



TECH Customer Post-Install Survey Topline Findings

Introduction and Methods

Opinion Dynamics conducted an online survey with single-family homeowners who received a TECH-incented heat pump water heater (HPWH) or HVAC heat pump. The objective of the survey was to capture feedback on their motivations for the installation, factors that influenced their decision-making, and their experience with their TECH contractor. Respondents received a \$5 gift card for completing the survey.

Opinion Dynamics sent 5,947 emails and received 1,583 completes, resulting in a response rate of 27%. We sent 5,031 emails to HVAC customers and 916 to HPWH customers, leading to 1,185 HVAC completes (24% response rate) and 335 HPWH completes (37% response rate). These survey findings reflect the experiences of customers who had a heat pump installed between December 8, 2021, and July 27, 2022. As an embedded evaluator, we administered this survey on a rolling basis every two weeks as more customers participated, which has resulted in higher-than-normal response rates.

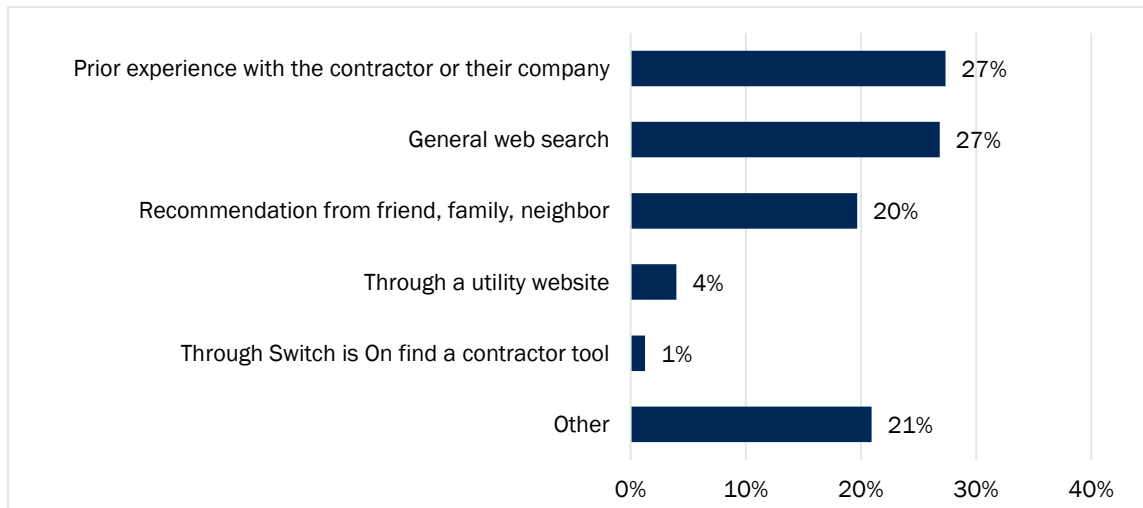
This document presents topline findings from a high-level analysis. The survey instrument and results from the full, in-depth analysis of the single-family customer survey are included in the Interim Process Evaluation Report, published in November of 2022.

Findings

Finding a Contractor & Motivations for Install

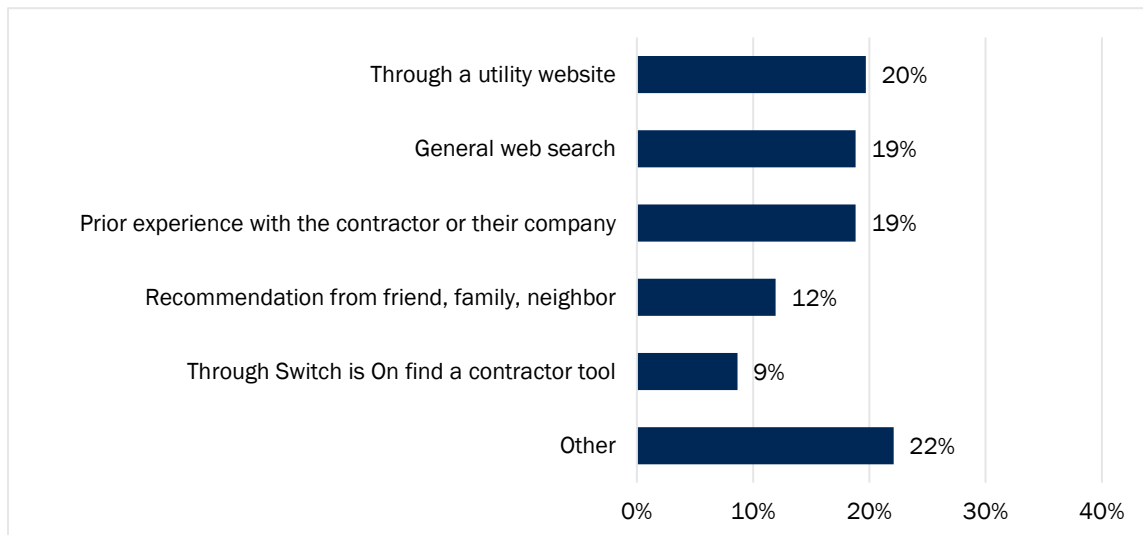
Almost half of HVAC heat pump respondents (47%) found their TECH contractor through existing personal relationships, from either a previous experience with the contractor or recommendations from a friend or family member (Figure 1). Most other HVAC customers (31%) found a contractor online. Examples of “other” responses included finding their contractor through social media, TV/radio ads, mailers/pamphlets, and home adviser groups.

