



Efficient Direct Vent Gas Fireplaces in Oregon

December 5, 2013

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Executive Summary

Introduction and Purposes

Energy Trust of Oregon (Energy Trust) currently offers incentives to consumers purchasing select high-efficiency direct-vent gas fireplaces. To assess the appropriateness of the incentives currently being offered, Energy Trust undertook this survey of Oregon hearth dealers to better understand the market for direct-vent gas fireplaces. Cadmus interviewed 23 hearth vendors in Oregon (out of a population of 48) by telephone during August 2013. While the sample is small, its characteristics represent the full population of Oregon hearth vendors.

This study sought to better understand vendor views of consumer purchases, gauge their understanding and promotion of high efficiency models, and collect characteristics of the market place. This study also serves as an update to a similar study conducted in 2009.

Key Findings

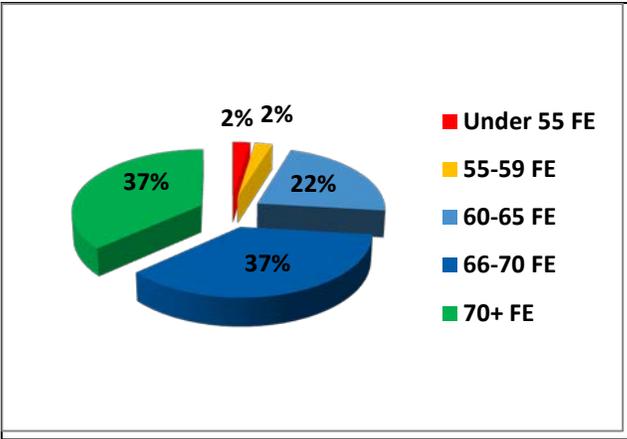
- As in 2009, vendors most often mentioned ‘looks’ or aesthetics (74%) when asked about the most important factors in customer buying decisions. In addition, a notable proportion of vendors mentioned price (44%) and heating capacity (30%) as important factors, and 22% of vendors specifically mentioned heating efficiency¹. While it is clear that aesthetics retain their edge as the most important fireplace attribute for consumers, responses across a variety of questions suggest vendors believe customer concern about heating efficiency is increasing.
- A large proportion (83%) of vendors said they actively sell high efficiency direct vent gas fireplaces, compared to 69% of vendors in 2009. Several vendors said they only sold these types of fireplaces. The consensus among vendors is that direct vent gas fireplaces present a solid value proposition to the customer and are where the market is headed in the future.
- Most vendors seemed aware of and conversant about the various efficiency ratings for fireplace products. Two-thirds (65%) of vendors referred to the energy efficiency rating numbers they like their products to meet, or simply said all their fireplaces were efficient models. This contrasts with only 30% of vendors who defined or specified efficiency ratings in the 2009 study.
- Standing pilot lights have become a much smaller part of the direct vent gas fireplace market. On average, vendors in 2013 said 32% of their sales consisted of fireplaces with standing pilot lights (this figure does not take into account differences in sales volumes between vendors). Almost two thirds (65%) of vendors in 2013 said standing pilot lights were 15% or less of their direct vent gas fireplace sales. This is a big change since 2009, when 61% of vendors said over 50% of their fireplace sales had standing pilot lights.

¹ Percentages add to more than 100% due to multiple responses from respondents.



- For 41 top selling fireplace models where efficiency ratings were available, the 31 models with either intermittent pilot ignition (IPI) or pilot on demand lights had average fireplace efficiency (FE) ratings of 69.6 and 68.9, respectively. This is higher than the ratings given IPI models in 2009 (58 FE).
- As in 2009, the same proportion of vendors, 74%, said that one-half or more of their customers rely on their fireplaces as a major heat source during the heating season. Once again, fireplaces are much more likely to be a major heat source outside of the Portland metro area.
- Compared to 2009, a larger proportion of fireplace sales came from direct vent gas fireplaces. Forty-four percent of vendors in 2013 said that over 75% of the fireplaces they sold were direct vent, compared to 17% in the same category in 2009.
- Based on vendor reports for the 2012-2013 heating season, estimated sales were about 7,600 direct vent gas fireplaces. Overall, sales were lower than in 2009, consistent with vendor reports that economic conditions suppressed sales. A number of vendors, however, also said that sales are starting to rebound. Notably, while direct vent fireplace sales overall are lower, vendors report a larger proportion of customers are buying high efficiency models.
- When asked about their top 5 best-selling brands, vendors most frequently mentioned Travis(16%), HeatnGlo (15%), and Valor(14%). Twelve other brands were also mentioned. Based on mentions, the market appears to have shrunk somewhat (fewer brands cited) and become more competitive (top brands mentioned less often), compared to 2009. At the same time, vendors on average said their top brands represented 72% of direct vent gas fireplace sales, exactly the same as 2009.
- For top selling fireplaces where FE ratings were available, the average rating was 68, compared to an average rating of 61 in 2009. It also is clear that the proportion of high efficiency direct vent gas fireplaces has risen since the 2009 study. As shown below, 37% of fireplaces in 2013 were rated between 66 and 70 fireplace efficiency (FE) and another 37% were rated as 70+ FE. In 2009, only 19% received between 60 and 70 FE ratings and only 9% were rated as 70+ FE.

