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*Comment Received From: Harris & Sloan Consulting Engineers, Inc.
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**Harris & Sloan comment on 2025 Energy Code Pre-Rulemaking
Express Terms**

Additional submitted attachment is included below.



May 10, 2024

California Energy Commission
Docket No. 24-BSTD-01
715 P Street Sacramento, CA 95814
docket@energy.ca.gov

RE: 2025 Building Energy Efficiency Standards, Express Terms, 45-Day Language

California Energy Commission Commissioners and Staff:

Harris & Sloan is an engineering consulting firm to builders/developers in CA, with a focus on new residential construction in master planned communities we are directly involved in the design and construction of roughly 25% of all new residential units built annually. Harris & Sloan appreciates the commission and staff's goal of reducing energy use through a wide array of measures and are thankful for the opportunity to comment on the Commission's 45-Day Express Terms docketed March 28th, 2024.

Section 10-103.3 ECC Program

This section includes 44 pages of additional code language, centered around reorganization of the ECC (formerly HERS) program and concerns of conflict of interest, lack of transparency, and limited regulation. While well intentioned, it is only a partial step and effectively limits a portion of the industry that has historically been unregulated by adding regulation, then allowing self-certification. If these regulations are born from concern, then more should be done, if there is not significant concern then consideration should be given to reducing the amount of information that must be managed as it would only be increasing efforts and, ultimately, costs. If the new regulations are not enforced, this portion of the industry is effectively walled off, keeping out potential new competition with an abundance of regulation, while continuing the business-as-usual approach that has led to the concerns in the first place. We urge the commission to work toward a more regulated future that does not allow self-certification and/or swiftly enforcing the regulations that have been added.

Section 100.1 Definitions

The reorganization of the 2022 BEES to include separate sections for Single-Family and Multifamily buildings has created a lack of clarity around Townhouses, how they are modeled, which standards apply, local jurisdiction interpretation, and limit our ability to get builders/developers to participate in incentive-based programs like California Electric Homes Program (CalEHP) which categorizes any Townhouse as Single-Family regardless of Occupancy Group. Approximately 75% of the Townhouse projects we design meet the Townhouse definition (each unit extends from foundation to roof with open space on at least two sides) but are Occupancy Group R-2. Based on the current definitions a building of occupancy Group R-2 other than a hotel/motel is defined as a Multifamily Building, the definition of Low-Rise Residential Building further substantiates this. We recommend the following changes:

- Remove Low-Rise Residential Building from the definitions and throughout the code as it is no longer relevant. Alternatively remove R-2 and R-3 from the definition of Multifamily Building and Single-Family Building
- Adjust the definition of Single-Family to add clarity around a townhouse:
 - A townhouse of **Occupancy Group R-2 or R-3**,

Section 150.0(h) Mandatory Requirement for Space Conditioning, Single-Family

Proposed requirements for System Selection eliminate the use of auxiliary electric-resistance heating (heat strips) to meet heating loads. Single-speed packaged units are the most widely used HVAC systems for roughly 90% of new construction that utilize Heat Pump technology. These packaged units offer similar heating and cooling capacities. While well intentioned, this requirement will result in significant over-sizing for cooling, will drastically reduce the ability to comply with Energy Star (which provides tax incentives for efficient homes), and does not include exceptions for conditions that would



increase energy use beyond the savings attained through eliminating auxiliary heating. As example, larger homes in mild/costal climates will need (2) systems to comply. We believe the use of auxiliary heating should be reduced to the point that it is not allowing significant system under-sizing while allowing auxiliary heating for a small percentage of days/hours to ensure systems are “right sized” for both heating and cooling. We recommend the following changes:

5. System Selection.

- A. Equipment sizing and selection shall meet the cooling and heating loads of Section 150.0(h)1 and 2.
- B. Systems shall be sized based on ACCA Manual S-2023 in accordance with these requirements:)
 - i. Cooling Capacity: There is no limit on the minimum capacity.
 - ii. Furnaces: Heating capacity shall be sized based on ACCA Manual S-2023, Table N2.5.
 - iii. Heat Pump Heating Capacity: There is no limit on the minimum capacity.
 - a. Minimum: Heating systems are required to have a heating capacity meeting the minimum requirements of the CBC not including any supplementary heating **with the following exceptions:**
 - 1. **Where total cooling capacity would exceed 130% of total cooling load**
 - 2. **Where system size would exceed a single nominal 5-ton system**
 - b. Maximum: There is no limit on the maximum heating capacity.

Energy Star requirements can be found at: [Energy Star Single-Family New Homes. National HVAC Design Report, Version 3/3.1/3.2 \(Rev 13\)](#)

Section 150.0(h) & 160.3 (b) Mandatory Requirement for Space Conditioning, Single-Family and Multifamily

Draft 2025 Building Energy Efficiency Standards Express Terms included a requirement for space conditioning system load calculations to be provided for approval by the enforcement agency, which has since been removed. We recommend this language be reintroduced and included. As a builder consultant we can express firsthand that this is the only designed/engineered system in a new residential building that is not currently subject to review by the enforcement agency. Technically, Part 6 and 11 require calculations but it has become commonplace for that not to be enforced. While we understand requirements like this may be on the edge of the commission’s purview, requirements for accurate sizing are well within the purview and requiring calculations to be provided is a step toward achieving this goal. Without including this requirement we do a disservice to the building industry at-large; potentially increasing first costs to builders/developers (which will be passed on to buyers) and utility costs to owners, and limit the ability to reach the commissions long-term goals.

We believe these clarifications will go a long way toward providing the clarity, consistency, cost-effectiveness that is in the best interest of homeowners, and ultimately continue the push toward building more energy-efficient and affordable homes for years to come. If there are any further clarifications or questions that we can address, please contact me at (916) 921-2800.

Sincerely,

Shawn Mayer
Harris & Sloan Consulting Engineers, Inc.