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Market Characterization of the Northwest Natural Gas Hearth Market

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I – EXECUTIVE SUMMARY

BACKGROUND

The Northwest Energy Efficiency Alliance (NEEA) contracted with Russell Marketing Research, Inc. (Russell Research) and its forecasting partner, Top Box Associates LLC (Top Box), to conduct a comprehensive Market Characterization of the Northwest Natural Gas Fireplace research study. The primary objective of this study is to improve knowledge of the natural gas fireplace market in the Northwest region that is funded by NEEA's natural gas stakeholders. This research will help to inform its future efforts to develop market intervention strategies as needed, and these strategies in turn will help to overcome existing barriers to market adoption and leverage existing market opportunities.

To fully understand the marketplace, a comprehensive study of the entire gas fireplace ecosystem was conducted among the supply chain (distributors, builders and retailers) and end-users (consumers and commercial property managers). Secondly, for a complete understanding of end-users, research included the behaviors and views of owners, intenders and rejecters was critical for a complete characterization. Lastly, market sizing for the commercial and residential markets was required to effectively measure gas fireplace opportunity in the Northwest region.

In order to complete this work, Russell Research conducted four core research activities:

- Telephone depth interviews among distributors, builders, retailers and commercial property managers
- Focus groups among gas fireplace owners
- o Online suveys among Northwest region residents with gas service
 - Gas fireplace owners (heirs and installed) and non-owners (intenders and rejecters)
- Online suveys among random Northwest region residents

OBJECTIVES

Specific objectives met with this research study include the following:

- Gather supply chain intelligence (distributors, builders and retailers)
 - Understand trends, differences, similarities and opportunities within the fireplace supply chain
 - Learn about retail interactions with the supply chain and end-users, specifically sales strategies and discussions revolving around gas fireplace capacity
- Study gas fireplace owners (commercial property managers and consumers)
 - Determine key usage patterns
 - Understand motivations, experiences and expectations regarding selection, purchase and installation (including capacity)
- Uncover intender & rejecter insights (property owners and consumers)
 - Learn about awareness, attitudes, consideration, drivers and barriers / perceived benefits to gas fireplace purchase and installation
- Size market opportunity
 - Develop market size estimates for residential (condos and single / multi-family homes) and commercial hospitality sectors, including both new and existing construction

MARKET INTERVENTION OPPORTUNITIES

Research conducted delivered industry conclusions that provide an opportunity for market intervention.

Conclusion	Intervention Opportunity			
 Consumers who had gas fireplaces installed or are intending to purchase share(d) the same concerns – cost of the unit and installation. 	Communicate how unit and installation investments can be offset by heating benefits and unit efficiency.			
 Consumers who convert from wood-burning to gas fireplaces quickly realize the benefits of owning a gas unit. 	Promote cost-savings and other benefits of gas (e.g., no cutting wood / less maintenance, clean-burning) to drive conversion growth.			
 New growth opportunities exist for secondary gas fireplaces and smaller unit installations. 	Target and educate higher income consumers who are most interested in secondary / smaller units.			
 Retailers are at the heart of the gas fireplace ecosystem, interacting with every player in the value chain. 	Develop strong relationships with retailers, supporting active partnership and participation to spur gas fireplace growth and create more industry "pull".			
 Brand awareness pre- and post-purchase is extremely low and not top of mind for intenders. 	Help manufacturers build brands and promote the industry to foster marketplace growth.			
 Commerial property managers (representing businesses such as lodging, restaurants, hotels, hospitality, etc.) are more reactive than proactive when it comes to property improvement, mostly due to the time, budget or a lengthy, complicated approval process. They are spurred by customer demands or being forced to keep up with competitors. 	Create a stronger need for businesses to better compete and meet evolving customer demands to drive growth.			
 One-third of gas fireplace rejecters, many fearing costs, may consider purchase / installation if incented to do so. 	Target rejecters with rebates and cost-savings promotions for units / installations.			
 The estimated number of gas fireplace installations over the next year is approximately 270 units for hospitality businesses and 51,000 units for residences. 	Leverage all findings and develop strategies to better educate the marketplace, create more awareness and fuel growth.			

II - METHODOLOGY

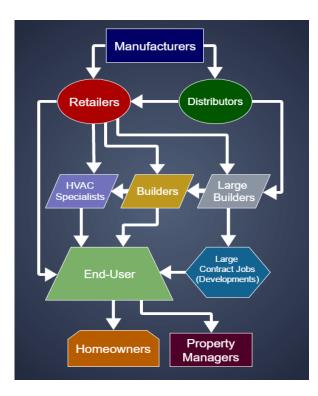
To meet NEEA's research objectives, Russell Research leveraged a combination of research methodologies to best target the proper audiences and gather market intelligence. The results were then compiled and analyzed to inform key findings and market intervention opportunities described in the report.

- Telephone Depth Interviews were conducted among:
 - 6 distributors
 - Sell gas fireplaces or are involved in any part of the sales process
 - 5 from Washington and 1 from Oregon
 - 15 builders
 - Install gas fireplaces or manage the process in some capacity
 - 6 from Washington, 6 from Oregon and 3 from Idaho
 - 12 retailers
 - Sell gas fireplaces or are involved in any part of the sales process
 - 5 from Washington, 5 from Oregon and 2 from Idaho
 - 15 property managers
 - Manage a commercial property (hospitality hotel / lodging, bar, restaurant, etc.)
 - Have a gas line to the property
 - 6 owners, 9 non-owners (mix of intenders and rejecters) of gas fireplaces
 - 6 from Washington, 6 from Oregon and 3 from Idaho
- Focus groups were conducted in Portland, Oregon among consumers:
 - 14 gas fireplace owners (2 groups of 7 participants each)
 - Own and live in a condo, single or multi-family home in the Portland, Oregon area
 - Have a gas line to their home
 - Primary or shared decision maker for home remodeling / utilities
 - Own and operate their gas fireplace at least half of the time
 - Completion of pre-group assignment
 - Usage log & letter / description of gas fireplace to friend
- Online surveys were also conducted among:
 - 777 consumers
 - Own and live in a condo, single- or multi-family home in the Northwest region
 - Have a gas line to their home
 - Primary or shared decision maker for large appliance purchases & home remodeling decisions
 - 325 from Washington, 323 from Oregon, 129 from Idaho
 - 314 Owners

- 158 Installed consumers (had a gas fireplace installed post-home purchase)
- o 156 Heirs (a gas fireplace was already in their home pre-purchase)
- 463 Non-Owners
 - 154 Intenders (somewhat likely or greater to purchase and install a gas fireplace in the next 6 months)
 - 309 Rejecters (have no need or are not as likely to purchase and install a gas fireplace)
- Short online surveys were also conducted among commercial property owners and consumers for market sizing and forecasting purposes among:
 - 957 random Northwest region residents
 - Own and live in a condo, single- or multi-family home in the Northwest region
 - 391 from Washington, 391 from Oregon and 175 from Idaho
 - 99 random Northwest region commercial property owners
 - 38 from Washington, 40 from Oregon and 21 from Idaho

III – THE GAS FIREPLACE ECOSYSTEM

The gas fireplace industry consists of many players, with many playing dual roles or more depending on the situation, from manufacture to end-user.



Distributors

- Purchase from manufacturers and rely on them as resources/partners

- Supply to Retailers, Larger Builders/Developers & Consumers / Homeowners who walk into their Retail / Showroom location.

Retailers

- Purchase from Manufacturers for cost-savings & Distributors for a service and support partnership

- Supply to all Builder types (Contractors, Home Builders, HVAC Specialists) & Consumers directly or through a Builder who purchase for their customers

Offer installation services to customers

Contractors / Builders

- Purchase from Retailers unless volume enables purchasing directly from Distributors / Manufacturers
- Supply to Consumers via discounted purchases from Retailers
- Utilize Retail showrooms and sales staff to educate Consumers and receive referrals from Retailers that do not offer installation.

Commercial Property Managers

- Act as a consumer and enter a purchase process (infrequently) through their builders
- Purchase through Builders or Retailers based on their needs

Residential Consumers

- Purchase through Retailers, all Builder types and sometimes Distributors

IV – SUPPLY CHAIN KEY FINDINGS AND RESULTS

KEY FINDINGS



Retailers interact with the entire ecosystem, educating builders and end-users while also creating the pull for manufacturers & distributors.



Many consumers are seeking units to be their primary heat source, yet builders feel these units are better served as secondary heat sources or aesthetic home improvements (and refer them to retailers when necessary).



According to distributors, builders will recommend high-margin units to consumers. However, consumers will pay more for units with features they want, forcing builders to offer less-profitable units.



Builders shared that consumers realize many benefits post-purchase / installation...and gas fireplaces are becoming increasingly popular. Secondary fireplace installations present intervention opportunities.



According to distributors, demand for modern / aesthetic designs and electronic ignition units is growing. Also, retailers are receiving more requests for efficiency, aesthetics & new features (e.g., remotes, thermostat-controlled, electronic ignition).

DETAILED FINDINGS - DISTRIBUTORS

BACKGROUND



Distributors interviewed discussed selling numerous gas fireplaces from a variety of different manufacturers, with personal sales territories ranging from one state, to large regions across the West and Pacific Northwest.

RELATIONSHIPS WITH MANUFACTURERS

Distributors consider manufacturers to be resources for new products, features, solution managers regarding performance / installations, and are valued sales coaches for them and their staff. Additionally, these findings were also uncovered during these interviews:

• Communication Channels

• Interactions with manufacturer representatives materialize through several forms – onsite visits, phone, and e-mail; most representatives were considered to be responsive and helpful as none had any real complaints about them.

• Estimating Demand

• Purchases of tried-and-true brands and products is seamless, but to hedge against a bad purchase of a new product line or manufacturer, distributors estimate customer demand and preferences to ensure sales potential.

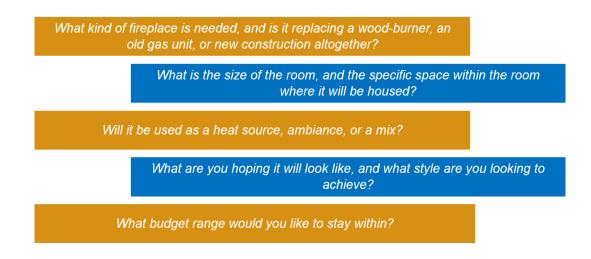
• Unfamiliar Manufacturers

• When working with an unproven organization, other concerns include the quality and reputation of a manufacturer in general or the specific unit type, regarding service records, reliability, and support provisions.

DISTRIBUTOR CUSTOMER TYPES

This audience sometimes acts as both a distributor and retailer, as some have distribution capabilities and retail locations. Customers are a varied mix of contractors, builders, retailers, and homeowners who enter their retail stores.

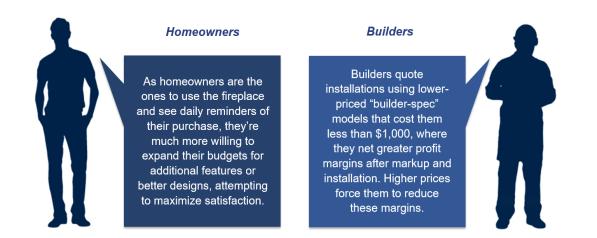
In order to confidently provide an appropriate recommendation to customers, distributors feel several key pieces of information are needed. Conversations start with asking:



STANDARD VS. PREMIUM UNITS

Homeowners are willing to pay more for higher-end features and designs to maximize personal satisfaction, whereas builders, with the exception of custom builders, are reluctant to spend more in order to maximize profit/profit margin

Cost vs. Quality Tradeoff Perceptions



MARKETPLACE TRENDS

Distributors believe current market trends to be heading toward...

• Modern Trends

• Demands are increasing for more modern, sleek, and aesthetic designs, though customers with traditional preferences do exist.

o Ignition Standards

• Electronic ignition switches have become nearly standard, although all reported selling at least one model with a standing pilot light.



BACKGROUND

The builders interviewed discussed extremely varied job scopes and frequency, with the majority tending to be business owners / operators in some capacity. Participant types included:

• Large Contractors

- General contractors who completed hundreds of homes per year and subcontracted a few hundred fireplaces as well
- Home Builders
 - Builders from much smaller businesses who worked on parts of a few homes per year, and directly completed several fireplaces per year
- HVAC Specialists
 - HVAC specialists who reported being subcontracted to install fireplaces for larger builders or general contractors

PRIMARY BENEFITS

According to builders, there are a variety of benefits that gas fireplaces provide. However, there were mixed reactions around their effectiveness as a heat source, especially when it came to what builders believe their customer's primary motivation for installation was.

• Primary Heat Source

- Many builders felt gas fireplaces were not efficient enough to be cost-effective heat sources, especially when compared to furnaces.
- Secondary Heat Source
 - Some felt they were 'OK' secondary, room-specific or small-room heat sources, mitigating the need to heat an entire home. A few also felt the use or inclusion of a fan to push warm air rather than radiate greatly increased its effectiveness.
- Aesthetics-Driven
 - Ultimately, most believe a customer's primary motivator for installation is usually to act as a room-setter. They are more concerned with the look of a unit than its performance, as most homes had a furnace as its primary heat source.

SECONDARY BENEFITS

Although the primary motivator for gas fireplaces was reported to be aesthetics, Builders believe that there are many other advantages, and do their best to inform customers of them. Some of these benefits directly address the drawbacks of wood-burning fireplaces.



Decorative Statement Piece

Most believe that their customers purchase gas fireplaces for it to be a statement piece. However, some reported that customers occasionally ask about heating capabilities during the process, though this is infrequent.

"People are wanting them for the ambience in the house... Purely after dinner, sit in the family room having a glass of wine, watch TV and turn the fireplace on," – Builder



Several mentioned that gas fireplaces are excellent non-electric back-up heat sources, especially in the Northwest, where power outages are frequent. They may not be able to heat the entire house, but they could provide emergency warmth when necessary.

"If the power goes off, you have backup heat for your home. If you live in an area that often [has power outages]... you will still have a place to stay warm." – Builder

ADVANTAGES OVER TRADITIONAL / WOOD-BURNING UNITS

According to Builders, gas fireplaces are quickly phasing out wood-burning fireplaces for a number of reasons. Although Builders are aware of these benefits, consumers are slow to catch on or realize them post-installation.



ROLE IN THE CUSTOMER JOURNEY

The decision to install a gas fireplace is made prior to the involvement of a builder in both new homes and post-build replacements, and is usually accounted for in initial design plans.

• The Burden is on Retailers

 When questioned about gas fireplaces, most builders will direct customers to a trusted retailer/partner to evaluate a showroom, touch and feel options, and ask specific questions. Builders often do not want to be responsible for specific brand or visual recommendations.

• Logistics Information

• The Builder's primary role during this process is nearly always logistics-based – they typically only arm customers with recommendations or requirements for unit size options based on room specs. For new homes, design plans allow for flawless installation and sizing, but this process is trickier for post-builds.

• Common Purchase Process

 Unless requested, Customers are often 'OK' with the standard "Builder's Model" and rely on Builders to make the purchase (almost always marked-up). Some partner with Retailers to receive discounts for single purchases, while larger builders or contractors are able to leverage bulk-pricing when building multiple residences.

Some consumers shop online, do research, or try to purchase themselves, but the majority rely on the builder to purchase a unit for them.

FEATURE CONSIDERATIONS

As feature choices are driven by personal preference, Builders prefer to stick to functional capability and practicality discussions with customers. However, there are conversations about features in which Builders appreciate the opportunity to provide insight.

Capacity	Builders are not typically recommending specific capacities, or BTUs, and do not believe consumers are concerned (or even aware) of these types of attributes. However, this situation does present itself from time to time, where mostly HVAC specialists do calculations based on room square footage.
Standing Pilot vs. Electronic Ignition	As consumers don't know to ask, Builders do not frequently recommend electronic ignitions or standing pilot lights, and hope Retailers help with these decisions. Additionally, several stated there was no need, with electronic ignition becoming the norm across the industry. They also believe that users with older units and standing pilot lights don't know to turn them off in warmer months.
Slim Profiles	Builders perceive slim-profile units to offer several advantages and have seen their sales increase in recent years. Often, clients have lofty expectations for fireplace size given room specs, and slim profiles effectively enable these structures to be built in tighter spaces, especially due to reduced masonry. Some feel this presents an opportunity for first-time buyers.

