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TRC Comments on 2025 Draft California Building Energy Action Plan

Additional submitted attachment is included below.

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February 20, 2026

To: California Energy Commission staff

From: Abhijeet Pande, Cathy Chappell, Farhad Farahmand (TRC)

Re: 2025 California Building Energy Action Plan, Docket No. 23-DECARB-03

Thank you for the opportunity to comment on the draft 2025 California Building Energy Action Plan (Action Plan) report dated December 2025. TRC provides the following comments on seven (7) selected topical areas for your consideration in developing the Final commission report.

A. Bill Impact Estimations and Electricity Rates

Utility customers are faced with increasing bills and are hesitant to invest in energy improvements for fear of further increases. The Energy Commission is well-positioned to lead the discourse on bill savings and cost-effective opportunities for electrification. As mentioned in the Action Plan, TECH Clean California found on-bill savings of $154 when measuring interval data in PG&E territory, and this Peninsula Clean Energy study found similar results showing electrifying nine low-income households saved 20% on their utility bills.

Evidence-based and trustworthy consumer education campaigns are needed to dispel misinformation around the costs of electrification. Energy simulations must be calibrated to utility meter data, perhaps using the CEC energy data repository if that is the best available source. Energy simulations must be conducted with EnergyPlus, which is flexible and can more easily be calibrated to utility data, rather than with CBECC, which is a compliance software with specific constraints to avoid enforcement challenges.

We recommend the Energy Commission lead the way in identifying the pathways to cost-effective on-bill electrification and educating consumers on what choices are economically optimal.

While the focus has rightly been on residential customers, especially those in disadvantaged communities and low-income homeowners and renters, small businesses have similar needs and affordability challenges. We recommend the Energy Commission conduct focused assessments of bill impacts and electricity rate impacts for small businesses.

While we appreciate the analysis done to date, representing average impacts by consumer class paper over real differences in rate and bill impacts among those within those consumer classes. The rate and bill impacts are not uniformly faced by all customers and varies based on their baseline energy consumption, fuels used and decarbonization efforts undertaken. We request the Energy Commission provide further information on the range of impacts (positive and negative) rather than average impacts.

B. Benchmarking and Building Performance Standards

To better understand compliance with AB802 Benchmarking requirements, we recommend the Energy Commission develop a complete Covered Buildings list by collecting property tax assessor's information for all California counties. Though property assessor's information often has errors, they tend to be the most comprehensive local records available. This list can then be compared with the building owner submittals to the Building Energy Benchmarking Program to develop a rough compliance rate.

C. Building Energy Efficiency Standards for New Construction

The Energy Commission has made tremendous progress through the BEES for new construction. The primary remaining gaps are in nonresidential buildings. We suggest the Energy Commission prioritize code updates focused on non-residential end uses. The suggested topic areas for nonresidential new construction in future code updates (2031 and beyond) include:

1. Mandatory electric-readiness, building on the 2024 IECC Appendix CH Electric Ready Commercial Building Provisions, which includes space heating, service hot water, cooking, and clothes drying. Multizone central space conditioning provisions may look like the central multifamily domestic hot water electric readiness provisions in the 2025 standards.
2. Update CBECC compliance software to properly model service hot water systems and distribution systems and advanced HVAC technologies for inclusion in new construction and alterations.
3. Prescriptive pathways for:
    a. Heat pumps for multizone space conditioning systems in addition to offices and schools. Other common building types include Assembly, Hotels, and Laboratories.
    b. Heat pumps for single zone space conditioning systems serving special occupancies such as restaurants and warehouses.
    c. Service hot water clarifying the baselines of heat pump, electric resistance point-of-use, and gas water heating. Except for schools, Section 140.5 of the standards do not align with ACM Appendix 5.4A provisions.

D. Regulatory Standards for Existing Buildings

The Energy Commission has passed a major milestone in developing a model policy for single-family heat pump replacements, which has spurred interest in local adoption of this policy across the state. We support updates to the 2028 nonresidential prescriptive Energy Code to encourage the installation of heat pumps during air-conditioning and water heating replacements.

In addition, we suggest that electric-readiness provisions be added during major non-residential retrofits. Tenant improvements and other major improvements represent a tremendous opportunity for building owners and tenants to invest in technologies that will comply with future standards from CARB and air districts, as well as the Energy Commission's Building Energy Performance Standards.

While residential policy opportunities are diminished under the constraints of AB130, we suggest that the Energy Commission closely coordinate with local jurisdictions passing reach codes through AB130 exemption pathways. Gathering information on the enforcement of reach codes for existing buildings, including Electric Readiness, Two-Way Air Conditioning, and Flexible Compliance Pathways, will position the market to restart residential policymaking in 2031.

