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Water Heater Market Characterization Report

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Executive Summary

Project Summary

NEEA is looking to continue improving its understanding of the supply & demand side of the residential and commercial water heater market in the Northwest region (Idaho, Montana, Oregon & Washington).

Results from this study will allow NEEA and its partners to further enhance current initiatives and develop new programs to increase the penetration of high efficiency water heaters.

Summary of Key Findings

- Unit selection is a low-involvement purchase for all end users - brand is unimportant and low-cost (#1 concern for residential and commercial customers), “like-for-like” purchases prevail
- Education for the supply chain and end users is critical to effectively grow sales – manufacturers must lead the way and others in the chain should follow
- Installers are the greatest influencers for all end users and are critical for driving replacement or pre-emptive unit sales growth
- Barriers for alternative unit sales vs. “like for like” sales include installation difficulty, (requires another professional / additional time and cost to install) and high-tech units (present installation and servicing challenges)
- The commercial decision-making process is much more complex than residential – it’s not just a one or two person decision

Background & Methodology

Research Objectives

Key research objectives include the following:

- Understand how distributors, retailers and installers interact and fill the demand for water heaters
- Learn how the supply side positions different types of water heaters to end users
- Identify opportunities on the supply side regarding new technologies and new product launches
- Uncover behaviors and attitudes related to the purchase process / replacement of water heaters across product categories and by fuel type
- Unearth consumer perceptions and behaviors throughout the purchase journey (inclusive of planned vs. emergency purchases)
- Understand challenges and perceived barriers associated with purchases of heat pump water heaters
- Develop residential market sizing for water heaters



Supply Side - Methodology



10

Manufacturer
Telephone Depth
Interviews



- Manufacture water heaters sold in the Northwest region



16

Installer
Telephone Depth
Interviews



- Perform/supervise gas water heater installation
 - 2 (ID), 2 (MT), 7 (OR), 5 (WA)



12

Distributor
Telephone Depth
Interviews



- Distribute water heaters
 - 1 (ID), 1 (MT), 4 (OR), 6 (WA)



12

Retailer Telephone
Depth Interviews



- Sell water heaters
 - 2 (ID), 2 (MT), 4 (OR), 4 (WA)



End Users - Methodology



12

Commercial Decision Maker
Telephone Depth Interviews

- Installers Involved in commercial gas water heater sell-in
 - 5 (WA), 5 (OR), 2 (ID)



1

Residential Online Bulletin
Board

- 36 Participants (installed water heater in past 2 years)
 - 11 (WA), 7 (OR), 11 (MT), 7 (ID)

12

Residential Skype Interviews

- 12 Participants (installed water heater in past 2 years)
 - 4 (WA), 8 (OR)

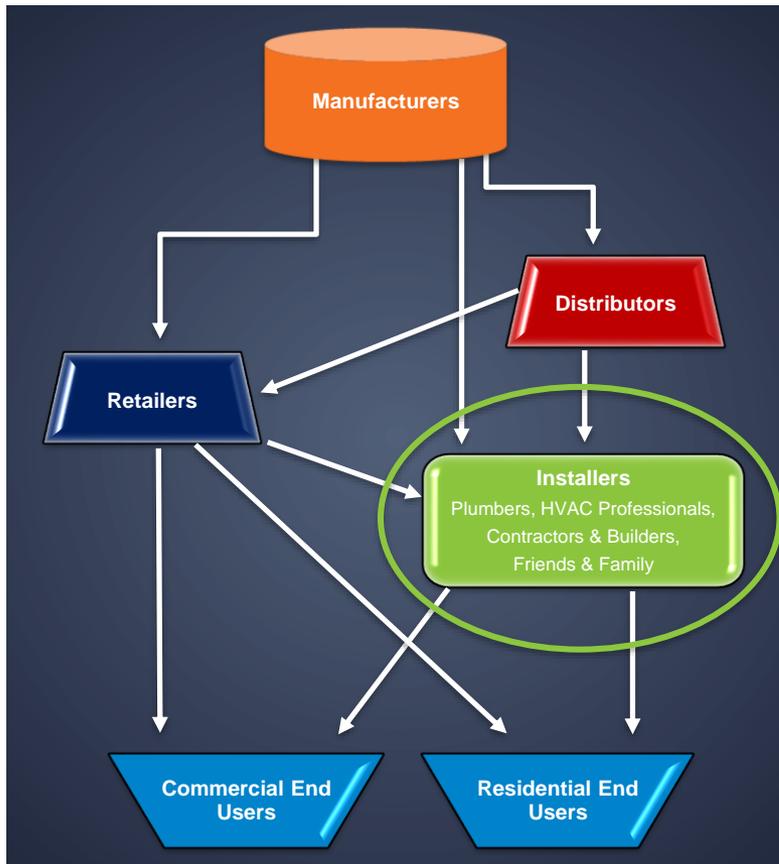
805

Online Surveys

- 805 Participants (installed water heater in past 2 years)
 - 379 (WA), 247 (OR), 122 (ID), 57 (MT)

The Water Heater Ecosystem

Installers are critical to the growing unit sales, directly receiving product & support from the supply chain and heavily influencing End User decisions.



Manufacturers

- Supply products to Retailers, Distributors and (some) Installers directly

Distributors

- Purchase from Manufacturers / rely on them as resources/partners
- Supply to Retailers & Installers (volume enables bulk purchasing power)
- Supply to End Users who engage with them directly

Retailers

- Purchase from Manufacturers for cost-savings
- Purchase from Distributors for service and support partnerships
- Supply to Installers and End Users (mostly Residential since most Commercial units are supplied by Installers; smaller Commercial End Users (e.g., small business owner) sometimes purchase from Retailers)

Installers (strongest influence in the ecosystem)

- Purchase from Retailers unless volume enables purchasing directly from Distributors / Manufacturers
- Supply to End Users

Commercial End Users

- Purchase the unit & installation directly from Installers

Residential End Users

- Mostly purchase through Retailers or have Installers, Friend or Family purchase and install

Key Ecosystem Finding

Commercial water heater purchase decisions are typically made by committee and units recommended by installers (as opposed to one individual selecting unit type, brand, being directly involved with overseeing installation, etc.)

- In an effort to understand how recommendations are provided and decisions made, commercial property manager research was replaced with commercial-focused salesperson / installer interviews to better understand the purchase process - from bid to installation



Manufacturers



Ecosystem Interactions

Though distributors are their primary clients, some manufacturers have direct sales relationships with retailers and installers.

Manufacturers educate distributors, retailers and installers about new products & innovations, features, and issues related to performance and installation of water heaters.

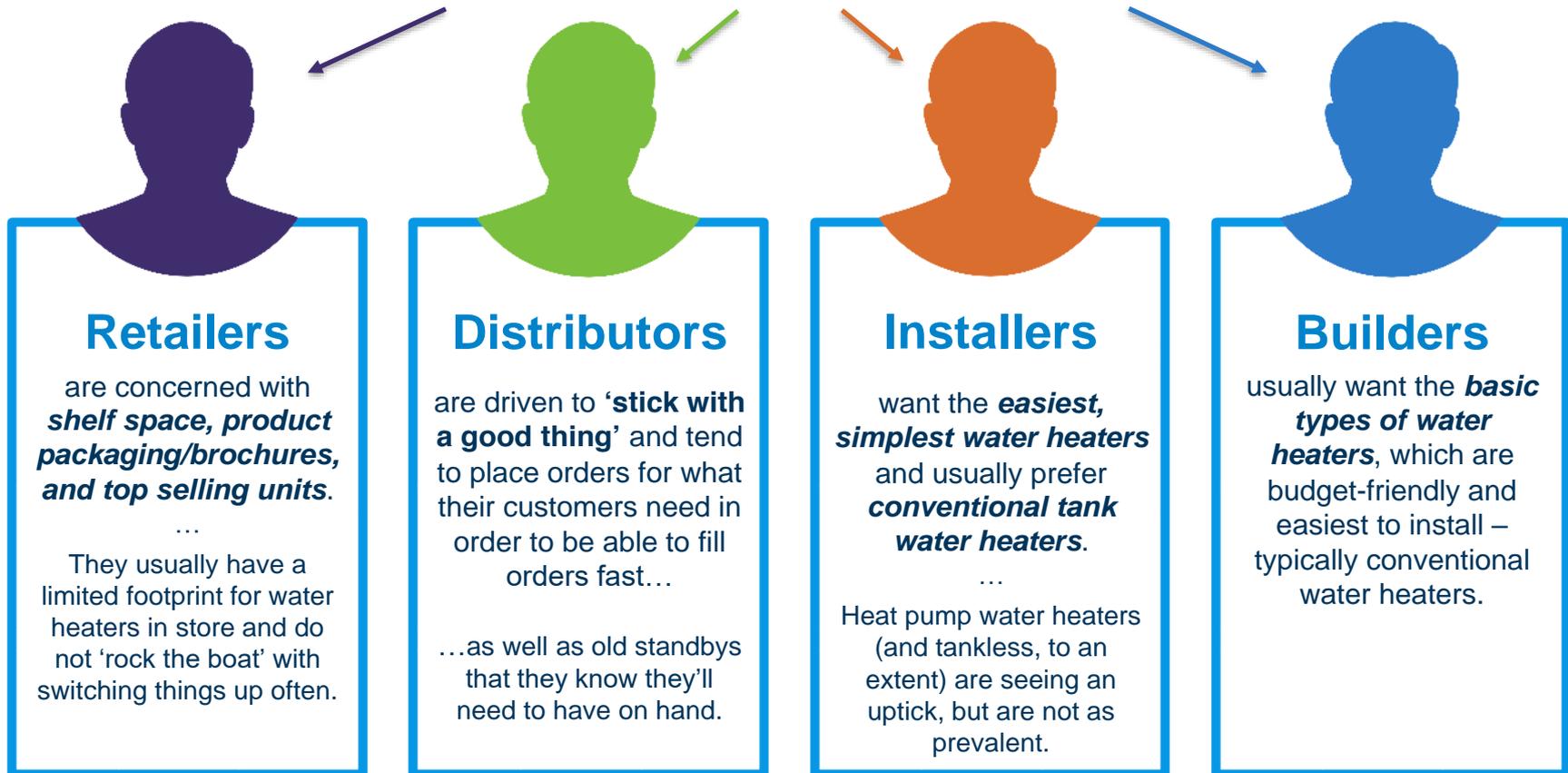


They also **attend trade shows and reach out to installers (primarily plumbers), engineers, contractors/builders, etc. to raise awareness of their brand/product/innovations/ROI since there is so little direct-to-consumer advertising of water heaters.**



Feeding the Supply Chain

Purchasing originates with them and is largely driven by market demand.