Interestingly, because of slimmer profiles and inherently smaller structures, one builder reported that additional fireplaces being installed in secondary rooms / non-living rooms (bedrooms) are becoming more feasible and common.



RETAILER STOCK

Retailers stock products based on needs identified through conversations with end-users (primarily homeowners) and brand reps or colleagues at trade shows / industry organizations. Some occasionally act as a passive intermediary for the homeowner to help purchase a specific product at a discount, eliminating the need for stock. Their role and rationale behind decisions to select and stock products for sale include:

• Personal Experience

• Most cited their years of experience and conversations with customers as a basis for product stock choices and are confident in their knowledge of the market.

• Manufacturer / Distributor Representatives

• Some heavily utilize brand reps, having conversations with their rep up to several times per week. Conversations usually revolve around unit features, quality, size, installation info, and price.

• Industry Organizations

• A few attend trade shows or are members of industry organizations and use these channels to network and learn about category trends.

o Middle-Man

- Several simply act as a middle-man directing their customers online or to catalogs to evaluate, and then simply place a specific order for them.
- Purely Transactional
 - Most retailers consider themselves industry vets and feel they're extremely knowledgeable, needing little assistance to gauge what to stock in their stores.

INDUSTRY TRENDS

Retailers had a defined perspective on current industry trends which fell into three major buckets: aesthetic and design preferences, unit efficiency, and homeowner's feature preferences.

• Aesthetic Trends

• Aesthetics dominates preference, and many felt enclosed fireplace designs were heading in a modern direction, including wider designs, thinner depth, multiple vantage points, more glass/less frame, chimney-less, and more natural-looking flames and logs. The desire for a traditional look is becoming less common.

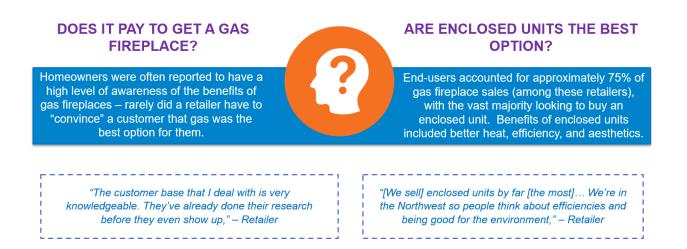
• Efficiency Trends

• Some felt the Pacific Northwest is a particularly energy-conscious region, resulting in a demand for more energy efficient units. Efficiency was evaluated by consumers and retailers using several metrics, often depending on the specific purpose of the fireplace and room specs.

o Feature Trends

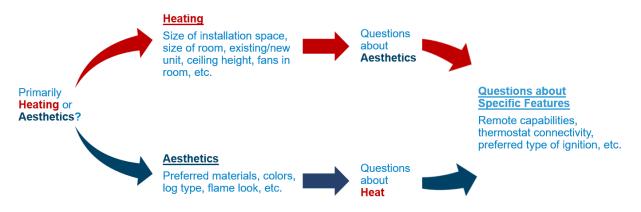
• Several felt beyond design and heating capabilities, there were specific feature trends desired by consumers, including remote on/off switches, controllable heat and fan settings, automatic thermostat connectivity, electronic ignition, etc.

Although there are a myriad of questions addressed during early conversations with endcustomers, two decisions were very easy to make (or were already made) on behalf of the consumer.



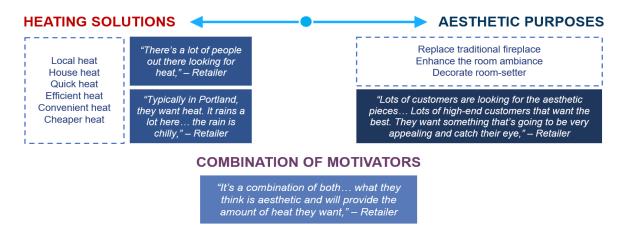
CONSERVATION PATH

The key to a successful sale was communication, and although some customers are knowledgeable about gas fireplaces from previous research, the customer interaction process was described as more labor-intensive than when interacting with vendors to stock product.



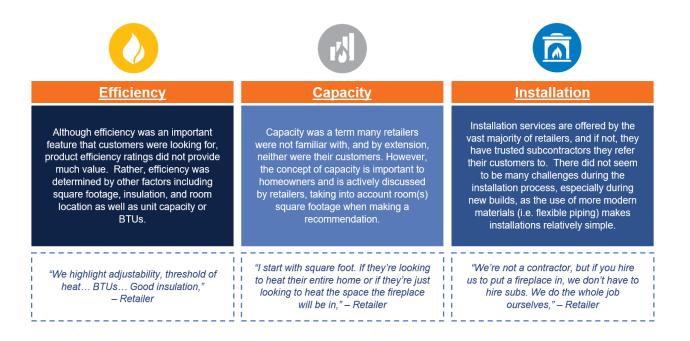
PURCHASE MOTIVATORS

The impetus for a gas fireplace purchase was driven by a specific purpose or "problem" a consumer wanted to solve. For most consumers, this was either a specific heating solution, room aesthetic enhancement (or replacing a traditional fireplace), or a combination. Convenience was an after-thought, mostly realized post-installation / purchase.



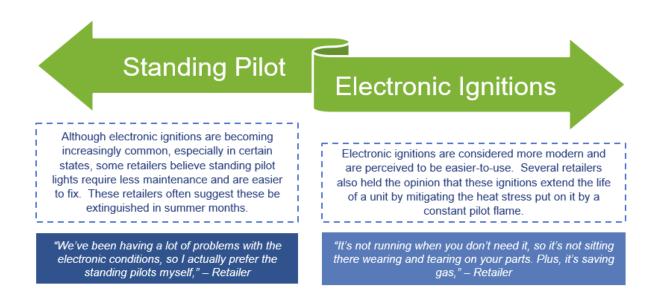
BENEFIT CONSIDERATIONS

Other topics that played a role in the sales process and that retailers commonly discussed with their customers included:



PILOT LIGHT RECOMMENDATIONS

Most retailers recommend electronic ignition systems to consumers, and some consider electronic ignition to be an industry-standard. However, units with standing pilot lights are still being purchased.



IV – END-USER KEY FINDINGS AND RESULTS

KEY FINDINGS - COMMERCIAL PROPERTY MANAGERS



Purchase drivers for considering any property improvement include differentiating themselves vs. competitors, keeping up with industry trends, and responding to customer demand. Intervention strategies should hone in on these.



Costs, red tape and long processes tend to make them more reactive than proactive when considering any property improvement, including gas fireplaces.



Businesses owning gas fireplaces typically run units all day in fall and winter, with minimal use during other seasons...and almost all shut them down at night. Peak occupancy times also drive additional usage.



Gas fireplace intenders are seeking aesthetics first, heat second. Also, cost, look, size, ease of installation and capacity (if seeking a heat source) are their top consideration drivers.



Rejecters claim that limited space and cost (outweighing benefits) are the primary barriers, in addition to general property improvement obstacles.

DETAILED FINDINGS - COMMERCIAL PROPERTY MANAGERS



PURCHASE JOURNEY

Commercial property managers interviewed oversee a variety of properties, ranging from restaurants and cafes to hotels, resorts, or even mixed-use properties. Depending on property specifics, the process taken when undergoing a project can differ, but typically involves at the very least, a budget and timeline.

• Primary Considerations – Budget and Timeline

"Cost is a huge factor... We look at it from a cost aspect and how we can make sure that that change is going to meet the guests' needs while fitting within our budget," – Property Manager

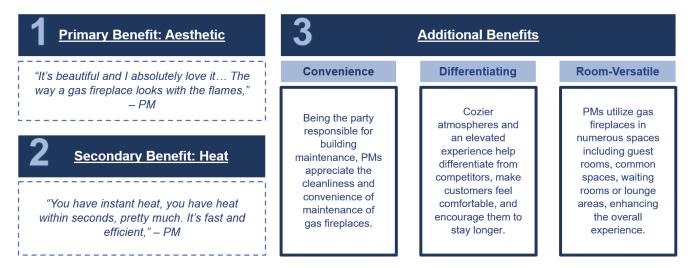
"In the hotel industry, there's never a good time to do anything. We're never slow, we're never closed. We try to do something in our off seasons... [so] it won't have a huge impact," – Property Manager

• Improvement Motivators

- Staying up-to-date or keeping with industry standards
- Responses to consumer demands and expectations
- Differentiating the property from competitors
- Other Steps & Considerations
 - Input and approval from a corporate supervising entity (if a franchise, for example)
 - City approval & permits
 - Input from architects/engineers if design/structural changes are involved

PRIMARY BENEFITS

Overall, commercial property managers have positive perceptions of gas fireplaces and consider the primary advantage to be aesthetic and sensory-based. Many consider heating capability a secondary benefit, though drivers of positive perceptions seem to focus on ambience and the look and feel of a real fire.



When considering to purchase and install a gas fireplace, critical purchase factors include the following:

Overall Look	<u>Size</u>	<u>Cost</u>	Ease of Installation	<u>Efficiency</u>	<u>Capacity</u>
We are a rustic resort in the back country. Ambiance is of course important. To me, as the marketing person, that is the most important thing," – PM	"If we were going to be switching one out, I would ask about compatibility with what we currently have. How much retrofitting needs to be done?" – PM	"Cost would be a factor. Is it something that meets our needs and is it cost effective as well?" – PM	"[I'd want to know about] Installation, and how that goes. The smoothness of getting it all done in a timely manner is really important," – PM	"[A driving factor for the decision] would be BTU capabilities," – PM "Efficiency is the big thing Efficiency would cover the utility cost," – PM	"The heat is a plus when it's cold out People would say, 'oh, look at that beautiful fireplace. Let's get warm," – PM

USAGE PATTERNS

Commercial property managers who own units have between one and three fireplaces on their properties, and while a few use them year-round, most only use them in Fall and Winter. During peak occupancy hours, fireplaces are on all day and turned off at night.



PURCHASE BARRIERS

Among commercial property managers who do not have a fireplace on premises, there were mixed reactions to the idea of installing one, with the primary barrier being available space.

Rejecters

• Space is limited

- Many feel that their property is already limited on space and are reluctant to give up seating or other furniture items to accommodate a gas fireplace.
- Not worth it
 - The trade-off is not considered worthwhile, despite a personal appreciation for the potential enhanced ambience and experience.
- Cost Concerns
 - Of course, cost is a concern regarding future installations, however, this concern was somewhat minor, especially compared to space availability issues.

Intenders

• **Opportunity hasn't surfaced**

• Prospects state there are no real "obstacles" to installing a fireplace, rather, they simply have not undergone these types of projects yet, and will consider a gas fireplace in future upgrades.

• Limited category knowledge

• Most, admittedly, had not done the research yet and do indicate they have questions on cost, size, and look, though they are confident that options exist in the marketplace to meet their needs.

BACKGROUND – RESIDENTIAL CONSUMERS

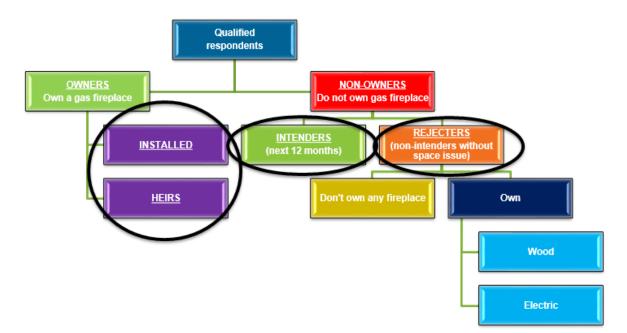
All types of consumers were interviewed to paint a complete picture of the consumer marketplace. The types and subgroups referred to in this section of the report are the following:

• Owners

- "Installed" consumers had a gas fireplace installed in their home
- "Heirs" inherited a gas fireplace (was already in their home pre-purchase)

• Non-Owners

- o "Intenders" are seeking to purchase and install a gas fireplace in the next year
- "Rejecters" are non-intenders of gas fireplaces (besides space constraints)
 - Own electric or wood units and do not wish to convert
 - Not interested in purchasing / installing a gas fireplace





Owners and intenders responded similarly. High-income consumers seek ambiance over heat when seeking a gas fireplace. Conversely, low-income consumers turn to these units as a valid heat source.

Replacing wood burning units with gas units is key; strategies should focus on less mess/labor cutting wood and gas fireplaces being a cleaner, safer alternative.

Installed consumers relied on (and intenders plan to rely on) online research, advice from professionals and word of mouth (friends, family, etc.)



Installed consumers & intenders share(d) the same concerns - cost of unit / installation and finding a reputable installer. In addition, it can't look fake.



Installed consumers didn't have a brand in mind, intenders aren't seeking specific brands, owners have a hard time recalling them, and share is scattered.



Most look to professionals for purchase and installation - 40% purchased at retail and 40% directly from builders/contractors...and 87% of installers had them professionally installed



Owners are very satisfied with their gas fireplaces, mainly because they effectively heat their homes. Appearance and ease of use were also mentioned as secondary reasons for their satisfaction

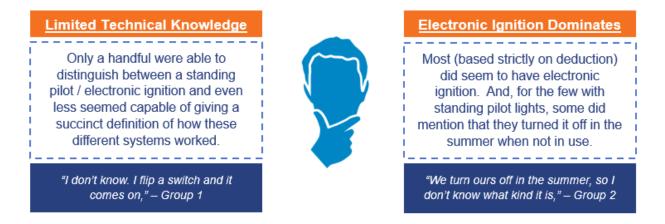


Over half of rejecters aren't interested, but free installation or a sizeable rebate may win some. Targeted messaging / intervention must address cost & installation barriers and highlight benefits



CONSUMER KNOWLEDGE

It was clear during focus groups that consumers had little knowledge of the particulars and technical details of their fireplace units, as most were unaware of what type of ignition system (either standing pilot or electronic ignition) their fireplace had.



BRAND RECALL

Qualitative and quantities research conducted delivered the same results when it came to brand. Many did not seek a brand initially and deferred to expert recommendations, and all owners have very limited recall for the brand of unit they currently own. Among those surveyed online, brand share was extremely scattered with very few manufacturers standing out.

	Total	Installed	Heirs
	(314)	(158)	(156)
	%	%	%
Heat & Glo	9	11	7
Lennox	6	7	6
Heatilators	5	3	7
Empire	5	4	5
Napoleon	4	4	3
Regency	4	5	2
Superior	2	1	3
Avalon	2	1	2
Other	11	13	7
Not Sure/Don't Remember	54	50	58

PERCEPTIONS AND PREFERENCES

For some, there was a direct comparison of pros and cons between gas fireplaces and wood fireplaces. The primary advantages or benefits of gas were reported to include:

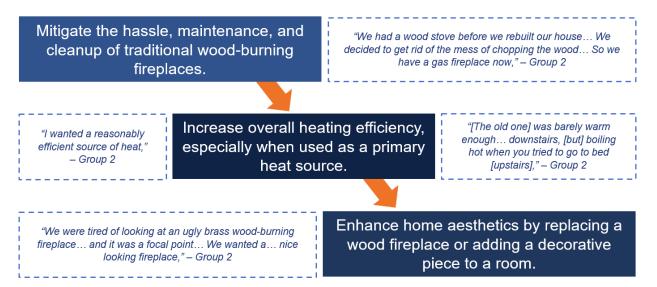
- Convenience of operation
- Operational efficiency and low gas operating costs
- Realistic flames / logs
- o Being cleaner / less polluting than wood
- o Immediate heat that a gas unit produces
- o Ability to hold heat after unit is turned off

Beyond the general benefits of gas fireplaces, consumers were interested and, ultimately driven to purchase, by specific features of particular units, including...

