



Portland General Electric Company
121 SW Salmon Street • Portland, Oregon 97204
PortlandGeneral.com

January 17, 2013

Email / US Mail

puc.filingcenter@state.or.us

Oregon Public Utility Commission
Attention: Filing Center
550 Capitol Street NE, #215
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Salem OR 97308-2148

**Re: UM 1565 Investigation of Fuel Switching and Cross Fuel Energy Efficiency Issues
In the Matter of PORTLAND GENERAL ELECTRIC COMPANY'S
RESPONSE TESTIMONY**

Attention Filing Center:

Enclosed for filing in the above-captioned docket please find the following:

Original and five copies of Reply Testimony and Exhibits of:

- **Lauren Shapton (PGE / 100-105)**

These documents are being filed electronically with the Filing Center. Hard copies will be sent via US Mail. An extra copy of this cover letter is enclosed. Please date stamp the extra copy and return it to me in the envelope provided.

Sincerely,

Randall J. Dahlgren
Director, Regulatory Policy & Affairs

RJD:jlt
encl.

cc: UM 1565 Service List

**BEFORE THE PUBLIC UTILITY COMMISSION
OF THE STATE OF OREGON**

UM 1565

PORTLAND GENERAL ELECTRIC COMPANY

Response Testimony and Exhibits



Portland General Electric

January 17, 2013

BEFORE THE PUBLIC UTILITY COMMISSION
OF THE STATE OF OREGON

Investigation of Fuel Switching and Cross Fuel Energy Efficiency Issues

PORTLAND GENERAL ELECTRIC COMPANY

Response Testimony and Exhibits of
Lauren Shapton



Portland General Electric

January 17, 2013

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I. Fuel Switching Testimony

1 **Q. Please state your name and position with Portland General Electric (“PGE”).**

2 A. My name is Lauren Shapton. I serve as the Manager, in Customer Mass Programs, at
3 Portland General Electric (PGE). In this position, I am responsible for the marketing and
4 promotions activities undertaken by PGE in support of Energy Trust of Oregon (Energy
5 Trust or ETO) to help ETO meet PGE’s Integrated Resource Plan goals for energy
6 efficiency. From 2005-2008 and again in 2011, I was in charge of PGE’s Heat Pump
7 program.

8 **Q. Please describe your education and employment background.**

9 A. I have a Bachelor of Arts in Economics from Swarthmore College and a Master of
10 Business Administration from University of Michigan. I have been with PGE 18 years,
11 in Market Intelligence, Corporate Communications, Community Affairs, and Network
12 Meter Reading prior to my current role. Before coming to PGE, I worked for Kaiser
13 Permanente and Quaker Oats in marketing and marketing research roles, and for the
14 Philadelphia National Bank as an economic analyst.

15 **Q. Please provide a summary of your testimony?**

16 A. In this testimony I provide the following information:

- 17 • Background on PGE’s involvement in this docket;
- 18 • PGE’s comments on the relief sought in this docket and responses to the questions in
19 this docket; and
- 20 • PGE’s responses to Northwest Natural’s (NWN) testimony in this docket.

1 **Q. Does PGE support NWN's requests in this docket?**

2 **A.** No. As a policy matter, PGE opposes modifying the Energy Trust of Oregon's (Energy
3 Trust or ETO) incentive policy and practice for several reasons. We support the current
4 structure of administering energy efficiency in Oregon through the ETO including the
5 fuel neutral approach, deference to customer choice, and determinations about market
6 transformation and cost efficiency. PGE is dependent on the ETO's aggressive
7 acquisition of energy efficiency as our acknowledged Integrated Resource Plan (IRP)
8 counts on energy efficiency as our top priority resource to meet anticipated load growth
9 in our service territory.

10 As to the particulars, NWN has not made its case that the ETO incentives are
11 causing fuel switching.

12 **Q. Please elaborate.**

13 **A.** As noted in the ETO and Staff joint testimony in this docket, the Energy Trust provides
14 fuel-neutral technical information on efficiency options to customers, and allows the
15 customer to make decisions on fuel source.¹ Energy Trust programs have to be cost-
16 effective, that is, for 2013 Energy Trust is striving to bring in savings at ≤ 3.5 cents/kwh.
17 Energy Trust aims to incent the customer to make the choice to install a higher efficiency
18 option until the market has been transformed, meaning customers are buying the higher
19 efficiency option without an incentive.² The ETO does not limit incentives based on a
20 customer's equipment or fuel source used previously. We support that approach.

¹ Staff-ETO Joint Opening Testimony, Filed June 6, 2012, Exhibit 100, Johnson-Lacey p.2 at. 4-6

² ETO incentives were discontinued for high efficiency gas furnaces based on an analysis that most customers replacing gas furnaces were opting for high efficiency models regardless of ETO incentive. Id. P.4, 4-7.

1 **Q. Does PGE have a heat pump program?**

2 A. PGE had its own heat pump program from 2005-2011, but since early 2012 has not had a
3 separate program, and instead has supported Energy Trust's heat pump goals. For 2012,
4 the Energy Trust goal, in PGE's service territory, was the installation of 2,000 high-
5 efficiency heat pumps.

6 **Q. What is the recent history of PGE's heat pump program?**

7 A. In 2005, PGE reviewed the space heating and water heating market in our service
8 territory and learned the following:

- 9 • The company's residential appliance saturation studies (RASS) showed a decrease in
10 electric space heat and water heat penetration in the single family market, and a rise
11 in installations of central air conditioning.
- 12 • Satisfaction surveys showed that customers with heat pumps were often very satisfied
13 with them, but in general market perceptions of heat pumps were negative.