Unit Perceptions

Most feel that consumers are ultimately seeking low-cost units, and they aren't always convinced to pay more for higher efficiency units – but they believe there is room for opportunity.

Higher Efficiency Units

While consumers seem hesitant to justify the additional upfront cost, a few manufacturers indicated they could probably be doing a **better job educating their customers and installers** about the potential for savings and how to best 'sell' these to end-users.



Heat Pump Units

Though considered innovative, the **somewhat more difficult installation and price tag** of heat pump water heaters are considered potential obstacles.

The **rebates** offered by state utilities and more **education**, could make them more attractive moving forward.



Distributors & Retailers

Initial End User Purchase Needs



Distributors and retailers viewed the unit decision process / purchase similarly, especially agreeing that unit selection is a low-involvement decision for all end users.

Residential

Most replacements are emergencies (e.g., unit failed, was leaking, etc.)

- **Like-for-like:** unit similar to what they already have (alternatives mean higher costs and more time)
- **Speed:** need it now & keep the conversation short so they don't have to research alternatives
- **Low costs:** minimize costs (thus considerations for long-term savings/efficiency are often ignored)

Commercial

Most are “planned” (e.g., new development / construction, renovations, etc.)

- **Like-for-like:** installers accept requests and shy away from recommending heat pump water heaters since they require a plumber and electrician to install
- **Low costs:** most important consideration for customers requesting bids (also keeps alternatives off the table)



Initial Customer Interactions

As many only seek “like-for-like” / familiar options, the opportunity to engage customers and provide alternative options is often limited. However, interactions vary depending on whether the sale is residential or commercial.

On the residential side...

Homeowners pose some questions to retailers centered around **logistics (i.e. dimensions, availability, cost, and equipment needed)**.

...

A few engage customers in a discussion about efficiency, but they almost always purchase ‘like-for-like’. So, retailers usually have only a handful of models in stock and replace as needed.

“They don’t appear to be concerned about efficiency. They’ve taken a cold shower and they want hot water now,” – Retailer, Idaho



On the commercial side...

Distributors relay the contractor’s needs to the manufacturer via a salesperson, but this **interaction is extremely limited**.

...

There is **little consultative selling**. Contractors know in advance what they like and want for a project, and call-in/email their orders.

...

In such cases, suppliers typically don’t engage the contractor in a conversation about alternative units.

“A contractor knows their business... They have already made that decision along with their end-customer,”
– Distributor, Oregon



Units Typically Sold

Retailers sell more electric than gas units and distributors sell more gas than electric units, primarily based on their end users / installation difficulty. They also claim that fuel type cost is still a driving factor for unit purchases.



Overall, there was the sense that **natural gas has become a cheaper fuel source** than electricity in many locations - so gas units have become an increasingly popular choice.

“Electric was cheaper and then over time gas gets cheaper than electric. So when they were installing this into the home, that kind of drove what they were doing at the time,” – Retailer, Idaho

Some homeowners are replacing an electric unit with an electric unit ('like-for-like') even when gas might be better/cheaper, because of the lower out-of-pocket cost of replacement.

Even in areas where gas is cheaper, some were still selling a high percentage of electric. Sometimes, as development sprawls beyond a city's limits, new gas lines will not accompany the outward sprawl, so homeowners in these new developments are forced to go with electric.



Heat Pump Water Heater Reactions

Distributor and retailer reactions to heat pump water heaters varied...and seemed to depend largely on geographical location. When prompted, respondents provided a range of suggestions to improve unit sales.



Geographic Differences

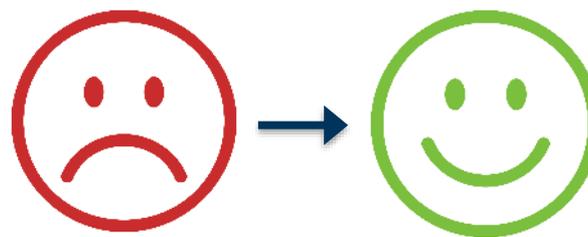
Respondents in Oregon and Washington had more positive impressions of heat pump water heaters than those from Idaho and Montana.

...

Some retailers in Montana and Idaho had never sold / heard of them.

...

Most felt neutral about their efficiency and specifics, but some felt very positive and tried to steer customers toward them.



What Would Help Sell Them?

- Bring costs down
- Stable, consistent rebates
- Time – eventually, people will get used to them
- Change regulations to force people to buy them
- *Work out the 'kinks'*
- Change the size, so they can fit into existing spaces
- Educate plumbing contractors on proper installation to reduce reluctance to install
- Marketing / education aimed at end users

Installers



Installation Volume

Plumbers are the primary installers of water heaters as opposed to HVAC professionals, who install a significantly lower volume of units per year.



Plumbers typically install anywhere from 50 to over 1,000 water heaters per year.

Most **HVAC professionals** have experience installing anywhere from just a handful (3-5) to about 25-30 units per year.



For most installers, at least **50-75%** of their water heater installations are **natural gas**, with a few exceptions who deal primarily with electric/heat pump water heaters.

None install more than 10% heated with propane, and virtually none expect the heat types of their frequent installations to significantly change in the near future.



Initial End User Interaction

Most indicate that water heater installation begins as a service request but, more often than not, the customer has a system failure and calls for an “emergency” replacement – though there are some instances surrounding planned renovations and new constructions.

Perceived Research

The majority discussed that **consumers typically do little research** in this category and want the **quickest, cheapest, and least disruptive solution** when it comes to water heaters.



Some do a bit more research and have specific preferences (i.e. energy efficiency) but more often than not, most customers just want a replacement of their current unit in a timely and budget-friendly manner.

Preferred Brands

Installers seem to stick with **one or two brands consistently** – since they have **familiarity and confidence** that the units perform without issues and are readily available from local distributors.



were mentioned most and are viewed as reliable, accessible, and price-friendly for customers.

Many suggest that their perceptions of brand differentiation are limited and that choices are driven largely by what is locally available.



Specifics & Innovations

When it comes to innovations in the water heater market, some installers are more up-to-speed than others (e.g., plumbers vs. HVAC professionals).

Scope of Knowledge



Most innovations are spoken about in the context of **greater efficiency**, while some speak to some particular **digital and smart-technology developments** such as displays, links to smartphones, and alerts on usage levels.

“Combi-boilers are a boiler and a tankless unit in the same box. Those are really cool. I sell quite a few of those,” – Installer, Oregon

High Price = High Efficiency?



Most think of **higher-priced units as another way of saying ‘energy efficient’**. For customers who can afford them, they are considered a good investment that pays for itself in time (only some can quantify the ROI).

...

The perceived downside is that units with **more ‘bells and whistles’ come with more potential for problems** and subsequently, repairs – which may be out of their scope / resources.

Limitations



No installer had anything negative to say about energy efficient water heaters, but felt that their customers are generally more driven by **price sensitivity** than energy efficiency – particularly when it means expensing more money upfront.

...

Better education, more generous rebates, and overall awareness could boost interest in these types of water heaters.



Distributor Relationships

The distributors installers rely on most for their water heater / accessory needs include: Ferguson, Kelly, Robertson, and Consolidated – mainly due to a perceived level of trust.



- These choices are usually built on **longstanding relationships** with these distributors across other lines of business and parts
- Distributors are considered trusted sources of information, usually the conduit for **knowledge transfer** with manufacturers, and **support** when questions arise during installation
- Installers trust that distributors will help them **meet their customer's demands** and **have product on hand** when needed



“What kind of support do they deliver? That’s big for us because, if we have problems, I want to know who to call,” – Installer, Oregon



End Users

***Installers (Liaisons for
Commercial Purchase Process &
Insights)***



Commercial Purchase Journey





Level of Knowledge

The level of knowledge the commercial requestor had varied, however some generalities did emerge.





Key Decision Factors

These liaisons (typically plumbers) felt that cost was the customers' primary concern when thinking about installing a water heater, though they placed more of an emphasis on dependability of the unit.

By the Customer (Perceived)

- 
- **Cost / price**
(‘by far’ the #1 concern)
 - **Reliability / dependability**
(important)
 - **Hot water on demand**
(mid-tier factor)
 - **Space savings**
(lower-level factor)
 - **Speed**
(lower-level factor)
 - **Efficiency**
(lower-level factor)

By the Commercial Liaison



When asked how they themselves would rank the most important factors...