- o Convenience & remote operation
- Design & aesthetics
- Looking realistic (sensory experience)
- Double-sided
- Affordability
- Easy heat & clean burn

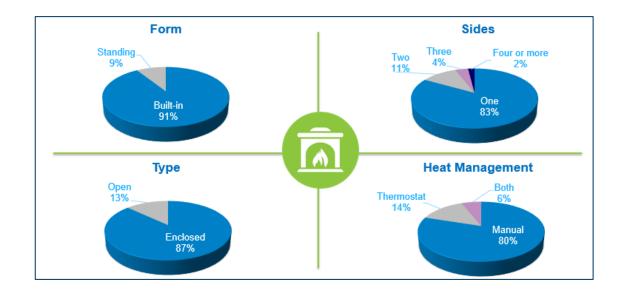
FIREPLACE PURCHASE MOTIVATORS

Gas fireplace purchases are typically driven by consumers' desires to...



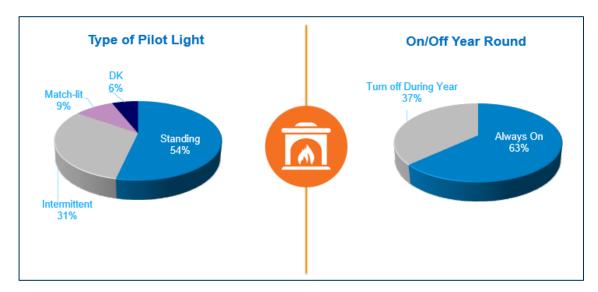
TYPES OF UNITS OWNED

Nearly all owners have a built-in, enclosed, one-sided fireplace and manually turn it on and off. Though one-sided units are prevalent, some installers have recently opted for two-sided units.



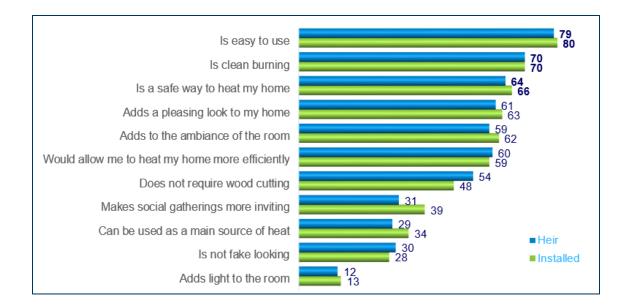
GAS FIREPLACE PILOT LIGHTS

The majority of owners have a standing pilot light, and among those with a pilot ignition/light, just under two-thirds keep it on all year.



REASONS FOR USE

When it came to reasons for using their fireplace, installers and heirs responded in kind with very little differences. Among the top reasons selected for using their fireplace, ease of use, clean burning, and "is a safe way to heat my home" are among the top reasons Owners use their gas fireplace.



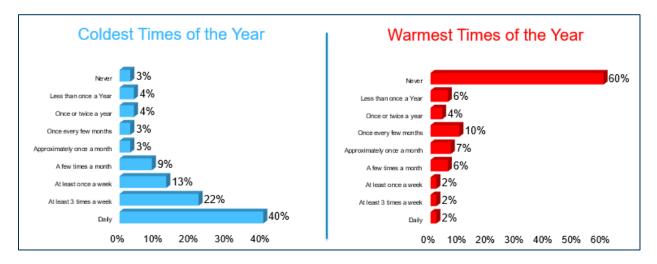
UNEXPECTED USAGE BENEFITS & OCCASIONS

Owners reported very heavy fireplace usage in exploratory research conducted, often ranging from at least once a day to many times a day as a "quick heat" source to warm up the house in the morning and as a social hub in the evening.



GAS FIREPLACE USAGE

As expected, the majority of consumers (75%) use their fireplace at least once a week during the coldest times of the year. In contrast, during the warmest times of the year 40% use their fireplace, but usage during that time is infrequent.

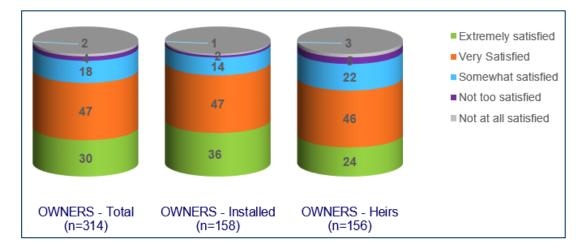


GAS FIREPLACE EXPERIENCES & SATISFACTION

In focus groups conducted, owners reported using their fireplace more frequently and being happier with their purchase than they had originally anticipated.

Pre-Purchase	Usage Experiences	Post-Usage	
Consumer focus seemed very one- dimensional, primarily buying their gas fireplace for one specific reason, which was often a decision between heating and aesthetics.	After prolonged usage, many realized alternate benefits (local heat source), or new benefits that went far above what they were originally anticipating (social center).	Due to years of frequent and heavy usage, it seemed that, just by continuous usage behaviors, they have a high level of satisfaction with their purchase.	
"We already have a heater, so we have heat in our house We just wanted something that looked nice," – Group 1	<i>"When the fireplace is on, people gather, and then that room becomes the heart of the house," – Group 2</i>	"I like it way better than I ever thought I would Now it really has an emotional content to it," – Group 2	

Validating these initial findings, online survey respondents echoed this sentiment. Over threequarters of owners are very or extremely satisfied with their gas fireplace, and Installed consumers communicated greater levels of satisfaction, most likely since they desired this addition to their home and quickly realized the benefits post-usage.



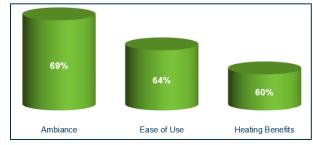
INSTALLED CONSUMER PRE-PURCHASE CONCERNS

After exploring consumer mindsets pre-purchase in focus groups, it was clear that there was a lot of uncertainty and many questions asked prior to installation, as most seemed to be first time buyers. The two categories that many installer concerns fell into were cost and getting a realistic sensory experience.

S <u>Cost</u>	Realistic	<u>Miscellaneous</u> مه <u>Concerns</u>
Being first-time fireplace purchasers, much uncertainty revolved around the cost of purchasing a gas unit and the operating costs of gas. Both seemed to be easily alleviated through initial conversations with retailers.	Many already owned wood fireplaces and valued the sensory experience (i.e. the visual, crackle, and smell), and were concerned whether it could be replicated by gas. However, after seeing units first-hand, many realized the gas flame look had improved greatly over the years.	 Consumers also raised several more questions, including How efficient will the unit be? Will it heat enough? Is gas safe? Will it produce any hazardous fumes? How easy is it to maintain?
"Definitely cost [was a concern] What I can afford. I was building a house from scratch I just didn't know what it would be," – Group 1	"I wanted a lot of flame. I just wanted it to look real, I didn't want it to look like little lights. Is this going to look like a real fire?" – Group 2	"I was worried about safety I had to get used to the gas furnace. [I] just [had] a thing about safety, gas blowing up," – Group 1

INSTALLED CONSUMER PRE-PURCHASE CONCERNS

Ambiance, followed closely by ease of use and heating benefits, were the three main reasons Installers planned to purchase / install a gas fireplace. Consumers with incomes less than \$75,000 chose to install for heating benefits, and those with incomes greater than \$75,000 did so to create ambiance.



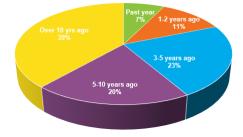
INSTALLED CONSUMER RESEARCH CONDUCTED

Though many Installed consumers researched gas fireplaces online prior to purchase, many also spoke to professional builders or contractors, someone involved in HVAC, salespeople, and family/friends.



INSTALLED CONSUMER PURCHASE AND INSTALLATION TIMING

Most installed a gas fireplace 3+ years ago, with 18% doing so over the last two years. Higher income households and urbanites installed most over the last year.



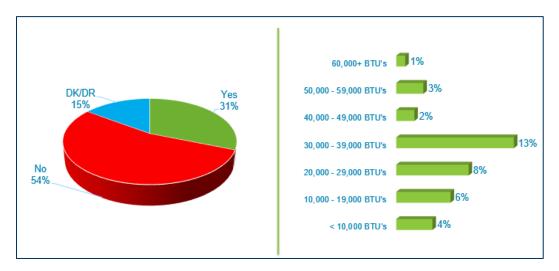
INSTALLED CONSUMER PURCHASE AND INSTALLATION

Installed consumers did not have a specific brand in mind, split purchases between retail and professionals, and shared the same cost concerns prior to buying / installing their unit as intenders. Findings yielded the following:

 Average installation date - <u>8.4</u> years ago <u>87%</u> had it professionally installed Top 3 concerns pre-purchase / installation: <u>47%</u> - installation cost, <u>43%</u> - unit cost, 4<u>2%</u> - reputable installer
 <u>87%</u> had no brand in mind <u>40%</u> bought at retail local, selection, knowledgeable sales staff <u>39%</u> bought from contractor / builder reputation & trust <u>60%</u> accepted professional recommendations

INSTALLED CONSUMER HEATING CAPACITY

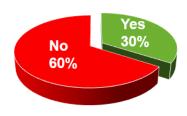
Though not for the majority, capacity was a factor for almost one-third of Installed consumers when choosing a gas fireplace. When it came to recalling BTU's of their current units, similar to earlier findings technical knowledge was low as 64% of Installers couldn't recall their unit's BTUs



HEIRS AND THE ROLE OF THEIR GAS FIREPLACE PRE-PURCHASE

The majority of respondents whose gas fireplace was in the home before they purchased it said it didn't factor heavily into their decision to purchase that home.

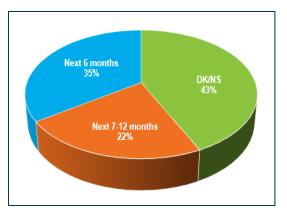
For the majority who said it didn't play a role in their decision, they claimed that other factors, such as location, the house itself, property, schools, etc. were the most important features. For those who said it did play a role in their decision, 44% agreed for ambiance / appearance reasons, 22% for heating purposes, and 16% for ease / convenience.

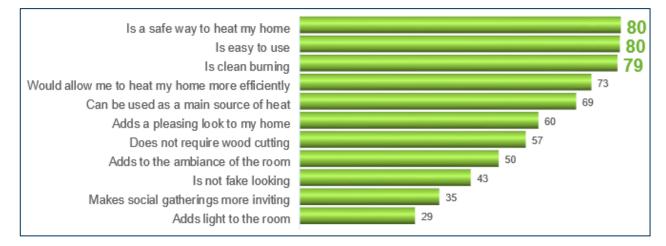


PURCHASE INTENT & REASONS

Over one-third of Intenders plan to purchase & install a gas fireplace over the next 6 months.

Functionality and convenience are the major reasons contributing to a planned purchase of a gas fireplace (safe, ease of use, clean burning, efficient heating, and main source of heat). They share the same top three reasons for wanting a gas fireplace as compared to owners and why they currently use theirs, heating needs seem to surface more than ambiance / pleasing look to the home which seems to be realized more so post-installation.

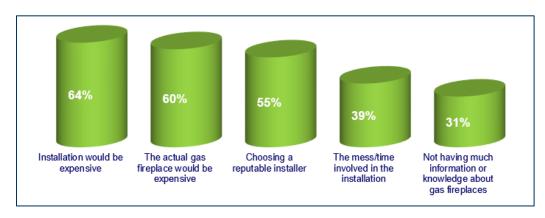




Respondents with household incomes greater than \$75,000 and urban residents drove the ambiance & social gathering ratings, while those with incomes less than \$75,000 and living in the suburbs are more interested in using a gas fireplace as a heating source.

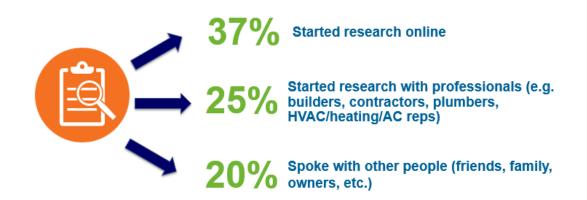
INSTALLATION CONCERNS

Cost of the unit, installation cost and finding a reputable installer are the three top installation concerns among those intending to purchase and install a gas fireplace.

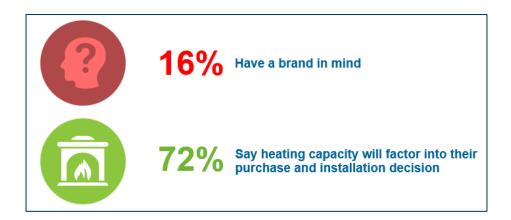


RESEARCHING GAS FIREPLACES

As found with gas fireplace owners conducted, Intenders in the research process are conducting the same types of research with very similar frequency.



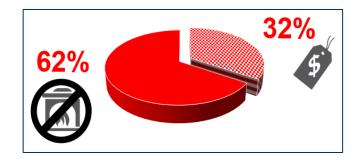
Similar to owner behaviors identified, most Intenders do not have a specific brand in mind as they plan to purchase and install a gas fireplace. However, heating capacity is top of mind and will factor into their decision.



REASONS FOR NO INTEREST

Two-thirds of consumers not planning to install a gas fireplace in the next year either have no need or interest. They either have other heat sources (prefer / currently own electric or wood-burning fireplaces) or are very concerned with the costs of purchasing and installing a gas fireplace.

Benefits of gas fireplaces over wood-burning units may win over some current rejecters, but they were more interested in rebates and / or other incentives (i.e. free or discounted installation or unit costs) that may help them reconsider a gas fireplace.



V - MARKET SIZING ESTIMATES

EXECUTIVE SUMMARY

It was estimated that there are about 1.2 million homes with gas fireplaces within the targeted counties of the three-state region. 20% of the homes with a gas line but currently without a gas fireplace state that they would likely purchase and install a gas fireplace within the next year. It is further estimated that an estimated 51 thousand future installations in this region over the next year will occur.

Among commercial buildings of certain types, it is estimated that there are 76 thousand with gas fireplaces within the targeted region. The estimated total number of future installations of gas fireplaces for commercial buildings in this region over the next year is only about 270 units.

METHODOLOGY

The market sizing process involved three steps. Each step was repeated for both residential properties and commercial buildings.

- Step 1: Desk research. Identify number of homes or commercial buildings in area
- Step 2: Primary research. Measure presence of gas fireplace
- Step 3: Primary research. Measure future intent of installing a gas fireplace in the future

DESK RESEARCH: RESIDENTIAL PROPERTIES

Census data was gathered to measure the Consumer/Household Universe Size of the counties in ID, OR and WA state for which NEEA is interested. In addition to certain counties being excluded from the relevant Universe Size, also excluded were unoccupied, RV, mobile and boat homes. The net universe size is estimated to be about 4.4 million occupied homes.

(thousands)	ldaho	Oregon	Wash.	Total Region
Total Dwellings ¹	699	1,731	3,017	5,447
less: exclusions	- 496	- 184	- 322	- 1,002
Net Universe Size	203	1,547	2,695	4,445

• The number of occupied homes in the region was taken from 2016 US census figures.

PRIMARY RESEARCH: RESIDENTIAL PROPERTIES

Residential homeowners were interviewed and asked about the presence and type of fireplace in the home. Combining the results from the primary research findings with the Universe Size estimates yields an estimate of the number of occupied households that have a gas fed fireplace.

This estimate of gas fireplace homes in the total region is about 1.2 million, which is about 27% of occupied homes.

(thousands)	ldaho	Oregon	Wash.	Total Region
Net Universe Size	203	1,547	2,695	4,445
Homes w/ Fireplace (%)	43%	53%	63%	59%
% Fireplaces that are gas fed	55%	47%	46%	47%
Net % of homes with a gas fireplace	23%	25%	29%	27%
Market Size Estimate #	47	385	777	1,209

PRIMARY RESEARCH: RESIDENTIAL PROPERTIES FUTURE INTENT

In addition to consumers being asked about current gas fireplace ownership, they were also asked about their future intent to purchase and install a unit. Furthermore, they were also asked how soon they intended to purchase this new unit.