Figure 1 Proportion of Direct Vent Gas Fireplaces at Various Efficiency Levels (N=41 Top Sellers)



- Based upon vendor reports, the prices across all 74 top models ranged from \$1,076 to \$4,500, with an average price of \$2,653. More efficient models have higher average prices.
- The average cost to install and vent three types of direct vent gas fireplaces ranged from \$838 for fireplace inserts, to \$947 for free-standing fireplaces/stoves, and to \$975 for zero clearance fireplaces.
- The estimated annual market for pellet stoves, based on the 2012-2013 heating season, is approximately **1,520** units per year.

SECTION ONE- INTRODUCTION AND METHODS

Project Background and Goals

Energy Trust of Oregon (Energy Trust) currently offers incentives to consumers purchasing select high-efficiency direct-vent gas fireplaces. To assess the appropriateness of the incentives currently being offered, Energy Trust undertook this survey with Oregon Hearth dealers to better understand the overall market for direct-vent gas fireplaces. Energy Trust wanted to improve their understanding in four main areas:

1. The importance of energy efficiency in consumer thinking when they buy direct vent gas fireplaces.
2. The importance and understanding of energy efficiency among hearth dealers when they sell these products.
3. Characteristics of the direct vent gas fireplace market in Oregon, including the number sold, how much they are used, their price, and their efficiency levels. Several of these characteristics will be used to describe the current market for efficient direct vent gas fireplace models.
4. How results from this study compare to results obtained from a similar fireplace market study performed for Energy Trust in 2009, in terms of how the market may have changed or remained the same over that time period.

Methods and Sample of Vendors

Energy Trust staff worked with an expert representative from the industry's professional organization, the Oregon Hearth, Patio & Barbecue Association (Oregon HPBA), and with Cadmus, an energy efficiency consulting firm in Portland, Oregon, to develop an interview guide (see Appendix A) for hearth vendors that addressed the goals above. Energy Trust and Oregon HPBA assembled and provided a contact list for the population of 48 hearth vendors throughout Oregon.

Prior to the survey, Energy Trust and Oregon HPBA jointly sent a letter (see Appendix A) to fireplace vendors asking them to cooperate in an August 2013 telephone survey. Vendors were asked to help Energy Trust assess the effectiveness of the incentives currently being offered for direct vent gas fireplaces. Our goal was to interview at least 20 of the 48 vendors.

We made multiple attempts to contact all vendors on the Oregon HPBA list by telephone. We successfully completed interviews with 23, or 48%, of these vendors. Tables 1-3 below provide further information about the sample of vendors represented in this study. We used Cvent, an online survey research and analysis tool, to input data during the phone calls. Results were analyzed using SPSS, a statistical analysis package.

Table 1 below shows vendor size based on number of employees; data were taken either from Oregon state employment data or from vendor reports at the time of the survey. Given the small sample size, sample data tracks well with state-reported distributions.



Table 1 Distribution of Vendors Based on Number of Employees

	Population- State Employment Data		Sample- State Employment Data		Sample- Vendor Reported Data	
	N	Percent	N	Percent	N	Percent
Very small (1-4)	11	23%	6	26%	8	35%
Small (5-9)	16	33%	6	26%	7	30%
Medium (10-19)	10	19%	5	22%	5	22%
Large(20-49)	6	13%	2	9%	3	13%
Largest(50-99)	1	2%	1	4%	0	0%
Don't know	4	8%	3	13%		
Total	48	100%	23	100%	23	100%

Table 2 compares the Active and Lapsed members categories, along with locations of members overall and those interviewed. Active and lapsed member proportions for the sample are similar to the population. Geographical dispersion is also similar, especially given the number of categories and small sample size, with Coastal Oregon stores being a bit underrepresented and Willamette Valley stores being a bit overrepresented.

Table 2 Membership in Oregon HPBA and Location of Vendors

	Population		Sample	
Active Members	40	83%	20	87%
Lapsed Members	8	17%	3	13%
Total	48	100%	23	100%
Location				
Northern Oregon	23	48%	11	48%
Willamette Valley	9	19%	6	26%
Southern Oregon	6	13%	2	9%
Coastal Oregon	5	10%	1	4%
Eastern Oregon	5	10%	3	13%
Total	48	100%	23	100%

Table 3 shows that in addition to 18 members identified as retailers, we also spoke to 5 members who fell into one of four other member categories- Distributor, Informational, Manufacturer’s Rep, and Service membership. These members also provided insightful and useful information to the study. We combined the four categories into one for this table in order to preserve confidentiality of responses.

Table 3 Oregon HPBA Member Categories

Member categories	Population		Sample	
Distributor/Informational/ Mfr’s Rep/Service membership	7	15%	5	22%
Retailer /New member	40	83%	18	78%
Other	1	2%	0	0%
Total	48	100%	23	100%

As shown in Table 4, the majority of respondents, 57%, sold fireplaces from one physical location, while three vendors (13%) had two locations, one vendor (4%) had three locations, and one vendor (4%) had five locations. Five of our respondents did not have retail locations, because they variously worked as a manufacturers rep, distributor, or as an independent fireplace salesperson and consultant.