Respondents placed slightly less emphasis on cost / price and more emphasis on **reliability and customer service.**

Food for Thought...



While reliability/dependability is high on the customer's list, respondents said that their customers almost never ask which **brand** of water heater is being installed, and some said they don't even mention brand in their estimates.





Innovation Awareness

In keeping up with 'what's new' in the market, respondent information sources were primarily online (plumbing house websites, manufacturer websites), their distributor rep, or manufacturer reps who occasionally 'make the rounds'.



Innovations / developments mentioned include:

- Solar powered water heaters
- Hybrid gas/solar water heaters
- Tankless units
- EZ TR series by Noritz
- Navien units with internal circulation pumps
- Noritz has established a 24-tech help-line manned by native English speakers
- Heat pump water heaters
- More programmable units

Residential Insights

Residential Purchase Journey





A Manageable Inconvenience

Concerns revolve around finding a reasonably-priced, quick replacement – since a leak / no hot water, are “extremely inconvenient”. However, getting a new water heater is seen as a fairly straightforward and manageable proposition.



“Besides the \$500, I was happy to get something that will hopefully last me 10-15 years,”
– Consumer, Washington



Simple Concerns

In outlining their concerns, most discuss the **inconvenience** of not having hot water, a leak, and the anticipated costs.

...

In terms of benefits within the process, most are simply relieved to have hot water running again.

“I either had to go without hot water or spend the money. Once installed, things were good,” – Consumer, Idaho

The Bright Side

Some add the additional benefits of **not having to revisit this issue/expense again for years to come, lower utility bills, more efficient units, faster recovery**, and, for those with tankless units, **“unlimited” hot water**.

“I am satisfied and happy I do not have to think about a water heater again for 10 years,”
– Consumer, Washington

No Hot Water = Do-able

The idea of ‘no hot water for a week’ is seen as an **inconvenience, not a catastrophe**.

...

Many have experience with this setback, and all came up with a workable plan to accommodate their family’s needs in this scenario.

“No hot water is inconvenient, but not as bad as no water at all... It’s a lot like camping,”
– Consumer, Washington

Purchase Factors & Questions



Consumers have some basic questions about their water heater purchase, but are not entirely interested to learn much beyond satisfying their needs to get a new water heater as quickly as possible, at the lowest cost.

Important Features

When it comes to features, most consumers focus on the size of the water heater (**capacity**) – relating to cost and quality of life (i.e. “can we wash dishes and take a hot shower at the same time?”). Other mentions included **warranty**, **speed of installation**, **similarity to current unit**, and **efficiency**.



Questions Asked

Sellers seemed to ask only the **most basic questions** (i.e. electric vs. gas, size of space, size of household) before making a recommendation. While some seemed satisfied with this interaction, other responses suggest they **were left ‘wanting more’** from the seller and pursued research further on their own (online or via a trusted friend).

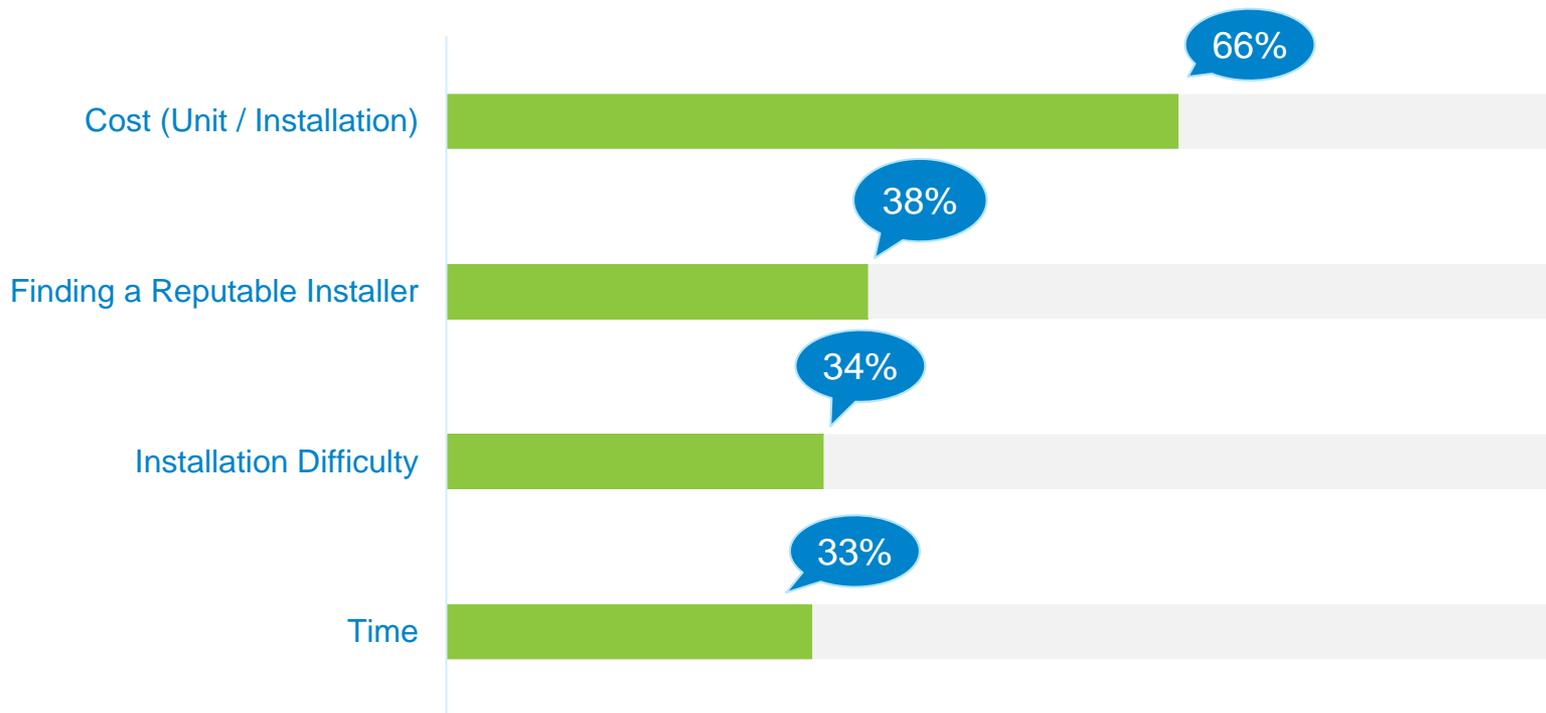
“*I wanted a 6-10 year warranty and energy efficient unit. Tankless are nice, but I didn’t want to spend that much,*”
– Consumer, Washington

“*They don’t ask enough questions. They asked me how I would use the unit Year 1, not Year 10,*”
– Consumer, Washington



Pre-Purchase Concerns

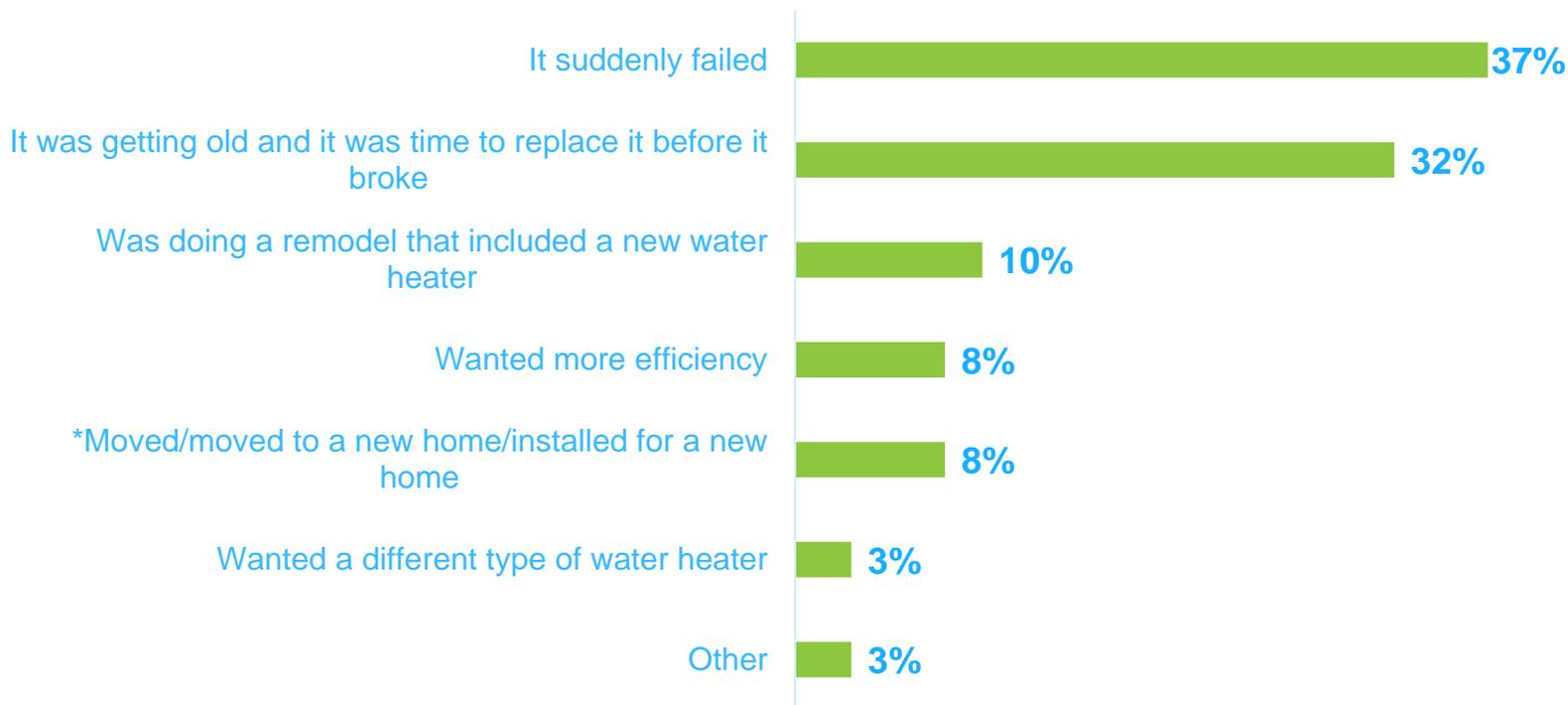
Cost (unit / installation) was the major concern prior to choosing and installing their new water heater, with two-thirds of all respondents listing it among their top three concerns.





