

DOCKETED

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SPAN comments on Draft 2025 California Building Energy Action Plan, Docket 23-DECARB-03

Additional submitted attachment is included below.

February 20, 2026

California Energy Commission

Re: Docket [23-DECARB-03](#)

715 P Street

Sacramento, CA 95814

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RE: SPAN Comments on the Draft 2025 California Building Energy Action Plan

Dear Commissioner McAllister and California Energy Commission Staff,

Span.IO, Inc. (SPAN) appreciates the opportunity to provide comments in response to the Draft 2025 California Building Energy Action Plan (Draft Plan) presented during the staff workshop on January 29, 2026.

I. SPAN Overview

SPAN is a manufacturer of smart electric panels and grid-edge hardware and software solutions. Smart panels, such as those developed by SPAN, serve as a direct replacement for traditional residential electrical breaker boxes. The panel includes intelligent hardware that can enable whole-home electrification, including the installation of rooftop solar, backup battery, heat pump HVAC, hot water heaters, induction cooking, and EV charging, without the need for expensive service upgrades and additional upstream investments to the distribution system. SPAN panels have already been used as part of utility pilot projects to reduce overall demand similar to a virtual power plant project.¹

II. Comments

SPAN applauds the California Energy Commission (CEC) for its commitment to providing the state with a comprehensive, efficient, and cost-effective building decarbonization strategy.² We commend staff for developing a thoughtful and robust Draft Plan. In the interest of supporting its successful implementation, we respectfully offer the following comments on the section titled “Residential Panel Optimization and Sizing:”

- SPAN agrees with the Draft Plan’s goal of reducing infrastructure costs;
- The Draft Plan does not fully recognize the ability of Energy Management Systems certified to the Power Control System standard to avoid costly service upsizing; and

¹ Pacific Gas and Electric Company, “[PG&E Launches Seasonal Aggregation of Versatile Energy \(SAVE\) Virtual Power Plant Program](#),” Press Release, 2025.

² CEC. [Draft 2025 California Building Energy Action Plan](#). December 2025.

- Panel upgrades, when strategically deployed, can represent a cost-effective investment for homeowners.

A. SPAN agrees with the Draft Plan’s goal of reducing infrastructure costs.

SPAN supports the extensive discussion in the Draft Plan of infrastructure costs as a key barrier to electrification and decarbonization. The Draft Plan correctly identifies infrastructure upsizing as a potentially large expense that can both delay electrification projects and make projects uneconomic. We are also aligned with the Draft Plan’s focus on right-sizing equipment for a home and using efficient equipment. For example, this section from page 86-87 is very strong and accurate guidance for homeowners and electricians: “Adding energy efficiency measures and selecting power-efficient appliances and equipment can reduce the peak load of a building. Sizing new equipment properly reduces peak demand and long-term energy costs.” SPAN is grateful for staff’s focus on cost-effective electrification strategies that minimize unnecessary infrastructure upgrades while advancing the state’s decarbonization goals.

B. The Draft Plan does not fully recognize the ability of Energy Management Systems certified to the Power Control System standard to avoid costly service upsizing.

SPAN appreciates staff’s inclusion of panel optimization and right-sizing in the Draft Plan. As staff correctly recognize, securing a service upgrade is often costly and time-intensive and is not always the most effective pathway to advance electrification. Innovative technologies, such as SPAN’s smart panels, offer a practical, cost-effective, and readily deployable solution that can enable electrification without requiring unnecessary service upgrades in many applications.

We believe that the Draft Plan could be strengthened by providing an important point of clarification. The Draft Plan states that “California Electrical Code requires the electric panel and the utility service line to be sized to accommodate the estimated maximum combined instantaneous electricity draw (or peak load) of the building.”³ However, Section 220.70 of the California Electrical Code provides additional flexibility by allowing homes equipped with an Energy Management System (EMS) to use an alternative load calculation methodology.⁴ This mechanism is being used effectively in California today. For example, Silicon Valley Clean Energy has published an educational resource for customers that says, “Using NEC 220.70, the Kim family electrified their home, installing a smart electric panel with digital energy management to avoid costly service upgrades.”⁵ The CEC, in recognizing this existing pathway, could further strengthen the Draft Plan’s guidance on cost-effective electrification solutions.

In order to present Californians with a full set of cost-effective decarbonization strategies, we respectfully request that the final Plan include a discussion of how homeowners can avoid service upsizing with an electric panel that has EMS capabilities. Given that the National Electrical Code is

³ [Draft 2025 California Building Energy Action Plan](#). Pg. 84.

⁴ California Electrical Code, Cal. Code Regs., Title 24, Part 3, § 220.70 (2025 ed.) (Energy Management Systems).

⁵ <https://svcleanenergy.org/wp-content/uploads/Understanding-Electrical-Panel-Options-0925.pdf>

transitioning from EMS to a more robust concept of a Power Control System (PCS), we recommend that the final Plan specifically identify the solution as “Energy Management Systems certified to the Power Control System standard.” UL affirms this approach, writing, “A PCS monitors the output of power sources and regulates or limit current or power within predefined limits...Unlike the energy management system (EMS), which focuses on optimizing energy usage and cutting costs, the PCS addresses the essential aspects of load control and safety.”⁶

C. Panel upgrades, when strategically deployed, can represent a cost-effective investment for homeowners.

We greatly appreciate the Draft Plan’s recognition of panel optimization, but note that it appears to start from an assumption that all panel upgrades should be avoided, if possible. We want to note that there are at least two times when a panel upgrade is a prudent investment.

First, as described above, a panel that performs the functions of an EMS certified to the PCS standard can help avoid large upstream costs, particularly a service upsizing. For this reason, we respectfully request that the final Plan acknowledge that installing a panel with these capabilities (which is a “panel upgrade,” in the Draft Plan’s framework) is often a cost-effective investment when viewed as part of an overall decarbonization project.

Second, this section of the Draft Plan appears to be narrowly focused on situations where the customer is only adding one or two additional appliances, and underestimates the need to plan for full electrification. For example, while TECH Clean California data shows that many homes can add one or two electric appliances without a panel upgrade,⁷ these households may need a panel upgrade when adding further electric loads in the future. By squeezing more loads into the existing panel today, the homeowner may actually end up paying more if this work has to be duplicated in the future with a new panel. Additionally, planning for future growth early in the electrification process helps avoid delays when a customer is ready to install additional electric appliances. Without this foresight, such delays can lead customers to replace failed gas appliances with new gas units instead of electrifying.

For the reasons stated above, we recommend that the final Plan include more nuance about wise investments for homeowners, rather than simply recommend avoiding panel upgrades.

Conclusion

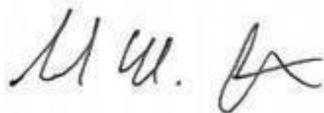
In summary, SPAN strongly supports the Draft Plan’s focus on improving cost-effectiveness and maximizing the value of existing infrastructure. We believe there is an opportunity to further enhance the Draft Plan by incorporating additional clarity around panel optimization and sizing pathways. We respectfully encourage the Commission to ensure the final Plan provides homeowners, electricians,

⁶ <https://www.ul.com/services/power-control-systems-distributed-energy-resource-systems>

⁷ [Draft 2025 California Building Energy Action Plan](#). Pg. 85.

policymakers, and other stakeholders with a comprehensive and balanced understanding of the full range of available solutions.

Sincerely,

A handwritten signature in black ink, appearing to read "R. W. Caperton". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

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