The research shows that 20% indicated they would likely purchase and install a gas fireplace in the next year and, on average, would do so in about 6 months.

	ldaho	Oregon	Wash.	Total Region
Top2Box Intent (%)	14%	18%	23%	20%
Immediacy (#months)	6.5	6.0	6.2	6.2

PRIMARY RESEARCH: DEFINITION OF TERM

Take Rate Analysis: a part of the projective model that estimates interest in purchasing a product or service. This part of the model uses consumers' stated intent to purchase and stated immediacy to act as inputs. The heart of the analysis lies in the correction of overstatement always present in these metrics. The model has been rigorously validated, providing confidence in the accuracy of these overstatement corrections. A Take Rate, in this instance, can be described as the proportion of consumers in the target group, who if were made aware of the offer and had it available, would purchase and install a gas unit within one year. After adjusting consumers' stated intent for overstatement, the estimated Take Rates to purchase and install a gas unit are in the 1%-2% range. These rates, taken in combination with the number of homes currently without a gas fireplace, yield estimates of the number of installations that are likely to occur in the next year or so.

The estimated total number of future installations of gas fireplaces in this region over the next year is about 51 thousand units.

(thousands)	Idaho	Oregon	Wash.	Total Region
Net Universe Size	203	1,547	2,695	4,445
less: Market Size	- 47	- 385	- 777	- 1,209
# Homes without a gas fireplace	156	1,162	1,918	3,236
Take Rate (%)	0.5%	1.3%	1.8%	1.6%
Estimated # future 12mo gas fireplace installs	0.7	15.3	35.0	51.0

DESK RESEARCH: COMMERCIAL PROPERTIES

Census data for the region was gathered to measure the Universe Size of the counties within each state for which NEEA is interested. In addition to certain counties being excluded from the relevant Universe Size, also excluded were certain types of Commercial Buildings². The net universe size is estimated to be about 113 thousand occupied commercial buildings.

(thousands)	ldaho	Oregon	Wash.	Total Region
Total Establishments ¹	44.8	112.3	182.8	339.9
less: exclusions	- 39.2	- 71.2	- 116.2	- 226.9
Net Universe Size	5.6	41.1	66.3	113.0

• The number of occupied buildings in the region was taken from 2016 US census figures.

 Includes: Food Service, Office and Lodging and some Services. Excludes: Education, Food sales, Healthcare, Retail, Public assembly, Public order and safety, Religious, Warehouse and Vacant.

PRIMARY RESEARCH: COMMERCIAL PROPERTIES

A sample in the eligible region was gathered to determine which buildings have a gas line and among those that do, which have a fireplace. Applying that net rate to the universe size yields an estimate of the number of occupied commercial buildings that have a gas fed fireplace. The estimate of commercial buildings with gas fireplaces in the total region is about 76 thousand, which is about 67% of these particular building types.

(thousands)	ldaho	Oregon	Wash.	Total Region
Net Universe Size	5.6	41.1	66.3	113.0
Establishments w/ Gas Line (%)	81%	90%	82%	85%
Establishments w/ Gas Fireplace (%)	71%	89%	74%	80%
Net % of commercial building with a gas fireplace	57%	80%	61%	67%
Market Size Estimate #	3.2	32.9	40.1	76.2

PRIMARY RESEARCH: FUTURE INTENT

To estimate future intent, those who have a gas line to the building were asked what their future likelihood to purchase and install a gas fireplace in the future would be in the coming year. The research shows in the first Round that 30% said they would likely purchase and install a gas fireplace in the next year, while 18% said they would in the second Round of research.

	ldaho	Oregon	Wash.	Total Region
Top2Box Intent (%) (Round1)	0%	25%	40%	30%
Top2Box Intent (%)(Round2)	20%	25%	12.5%	18%

After adjusting the stated intent for overstatement, the estimated Take Rates to purchase and install a gas unit are in the range of 1.5%. This rate, taken in combination with the number of establishments with a gas line but without a gas hearth, yields estimates for the number of installations that are likely to occur in the next year.

The estimated total number of future installations of gas fireplaces in this region over the next year is only about 270 units.

(thousands)	ldaho	Oregon	Wash.	Total Region
Establishments with Gas Line	4.5	37.0	54.1	95.6
less: Market Size	- 3.2	- 32.9	- 40.1	- 76.2
# Commercial buildings without a gas fireplace	1.3	4.1	14.0	19.4
Take Rate (%)	1.4%	1.5%	1.5%	1.5%
Estimated # future 12mo gas fireplace installs	0.02	0.06	0.19	0.27

VI – CONCLUSION

In conclusion, there are many opportunities for stakeholders in the Northwest region to further develop the gas fireplace market and capitalize on with market intervention strategies. Opportunities exist among many members of the ecosystem, from current gas fireplace owners who already exist for sencdary unit installations.



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Market Characterization of the Northwest Natural Gas Hearth Market

Addendum to Report #E17-354 July 12, 2017



- Project Background & Objectives
- Research Methodology
- Summary of Conclusions / Market Intervention Opportunities
- Research Findings
 - Supply Chain
 - Distributors
 - > Builders / Contractors
 - > Retailers
 - o End-Users
 - Commercial Property Managers
 - Consumers
 - Owners (Installed or Heirs)
 - Non-owners (Intenders or Rejecters)
- Forecasting
 - o Residential
 - o Commercial





Project Background

NEEA sought to improve its understanding of the Northwest natural gas fireplace market to inform future efforts and fuel market intervention strategies.

These strategies in turn will help overcome existing barriers to market adoption and leverage existing market opportunities.



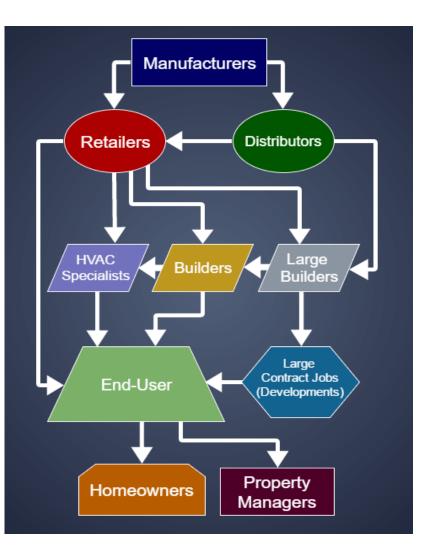


Project Objectives

- Supply Chain Understandings
 - Trends, differences, similarities and opportunities within the gas fireplace ecosystem
 - Learn retail interactions with the supply chain and end-user sales strategies (including capacity discussions)
- End-user Learnings (businesses & consumers)
 - Key usage patterns plus motivations, experiences and expectations regarding selection, purchase and installation (including capacity)
- Intender & Rejecter Insights (businesses & consumers with gas service)
 - Awareness and attitudes, drivers and barriers / perceived benefits to installation
- Forecasting
 - Market size estimates for residential (single / multi-family homes and condos) and commercial hospitality sectors, including both new and existing construction



The Gas Fireplace Ecosystem



Distributors

- Purchase from manufacturers and rely on them as resources/partners
- Supply to Retailers, Larger Builders/Developers & Consumers / Homeowners who walk into their Retail / Showroom location.

Retailers (interact with the entire ecosystem)

- Purchase from Manufacturers for cost-savings & Distributors for a service and support partnership
- Supply to all Builder types (Contractors, Home Builders, HVAC Specialists) & Consumers directly or through a Builder who purchase for their customers
- Offer installation services to customers

Contractors / Builders

- Purchase from Retailers unless volume enables purchasing directly from Distributors / Manufacturers
- Supply to Consumers via discounted purchases from Retailers
- Utilize Retail showrooms and sales staff to educate Consumers and receive referrals from Retailers that do not offer installation.

Property Managers

- Act as a consumer and enter a purchase process (infrequently) through their builders
- Purchase through Builders or Retailers based on their needs

Homeowners (Consumers)

 Purchase through Retailers, all Builder types and sometimes Distributors





Research Methodology

15 Builder Telephone Depth Interviews

6

Distributor Telephone Depth Interviews

12 Retailer Telephone Depth Interviews



15 Commercial Property Manager Telephone Depth Interviews

> **2** Consumer Focus Groups (Owners)

777

Consumer Online Surveys

957 random Northwest region residents & 99 random property owners surveyed for forecasting purposes.



Market Intervention Summary

Market Intervention Opportunities

Conclusion

- Owners shared / intenders share the same concerns – cost of the unit and installation.
- Those who convert from wood-burning to gas fireplaces quickly realize the benefits.
- New growth opportunities exist for secondary gas fireplaces and smaller unit installations.
- Retailers are at the heart of the gas fireplace ecosystem.

Intervention Opportunity

- Communicate how investments can be offset by heating benefits and unit efficiency
- Promote cost savings and other benefits of gas (e.g., no cutting wood / less maintenance, cleanburning) to drive conversion growth.
- Higher income consumers are most interested in secondary / smaller units available.
- Support active partnership and participation to create more "pull".



Market Intervention Opportunities

Conclusion

- Brand awareness pre- and postpurchase is extremely low and not top of mind for intenders.
- Commercial property managers are reactive when it comes to property improvement.
- One-third of rejecters (many fearing costs) may consider purchasing if incented to do so.
- The estimated number of gas fireplace installations over the next year is approximately 270 units for hospitality businesses and 51,000 units for residences.

Intervention Opportunity

- Support manufacturers to build brands and foster industry growth.
- Create / market needs for businesses to better compete and meet customer demands to drive growth.
- Target them with rebates and costsavings promotions for units / installations.
- Leverage all findings and develop strategies to better educate the marketplace, create more awareness and fuel growth.



Supply Chain Findings



Supply Chain Key Findings



Retailers are the heart of the ecosystem...

Retailers interact with the entire ecosystem - educating Builders & Contractors and end-users while also creating the pull for Manufacturers & Distributors. Intervention plans must involve them!

Builders know what Consumers don't...

Many consumers are seeking units to be their primary heat source, yet Contractors / Builders feel these units are better served as secondary heat sources or aesthetic home improvements (and refer to Retailers when necessary).

Builder recommendations vs. Consumer needs & wants...

According to distributors, Builders will recommend high-margin units to Consumers. However, Consumers will pay more for units with features they want forcing builders to offer less-profitable units.

You don't know what you've got 'til you've got it...

According to Builders, consumers realize many benefits post-purchase/installation...and gas fireplaces are becoming increasingly popular. Secondary fireplace installations present intervention opportunities.

These are so <u>HOT</u> right now...

Distributors say demand for modern / aesthetic designs and electronic ignition units is growing. Retailers are receiving more requests for efficiency, aesthetics & new features (remotes, thermostat-controlled, electronic ignition, etc.)

Distributors

S

Relationships with Manufacturers

Distributors consider Manufacturers as resources for new products, features, solution managers regarding performance / installations, and are valued sales coaches for Distributors and their staff.

Communication Channels

Interactions with manufacturer reps materialize through several forms – on-site visits, phone, and e-mail –most reps are considered responsive and helpful. None had any real complaints about this process.

"Generally they send sales representatives that come around to the store ... They've been able to answer all the issues that I've brought to them," – Distributor

Estimating Demand

Purchases of tried-and-true brands and products are seamless, but to hedge against a bad purchase of a new product line or manufacturer, Distributors estimate customer demand and preferences to ensure sales potential.

"The product that we carry as far as what we're going to be selling to the customer is based on what we're seeing as being sold well... It's based off of what were the previous numbers," – Distributor

Unfamiliar Manufacturers

When working with an unproven organization, other concerns include the quality and reputation of a manufacturer in general or the specific unit type, regarding service records, reliability, and support provisions.

"We'll find out who's locally selling that product... do a little research, call them up, talk to them, see what kind of problems they've ever had... What their warranties are like, and how they deal with them," – Distributor



Distributor Customer Types

This audience sometimes acts as both a Distributor <u>and</u> Retailer, as some have both distribution capabilities and retail locations. Customers are a varied mix of Contractors, Builders, Retailers, and homeowners who enter their retail stores.

In order to confidently provide an appropriate recommendation to customers, Distributors feel several key pieces of information are needed. Conversations start with asking...

What kind of fireplace is needed, and is it replacing a wood-burner, an old gas unit, or new construction altogether?

What is the size of the room, and the specific space within the room where it will be housed?

Will it be used as a heat source, ambiance, or a mix?

What are you hoping it will look like, and what style are you looking to achieve?

What budget range would you like to stay within?



Homeowners are willing to pay more for high-end features and designs to maximize personal satisfaction, whereas Builders, with the exception of custom builders, are reluctant to spend more in order to maximize profit/profit margin.

Cost vs. Quality Tradeoff Perceptions

Homeowners

As homeowners are the ones to use the fireplace and see daily reminders of their purchase, they're much more willing to expand their budgets for additional features or better designs, attempting to maximize satisfaction.

Builders

Builders quote installations using lowerpriced "builder-spec" models that cost them less than \$1,000, where they net greater profit margins after markup and installation. Higher prices force them to reduce these margins.



Marketplace Trends

Distributors believe new market trends are emerging based on the interaction with the ecosystem and feedback...



Modern Trends

Demands are increasing for more modern, sleek, and aesthetic designs, though customers with traditional preferences do exist.



Ignition Standards

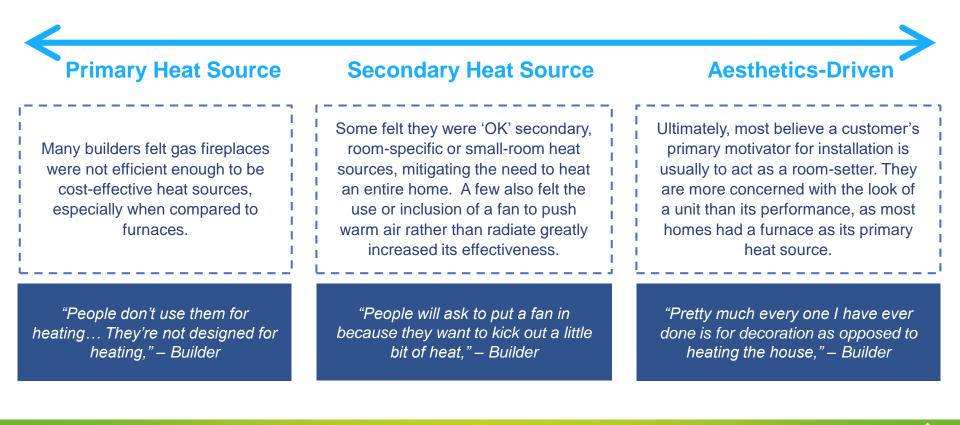
Electronic ignition switches have become nearly standard, although all reported selling at least one model with a standing pilot light.

Builders



Gas Fireplace Benefits

According to Builders, there are a variety of benefits that gas fireplaces provide. However, there were mixed reactions around their effectiveness as a heat source, especially when it came to what builders believe their customer's primary motivation for installation was.



Advantages Over Traditional

According to Builders, gas fireplaces are quickly phasing out wood-burning fireplaces for many reasons. Although Builders are aware of these benefits, consumers are slow to catch on or realize them post-installation.



Role in the Customer Journey

According to Builders, the decision to install a gas fireplace is made prior to the involvement of a builder in both new homes and post-build replacements, and is usually accounted for in initial design plans.

The Burden is on Retailers

When questioned about gas fireplaces, most builders will direct customers to a trusted retailer/partner to evaluate a showroom, touch and feel options, and ask specific questions. Builders often do not want to be responsible for specific brand or visual recommendations.

Logistics Information

The Builder's primary role during this process is nearly always logisticsbased – they typically only arm customers with recommendations or requirements for unit size options based on room specs. For new homes, design plans allow for flawless installation and sizing, but this process is trickier for post-builds.

Common Purchase Process

Unless requested, Customers are often 'OK' with the standard "Builder's Model" and rely on Builders to make the purchase (almost always marked-up). Some partner with Retailers to receive discounts for single purchases, while larger builders or contractors are able to leverage bulk-pricing when building multiple residences.