14 PGE decided to create a heat pump program to counteract unfavorable market
15 perceptions. The program from 2005-2009 offered customers a \$200 rebate for
16 installation of a standard efficiency or better heat pump if the previous heating system
17 was not gas (that is, electric, wood or oil).

18 In 2009, the company decided to cease offering a direct rebate to customers,
19 instead allowing PGE-certified contractors to offer a rebate. Direct communications were
20 sent to single-family homeowners in areas with high electric heat penetration, but from
21 about 2008 on they were not "scrubbed" to remove customers listed in PGE's Customer
22 Information System as having gas heat.

1 In 2011, PGE decided to terminate its heat pump program, and instead focus on
2 supporting PGE's IRP through the Energy Trust's heat pump goals, starting in 2012.

3 **Q. What types of marketing of heat pumps has PGE done since the end of 2011?**
4 **Specifically to whom is PGE marketing heat pumps now?**

5 A. Since the end of 2011, PGE promoted heat pumps to its customers who do not have
6 natural gas heating. Unfortunately, a series of 3 direct mail pieces went to gas-heated
7 customers, and in 7,000 cases, customers received more than one communication piece,
8 contrary to PGE's intent. Because of the errors, the costs for these direct mail pieces
9 were paid for by PGE shareholders.

10 Since May 2012, PGE has had a more robust process for drawing direct mail lists,
11 including a standard request sheet, list order confirmation and "buddy checks." During
12 the remainder of 2012, PGE ran several joint promotions with Energy Trust on heat
13 pumps to electrically-heated homes, including a very successful ductless heat pump
14 promotion to customers whose home age and size suggested they were likely to have
15 electric resistance heat. PGE staff has worked with Energy Trust to inspect heat pump
16 installations in PGE service territory to assure new heat pump installations are high
17 quality and will operate efficiently.

18 **Q. Could gas heat customers receive PGE's heat pump marketing materials?**

19 A. They could. While our intent is not to market heat pumps to gas heat customers, as noted
20 above, we do use our customer newsletters, the web, advertising, and other avenues to
21 publish the benefits of heat pumps. Gas heat customers who are also PGE electricity
22 customers, in accessing our website or reading their bill insert, may see promotions for

1 heat pumps. Having said that, as we detail later, we note in the marketing materials that
2 these are intended for electric heat customers.

II. Issue 1, Part 1: “What are Energy Trust’s policies and practices regarding residential fuel switching related to space conditioning?”

3 **Q. Does PGE support the Energy Trust’s policies and practices regarding fuel**
4 **switching?**

5 A. Yes. PGE supports current Energy Trust policies and practices regarding fuel switching
6 as detailed in the joint Staff-ETO testimony and ETO testimony submitted in this docket.
7 In the case of space heating, PGE believes a \$250 incentive on a ~\$5,000 purchase will
8 not influence the overall choice of fuel, but can influence a customer to install a high-
9 efficiency heat pump over a standard efficiency heat pump.

10 **Q. Does PGE prefer that customers choose a high-efficiency rather than standard**
11 **efficiency heat pumps?**

12 A. Yes. PGE prefers higher efficiency heat pumps when heat pumps are installed. PGE’s
13 IRP has designated energy efficiency the preferred resource.³ Higher efficiency heat
14 pumps help meet IRP goals and also benefit PGE and its customers in reducing overall
15 peak demand in summer and winter.⁴ Standard efficiency heat pumps generally result in
16 higher seasonal peak demand compared to high-efficiency heat pumps.

³ PGE’s Acknowledged IRP includes all energy-efficiency measures deemed achievable by the ETO — 183 average MWs — which PGE expects will meet nearly half of its load growth through 2020. PGE 2012 IRP Update, Nov. 21, 2012 at 10.

⁴ When properly installed, an air-source heat pump can deliver one-and-a-half to three times more heat energy to a home than the electrical energy it consumes. <http://energy.gov/energysaver/articles/air-source-heat-pumps>. (U.S. Dept. of Energy, “air Source Heat Pumps.” Retrieved January 15, 2013.

III. Issue 1, Part 2: “What outreach and messaging does Energy Trust engage in related to this type of fuel switching,” i.e., residential fuel switching related to space conditioning?

1 **Q. In response to NWN’s concerns regarding marketing to gas heat customers, when**
2 **PGE has promoted heat pumps jointly with Energy Trust, does the Company tailor**
3 **its outreach and message?**

4 **A.** Yes, as mentioned earlier, starting in 2012 PGE aligned its heat pump program with the
5 ETO goals for PGE’s service territory. Direct communications from PGE since
6 May 2012 have been targeted to customers listed in PGE’s Customer Information System
7 as having electric heat. NWN in its testimony (Edmonds/13) quotes two PGE
8 communications as evidence of using the ETO incentive in a way not intended by the
9 Energy Trust or the Commission—encouraging gas customers to switch to electricity.

10 However, their quotes are taken out of context as can be seen in NWN
11 Exhibit 103, Edmonds/11 and Edmonds/15.⁵ Immediately before the sentence excerpted
12 from PGE’s August 6, 2011 customer letter in NWN’s testimony the letter says “Ductless
13 heat pumps can completely replace your *electric baseboard heaters, wall-mounted*
14 *heaters or electric furnace*, with no back-up heat source needed.” (Emphasis added).