Primary Reason for Replacement

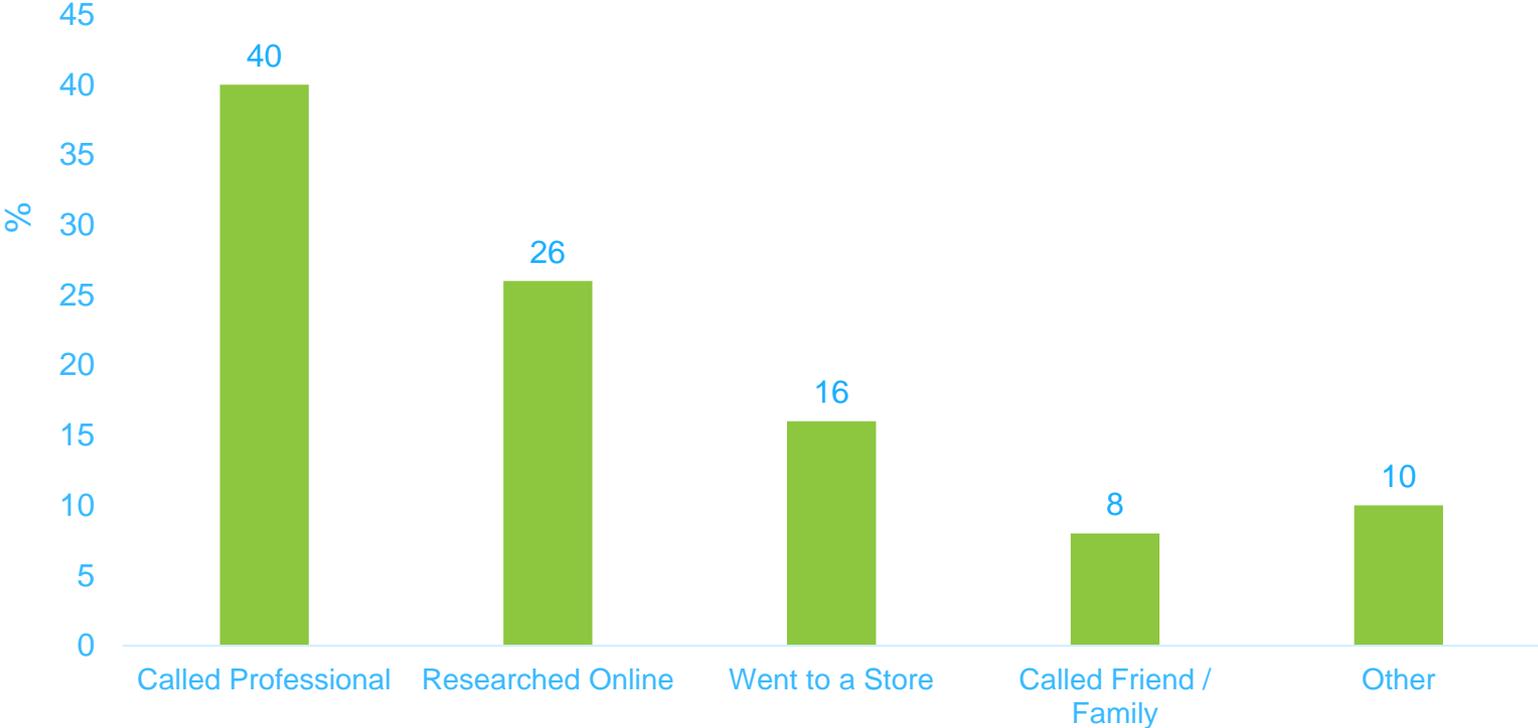
Water heater replacement was spurred by unit failure or the unit becoming old / needing replacement before failure, with the average age of the unit replaced being **13.2 years**.





First Step Taken To Replace

The first step for many homeowners in the market to replace their water heater was calling a professional, followed by online research and other actions.



Reasons for Not Price Shopping



48% of respondents did not price shop, with the majority citing that they trusted their contractor to provide a unit for a reasonable cost.

