can clarify the heat pump pool heater control requirements by creating a separate section 110.4(d) heat pump pool heater control requirements section. The language in section A4.204.1.2 should be updated to reflect any change CEC makes to section 110.4(c) for consistency. <i>See docketed comment for recommended change/marked-up language.</i>	Staff agrees with the proposed edit in 110.4(d) and have incorporated substantively similar language into the 15-Day Express Terms in Part 6. For A4.204.1.2 and A5.204.1.1, the reference has been updated to 110.4(d).	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.017	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	Offer exception similar to the pool heating exceptions proposed for T24 Part 6 <i>See docketed comment for recommended change/marked-up language.</i>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.018	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	Offer exception similar to the pool heating exceptions proposed for T24 Part 6 <i>See docketed comment for recommended change/marked-up language.</i>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352

257476.019	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	Offer exception where there is not sufficient roof area nearby to meet the solar pool heating system sizing requirements. <i>See docketed comment for recommended change/marked-up language.</i>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.020	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	The CASE Team offered comments in TN 256484 to docket 24-BTSD-01 for the 2025 T24 BEES code change proposal for pool and spa heating measure. The comments suggest that the CEC can clarify the heat pump pool heater control requirements by creating a separate section 110.4(d) heat pump pool heater control requirements section. A new section of language should be added to the language in section A4.204.1.3 should be updated to reflect any change CEC makes to section 110.4(d) for consistency. <i>See docketed comment for recommended change/marked-up language.</i>	Staff agrees with the proposed edit in 110.4(d) and have incorporated substantively similar language into the 15-Day Express Terms in Part 6. For A4.204.1.2 and A5.204.1.1, the reference has been updated to 110.4(d).	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.021	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	New terms are added for Long-term system cost (LSC), On-site recovered energy, and solar pool heating system. Existing text says the terms are defined in chapter 2. No proposed changes to chapter 2 are shown in 45-day language. A check of current CALGreen chapter 2 has no definitions for these terms. <i>See docketed comment for recommended change/marked-up language.</i>	Thank you for your comment. These definitions were added to the 15-Day Express Terms to ensure consistency with how the terms were defined in Title 24, Part 6 and will ensure that terms used within the regulations are clear and unambiguous to readers.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.022	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	The section strikes out Time dependent valuation (TDV) energy. Consider removing the definitions for these terms in chapter 2. <i>See docketed comment for recommended change/marked-up language.</i>	Thank you for your comment. This definition was repealed in the 15-Day Express Terms - Energy Design Rating (EDR) and Time Dependent Valuation (TDV) are no longer being used for establishing energy budgets in Title 24, Part 6.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.023	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	Amend this section so that the requirements for both the heater sizing and the newly proposed heat pump pool heater control requirements are mandatory. <i>See docketed comment for recommended change/marked-up language.</i>	This change is not necessary because we are not adding a new section for heat pump pool heater control. Instead, the reference has been updated to 110.4(d).	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352

257476.024	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>The CASE Team offered comments in TN 256484 to docket 24-BTSD-01 for the 2025 T24 BEES code change proposal for pool and spa heating measure. The comments suggest that the CEC can clarify the heat pump pool heater control requirements by creating a separate section 110.4(d) heat pump pool heater control requirements section. The language in section A5.204.1.1 should be updated to reflect any change CEC makes to section 110.4(c) for consistency.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	Staff agrees with the proposed edit in 110.4(d) and have incorporated substantively similar language into the 15-Day Express Terms in Part 6. For A4.204.1.2 and A5.204.1.1, the reference has been updated to 110.4(d).	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.025	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>Offer exception similar to the pool heating exceptions proposed for T24 Part 6</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.026	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>Offer exception similar to the pool heating exceptions proposed for T24 Part 6</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.027	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>Offer exception where there is not sufficient roof area nearby to meet the solar pool heating system sizing requirements.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.028	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>The CASE Team offered comments in TN 256484 to docket 24-BTSD-01 for the 2025 T24 BEES code change proposal for pool and spa heating measure. The comments suggest that the CEC can clarify the heat pump pool heater control requirements by creating a separate section 110.4(d) heat pump pool heater control requirements section. A new section of language should be added to the language in section A4.204.1.3 should be updated to reflect any change CEC makes to section 110.4(d) for consistency.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352

257476.029	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>The requirements use terms and metrics that are not enforceable. The exceptions are specified in a circular and very convoluted way, and introduce conflict between the main requirements and exceptions regarding what types of luminaires are excepted.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	The proposed term is intended to be easy to understand and implement. Staff agrees with the comment that the term could be read in a different way as commented and therefore staff retracts the this section from the express terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.030	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>The requirements use terms and metrics that are not enforceable. The exceptions are specified in a circular and very convoluted way, and introduce conflict between the main requirements and exceptions regarding what types of luminaires are excepted.</p> <p>The indentation of the exception "Luminaires that qualify as exceptions in Sections 130.2(b) of Title 24, Part 6." is confusing and inappropriate. It's not clear whether it is an exception to the color temperature requirement or an exception to the entire A5.203.1.1.1.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	The proposed term is intended to be easy to understand and implement. Staff agrees with the comment that the term could be read in a different way as commented and therefore staff retracts the this section from the express terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257476.031	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>There is a typographical error regarding Table 140.7-B.</p> <p><i>See docketed comment for recommended change/marked-up language.</i></p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	6/27/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257476&DocumentContentId=93352
257482.001	Fenestration & Glazing Industry Alliance	<p>The Fenestration & Glazing Industry Alliance (FGIA) represents more than 420 member companies who manufacturer and market windows, doors, skylights, tubular daylighting devices (TDDs), and glazing components that go into them for residential and commercial application. In addition to member companies, FGIA represents hundreds of professional and technical members.</p>	Introductory remarks - no response needed.	6/28/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257482&DocumentContentId=93361

