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NRDC et al comments on August 15 Day Language - corrected

Additional submitted attachment is included below.

September 6, 2024

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

Re: Comments on 2025 Building Energy Efficiency Standards, Express Terms, 15-Day Language (August 2024)

Dear Commissioners and CEC Staff,

The Natural Resources Defense Council (NRDC), Earthjustice, SAFE Cities, and Sierra Club submit the following comments on the California Energy Commission's (CEC) August 2024 15-Day Language Express Terms for the 2025 Title 24 Building Energy Efficiency Standards ("2025 Building Code") published August 22, 2024.[1] We appreciate the CEC's work in developing this second set of 15-Day Language for the 2025 Building Code and in particular the CEC's work to expand the available prescriptive options for multizone space heating systems in nonresidential buildings in Section 140.4(a)3. We strongly support the CEC's proposal for multizone systems which will encourage electrification in small and medium-sized school and office buildings, while allowing multiple compliance pathways.

The Building Code is instrumental in decarbonizing buildings throughout the state and helping achieve California's climate and air quality objectives. As submitted in our comments on the 45-Day Language[2] and June 2024 15-Day Language,[3] we continue to strongly support critical advances to the Building Code as proposed for the 2025 Building Code which will further building electrification and increase energy efficiency. These changes will save Californians money, increase comfort, and reduce the state's dependency on fossil fuels.

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[1] CEC, 2025 Building Energy Efficiency Standards, Title 24 Parts 1 and 6, 15-day Language ("15-Day Language") (August 22, 2024), https://efiling.energy.ca.gov/GetDocument.aspx?tn=258643&DocumentContentId=94700.

[2] NRDC et al Comments on 45-Day Language (May 9, 2024), https://efiling.energy.ca.gov/GetDocument.aspx?tn=256269&DocumentContentId=92054.

[3] NRDC et al Comments on 15-Day Language (June 27, 2024), https://efiling.energy.ca.gov/GetDocument.aspx?tn=257466&DocumentContentId=93346.

In the August 2024 15-Day Language, the CEC has expanded the number of prescriptive options for multizone systems in non-residential buildings under Section 140.4(a)3 and also limited the applicability to buildings less than 150,000 square feet and less than 5 stories tall to address stakeholder concerns. As written, the provision makes an important step forward to encourage electrification in this building size category, expanding on the requirements in the 2022 Building Code for small buildings with single-zone systems. The CEC has included additional prescriptive options in response to stakeholder feedback (including an option that will allow further equivalent pathways to be identified in the future) and has limited the scope to smaller buildings where these systems are shown to be cost-effective. These additional prescriptive options open up multiple compliance pathways in addition to the flexibility provided by the performance path.

The CEC has also revised its cost-effectiveness analysis to reflect stakeholder feedback and has developed a reasonable estimation of cost-effectiveness in its final analysis. While project costs can range widely from project to project based on individual building characteristics, the cost numbers presented for variable refrigerant flow (VRF) systems are a reasonable estimate for average costs, based on our project cost experience. This conclusion is based on a database of 16 VRF with very high efficiency dedicated outside air system (VHE-DOAS) projects installed in small and medium school and office buildings in Oregon and Washington. These projects are aligned with the CEC's cost estimates for VRF systems adjusting for the different construction regions, price escalation, and other project differences. For example, one commenter suggested that refrigerant piping would cost $16/square foot and condensate piping as much as $2,500/zone. This does not align with the detailed project level project cost data we have for the installation of one VRF plus VHE-DOAS system in an office building in Portland, Oregon, which found that all installation labor and materials (including condensate plumbing, refrigerant piping, install labor, crane picks, and curb materials) was $5.13/square foot (adjusted to 2024 dollars). Even if you assume California construction cost is double that of the project in Portland, Oregon, it would support the CEC's cost analysis. We also note that the CEC's analysis is specific to small and medium, new construction buildings where VRF installation is typically straightforward and for these building types we believe the CEC's analysis is an accurate representation of relative system costs.

We appreciate all the work the CEC has done to address stakeholder feedback on this provision and believe the CEC's proposed language in the August 2024 15-Day Language is a modest and important first step to encouraging electrification in these small and medium school and office buildings that is supported by the cost-effectiveness analysis.

We appreciate the opportunity to comment and the hard work of the CEC in preparing the August 2024 15-Day Language and urge the CEC to move forward with the adoption of the language as proposed in its September 11th, 2024 business meeting. We would welcome further discussion on any of our comments.

Sincerely,

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Natural Resources Defense Council (NRDC)

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