Figure 1. How Customers Found Their TECH Contractors – HVAC Heat Pump (n=1,185)



Results for HWPB respondents were almost reversed from those of HVAC heat pump customers, with 39% of customers finding their contractor online either through a web search or their utility's website and 31% of customers finding their contractor through existing personal relationships (Figure 2).

Figure 2. How Customers Found Their Contractors – Heat Pump Water Heater (n=335)



Most HVAC heat pump and HPWH customers were looking to replace old equipment that was either functioning poorly or not functioning at all (Table 1). HPWH customers were likely to say they were exploring new options while their existing equipment was still functioning well. HVAC heat pump and HPWH customers were also likely to say they reached out to the contractor for a reason other than those listed in the survey. The full analysis of these responses can be found in a separate document.

Table 1. Reasoning for Reaching out to Contractor

Source	HVAC Heat Pump Customers (n=1,185)	Heat Pump Water Heater Customers (n=335)
My existing equipment was old or not functioning well	47%	27%
My existing equipment was functioning, but I wanted to explore options for new equipment	18%	24%
My existing equipment was broken, and I needed to replace it	17%	15%
I was doing an addition and needed to add new equipment	3%	1%
Other	15%	34%

About one-third of both HVAC heat pump and HPWH customers hired the first contractor they spoke to (34% HVAC, 35% HPWH). Most of the others found their contractor after speaking with two contractors (22% HVAC, 21% HPWH) or three contractors (26% HVAC, 26% HPWH).

A majority of customers reported that their contractors offered useful information about why an electric option was a good choice for their home (74% HVAC, 66% HPWH), although a sizable portion (35% HVAC, 69% HPWH) indicated they mentioned a heat pump as an option before the contractor did.

Customers had varying levels of knowledge about their new heat pumps, though surveyed HPWH customers were more knowledgeable than surveyed HVAC customers (Table 2). The disparity has grown slightly as the sample of HPWH customers has grown larger.

Table 2. Knowledge of Heat Pump by Measure

Knowledge Level	HVAC Heat Pump Customers (n=1,185)	Heat Pump Water Heater Customers (n=335)
Very knowledgeable	12%	23%
Some existing knowledge	41%	47%
Little existing knowledge	28%	21%
Not at all familiar with this product	19%	9%