15 Similarly, in quoting PGE’s October 3, 2012 customer letter (NWN Exhibit 100,
16 Edmonds/13) in its testimony, NWN omits the following which evidences PGE’s more
17 tailored approach: “Cut energy waste by replacing your *electric baseboard, wall-*
18 *mounted or ceiling heaters*,” (Emphasis added) and the accompanying brochure

⁵ NWN Exhibit 103, Edmonds/11 is PGE’s August 6, 2012 letter. NWN Exhibit 103, Edmonds/15 is PGE’s October 3, 2012 letter.

1 headline states “It’s the smart choice for replacing costly *electric baseboard, ceiling and*
2 *zonal heaters.*” (Emphasis added).⁶

3 **Q. What about PGE’s newsletters?**

4 A. NWN has complained that when PGE puts heat pump information in its newsletters, gas-
5 heat customers get the communication. PGE’s newsletters have followed the same
6 communication messaging, comparing savings and benefits on an electric-to-electric
7 basis. For example, here is the copy for August 2012 Home Connection⁷ electronic
8 newsletter as it concerns heat pumps:

*Is a heat pump right for your home?
If you have electric heat and want to save energy, take our quiz to see if a heat pump is a
smart solution for you.*

IV. Issue 2: “Is fuel switching actually occurring?”

9 **Q. To what degree does PGE believe fuel switching is occurring?**

10 A. We have not seen any evidence of anything other than minimal fuel switching among
11 customers. PGE does not track nor attempt to track specific instances of fuel switching
12 except through the 2008 Residential Appliance Saturation Study (RASS).⁸ The RASS,
13 released in response to a NWN data request, showed less than 1% of customers surveyed
14 reported replacing a gas furnace with a heat pump.

⁶ NWN Exhibit 103, Edmonds/16. PGE Response to NWN DR No.1.

⁷ See PGE Exhibit 101.

⁸ PGE’s RASS was conducted by mail of 3400 residential customers fall 2008.

1 According to the Energy Trust's program data, the Energy Trust incented 1,440
2 heat pumps installed in homes which previously heated with gas from 2003-2011.⁹ Two
3 additional pieces of data add important context:

- 4 • The total number of incentives Energy Trust provided for heat pumps in the period
5 was 9,443; 15% of all Energy Trust heat pump incentives went to customers who
6 previously heated with gas.¹⁰
- 7 • Energy Trust incented 2,482 gas furnaces on homes that previously heated with
8 electricity over the same period; 6% of Energy Trust gas furnace incentives went to
9 homes that previously heated with electricity.¹¹

10 It would seem that a better way of characterizing the data would be to say that a
11 small minority of customers switches heating fuels and that switching goes in every
12 direction except possibly customers switching to oil as a heating fuel. The data do not at
13 all support an assertion that Energy Trust incentives are causing these switches.

14 **Q. NWN claims that the ETO heat pump incentive operates as a significant selling**
15 **point for contractors when they seek to install a heat pump at a gas customer's**
16 **home. How do you respond to this?**

17 **A.** We disagree. When asked in CUB's data requests for evidence of this, NWN responds
18 that its conclusion is based on conversations and anecdotes and is not documented. See
19 PGE Exhibit 103.

⁹ Staff-ETO, Johnson-Lacey, Exhibit 105, Updated March 5, 2012 in ETO to Staff memo noting 2011 figure was 173, not 117.

¹⁰ Staff-ETO, Johnson-Lacey, Exhibit 105.

¹¹ See PGE Exhibit 102. This page is an excerpt (page 13) from a series of ETO data responses dated October 26, 2011 to OPUC Staff, Juliet Johnson.

1 **Q. What is PGE’s response to data provided by NWN on city/county-issued mechanical**
2 **permits for residential heat installations?**

3 A. PGE does not believe the data provided by NWN offer any conclusive evidence
4 regarding the frequency with which existing residential customers are switching from gas
5 heating systems to heat pumps. Based on a sample of the 136 page listing of permits¹²
6 from a variety of jurisdictions NWN provided in response to a POE data request, both
7 within and without the ETO-served areas, it appears that NWN may have assumed fuel
8 switching occurred any time a current NWN customer purchased a heat pump, even if the
9 customer’s previous heat source was not gas or unknown. In only some cases did the
10 permit reference the previous fuel source for heating. In several cases, rooftop units were
11 referenced, suggesting commercial installations. In still other cases, permits identify
12 “lots” which suggests new construction. It is unclear whether NWN counted these as fuel
13 switching. Moreover, since the jurisdictions surveyed included areas not served by
14 Energy Trust,¹³ the data cannot support an assertion that Energy Trust incentives are
15 influencing any outcome.

16 **Q. While NWN expresses concern about increasing costs to the energy system as a**
17 **whole and increases to peak loads, does NWN do promotions to encourage**
18 **customers to install central air conditioning?**

19 A. Yes. While the economics of fuel switching is not within the scope of the docket, we
20 think it important to note NWN’s inconsistencies when it comes to concerns about costs

¹² This information is based on NWN response to PGE data request 007. NWN marked the document “highly confidential” so it is not attached as an exhibit.

¹³ The NWN permits survey includes Salem, part of which is served by Salem Electric, and areas of Washington County served by Western Oregon Coop.

1 to the energy system as a whole. In response to a PGE data request,¹⁴ NWN
2 acknowledged its air conditioning incentives, noting they are paid by shareholders. Air
3 conditioners increase electric peak loads.