Some consumers shop online, do research, or try to purchase themselves, but the majority rely on the Builder to purchase.



Feature Considerations

As feature choices are driven by personal preference, Builders prefer to stick to functional capability and practicality discussions with customers. However, there are conversations about some features in which Builders appreciate the opportunity to provide insight.

Capacity	Builders are not typically recommending specific capacities / BTUs, and do not believe consumers are concerned or even aware of these attributes. However, this situation does present itself from time to time, where mostly HVAC specialists do calculations based on room square footage.
Standing Pilot vs. Electronic Ignition	As consumers don't know to ask, Builders do not frequently recommend electronic ignitions or standing pilot lights, and hope Retailers help with these decisions. Additionally, several stated there was no need, with electronic ignition becoming the norm across the industry. They also believe that users with older units and standing pilot lights don't know to turn them off in warmer months.
Slim Profiles	Builders perceive slim-profile units to offer several advantages and have seen their sales increase in recent years. Clients usually have lofty expectations for fireplace size given room specs, and slim profiles enable these structures to be built in tighter spaces, especially due to reduced masonry. Some feel this presents an opportunity for first-time buyers.
sec	Due to slimmer profiles and smaller structures, one builder reported seeing cond fireplaces being installed in other rooms (i.e. bedrooms) becoming more feasible / common. This present a potential market intervention opportunity among gas fireplace owners already familiar with their benefits.

Retailers

Retailer Stock



Retailers stock products based on needs identified through conversations with endusers (primarily homeowners) and brand reps or colleagues at trade shows / industry organizations.



Middle-Man

Several simply act as a middle-man directing their customers online or to catalogs to evaluate, and then place an order for them.

Purely Transactional

Most consider themselves industry veterans and feel they're extremely knowledgeable, needing little assistance to gauge what to stock.

\$

Industry Trends

Retailers had a defined perspective on current industry trends which fell into three major buckets: aesthetic and design preferences, unit efficiency, and homeowner feature preferences.

Aesthetic Trends	Efficiency Trends	Feature Trends
Aesthetics dominates preference, and many felt enclosed fireplace designs were heading in a modern direction, including wider designs, thinner depth, multiple vantage points, more glass/less frame, chimney-less, and more natural-looking flames and logs. The desire for a traditional look is becoming less common.	Some felt the Pacific Northwest is a particularly energy-conscious region, resulting in a demand for more energy efficient units. Efficiency was evaluated by consumers and retailers using several metrics, often depending on the specific purpose of the fireplace and room specs.	Several felt beyond design and heating capabilities, there were specific feature trends desired by consumers, including remote on/off switches, controllable heat and fan settings, automatic thermostat connectivity, electronic ignition, etc.
<i>"They want to go with something more modern, such as glass, rocks, or other sculpture items that go in fireplaces," – Retailer</i>	<i>"People want heat efficiently Efficiency is the measure of energy of gas It's one of the top things that customers ask about," – Retailer</i>	"Sometimes they like different options that come along with it. Remotes, thermostat on/off switches, IPI versus set valve," – Retailer



Conversation Starters

Although there are a myriad of questions addressed during early conversations with end-users, two decisions were very easy to make (or were already made) on behalf of the consumer.

DOES IT PAY TO GET A GAS FIREPLACE?

Homeowners were often reported to have a high level of awareness of the benefits of gas fireplaces – rarely did a retailer have to "convince" a customer that gas was the best option for them.



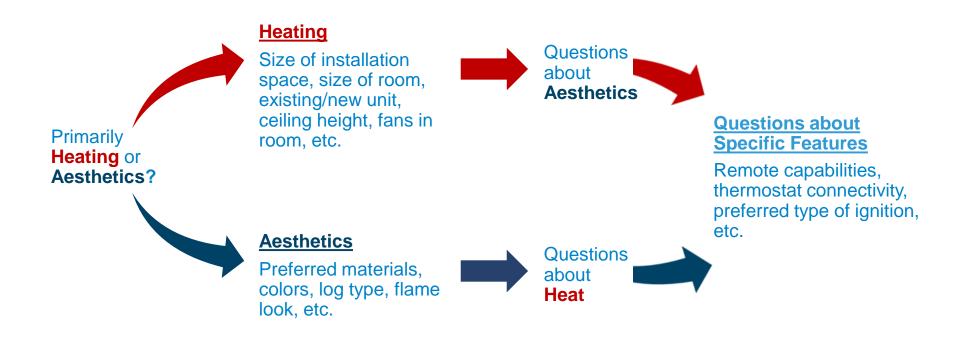
ARE ENCLOSED UNITS THE BEST OPTION?

End-users accounted for approximately 75% of gas fireplace sales (among these retailers), with the vast majority looking to buy an enclosed unit. Benefits of enclosed units included better heat, efficiency, and aesthetics.

"The customer base that I deal with is very knowledgeable. They've already done their research before they even show up," – Retailer "[We sell] enclosed units by far [the most]... We're in the Northwest so people think about efficiencies and being good for the environment," – Retailer

Conversation Path

Communication is the key to a successful sale and conversations initially take a heating or aesthetic path, yet later on involve the other path. The customer interaction process was also described by many Retailers as labor-intensive.

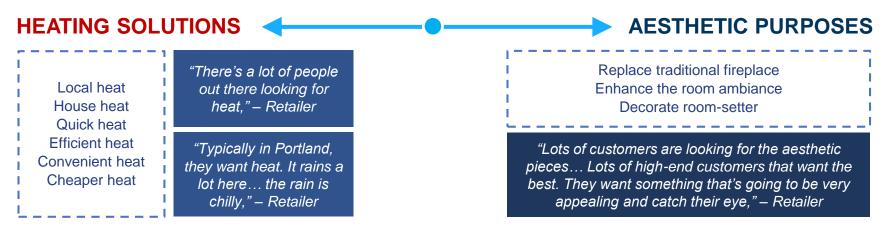






Purchase Motivators

For most consumers, the "problem to be solved" is either a heating solution, room aesthetic enhancement (or replacement of a wood-burning fireplace), or a combination. Convenience was an after-thought, though this is mostly realized postinstallation / purchase.



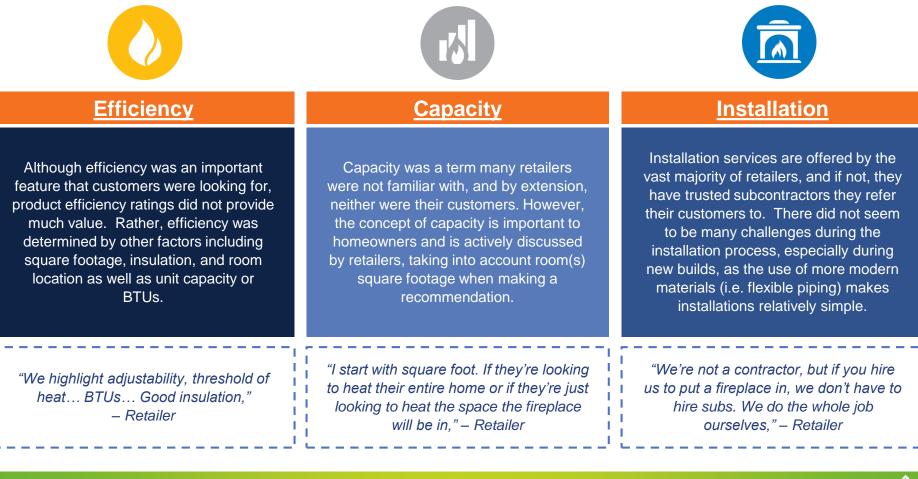
COMBINATION OF MOTIVATORS

"It's a combination of both... what they think is aesthetic and will provide the amount of heat they want," – Retailer



Benefit Considerations

Other topics that played a role in the sales process and that Retailers commonly discussed with their customers included:





Most retailers recommend electronic ignition systems to consumers, and some consider them to be an industry standard. However, units with standing pilot lights are still being purchased.



Electronic Ignitions

Although electronic ignitions are becoming increasingly common, especially in certain states, some retailers believe standing pilot lights require less maintenance and are easier to fix. These retailers often suggest these be extinguished in summer months.

"We've been having a lot of problems with the electronic conditions, so I actually prefer the standing pilots myself," – Retailer Electronic ignitions are considered more modern and are perceived to be easier-to-use. Several retailers also held the opinion that these ignitions extend the life of a unit by mitigating the heat stress put on it by a constant pilot flame.

"It's not running when you don't need it, so it's not sitting there wearing and tearing on your parts. Plus, it's saving gas," – Retailer End-User Findings: Commercial Property Managers & Consumers

Commercial Property Managers

Commercial Property Manager



I'd like to improve but...

Purchase drivers for considering <u>any</u> property improvement include differentiating themselves vs. competitors, keeping up with industry trends, and responding to customer demand. Intervention strategies should hone in on these.

They're more reactive than proactive...

Costs, red tape and long processes tend to make them this way when considering any property improvement.

If they have one, they use it...

Businesses owning gas fireplaces typically run units all day in fall and winter, with minimal use during other seasons...and almost all shut them down at night. Peak occupancy times also drive additional usage.

Beauty before warmth...

Gas fireplace intenders are seeking aesthetics first, heat second.

And the consideration drivers are...

Intenders also stated that cost, look, size, ease of installation and capacity (if seeking a heat source) are their top consideration drivers.

Why not?

Rejecters claim that limited space and cost (outweighing benefits) are the primary barriers, in addition to general property improvement obstacles.



Purchase Journey

Commercial Property Managers interviewed manage buildings ranging from restaurants and cafes to hotels or mixed-use properties. Depending on property specifics, the process taken to undergo a project differs, and cost and timing are critical.

Improvement Motivators

Regardless of property type, improvement projects are driven by:

Staying up-to-date or keeping with industry standards

Responses to consumer demands and expectations

Differentiating the property from competitors

Primary Considerations

BUDGET

"Cost is a huge factor... We look at it from a cost aspect and how we can make sure that that change is going to meet the guests' needs while fitting within our budget," – PM

TIMING

"In the hotel industry, there's never a good time to do anything. We're never slow, we're never closed. We try to do something in our off seasons... [so] it won't have a huge impact," – PM



"We have to get those plans approved by our mother company," – PM

Input from architects/engineers if design/structural changes are involved

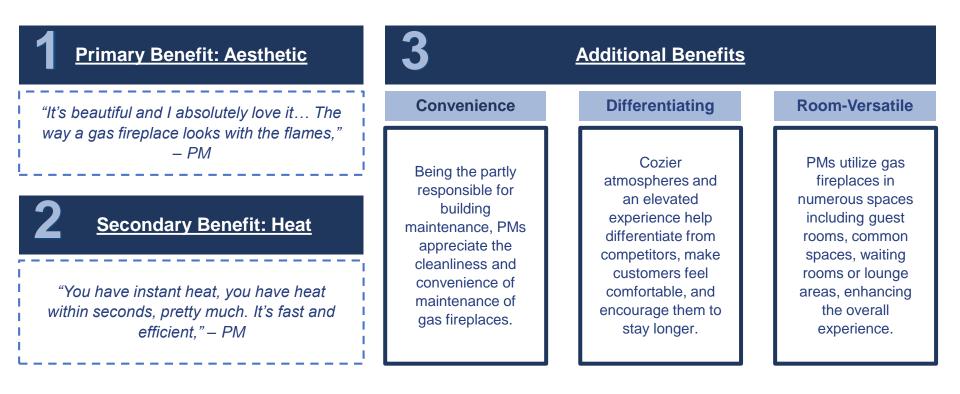
"I have to find out if they require an engineer or an architect to be involved," – PM





Primary Benefits

Overall, Commercial Property Managers have positive perceptions of gas fireplaces and consider the primary advantage to be aesthetic and sensory-based. Many consider heating capability to be a secondary benefit, though drivers of positive perceptions seem to focus on ambience and the look and feel of a real fire.





Purchase Barriers

Among Commercial Property Managers without a fireplace on the premises, there are mixed reactions to the idea of installing one, with the primary barrier being space available.

Rejecters

SPACE IS LIMITED

Many feel that their property is already limited on space and are reluctant to give up seating or other furniture items to accommodate a gas fireplace.

"If you take away seats, you're actually decreasing your ability to generate income... I can't do that," – PM

NOT WORTH IT

The trade-off is not considered worthwhile, despite a personal appreciation for the potential enhanced ambience and experience.

COST CONCERNS

Of course, cost is a concern regarding future installations, however, this concern was somewhat minor, especially compared to space availability issues.

Intenders

OPPORTUNITY HASN'T SURFACED

Prospects state there are no real "obstacles" to installing a fireplace, rather, they simply have not undergone these types of projects yet, and will consider a gas fireplace in future upgrades.

LIMITED CATEGORY KNOWLEDGE

Most, admittedly, had not done the research yet and do indicate they have questions on cost, size, and look, though they are confident that options exist in the marketplace to meet their needs.

"In an ideal world, it would be great to just have the hearth heating the room and have a thermostat on the hearth... I have not looked into that," – PM

"I'd go to Google, or I've also heard of Northwest Naturals... But most likely I'd go to the Internet - that's where I usually find my best deals," – PM

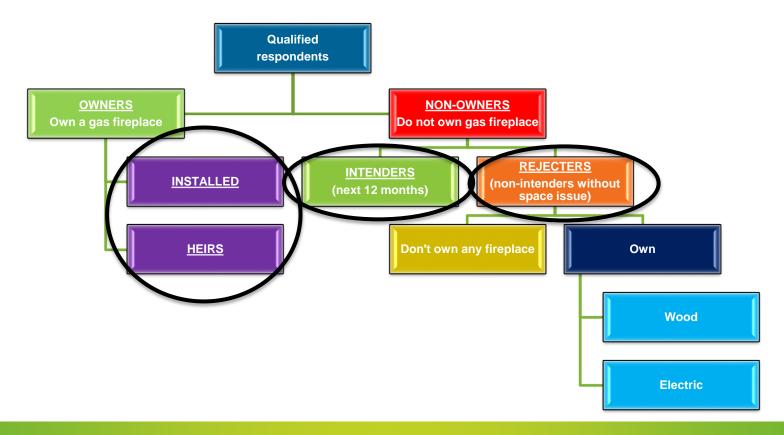


Consumers (Residential)



Consumer Types

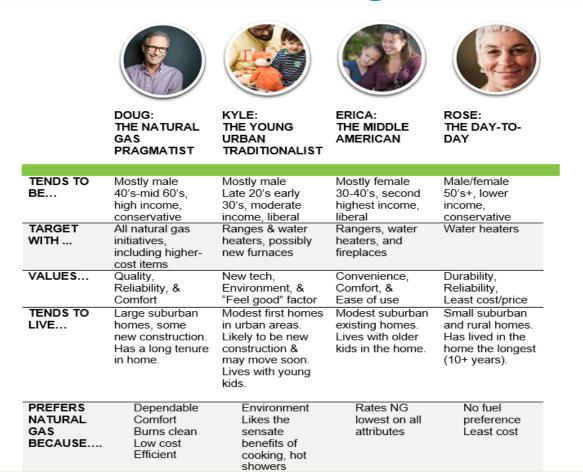
Respondents were categorized as OWNERS (INSTALLED or HEIRS) or NON-OWNERS (INTENDERS or REJECTERS).







Consumer Segments



Significant differences by segment will be called out in consumer research.





Consumer Key Findings

We're pretty much the same...

Though some significant differences exist, most Owners & Intenders responded in kind. High income consumers are seeking ambiance over heat (and vice versa).

Why wood ya?

Replacing wood burning units with gas units is key; strategies should focus on less mess/labor cutting wood and gas fireplaces being a cleaner, safer alternative.

Where do I begin?

Conducting online research and seeking advice from professionals / word of mouth from friends and family are the top starting places.

What were (or are) you worried about?

Installed consumers had & Intenders have the same concerns - cost (installation and/or unit) and finding a reputable installer. And it can't look fake!

Brand isn't king...

