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CBIA Comments on Pre-Rulemaking Peak Load Workshop

Additional submitted attachment is included below.

October 11, 2023

Commissioner Andrew McAllister
California Energy Commission
Docket Unit, MS-4
715 P Street
Sacramento, California 95814

RE: **Docket No. 22-BSTD-01**
September 28 Peak Cooling Energy Pre-Rulemaking Workshop
Comments by: **California Building Industry Association**

Dear Commissioner McAllister

Introduction

The California Building Industry Association (CBIA) is a statewide trade association representing over 3,000 member companies involved in residential and light commercial construction. CBIA member companies are responsible for over 85% of the new single-family homes built in California annually.

Background

For the 2025 Residential Building Energy Efficiency Standards (BEES), the CEC is moving away from the Time Dependent Valuation (TDV) metric, which emphasizes summer peak load reduction measures, and will instead use the "Long-term System Cost" (LSC) metric, which focuses more on preparation for the long-term impacts of climate change and the impact of electrification policy measures on the grid. While this is a well-intentioned response to the climate crisis, some unintended short-term issues have emerged.

The Problem

Including the LSC as a metric in the 2025 Residential BEES has resulted in an analysis showing two new peak loads emerging in the winter months, now exceeding the already huge peak load in the summer months. Specifically, the current (and very large) summer HVAC peak is now in third place behind the projected #2 peak load that will occur at midnight during the winter months. The analysis also shows that the new, largest peak load will occur at 8 p.m. **during the winter months** and is estimated to be **twice the size** of the existing summer peak load. This stunning change in peak load projections is primarily due to the assumed power demand from the massive, statewide application of heat pump space heating and EV charging during the evening hours.

CBIA is not taking issue with this projected impact of electrification on the grid in the decades to come. This may well be the case. However, if left unchanged, the impact of this new metric on the 2025 Residential BEES will effectively diminish the critically needed focus on efficiency measures that reduce the summer peak loads that are the reality of today. Instead, efficiency measures that primarily save energy in the winter evenings, such as improved heat pump HSPF and HRV, can now get an outsized compliance credit that can be used to trade away building

envelope features, including those that save electricity strictly on the hot summer days we are already experiencing and will continue to experience in years to come. This is especially disturbing as California's winters are becoming milder, not colder. Also, with proper utility rate design and EV-to-Grid capabilities, EVs may help the grid rather than hurt it.

In response to the issue cited above, CEC Staff is proposing to use the 2025 building envelope measures as a backstop for the summer cooling loads. Until CBIA can model this using updated CBECC-RES software, our industry will be very concerned with this approach. While it seeks to address the summer peak load issue created by the LSC, it may severely limit critically needed compliance tradeoff options, especially with mechanical equipment.

NOTE: As of the submittal of this comment, CBIA has yet to receive the updated compliance software. A rigorous analysis using the updated software could quell this concern.

Bottom Line:

The LSC is a well-intended, long-term metric that considers significant changes to the grid that may (or may not) take place decades into the future. The immediate problem is that these proposed energy standards go into effect in January 2026, not decades later.

Suggested Solution(s):

While this problem has emerged late in the informal regulatory development stage of the process, we must still find a way to address this issue in a way that will continue to allow builders access to robust compliance credit for those measures that reduce the summer peak load that we are experiencing now and will continue to worsen in years to come.

As an alternative, CBIA respectfully requests the Commission to address the structural summer peak LSC issue by restoring the summer/winter peak ratio balance that currently exists under the 2022 TDV. This can be accomplished by applying a "multiplier" to the summer peak values of the 2025 LSC to restore the 2022 summer/winter peak ration balance.

This approach has the following benefits:

- It maintains appropriate compliance tradeoff options available under the 2022 standards, which are VERY beneficial to the grid and the homeowner's pocketbook.
- It should not impact the 2025 building electrification measures since it leaves the winter peaks intact.
- It should bolster the cost-effectiveness of measures that save energy year-round because it maintains the proposed winter signals while bolstering the summer signals.
- It restores summer demand response and load-shifting strategy signals

Reality Check:

CBIA realizes this request comes very late in the code-development process. However, the impact of the LSC was only recently brought to the attention of the stakeholders, and we need to fix this now before the CEC moves into the formal rulemaking process.