257482.002	Fenestration & Glazing Industry Alliance	<p>FGIA appreciates the opportunity to provide comments on the proposed 45-day language for the 2025 Green Building Standards Code. Similar to our comments on the 2025 Energy Code, FGIA has concerns with the Maximum Solar Heat Gain Coefficient (SHGC) change being proposed in Section A4.203.1.2.5, High performance vertical fenestration, for Climate Zone 15.</p> <p>FGIA has been unable to find any documentation providing the rationale as to why, for Climate Zone 15, the Solar Heat Gain Coefficient (SHGC) is changing from 0.23 to 0.20. It is important to understand that with current triple silver low-e technology on the market today, when put into a fixed window, it is already difficult to meet the existing 0.23 SHGC. By dropping the SHGC to 0.20, it would require the consumer to purchase a more expensive tinted glass window</p>	<p>Thank you for your comment. In climate zone 15 an SHGC of 0.20 is being proposed to help accommodate the heat pump baseline.</p> <p>In the development of the heat pump baseline proposal, staff found there to be a negligible cost impact associated with changing from an SHGC of 0.23 to 0.20. And based upon a review of the CalCERTS registry data, staff found that 25% projects in climate zone 15 are already installing an SHGC of 0.20 or lower.</p>	6/28/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257482&DocumentContentId=93361
257482.003	Fenestration & Glazing Industry Alliance	<p>We ask the Commission to provide what justification was used to make the change, when the result would mean homeowners in this climate zone would now be required to purchase higher priced windows. To provide consistency with the other climate zones, FGIA urges the Commission to change this back to 0.23. To do otherwise would require this small area to have a different SHGC from the surrounding areas, making product availability difficult and more costly.</p>	<p>Thank you for your comment. In climate zone 15 an SHGC of 0.20 is being proposed to help accommodate the heat pump baseline.</p> <p>In the development of the heat pump baseline proposal, staff found there to be a negligible cost impact associated with changing from an SHGC of 0.23 to 0.20. And based upon a review of the CalCERTS registry data, staff found that 25% projects in climate zone 15 are already installing an SHGC of 0.20 or lower.</p>	6/28/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257482&DocumentContentId=93361

257496.001	Western Riverside Council of Governments I-REN	<p>The Inland Regional Energy Network (I-REN) respectfully submits these comments in support of the changes proposed in the rulemaking process for the 2025 Green Building Energy Efficiency Standards (CALGreen) to the California Energy Commission (CEC). I-REN appreciates the leadership that CEC has shown in the development of Title 24, Part 11, and would like to recognize the CEC's successes in incorporating building industry feedback.</p> <p>I-REN is a collaboration among three California local inland governments (Coachella Valley Association of Governments, San Bernardino Council of Governments, and Western Riverside Council of Governments) established to actively participate in California's clean energy initiatives and build a stronger clean energy economy throughout communities in Riverside and San Bernardino counties. I-REN implements a dynamic and targeted set of programs to assist local government agencies in better understanding and enforcing the Energy Code, including its Codes & Standards program, which supports and trains local building departments and the building industry to enable long-term Energy Code compliance.</p> <p>When reviewing the proposed changes, I-REN has kept the following guidelines in mind:</p>	Introductory remarks - no response needed.	6/28/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257496&DocumentContentId=93375
257496.002	Western Riverside Council of Governments I-REN	<p>I-REN supports the updated Long-Term System Cost (LSC) performance compliance margins based on the proposed 2025 two heat pump baseline updates in Title 24, Part 6, plus the verified low-leakage ducts in conditioned space (VLLDCS) and compact hot water distribution (CDHW) measures established by climate zones.</p> <p>The two heat pump baseline updates in Title 24, Part 6 have been shown to be cost effective. Requiring VLLDCS in some climate zones and not in others has also shown to be cost effective. INLAND REGIONAL ENERGY NETWORK I-REN supports including Climate Zone 15 in the updated LSC performance compliance margins based on the two heat pump baseline updates plus the</p>	Thank you for your comment of support.	6/28/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257496&DocumentContentId=93375

257496.003	Western Riverside Council of Governments I-REN	<p>I-REN supports the new proposed prescriptive standards for altered space conditioning systems and the corresponding exceptions to this measure.</p> <p>These proposed standards requiring a heat pump when replacing air conditioning systems in existing single-family homes support California's energy and climate goals. Because this measure could not be adopted into Title 24, Part 6, I-REN supports this measure being adopted here in Part 11. The shift toward heat pumps also supports efforts to improve air quality in the Inland Empire, which is a significant concern in this region.</p> <p>Regarding the exception to this measure for Climate Zone 15, I-REN recognizes CEC's efforts to address cost-effectiveness as local jurisdictions can consider additional savings in their cost-effective analysis. I-REN joins the comment of the manager of the Statewide Codes & Standards Reach Codes Program at the June 4 Lead Commissioner Hearing in encouraging the CEC to extend</p>	Thanks you for your comment of support.	6/28/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257496&DocumentContentId=93375
257496.004	Western Riverside Council of Governments I-REN	<p>I-REN supports the addition of outdoor lighting standards that prevent light pollution and increase lighting efficiency.</p> <p>The proposed standards are designed to prevent light pollution from outdoor lighting and minimize glare so lighting is used more efficiently. These standards are in line with California's energy goals.</p>	Thank you for your comment of support.	6/28/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257496&DocumentContentId=93375
257496.005	Western Riverside Council of Governments I-REN	<p>I-REN supports the new voluntary measures for altered pool and/or spa heating for multifamily homes which support solar thermal pool heating systems, heat pump pool heaters, or on-site renewable energy.</p> <p>The new voluntary measures support solar thermal pool heating systems, heat pump pool heaters, or on-site renewable energy, which is in line with California's energy and climate goals. I-REN supports the exceptions to the measure for portable electric spas or pools or spas heated solely by a solar pool heating system as</p>	Thank you for your comment of support.	6/28/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257496&DocumentContentId=93375
257496.006	Western Riverside Council of Governments I-REN	<p>Finally, as a general comment: I-REN appreciates that the CEC had made significant effort in this revision to propose updates that help the code to stay organized, current, and understandable. Maintaining clear and concise language is critical to ensuring ongoing compliance with CALGreen.</p> <p>We appreciate the opportunity to review the proposed code language and provide comment. IREN looks forward to working</p>	Thank you for your comments of support.	6/28/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257496&DocumentContentId=93375