Installed consumers didn't have one in mind, Owners can't recall them and share is scattered. Supporting manufacturer brand building & awareness strategies can play a role in market intervention to create more pull.

Professionals to the rescue...

40% purchased at retail and 40% directly from builders/contractors – and 87% of Installed consumers had them professionally installed.

Love at first post-purchase / installation

Owners are very satisfied with their gas fireplace – they effectively heat their homes and many mentioned appearance and ease of use as reasons for their satisfaction.

Who's on the fence?

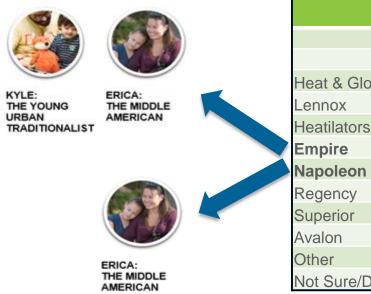
Over half of Rejecters have no need / aren't interested. However, free installation or a sizeable rebate may win some over. Targeted messaging / intervention must address cost & installation barriers and highlight benefits.

Consumers: Owners (Heirs and Installed)



Brand Recall

Validating findings gleaned from focus groups, Owners did not seek (and many couldn't recall) the brand of gas fireplace they have in their home. Empire & Napoleon are significantly favored by specific segments.

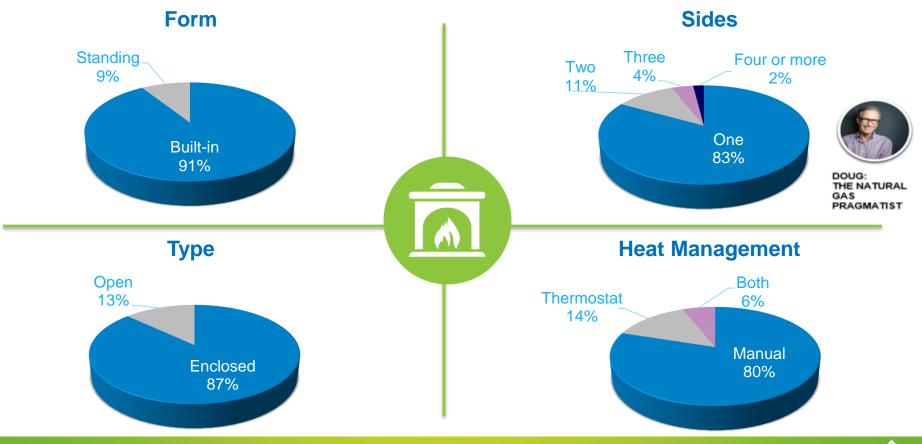


	Total	Installed	Heirs
	(314)	(158)	(156)
	%	%	%
Heat & Glo	9	11	7
Lennox	6	7	6
Heatilators	5	3	7
Empire	5	4	5
Napoleon	4	4	3
Regency	4	5	2
Superior	2	1	3
Avalon	2	1	2
Other	11	13	7
Not Sure/Don't Remember	54	50	58



Gas Fireplace Profile

Nearly all Owners have a built-in, enclosed, one-sided fireplace and manually turn it on and off. Though one-sided units are prevalent (especially with Doug), some Installed consumers opted for two-sided units.

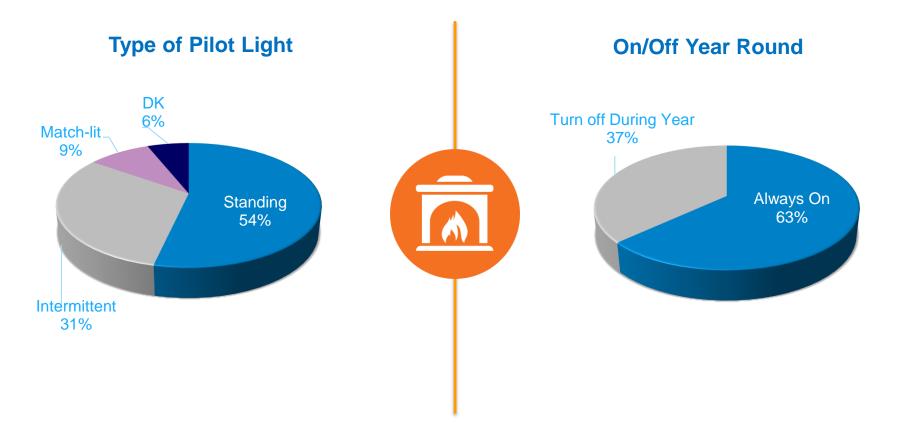






Gas Fireplace Pilot Lights

The majority of owners have a standing pilot light. Among those with a pilot ignition/light, most keep it on all year.





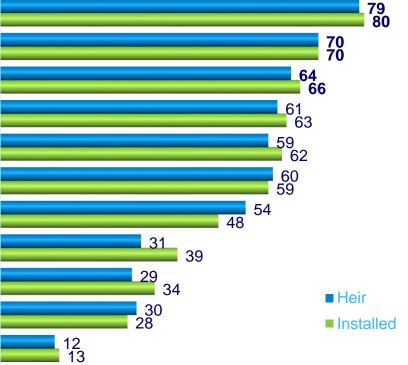




Reasons for Use

"Is easy to use", "is clean burning", and "is a safe way to heat my home" are among the top reasons Owners use their gas fireplace. Among the top reasons selected, Installed consumers and Heirs responded very similarly.

Is easy to use Is clean burning Is a safe way to heat my home Adds a pleasing look to my home Adds to the ambiance of the room Would allow me to heat my home more efficiently Does not require wood cutting 31 Makes social gatherings more inviting 39 29 Can be used as a main source of heat 34 , 30 28 Is not fake looking 12 13 Adds light to the room

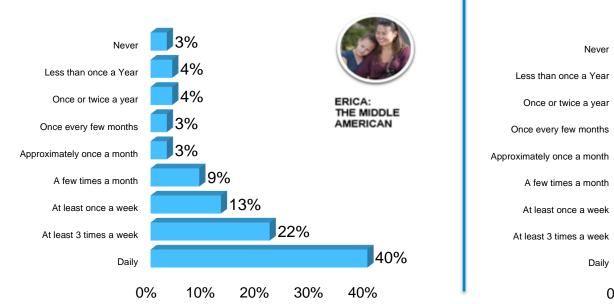


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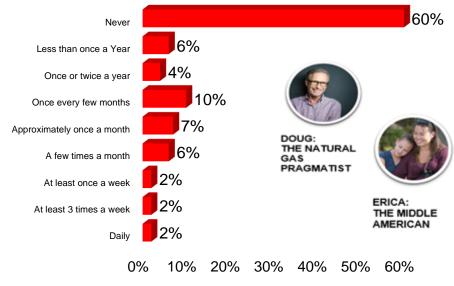
Gas Fireplace Usage

75% of consumers use their fireplace at least once a week during the coldest times of the year. 40% use their fireplace during the warmest times of the year, but usage during that time is infrequent. Erica uses it at least once a week all year round and Doug uses it at least once a week during the warm months.



Coldest Times of the Year

Warmest Times of the Year





Experiences & Satisfaction

In general, Owners reported using their fireplace more frequently and being happier with their purchase than they had originally anticipated.

Pre-Purchase	Usage Experiences	Post-Usage
Consumer focus seemed very one- dimensional, primarily buying their gas fireplace for one specific reason, which was often a decision between <u>heating</u> and <u>aesthetics</u> .	After prolonged usage, many realized <u>alternate benefits</u> (local heat source), or new benefits that went far above what they were originally anticipating (<u>social</u> <u>center</u>).	Due to years of frequent and heavy usage, it seemed that, just by continuous usage behaviors, they have a <u>high level of satisfaction</u> <u>with their purchase</u> .
<i>"We already have a heater, so we have heat in our house… We just wanted something that looked nice,"</i> – Group 1	<i>"When the fireplace is on, people gather, and then that room becomes the heart of the house," – Group 2</i>	<i>"I like it way better than I ever thought I would… Now it really has an emotional content to it," – Group 2</i>



Owner Satisfaction

More than three-quarters of owners are "extremely/very satisfied" with their gas fireplace, especially Installed as opposed to Heirs. Erica is more satisfied than all other segments.



neéa

Consumers: Owners (Installed)



Pre-purchase Concerns

After exploring Installed consumer mindsets pre-purchase, it was clear that there was some uncertainty and questions around the gas fireplace experience, as most seemed to be first time buyers. The two categories that many consumer concerns fell into were <u>cost</u> and getting a <u>realistic</u> sensory experience.

<u>S</u> <u>Cost</u>	Realistic	MiscellaneousConcerns
Being first-time fireplace purchasers, much uncertainty revolved around the <u>cost of purchasing a gas unit and the</u> <u>operating costs of gas</u> . Both seemed to be easily alleviated through initial conversations with retailers.	Many already owned wood fireplaces and valued the <u>sensory experience (i.e.</u> the visual, crackle, and smell), and were concerned whether it could be replicated by gas. However, after seeing units first-hand, many realized the gas flame look had improved greatly over the years.	 Consumers also raised several more questions, including How efficient will the unit be? Will it heat enough? Is gas safe? Will it produce any hazardous fumes? How easy is it to maintain?
"Definitely cost [was a concern] What I can afford. I was building a house from scratch I just didn't know what it would be," – Group 1	"I wanted a lot of flame. I just wanted it to look real, I didn't want it to look like little lights. Is this going to look like a real fire?" – Group 2	"I was worried about safety I had to get used to the gas furnace. [I] just [had] a thing about safety, gas blowing up," – Group 1

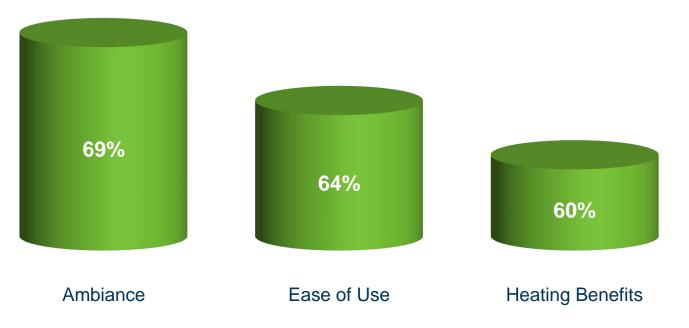




Installation Drivers

Ambiance, followed closely by ease of use and heating benefits, were the three main reasons Installed consumers planned to purchase / install a gas fireplace. Those with incomes less than \$75K favor heat and those with \$75K+ favor

ambiance.



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Research Conducted

Though many Installed consumers researched gas fireplaces online prior to purchase, many also spoke to professional builders or contractors, someone involved in HVAC, salespeople, and family/friends.

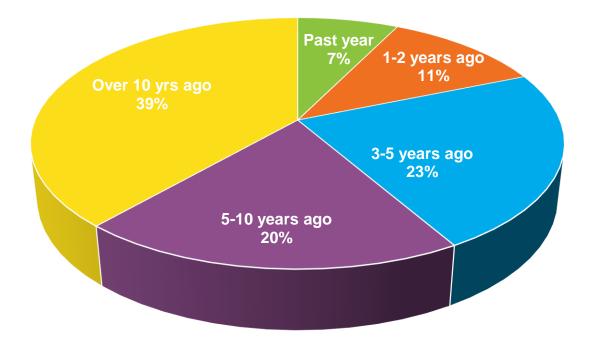


Installed



When Purchased / Installed

Most installed a gas fireplace 3+ years ago, with 18% doing so over the last two years. <u>Higher income HH's and urbanites</u> installed most over the last year, presenting an opportunity for targeted market intervention.







Purchase & Installation

Installed consumers did not have a specific brand in mind, split purchases between retail and professionals, and shared the same cost concerns prior to buying / installing their unit as intenders. Findings yielded the following:



- Average installation date 8.4 years ago
- 87% had it professionally installed
- Top 3 concerns pre-purchase / installation:
 - <u>47%</u> installation cost, <u>43%</u> unit cost, 4<u>2%</u> reputable installer
- 87% had no brand in mind
- 40% bought at retail
 - local, selection, knowledgeable sales staff (Rose & Erica)
- 39% bought from contractor / builder
 - reputation & trust (Doug)
- 60% accepted professional recommendations





ERICA: THE MIDE AMERICA

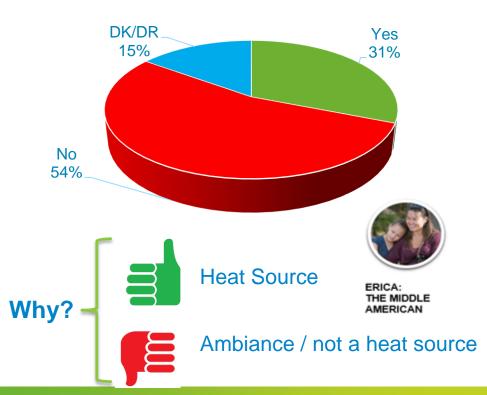


THE NATURAL GAS PRAGMATIST



Heating Capacity

Capacity was a factor for almost one-third of Installed consumers when choosing a gas fireplace – and Erica favors heat more than other segments. In addition, 64% of Installed consumers couldn't recall their unit's BTUs.



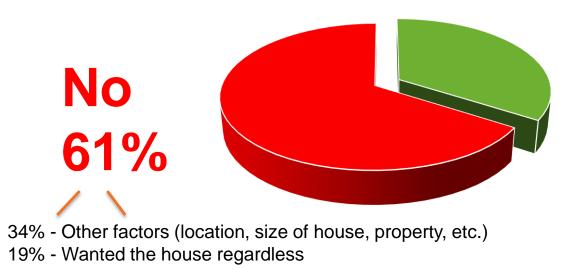


Consumers: Owners (Heirs)



Home Selling Point?

The majority of respondents whose gas fireplace was in the home before they purchased it said it didn't factor heavily into their decision to purchase that home.





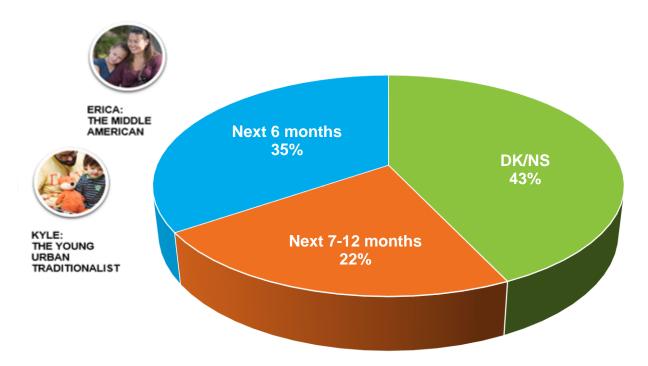


Consumers: Non-Owners (Intenders)



Purchase Intent

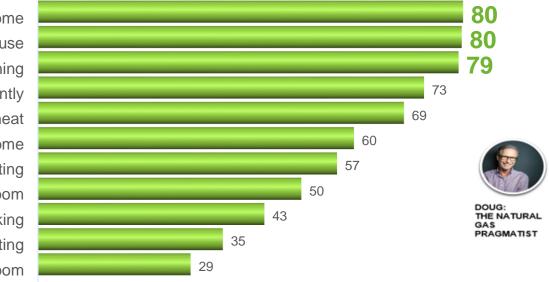
Over one-third of Intenders plan to purchase & install a gas fireplace over the next 6 months; Erica and Kyle are the leading prospects, presenting a targeted market intervention opportunity.







Functionality and convenience are the major reasons contributing to a planned purchase of a gas fireplace (safe, ease of use, clean burning, efficient heating, and main source of heat). However, Doug likes ambiance.



