California's Building Decarbonization Opportunity

BUILDING DECARBONIZATION COALITION

California is committed to achieving economy-wide carbon neutrality by 2045. This will create a robust, resilient economy that is not dependent on fossil fuels, and will set an example for the rest of our nation and the world. However, much work remains to be done to meet the 2045 goal; for instance, we must eliminate greenhouse gas (GHG) emissions from buildings, which account for over one quarter of the state's GHG emissions. The removal of carbon emissions from buildings, known as building decarbonization, is a key low-cost tool for meeting California's 2045 climate goals.

2018's Senate Bill 1477 directed the California Public Utilities Commission (CPUC) to begin the important work of decarbonizing California's buildings. The CPUC now needs to decide how best to implement this legislative guidance and what else needs to be done to ensure successful building decarbonization across the state. The Building Decarbonization Coalition (BDC) is releasing this set of three white papers to help the CPUC better understand the opportunities and challenges involved with building decarbonization at the scale and speed necessary to meet the state's climate goals.

The papers discuss the following issues:

CALIFORNIA'S BUILDING DECARBONIZATION OPPORTUNITY: KNOWING WHERE WE ARE AND DELIVERING WHAT WE NEED

The first paper outlines the most important costs and barriers that need to be overcome to deliver the benefits of building decarbonization to all Californians. The paper also discusses how the CPUC's current regulatory tools are inadequate for valuing the costs and benefits of building decarbonization. Finally, the paper recommends four guiding principles for a regulatory framework that would set the best tone for building decarbonization in California:

- Focus on key results (GHG reductions)
- Put in place rules that support customer-centric interventions
- Allow flexibility to adapt to changing market realities
- Keep clean energy affordable

RATE DESIGN FOR BUILDING ELECTRIFICATION

Today, beneficial electrification, the switching of building end uses (such as space and water heating) from fossil fuels to clean electricity, is a key tool for building decarbonization. By adjusting key rate design levers, the CPUC and energy providers can send optimal price signals to help customers purchase and operate new electrification equipment in ways that reduce costs for all Californians. Key rate design levers that will need to be considered in the near-term are:

- Baseline allowances for electrified water heating and other essential home energy uses
- Optional TOU rates with larger peak to off-peak price differentials
- Revisiting High Usage Charges for residential customers and non-coincident demand charges for other customers types

STRATEGIES AND APPROACHES FOR BUILDING DECARBONIZATION

The final paper presents best practices from across the nation that can inform building decarbonization approaches for California. The paper discusses successful initiatives that focus on affordability and equity; workforce training and development; industry and customer engagement and incentives; financing; and local government initiatives. A follow-up BDC paper will elaborate on these nationwide best practices and make specific programmatic recommendations tailored for California.

Transcendent Energy for the Building Decarbonization Coalition
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