Table 4 Number of Store Locations

# of Locations	N	Percent
Zero*	5	22%
One	13	57%
Two	3	13%
Three	1	4%
Five	1	4%
Total	23	100%

*Respondents without retail stores. Includes distributors, manufacturer’s reps, and independents.



SECTION TWO: FINDINGS

VENDOR VIEWS ABOUT ENERGY EFFICIENCY

Customer Preferences and Interest

We asked hearth vendors several questions to get their perspective on the features customers want most when they purchase direct vent gas fireplaces. When asked to describe the most important factors to customers when they buy fireplaces, 74% of vendors said looks or aesthetics (see Table 5), similar to the 2009 study, where 70% also named looks/aesthetics. Respondents in 2013 said looks are not only one of the most important factors, but also the number one factor for most customers.

Vendors also frequently mentioned price as a key factor for customers (44%), fireplace heating capacity (30%, also characterized as size or square footage of the heating area), heating efficiency (22%), and warranty (9%). Individual comments included overall fireplace quality, turndown capability, and electronic ignition capability.

Two respondents who also sold to the builder market distinguished builder preferences from retail customer preferences. They said that for builders, price was the most important factor.

Table 5 Most Important Factors in Customer Purchases of Fireplaces

	N of Responses	Percent of 23 Respondents ²
Looks/Aesthetics	17	74%
Price	10	44%
Heating Capacity/sq footage/size	7	30%
Heating Efficiency	5	22%
Warranty	2	9%
Other (overall quality, etc)	3	13%

Vendors were then asked to rate how concerned customers were about the energy efficiency of the direct vent gas fireplaces they buy. Overall, vendors in 2013 rated customers as more concerned about energy efficiency than they did in 2009; the vast majority of vendors (83%) said their customers were very or somewhat concerned about energy efficiency compared to 74% who gave these ratings in 2009. In particular, the proportion of very concerned ratings rose steeply from 4% to 26% (see Table 6).

² Percentages add to more than 100% due to multiple responses from respondents.

Table 6 Vendor Ratings of Customer Concern about Direct Vent Fireplace Efficiency

	2009 Survey Percent (n = 23)	2013 Survey Percent (n = 23)
Very Concerned	4%	26%
Somewhat Concerned	70%	57%
Neutral ³ /Not Too Concerned	22%	13%
Not at All Concerned	4%	4%
Total	100%	100%

Promoting Energy Efficiency

As shown in Table 7, over half of vendors (57%) said they very actively promote high efficiency direct vent gas fireplaces to their customers, with 26% reporting they somewhat actively promoted them. The proportion of vendors saying they actively promote these high efficiency fireplaces has increased considerably since 2009 (from 69% to 83%).

Several active promoters commented that efficient gas fireplaces were the only fireplaces they sold. One respondent said, “We bring it up at every sale, and we keep bringing it up unless the customer says ‘we don’t want that.’” Another mentioned that they ran a heating/air conditioning business in addition to fireplace sales and partly because of that are always talking about efficiency with their customers. Other active promoters also said that high efficiency was the direction the market was going in.

Only 17% of vendors in 2013 (compared to 31% in 2009) said they did not actively promote high efficiency direct vent gas fireplaces. This group gave a variety of reasons for their ratings, including the greater importance of aesthetics to customers, and customer confusion about efficiency given the different standards. One vendor said that customers tended to be more familiar with furnace efficiency ratings – that they would recall furnace ratings in the 90% range and then would assume a P4 70% rating was not that efficient or would be confused by the rating.

Table 7 How Actively Vendors Promote High Efficiency Direct Vent Fireplaces

	2009 Survey Percent (n = 23)	2013 Survey Percent (n = 23)
Very Active	43%	57%
Somewhat Active	26%	26%
Neutral/Not Too Active	22%	13%
Not At All Active	9%	4%
Total	100%	100%

Defining Energy Efficiency

When vendors were asked how they define a high efficiency direct vent gas fireplace for customers, responses ranged from brief and specific to wide ranging [Please see Appendix B for verbatim responses]. Many vendors mentioned they referred to the manuals supplied with the fireplaces. Overall, though, comments seemed to be

³ Throughout the report, neutral ratings from the 2009 survey are combined with the not too concerned rating.



more specific and detailed than they were in the 2009 study, with fewer vendors saying that all fireplaces were about the same and with more promoting specific benefits of high efficiency direct vent gas fireplaces.

Vendors referred to ratings targets that they felt certain types of fireplaces should meet – such as “a standard zero clearance should be 75% or better,” or “we’re trying to get to 80% or above, that’s the general rule,” without being specific about the rating scale being discussed. One vendor said he would tell customers why direct vent was better and more efficient than the older B vent style. A few mentioned the complexities with at least three distinct rating systems out there, which could make things confusing for customers. Two vendors said high efficiency was easy to define since that was all they sold: “If you buy from us it will be high efficiency gas.” One vendor said he used a comprehensive overall approach, where the efficiencies per million BTUs of all heating options are discussed, including direct vent gas options along with hardwood, pellet stoves, propane, and electric heating alternatives.

