



A ROADMAP TO DECARBONIZE CALIFORNIA BUILDINGS SUMMARY



**BUILDING
DECARBONIZATION
COALITION**

In 2016, energy use within California buildings was responsible for more than 26% of statewide greenhouse gas emissions. For California to meet its climate goals, homes and buildings must be decarbonized. This will require clear, ambitious targets, coordinated actions directed at key barriers, alignment of all stakeholder value propositions and clear leadership from the Governor and his administration.

A ROADMAP TO DECARBONIZE CALIFORNIA BUILDINGS outlines an approach to fulfilling these objectives.

WHAT DOES BUILDING DECARBONIZATION MEAN?

To decarbonize a building is to remove greenhouse gas emissions from the building's energy use by making it more efficient and integrating appliances powered by clean energy sources.

Fortunately, California is already rapidly transitioning its electricity generation to renewable sources. Buildings can take advantage of this shift by transitioning from appliances that currently depend on fossil fuels to already available technologies powered by electricity.

For example, high efficiency electric heat pumps can provide clean space and water heating, induction ranges can provide a superior and safe alternative to gas-powered appliances in the kitchen, and efficient electric clothes dryers can be used in place of gas-powered dryers.

In addition, each of these solutions has the potential to improve living and working conditions and save the building owners and occupants money.

STEPS FOR ADDRESSING POLICY AND MARKET BARRIERS

In order to achieve building decarbonization, a range of policy and market barriers must be addressed. The

Building Decarbonization Coalition recommends an approach that includes three phases:

- **Readying the market**, by establishing ambitious targets, aligning policy, sending clear signals to suppliers, building coalitions and developing a coordinated marketing campaign.
- **Accelerated Deployment of Measures** through full supply-chain incentives to manufacturers and builders and financing solutions ready to reach all customers, including underserved communities.
- **Scaling the Market** through downstream incentives, grid integration, and targeted solutions for hard to reach customers.

We believe that with the right leadership, California can realize **Phase 1** of this change (Market Readiness) **in the near term**, while planting the necessary seeds for Phases 2 and 3.

TAKING ACTION

The Coalition supports the following immediate actions to overcome the main barriers to building decarbonization.

GOAL 1

Build customer, builder, contractor and policy-maker awareness and interest in decarbonization.

- Create marketing and outreach campaigns to educate consumers generally and on specific technologies such as induction cooking.
- Promote decarbonization through a network of local governments, professional and community-based organizations.
- Build partnerships between solar, storage, and electric vehicle vendors and associations to promote co-benefits and form national partnerships where necessary.

GOAL 2

Ensure that customers receive a good value from adopting building decarbonization measures.

- Develop strategic long-term market transformation incentive programs.
- Create low-cost, easily accessible financing options.
- Implement policies that ensure affordable electricity rates, geared toward building decarbonization.
- Re-align low-income weatherization and efficiency programs to focus on emissions, bill reductions, health, comfort and rapid deployment of measures.
- Monetize decarbonization measures as grid integrated solutions to address and support grid needs through participation in demand management programs.

GOAL 3

Ensure that building decarbonization provides a better value to builders and contractors than fossil-fuel heating.

- Produce midstream incentive programs for builders who offer decarbonized new buildings and installers offering electric retrofits.
- Support builders who move to decarbonization through policies, programs, permitting and other solutions.
- Create and maintain a centralized resource for contractors to access information on best practices, technology, and programs. Deploy a building electrification professional designation.
- Create a statewide program to voluntarily certify buildings and developments to recognize and promote builders and contractors supporting decarbonization.
- Launch a statewide campaign with local governments to offer supportive policies for building decarbonization measures.

GOAL 4

Prepare supply-chains and delivery agents are to meet rising demand for carbon-free building technologies with a quality product.

- Offer a statewide electric panel upgrade program in cooperation with policies promoting electric vehicle adoption.
- Develop an aggressive, national level campaign to increase in sales volumes for heat pump technology.
- Produce industry-leading appliance standards for technologies to ensure quality, co-benefit achievement, durability and other desired factors. Reward manufacturers who meet the standards through bulk purchasing contracts through state procurement, incentives, recognition and other measures.

GOAL 5

Align Policy.

- Align program and agency metrics to target emissions, save energy, promote equity, and benefit the grid in state

legislation and regulation, utility and community choice aggregator programs and local government activities.

- Support the opening of necessary CPUC proceedings to evaluate, design and implement measures to provide a just and safe transition away from the natural gas system.
- Support local governments adopting building decarbonization policies.

CONCLUSION

Reaching California's climate goals will require leaders in state government, industry, and the public to join together to chart the course and take action. To achieve that engagement, visionary leadership from Governor Newsom is critical.

The Building Decarbonization Coalition stands ready to support the effort via energy providers, public interest advocates, manufacturers, contractors, unions, builders, local governments, real estate interests, and investors spanning California's building community.

STRATEGY FOR DECARBONIZING BUILDINGS

NEW BUILDINGS

- **Stop digging the hole:** a third of California's 2045 building stock will be built between now and then. New buildings which rely principally on fossil fuels for heat, hot water, cooking or drying clothes undermine carbon emissions goals. The Coalition recommends that Zero Emission Building Codes be adopted for new buildings in the residential and commercial sectors by **2025** and **2028**, respectively.
- **Save money:** New, decarbonized, all-electric buildings cost less to build to code than those requiring additional gas infrastructure.
- **Seed the market for retrofits:** Zero Emissions Building Standards send a clear signal to critical industry stakeholders, to begin investing in building decarbonization now.

EXISTING BUILDINGS

Fossil fuel powered **space and water heaters** account for the largest sources of emissions within existing buildings. These appliances have a replacement cycle of between 8 and 20 years. **A progressive approach** to replacing these appliances with zero-emission alternatives over time will balance the need for progress and affordability with the languid speed of appliance turnover.