257553.001	Pool & Hot Tub Alliance	<p>The Pool & Hot Tub Alliance (PHTA) represents more than 4,000 company members and over 11,000 individual members nationwide, including companies that manufacture pool and spa heating equipment. PHTA has a long history of working with the California Energy Commission (Commission or CEC) and appreciates the opportunity to provide feedback on the current proposed language.</p> <p>The California Pool & Spa Association (CPSA) is the statewide trade association that represents more than 230 company members in the state of California, including pool and spa builders, service companies, manufacturers, and distributors.</p>	No response needed. Introductory comment	7/1/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257553&DocumentContentId=93436
257553.002	Pool & Hot Tub Alliance	<p>Heat Source Control References to Section 110.2(b)</p> <p>The comment expressed below parallels a similar comment that PHTA and CPSA made on the Title 24, Part 6 45-day Express Terms. Those terms included a reference to control requirements in SECTION 110.2 – MANDATORY REQUIREMENTS FOR SPACE-CONDITIONING EQUIPMENT, 110.2(b) Controls for heat pumps with supplementary heaters. That reference appears again in Title 24, Part 11 45-day Express Terms in A4.204.1.2 Altered Pool or Spa Heating requirements.</p> <p>In response to the PHTA and CPSA comments submitted for this reference in Part 6, in their 15-day language, the Commission removed the reference to section 110.2(b) from 110.4(c) 2 and replaced it with the following language in Section 110.4(d):</p> <p><i>See docketed comment for marked up language.</i></p>	Staff agrees with the proposed edits detailed in the cell below and have incorporated substantively similar language into the 15-Day Express Terms.	7/1/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257553&DocumentContentId=93436

257553.003	Pool & Hot Tub Alliance	<p>These changes made by CEC reflect two important facts.</p> <p>1) Section 110.2(b) is intended solely for controls used for space heating and cooling and does not apply to pools or spas.</p> <p>2) "Backup heater" was replaced by "supplementary heater" for both consistency and to correctly identify the nature of this second system; that it was not in place in case of failure of the first system, but rather to supplement its operation.</p> <p>Considering the CEC actions taken partially in response to PHTA and CPSA comments on the Part 6 45- day Express Terms, we request that the CEC to take the same action with regards to the reference in Express Terms for Title 24, Part 11 (CALGreen), Appendices A4.2 & A5.2.</p> <p>PHTA and CPSA request that CEC remove the reference to Section 110.2(b) entirely or insert language that parallels the language in Part 6, Section 110.4(d). Doing so will help prevent conflict within the Code and potential confusion for users.</p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	7/1/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257553&DocumentContentId=93436
257553.004	Pool & Hot Tub Alliance	<p>Response to California Statewide Utility Codes and Standards Enhancement (CASE) Team June 27 Comments on Controls for Heat Pump Pool Heaters</p> <p>In its June 27 comments submitted to the Commission, the CASE Team recommended inserting revised limiting language1 in section A4.204 Controls for Heat Pump Pool Heaters as follows:</p> <p><i>See docketed comment for proposed language.</i></p>	The current reference section in 110..4(d) has the correct term "heat pump heating". No additional changes is needed.	7/1/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257553&DocumentContentId=93436

257553.005	Pool & Hot Tub Alliance	<p>PHTA and CPSA can support the resolution that the Commission previously approved for the Title 24, Chapter 6 15-Day Express Terms, which placed parallel language in Section 110.4(d) Controls for Heat Pump Pool Heaters with Supplementary Heating. Our concern lies with the insertion of the undefined term "compression heating" (highlight added by PHTA/CPSA for emphasis and clarity).</p> <p>We assume that CASE meant for compression heating to serve as a substitute term for "heat pump water heater (HPPH)" a term that is well understood in the industry. While most heat pumps operate through compression heating, not all do, so the language is unnecessarily limiting.</p> <p>PHTA and CPSA request that if the above referenced CASE comment is accepted by the Commission, that the term "heat pump pool heating" replace "compression heating" in A4.204.1.3 Controls for Heat Pump Pool Heaters.</p>	The current reference section in 110.4(d) has the correct term "heat pump heating". No additional changes is needed.	7/1/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257553&DocumentContentId=93436
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257553.006	Pool & Hot Tub Alliance	<p>Pool and Spa Heating Exceptions Provided in Title 24, Part 6 45-day Express Terms.</p> <p>The Commission provided several key exceptions in Title 24 Part 6 45-day Express Terms Section 110.4 – Mandatory Requirements for Pool and Spa Systems and Equipment, Section 110.4(c). These exceptions remain, largely unchanged, in the Title 24, Part 6 15-day language. The only modification to these exceptions was the insertion of a reference to Section 150.1(c)14 to provide clearer guidance for requirements for spa heating systems which cannot be powered by solar power.</p> <p>I have listed these exceptions below for reference.</p> <p><u>Exception 1 to Section 110.4(c): Portable electric spas compliant with 20 CCR § 1605.3(g)(7) of the Appliance Efficiency Regulations.</u></p> <p><u>Exception 2 to Section 110.4(c): Alterations to existing pools and/or spas with existing heating systems or equipment.</u></p> <p><u>Exception 3 to Section 110.4(c): A pool and/or spa that is heated solely by a solar spool heating system without any backup heater.</u></p> <p><u>Exception 4 to Section 110.4(c): Heating systems which are used exclusively for permanent spa applications in existing buildings with gas availability.</u></p> <p><u>Exception 5 to Section 110.4(c): Heating systems which are used exclusively for permanent spa applications where there is inadequate Solar Access Roof Area (SARA) as specified in Section 150.1(c)14 for a solar pool heating system to be installed.</u></p> <p>The above exceptions expand the opportunity to use alternatives to heat pump pool and spa heaters where conditions make use of</p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	7/1/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257553&DocumentContentId=93436
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257553.007	Pool & Hot Tub Alliance	<p>Response to California Statewide Utility Codes and Standards Enhancement (CASE) Team June 27 Comments on Exceptions Included in Chapter 11</p> <p>In its June 27 comments submitted to the Commission, the CASE Team recommended revised language paralleling the Exceptions to Section 110.4(c) that were included in the Commission’s 15-Day Express Terms. The CASE comment for its recommended Exception 42 is reproduced below.</p> <p><u>Exception 4 to A4.204.1.2: Heating systems which are used for pools or permanent spa applications where the available qualifying roof area is less than 65 percent of the combination of surface areas of the pool and spa. The qualifying roof area shall have no less than 70 percent annual solar access. Annual solar access is determined by dividing the total annual solar insolation, accounting for shading obstructions, by the total annual solar insolation if the same areas were unshaded by obstructions. Only roof areas located within 250 feet of the pool or permanent spa shall be consider for inclusion as qualifying roof area.</u></p> <p>Except for tying the size of available qualifying roof area to the total pool and spa surface area, the above requirements relating to solar access are already detailed in the SARA requirements in the Natural Resources Defense Council (NRDC), CalInjustice, and RMI submit the following comments on the California Energy Commission’s (CEC) 45-Day Language Express Terms for the 2025 Green Building Standards Code, Title 24, Part 11 (“CALGreen”) published May 16, 2024.1 CALGreen provides an important supplement to the Title 24 Building Energy Efficiency Standards in Part 6 (“Building Code”) as it provides a framework for local jurisdictions that are interested in adopting additional energy efficiency and decarbonization measures.</p> <p>The proposed CALGreen language contains two important provisions that we have advocated for inclusion in the 2025 Building Code. These include the requirements that encourage residential air conditioners to be replaced with heat pumps at the time of equipment failure and that require heating systems for nonresidential and multifamily pool and spa alterations to use renewable energy sources when heat pumps are not available.</p>	Staff agrees with the proposed edit and have incorporated substantively similar language into the 15-Day Express Terms.	7/1/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257553&DocumentContentId=93436
257554.001	Natural Resources Defense Council	<p>RMI submit the following comments on the California Energy Commission’s (CEC) 45-Day Language Express Terms for the 2025 Green Building Standards Code, Title 24, Part 11 (“CALGreen”) published May 16, 2024.1 CALGreen provides an important supplement to the Title 24 Building Energy Efficiency Standards in Part 6 (“Building Code”) as it provides a framework for local jurisdictions that are interested in adopting additional energy efficiency and decarbonization measures.</p> <p>The proposed CALGreen language contains two important provisions that we have advocated for inclusion in the 2025 Building Code. These include the requirements that encourage residential air conditioners to be replaced with heat pumps at the time of equipment failure and that require heating systems for nonresidential and multifamily pool and spa alterations to use renewable energy sources when heat pumps are not available.</p>	Thank you for your comment of support.	7/1/2024	45-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=257554&DocumentContentId=93432