4 **Q. Does PGE promote air conditioners?**

5 A. No, air conditioners contribute to peak demand on our system. If our customers desire air
6 conditioning, our first message is encouraging high-efficiency units. For example, see
7 PGE's website:

[http://www.portlandgeneral.com/residential/energy_savings/
heating_cooling/ventilation_air_conditioning.aspx](http://www.portlandgeneral.com/residential/energy_savings/heating_cooling/ventilation_air_conditioning.aspx)

V. PGE response to Issue Number 3

8 **Q. Does PGE support modifying Energy Trust policies or practices or ratepayer**
9 **funded messaging?**

10 A. No. As we have stated, we support the ETO's policies and practices.

11 **Q. With regard to PGE's described messaging and outreach, is it paid for with**
12 **ratepayer funding?**

13 A. As described above, since April 2012, PGE's heat pump promotions have been paid
14 through Schedule 110, PGE's SB838 retained funds, and these are ratepayer funds. Prior
15 to April 2012, PGE paid for all heat pump promotions and communications through
16 shareholder funds.

¹⁴ Attached as PGE Exhibit 104.

1 **Q. Does the ETO provide heat pump incentives to gas heat customers?**

2 A. Yes. As cited in the ETO testimony, the Energy Trust website mention of heat pump
3 eligibility states that heat pumps must be used as the primary heat source and backup
4 systems do not qualify for an incentive.¹⁵

5 **Q. NWN has indicated they would prefer incentive “parity,” that is Energy Trust**
6 **should incent both gas and electric heating and water heating systems. Would that**
7 **be more fair?**

8 A. NWN is proposing what may look like a tactical solution, but in fact has policy
9 implications. Incentives are offered in the market to encourage customers to choose
10 higher efficiency equipment than they would otherwise. So, for example, a customer
11 choosing a high-efficiency heat pump might pay from \$500-\$1500 more for that heat
12 pump than one that meets minimum code standards. The incentive pays a fraction of that
13 difference, in the case of Energy Trust incentives, \$250 or \$450 depending on previous
14 heating system.

15 When customers tend to make the efficient decision on their own, the market is
16 considered transformed. Offering incentives after the market is transformed has negative
17 public policy implications as all customers would be funding unnecessary incentives, and
18 less funding would be available to incent energy efficiency measures that may not
19 otherwise occur. While the docket is specifically not examining the economic harm
20 arguments NWN made earlier, this is a different kind of economic harm their proposed
21 remedy could cause.

¹⁵ ETO Response Testimony, Lacey at 6, filed January 10, 2013.

1 **Q. NWN has cited two studies that they claim support their argument that “it would be**
2 **more economical for gas customers to heat their homes with gas rather than switch**
3 **to electric heat pumps.” Does PGE agree with conclusions made by NWN regarding**
4 **the studies referenced?**

5 A. No. While PGE did not intend to address economic aspects of fuel switching since it is
6 outside the ALJ-ordered scope of this docket, the issue was discussed in NWN’s
7 testimony, so PGE will briefly respond.

8 First, NWN distorts the NWPPC’s study¹⁶ conclusions. On page 18 of the study, it
9 states: “[m]oreover, as in prior Council analysis, this study again found that from a
10 consumer perspective the economic selection of residential space conditioning and water
11 heating systems is highly dependent upon the gas and electric rates of individual
12 consumers. Electric rates, and to some extent gas rates, vary widely across the region.
13 The optimal choice therefore depends on the utility and the climate.” PGE shared
14 NWN’s summary of NWPPC’s study with Tom Eckman, one of the study’s authors.
15 Eckman’s response was as follows: “Bills [sic] summary isn’t quite correct. We found
16 that the switching to gas was generally only economical 1) where gas was available and
17 2) for water heating, not space heating.” Eckman’s statement is attached as PGE
18 Exhibit 105.

19 With regard to the Forefront study, since it has not been submitted into the docket,
20 PGE can only comment on the draft copy shared in the fall of 2011. PGE notes that one
21 key conclusion was based on data from a sample size of 4 heat pumps, much older and
22 less efficient than ones currently being installed.

¹⁶ Direct Use of Natural Gas: Economic Fuel Choices from The Regional Power System and Consumers Perspective, available at: <http://www.nwcouncil.org/library/2012/2012-01.pdf>.

1 **Q. Contrasted with NWN's economic claims, has PGE conducted any further**
2 **evaluation of the economic impacts of gas furnace versus heat pump installations?**

3 A. Yes. Our study reaches a different conclusion but I am going to refrain from further
4 discussion as the economic issues are beyond the current scope of the docket.

5 We would suggest that there can be compelling cases made for both heat pumps
6 and gas furnaces in residential installations, and allowing the customer, rather than the
7 ETO or the Commission, to choose is the best policy. We also endorse continuing ETO's
8 ability to incent higher efficiency models in markets not yet transformed to encourage
9 customers to choose high-efficiency models of whatever devices they desire.

10 **Q. Does this conclude your testimony?**

11 A. Yes.

Is a heat pump right for you?

Learn the basics, and take our quick quiz.

If you have electric heat, you might want to consider a heat pump, which is a great heating and cooling choice in our mild climate. Heat pumps are extremely energy efficient because they transfer heat rather than create it.