Customer Decision-Making

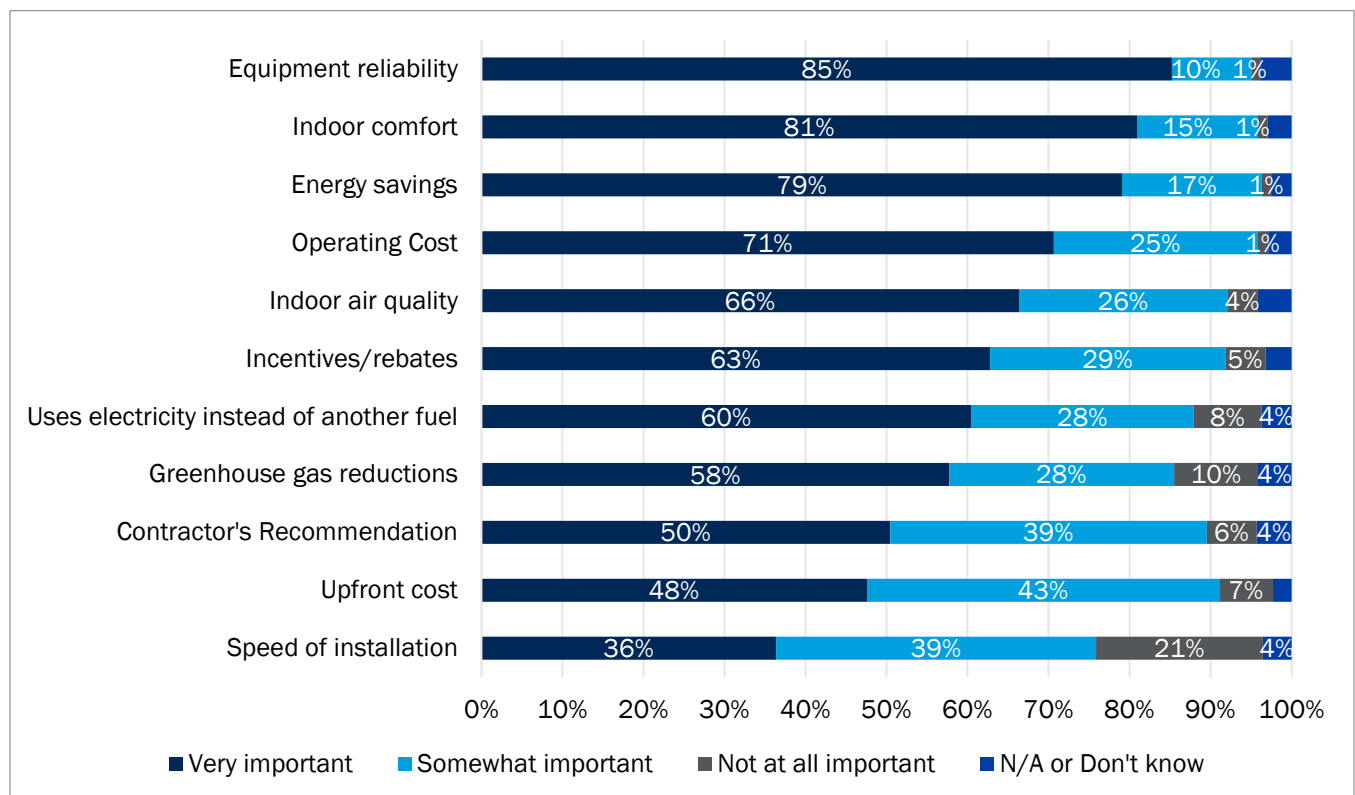
Financial benefits (such as the TECH incentive, energy savings, and energy efficiency) and a desire to complement existing or future solar installations by converting as many appliances as possible to electric were the main reasons customers decided to move forward with a heat pump instead of an alternative type of equipment (Table 3). Another important factor was the environmental benefit of installing a heat pump (such as reducing their carbon footprint or environmental impact). Other, less common responses for HVAC heat pump participants included things like ease of use, indoor comfort, and safety when compared to gas. This information was provided unaided, in open-ended answers.

Table 3. Reasons Customer Moved Forward with a Heat Pump

Reasoning	HVAC Heat Pump Participants (n=1,185)	Heat Pump Water Heater Participants (n=335)
Financial (including energy efficiency)	50%	56%
Solar/Electrification	26%	41%
Environmental	19%	31%
Issues with old gas equipment	7%	10%
Recommendations from friends, family, contractor	14%	6%
Added air conditioning	4%	0%
Other	18%	8%