257554.002	Natural Resources Defense Council	<p>Strongly support encouraging replacement air conditioners to be heat pumps.</p> <p>Section A4.204.1.1 would encourage the replacement of air conditioners with heat pumps at the time of equipment change out for jurisdictions that choose to adopt it. Replacing air conditioners with heat pumps at the time of burnout is a common sense policy that provides a cost-effective, low cost opportunity to lock in emissions reductions. The opportunity is huge: approximately 1.9 million central air conditioners are due for replacement in California today that could be affected by this requirement in the near term. The magnitude of this opportunity also highlights the magnitude of a missed opportunity: air conditioners that are not replaced with heat pumps in 2026 will likely remain in place well into the 2040s, locking in the associated emissions for decades or burdening the homeowner with the cost of retiring the equipment early to meet future appliance emissions requirements. The requirement to install a heat pump would still allow for a gas furnace that operates in tandem with the heat pump, but would align with future appliance emissions standards by ensuring that heat pump heating is in place. We therefore strongly support the inclusion of this policy in the CAL Green 45-Day Language.</p>	Thanks you for your comment of support.	k	45-Day	
257554.003	Natural Resources Defense Council	<p>In addition to the fact that these systems are available and feasible, there is a large risk in continuing to allow the installation of air-conditioners only, due to the likelihood of existing and future appliance emissions standards. The Bay Area Air Quality Management District (BAAQMD) will require zero-emissions space heating equipment starting in 2029. Encouraging air conditioners to be heat pumps in Bay Area jurisdictions would protect residents against the potentially costly scenario, when their furnace dies in the future, of having a newly installed AC that they must replace with a heat pump due to the BAAQMD policy, when they could have made this change for minimal incremental cost at the time of their AC installation. In the case of a homeowner who replaces an air conditioner in 2026 and</p>	Thank you for your comment.	7/1/2024	45-Day	

257554.004	Natural Resources Defense Council	<p>As noted in the CEC's analysis this measure is cost-effective in all climate zones except for 15 (due to low heating use in that climate zone). The CEC's analysis shows a low 30-year incremental first cost for a heat pump compared to a standard AC replacement: \$1,008 for a 3-ton unit, as shown in Figure 1. 6 This number is based on cost data collected from a small number of contractors in the summer of 2023. However, a more recent and robust data set collected by Opinion Dynamics in February 2024 based on a survey of 64 TECH Program contractors shows even lower costs. Based on the data collected by Opinion Dynamics, the 30-year lifetime incremental first cost of a 3-ton heat pump is only \$138, as shown in Figure 2. We recommend that the CEC update these numbers for future analyses, which would improve the cost effectiveness of this already cost-effective measure.</p> <p><i>See docketed comment for tables.</i></p>	<p>CEC staff appreciates the comprehensive data provided by Opinion Dynamics and acknowledge its broader range. However, it's important to consider that the current phase of the project is focused on desktop research, with future phases planned to collect real-world installation data. While the updated figures from Opinion Dynamics are promising and suggest an even lower cost for a 3-ton heat pump, it would be premature to update the CEC's analysis solely based on this preliminary data.</p>	7/1/2024	45-Day	
257554.005	Natural Resources Defense Council	<p>Strongly support requiring altered pool and spa heaters to use renewable fuel sources or be heat pumps.</p> <p>Sections A2.401.2 and A5.204.1 would require replacement pool and spa heaters in multifamily and nonresidential pools to be heated by solar energy, other renewable or site-recovered energy, or a heat pump water heater. This measure was originally proposed in Part 6 as part of a measure that represented the single measure with the largest gas savings identified by the CASE Team and would have saved an estimated 61,293 metric tons CO2e in the first year alone. The existing pool and spa component of this provision represents significant savings. While we are disappointed that this measure was not included in Part</p>	<p>Thank you for your comment of support.</p>	7/1/2024	45-Day	