Year-round solution

In summer, a heat pump operates like an air conditioner. It pumps heat outside and circulates cooler air to keep you comfortable. In winter, it collects heat from outdoor air and brings it inside. A heat pump can cut winter heating bills by up to 60 percent.*

Styles for any home

There are heat pumps for homes with ductwork, as well as ductless systems that are great for homes without ductwork and offer flexible heating and cooling for different rooms.

Take our heat pump quiz

Answer “true” or “false” to these statements to help you decide if a heat pump might be smart solution for your home:

I have electric zonal heat (baseboard heaters, wall heaters, etc.), an older heat pump or electric furnace.

My home is too hot in summer or too cold in winter.

I’d like to save on my electric heating costs.

I’d like to update to a more energy-efficient heating system and also add cooling.

Since I have baseboard heaters, I don’t have any ductwork.

If you answered “true” to any of these statements, you owe it to yourself to learn more about heat pumps.

Special savings offer

Right now, you can get up to \$1,200 in rebates, tax credits and cash incentives, plus a MasterCard gift card valued up to \$1,250, when you install a qualifying heat pump system. Learn more about our [Heat Pump Offer](/residential/energy_savings/heating_cooling/heat_pumps/special_offer.aspx "Heat Pump Offer").

*Compared to electric heating, such as an electric furnace or baseboards. Savings on ducted homes is up to 40 percent; savings on homes without ducts is up to 60 percent. Individual circumstances will vary. Ask the PGE Energy Experts or your contractor for more information.



10/26/11

Below are Energy Trust's responses to OPUC questions received on October 12 regarding follow-up items concerning NW Natural's fuel conversion proposal. These questions were raised by staff as an outcome of the OPUC meeting on this matter held on September 22. This is a complete set of responses to questions 1-10 inclusive of those sent on October 19.

- 1. In how many instances in the past years have customers received incentives for heat pumps who previously had gas furnaces?**
 - a. How much incentive money was given for these?**
 - b. How much savings were realized based on these?**
- 2. In how many instances in the past years have customers received incentives for heat pumps who previously had other electric heat sources?**
 - a. How much incentive money was given?**
 - b. How much savings was realized based on these?**

See the tables below that summarize the number, savings, and incentives provided for heat pumps, by previous heating system fuel and year, with 2011 results as of 10/14/11. For comparison, similar results are provided for gas furnaces and gas through the wall heaters in the Appendix at the end of this document. Energy Trust also provides incentives for efficient gas hearths, but incentives for these are not currently tracked by prior heating system fuel. The number of efficient gas hearths that receive incentives is several orders of magnitude larger than the number of gas through the wall heaters.

Also included below is a table of co-op advertising dollars provided to Trade Allies over time and the allocation of those dollars by utility. This is in response to NWN's question 4b, as submitted to Energy Trust.

Count of Heat Pumps Incented by Prior System Heating Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Electric	0	80	359	758	865	1,161	1,377	1,467	835	6,902
Gas	0	6	41	94	221	261	329	315	117	1,384
Other ¹	0	7	31	59	95	277	135	105	56	765
N/A ²	11	44	133	83	18	23	15	20	45	392
Total	11	137	564	994	1,199	1,722	1,856	1,907	1,053	9,443

Percentage of Heat Pumps Incented by Prior System Heating Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Electric	0%	58%	64%	76%	72%	67%	74%	77%	79%	73%
Gas	0%	4%	7%	9%	18%	15%	18%	17%	11%	15%
Other ¹	0%	5%	5%	6%	8%	16%	7%	6%	5%	8%
N/A ²	100%	32%	24%	8%	2%	1%	1%	1%	4%	4%

Sum of Heat Pumps Savings (kWh) by Prior System Heating Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Electric	0	83,200	284,751	838,166	780,703	978,466	1,440,556	1,446,271	1,147,738	6,999,851
Gas	0	6,240	33,531	75,401	107,980	126,697	157,886	169,113	32,502	709,350
Other ¹	0	7,280	24,490	46,610	47,971	140,981	66,181	45,026	37,783	416,322
N/A ²	11,440	45,760	105,070	76,365	8,276	14,486	9,121	15,662	34,540	320,720
Total	11,440	142,480	447,842	1,036,542	944,930	1,260,630	1,673,744	1,676,072	1,252,563	8,446,243

Percentage of Heat Pumps Savings by Prior System Heating Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Electric	0%	58%	64%	81%	83%	78%	86%	86%	92%	83%
Gas	0%	4%	7%	7%	11%	10%	9%	10%	3%	8%
Other ¹	0%	5%	5%	4%	5%	11%	4%	3%	3%	5%
N/A ²	100%	32%	23%	7%	1%	1%	1%	1%	3%	4%

Sum of Heat Pumps Incentives (\$) by Prior System Heating Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Electric	\$ -	\$ 16,000	\$ 73,400	\$ 194,800	\$ 242,500	\$ 301,200	\$ 411,950	\$ 459,700	\$ 267,400	\$ 1,966,950
Gas	\$ -	\$ 1,200	\$ 8,400	\$ 19,000	\$ 40,400	\$ 47,150	\$ 72,850	\$ 77,350	\$ 28,400	\$ 294,750
Other ¹	\$ -	\$ 1,400	\$ 6,200	\$ 11,800	\$ 17,600	\$ 51,400	\$ 28,400	\$ 25,450	\$ 14,750	\$ 157,000
N/A ²	\$ 2,200	\$ 8,800	\$ 26,900	\$ 16,400	\$ 2,800	\$ 4,900	\$ 3,100	\$ 5,950	\$ 11,700	\$ 82,750
Total	\$ 2,200	\$ 27,400	\$ 114,900	\$ 242,000	\$ 303,300	\$ 404,650	\$ 516,300	\$ 568,450	\$ 322,250	\$ 2,501,450

