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**Joint Comments on Assembly Bill 3232 Building Decarbonization Assessment**

*Additional submitted attachment is included below.*



June 8, 2020

Commissioner Andrew McAllister  
California Energy Commission  
1516 9th Street, MS 34  
Sacramento, California 95814

Dear Commissioner McAllister:

On behalf of the undersigned organizations, we thank you for the opportunity to provide comments on the Building Decarbonization Assessment (Assessment) that the California Energy Commission (Commission) is developing pursuant to Assembly Bill (AB) 3232. As you are aware, homes and buildings must be decarbonized in order for California to meet its climate goals. For this reason, we strongly believe the Assessment should serve as a decarbonization “roadmap” that clearly identifies goals, strategies, and timelines to reduce emissions from California’s building stock.

Tackling emissions from the building sector is an unprecedented task; to be effective, this roadmap must coordinate stakeholder interests, develop a comprehensive strategy to tackle electrification barriers head on, leverage opportunities in the marketplace, and assert leadership from the administration.

Based on our collective research, analyses, and experiences with building electrification, we have determined there are three barriers a successful roadmap must address (in order of priority).

## **1. The market for electric appliances is underdeveloped.**

Although the technology to decarbonize the building sector already exists and in many cases is cost-effective even without incentives, the market share is extremely low. As a result, the technology is often more expensive and less widely available. The Energy Commission must consider strategies to develop the market in order to bring this technology down the cost curve to unleash a lower-cost, lower-pollution, zero-carbon, grid-flexible technology. Below are three barriers where policy intervention will be critical to develop the market effectively.

### *Low Perceived Customer Value*

Currently, in adopting all-electric technologies, customers do not see a clear value proposition. To improve this, the roadmap should do the following:

***Coordinate state incentive programs to support building electrification efforts in both new and existing buildings:*** California currently has various incentive programs separately working to incentivize electrification technologies (i.e. the Self-Generation Incentive Program Heat Pump Water Heater Program, SB 1477 BUILD Program, and individual utility operated incentive programs). The benefits of these incentive programs to transform the market, while also being sensitive to customer bill impacts, will be most effective if they are targeted and coordinated. The Commission should also consider what new programs will be necessary to fill the gaps in existing programs to ensure the state is properly incentivizing all-electric technologies in new buildings, as well as affordably modernizing existing buildings.

***Develop and launch low-cost, easily accessible financing options:*** If we are to reach the state's policy objectives, a building decarbonization strategy must be robust enough to enable the participation of California's low- and moderate-income (LMI) and renter households, who together represent more than 40 percent of the state's population. California must identify the means to overcome the upfront cost and split incentive barriers in order to put decarbonization investments within reach of all Californians, regardless of income, credit history, liquidity, or home ownership status. Publicly or privately funded financing options will be crucial for building owners and contractors to overcome the initial cost barrier, particularly in LMI households.

***Adopt electrification-friendly rates:*** Current electric rate structures do not encourage California consumers to transition their buildings from mixed-fuel structures to all-electric buildings in part because existing rate designs are focused on conservation of energy consumption, not reduction of pollution. Most rate designs currently increase the per-unit electricity cost as usage increases so a customer switching from a gas water

heater to a heat pump water heater may be penalized because of their increase in electricity use, despite their net reduction in energy use (across fuels) and in GHG emissions. The Commission must consider policies that ensure attractive, stable, and affordable electricity rates, as well as all-electric rates with appropriate baselines and other designs to ensure adoption and effective use of building decarbonization measures.

***Re-align low-income weatherization and efficiency programs:*** The AB 3232 report should call for the expansion of funding for existing programs that are already successfully delivering beneficial electrification retrofits to low income Californians. The report should recommend stability for these programs through long-term appropriations. Additionally, the report should recommend modification of existing low-income energy assistance programs that do not incorporate building electrification or the launch of new low-income programs that encourage building electrification, while protecting tenants from the risk of eviction after renovations.

***Low Perceived Contractor, Builder, and Designer Value***

Like customers, contractors, builders, and architects do not see a clear value proposition in building all-electric. To improve this, the roadmap should do the following:

***Stop funding for gas infrastructure expansion:*** As it stands, when a building or development requests new gas service, CPUC tariffs require the cost of providing new service to be split between ratepayers and the requesting building owner or developer. These CPUC-governed tariffs (Rules 15 & 16) define the amount and the process by which a portion of the cost is paid upfront by the gas utility and recovered from ratepayers. Any changes to the size or scope of these rules are subject to CPUC approval. Additionally, California provides General Fund, special fund, and bond monies to support state and privately owned buildings that include gas infrastructure and appliances. This state-funded construction extends the natural gas infrastructure and locks in dependency on that infrastructure for decades. As a result of the gas allowance, existing gas customers are effectively subsidizing the expansion of the natural gas system for decades to come.

