

Building Electrification in California

Thoughtful Investment in our Future





California's Future is Electric

- Building and transportation electrification are the least-cost pathways to achieving our carbon goals
- All-electric buildings are safer for the environment and occupants
- Many who may benefit most from allelectric buildings could be left behind





Cause for Celebration!

- Inflation Reduction Act brings historic investment to building decarbonization and climate
- Heat pump shipments outpaced gas furnaces for the first time
- Stovegate piqued America's interest in induction
- Heat pumps reached new highs of public interest





California is a Leader

- California legislature committed \$1.1 billion to decarbonizing homes in 2022
- The TECH program disbursed more than \$30 million in incentives
 - Nearly 10,000 heat pump HVAC and more than 1,000 HP water heaters
 - Less than \$3 million disbursed to disadvantaged communities
- Building Codes
 - Strong emphasis on electric construction in 2022 building code (California Energy Commission)
 - **75** local jurisdictions have adopted some form of "electric-preferred" reach code
- Air quality agencies are beginning to act on link between gas combustion and harmful air pollutants
 - Air Resources Board commits to phasing out the sale of gas appliances by 2030
 - Bay Area Air Quality Management District is voting today on a history local ban of gas appliance sales



How do we make this transition just and equitable?

- Installing heat pump HVAC in 70% of California's low and moderate income housing could cost \$32 billion
- Local reach codes are concentrated in coastal cities
- Incentive-based programs do not work well for many customers
- Stranded gas assets and unplanned transition could increase affordability burdens
- Thoughtful transitions for the labor market are needed
- "Soft costs" represent an opportunity for local innovation



Features of a Thoughtful Transition

- Meaningful and focused investment in low-income and BIPOC communities
- Planned transition for existing natural gas infrastructure
- Plan for and invest in workforce transition and workforce development
- Focus on affordability: meaningful, streamlined incentives or direct install, affordable financing, and rate design





Deep Dive: Tariffed On-Bill Financing

- Utility investments to finance clean energy improvements and recovered through utility rates
- Tied to the meter, not the customer
 - This allows for expanded access to financing you're evaluating a project, not a borrower
 - Can overcome landlord / tenant "split incentive"
- Can be paired with third party capital to scale up investment beyond public subsidy
 - Collection on the utility bill could lower perceived risk to lenders



Best Practices for Tariffed-Based Financing

- Expands access to financing
- Ensure bill savings for customer and strong customer protections
 - Limit utility cost recovery so customers receives bill savings
 - Notifications of existing tariff to prospective occupants
- Limited to proven technologies with demonstrated cost-savings and quality installation
- Allow customer obligation to transfer automatically with change of occupant
 - Note, this requires equally strong customer protections



Tariffed Based Financing in California

- CPUC Clean Energy Finance Proceeding
 - Proposals from PG&E, Silicon Valley Clean Energy, Southern California Edison
 - Awaiting a CPUC Decision
- BB 1112 (Becker)
 - Directs CEC to leverage federal funding in support of innovative financing and investment strategies







Thank you!

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