



Retrofit Heat-Pump Water Heater Program Framework Elements A Manufacturer's Perspective

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Key Program Elements

- A.O. Smith believes a successful market transformation program must be put in place in order to help California meet its Electrification Goals.
- Market programs can help catalyze the market transformation and make HPWHs the favored application in replacement water heater situations.
- The market transformation program must include the following elements:
 - Upstream, state-wide rebates;
 - Long-term commitments;
 - An education campaign; and
 - A value-proposition for consumers to help them understand why they should change their purchasing decisions.

The Retrofit HPWH Framework Elements

- Vision and State-wide Coordinated Partnership
 - *Establish Program Vision:* Electric heat pump water heaters are the preferred/predominant water heater type for residential buildings throughout the state of California.
 - *Establish Milestones – The Decarbonization Coalition Program Working Group is recommending the following targets:*
 - 10% market replacement of the 2014 existing water heater stock by 202;
 - 50% market replacement of the 2014 existing water heater stock by year 2033; and
 - 85% market replacement by 2045.

The Retrofit HPWH Framework Elements

- Coordination amongst the programs within the state is essential.
 - A rebate scheme that is consistent across the state helps simplify understanding by those within the distribution channel and increase uptake.
- The rebate scheme should be simple and it is recommended that a single rebate level is established state-wide for all heat pump water heaters.
- Currently, the Decarbonization Coalition Program Working Group is recommending the following rebate attributes:
 - ~\$500 to ~\$1,000 per unit
 - Total Incentive Program Budget:
 - 1st Year (~21,000 units): 10 to 21 million
 - 5th Yr (~952,000 units): 476 million to 952 million

The Retrofit HPWH Framework Elements

- Manufacturers Need A Long-Term Commitment
 - Current manufacturing capacity for the industry is approximately 120,000 units.
 - In order for manufacturers to invest in the infrastructure needed to support the transition, program administrators must show they are committed to invest in the long-term transition of the stock.
 - Manufacturing capacity cannot be added overnight and will take years in order to the heat pump water heater production to reach the estimated levels necessary to meet the policy goals.
 - Programs must remained focused on major markets and then work on niche markets, which is especially important for the specification development.

The Retrofit HPWH Framework Elements

- Upstream Rebates are the Preferable Approach
 - The primary goal of upstream engagement is to drive early sales to boost the market and help get all manufacturers and distributors/installers interested in the program.
 - Programs must engage directly with manufacturers to help reduce the purchase costs of high efficiency equipment.
 - Programs should target the specific application based on ease of transition, including:
 - Phase 1: New Construction;
 - Phase 2: Electric Storage to HPWH; and
 - Phase 3 (multiple parts): Gas Installations to HPWH.

The Retrofit HPWH Framework Elements

- Training and Education Need for Distribution Channel and Installers
 - Any rebates and education programs available to distributors, contractors, retailers, etc. must be available to all.
 - The programs will need to work closely with the midstream channels to help them realize and sell the value proposition of heat pump water heaters.
 - Programs will need to emphasize that installers will need seek out opportunities for hands-on experience/first installation jobs to gain experience and expertise.
- Decarbonization Coalition Program Working Group recommends:
 - Adding heat pump water heater specific training for replacement situations to existing training modules (e.g., at the IOU Energy Centers)

The Retrofit HPWH Framework Elements

- Advertising and Establishing the “Value-Proposition”
 - One of the keys to the success of any market transformation is getting consumers excited about the new technology and the market transformation.
 - Initially, programs should conduct coordinated market studies to understand how consumers perceive their gas appliances and the stigmas that might exist with comparable electric counterparts.
 - Once that knowledge is gained, it will be important that program administrators a marketing campaign that focuses on educating and establishing a “buzz” around this new technology throughout the distribution channel and at the consumer level.
 - Ultimately, the consumer has to want to change products and needs to understand the utility of the product will not be compromised.

The Retrofit HPWH Framework Elements

- Lessons Learned from Existing Programs
 - Most HPWHs are sold into the new construction market.
 - Downstream mail-in rebates do not work for retrofit installations.
 - Sales uptick with Upstream/Midstream instant rebates \$500/unit or more, available at retail and wholesale, with promotional consumer advertising.
 - Statewide programs are easier to manage for the supply chain actors with minimal data collection requirements (if any).
 - Many implementation firms are developing software solutions to simplify and standardize processes for consumers, retailers, contractors, distributors.
 - Implementation firms must LEAD with an actionable and measurable training and advertising plan, well defined and communicated, to obtain active support of the Manufacturers' Sales Agencies in the field.