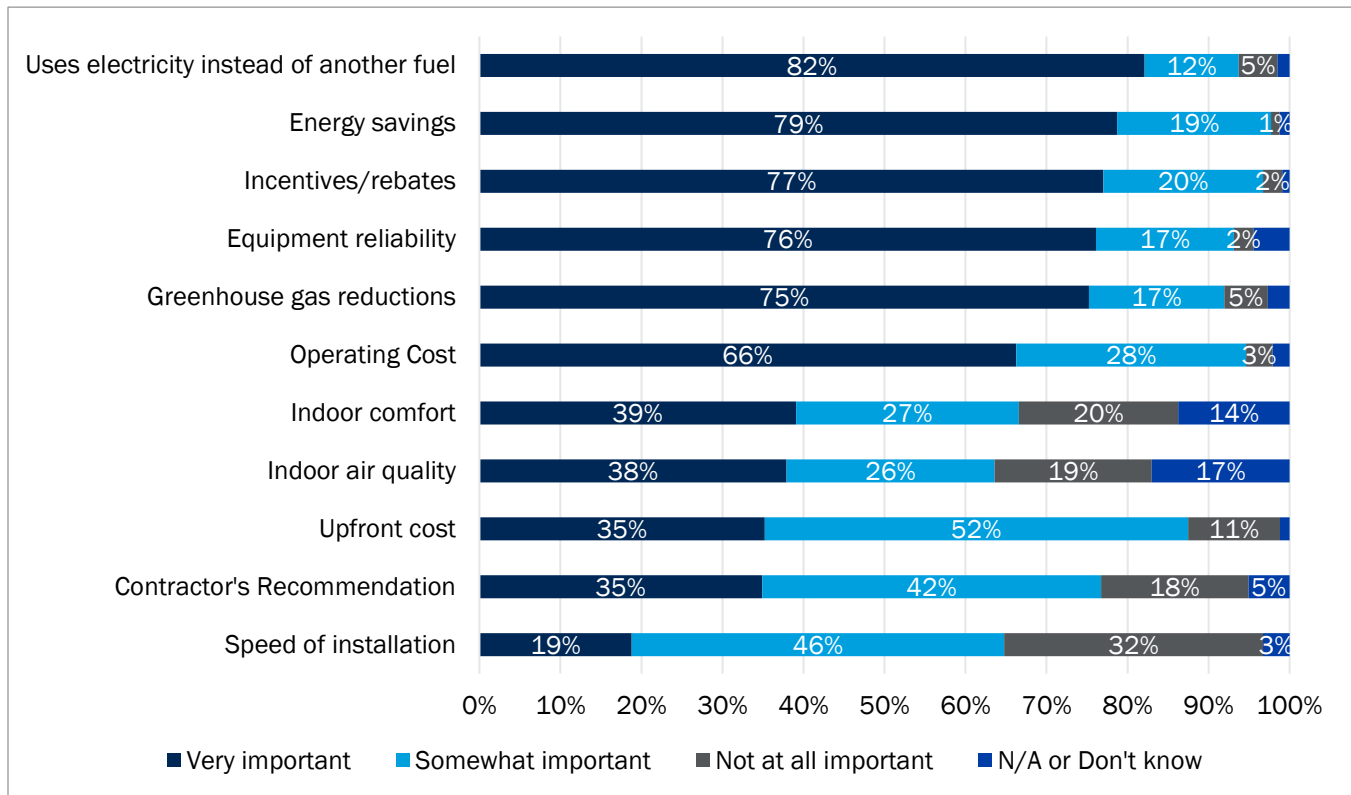
When given specific factors to score on importance, HVAC heat pump customer responses had similarities and differences when compared to their previous open-ended descriptions. Financial benefits such as energy savings, operating costs, and incentives were still rated highly, but other factors such as indoor comfort and indoor air quality were also rated as very important in their decision to purchase a heat pump (Figure 3).

Figure 3. Importance of Factors to Heat Pump Purchase - HVAC Heat Pumps (n=1,185)



HPWH customers found it important that the water heater used electricity in addition to their financial and environmental motivators (Figure 4).

Figure 4. Importance of Factors to HWPB Purchase - Heat Pump Water Heaters (n=335)



The TECH incentive played a role in encouraging customers to purchase their heat pumps. Of the 1,412 customers who reported the TECH incentive was at least somewhat important in their decision to purchase a heat pump, 39% of HVAC customers (426 of 1,088) were either unlikely to or would not have purchased a heat pump without the incentive. An even larger portion of HPWH customers reported feeling the same way, at 62% (200 of 324).

Financing was generally not used by customers for their TECH projects (Table 4). When they did finance the equipment, both HVAC heat pump and HPWH customers chose most often to finance through the contractor that installed their equipment (57% HVAC, 45% HPWH). Other choices included putting it on a credit card, financing through a bank or credit union, using home re-financing, or financing through GoGreen Home.

Table 4. Customer Financing for TECH Project

Response	HVAC Heat Pump Participants (n=1,185)	Heat Pump Water Heater Participants (n=335)
Used financing	25%	9%
Did not use financing	75%	91%

The need to upgrade their electrical panels did not appear to negatively affect customers' decision to move forward with the heat pump. While nearly half of HPWH customers (44%) and a quarter of HVAC heat pump customers (25%) reported that their electrical panel needed to be upgraded as part of the installation, relatively few of those (16% HPWH, 12% HVAC) reported that it caused them to rethink their decision.

Customer Satisfaction with Contractor

Customers generally reported positive experiences with their contractors (Figure 5). The majority of contractors explained how to use the equipment and answered questions satisfactorily (Figure 6). Fewer contractors reportedly explained how to perform equipment maintenance, indicating this could be an area for improvement.