57%



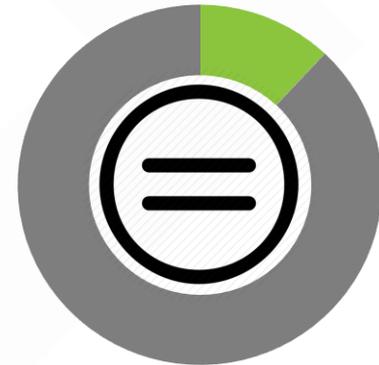
Trusted
contractor / fair
price offered

17%



Had no time to
research

12%

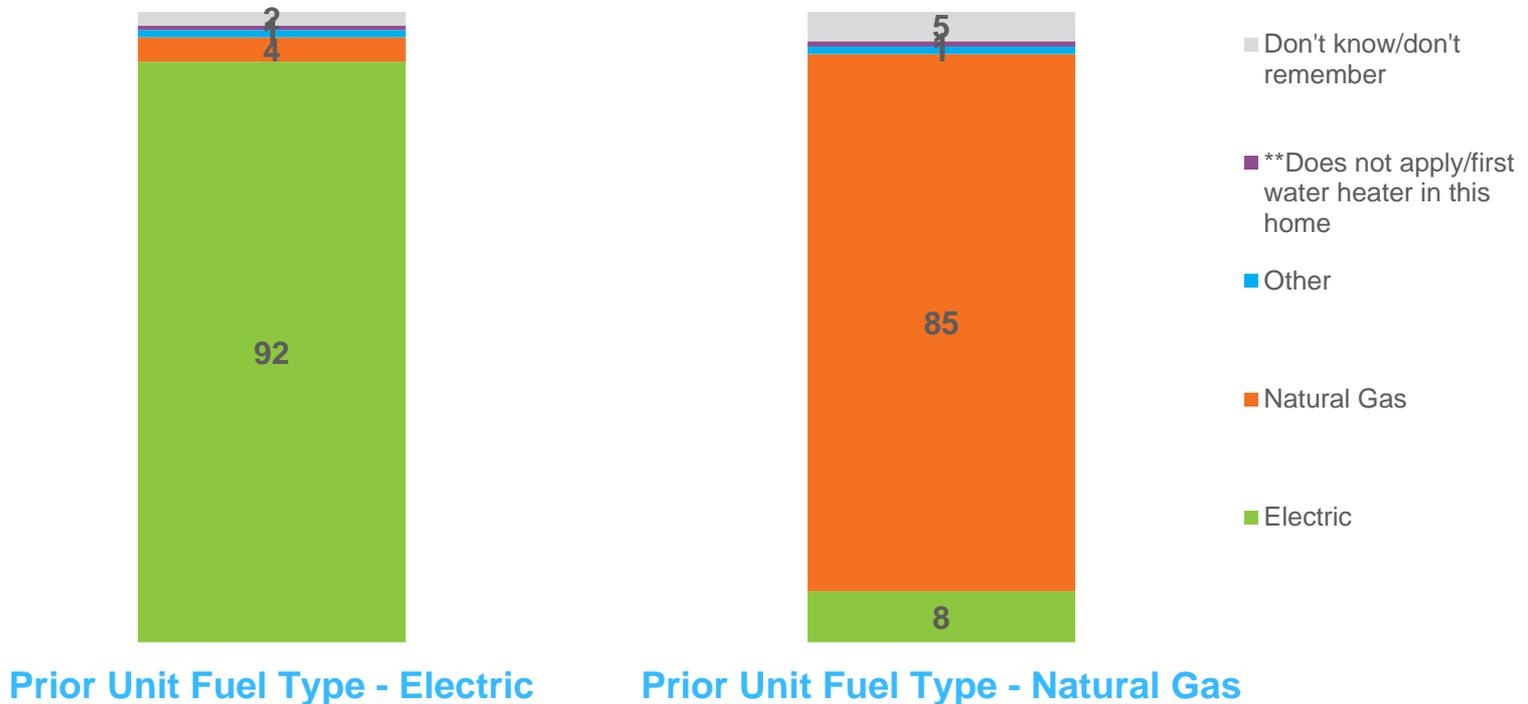


Used same
brand / supplier

New Unit Installation By Fuel Type



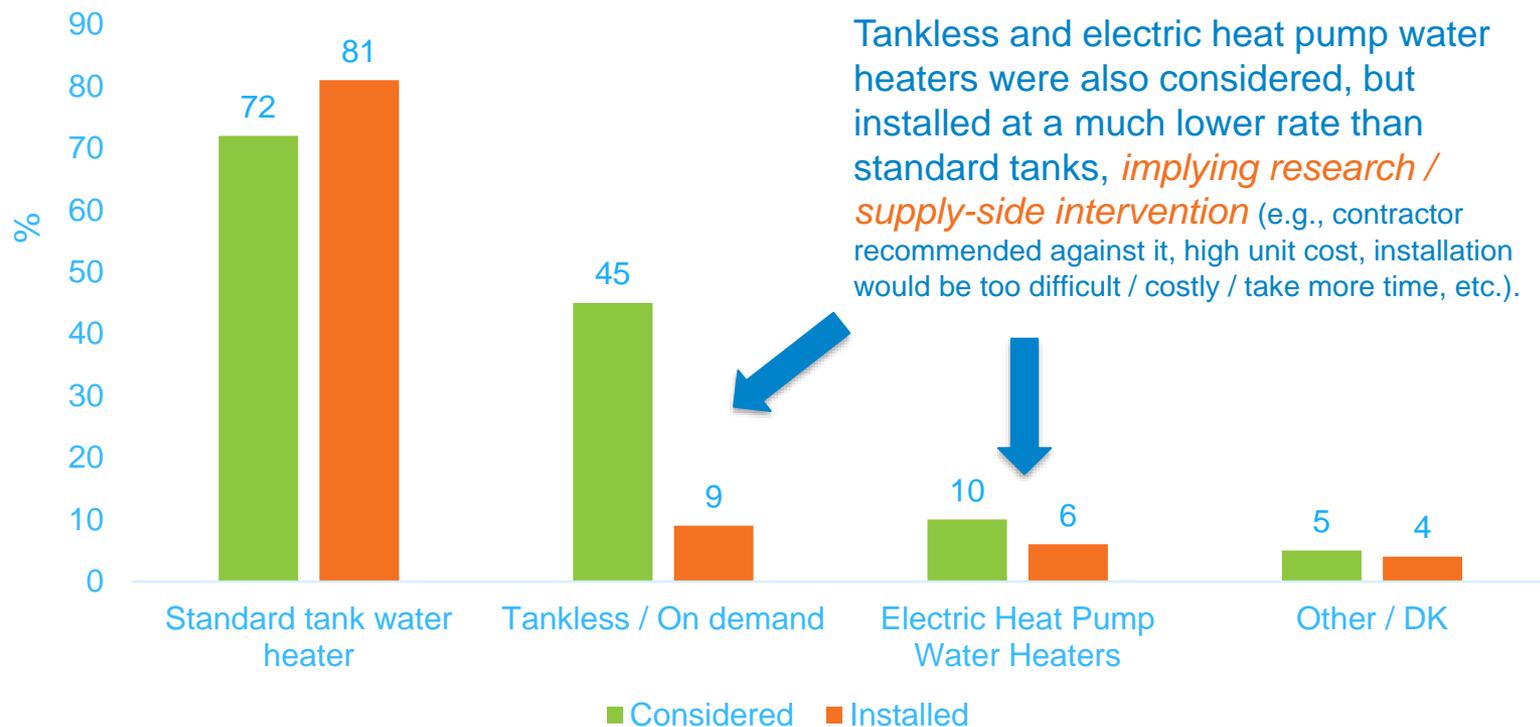
A vast majority of homeowners stayed with the same fuel type for their newly-installed water heater, however some did convert from gas to electric.





Types Considered & Installed

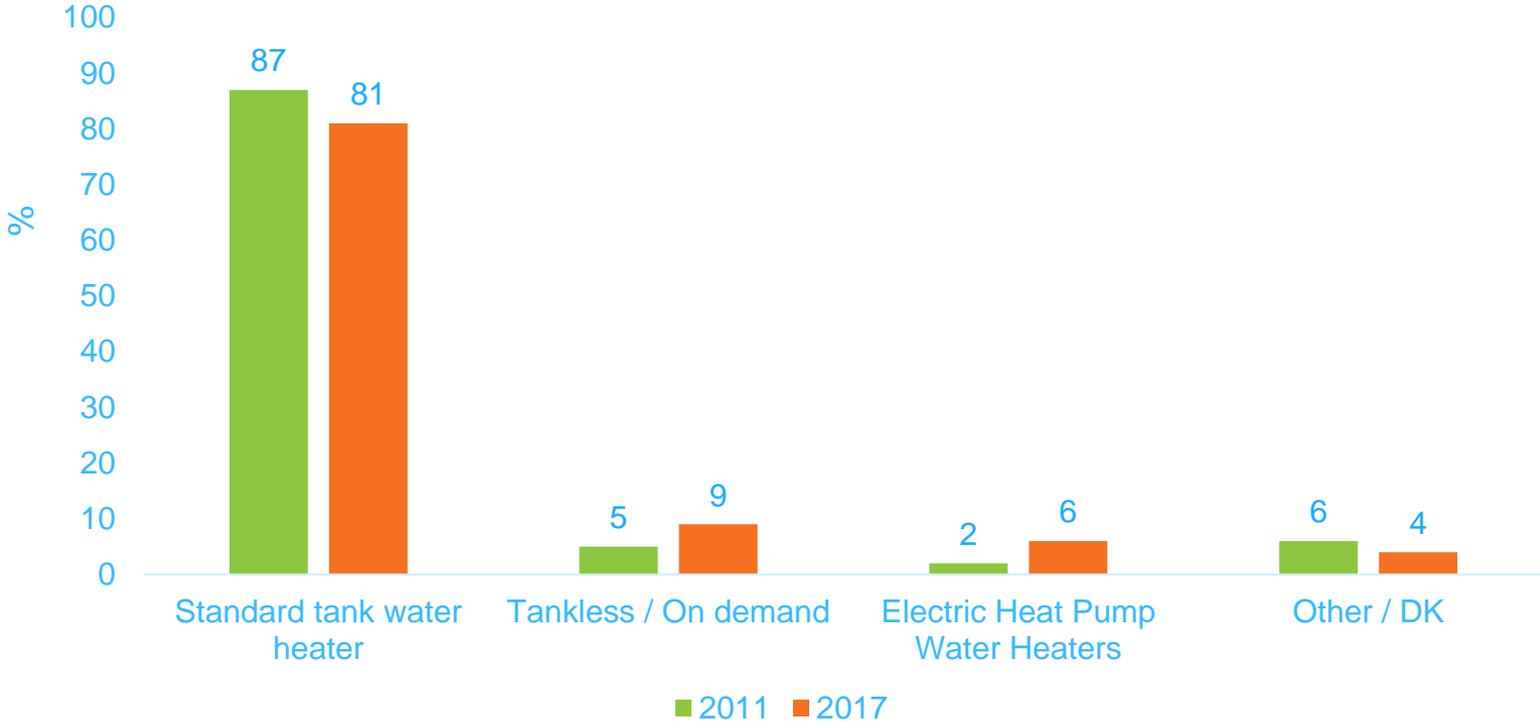
The most common type of units considered and installed were standard tank water heaters.





Unit Installation Trends

Standard tank heaters still represent the majority of installations, however, tankless unit installations have almost doubled and electric heat pump water heater installations have tripled in the last 6 years.



*2011 figures derived from NEEA 2011 Water Heater Market Update report

Heat Pump Water Heater Consideration



The top reason for heat pump water heater consideration was performance / efficiency. No need / interest was the top reason for not considering one, and teamed with unfamiliarity, this indicates a gap in education.



