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Technology and Equipment for Clean Heating (TECH)

SB 1477 Pilot Proposal

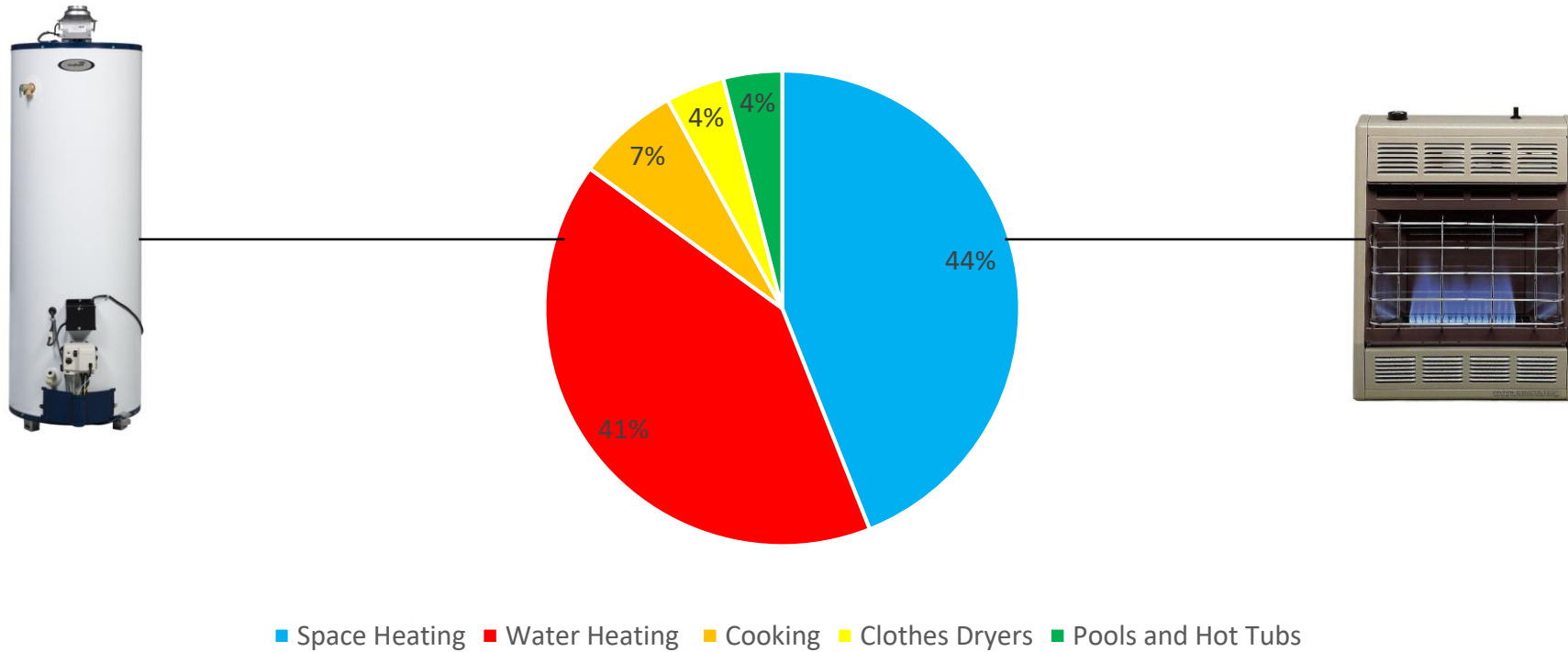


Rory Cox
July 30, 2019
California Public Utilities Commission



The Problem: Emissions from Existing Buildings

Shares of Natural Gas Consumption by End Use, Residential



- 70% of direct emissions come from residential sector
- Most emissions (85%) come from space and water heating



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)...”



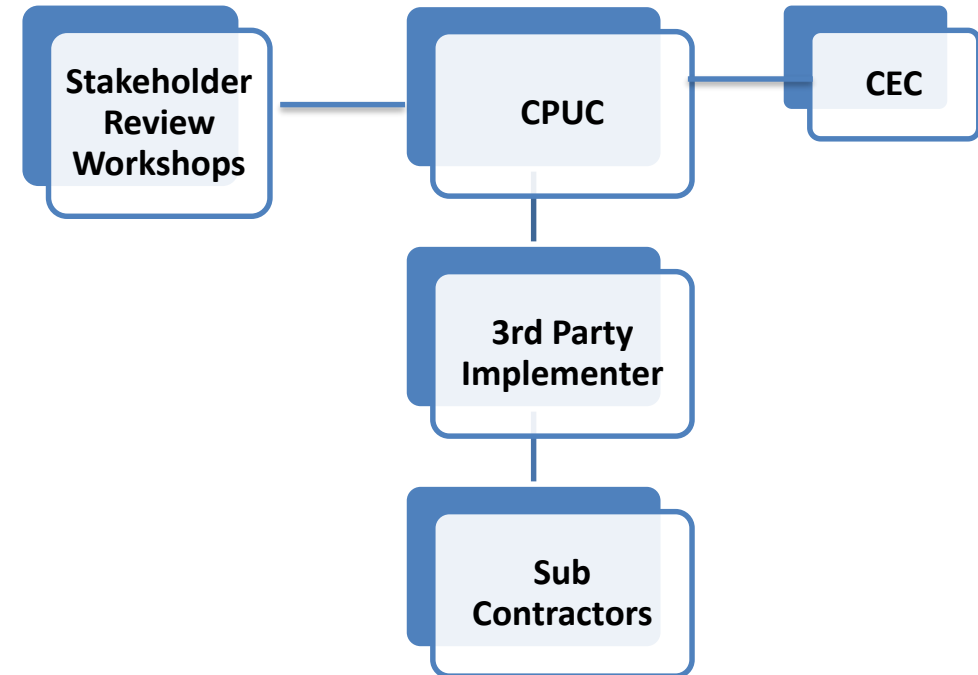
Legislative Background

- It should accomplish this “...through upstream market development, consumer education, contractor and vendor training, and the provision of upstream and midstream incentives to install low-emission space and water heating equipment.”



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





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



Market Transformation Framework

An implementer should be able to implement a holistic MT effort, which includes:

1. Customers, builders, contractors, and policy maker awareness
2. Customers receive a good value
3. Builders and contractors receive good value over incumbent technologies
4. Supply-chains and delivery agents are able to meet a rising demand with quality products.



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



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



TECH Program Budget

Item	Cost
Program Costs	\$22 million
Quick start pilot programs	\$5 million
Prize Program	\$2 million
Evaluation	\$1 million
TOTAL	\$30 million



Discussion Questions

1. Should a prize be used to augment the TECH program? If a prize approach is used, what should be the attributes of the prize?
2. How should any level of incentive or reward be set? Should it be the state agencies, or should it be the program implementer?
3. To what extent should the agencies try to leapfrog to the use of advanced technologies like grid-connected water heaters, versus taking a more gradual approach to moving to new technologies?



Questions?

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