Percentage of Heat Pumps Incentives by Prior System Heating Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Electric	0%	58%	64%	80%	80%	74%	80%	81%	83%	78.6%
Gas	0%	4%	7%	8%	13%	12%	14%	14%	9%	11.8%
Other ¹	0%	5%	5%	5%	6%	13%	6%	4%	5%	6.3%
N/A ²	100%	32%	23%	7%	1%	1%	1%	1%	4%	3.3%

Notes:

* 2011 results to date as of 10/14/2011

1. Other includes oil and wood fuels.

2. N/A includes fields left blank or otherwise indiscernible values.

Coop Advertising Expenditures by all Energy Efficiency Sector Trade Allies

	PGE	PAC	NWN	Cascade	Total
2007	47%	32%	20%	1%	
2008	48%	29%	22%	1%	
2009	49%	30%	20%	1%	
2010	49%	32%	18%	1%	
2011 YTD	47%	34%	17%	2%	
2007	\$1,861	\$1,267	\$792	\$40	\$3,959
2008	\$4,139	\$2,501	\$1,897	\$86	\$8,623
2009	\$6,548	\$4,009	\$2,673	\$134	\$13,364
2010	\$5,926	\$3,870	\$2,177	\$121	\$12,094
2011 YTD	\$8,394	\$6,072	\$3,036	\$357	\$17,859
Total	\$26,868	\$17,719	\$10,575	\$738	\$55,899

3. If in 2012 and going forward, if people who had gas furnaces were no longer eligible for heat pump incentives, what would the estimated impact be to savings, budget? (i.e., how many low efficiency heat pumps would go in and what savings would be lost, etc)

Within the existing homes program, there are three main heat pump incentives available to customers:

- a) ductless heat pump – available only to customers with electric resistance
- b) heat pump replacement – available only to customers who are replacing an electric furnace, baseboard, wall heater, or ceiling heat
- c) heat pump upgrade – available to customers upgrading an existing heat pump or replacing a non-electric heating source

Of these three incentives, customers with an existing gas furnace as the main heating source are only eligible for the heat pump upgrade incentive of \$250. This incentive is designed to encourage people who have already made the decision to purchase a heat pump to buy a more efficient unit – thus the smaller incentive (\$250) relative to the heat pump replacement (\$450) and ductless heat pump (\$600) measures.

While it is difficult to estimate the future impact of removing an incentive, especially in the context of potentially expiring federal and state tax credits for efficient heating equipment, it is possible to look at the recent history of the heat pump upgrade incentive at Energy Trust to attempt to form a basis of understanding. For example, in the last twelve months of program activity, Energy Trust has issued about 1100 incentives for the heat pump upgrade in the existing homes program. Of these, a little over 200 were for customers replacing a gas furnace.

If people with gas furnaces were no longer eligible for the incentive to upgrade from a standard to more efficient heat pump, the savings impact would be about 100,000 annual kWh, assuming similar activity to what has occurred over the last twelve months. Likewise, the amount of incentives that would have otherwise been paid to move people from a baseline heat pump to an efficient option would about \$52,000.

4. If in 2012 and going forward people with gas heat were no longer eligible for heat pump incentives, what does the ETO see as practical implications / challenges of making this change?

Before such a policy would be implemented, several clarifications would need to be made concerning the extent to which fuel switching was prohibited. For example, are solar water heat incentives allowed so long as the backup system is the same fuel? Larger multifamily buildings may present situations where there is an opportunity to retire old boilers or resistance heat systems with more efficient options that may involve fuel switching. Homes where oil, propane, or wood is the primary heating fuel also deserve consideration. All possible systems and equipment types impacted by the new policy would need to be identified.

Once these clarifications are made, significant time and expense would be required to develop and define new program rules. Training materials would be developed for program staff, PMCs, vendors and trade allies. A communication strategy would also be developed, including the modification of existing program forms and marketing collateral explaining the new restriction(s). This would include written materials, website language, eligibility and promotional language, customer service training, and trade ally training. Additional time and expense would be required to ensure compliance in the processing of incentives. An enforcement strategy would be defined, and resources may need to be devoted to quality control with identified consequences for violations. Customer complaint resolution processes would also need to be developed, including exception and escalation procedures.

These new policies and procedures would be presented to our Conservation Advisory Council, Board, and the utilities—both those we serve as well as surrounding public utilities so they can help with messaging. For all utilities, again including both those we do and do not serve, discussions would need to take place about the consistency of the new policy with their own, individual promotions, some of which are shareholder funded. Conflict may arise with utility-funded promotion of heat pumps or gas furnaces with air conditioning, and coordinating with POU/COUs may prove to be difficult.

There may be some impact on Clean Energy Works Oregon, and efforts would need to be made to monitor the impact of the new policy.

If the policy changes subsequently due to changes in fuel prices, avoided costs, technological advances, or other reasons, changes to the policy would result in further confusion, frustration, and reduced customer and contractor engagement.