Figure 5. Overall Customer Satisfaction with Contractor

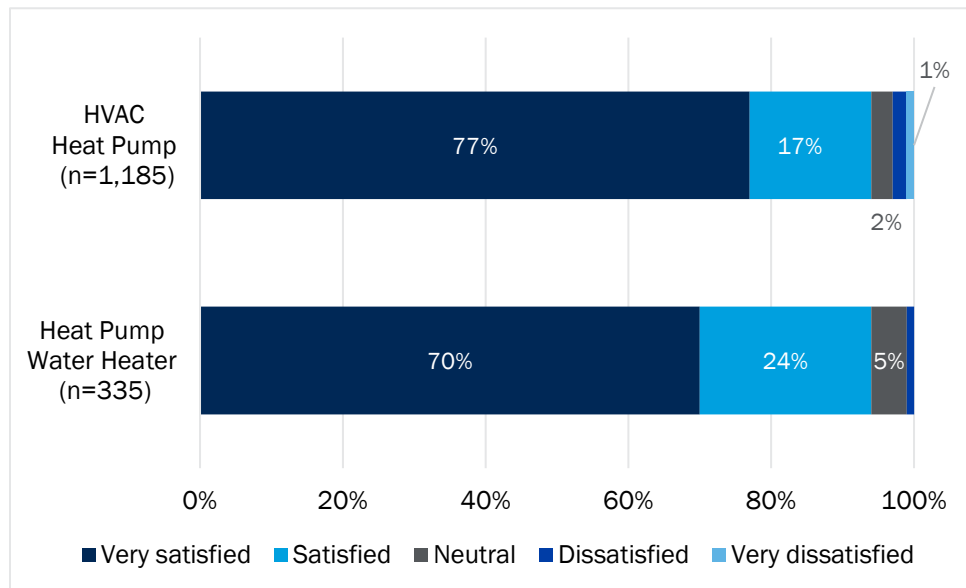
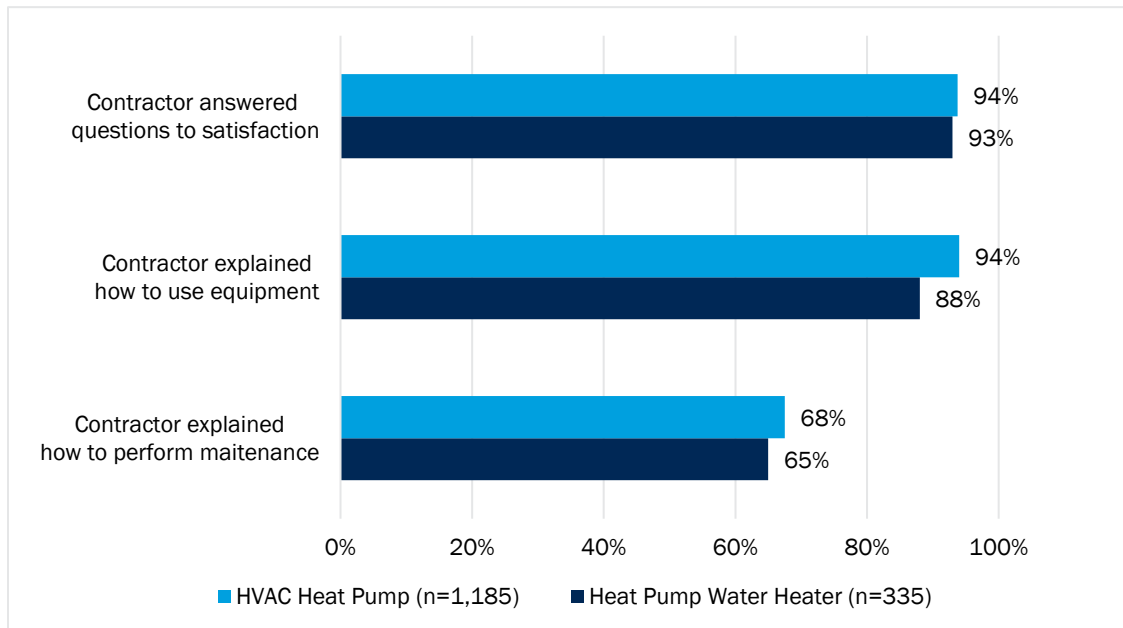


Figure 6. Customer Experience with Contractors (Percent Indicates a “Yes” Response)



According to survey respondents, contractors often mentioned both the TECH Clean California incentive, (70% HVAC, 77% HPWH), and the specific dollar amount (93% HVAC, 95% HPWH). A much smaller number of respondents could actually remember the dollar amount specified by their contractors (HVAC 44%, HPWH 39%), and they reported that the contractor mentioned the amount as \$3,000 although answers ranged from \$400 to \$8,000 and had an average of \$2,990.

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