When building owners or developers do not bear the full share of these costs, they are less incentivized to consider all-electric designs. California should eliminate the use of gas utility ratepayer funds and state funds that encourage new gas line extensions. Eliminating allowances would cause new developments to bear the full cost of interconnection, and this would encourage more developers and building owners to consider cost-effective all-electric designs.

***Offer technical support and training for builders and installers:*** Contractors and builders suffer from an information gap on the state of the technology and how to install it. Because of this, they are not naturally educating customers about the value of the technology and the availability of state or local incentives. More often than not, they do not even offer it as an option when replacing a broken appliance. Therefore, builders and contractors would benefit immensely from a centralized resource that provides information on best practices, existing technologies, and assistance programs.

***Update the state building code to require all-electric new construction:*** Continuing to connect new buildings to the gas pipeline makes it much harder and costlier to convert them to clean electricity later. Additionally, the cost of the gas infrastructure in and out of the building adds to its construction cost and time, exacerbating the housing affordability crisis. For these reasons, all-electric new construction will improve housing affordability in California, protect low-income communities, and help achieve state climate and clean energy goals, but builders and contractors need market signals to confirm the state is heading in this direction. The Commission should require all-electric new construction for both residential and commercial buildings by 2025 and 2028, respectively. In the interim, the Commission should remove the barriers to all-electric new construction in the building code and provide incentives to builders and contractors to build new all-electric buildings.

#### *Low Availability of Decarbonized Technologies*

The market and building sector are not prepared to meet rising demand for carbon-free building technologies. In order to support the market to meet this demand, the roadmap should do the following:

***Incentivize building electric infrastructure modernization:*** Many older homes lack the electrical panel capacity to adopt all-electric technologies; these upgrades alone can cost anywhere from \$2,500 to \$4,000, which is enough of a financial barrier to prevent a household from investing in electric appliances. The Commission should create a statewide panel upgrade program, which could simultaneously promote electric vehicle adoption while offering grid and ratepayer benefits.

***Develop technology leadership standards:*** California lacks clean energy appliance standards to support customers receiving quality, all-electric products. In order to ensure the all-electric products entering the market meet the highest standards, the Commission should promote industry-leading voluntary appliance standards for these technologies. Such standards should also encourage flexible demand technologies and be closely coordinated with the Commission's efforts pursuant to Senate Bill 49. The Commission can reward products and manufacturers that meet the standards through bulk purchasing contracts through State procurement, incentives, recognition, or additional measures.

## **2. California's policies and codes are not aligned to support electrification.**

California's existing policies and codes support an outdated view of the energy landscape in California that does not reflect existing GHG emission reduction priorities. In order to efficiently decarbonize the building sector, California must align all of its existing policies and codes to fully support electrification.

Currently, the state's building code and various incentive and development programs (i.e. the Public Utilities Line Extension Allowances, and the California Debt Limit Allocation Committee Program, Affordable Housing and Sustainable Communities Program) continue to support a mixed-fuel building sector. This misalignment results in higher energy use, pollution, and construction costs today and prevents rapid market development of electric appliances. The Commission should review the state's current codes, incentives and development programs and propose adjustments in the AB 3232 report to coordinate efforts towards an all-electric building sector.

Simultaneously, as California shifts towards all-electric buildings, the state must plan a just and safe transition away from the natural gas system. The [E3 Report \(April, 2019\)](#) confirmed that the cost to maintain natural gas infrastructure in a high building electrification scenario results in higher natural gas prices. The report also concludes these higher costs will likely impact low-income communities the most. A separate Commission [study](#) found that "...building electrification lowers the total societal cost of meeting California's long-term climate goals. The High Building Electrification scenario is lower cost than the No Building Electrification scenario in 2050 by \$5 billion to \$20 billion per year (in 2018 dollars)." As the Commission reviews the costs and benefits of meeting AB 3232's targets they must be considered in the context of the expensive alternative articulated in the Energy Commission's own reports on the topic.

## **3. There is a critical lack of awareness of decarbonized technology.**

Lack of awareness of and interest in decarbonized technology for residential and commercial buildings is not only a result of customers not being educated on the health and economic benefits, but also because there is a lack of coordination between organizations (NGOs, local governments, and research institutions), a lack of coordination across incentive programs to promote these technologies, and a lack of coordination among policymakers to support this transition.

The Commission must utilize AB 3232 as a tool to raise the profile for the benefits of building decarbonization across all of these areas to ensure there is an awareness and demand for decarbonization measures. Specifically, the Commission should recommend

the creation and maintenance of a consumer inspiration campaign to ensure customers are knowledgeable of electrification measures, the State's transition off of natural gas and how to access resources to aid in their own transition.

## **Conclusion**

Affordable market transformation is possible, but it will involve serious planning to coordinate market development and align state policies. The Energy Commission must design a roadmap to lay out for the state how to transform the market affordably and effectively, aligning all building efforts towards meeting the state's 2045 goals.

Thank you for your consideration.

Sincerely,

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