

# California Building Decarbonization Policy Update

Merrian Borgeson, NRDC  
Getting to Zero Forum -- October 2019



## Policy Framework

Make the case, educate, inspire, connect

- Electrification technologies, benefits

Stop digging the hole

- Stop connecting new buildings to gas
- Stop pipeline expansion, safety upgrades only

Develop the market

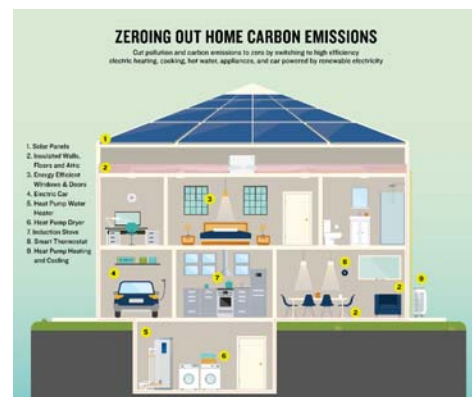
- Remove regulatory barriers
- Incentive funding, with low-income priority
- Training and workforce development

Set performance standards






- Existing buildings
- Equipment, e.g. clean air standards

Plan for gas infrastructure transition

- Start conversation, develop strategic transition plan that protects workers and vulnerable communities



## Growing policy momentum behind building decarbonization in California

<ul style="list-style-type: none"> <li>• 40% GHG reduction by 2030</li> </ul> <p>SB 32 (2016)</p> 	<p>Electric sector:</p> <ul style="list-style-type: none"> <li>• 60% renewables / 2030</li> <li>• 100% carbon-free / 2045</li> </ul> <p>SB 100 (2018)</p> 	<ul style="list-style-type: none"> <li>• Carbon neutrality by 2045</li> </ul> <p>Gov. Exec Order (2018)</p> 
<ul style="list-style-type: none"> <li>• Assessment of 40% GHG reductions in <u>buildings</u> / 2030</li> </ul> <p>AB 3232</p> 	<ul style="list-style-type: none"> <li>• \$200M/4yrs incentives for building decarb</li> </ul> <p>SB 1477</p> 	

3

## Recent Building Decarb Legislation

**SB 1477** - Provides \$200 million over 4 years for near-zero emissions new construction and market development for clean eating technologies.

**AB 3232** - Requires the California Energy Commission to assess the potential for the state to reduce carbon pollution from residential and commercial buildings by 40 percent from 1990 levels by 2030.



4

## SB 1477: BUILD + TECH Programs

### **BUILD (Building Initiative for Low-Emissions Development)**

BUILD provides incentives that tap into the ingenuity of California's builders to find innovative and low-cost ways to "build clean from the start" and gain market experience to make clean heating technologies common practice in new construction. SB 1477 is patterned on the successful New Solar Homes Partnership, which helped kickstart the market for rooftop solar in new buildings.