33% Performance / efficiency
21% Price / cost
11% Reputation / recommendation

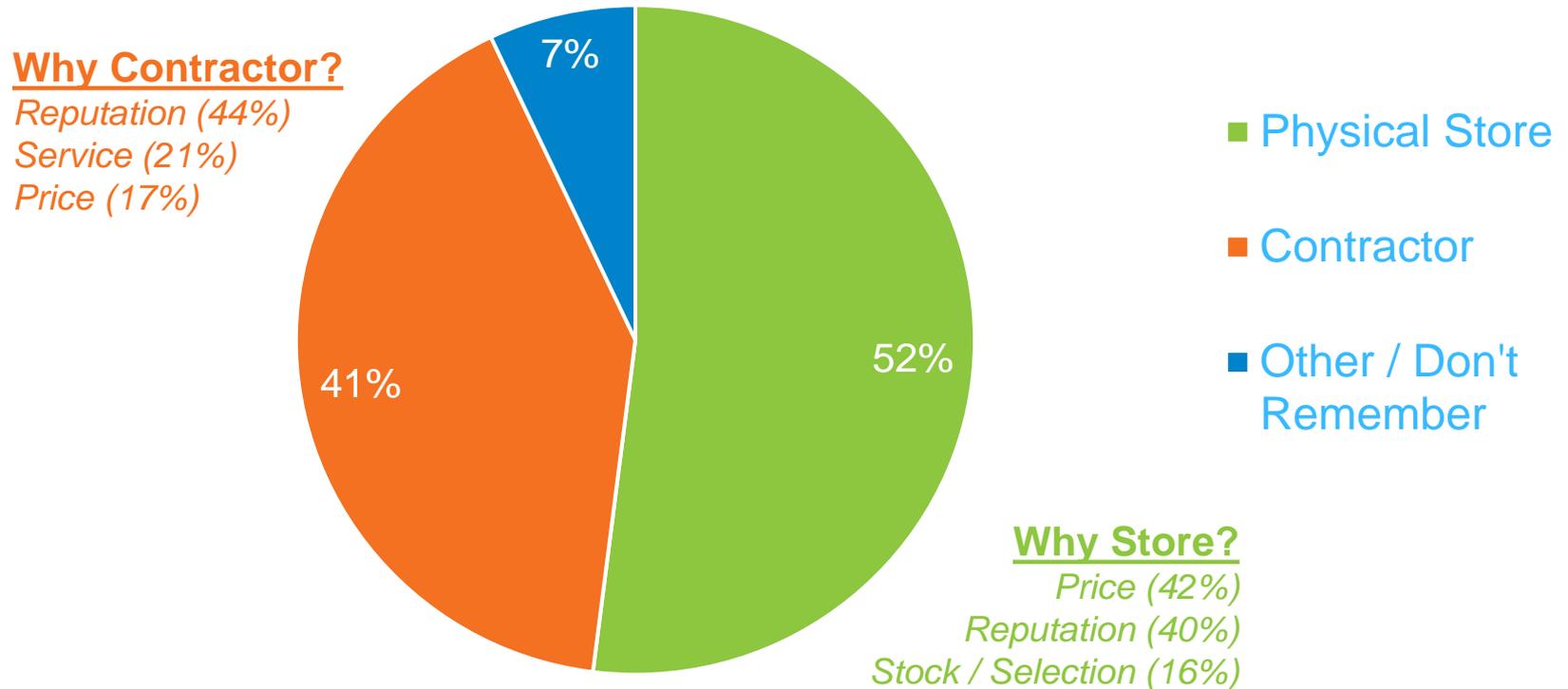


40% No need / interest
19% Unfamiliar
19% Price / cost

Water Heater Purchase Channel



Over half of respondents surveyed purchased their unit from a store (more electric than gas) with slightly less purchasing it through their contractor (more gas than electric).



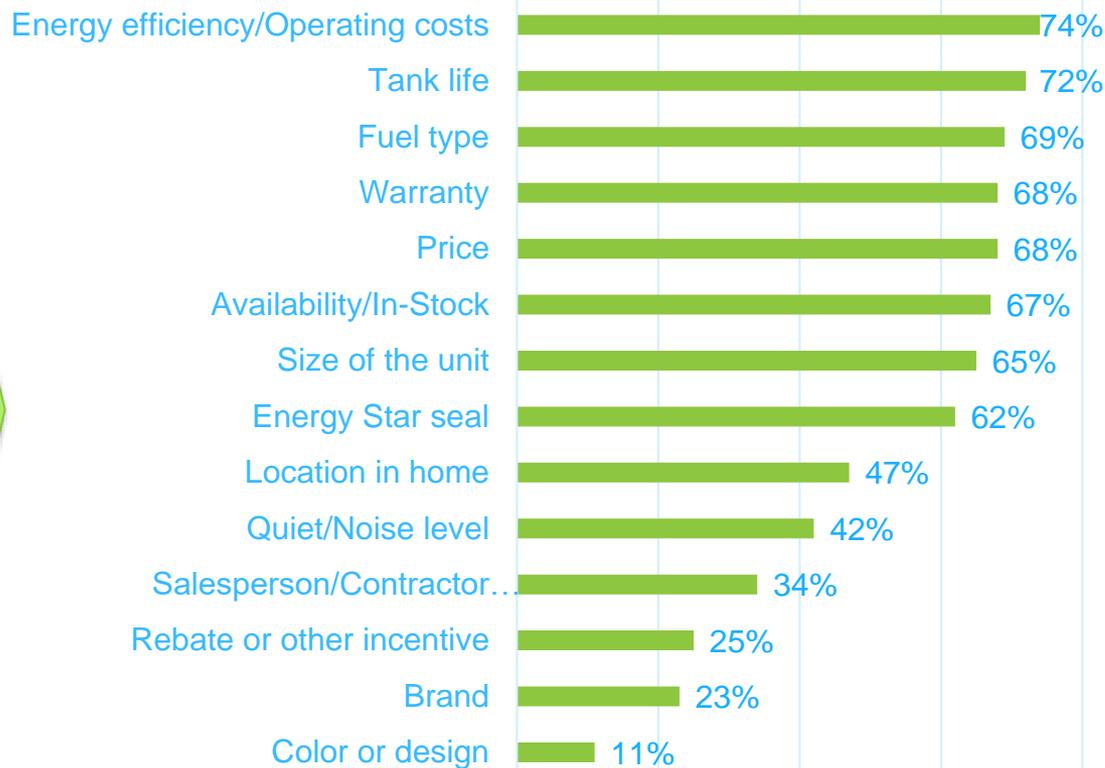


Unit Feature Importance

Efficiency, tank life and fuel type were the most desired features, with color/design, brand and rebates / incentives being the least desired ones.

86%

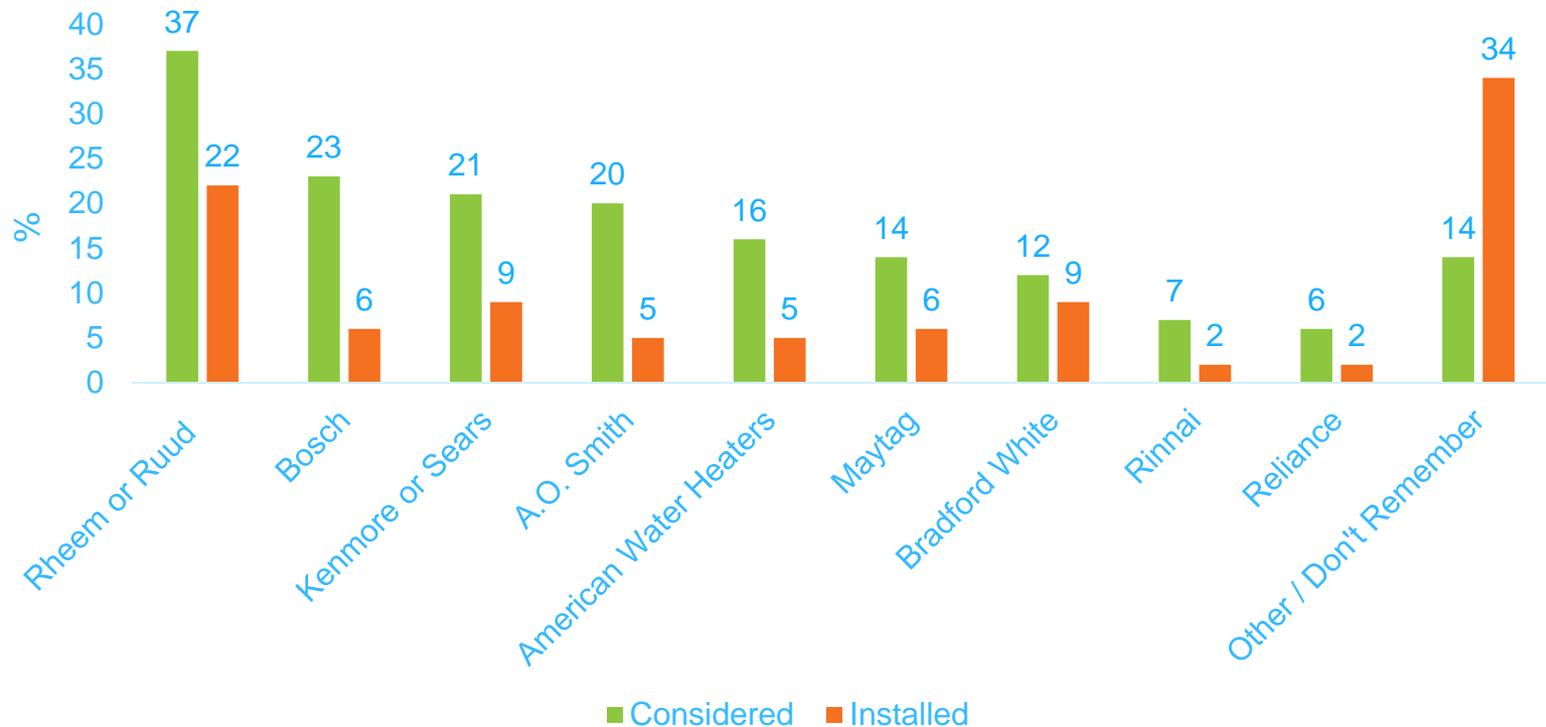
did not have a brand in mind pre-purchase / installation





Brands Considered & Installed

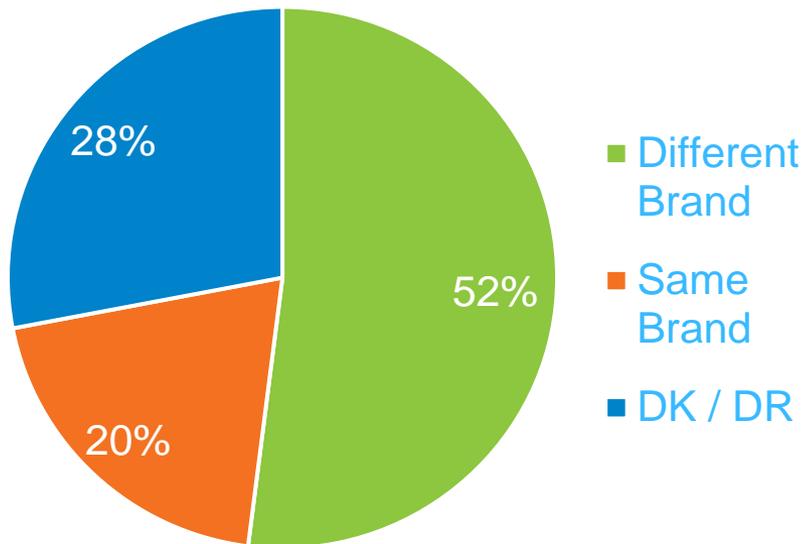
Rheem / Ruud was the most considered and installed brand among respondents. Bosch, Kenmore / Sears & A.O. Smith were next most considered brands, but installation rates varied.