Comment Number	Commenter (Name/Affiliation)	Comment(s)	Staff Response to Comment During Hearing	Additional Staff Response to Comment	Date of Comment	Phase
20240605.001	Meg Walther, Energy 350 on behalf of NRDC	<p>Yeah, I just want to voice my overall support for the measures proposed today. As I know you all are aware, we would have preferred to see both the pools and AC to heat pump alterations measures in Part 6, but if they're not going to be in Part 6, we're strongly supportive of them being here in Part 11. And the AC to heat pump measure in particular really leverages a key opportunity to install heat pumps in the state when it makes the most sense when you're already changing out that AC rather than locking in an AC again for another 15 years and locking out that heat pump technology.</p> <p>And similarly, the pool alteration measures results in significant emissions reduction, so happy to see that in Part 11 if it wasn't going to be in Part 6.</p> <p>I did just want to make a comment on the incremental first costs that are in the report. Those are, I think, based on the survey of a few contractors that you all did last August or so, or last fall. And since then, the TECH program with Opinion Dynamics did a much broader contractor survey around costs and found lower incremental first costs than what you all found in that initial survey. And so I just recommend updating that report with those Opinion Dynamics data.</p>	MR. BOZORGCHAMI: Thank you, Meg. I'm not going to take credit for the work that Bach and the team did, but thank you for your comment.	Thank you for your comment. The cost assumptions used are reasonable and CEC staff does not plan to update the final report. However, as we work with local jurisdictions to bring this item forward in the form of a local ordinance, we will be sure to provide the Opinion Dynamics cost information for their consideration.	6/5/2024	Lead Commissioner Hearing
20240605.002	Kelly Cunningham, Pacific Gas & Electric	<p>So taking off that hat and putting on my PG&E hat, we did make a comment back when this was in the express terms last fall from Pacific Gas & Electric and not through the Local Energy Codes Program, just noting that new furnace allowed for backup does lock in that gas technology for a long time. So although we recognize that dual fuel systems are a viable alternative in the meantime while the decarbonization movement is taking place, allowing for that new furnace, it does have a long lifetime, so referring back to our letter from the fall. However, cities can adjust these. They can take them wholesale or they could adjust them. So in a way, having it in Part 11 allows for more flexibility.</p>		Thank you for your comment.	6/5/2024	Lead Commissioner Hearing
20240605.003	Bob Rayermer, CBIA & CAA	Yeah, we are definitely supporting the exceptions that you've included for electrical capacity shortfalls. Depending on what part of the state you're in and the urbanized area, if it's infill or whatever, that's a real concern these days. Hopefully that'll get corrected.		Thank you for your comment of support.	6/5/2024	Lead Commissioner Hearing
20240605.004	Bob Rayermer, CBIA & CAA	I would indicate that you might want to consider, and we'll work with the staff before we get our comments in by the July 1st deadline, but you may want to consider the addition of a third exception dealing with space constraints. If you go back three to four years when the Commission was first considering this, we did recognize that there were a number of sort of physical constraints that have to be met with electric heat pump technology that may	MR. BOZORGCHAMI: Thank you, Bob. Bob, I'm going to recommend, if you could submit that in writing to us, and sooner than later, so we could actually get the dialogue going with Bach and Mikey and other staff members to resolve some of that concerns and evaluate this third exception that you brought up to us.	Thank you for your comment. Staff agrees with Ted Tiffany's response to this comment and no changes were made to the code language.	6/5/2024	Lead Commissioner Hearing
20240605.005	Bob Rayermer, CBIA & CAA	Lastly, you know, I've looked at your either/or, the A or the B, and you're characterizing it as a prescriptive mandate. It seems a little bit more like more of a performance where you either do the heat pump, or if you don't do the heat pump, you do these other things with a gas system. You know, once again, I'll be contacting CEC staff offline to make sure we're reading this correctly.		Thank you for your comment.	6/5/2024	Lead Commissioner Hearing
20240605.006	Ted Tiffany, Building Decarbonization Coalition	<p>Bob, you bring up a good point, but I just want to make sure that we're clear on the space constraint issue. This is for AC replacements. And this is a question to staff. I guess, to clarify with Bob, the space constraint issue being space within the internal space? Because if this is an AC replacement, the space for the air conditioning on the external space is already existing. And most of those concerns with were property line issues, HOA issues with the external condenser that would already be there in this constraint.</p> <p>So we didn't see many internal constraints with the AC replacement at all, even in keeping the remaining furnace. So just make sure staff understands what the space constraint is there.</p> <p>So thank you for the comment, Bob, and I appreciate your support</p>	MR. BOZORGCHAMI: Thank you, Ted. Yeah. Yeah, we'll look into that and we'll have a dialogue with Bob as soon as we get that comment in writing to us.	Thank you for your comment. Staff agrees with the commentor's response and no changes were made to the code language.	6/5/2024	Lead Commissioner Hearing
20240605.007	Kelly Cunningham, Pacific Gas & Electric	<p>First of all, thank you. I think this provides some exciting voluntary options for our jurisdictions. I am a program manager for the PG&E Local Energy Codes Program, also known as Reach Codes, and encourage the Commission to maybe extend additional support this cycle to local jurisdictions wanting to really hear the cost effectiveness and the options that are behind these voluntary suggestions, and also how they could perhaps customize them as they go through their ordinance process.</p> <p>So although you've offered support in the past, maybe expanded support, really an invitation to talk through things for that climate zone and for that city. Our program is also here to support with additional resources for that city, but hearing it from the</p>	MR. SHEWMAKER: So in response to assistance for local jurisdictions who are planning or intend to potentially take up the single-family heat pump replacement item, we do very much intend to provide what support we can to those local jurisdictions. So already once, we have presented this material to the IOU REACH Code Team monthly meeting. And moving forward, we do plan to work closely with that group to provide what information we can to local jurisdictions to make it as easy as possible for them to adopt.		6/5/2024	Lead Commissioner Hearing
20240605.008	Kelly Cunningham, Pacific Gas & Electric	[Follow-up questions] Does that include individual jurisdictions? Could they reach to the Commission directly, or would you -- or is it more in the public format, maybe in multiple jurisdiction meetings?	MR. SHEWMAKER: If they would like to reach out to us directly, they are more than welcome to. So in addition to that outreach, we have made available the Single-Family Heat Pump Replacements, not case report, but Technical Report, so that is available. We are trying to come up with what additional information we could put together that would be helpful to the local jurisdictions.		6/5/2024	Lead Commissioner Hearing
20240605.009	Bob Rayermer, CBIA & CAA	<p>And first, I'd like to start off with a question for Mikey. Are we talking about just single-family homes here or, given the way it's presented, it looks like it would also apply to low rise multifamily. Am I reading that correctly?</p> <p>[Question re: the AC to HP replacement proposal]</p>	MR. SHEWMAKER: So that measure in particular is specific to single-family only; is that correct, Bach? MR. TSAN: Yes, that is.		6/5/2024	Lead Commissioner Hearing
20240605.010	Bob Rayermer, CBIA & CAA	But the big thing today is I wanted to confirm that the HVAC change-out that you're discussing here did not apply to multifamily. And Mikey just confirmed that. So thank you very much.		Thank you for your comment.	6/5/2024	Lead Commissioner Hearing

