

<b>DOCKETED</b>	
<b>Docket Number:</b>	24-BSTD-01
<b>Project Title:</b>	2025 Energy Code Rulemaking
<b>TN #:</b>	255323-1
<b>Document Title:</b>	Staff Supplement to 2025 CASE Report - Controlled Environment Horticulture
<b>Description:</b>	N/A
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<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	3/28/2024 4:31:48 PM
<b>Docketed Date:</b>	3/28/2024



## ***Staff Supplement to Kyle Booth Measure Proposal “Controlled Environmental Horticulture”***

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**Date:** March 28, 2024

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### Description of Proposed Regulatory Changes

The measure change proposal submitted by Kyle Booth and titled “Controlled Environmental Horticulture” (CEH) proposes to make the following changes to the 2025 Standards:

- Horticultural Lighting Minimum Efficacy: The horticultural lighting minimum efficacy measure proposes increases in mandatory requirements for minimum photosynthetic photon efficacy (PPE) from 1.9 micromoles per joule ( $\mu\text{Mol}/\text{J}$ ) for indoor growing facilities and 1.7  $\mu\text{Mol}/\text{J}$  for greenhouses to 2.3  $\mu\text{Mol}/\text{J}$  for luminaires used for plant growth and maintenance in indoor growing facilities with more than 40 kW of total connected horticultural lighting.
- The measure applies to new construction, additions to CEH facilities, alterations that change the occupancy classification of a building (for example, a warehouse converted to a CEH facility), and alterations that involve replacing 10 percent or more of the luminaires serving an enclosed space.

Staff agrees with the proposed changes to Horticultural Lighting Minimum Efficacy, setting luminaire efficacies at a 2.3  $\mu\text{Mol}/\text{J}$  PPE level for both indoor growing facilities and greenhouses, and have incorporated substantively similar changes into the proposed 2025 Express Terms.

### Staff Analysis and Conclusion

Staff has analyzed the submitted proposal and reached the following conclusions for the measures included in the 2025 Express Terms:

- Based on the evidence presented in the proposal, the measures, as proposed, are cost effective and the author has appropriately followed the Energy Commission’s Life Cycle Cost methodology.

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- Measure costs premiums presented in the proposal are reasonable and appropriate for the measure proposed.
- Measure energy savings presented in the proposal are appropriately modeled and are credible.
- Measure environmental impacts presented in the proposal are reasonable and appropriate for the measure proposed.