- 5. Besides the political issues of having to work with both electric and gas utility companies, what does the ETO see as the practical implications / challenges associated with actually developing programs and incentives that fully and dynamically address cross-fuel energy efficiency issues and treat fuel switching as an efficiency measure.**

Implementing a policy to encourage fuel switching presents numerous technical, logistical, and financial challenges. Currently, measures are evaluated from the standpoint of a baseline with the same fuel. This makes considering potential efficiency measures fairly straightforward. Adding fuel switching as a consideration would require separate analyses for the various pre-existing systems and conditions possible at a site. At times, the characteristics of a site including the size, whether it already has ducting, and other factors may make one solution cost-effective for some sites but not others that would be served by the same program. This would add a great expense to our measure research and evaluation process.

Our calculation of avoided costs would necessarily be more complex, as the 10% credit for efficiency measures and hedge value of efficiency would not be present when load is being added to one utility. This would mean that two sets of avoided costs would need to be developed and programmed into a new cost-effectiveness calculator which could account for fuel switching on its own or in addition to efficiency measures. The complexities would likely necessitate more complicated incentive structures.

Challenges also exist on a broader level. Volatility of energy prices may lead to quick shifts in policy, causing market confusion and frustration, as well as the expense of re-evaluating measures. Technological advances may require a shift in policy. Long term planning and IRP work with the utilities is further complicated. Program participants may implement weatherization measures one year, but during subsequent years switch their heating system fuel, negating the measure savings lifetime we have previously claimed for the original utility. Separate revenue for fuel switching programs would need to be negotiated and tracked.

As mentioned in the response to question #4 above, coordination with utilities may prove challenging due to their own shareholder-funded equipment incentives, as well as in areas where consumer- or municipally-owned utilities exist. Many of the same program development, customer service, and communication processes discussed above would also be required if Energy Trust that encourage fuel switching.

6. If the PUC were to direct the ETO to treat fuel switching as an efficiency measure, how would the ETO propose to do cost effectiveness tests? How would you implement programs?

Some of the complexities associated with cost-effectiveness tests where fuel switching is treated as an efficiency measure are addressed in the response to question #5 above. A full proposal on how to approach cost-effectiveness would ultimately require coordination and agreement with the utilities—again, both those we do and do not serve—on the costs and benefits with moving load from one fuel to another, and would also need to be informed by the questions around IRP planning, the volatility of energy prices, and the persistence of savings also discussed above.

The California Standard Practices manual may also provide some guidance on how to approach cost-effectiveness in fuel switching. It says the following

For fuel substitution programs, benefits include the avoided device costs and avoided supply costs for the energy, using equipment not chosen by the program participant.

The costs in this test are the program costs paid by both the utility and the participants plus the increase in supply costs for the periods in which load is increased. Thus all equipment costs, installation, operation and maintenance, cost of removal (less salvage value), and administration costs, no matter who pays for them, are included in this test. Any tax credits are considered a reduction to costs in this test. For fuel substitution programs, the costs also include the increase in supply costs for the utility providing the that is chosen as a results of the program

The complications and approach to implementing programs have also been discussed at length above. It is likely that these programs would need to be funded, tracked, and evaluated separately but would need to be integrated with our existing programs.

7. How much savings is the ETO currently claiming per year for furnace market transformation?

Based upon the findings of the gas furnace market transformation study that was completed in August, 2009 by Summit Blue Consulting (now Navigant Consulting), Energy Trust claims different levels of savings each year. The table below summarizes the annual savings to be claimed by Energy Trust for gas market transformation. As was presented to the CAC in October 2009, it was Energy Trust's intent to claim savings for gas furnace market transformation as determined by the Low Case scenario from Summit Blue's analysis and report.

The difference between what was claimed in 2010 and the low case is attributable to additional savings from working within the low income sector that was not included in the report. The discrepancy between what is being claimed in 2011 and is in the budget for 2012 and 2013 is a reduction of 25% of the low case savings due to the lack of economic recovery within the state of Oregon. In addition, Energy Trust is currently planning a follow-up study that will track the penetration of high efficiency furnaces within its service territory during 2010 and 2011.

Annual Reportable Therms for Gas Furnace Market Transformation			
Year	Summit Blue Low Case Savings	Summit Blue High Case Savings	ET Claimed or Budgeted Savings
2010	202,550	560,619	230,000
2011	96,143	517,223	72,107
2012	11,760	471,234	8,820
2013	11,760	422,500	8,820
2014	435,675	878,981	*
2015	452,798	821,262	*
2016	451,914	760,660	*

* To be updated pending results of gas furnace market analysis to be finished early 2012.

8. If a furnace incentive equal to the current heat pump incentive were to be implemented, how many folks would you estimate would use the incentive each year? What would the cost of these incentives be?

Offering a furnace incentive presents several issues that warrant discussion before any consideration is made. Energy Trust has already claimed market transformation for efficient gas furnaces and claims savings from this market transformation as discussed above. While we plan to track the furnace market for the persistence of this market transformation, offering an incentive for gas furnaces at this point would seem to offer no benefit to the gas utilities or our service territory for the ratepayer dollars that are used.

Since our current best knowledge is that the market is dominated by 95% efficient furnaces that would be eligible for any incentive, we would expect that an incentive offer in the \$250 range would get many participants, perhaps thousands. Participation levels would depend to some degree on promotional strategies by Energy Trust and the gas companies.

We are about to begin work on a furnace installation market study, which could potentially identify a basis for offering a furnace incentive if an increase in 80% furnaces is documented. This incentive would only last until the federal standard takes effect in 2013. The study is expected to be complete in the early spring of 2012.

9. What would other implications be of instituting a furnace incentive?

See the response to question #8 above for a discussion of the primary issues regarding the institution of a furnace incentive.