20240605.011	Clarie Warshaw, (no affiliation)	<p>I haven't followed these issues closely. So I'm just kind of learning along with a couple of meetings, because the last business meeting I attended, there was a bunch of Sierra Club members during public comment that came. I have participated a long time ago with the Sierra Club, but not recently at all. I don't know why they showed. I don't know why they're not here either.</p> <p>But after listening to that, I kind of understand their point of view a little bit. I kind of see where they're coming from, and about pushing heat pumps and not having more gas, but that not really a huge issue of mine. I just kind of see it now more why they are concerned that it isn't in the Energy Code and is here instead.</p> <p>But that's my own perspective. I'm just sorry they're not here, too, if they're listening, I hope they're listening.</p>		Thank you for your comments.	6/5/2024	Lead Commissioner Hearing
20240605.012	Clarie Warshaw, (no affiliation)	<p>The other thing I wanted to say is to give hope to more of these voluntary compliance measures, because I live in an area that seems resistant to a lot of things that are proposed. I'm near Rancho Cordova and in an unincorporated part of Sacramento County. I would say, for example, the pool standards, the spa and pool standards pump things that you're suggesting I have not even seen or heard of in terms of a solar, thermal situation.</p> <p>It would be really nice to see if there are existing examples, see that in the information you provide when you're sharing this today so that, you know, people that just happen to, like me or Sierra Club, wherever they are, happen to listen might think that it's possible instead of having to, like, we have to insert ourselves into a whole bunch of literature to find out what you're talking about. So sharing some examples, current examples that are existing might be nice.</p>	<p>MR. BOZORGCHAMI: We did post the express terms in our docket for public review. And what we do, we do have an outreach program here at the Energy Commission that, and then I know that there's the program called Energy Code Ace that provides information, educational information for the public. And we also have an Outreach and Information Group ran by Chris Olvera, who does training and provides educational information. All that can be found on our website.</p> <p>And the other one is energycodeace.org -- com, excuse me, energycodeace.com that has a slew of information on not just pool heaters and solar but on everything energy efficient related. So the information's out there, but thank you.</p>		6/5/2024	Lead Commissioner Hearing
20240605.013	Bob Raymer, CBIA & CAA	<p>And to the last speaker, you may be unfamiliar with the Green Code Advisory Committee that the Building Standards Commission has, but as we were going over the Department of Housing and Building Standards Commission changes to the Green Code earlier this year, the CEC provided sort of an update. And the Sierra Club was heavily represented during that hearing, and they seemed to be quite aware of where the CEC was headed, and nobody seemed to be having objections.</p> <p>So for that, the CEC's done a pretty good outreach program. Thank you.</p>	<p>MR. BOZORGCHAMI: Thank you, Bob. And I did forget about the Green Code Advisory. I apologize. Yes. That is another organization that people can participate, partake with.</p>		6/5/2024	Lead Commissioner Hearing
20240605.014	Leora Radetsky, Design Lights Consortium	<p>We would like to recognize CEC in California for your leadership in energy and environmental protection. We support your approach in the new CALGreen 2025 proposal to limit sky glow and light trespass by applying a maximum of ten degree tilt, as well as requiring shielding language in your Code language.</p> <p>We'll be submitting written comments, as well, but I did want to make the comment that we have a program that also optimizes energy efficiency and environmental goals called LUNA. And our LUNA requirements will provide a way for end-users to meet CALGreen requirements in a simple, accessible way for</p>	<p>MR. BOZORGCHAMI: Thank you. Before you get off the call, have you reached out to Simon Lee, our lead electrical engineer, who's been really working on the lighting?</p> <p>MS. RADETSKY: Yes.</p> <p>MR. BOZORGCHAMI: Okay, Good. As long as he's aware of the program, we will take a look at it and evaluate it. Thank you so much.</p>	<p>No changes were made to the code language. Staff have evaluated the DLC program's outdoor lighting ordinances and specifically about control of glare and light trespass as related to the CALGreen Express Terms.</p>	6/5/2024	Lead Commissioner Hearing