Is a safe way to heat my home Is easy to use Is clean burning Would allow me to heat my home more efficiently Can be used as a main source of heat Adds a pleasing look to my home Does not require wood cutting Adds to the ambiance of the room Is not fake looking Makes social gatherings more inviting Adds light to the room

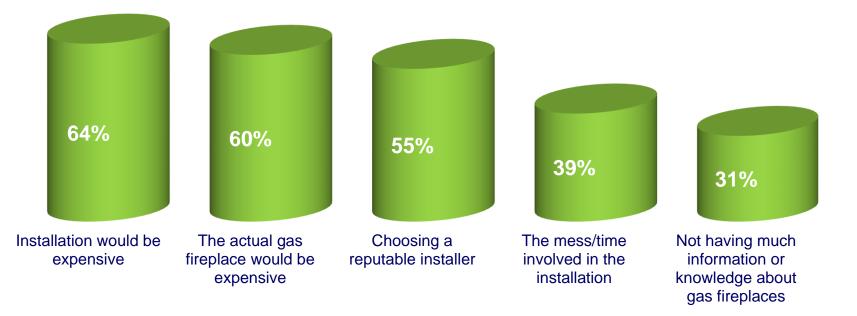
HH's with \$75K+ income want more ambiance, inviting social gatherings & light than other HH's. Urban HH's significantly interested in ambiance, not fake looking, inviting social gatherings higher than suburban & rural HH's. Men also agree more so than women on these same features.





Installation Concerns

Cost (installation and actual fireplace) and finding a reputable installer are the three top installation concerns among Intenders.



HH's with lower incomes (<\$75K) worry about high fireplace and installation costs.

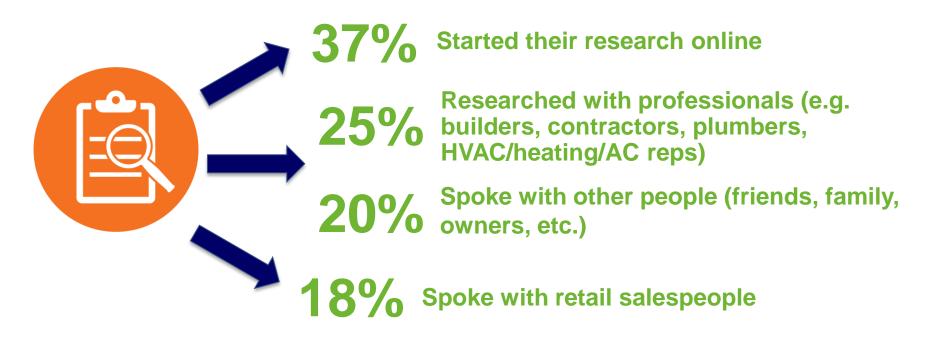
Suburban & Rural HH's worry about expensive installation as compared to Urban HH's. Females feel the same way, more so than males.





Research Conducted

Most Intenders have spoken to other people during their planning stage and many started to research online.







Similar to Owners, most Intenders do not have a specific brand in mind as they plan to purchase and install a gas fireplace, however heating capacity (*aided*) is top of mind and will factor into their decision.





72% Say heating capacity will factor into their purchase and installation decision; heat effectiveness & efficiency are key!

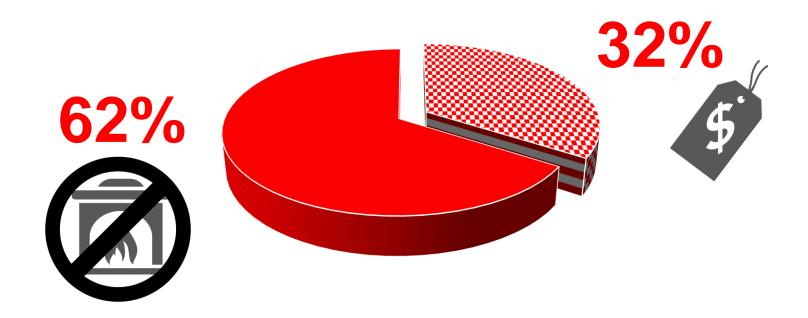


Consumers: Non-Owners (Rejecters)



Reasons for "No"

Two-thirds of consumers not planning to install a gas fireplace in the next year either have no need or interest (have other heat sources or prefer wood burning fireplaces) or are concerned about the cost of doing so. Rebates and other incentives may persuade them.







Ways to Incent

57% of Rejecters are not interested in any of the potential incentives evaluated. Of the 43% that may be won over, the top two incentives that would entice them included:









NEEA Gas Fireplace Market Sizing Study



Prepared by Top Box Associates



Background & Objectives

- Russell Research conducted a quantitative research study in Idaho, Oregon, and Washington.
- This consumer research was utilized to understand the presence and the type of fireplaces found in the homes and selective commercial spaces in this region.
- Top Box Associates has integrated this research with desk research data to estimate the size of the gas fireplace market.
- Lastly, among those that do not currently have a gas fireplace, it is also important to understand the propensity to purchase and install a gas fireplace in the near future.



Residential



Desk Research

- Census data in the region was gathered to measure the Consumer/Household Universe Size of the counties NEEA in ID, OR and WA state.
- In addition to certain counties being excluded from the relevant Universe Size, also excluded were unoccupied, RV, mobile and boat homes.
- The net of these figures is estimated to be about 4.4 million occupied homes.

(thousands)	Idaho	Oregon	Wash.	Total Region
Total Dwellings ¹	699	1,731	3,017	5,447
less: exclusions	- 496	- 184	- 322	- 1,002
Net Universe Size	203	1,547	2,695	4,445



Annual 2016 projected US census figures.



Primary Research

- A random sample in the eligible region was gathered to first determine the proportion of homes that have a fireplace and then identify the type of fireplace within those homes.
- Using the combination of these two figures (presence of a fireplace and its type) applied to the Universe Size yields an estimate of the number of occupied households that have a gas fed fireplace.
- This estimate of gas fireplace homes in the region is about 1.2 million, which is about 27% of occupied homes.

(thousands)	Idaho	Oregon	Wash.	Total Region ¹
Net Universe Size	203	1,547	2,695	4,445
Homes w/ Fireplace (%) ²	43%	53%	63%	59%
% Fireplaces that are gas feed ³	55%	47%	46%	47%
Net % of homes with a gas fireplace	23%	25%	29%	27%
Market Size Estimate #	47	385	777	1,209

- 1 Total figures are household weighted not survey sample weighted.
- 2 Survey qL: Which if any of the following do you currently own and have in your home?
- 3 Survey qM (base=fireplace): Which of the following types of fireplace(s) do you currently own and have in your home?



Primary Research



- To estimate future intent, we asked those that currently do not have a gas fireplace what their likelihood to purchase and install a gas fireplace in the future would be. Additionally, we also asked how soon they intended to purchase this new unit.
- The research shows that 20% said they would likely purchase and install a gas fireplace in the next year and, on average, would do so in about 6 months.

	Idaho	Oregon	Wash.	Total Region ¹
Top2Box Intent (%) ²	14%	18%	23%	20%
Immediacy (#months) ³	6.5	6.0	6.2	6.2

- 1 Total figures are household weighted not survey sample weighted.
- 2 Survey qO(base: not gas fireplace owner): Which statement best describes how likely you are to purchase and install a new gas fireplace in your home within the next 12 months?
- 3 Survey qP (base: qO intenders): How soon will you purchase and have this new gas fireplace installed?



Definition



- Take Rate Analysis: a part of the Top Box Forecasting
 Model[™] is utilized to estimate interest in purchasing a product or service. This part of the model uses stated intent to purchase and consumers' stated immediacy to act as inputs.
- The heart of the analysis lies in the correction of overstatement always present in these metrics. The model has been rigorously validated, providing confidence in the accuracy of these overstatement corrections.
- A Take Rate, in this instance, can be described as the proportion of consumers in the target group, who if were made aware of the offer and had it available, would purchase and install a gas unit within one year.





Future Intent

- After adjusting consumers stated intent for overstatement, the estimated Take Rates to purchase and install a gas unit are in the 1%-2% range.
- Using these estimates, combined with the number of homes currently without a gas fireplace, yields an estimate of the number of installations that are likely to occur in the next year or so.
- The estimated number of future installations of gas fireplaces in this region over the next year is about 51 thousand units.

(thousands)	Idaho	Oregon	Wash.	Total Region
Net Universe Size	203	1,547	2,695	4,445
less: Market Size	- 47	- 385	- 777	- 1,209
# Homes without a gas fireplace	156	1,162	1,918	3,236
Take Rate (%)	0.5%	1.3%	1.8%	1.6%
Estimated # future 12mo gas fireplace installs	0.7	15.3	35.0	51.0



Commercial



Desk Research

- Census data in the region was gathered to measure the Universe Size of the counties NEEA is interested for each state.
- In addition to certain counties being excluded from the relevant Universe Size, also excluded were certain types of Commercial Buildings² (see footnote).
- The net of these figures is estimated to be about 113 thousand occupied commercials buildings.

(thousands)	Idaho	Oregon	Wash.	Total Region
Total Establishments ¹	44.8	112.3	182.8	339.9
less: exclusions	- 39.2	- 71.2	- 116.2	- 226.9
Net Universe Size	5.6	41.1	66.3	113.0

- 1 Annual 2016 projected US census figures.
- 2 Including Food Service, Office and Lodging and some Services. Excludes: Education, Food sales, Healthcare, Retail, Public assembly Public order and safety, Religious, Warehouse and Vacant.



Primary Research



- A random sample in the eligible region was gathered to first determine the proportion of establishments that have a gas line to their building and among those that do, which have a gas hearth.
- Using the combination of these two figures (presence of gas line and a gas hearth) applied to the universe size yields an estimate of the number of occupied commercial buildings that have a gas fed fireplace.
- This estimate of the commercial buildings with a gas fireplaces in the region is about 76 thousand, which is about 67% of these building types.

(thousands)	Idaho	Oregon	Wash.	Total Region ¹
Net Universe Size	5.6	41.1	66.3	113.0
Establishments w/ Gas Line (%) ²	81%	90%	82%	85%
Establishments w/ Gas Fireplace (%) ³	71%	89%	74%	80%
Net % of commercial building with a gas fireplace	57%	80%	61%	67%
Market Size Estimate #	3.2	32.9	40.1	76.2

- Total figures are commercial buildings weighted, not survey sample weighted.
- 2 Survey q8:Does the property or business that you work for or manage currently have a gas line that runs to the building?
- 3 Survey q9 (base=gas line): Is there a gas hearth or fireplace on the premises of the property or business that you work for or manage?

Primary Research

- To estimate future intent, we asked those that currently do not have a gas fireplace what their likelihood to purchase and install a gas fireplace in the future would be. Additionally, the question was worded to install in the next 6-12 months to frame the decision.
- The research shows in the first Round that 30% said they would likely purchase and install a gas fireplace in the next year, while 18% said they would in the second Round.

	Idaho	Oregon	Wash.	Total Region ¹
Top2Box Intent (%) ² (Round1)	0%	25%	40%	30%
Top2Box Intent (%) ² (Round2)	20%	25%	12.5%	18%

- 1 Total figures are building weighted, not survey sample weighted.
- 2 Survey q10(base: no current gas fireplace present): In your opinion what do you think is the likelihood that the property or business that you work for or manage is likely to purchase a gas hearth or fireplace in the next six months to one year?
- 3 Round1 n10, Round2 n17



Future Intent



- After adjusting for stated intent for overstatement, the estimated Take Rates to purchase and install a gas unit are in the range of 1.5%.
- Using these estimates, combined with the number of establishments with a gas line but without a gas hearth, yields an estimate of the number of installations that are likely to occur in the next year.
- The estimated number of future installations of gas fireplaces in this region over the next year is only about 270 units.

(thousands)	Idaho	Oregon	Wash.	Total Region
Establishments with Gas Line	4.5	37.0	54.1	95.6
less: Market Size	- 3.2	- 32.9	- 40.1	- 76.2
# Commercial buildings without a gas fireplace	1.3	4.1	14.0	19.4
Take Rate (%)	1.4%	1.5%	1.5%	1.5%
Estimated # future 12mo gas fireplace installs	0.02	0.06	0.19	0.27





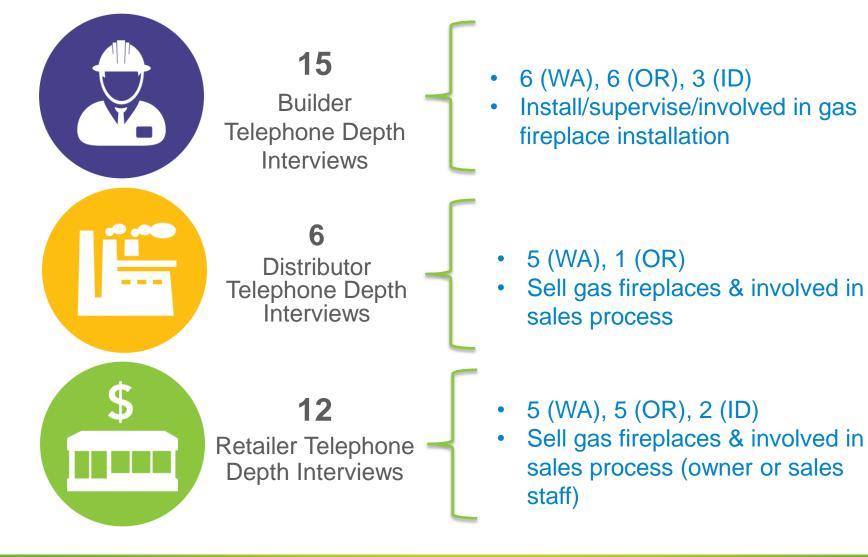
TOGETHER We Are Transforming the Northwest



Research Appendix



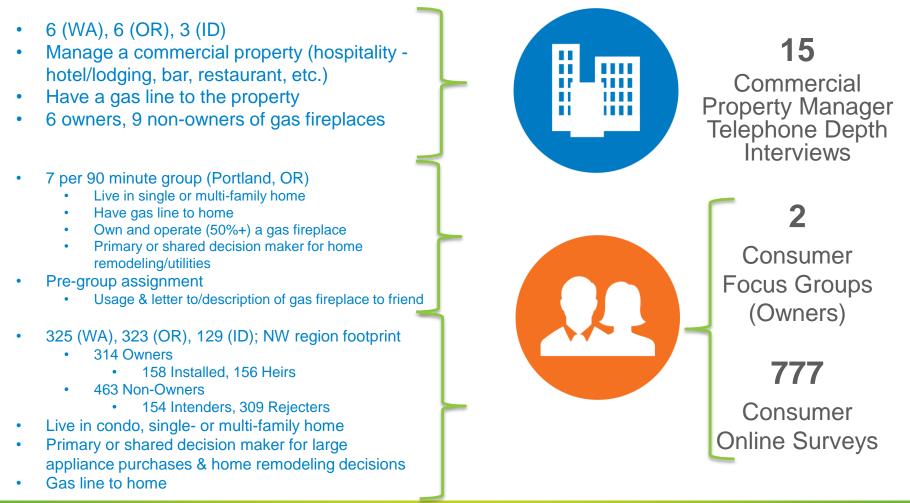
Research Methodology







Research Methodology

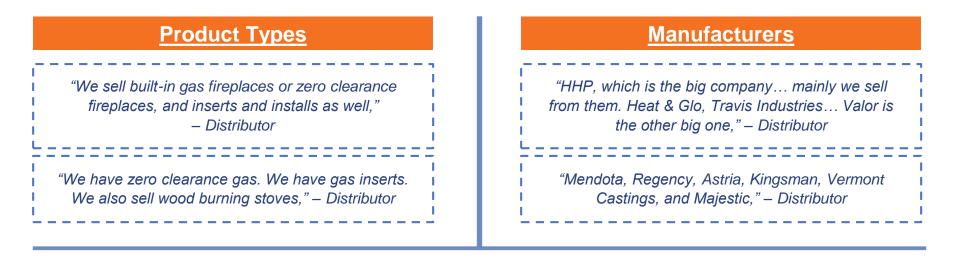




Distributors

Distributor Background

Distributors discussed selling numerous gas fireplaces from a variety of different manufacturers, with personal sales territories ranging from one state to large regions across the West and Pacific Northwest.



