

DOCKETED

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Association for Energy Affordability Comments on EPIC 5 Strategies

Additional submitted attachment is included below.

Association for Energy Affordability
5900 Hollis St R2
Emeryville, CA 94608

June 18, 2026

Re: Comments on EPIC 5 Investment Priorities

To Whom It May Concern,

The Association for Energy Affordability (AEA) applauds the California Energy Commission's (CEC) continued investment in the Electric Program Investment Charge (EPIC) program and its commitment to advancing research, innovation, and deployment strategies that support California's transition to a clean energy future. We appreciate the opportunity to provide comments on the EPIC 5 Investment Plan.

The comments below are informed by AEA's experience in both program implementation and applied research, particularly in the areas of distributed energy resources (DERs), building decarbonization, multifamily housing, and community resilience.

Distributed Energy Resources

AEA strongly encourages continued investment in DER strategies and technologies that reduce grid impacts while enhancing flexibility and resilience. As noted in the EPIC 5 discussions, interoperability and control strategies remain significant barriers to effective DER deployment.

In particular, AEA recommends increased focus on control strategies and communication protocols for central heat pump water heating systems. Domestic hot water is often the largest energy load in multifamily buildings, and central heat pump water heaters have significant potential to function as thermal energy storage resources. However, current load-shifting approaches are frequently customized and lack standardized controls, sequencing protocols, and optimization frameworks. As a result, system performance is often limited to static schedules rather than dynamic, grid-responsive operation.

Additional research is needed to better understand:

Optimal storage sizing relative to building demand profiles.

- The relationship between system efficiency and various load-shifting strategies
- Standardized and scalable control strategies.
- Dynamic control approaches that respond to real-time grid conditions and occupant demand.

Beyond thermal storage, AEA recommends investment in cost-effective technologies that help mitigate potential utility bill increases associated with electrification. Small behind-the-meter battery systems and plug-in solar technologies may offer practical solutions, particularly in

multifamily rental properties where traditional DER deployment can be challenging. These strategies may be especially valuable for low-income households that do not qualify for CARE or FERA programs and may face higher energy burdens.

Building Decarbonization

Given current utility rate structures, electrification does not always provide immediate economic benefits for building owners or residents. EPIC investments should therefore continue to prioritize strategies that reduce both upfront and operational costs while improving building performance.

AEA recommends consideration of the following areas:

Comprehensive Retrofit Strategies. Support comprehensive retrofit approaches that combine electrification with cost-effective building envelope improvements. Reducing heating and cooling loads enables the use of smaller HVAC systems and improves overall project economics. Continued investment in less disruptive envelope retrofit technologies, while building on lessons learned from previous EPIC-funded research, would be particularly beneficial.

Product Development and Market Innovation

HVAC Equipment Product Development . Investments in HVAC product development, as well as supporting pathways to introduce proven international technologies into California markets, could significantly reduce both capital and operating costs. Many multifamily apartments have relatively low heating and cooling loads but are currently served by oversized equipment. Expanding product offerings with smaller capacities and more appropriate form factors would better serve the multifamily sector.

Mechanical, Electrical, and Plumbing (MEP) Product Development. Investments in MEP product innovation can support faster and more consistent installations, reduce project costs, and minimize disruption to residents. Opportunities include improved ductwork systems and prefabricated installation solutions. While ductwork improvements may be eliminated during value engineering due to complexity and cost, doing so can negatively affect heat pump performance, occupant comfort, and overall system efficiency.

Ventilation Product Development. Ventilation remains critical for achieving healthier indoor environments. While heat recovery ventilators (HRVs) and energy recovery ventilators (ERVs) are effective solutions, barriers related to equipment size, access to exterior walls, and installation costs limit adoption and deployment in multifamily buildings.

AEA encourages investment in ventilation technology development specifically designed for multifamily retrofit applications and a diversity of building configurations. Opportunities may include integrated solutions that combine ventilation improvements with other envelope upgrades, such as window replacement systems.

Field Demonstrations. AEA strongly encourages continued investment in field demonstrations, particularly in under-resourced communities where deployment barriers are often greatest. Demonstration projects should include resources not only for technology installation but also for:

- Utility bill mitigation strategies and reimbursement mechanisms.

- Long-term service agreements, maintenance and warranty support.
- Resident education and engagement.

Emerging technologies are being deployed in tested through demonstration projects in vulnerable communities in order to bring benefits to those communities. The above strategies would protect residents from potential health, safety, comfort and cost issues and owners from unforeseen financial impacts that may arise.

Utility Rate Analysis and Data Access. Because utility bill impacts remain a significant concern, AEA recommends that all electrification demonstration projects include utility rate analysis to identify the most favorable rate structures for both property owners and residents. Implementing this recommendation will require improved access to utility consumption and billing data through collaboration with the California Public Utilities Commission (CPUC) and investor-owned utilities (IOUs). Such analysis can help address concerns regarding operating costs while complementing other strategies aimed at reducing upfront project expenses.

Neighborhood-Scale Decarbonization. AEA supports continued investment in neighborhood-scale decarbonization strategies that reduce reliance on gas infrastructure, lower emissions, and strengthen community resilience. Successful neighborhood decarbonization efforts must address not only technological and utility coordination challenges but also social and community considerations. Community engagement and resident participation are critical components of successful implementation and should be integrated into project design from the outset. As Commissioner McAllister mentioned this is a social movement as much as it is a climate and technology movement.

Climate Adaptation, Health, and the Cost of Whole-Home Electrification

AEA commends the CEC for its previous investments in indoor air quality and non-energy benefits research, as well as its continued recognition of the connections among building performance, health, comfort, and well-being in the EPIC 5 priority strategies.

A growing body of evidence demonstrates the health and quality-of-life benefits associated with improved indoor environments and building electrification. Expanding this evidence base will help support additional investments in clean energy improvements while providing stakeholders with more comprehensive data to draw upon.

AEA encourages continued research into the relationships among electrification, indoor environmental quality, health outcomes, and healthcare utilization. Stronger evidence generated through epidemiological, longitudinal, and quasi-experimental studies would help residents, policymakers, and building owners make more informed decisions.

Equally important is translating research findings into practical decision-making tools that can inform investments, program design, and policy development. Expanded datasets and stronger evidence could ultimately support the integration of health, comfort, and indoor air quality metrics into programs, incentive structures, and future code development.

AEA appreciates the opportunity to provide these comments and looks forward to continued collaboration with the California Energy Commission to advance equitable, cost-effective, and resilient pathways toward California's clean energy future.

Sincerely,



Amy Dryden
Senior Director