Comment Number	Commenter	Comment(s)	The Commission's Response to Comment	Date of Comment	Phase	Link to Comment
258730.001	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>The Statewide Utility Codes and Standards Enhancement Team (Statewide CASE Team) and utility Compliance Improvement Team appreciate the opportunity to provide the California Energy Commission (CEC) comments on the 15-Day Express Terms for the 2025 California Green Building Standards Code (Part 11, Title 24, or CALGreen).</p> <p>We recommend five revisions to improve the clarity and enforceability for both the pool heating and the lighting requirements.</p>	Thank you for your comments.	8/29/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258730&DocumentContentId=94767
258730.002	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>1. Modify pool heating definition for consistency with Part 6. In Section 202 of the CALGreen 15-Day language, the definition of the term Solar Pool Heating System uses the word “designated”, while the Part 6 15-Day language uses the word “designed”. We recommend the following change to the CALGreen definition for consistency:</p> <p>a. “SOLAR POOL HEATING SYSTEM. [CEC] An assembly of components designated <u>designed</u> to heat water for swimming pools, spas, or swimming pool and spa combinations by solar thermal means, excluding pool recirculation components.”</p>	Thank you for the comments. Staff acknowledge the nonsubstantive errors and will identify this edit to the California Building Standards Commission to address consistent with the rulemaking process.	8/29/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258730&DocumentContentId=94767
258730.003	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>2. Correct the language related to luminaire tilting requirements. In Exception #3 to Section A4.203.1.3, and in Exception #2 to Section A5.203.1.1.2, the language appears to have been copied from sections in Part 6 related to light distribution cutoff. These sections in Part 11 are related to luminaire tilting. There is not a direct relationship between whether the light from a luminaire is cut off/shielded and whether a luminaire is tilted. Tilting a luminaire is not a recommended method to compensate for cutoff light distribution. We recommend the following change to the CALGreen language in both Appendix A4 and Appendix A5:</p> <p>a. “Lighting not permitted by a health or life safety statute, ordinance, or regulation to be a cutoff limit luminaire <u>tilt angle</u>.”</p>	Thank you for the comments. This requirement (A4.203.1.4 and A5.203.1.1.2) is a luminaire tilting requirement intended to preserve the luminaire’s BUG rating such that the rating is preserved when the luminaire is installed upright. When a luminaire is installed tiled with more than 10 degrees, the luminaire’s BUG rating is no longer preserved for its rating and obstructive lighting is very likely to occur. When the BUG rating requirement is not required for the luminaire, the tilting requirement of A4.203.1.4 or A5.203.1.1.2 is also not required. Based on the aforementioned, staff disagree with the comment.	8/29/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258730&DocumentContentId=94767

258730.004	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>3. Modify pool heating charging language for consistency with Part 6. The pool heating language in the 15-Day Express Terms for Part 6 [Section 110.4(c)] expanded the options from three to five, as has also been done for Part 11 [Section A4.204.1.2 and Section A5.204.1.1]. However, we recommend that the following language be modified for consistency and clarity:</p> <p>a. “Heating Source Sizing. Heating systems or equipment for pool and/or spa shall meet one of the sizing requirements of 1, 2, or 3</p>	Thank you for the comments. Staff acknowledge the nonsubstantive errors and will identify this edit to the California Building Standards Commission to address consistent with the rulemaking process.	8/29/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258730&DocumentContentId=94767
258730.005	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>4. Modify reference to heat pump pool heater controls. The second option in Section A4.204.1.2 and A5.204.1.1 incorrectly refers to Section 110.2(d). We recommend the following change to the CALGreen language in both Appendix A4 and Appendix A5:</p> <p>a. “A heat pump pool heater as the primary heating system that meets the sizing requirements of Reference Joint Appendix JA16.3. The control for the heat pump pool heater shall meet the requirements specified in Title 24, Part 6, Section 110.4(d) 110.2(d). The supplementary heater can be of any energy source; or”</p>	Thank you for the comments. Staff acknowledge the nonsubstantive errors and will identify this edit to the California Building Standards Commission to address consistent with the rulemaking process.	8/29/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258730&DocumentContentId=94767
258730.006	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>5. Provide clarification regarding portable electric spas. For consistency with Title 24, Part 6, we recommend the following modification to Exception #1 to Section A4.204.1.2 and to Exception #1 to Section A5.204.1.1:</p> <p>a. “Portable electric spas compliant with 20 CCR §1605.3(g)(7) of the Appliance Efficiency Regulations.”</p>	Thank you for the comments. Staff acknowledge the nonsubstantive errors and will identify this edit to the California Building Standards Commission to address consistent with the rulemaking process.	8/29/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258730&DocumentContentId=94767

258730.007	CA Statewide Utility Codes and Standards Enhancement (CASE) Team	<p>The Statewide Utility Team supports the CEC's efforts in providing a path for local governments to adopt an ordinance that encourages heat pump installations when air conditioners are replaced in single family homes. This work has considered the various important nuances of such an ordinance, including technical feasibility, utility costs, first costs, implementation, and enforcement.</p> <p>We applaud the CEC's commitment to support jurisdictions considering adopting the CALGreen requirements. This process may include modifying the language to suit local needs. The utility-led Local Energy Codes program works closely with jurisdictions to identify regionally appropriate, cost effective, and legally defensible strategies, and we look forward to continuing to do so with the CEC.</p> <p>Local adoption of CALGreen is especially important in the existing buildings sector, where there is tremendous potential for energy and greenhouse gas emission reductions. The Local Energy Codes program and the Statewide CASE Team are motivated to improve coordination between Title 24, Part 6 and Title 24 Part 11, to help familiarize the market with the more advanced energy and GHG-reducing approaches in CALGreen for consideration as future proposals in Part 6.</p> <p>Thank you for considering these comments and for the constructive dialogue that went into developing and updating the 2025 CALGreen requirements. We support CEC's efforts to improve the practical experience implementing CALGreen which could lead to</p>	Thank you for your comments of support.	8/29/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258730&DocumentContentId=94767
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258866.001	Pool & Hot Tub Alliance	<p>The Pool & Hot Tub Alliance (PHTA) represents more than 4,000 company members and over 11,000 individual members nationwide, including companies that manufacture pool and spa heating equipment. PHTA has a long history of working with the California Energy Commission (Commission or CEC) and appreciates the opportunity to provide feedback on the current proposed language.</p> <p>The California Pool & Spa Association (CPSA) is the statewide trade association that represents more than 230 company members in the state of California, including pool and spa builders, service companies, manufacturers, and distributors.</p> <p>PHTA and CPSA thank the Commission for their attention to the comments both associations submitted July 1, 2024, on the CALGreen 45-Day Express Terms issued May 16, 2024. The Commission has followed through on those comments and responded to the changes suggested in them. We appreciate the opportunity to provide information that will benefit California's economy and environment and meet the needs of the many California swimming pool and spa owners, builders, and designers.</p> <p>PHTA and CPSA submit the following comments on the Commission's 15-Day Express Terms for 2025 California Green Building Code, Title</p>	Thank you for your comments.	9/3/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258866&DocumentContentId=94965
258866.002	Pool & Hot Tub Alliance	<p>Heat Source Sizing Requirements</p> <p>A minor error listing sizing requirement options appears in two sections of the 15-Day Express Terms. This error may be corrected during editorial review, but as it affects pool heating requirement options, PHTA and CPSA thought it important to point out.</p> <p>In section A4.204.1.2 Altered Pool and/or Spa Heating for Existing Multifamily Buildings, the following requirements are provided (highlight added by PHTA/CPSA for emphasis and clarity):</p> <p>"A4.204.1.2 Altered Pool and/or Spa Heating for Existing Multifamily Buildings. Alteration of existing multifamily pool and/or spa heating system shall meet the following. Heating Source Sizing. Heating systems or equipment for pool and/or spa shall meet the sizing requirements of 1, 2, or 3 below:"</p> <p>There are five options that follow this section.</p>	Thank you for the comments. Staff acknowledge the nonsubstantive errors and will identify this edit to the California Building Standards Commission to address consistent with the rulemaking process.	9/3/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258866&DocumentContentId=94965