CHARACTERISTICS AND USE OF DIRECT VENT GAS FIREPLACES

Standing Pilot Lights

As Table 8 shows, almost two thirds of vendors (65%) said that fireplaces with standing pilot lights constituted 15% or less of their direct vent gas fireplace sales. Several vendors made a point of saying that the trend in general was away from standing pilot lights and toward intermittent pilot ignitions (IPIs). One respondent said that while all of her fireplaces had a standing pilot option, they also had pilot on demand, which allowed customers to use the option that they preferred.

Table 8 Percent of Direct Vent Gas Fireplaces Sold with Standing Pilot Lights

	Response Total	Response Percent
15% of Sales or Less	15	65%
16% to 70% of Sales	4	17%
> 70% of Sales	4	17%
Total	23	100%

The trend away from standing pilot lights may be the biggest difference between this study and the 2009 study, when almost half of the vendors (48%) said direct vent fireplaces with standing pilot lights were 75% or more of their sales. Two respondents in 2013, however, said standing pilot lights were better in their area because IPIs allowed moisture to build up, which eventually caused problems with the unit. These respondents were on the low end of direct vent gas fireplace sales, each selling below 30 units in the previous year.

Table 9 below shows FE ratings, both averages and ranges, along with average reported prices, for three types of pilot lighting systems: standing pilot lights, pilot lights on demand, and intermittent pilot lights. Ratings results are shown only for those reported models that Energy Trust was able to identify in the Canadian EnerGuide rating system⁴.

Table 9 FE Ratings for IPI, Pilot on Demand, and Standing Pilot options

Pilot Light Type	Number	Mean FE Rating (%)	FE Ratings-Range	Average Price
Standing Pilot	10	61.6	50.6 to 66.1	\$2,245
Pilot on Demand	8	68.9	66.4 to 71.9	\$2,807
Intermittent Pilot	23	69.6	62.8 to 77.2	\$2,633
Total	41			

Table 9 results show the standing pilot lights received lower fireplace efficiency ratings than fireplaces with the pilot on demand and intermittent pilot light options. It also shows that more efficient models, on average, cost

⁴ The Canadian EnerGuide rating system has standard testing, so consumers can compare different fireplaces makes and models. It provides a “Fireplace Efficiency (FE) rating based on products tested and certified to the Canadian Standards Association (CSA) test standard P.4.1-02.” See http://oee.nrcan.gc.ca/publications/infosource/pub/home/all_about_gas_fireplaces_chapter3.cfm?attr=4 for more information.



\$400 to \$600 more than fireplaces with standing pilot lights. Consistent with anecdotal vendor input, higher-efficiency fireplaces tend to be more expensive in general.

Use of Direct Vent Gas Fireplaces as Major Heat Sources

We asked vendors to estimate what proportion of their customers planned to use their fireplaces to heat their homes 20 hours or more during the heating season. As shown in Table 10, results were similar to the 2009 study, with 74% of vendors in each year estimating at least half their customers would heat their homes 20 hours a week or more during the heating season with their gas fireplaces. As in 2009, intensive use of fireplaces for home heating was more prevalent outside of the Portland metro area. All vendors in the Willamette Valley, Southern Oregon, and Eastern Oregon areas said at least one-half of their customers would heat their homes 20 hours a week or more.

Table 10 Vendor Estimate of Proportion of Buyers Planning to Use Fireplace as Major Heat Source

	2009 Survey Percent (n=23)	2013 Survey Percent (n = 21)
One-quarter or less	9%	17%
One-quarter to one-half	17%	0%
One-half to three quarters	30%	39%
Over three-quarters	44%	35%
Total	100%	100%

SALES OF DIRECT VENT GAS FIREPLACES

Proportion of Fireplace Sales from Direct Vent Gas Fireplaces

We asked vendors what proportion of all fireplace sales came from direct vent gas fireplaces. As show in Table 11, the proportion of all sales from direct vent gas fireplaces has increased considerably since 2009. In 2013, 44% of respondents reported that over 75% of the fireplaces they sell are direct vent, compared with only 17% in this category in the 2009 study. This year, four vendors made comments such as, “they are virtually all we sell,” “they’re almost 100% of our fireplaces,” and “I think I’ve sold one B-vent fireplace in the last five years.”

Table 11 Percent of Fireplace Sales from Direct Vent Gas Fireplaces

	2009 Survey Percent (n = 23)	2013 Survey Percent (n=23)
25% or less	39%	13%
26-50%	31%	22%
51-75%	13%	22%
Over 75%	17%	44%
Total	100%	100%

Estimated Number of Direct Vent Gas Fireplaces Sold- 2012-2013 Heating Season

Based upon numbers from the respondents, the median number of units they sold in the 2012-2013 heating season was 80 (one-half of vendors interviewed sold more, one-half sold less). The average across respondents was 158, due to a small number of higher-selling vendors. About one third of vendors reported they sold 50 or fewer units during the last heating season, while half (50%) sold between 51-250 units, and 17% sold over 250 units.

If we extrapolate the respondent-reported average number sold to all 48 members listed in the Oregon HPBA member list, **the estimated total sales for the past heating season would be 7,584 direct vent gas fireplaces.** This **estimate** is a bit lower than the low end of the estimated sales range in 2009. A lower sales estimate is consistent with a number of respondents reporting sales had been slow in the past few years due to the economy. However, several respondents also said that sales are now beginning to come back.