Soloo Torritorioo	"We do the eleven western states California is a huge market," — Distributor
Sales Territories	"I'm in Olympia, Washington, so [we sell to] the Northwest," — Distributor



Builders



Builder Audience

Builders interviewed discussed extremely varied job scopes and frequency, with the majority tending to be business owners/operators in some capacity. Participant types included...

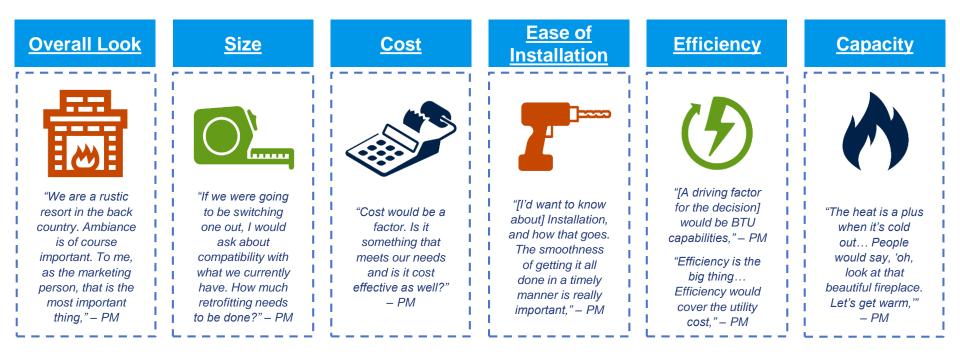
Large Contractors	Home Builders	HVAC Specialists
General contractors who completed hundreds of homes per year and subcontracted a few hundred fireplaces as well	Builders from much smaller businesses who worked on parts of a few homes per year, and directly completed several fireplaces per year	HVAC specialists who reported being subcontracted to install fireplaces for larger builders or general contractors
"I generally go through about 200 home invoices a year In years past, we've installed about 400 gas fireplaces a year," – Builder	<i>"I oversee a crew of three people. I do all the billing, invoicing, proposals, meet with the contractors, and do some of the infield labor as well," – Builder</i>	"I run an HVAC business and I help manage another one. Roughly we do at least 15 to 20 gas fireplaces a month," – Builder

Commercial Property Managers



Consideration Drivers

When considering to purchase and install a gas fireplace, critical purchase factors include the following:





Usage Patterns

Most Commercial Property Managers have between one and three units on their properties, and while a few use their fireplaces year-round, most only use them in Fall and Winter. During peak occupancy hours, fireplaces are on all day and turned off at night.



Consumers: Owners (Heirs and Installed)



Perceptions & Preferences

Benefits

For some, there was a direct comparison of pros and cons between gas fireplaces and wood fireplaces. The primary advantages or benefits of gas were reported to include...

Convenience of operation

- Operational efficiency and low gas operating costs
- Realistic flames / logs
- Being cleaner / less polluting than wood
- Immediate heat that a gas unit produces

Ability to hold heat after unit is turned off

Desired Features

Beyond the general benefits of gas fireplaces, consumers were interested in, and ultimately driven to purchase, specific features of particular units, including...

- Convenience & remote operation
- Design & aesthetics
- Looking realistic (sensory experience)
- Double-sided
- Affordability
 - Easy heat & clean burn



Consumer Knowledge

It was clear that most consumers had little knowledge of the particulars and technical details of their fireplace units, as most were unaware of what type of ignition system (either standing pilot or electronic ignition) their fireplace had.

Limited Technical Knowledge

Only a handful were able to distinguish between a standing pilot / electronic ignition and even less seemed capable of giving a succinct definition of how these different systems worked.

"I don't know. I flip a switch and it comes on," – Group 1



Electronic Ignition Dominates

Most (based strictly on deduction) did seem to have electronic ignition. And, for the few with standing pilot lights, some did mention that they turned it off in the summer when not in use.

"We turn ours off in the summer, so I don't know what kind it is," – Group 2



"After many years of cutting and splitting wood...we made it very clear this was the last wood burning fireplace we ever owned."

"Our relationship is pretty great, you are always there when I need you and don't require anything from me. You provide cozy light and heat and in return we've seen a slight bump in our gas bill."

"Finally the day came when you were adorned with the rustic mantle and simmering stone, I had a hard time taking my eyes off you." "If you were to leave us, I am certain we would greatly miss you and have to look for a replacement – we hope that will not happen."



Reasons for Use

Among Owners, there were some significant differences between the various geographic and demographic target groups both in terms of the order of importance and the strength of their choices (mean values).

		MARKET			AREA		INC	OME	GEN	NDER
	Idaho	Oregon	Wash- ington	Urban	Subur- Ban	Rural	Under \$75k	\$75k or Higher	Male	Female
Base: Total Owners	(48)	(131)	(135)	(62)	(194)	(58)	(111)	(178)	(175)	(139)
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Is easy to use	79.0	80.4	80.6	74.1	82.7	78.0	79.7	80.0	77.2	83.3
Is clean burning	63.6	69.3	73.0	69.2	71.1	67.4	71.7	68.9	69.2	70.9
Is a safe way to heat my home	66.9	63.5	68.2	67.7	65.6	66.4	71.7	62.5	63.8	68.4
Adds a pleasing look to my home	68.5 W	63.0	57.9	58.5	61.3	65.4	53.1	67.0	63.0	60.1
Adds to the ambiance of the room	65.5	61.2	58.4	54.1	60.4	67.6	51.8	66.3	64.6	56.6
Would allow me to heat my home more efficiently	61.7	56.4	61.6	64.4	57.1	63.2	68.3	54.4	56.4	62.7
Does not require wood cutting	41.1	53.7	52.3 ^I	48.5	54.4 R	42.5	48.4	50.5	46.8	55.5
Makes social gatherings more inviting	37.2	34.8	34.3	34.9	35.3	33.8	33.7	36.9	39.1	30.8
Can be used as a main source of heat	28.5	29.7	34.2	38.5 S	28.2	35.9	40.3	27.5	31.3	31.7
Is not fake looking	30.8	31.0	26.5	28.1	28.8	30.2	24.2	31.4	31.1	26.8
Adds light to the room	13.0	12.6	11.2	19.3 SF	R 11.0	8.6	12.5	12.4	14.0	10.2



Unexpected Usage Benefits & Occasions

Owners reported very heavy fireplace usage in both their homework assignment and within the discussion, often ranging from at least once a day to many times a day as a "quick heat" source to warm up the house in the morning and as a social hub in the evening.

General Ambiance & Quick Heat	A New Social Gathering	Sensory Benefits
While heat was the primary reason most were using their fireplace, ambiance or a particular occasion (i.e. reading or watching TV) also prompted usage. Some also believed the gas fireplace to be a better heat option in the morning to quickly heat an area more quickly than their home's furnace.	For many, the idea of the fireplace as a gathering place or a social hub emerged. One participant gave the example of the fireplace attracting her teenage daughter to the living room where the family would watch Netflix together, while many others reported the fireplace being the centerpiece of the room when entertaining company.	The idea of the fireplace as a social center stemmed from the fireplace being the aesthetic centerpiece of a room and that fire had a hypnotic / therapeutic quality that intrinsically drew people in. This may explain why for many, the primary purchase motivator was aesthetics, but post- purchase benefits were emotional or sensory-based.



Consumers: Owners (Installed)



Purchase Journey: Impact of Brand

Echoing other research conducted, brand had virtually no impact in the decision to purchase a particular fireplace, with only a handful even being able to reference a single brand. Brand awareness may be suffering due to the reliance on expert retailers as the category is perceived to be "technical" and gas fireplaces are often a one-time purchase.

Limited Brand Awareness

Some considered fireplaces to be nonconsumer-facing products, and therefore, understandably had limited knowledge of brands in the category. One participant even referenced needing to disassemble their fireplace to even find the brand name.

Trust In Seller

By extension, brand equity from a consumer's perspective was generally a moot point. Many held the mindset that if a specialty retailer stocks the product, then they, as experts, have confidence in the manufacturer and the unit.

"With fireplaces in general, it's not a big consumer product, so you're not aware of brand as say going to buy a refrigerator. You are aware of Whirlpool and Samsung and what not, but with fireplaces, I had no idea what brand was even in stores," – Group 1







Purchase Journey: Installation Process

Installed consumers reported very few issues when it came to the installation of their gas fireplace, especially in new homes or builds.

Reliance on Retailer Self-Installations Unexpected Costs A few either installed their entire Installation costs, and more Most relied on their retailer to specifically, unexpected postfireplace or at least a component either install the unit personally (i.e. fan) by themselves. The quote costs coming in above the or had the unit installed by a original quote concerned many. experience was often more builder, installer, or HVAC That being said, a few discussed challenging than initially specialist that was recommended installation details with an anticipated, though ultimately by their fireplace retailer. successful. installer pre-purchase. "It was a little more expensive than I "My husband actually [installed it]. It "The guy who [our retailer] Dorothy took us all day Saturday and part of originally thought... I thought it was sent, they installed it," going to cost maybe seven or eight, the day on Sunday... It just took a lot and it was a little higher," longer than I anticipated," - Group 1 – Group 2 – Group 2



Purchase Journey: Retailer Selection

After exploring consumer mindsets pre-purchase, it was clear that there was some uncertainty and questions around the gas fireplace experience, as most seemed to be first time buyers. The two categories that many consumer concerns fell into were cost and getting a realistic sensory experience.

Rational Factors

Most relied on *rational* factors to select a specific retailer. For many, a recommendation from a friend, good customer service, good selection, and possible installation capabilities were considered when making the decision on where to purchase.

Emotional Factors

Consumers were generally unfamiliar with the specifics of gas fireplaces and, because of this, sought guidance throughout the entire process (often selection through installation). *Trust* was critical in selecting a retailer.

Impact of Advertising

For some, advertising was impactful and drove the purchase within a particular retail location, especially when most were unfamiliar with the category. A few cited their gas bill / rebates advertised in their gas bill as a reason they purchased from Northwest Natural Gas directly.



Interestingly, the search typically ended after visiting the first retailer who typically offered a good combination of selection, service, installation capabilities, and even more importantly, trust. There also seemed to be a perceptual gap between specialty retailers and big box stores, with the perceived level of service and knowledge being far superior at specialty stores.



Northwestern Region Footprint

Counties That Qualify As Regional Footprint

- <u>IDAHO</u>: Benewah, Bonner, Boundary, Canyon, Clearwater, Kootenai, Latah, Nez Perce, Payette, Shoshone and Washington
- OREGON: Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Deschutes, Douglas, Gilliam, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington and Yamhill
- <u>WASHINGTON</u>: Adams, Asotin, Benton, Chelan, Clark, Columbia, Cowlitz, Douglas, Ferry, Franklin, Garfield, Grant, Grays Harbor, Island, Jefferson, King, Kitsap, Kittitas, Klickitat, Lewis, Lincoln, Mason, Pacific, Pend Oreille, Pierce, Skagit, Skamania, Snohomish, Spokane, Stevens, Thurston, Wahkiakum, Walla Walla, Whatcom, Whitman and Yakima



Statistical Notations & Demographics

Statistical Notations

- The statistical significance of a result in this survey is the probability that the observed relationship (e.g., between variables) or a difference (e.g., between means) in a sample occurred by pure chance, and that in the population from which the sample was drawn, no such relationship or differences exist. Using less technical terms, one could say that the statistical significance of a result tells us something about the degree to which the result is "true". More technically, the value of the p-value represents a decreasing index of the reliability of a result. The higher the p-value, the less we can believe that the observed relation between variables in the sample is a reliable indicator of the relation between the respective variables in the population. Specifically, the p-value represents the probability of error that is involved in accepting our observed result as valid, that is, as "representative of the population." For example, a p-value of .05 (i.e.,1/20) indicates that there is a 5% probability that the relation between the variables found in our sample is a "fluke."
- The following statistical notation is used throughout the report:
 - = Indicates figure is significantly higher than other/indicated sub-group at a 95% confidence level (i.e. p-value of .05 or less).
- In theory, with probability samples of this size, one could say with 95 percent certainty that the results have a statistical precision of plus or minus 3.5 percentage points of what they would be if the entire adult population had been polled with complete accuracy. (For each of the owner/non-owner cells the statistical precision is plus or minus 5.6% for Non Owner-Rejecters and plus or minus 7.8% for the other cells.) Unfortunately, there are several other possible sources of error in all polls or surveys that are probably more serious than theoretical calculations of sampling error. They include refusals to be interviewed (non-response), question wording and question order, and weighting. It is impossible to quantify the errors that may result from these factors. This online survey is not a probability sample.



Demographics

		OWNERS				NON-OWNERS	5
	TOTAL	Total (A)	Installed (B)	Heir (C)	Total (D)	Intender (E)	Rejecter (F)
Total Respondents	(777)	(314)	(158)	(156)	(463)	(154)	(309)
	%	%	%	%	%	%	%
<u>Gender (quota was set 50/50)</u>							
Male	50	50	50	50	50	50	50
Female	50	50	50	50	50	50	50
Market (quota was set 20/40/40)		I					i i
Idaho	17	16	20 C	11	17	21 C	16
Oregon	41	40	40	41	42	40	43
Washington	42	44	40	48	41	39	42
<u>Mean Age</u>	52.9	51.6	51.5 E	51.8 E	53.8	44.9	58.2 BC
		i					
Marital Status							
Married	76	80 D	83 F	76	73	78	71
Not Married	23	20	16	24	26	21	28 B

Demographics (Cont'd.)

		OWNERS				NON-OWNERS	
	TOTAL	Total (A)	Installed (B)	Heir (C)	Total (D)	Intender (E)	Rejecter (F)
Total Respondents	(777)	(314)	(158)	(156)	(463)	(154)	(309)
	%	%	%	%	%	%	%
<u>Mean Household Size</u>	2.7	2.8 D	2.8 F	2.8 F	2.6	3.0 F	2.3
Children Present							
Yes	33	38 D	39 F	37 F	30	52 BC	19
No	67	62	61 E	63 E	70 A	48	81 BQ
Education							
No College	12	10	10	10	13	11	15
College	88	90	90	90	86	89	85
Employment							
Employed	52	54	57 F	50	50	68 BC	42
Not Employed	48	46	43 E	50 E	49	32	58 BE
Mean HH Income	89.0	99.1	97.0	101.5	82.2	80.3	83.2
Median HH Income	78.4	85.5	83.3	87.9	72.8	73.9	71.9

Demographics (Cont'd.)

		OWNERS			1	NON-OWNERS			
	TOTAL	Total (A)	Installed (B)	Heir (C)	Total (D)	Intender (E)	Rejecter (F)		
Total Respondents	(777)	(314)	(158)	(156)	(463)	(154)	(309)		
	%	%	%	%	%	%	%		
<u>Ethnicity</u>									
Caucasian	88	88	88	87	89	90	89		
Asian/Pacific Islander	6	6	6	6	6	5	6		
Native American	1	2	2 F	2 F	1	2	0		
African-American	1	1	1	2	1	1	1		
Refused	3	2	2	3	3	3	3		
<u>Hispanic Origin</u>		i		i			j		
Yes	2	4 D	3	6 EF	1	1	_1		
No	96	94	96	92	97 A	98 C	97 C		
Refused	2	2	1	2	2	1	2		



Demographics (Cont'd.)

		OWNERS			1	NON-OWNERS			
	TOTAL	Total (A)	Installed (B)	Heir (C)	Total (D)	Intender (E)	Rejecter (F)		
Total Respondents	(777)	(314)	(158)	(156)	(463)	(154)	(309)		
	%	%	%	%	%	%	%		
Type of Area Live In									
Suburban	56	63 D	57 E	69 BE	51	44	54 E		
Urban	26	18	18	18	31 A	38 BCF	28 BC		
Rural	18	19	25 C	13	18	18	18		
			_				i		
Party Affiliation									
Democrat	37	39	33	45 BF	35	35	35		
Republican	26	24	23	25	28	31	27		
Independent	22	23	25	21	22	24	21		
Other Political Party	2	1	1	1	2	1	2		
Not registered to vote	3	3	3	3	3	2	3		
Refused	10	9	14 CE	4	10	7	11 C		