258866.003	Pool & Hot Tub Alliance	<p>Similar language appears in A5.204.1.1 Altered Pool and/or Spa Heating for Existing Nonresidential Buildings.</p> <p>“A5.204.1.1 Altered Pool and/or Spa Heating for Existing Nonresidential Buildings. Alteration of existing nonresidential pool and/or spa heating system shall meet the following. Heating Source Sizing. Heating systems, or equipment for pool or spa, shall meet the sizing requirements of <u>1, 2, or 3 below:</u>”</p> <p>Again, five options follow this section.</p> <p>PHTA and CPSA suggest that the intended language in the highlighted portions of these sections is “1 through 5 below.” The existing language unintentionally removes two important energy-saving options for builders, designers, and owners of pools.</p>	<p>Thank you for the comments. Staff acknowledge the nonsubstantive errors and will identify this edit to the California Building Standards Commission to address consistent with the rulemaking process.</p>	9/3/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258866&DocumentContentId=94965
258866.004	Pool & Hot Tub Alliance	<p>Heat Pump Controls Section References</p> <p>A minor error in referenced sections for Heat Pump Pool Heater (HPPH) requirements appears in similarly worded sections in both A4.204.1.2 Altered Pool and/or Spa Heating for Existing Multifamily Buildings and A5.204.1.1 Altered Pool and/or Spa Heating for Existing Nonresidential Buildings.</p> <p>In the Heating Source Sizing sections that appear under both A4.204.1.2 and A5.204.1.1 and that provide the options presented in the previous comment, there is a reference in option 2 in both sections to Heat Pump Pool Heater (HPPH) control requirements. That reference is to Title 24, Part 6, Section 110.2(d) in both sections.</p> <p>Section 110.2 provides Mandatory Requirements for Space-Conditioning Equipment, with the specific section referenced, 110.2(d), addressing Gas-fired and oil-fired furnace standby loss controls for space heating.</p> <p>The referenced section for HPPH control requirements should be Title 24, Part 6, Section 110.4(d) Controls for Heat Pump Pool Heaters with Supplementary Heating. Correcting this reference will help avoid frustration and confusion among swimming pool and spa designers, builders, and owners who are working to comply with the</p>	<p>Thank you for the comments. Staff acknowledge the nonsubstantive errors and will identify this edit to the California Building Standards Commission to address consistent with the rulemaking process.</p>	9/3/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258866&DocumentContentId=94965
258866.005	Pool & Hot Tub Alliance	<p>We welcome your careful consideration of the comments we have provided to the pool and spa-related proposals for the 2025 California Green Building Code (CALGreen), Title 24, Part 11. If you have any questions on these comments, please contact me at gceton@phta.org on behalf of PHTA.</p>	<p>Thank you for your comments.</p>	9/3/2024	15-Day	https://efiling.energy.ca.gov/GetDocument.aspx?tn=258866&DocumentContentId=94965

Comment Number	Commenter (Name/Affiliation)	Comment(s)	Staff Response to Comment During Business Meeting	Additional Staff Response to Comment	Date of Comment	Phase
20240911.001	Heidi Werner, CASE Team	<p>The CASE team supports the adoption of the voluntary energy efficiency requirements in CALGreen. Pacific Gas and Electric, San Diego Gas and Electric Southern California Edison, Los Angeles Department of Water and Power, and the Sacramento Municipal Utility District supported the CASE Team's effort for the 2025 code cycle.</p> <p>The updates to CALGreen provide a cost effective and technically feasible model for model code, for jurisdictions that wish to adopt local ordinances that will achieve energy and greenhouse gas savings that go beyond what is achievable through the Part 6 requirements.</p> <p>We are pleased to see that the update includes reasonable provisions for existing buildings that will result in significant savings. The requirements that apply to mechanical systems and pool and spa heating systems when they were replaced, encourage the transition to electric equipment, while also offering flexibility to achieve similar benefits with other design solutions. We look forward to continuing the conversation about how we might be able to draw upon the successes for this CALGreen update to consider strengthening the requirements for Part 6.</p> <p>We would like to thank Energy Commission staff for their hard work and collaboration in developing the updated CALGreen requirements. Especially, we'd like to thank Michael Shewmaker, Javier Perez, Payam Bozorgchami, Will Vicent, and Gypsy Achong. And also Commissioner McAllister, thank you for your support and</p>	N/A	Thank you for your comment of support.	9/11/2024	Business Meeting
20240911.002	Meg Waltner, Energy350 on behalf of NRDC	<p>I just wanted to briefly speak in support of the proposed voluntary CALGreen measures. We support the measures as proposed. As I spoke earlier, we would have preferred to see both the A/C to heat pump provision, and pool and Spa heater alterations requirements in Part 6. But given that they were removed from Part 6, we strongly support their inclusion here. And heat pumps in particular, is a critical for encouraging the adoption of heat pumps at the time of air conditioner burnout, which is just sort of this key pivotal point for encouraging that equipment to be heat pumps. So glad to see that included, and looking forward to seeing that adopted by local jurisdictions throughout the State. Thank you for your work on the</p>	N/A	Thank you for your comment of support.	9/11/2024	Business Meeting