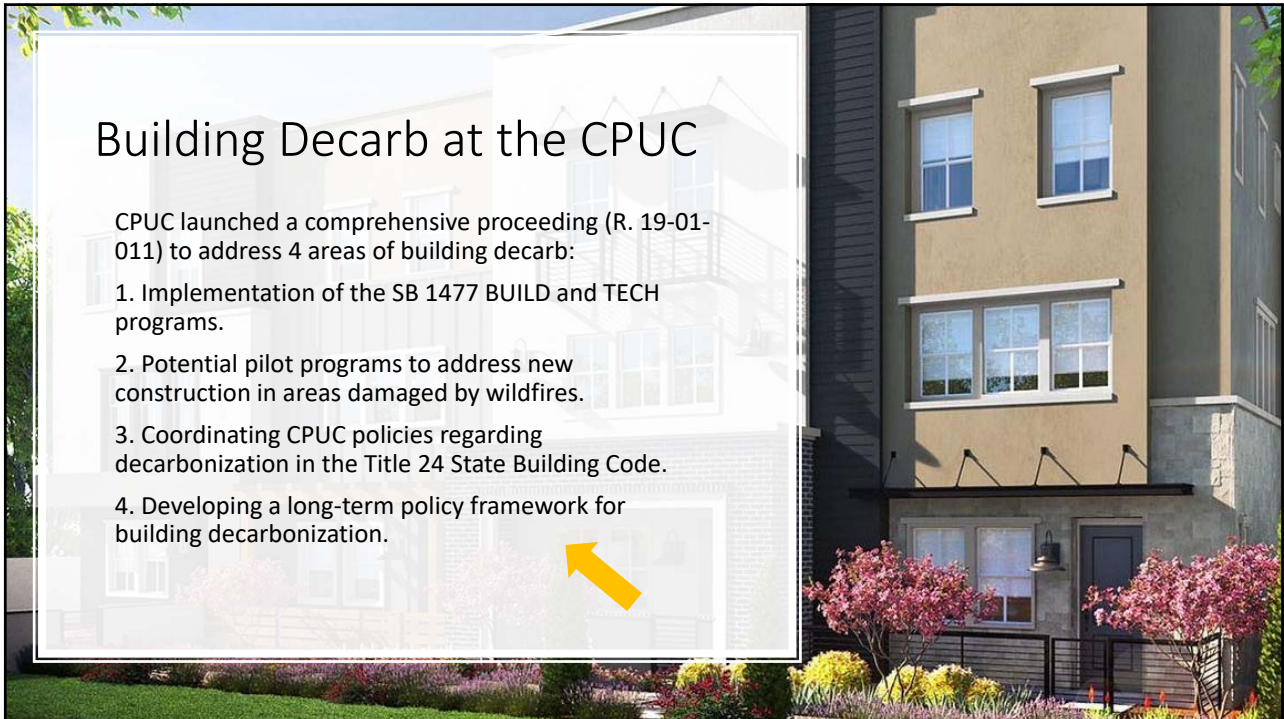
### **TECH (Technology and Equipment for Clean Heating)**

TECH spurs market development for low-emissions space and water heating technologies by incentivizing distributors and retailers to make equipment available, and providing customer education and contractor training. This program will focus on technologies that have the greatest potential to reduce climate pollution, and that improve the health and safety of, and energy affordability for, low-income households.

## Building Decarb at the CPUC

CPUC launched a comprehensive proceeding (R. 19-01-011) to address 4 areas of building decarb:

1. Implementation of the SB 1477 BUILD and TECH programs.
2. Potential pilot programs to address new construction in areas damaged by wildfires.
3. Coordinating CPUC policies regarding decarbonization in the Title 24 State Building Code.
4. Developing a long-term policy framework for building decarbonization.



## Efficiency funds now available for fuel substitution

*Decision in August 2019 to update Commission policy ("3-prong test") to enable the use of EE program funds for switching from gas to electric. Key elements of the decision include:*

- Removes the cost-effectiveness requirement at the individual measure level, and instead applies cost-effectiveness requirements at the portfolio level (like all other efficiency measures).
- Specifies that environmental impact will be measured in terms of carbon dioxide emissions.
- Updates the method for determining energy savings from the fuel source used, which will now account for the growing portion of renewable electricity
- Clarifies the "baseline" against which the proposed measure will calculate energy and emissions savings, and aligns this with what is required of other efficiency measures.
- Requires that the "new-fuel" customers fund the programs, and then makes appropriate adjustments to utilities' energy-savings goals

7



## Heat Pump Water Heaters as storage?

Funding for storage and loading shift may provide an opportunity for electrification

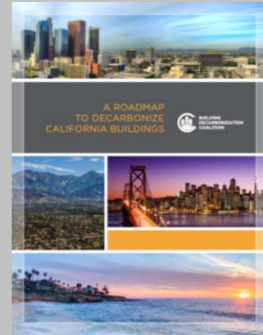
- PG&E water heater pilot is a part of their storage investment plan
- Self-Generation Incentive Program (SGIP) funding under consideration for HPHWs
  - \$4M explicitly made available for HPWH for low-income
  - Workshop later this year to discuss additional support for HPWH as a load shift resource
- HPWH thermal storage compliance credit in the state building code (JA-13)

