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Title: Catching the Wave: Lessons learned from a heat pump water heater pilot program

Abstract: California has adopted aggressive greenhouse gas (GHG) reduction and climate change policies and a strategic goal of Zero Net Energy buildings; but how to get there? One area is in water heating- heat pump water heaters (HPWH)! Using clean electricity for end uses currently powered by fossil fuels must be encouraged to end reliance on natural gas in buildings.

Electric heat pump technology can be significantly more efficient than gas in heating water. The most efficient electric heat pump water heaters however are not widely adopted in California, and most customers do not understand how the technology works.

The Electric Heat Pump Water Heater Program was designed to identify more information about the market potential of HPWHs through a small number of installations. The East Bay Energy Watch, a local government partnership between PG&E and the cities in Alameda and Contra Costa County, funded this one year program as a first step for a future, larger effort to incentivize heat pump technologies and encourage decarbonization.

This program encouraged the installation of high efficiency (UEF of 3.17 or higher) HPWHs in replace of gas storage water heaters by providing incentives and technical assistance to home owners.

Through these installations, this program learned more about customer interest for gas to electric 'fuel substitution,' technologies available, benefits and challenges for home owners and contractors, as well as opportunities to encourage more installations of this technology. Moving past energy efficiency, building decarbonization is an important strategy for reducing GHG emissions. Results from the project will be presented, along with the lessons learned and feedback from contractors, distributors and customers. The presentation will also discuss some possible next steps to encourage mass adoption of HPWHs.