

**DOCKETED**

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*Comment Received From: Diana Burk*  
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**New Buildings Institute Comment on Title 24**

*Additional submitted attachment is included below.*

June 21, 2021

To: California Energy Resources Conservation and Development Commission

From: New Buildings Institute

Re: Comments on CEC proposed 45-day language for the 2022 Energy Code Docket #21-BSTD-01

We appreciate the California Energy Commission's efforts to shift the market toward clean, efficient all-electric new construction. Building electrification and grid integrated buildings are crucial to addressing the transition away from onsite fossil fuel combustion in buildings as the electricity grid moves towards 100 percent carbon free sources of energy. In February, New Buildings Institute (NBI) released a Decarbonization Code to support states and cities in their efforts to meet their climate goals. This Decarbonization Code includes many of the elements proposed in California's proposed 2022 energy code including electric-ready or all-electric requirements and demand response requirements. Washington, New York, Connecticut, Washington, DC, New Castle County (DE) and Denver (CO) are already considering amending their codes to include building electrification and demand response requirements recommended in NBI's Decarbonization Code and other sources. NBI supports decarbonization measures in Title 24, including the following specific changes:

1. **Electric-Ready:** With an increasingly renewable energy grid, electrification both reduces carbon emissions and improves the health of a building's occupants. Making new buildings electric-ready costs very little at the time of construction and will ensure that new homes fueled by gas will be able to affordably upgrade to electric appliances in the future. NBI therefore supports the electric-ready provisions for space heating, water heating, and cooking in Title 24.
2. **Grid Integrated Buildings:** Building-grid integration is critical to supporting California's decarbonization efforts. Grid integrated buildings support the reduction of fossil fuels by shifting energy use away from the times of the day when renewable energy sources are undersupplying the grid. NBI supports the proposal to allow compliance credit for thermal energy storage technologies beyond the existing chld water systems and measures to simplify and streamline requirements for demand responsive controls. NBI also supports the proposed demand responsive lighting control and demand responsive water heating requirements in Title 24. NBI, however, recommends, that the CEC revise the proposed grid connectivity requirements for water heaters which currently reference ANSI/CTA-2045-A. Grid connectivity requirements should reference ANSI/CTA-2045-B which was published in November of 2020. ANSI/CTA-2045-B is a more advanced communication interface for water heaters which allows grid operators to require water heaters to both shed demand and load up, allowing better integration with time-of-use rate structures. ANSI/CTA-2045-A only allows grid operators to require water heaters to shed demand but not load up. Therefore, water heaters utilizing this protocol cannot be integrated with time-of-use rate structures.

3. **Required Lighting Efficacy Levels for Horticultural Applications:** The Title 24 proposal to require a photosynthetic photon efficacy of 1.9  $\mu\text{mol}/\text{J}$  for horticultural lighting systems used in indoor growing applications and 1.7  $\mu\text{mol}/\text{J}$  for horticultural lighting systems used in greenhouses is cost effective with no adverse impacts to growers. Because of these benefits, these efficacy requirements are setting a precedent demonstrated by current consideration in ASHRAE 90.1 and have already received preliminary approval in Washington State, Minnesota, Washington, DC and Vermont.

NBI looks forward to facilitating consistency between Title 24 and code specifications in IECC, ASHRAE and local code adoption efforts across the nation. Further, we hope that this can be a solid foundation to coordinate with the growing national effort to decarbonize buildings. Thank you for the opportunity to comment.

Signed,



Jim Edelson  
Director of Policy



Diana Burk  
Project Manager Codes and Policy