Brand (Dis)Loyalty

Just over one-half of respondents installed a different brand of water heater than the one they replaced. Reasons for switching appear to be situational (e.g., same brand / unit wasn't in stock, contractor recommended it, etc.).



Top reasons for switching brand:

- In stock - **22%**
- Reputation - **21%**
- Recommended - **19%**
- Price - **17%**

Understanding Energy Efficiency



While most did not ask for energy efficiency as a feature, those who did have the conversation during the purchase process were usually the initiators. There was a mix of knowledge of energy efficient units, and most believed that all newer water heaters are more efficient.



“What is it?”

Most had come across energy efficient units either online/in-store during research or already knew about them in their (fairly eco-conscious) area. They were described as having more insulation and saving energy, yet costing more upfront, with potential for savings on their return.

“You can get tax breaks. If it has a certain energy star rating, you can get credits on your electrical bill,”

– Consumer, Oregon



“Is it worth it?”

In order to evaluate the ROI, most said they’d “have to pencil it out” to see if it was truly worth it. However, when prompted, nearly all felt they would be willing to spend more money upfront on an energy efficient unit if it meant seeing long-term savings via lower monthly utility bills.

“I have a ceiling to my budget, but up to that level I’m willing to do that to save energy and costs,”

– Consumer, Oregon

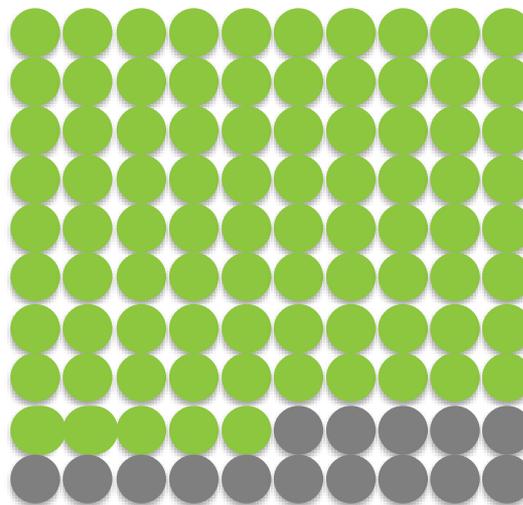


Energy Efficient Water Heaters

The majority of consumers claimed to have installed an energy efficient water heater.

85%

claimed they purchased
& installed an energy
efficient unit.



Top reasons for choosing an EE unit:

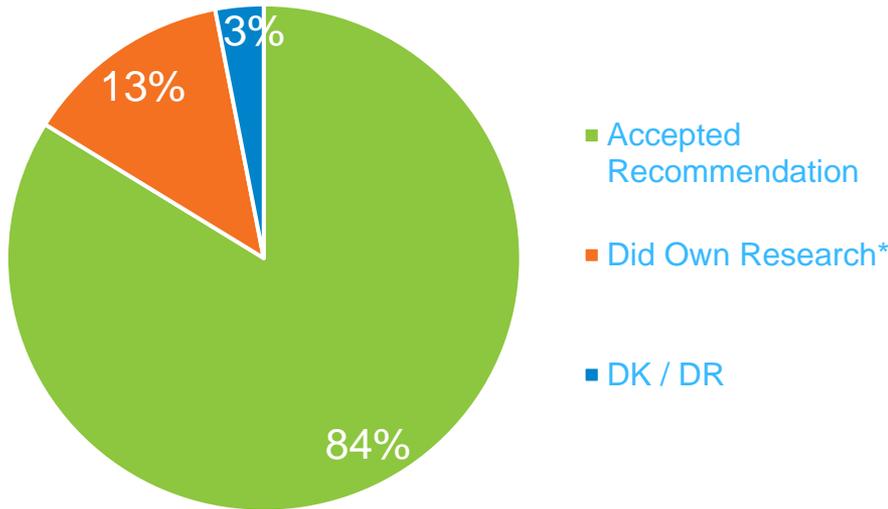
- Save money - **58%**
- Conserve energy - **32%**



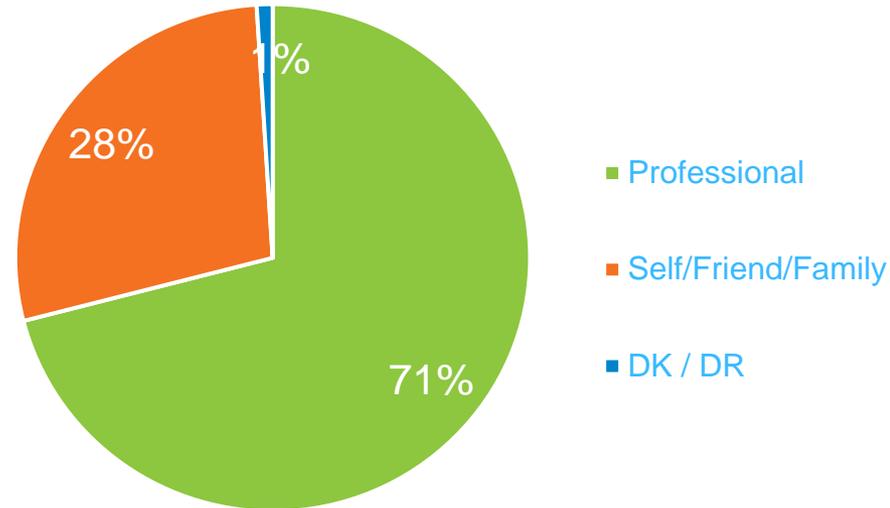
Unit Decision & Installation

The majority of homeowners surveyed accepted the installer's recommendation, further reinforcing their trust in professionals. And, in most cases, a professional installed the new water heater.

Decision Making Process



Who Installed



* Researched before accepting recommendation / installation or made decision for themselves (DIY installation)

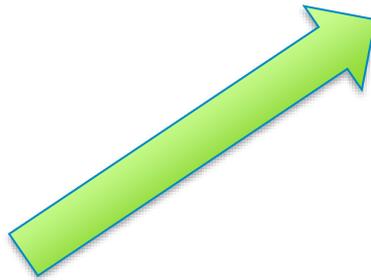
New Water Heater Performance



The majority of respondents indicated that their new water heater performs better than the old one it replaced, far surpassing their initial expectations.

59%

Expected their new unit to perform somewhat / much better than their old one.



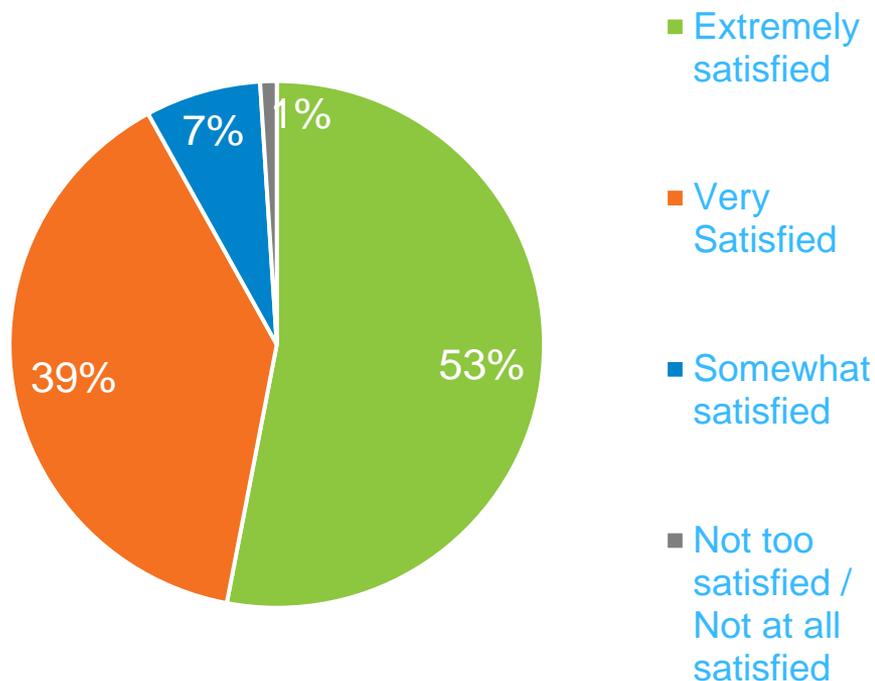
79%

Claimed their new unit performs somewhat / much better than their old one.



Installation Satisfaction

Nearly all respondents were very or extremely satisfied with the actual installation of their new water heater.



Top reasons for satisfaction:

- Performance - **42%**
- Service / Installation - **37%**
- Did it Myself - **13%**



Rebates and Credit Awareness

Though awareness was fairly low (especially for state income tax credits), almost two-thirds of consumers applied for rebates and credits, implying that many consumers learned of these benefits during or post-purchase / installation.

34%



Aware of
Rebates

64% applied

13%



Aware of State
Income Tax
Credit

60% applied

10%



Aware of Store
Credit /
Financing Plan



Rebate Consideration

Nearly all respondents inquired about / came across water heater rebates during the purchase process. They had suggestions for the ideal water heater rebate...