Table 12 Number of Direct Vent Gas Fireplaces Sold- 2012-2013 Heating Season

	Number	Percent
50 or less	6	33%
51-250	9	50%
Over 250	3	17%
Estimated sales across population of 48 vendors= 7,584 units	18	100%

*5 respondents did not provide sales estimates

Top Selling Brands

When the introductory letter was sent to hearth vendors, they were asked to prepare for a survey question that would ask them for their top five selling direct vent gas fireplace models for the past heating season, along



with their specific model numbers and prices. The specific model numbers were important to this study because Energy Trust could then derive the level of efficiency of the fireplaces sold.

Nineteen (83%) of the 23 vendors supplied complete brand and model information, although some smaller shops did not have five top models. Among the others interviewed, one vendor was not able to provide product details, one provided brands only, and two others provided brands and model type (insert, zero clearance, free-standing), but not model number. Table 13 shows the percent of top brands across all top models given. This year, the dominant three brands mentioned were Travis (18%), HeatnGlo (17%), and Valor(14%). Twelve other brands were also mentioned, all at 9% or less of the total brands mentioned.

Table 13 Brands of Top Five Selling Direct Vent Gas Fireplaces

Brand	Number of Top 5 Mentions	Percent of Models
Travis	16	18%
HeatnGlo	15	17%
Valor	12	14%
Regency	8	9%
Monnesen	7	8%
Quadra Fire	6	7%
Enviro	5	6%
Empire	4	5%
Mendota	4	5%
Napoleon	4	5%
Avalon	2	2%
Lennox	2	2%
HHT	1	1%
Kozy	1	1%
Vermont Casting	1	1%
Total	88	100%

As **Table 14** shows, the top five brands were a large proportion of sales for vendors. On average, the top five brands constituted 72% of direct vent gas fireplaces sold. While the grouped proportions listed in the table are not precisely the same as they were in 2009, the overall average of 72% is exactly the same for both years.

Table 14 Proportion of Sales that Top 5 Brands Represent

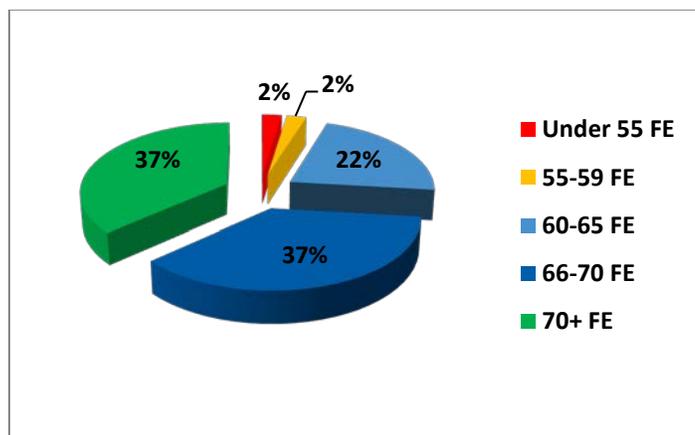
	2009 Survey Percent (n=22)	2013 Survey Percent (n=20)
Less than ¼ of sales	5%	10%
¼ to ½ of sales	18%	10%
½ to ¾ of sales	18%	25%
Over ¾ of sales	59%	55%
Total	100%	100%

Efficiency and Price of Top Selling Brands

When Energy Trust staff checked top selling model numbers for their fireplace efficiency ratings, they only were able to verify 45 of the 84 models listed (54%)⁵. This was further reduced to 41 models due to the same models being reported differently. Since the models that could be rated represent most brands, we used these 41 ratings to represent efficiency levels for all top models sold.

On average, the top-selling fireplaces have a 68% energy efficiency rating, higher than the 61% average efficiency rating found in the 2009 study. It also is clear that the proportion of high efficiency of direct vent gas fireplaces has risen since the 2009 study. In Figure 2 below, 37% were rated between 66 FE and 70 FE and another 37% were rated as 70+ FE. In 2009, only 19% received between 60 and 70 FE ratings and only 9% were rated as 70+ FE.

Figure 2 Proportion of Direct Vent Gas Fireplaces at Various Fireplace Efficiency Levels (N=41 Top Sellers)



Vendors provided prices for most of their top selling models. **Table 15** shows average and median prices by efficiency category where price was available. For those models we could match to efficiency ratings, average prices ranged from \$1,799 to \$2,666 and the prices rise with each level of efficiency. This progression is missing from the median prices, suggesting a few slightly higher priced models are drawing the averages up. The overall average price for the top selling models was \$2,581.

Table 15 Frequencies and Mean Price of Models at Select Efficiency levels

FE Rating	Number	Average Price	Median Price
<55	1	\$1,799	\$1,799
55-59	1	\$1,800	\$1,800
60-65	9	\$2,531	\$2,517
66-70	15	\$2,621	\$2,500
Over 70	15	\$2,666	\$2,542
Total & Overall Average	41	\$2,581	\$2,500

⁵ These are the same 41 models where the type of pilot light was available. One reason for the low rate of matching was that many models are not sold in Canada where fireplace efficiency ratings are mandatory. Lack of specificity in respondent model descriptions may have also contributed to the inability to match some models.