TRC supports CEC's stated opportunity "To guide potential consideration of additional heat pump retrofit measures in a future code cycle, the CEC will continue to monitor the heat pump market and assess information gaps, including the following topics:

- Making the cost of heat pump systems and panel and wiring alterations more predictable.
- Gathering more accurate and nuanced data to measure costs and payback periods, which vary across systems and home characteristics, to allow code measures to be targeted at lower-cost homes.
- Establishing a plan to cover the costs through rebates, financing, or other sources of funding. "

We encourage the Energy Commission to outline specific strategies to achieve these goals in coordination with their sister agencies.

E. Code Compliance for Existing Building Retrofits

Of the opportunities listed in the Plan, the legislative and regulatory reforms will be the most impactful in improving compliance. As stated in the Plan, there are few differences in the energy efficiency of permitted and non-permitted installations with minor exceptions, and it follows that certain non-essential permitting processes could be simplified to reduce the cost and administrative burdens of compliance.

First, we suggest that the Energy Commission revise the language in the Plan from 'streamlining,' which implies redundancy, to 'simplification' or 'modernization,' which implies a reduction of labor.

Second, we encourage the Energy Commission to coordinate with local authorities that are actively implementing regionally coordinated simplification approaches. In coordination with San Mateo County, TRC and partners have developed permit simplification proposals for residential heat pump water heaters that will be piloted across several jurisdictions, such as the following:

1. Express permitting, possibly leveraging Artificial Intelligence plan check tools.
2. Virtual or sampled inspections, which save time and reward consistent compliance.
3. Standardized online user experiences, ideally through a county web hub.
4. Heat pump water heater specific permits, as opposed to combination plumbing-electrical permits, which may include self-certification of city-approved installation details and specifications.
5. Reduced flat fees for zero emission appliances, and elevated fees for emissive appliances.

The Energy Commission's engagement in understanding the impacts of local regulatory reforms will expedite state-level assessments and best-practice development.

F. Electrical Capacity Constraints in Existing Buildings

TRC sincerely appreciates the Energy Commission outlining the challenges with upgrading existing electrical infrastructure including electric panels and utility service and the recommendations to promote power-efficient solutions. Unnecessary panel and service upgrades can result in waste of public funds, project delays and can pause electrification efforts for a significant portion of customers. We appreciate the recommendation to promote technologies and strategies that can keep electrification loads within the available panel capacity. Several recent studies have shown the potential for these technologies to successfully avoid unnecessary panel and service upsizing including a recently completed CalNext (California Statewide Electric Emerging Technology Program) project titled "Electrification Enablement via Load Balancing Solutions Focused Pilot" highlighting opportunities for incorporating these technologies in programs supporting electrification. We strongly encourage the Energy Commission to apply their recommendation of avoiding unnecessary electric panel and service upgrades to the Equitable Building Decarbonization programs being launched across the state. An EPIC funded project titled "A Decision Tool to Electrify Homes with Limited Electrical Panel Capacity" is developing and demonstrating a freely available tool for home electrification that provides recommendations on power efficiency including load controls, low power appliances, space saving solutions, and other strategies for power efficient

electrification. We recommend that findings from this and similar studies be shared with Energy Commission and CPUC funded programs to promote power efficiency.

The draft Action Plan is silent on the topic of electrical capacity constraints in existing non-residential buildings. We urge the Energy Commission to address this in the final Action Plan. Work is currently being done via the California Air Resources Board, which can be leveraged for this purpose.

G. Advancing Load Flexibility

TRC applauds the work being done by the Energy Commission on developing load management standards and the associated infrastructure. However, we urge the Energy Commission to conduct rigorous analysis on the benefits and potential pitfalls of moving to real-time pricing or any type of dynamic pricing. That model has been pioneered in other jurisdictions, but success depends largely on public awareness, ability to engage and building in rigorous protections against increased utility bills. Without those checks and balances, these new regimes will be self-defeating and create distrust, the same way the state faced challenges during the partial deregulation in the early 2000's. The example of the Texas snowstorms in February 2021 shows what happens when consumer protections are not put in place and market forces are left unchecked and drive-up real-time pricing beyond any previously known extremes. We urge the Energy Commission to engage in both dialog as well as rigorous studies looking into customer bill impacts of proposed real-time pricing structures and make recommendations on how to address intentional or unintended consequences for utility bills for customers. Customers becoming knowledgeable 'prosumers' overnight is not feasible, so we also encourage the Energy Commission to develop a roadmap of how to achieve the intended benefits and how to avoid any known pitfalls.

In summary, TRC appreciates the hard work that has gone into this Action Plan to date, the consultations that have already occurred as well as the transparency of the process. We hope the Energy Commission considers the suggestions we have made in good faith. We are happy to discuss any of our recommendations further with Energy Commission staff.