



Shaping Tomorrow's  
Built Environment Today

Ginger Scoggins  
2023-2024 ASHRAE President

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May 10, 2024

David Hochschild  
Chair  
California Energy Commission  
715 P Street  
Sacramento, CA 95814

Letter sent via email to: [docket@energy.ca.gov](mailto:docket@energy.ca.gov)

Re: Docket 24-BSTD-01: 2025 Energy Code

Dear Chair Hochschild:

ASHRAE, founded in 1894, is a technical and professional society of more than 53,000 members, including over 3,000 in California, that focuses on building systems, energy efficiency, indoor air quality, refrigeration, and sustainability. Through research, standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow's built environment today.

**We support the inclusion of ANSI/ASHRAE/IES Standard 90.1-2022, [Energy Efficiency in Sites and Buildings Except Low-Rise Residential Buildings](#), in the proposed 2025 Building Energy Efficiency Standards.** Standard 90.1 has been the benchmark for commercial building energy codes in the United States and a key basis for codes and standards around the world for more than 35 years. It is an indispensable reference for engineers and other professionals involved in design of buildings and building systems. ASHRAE Standard 90.1 is under continuous maintenance by the 90.1 Standard Project Committee, and energy performance has improved in each successive edition, resulting in major improvements over time. Over the period of 2004-2019, which included six editions of Standard 90.1, energy performance improved by 36%.

The latest edition of Standard 90.1, the 2022 edition, has made significant updates and expands on previous editions. It includes a new optional appendix that allows the use of alternative metrics like site energy, source energy, or carbon emissions in addition to the traditional energy metric. Most importantly, for the first time in a minimum-efficiency U.S. national energy standard, 90.1-2022 has an expanded scope that includes not just buildings, but the entire building site, including on-site renewable energy.

The U.S. Department of Energy (DOE) has issued a determination that ASHRAE Standard 90.1-2022 will achieve greater energy efficiency in commercial buildings subject to the code, as compared to the previous 2019 edition of the standard. The determination estimates savings for commercial buildings of approximately 9.8% in site energy and 9.4% in source energy, along with an estimated 8.9% reduction in energy costs and 9.3% savings in carbon emissions.<sup>1</sup> We are pleased to see that, with this regulation updating from the 2019 to the 2022 edition of Standard 90.1, California will be on track to continue to achieve these energy efficiency benefits in a timely manner.

We also appreciate the proposal updating references in ASHRAE standards to their latest edition, including the following:

- ASHRAE Guideline 36-2021, *High-Performance Sequences of Operation for HVAC Systems*
- ANSI/ASHRAE Standard 55-2023, *Thermal Environment Conditions for Human Occupancy*
- ANSI/ASHRAE Standards 62.1-2022 and 62.2-2022, *Ventilation and Acceptable Indoor Air Quality*
- ANSI/ASHRAE Standard 84-2020, *Method of Testing Air-to-Air Heat/Energy Exchanger*
- ANSI/ASHRAE Standard 154-2022, *Ventilation for Commercial Cooking Operations*

#### Section 140.4 "Prescriptive Requirements for Space Conditioning Systems"

With respect to Section 140.4, the proposed changes for multizone space conditioning systems would significantly restrict HVAC system type selection and make major changes from the current best practices for offices and schools. The requirements in this section would unnecessarily constrain design options by preventing the use of system designs and technology options that may be a better fit for specific types of buildings such as offices and school buildings. This restriction has the potential to increase the cost of HVAC systems in offices and schools, as well as require additional equipment and technology that the covered building owners and operators, especially school districts and school facilities, may not have the funds or expertise to install.

ASHRAE instead supports an approach based on setting metrics and minimum standards for performance rather than requiring a specific technology. ASHRAE suggests improving the clarity of this section by replacing the text of Section 140.4(a)3 with the following:

“Multizone space conditioning systems in office buildings and school buildings not covered by Section 140.4(a)2 shall be an electric heat pump.”

**Again, we support the inclusion of the latest editions of ASHRAE Standards 90.1, 62.1 and 62.2, and others in this 2025 update. We also recommend revising Section 140.4(a)3 to allow for a variety of appropriate design options for HVAC systems in offices and school buildings. If you have any questions or need additional information, please feel free to contact**

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<sup>1</sup> Determination Regarding Energy Efficiency Improvements in ANSI/ASHRAE/IES Standard 90.1-2022, U.S. Department of Energy, February 2024: [https://www.energycodes.gov/sites/default/files/2024-02/Standard\\_90-1-2022\\_Determination\\_FR\\_Notice.pdf](https://www.energycodes.gov/sites/default/files/2024-02/Standard_90-1-2022_Determination_FR_Notice.pdf)

[GovAffairs@ashrae.org](mailto:GovAffairs@ashrae.org). Thank you for your work to improve building performance and improve the lives of California residents.

Sincerely,

A handwritten signature in black ink, appearing to read "Ginger Scoggins". The signature is fluid and cursive, with the first name "Ginger" being more prominent and the last name "Scoggins" following in a similar style.

Ginger Scoggins  
ASHRAE President