The table also shows a much higher proportion of models fell in the higher efficiency categories compared to 2009. For instance, 37% of top sellers in 2013 were rated in the highest FE category (70+) compared to 11% in 2009 in the highest FE category. Not surprisingly, prices are also higher in 2013 than in 2009. In 2009 the average price for 70+ FE models was \$2,193 compared to \$2,666 in 2013.

PRICE OF INSTALLING AND VENTING DIRECT VENT FIREPLACES

We asked vendors what the average costs were of venting and installing three different types of direct vent fireplaces: zero clearance, fireplace inserts, and free-standing fireplaces or stoves . Their responses are summarized in Table 16 below. Average prices did not vary greatly (\$975, \$838, and \$947, respectively), but price estimates did range widely within each category.

Based on vendor comments and the pricing estimates, costs to install and vent fireplace inserts were slightly less compared to the costs for zero clearance and free-standing fireplaces, for any given vendor. Several vendors made it clear that a number of factors could add to the cost of venting and installing and that the final number was highly variable. One vendor commented “It’s like asking how much is a car.” For example, if a consumer had to vent through an exceptionally high roof that would add to both piping and labor costs. Most vendors estimated labor costs plus kit prices, and some also made side comments on common extras such as gas lines, permits, and electrical work. Labor costs, when mentioned separately, ranged from \$100 to \$650 for basic installs without extras.

The average installation and venting price for a zero clearance fireplace was \$975. Just over one-quarter (26%) of vendors priced it between \$500 and \$750, 42% gave a range between \$751 and \$1000, and another 32% said the price would be between \$1,001 and \$1,500. Fireplace inserts on average came in lower at \$838, with 42% of vendors between \$500 and \$750, 42% between \$751 and \$1,000, and only 16% between \$1,001 and \$1,500.

Free-standing fireplaces and stoves on average were at \$947. Only 2 (11%) vendors cited costs between \$500 and \$700. Nearly two thirds of vendors (62%) came in at a price point between \$751 and \$1000. Another 26% said venting and installing costs for free-standing stoves would be between \$1,001 and \$1,500.

Table 16 Price of Installing and Venting Direct Vent Fireplace Styles

Zero Clearance Price	Response Total	Response Percent
\$500-\$750	5	26%
\$751-\$1000	8	42%
\$1001- \$1500	6	32%
Average Cost = \$975		
Fireplace Inserts Price	Response Total	Response Percent
\$500-\$750	8	42%
\$751-\$1000	8	42%
\$1001- \$1500	3	16%
Average Cost= \$838		
Free-Standing Stoves Price	Response Total	Response Percent
\$500-\$750	2	11%
\$751-\$1000	12	63%
\$1001- \$1500	5	26%
Average Cost= \$947		



PELLET STOVE SALES

Because of Energy Trust’s interest in renewable energy, we asked a question about the pellet stove market in this survey. As Table 17 shows, 43% of those interviewed sold small numbers of pellet stoves (10 or less), while 22% sold between 11 and 40 stoves, and 31% sold between 41 and 100 stoves. Three vendors mentioned that demand for pellet stoves had dropped in the last couple of years, resulting in lower sales for them. One vendor who sold none said they required extensive maintenance and were not popular with other vendors he knew for that reason. Another who sold two said they were not popular in an urban environment.

On average, 30 stoves were sold per vendor. If we extrapolate this average to all 48 vendors from the OHPBA list, **the estimated annual market for pellet stoves is 1,520 units per year.** This contrasts with the estimated direct vent fireplace sales of 7,584 per year.

Table 17 Number of Pellet Stoves Sold

	N	Percent
10 or less	10	43%
11-40	5	22%
41-100	8	35%
	23	100%
<i>Average sold across all vendors- 30</i>		
<i>Range of sales times population of 48 vendors: 1520 units</i>		

Appendix A: Introductory Letter



July 31, 2013

851 SW Sixth Ave. #1200
 Portland, OR 97204
 1.866.368.7878
 503.546.6862 fax
 energytrust.org

Name
 Business Name
 Street Address
 City, State, Zip

Dear Mr/Ms. _____,

Energy Trust of Oregon is asking for your help in an important study to help assess the market for direct vent gas fireplaces in Oregon. Oregon Hearth, Patio and Barbeque Association and Energy Trust are conducting this study with a select group of fireplace companies to find out what more we should do to encourage consumers to buy high efficiency models.

Energy Trust, a nonprofit agency dedicated to helping Oregonians be more energy efficient, currently offers up to a \$250 cash incentive to consumers when they buy certain high efficiency direct vent gas fireplace models. This study will help us decide if our current incentives are continuing to help encourage consumers to choose more efficient models, and also if more models should be covered.

While the interview is under 10 minutes and most questions need no preparation, we are asking each company to tell us their top five best-selling direct vent gas fireplace models for the 2012-2013 heating season. We would like the brand name, the model number and the price of these best sellers. These prices would be for the fireplace only; we'll ask for average installation costs separately. We need this information to help us calculate the current market for high efficiency models.

Within the next two weeks, The Cadmus Group, a research and consulting firm, will be contacting you on our behalf to gather your viewpoints. Your input is essential to the project's success and the results will benefit all Oregonians and your business. Please be assured all information you give us is confidential.

