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Filer:	Raquel Kravitz
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SB 1477: Pilot Guidelines and Parameters of BUILD and TECH

IEPR Joint Workshop on Energy Efficiency and Building Decarbonization



Tiffany Mateo (CEC)
Rory Cox (CPUC)
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California Energy Commission
California Public Utilities Commission



SB 1477 Funding Source

- \$50 million/yr in FY19/20 – FY22/23
- Cap-and-Trade revenues from gas corporations
- Administrators must comply with Cap-and-Trade Regulation
 - Annual reporting to the California Air Resources Board on use of funds and expected GHG emission reductions





SB 1477 Annual Program Budget

40% to BUILD	60% to TECH
\$20 million – Total	\$30 million – Total
\$12 million for program costs	\$23 million for program costs
\$6 million for low-income program costs	\$5 million for “quick start” grants
\$2 million for administration	\$2 million for prize program
\$ 2 million for evaluation (of both programs)	

Note: \$2 million error will be corrected in next draft—the TOTAL budget is \$50 million.



Clean Heating Technologies

- Electric space and water heat pumps
- Solar hot water with electric backup
- Heat pump dryers (BUILD Only)
- Induction cooktops (BUILD Only)





SB 1477 Guiding Principles

- Equity
- Path to carbon neutrality
- Regulatory simplicity
- Transparency
- Market transformation
- Lessons learned and data reporting
- Cost-effectiveness





Metrics: GHGs and Bill Savings

- SB 1477 requirements:
 - Cost per metric ton of avoided GHG emissions
 - Projected annual and lifetime utility bill savings
 - Number of low-emission systems installed (BUILD)
 - Market share for eligible technologies (TECH)
- Cap-and-Trade fund requirements:
 - Total avoided GHG emissions from each year's expenditures
 - Total expenditures
 - Itemization of administration and outreach expenditures





Target Market Segment

- Strategic focus to foster long-term changes in:
 - New construction
 - Contracting
 - Retrofit
 - Appliance marketplace
- TECH audiences:
 - Upstream
 - Midstream





Proposed BUILD Program Elements

- California Energy Commission serves as direct program administrator
- Direct financial incentives for deployment of near-zero emissions technology to reduce GHG emission in new residential buildings
- Focus on new construction single-family and multifamily dwellings
- Eligible recipients include owners or developers of new residential housing
- A minimum of 30 percent of funds reserved for low-income residences (as defined by SB 1477). Administrator required to provide technical assistance to engage this demographic.



Proposed BUILD Incentive Structure

- Baseline incentive levels (see JSP Appendix for more detail):
 - For specific technology categories
 - By climate zone
- Baseline technology categories
 - Space heating
 - Water heating
 - Electric cooking
- “Kicker incentives” that encourage additional GHG emission reduction benefits beyond baseline incentivized technologies:
 - Thermal storage
 - Electrical storage
 - Low-global warming potential (GWP) refrigerants
 - Other?



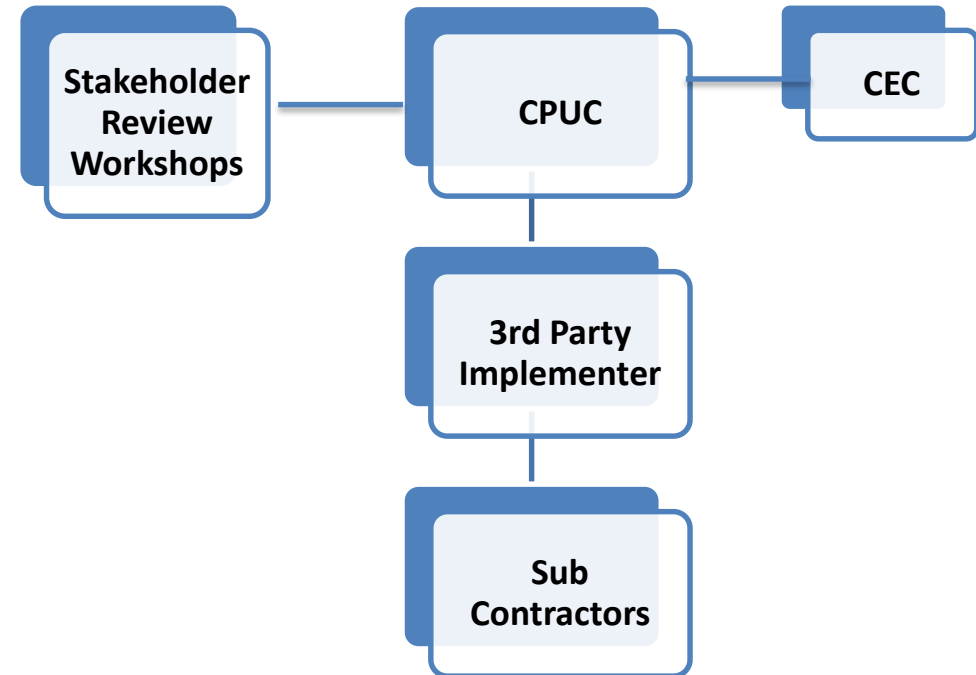
TECH Program: Legislative Background

- TECH intended to “advance the state’s market for low-emission space and water heating equipment for new and existing residential buildings.”
- SB 1477 directs the CPUC to “identify and target ... equipment technologies that are in an early stage of market development and would assist the state in achieving the state’s greenhouse gas emissions reduction (goals)...”



TECH: Third Party Implementer

- CPUC, in collaboration with SCE, will run competitive solicitation for third party implementer
- SCE proposed to hold contract
- CPUC will manage the work, with stakeholder input





TECH: Addressing Market Barriers

The implementer should be able to address market barriers, including:

- Lack of coordination with other programs
 - Untrained workforce
 - Lack of coordination at local permitting offices
 - Lack of consumer demand
 - Lack of awareness among contractors
- ...many more



TECH: Roles for the Supply Chain

- Manufacturers – Promote heat pump products and increase market share
- Manufacturers Representatives – Promote products, act as a midstream ally
- Distributors – Companies that offer sales and marketing support, elevate inventories, and lines of credit.
- Contractors – Trusted advisers and trade allies
- End Users – Find value in indoor comfort, health and safety, bill savings



TECH: Four Strategic Initiatives

1. Upstream: Incentives and partnership with supply side market actors
2. Midstream: Workforce development, education, and supply chain management
3. High-impact, quick-start pilot projects
4. Prize Program for Innovation



Questions?

Tiffany Mateo

Email: tiffany.mateo@energy.ca.gov

Ph: 916-651-0480

Rory Cox

Email: rory.cox@cpuc.ca.gov

Ph: 415-703-1093