“I remember looking up tax breaks... but it looked like those had expired in our state,”
– Consumer, Washington



- Money deducted from the upfront cost (~\$100, for most)
- Write-off on taxes
- Free appliance (i.e. coffee maker, smart home device)
- Having the retailer/installer process it for them, on-site



- Long/time-consuming paperwork (i.e. taking an hour to fill in serial number, model number, color, attach a barcode or photo, etc.) – (“not worth it”)
- Multiple steps (more room for mistakes)
- Geographical restrictions (some are limited to a certain state)
- Store credit (want the flexibility/cash)
- Login to a website (often has glitches)
- Required home inspection (difficult to coordinate schedules)
- Only applicable to higher-end, more expensive units (too limiting)

Residential Water Heater Market Sizing Study



Background & Objectives

- Russell Research conducted a quantitative research study in Idaho, Montana, Oregon, and Washington.
- The consumer research was utilized to understand the presence and the type of water heaters found in homes in this region.
- Top Box Associates has integrated this research with desk research data to estimate the size of the installation water heater market.



Desk Research

- Census data was gathered to measure the Residential Consumer/Household Universe Size for several Northwestern states, including ID, MT, OR and WA.
- The relevant Universe Size includes single and multi-family primary residences, where the multi-family residences are comprised of 3 or fewer floors. Multi-family residences of 4 or more floors and unoccupied/vacant housing units are excluded from the residential sizing estimates.
- The net of these is about 5.3 million occupied dwellings.

(thousands)	Idaho	Montana	Oregon	Wash.	Total Region
Total Dwellings ¹	708	501	1,746	3,054	6,009
<i>less: exclusions</i>	<i>- 103</i>	<i>- 98</i>	<i>- 199</i>	<i>- 276</i>	<i>- 676</i>
Net Universe Size	605	403	1,547	2,778	5,333

1 Annual 2017 projected US census figures.



Primary Research

- A random sample in the region was gathered to first determine when the most recent water heater tank was installed and the average age of the replaced (or installed unit with new construction) water heater.
- The incidence calculation of water heater installation is based on the reported age of the water heater that was replaced; applying the full timeframe to those who replaced their water heater due to sudden or impending failure, while a shorter timeframe was applied for more discretionary or less urgent installations.
- Using a weighted combination of these figures applied to the Net Universe Size yields an estimate of the number of households that have installed/replaced water heaters.



Primary Research

- The estimate of regional water heater installation/replacement is about 420 thousand units per year, about 8% of qualified homes.

	Idaho	Mont.	Oregon	Wash.	Total Region ¹
Net Universe Size (HHs thousands)	605	403	1,547	2,778	5,333
Last time new Water Heater Installed (years) ²	6.2	7.3	6.1	5.3	5.8
Age of Water Heater that was replaced (years) ²					
Sudden or Impending Failure:	13	13	16	13	14
All Other discretionary installations:	12	7	10	10	10
Reasons for water heater installation: ³					
Sudden or Impending Failure:	69%	69%	72%	70%	70%
All Other discretionary installations:	31%	31%	28%	30%	30%
Net % incidence ⁴ of Water Heater installations	7.6%	9.0%	7.0%	8.2%	7.9%
Market Size Estimate					
# residential Water Heaters installed (past year)	46	36	109	229	420

1 Total figures are by-state household weighted not survey sample weighted.

2 Survey qS12: *When was the last time a new water heater was installed in your home?*, Survey q6: *How old was the Water Heater that you replaced?*

3 Survey q5a: *What was the main reason you replaced your water heater?*

4 Net % incidence of Water Heater installations including both replacement and new units.



Primary Research

- The random sample of respondents were asked to identify the fuel type of their current water heater. Their responses were used to break out the per-year Market Size estimate results by fuel type.
- The research shows a fairly equal distribution between Natural Gas and Electricity fuel types.

Water Heater Fuel Type ²	Idaho	Montana	Oregon	Wash.	Total Region ¹
Market Size Estimate³ # residential Water Heaters installed (past year)	46	36	109	229	420
Natural Gas	23	18	54	103	198
Electricity	19	14	49	110	192
Propane	3	3	4	13	23
Other / Don't Know / Not Sure	1	1	2	3	7

1 Total Region are by-state household weighted not survey sample weighted.

2 Survey qS13: *What powers your water heater?*

3 *Estimate degree of error is about ±5% point estimates for the Total and twice this amount at the state level.*

Actions



Actions

As a result of this research study, the following intervention opportunities exist for NEEA:



Further drive pre-emptive and alternative unit sales by educating retailers, installers and end users on energy efficiency and alternatives to standard tank units (e.g., HPWH's, high satisfaction levels, new unit ROI, etc.,)



Partner with leading brands to capitalize on their momentum and further support strategies and ultimately sales growth



Create support system / training for installers so they can better install and comfortably service higher tech units (and confidently recommend them)



Increase awareness of and education regarding rebates and tax credits among end users (and leverage professionals / retailers) to drive more planned purchases, lessen emergency installations and alleviate cost concerns

Appendix

Residential Demographics and Home-Related Information

Home-Related Info

		Fuel Type		Market			
	Total	Electric	Natural Gas	Idaho (I)	Oregon (O)	Washington (W)	Montana (M)
Total Respondents	(805)	(399)	(406)	(122)	(247)	(379)	(57)
	%	%	%	%	%	%	%
Purchased Home							
Existing home	76	80	73	76	78	75	77
New construction	24	20	27	24	22	25	23
Mean Years In Existing Home							
	11.5	11.6	11.4	10.6	11.4	12.0	10.3
Home Appliance Responsibility							
Primarily Responsible	48	50	47	45	55 w	46	42
Share Responsibility	52	50	53	55	45	54 o	58
Energy/Fuel Type In home							
Electricity	95	100	91	97	96	95	99
Natural Gas	63	26	100	67	62	62	72
Propane	6	11	2	6	3	7 o	22 iow
Something else	2	3	1	3	2	1	-

Home-Related Info (Cont'd.)

	Total	Fuel Type		Market			
		Electric	Natural Gas	Idaho (I)	Oregon (O)	Washington (W)	Montana (M)
Total Respondents	(805)	(399)	(406)	(122)	(247)	(379)	(57)
	%	%	%	%	%	%	%
<u>New Water Heater Installed</u>							
Less than 6 months ago	18	18	19	16	19	18	17
6 - 12 months ago	24	23	25	23	24	26	16
1 - 2 years ago	58	60	56	60	57	56	67
<u>Water Heater Fuel Type</u>							
Natural Gas	50	-	100	56	50	48	55
Electricity	50	100	-	44	50	52	45
Total Have Natural Gas & Asked	(424)	(93)	(330)	(65)	(129)	(198)	(31)
	%	%	%	%	%	%	%
<u>Natural Gas Provider</u>							
<u>Northwest Natural/ NorthWestern Energy (net)</u>	34	34	34	5	78 ^{IW}	9	68
Northwest Natural	31	29	32	5	78	9	31
**NorthWestern Energy	3	5	2	-	-	-	37
Puget Sound Energy	30	31	30	-	1	66	-
Avista	12	14	12	16	15	11	-
**Intermountain Gas	11	8	12	69	-	-	-
Cascade Natural Gas	9	8	10	5	6	14	5
Other	3	5	2	5	1	-	27

Demographics

		Fuel Type		Market			
	Total	Electric	Natural Gas	Idaho (I)	Oregon (O)	Washington (W)	Montana (M)
Total Respondents	(805)	(399)	(406)	(122)	(247)	(379)	(57)
	%	%	%	%	%	%	%
Gender							
Male	40	34	46	40	40	40	40
Female	60	66	54	60	60	60	60
Market							
Idaho	15	14	17	100 _{OWM}	-	-	-
Oregon	31	31	30	-	100 _{IWM}	-	-
Washington	47	49	45	-	-	100 _{IOM}	-
Montana	7	6	8	-	-	-	100 _{IOW}
Mean Age							
	50.2	49.5	50.9	48.7	51.2	49.7	52.7
Marital Status							
Married	71	66	75	66	69	73	76
Not Married	29	34	24	33	31	27	24

Demographics (Cont'd.)

		Fuel Type		Market			
	Total	Electric	Natural Gas	Idaho (I)	Oregon (O)	Washington (W)	Montana (M)
Total Respondents	(805)	(399)	(406)	(122)	(247)	(379)	(57)
	%	%	%	%	%	%	%
Mean Household Size	2.8	2.8	2.8	3.0	2.7	2.8	2.7
Children Present							
Yes	35	36	38	37	36	38	32
No	65	64	62	63	64	62	68
Education							
No College	13	15	10	23 OWM	11	11	10
College	87	84	90	76	89 I	89 I	90 I
Employment							
Employed	53	55	54	48	54	57	54
Not Employed	46	45	45	52	46	42	46
Refused	1	1	1	1	1	1	-
Mean HH Income	89.5	82.1	96.9	78.6	82.9	99.3 IOM	75.0
Median HH Income	76.6	69.0	85.0	66.7	74.7	84.9	60.8

Demographics (Cont'd.)

		Fuel Type		Market			
	Total	Electric	Natural Gas	Idaho (I)	Oregon (O)	Washington (W)	Montana (M)
Total Respondents	(805)	(399)	(406)	(122)	(247)	(379)	(57)
	%	%	%	%	%	%	%
Area Live In							
Suburban	52	41	62	50 M	52 M	54 M	33
Rural	27	40	15	39 OW	27	21	49 OW
Urban	21	19	23	11	21 I	25 I	18
Ethnicity							
Caucasian	85	87	84	87	88 W	81	97 IOW
Asian/Pacific Islander	7	7	8	2	5	12 IOM	-
Other	5	5	5	5	4	6	3
Refused	3	2	3	6 W	4	1	-
Hispanic Origin							
Yes	5	4	5	7	6	3	1
No	94	94	94	90	92	96 I	99
Refused	1	2	1	3	2	1	-