Many thanks and please do not hesitate to call Elaine Prause with any questions or concerns.

Sincerely,

G. Harvey Gail Executive Director
 OHPBA
 503.371.7457

Elaine Prause
 Senior Manager of Planning
 Energy Trust of Oregon
 503.459.4076



Appendix A: Interview Guide

Hello, my name is _____ and I'm calling on behalf of the Energy Trust of Oregon. You should have recently received a letter from the Energy Trust about research they are doing to better understand the market for direct vent gas fireplaces, including zero clearance fireplaces, fireplace inserts, and free standing fireplaces. [If needed, add: The Energy Trust of Oregon is an independent non-profit organization dedicated to helping Oregonians use less energy and invest in renewable energy so they save money and protect the environment.]

We are talking with a select group of fireplace vendors throughout Oregon. Energy Trust will use the results of this research to see if they need to expand their direct vent gas fireplace rebate program. My questions will take about 10 minutes and your responses are completely confidential.

1. When your customers buy direct vent gas fireplaces, what are the most important factors in their buying decision?
2. How concerned are customers about the energy efficiency of the direct vent gas fireplaces they buy? Would you say they are Very concerned, Somewhat concerned, Not too concerned, or Not at all concerned?
3. Please tell me why you gave that rating?
4. How actively do you promote high efficiency direct vent gas fireplace models? Would you say Very actively, Somewhat actively, Not too actively, or Not at all actively?
5. Please tell me why you gave that rating?
6. If customers ask for a high efficiency direct vent gas fireplace, how do you define "high efficiency" for them? (PROBE: Anything else you tell them about high efficiency?)
7. Of the direct vent fireplaces that you sell, what percentage has standing pilot lights? (on all the time)
%
8. About what percent of your direct vent gas fireplace customers plan to use these fireplaces to heat their homes 20 hours a week or more during the heating season? (If needed: This is our definition of a "major" heat source) %
9. What % of all your fireplace sales came from direct vent gas fireplaces? %
10. (If it helps: As mentioned in the letter. . .) Now I'd like to know your 5 best-selling direct vent gas fireplace models for the 2012-2013 heating season. Please tell me the brand, specific model

number, and price, not including vent and install costs, for each of these top five models. Note: Interviewer will have the following list available for reference as he talks to the fireplace vendors.)

	Brands from ETO website list	1=Tier 1 models only 2= Tier 2 models only 3=Tier 2 and 1 models
1	Ambiance Fireplaces	2
2	American Hearth	1
3	Archgard	2
4	Atra	1
5	Blaze King	3
6	Continental	1
7	Curve	1
8	Empire	3
9	Enviro	3
10	Fyrestarter	2
11	HearthStone	3
12	Heatilator	3
13	Heat-N-Glo	1
14	Jotul	3
15	Jotul/Scan	2
16	Kingsman	1
17	Kozy Heat	3
18	Lennox Hearth Products	3
19	Lexington Forge	1
20	Majestic	3
21	Majestic/Vermont Castings	3
22	Marquis Collection	1
23	Martin Hearth & Heating	3
24	Mendota	1
25	MHSC	2
26	Monnesen	1
27	Monnesen Hearth Systems	1
28	Montigo	1
29	Napoleon	1
30	Ortal	2
31	Quadra-Fire	3
32	Regency	3
33	RH Peterson CO.	2



34	Scan	2
35	Tasman	1
36	Travis Industries	3
37	Valor	3

	Brand	Model Number	LIST Price
1			
2			
3			
4			
5			

11. What % of total direct vent gas fireplace sales do these top 5 models account for? %
12. Please tell me the average cost to **vent and install a direct vent ZERO CLEARANCE FIREPLACE?**
 - a. Average cost
13. What about the average cost to **vent and install a direct vent FIREPLACE INSERT?**
 - a. Average cost
14. And the average cost to **vent and install a direct vent FREE STANDING FIREPLACE?**
 - a. Average cost
15. Energy Trust, as part of its interest in renewable energy, would like to know more about the pellet stove market. Could you please tell me how many pellet stoves you sold during this last (2012-2013) heating season?
16. Now just a few final questions. How many store locations you have?
17. And, finally, how many full time employees does your business have?

Thank you. Energy Trust really appreciates your help!

Person to Call with Questions: Elaine Prause at ETO 503 459 4076

Appendix B: Definitions of High Efficiency

Question 6- If customers ask for a high efficiency direct vent gas fireplace, how do you define 'high efficiency' for them? (PROBE: Anything else you tell them about high efficiency?)