8



## Connecting stakeholders

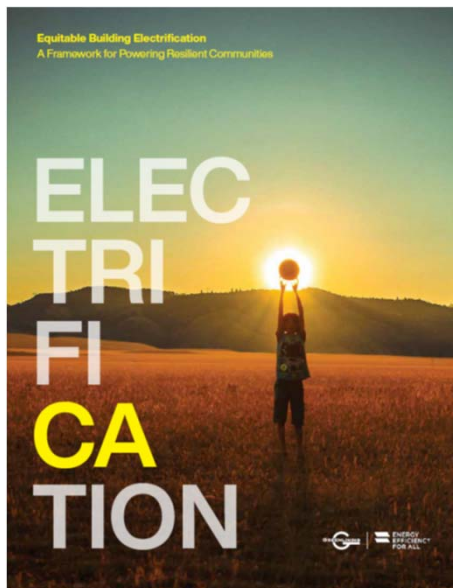
- Wide stakeholder group
- Collaborative development of a Roadmap to Decarbonize California Buildings
- Engage manufacturers on new product development (e.g. 120V plug-in HPWH)
- Consumer marketing campaign
- Surveying builders and contractors on barrier and opportunities to market transformation
- Forums on key topics such as rate design and financing
- Educate and inform policy makers



**BUILDING  
DECARBONIZATION  
COALITION**

9

## Equity-focused groups are taking the lead....



### Equitable Building Electrification Framework

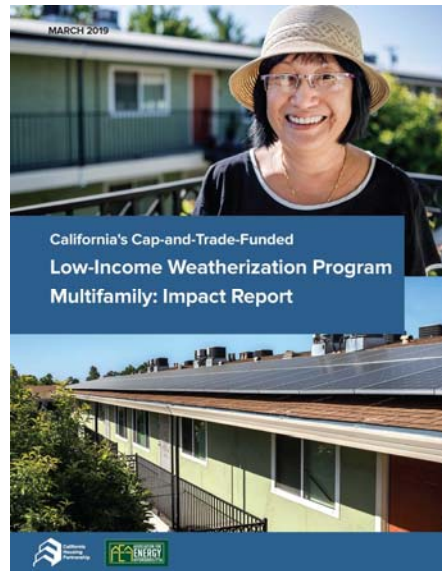
This five-step framework presents a start-to-finish recipe for how the current goals of building electrification can align with producing healthy homes, creating high quality, local jobs that cannot be outsourced, and establishing stronger connections between everyday Californians and our climate change policies and goals.

- **Step 1: Assess the Communities' Needs.** This should include understanding barriers preventing community members from electrifying their homes, residents' knowledge levels regarding building electrification, and their specific needs, wishes and concerns.
- **Step 2: Establish Community-Led Decision-Making.** Rich community input and engagement strengthen the overall program design quality with stronger cultural competence, ensure local buy-in and investment, and deliver tangible local benefits rooted in the lived experiences of everyday people. Partner with community-based organizations to develop a decision-making process that ensures that decisions are based on community needs and priorities.
- **Step 3: Develop Metrics and a Plan for Tracking.** Metrics should include both clean energy benefits like greenhouse gas reductions and community benefits such as local hires and residents' ability to pay their energy bills without sacrificing other essential expenses.
- **Step 4: Ensure Funding and Program Leveraging.** Current low-income energy programs often fail to deliver maximum benefits to all qualifying households due to short and unpredictable funding cycles, poor program design that inadequately reaches qualifying customers, or lack of coordination and integration with complementary programs.
- **Step 5: Improve Outcomes.** Using the tracking and metrics plan described above, ensure that there is a continuous feedback loop to improve current and future programs' reach and impact in ESJ communities. Consider adjustments to ensure the program reaches the people it seeks to reach and delivers the intended benefits.

10

## CA's Low Income Weatherization Program (LIWP)

- Funded with GHG \$
- Efficiency + electrification + solar
- Slashed GHG emissions while reducing energy bills by 30 percent.
- 10,000 low-income renter households have already or will soon be upgraded
- Needs more funding! Waiting list of 18,000+ units.



## CA's San Joaquin Valley Pilots

- Utility customer \$\$
- All-electric conversions from propane and wood
- FREE new appliances paid for households
- Bill protection and service guarantees
- Will serve about 1,600 households
- Anticipated to save participating households about \$1,500 in energy costs each year, while also slashing local air pollution and greenhouse gas emissions.





Thank you!

Merrian Borgeson  
[mborgeson@nrdc.org](mailto:mborgeson@nrdc.org)