Emergency Replacement Heat Pump Water Heater Market Study

The Challenge:

Water heaters are typically replaced at failure as an emergency replacement. When it's time to swap out faulty water heaters, many customers and contractors decide not to convert to heat-pump water heaters (HPWH) because they would face higher up-front costs, more time without hot water, and more complex replacements. This cycle of "like-for-like" gas water heater replacement creates persistent barriers to electrification and decarbonization efforts.

The Impact:

Customer rate of conversion

The market study explored the emergency replacement water heater market, focusing on the key decision factors for customers and contractors affecting the likelihood of a HPWH conversion. VEIC identified ways for electrification and energy-efficiency programs to encourage homeowners to convert to HPWH and contractors to recommend them. The findings also include examples of successful strategies to overcome barriers to HPWHs during emergency replacements.

From electric resistance to electric HPWH

Lowest cost for installation **Greatest** customer savings

- Highest energy savings
- · Simple installation with minimal electrical work
- · Requires installing a condensate drain

From gas to electric HPWH for households with lower water usage

Moderate cost for installation **Moderate** customer savings

- Plug-in 120V HPWH recommended
- Moderate energy savings
- Avoids need for an electrician, electrical upgrades, and electrical permits
- Limited capacity and location constraints

From gas to electric HPWH for households with higher water usage

Highest cost for installation **Moderate** customer savings

- 240V HPWH recommended
- Moderate energy savings
- Higher installation cost and complexity since electrical upgrades are needed

The Solution:

Increasing HPWH installations in emergency replacement scenarios is vital to decarbonization efforts. VEIC found the following areas are critical to increase HPWH adoption in these cases:



Ensure continuity of rebate funding to create a sustainable and predictable HPWH market. This reduces upfront costs, the most critical decision factor for contractors and homeowners.



Streamline rebate application and reporting processes for contractors. This includes making point-of-sale rebates more efficient to lighten the administrative burden on contractors and simplify participation.



Prioritize easier wins in program design and contractor training. Start by focusing on electric water heater replacements and plug-in 120V HPWH opportunities to increase HPWH adoption among contractors and lower installation costs and increase savings for customers.



Increase focus on disadvantaged communities and lower-income households when offering financial support. This broadens access to necessary electrical and physical remediation for HPWH and other electrification improvements.

Key Findings & Data Points:

Top Barriers for Contractors Installing HPWH:

- Gaps in rebate funding, complex application processes, and challenging reporting requirements
- Limited installation experience and lack of targeted HPWH sales process
- Difficulty accessing electricians for same-day gas to 240V HPWH conversions

Top Barriers for Customers Installing HPWH:

- High up-front cost and limited awareness around HPWH technology and rebates
- Longer replacement durations, meaning more time without hot water
- More significant and expensive remediation and electrical panel upgrades

Discover comprehensive insights and in-depth analysis by reading the **full report here**.