1. Cascade Gas has published things listing the priority, so I have resources to refer to, depends on flame burn and igniter, if it doesn't produce heat you are burning gas and getting nothing from it .
2. We compare efficiency from manuals. It can mean different things to different people.
3. Good question- I look at manufacturers suggestions.
4. A lot of it is on the brochures now. I go off on whether it's a pan burner or two burner or if it's heat-rated, some aren't .
5. I talk about the direct vent technology and how it's more efficient not using the room air heat- because its simple and they immediately get it. You can get into a discussion about the heat reclaimer system and the baffle but for most people its 'deer caught in the headlights time' at that point.
6. I know they have changed the standard on whether it's a p4 or thermal efficiency, - depends on what it's been tested to, we say these are our most efficient units. Some are p4 rated, others are under 70%, the thermal efficiency percentage.
7. We're trying to get to 80% and above. That's the general rule. For direct vent that has been hard but most are meeting that now. We usually keep it to fed regulations ware.
8. That's pretty simple. Any fireplace we sell that is heater rated- we give them that rating. We make it clear if it is not heater rated high efficiency, that they know that so it's not a surprise.
9. I would say for a standard 0 clearance it needs to be 75% or better. For condensing units they can be pushing 90% efficiency or greater.
10. We tell them to compare the p4 ratings now. In the manuals or brochures. It sometimes happens they ask about ETO incentives for the fireplaces. A lot of people are familiar with it.
11. We go off the fireplace owners guides and provide the ratings listed there.
12. Just going to the energy ratings, if they are shopping around, the energy rating on the manuals or brochures - lets them know there are three different ways mfrs can list efficiency- AFUE, p4 Canadian, and steady state. Make sure they are comparing apples to apples. Once you get over 70% efficiency, unless you go to 90+ , like with the Mantis, they are basically condensing units, you are looking at roughly comparable units, they usually don't go above 75% and there's a quantum jump in price too. Huge price increase to go to 90+ . I pushed Mantis hard four years ago, was not able to sell them. If incentives substantially increased for them could help but they are almost double the cost of others.
13. I usually go to manuals and the efficiency is rated on there. Most customers don't go into it- they want a fireplace that looks good , is efficient, and puts out heat . If you have IPI, if you don't have the pilot on, you get fogging on the window. Moisture in the air will corrode the



<p>system. IPI is not that good here on the coast.</p>
<p>14. We talk about the efficiencies in the 75% to 85% realm, talk about the energy guide ratings vs the AFUE ratings, but we say that our brands are high in that area.</p>
<p>15. We just group all direct vent gas fireplaces into high efficiency, then go by the numbers provided by the manufacturer. Around 70% is the minimum but there are nuances. Gaining popularity is linear ultra modern fireplaces, but they have heat management issues. The tradeoff is looks, they might be 70% and a more traditional model with fan and louvers might be 80%. Looks are always a factor; it's in the family room, master bedroom, other media, all kinds of surroundings. If they were focused on efficiency they would look at 90+ percent which are boring as can be looks wise. Not always but that is part of the marketing battleground.</p>
<p>16. It's complicated with all the different regulatory options. We have direct vent fireplaces from all over the world. One from England originally, now (the manufacturer is based) in Canada. Gas always works, it's always efficient, but they have 4 or 5 different ratings in their brochures. Plus, there is not one thing that makes something efficient, its the whole unit. Canada Energuide rating, in their literature they also have the AFUE rating. Travis puts in their brochures 80% efficiency so we go beyond the ratings in some ways. I have a living experience with each of these models. Valor has the highest customer satisfaction, 20-30 years of useful life. Another one might have super high efficiency but only last 7-10 years. That's important.</p>
<p>17. We make sure the customer knows how imprecise the efficiency ratings are, none of them for instance measure radiant heat output, the Valor will output the most radiant heat and make you warmer even if the efficiency ratings are not as high as some other models. Also efficiency ratings do not tell the whole story, we know that as a company even though one of our senior people is on the Canadian P4 rating board and has been on there for years.</p>
<p>18. It's everything we sell. We don't dabble in cheap fireplace market - if you buy from us it will be high efficiency gas. The builder market is very small right now .</p>
<p>19. We talk about overall performance of the unit, the emissions, and do a comparison to wood or pellet (also efficient) we use the efficiency chart, look at cost per million BTUs, from one of the manufacturers, fuel comparison chart, wood, natural gas, pellets and propane. Hardwood provides 64% efficiency,. Pellets are at 85, Natural gas 80, Propane 80, Electric is at a 100%. A pilot light will burn 100 BTUSs an hour, we try to provide all this information.</p>
<p>20. For a fireplace, almost everything we sell is direct vent and high efficiency. We discuss the efficiency rating which is on the brochure as well as on the unit itself. (Also commented on Q7 that standing pilot lights have been and still are more reliable than electronic ignition, which has a high failure rate going back to the 80s- related to the amount of moisture that gets into the box where the electronics are located due to the on-again-off-again nature of the control. But the more it's on the lower the failure rate)</p>
<p>21. We go to the efficiency rating on the brochure, and talk about the higher efficiency ones, that's an area - most manufacturers are providing steady state numbers. Not p4 and we'd like to see ETO use those as well. Those are the numbers we go to, and it will be more efficient with an IPI valve, with no standing pilot light - but we do have certain customers who have heard about IPI valves and the problems that have gone along with them.</p>

22. That's a loaded question, there are too many options, AFUE , Canadian p4 , steady state, want to compare apples to apples, many of ours are 80% or higher on an AFUE efficiency rating. Standardized test that has been around a long time. Not all companies show the Canadian rating, because it doesn't meet the Energy Trust rating.

23. We have the facts- we rely heavily on what ETO puts out there as the baseline- we use that as our reference to how efficient an appliance is. We refer back to ETO standards, either Energuide or P4 baseline.