10. What percent of total ETO a) expenditures and b) savings comes from heating equipment as compared to all other measures?

The following answers to question #10 pertain to the existing homes program as it represents the logical frame of reference for the retrofit market for residential heating equipment.

Energy Trust tracks expenditures to the program level and incentives to the measure level. Therefore, in order to provide an answer about heating equipment relative to other measures, the data chosen reflect the amount of **incentives** paid for heating equipment by each fuel type; Energy Trust does not allocate delivery and administrative charges to the measure level.

In the last twelve months from October 1st, 2010 to September 30th, 2011, Energy Trust has provided \$4.4 million in gas incentives for measures within the existing homes program. Of that amount, 5% of incentives were provided for gas heating equipment. During the same time period, Energy Trust has provided \$7.3 million in electric incentives for measures within the existing home program. Of that amount, 12% of incentives were provided for electric heating equipment.

In the last twelve months from October 1st, 2010 to September 30th, 2011, incentives for gas heating equipment have accounted for 6.2% of reportable, annual therms saved within the existing homes programs. During the same time period, 8.1% of reportable, annual kWh savings in the existing homes program is from electric heating equipment incentives.

Going back any further in time to analyze the impact of heating equipment incentives on existing homes savings would misrepresent the current state of the existing homes program. This is due to the decision to end the gas furnace incentive due to market transformation in early 2010. Prior to that point in time, the percentage of gas savings and incentives that came from heating equipment would be substantially higher.

Appendix

Information for Gas Furnaces

Count of Gas Furnaces Incented by Previous Heating System Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Gas	859	3,368	3,559	4,603	4,364	4,330	5,693	2,016	95	28,887
N/A ¹	247	897	1,005	703	597	1,152	691	160	12	5,464
Other ²	295	1,020	867	54	102	121	29	18	3	2,509
Electric	175	632	517	239	226	334	270	83	6	2,482
Multiple ³	12	102	52	9	0	0	0	0	0	175
Total	1,588	6,019	6,000	5,608	5,289	5,937	6,683	2,277	116	39,517

Percentage of Gas Furnaces Incented by Previous Heating System Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Gas	54%	56%	59%	82%	83%	73%	85%	89%	82%	73%
N/A ¹	16%	15%	17%	13%	11%	19%	10%	7%	10%	14%
Other ²	19%	17%	14%	1%	2%	2%	0%	1%	3%	6%
Electric	11%	11%	9%	4%	4%	6%	4%	4%	5%	6%
Multiple ³	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%

Sum of Gas Furnace Savings (therms) by Previous Heating System Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Gas	61,387	237,928	250,982	324,823	307,825	300,532	398,371	140,399	5,715	2,027,964
N/A ¹	17,499	63,363	70,772	49,598	42,127	80,297	48,192	11,290	847	383,984
Other ²	21,591	72,818	60,540	2,893	6,633	8,538	1,764	1,270	212	176,259
Electric	12,419	44,664	36,409	16,864	15,948	23,426	18,346	5,574	423	174,073
Multiple ³	847	7,197	3,669	635	0	0	0	0	0	12,348
Total	113,743	425,971	422,372	394,813	372,533	412,793	466,674	158,533	7,197	2,774,628

Percentage of Gas Furnace Savings by Previous Heating System Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Gas	54%	56%	59%	82%	83%	73%	85%	89%	79%	73%
N/A ¹	15%	15%	17%	13%	11%	19%	10%	7%	12%	14%
Other ²	19%	17%	14%	1%	2%	2%	0%	1%	3%	6%
Electric	11%	10%	9%	4%	4%	6%	4%	4%	6%	6%
Multiple ³	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%

Sum of Gas Furnace Incentives (\$) by Previous Heating System Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Gas	\$174,000	\$674,400	\$712,000	\$816,800	\$653,650	\$638,500	\$688,250	\$206,900	\$16,800	\$4,581,300
N/A ¹	\$49,600	\$179,800	\$201,000	\$129,750	\$89,550	\$171,150	\$85,800	\$16,000	\$1,650	\$924,300
Other ²	\$61,200	\$206,400	\$172,000	\$6,400	\$14,100	\$18,150	\$3,100	\$1,800	\$300	\$483,450
Electric	\$35,200	\$126,600	\$103,400	\$44,850	\$33,950	\$49,800	\$32,400	\$7,950	\$600	\$434,750
Multiple ³	\$2,400	\$20,400	\$10,400	\$1,800	\$0	\$0	\$0	\$0	\$0	\$35,000
Total	\$322,400	\$1,207,600	\$1,198,800	\$999,600	\$791,250	\$877,600	\$809,550	\$232,650	\$19,350	\$6,458,800

Percentage of Gas Furnace Incentives by Previous Heating System Fuel

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Gas	54%	56%	59%	82%	83%	73%	85%	89%	87%	71%
N/A ¹	15%	15%	17%	13%	11%	20%	11%	7%	9%	14%
Other ²	19%	17%	14%	1%	2%	2%	0%	1%	2%	7%
Electric	11%	10%	9%	4%	4%	6%	4%	3%	3%	7%
Multiple ³	1%	2%	1%	0%	0%	0%	0%	0%	0%	1%

* 2011 Results to date as of 10/14/2011.

1. N/A includes blank fields, new construction, and otherwise indiscernible values.

2. Other includes oil, wood, & propane.

3. Multiple includes values where multiple values were entered.

Information for Gas through the Wall Heaters

Count of Gas Through the Wall Heaters Incited by Previous Heating Fuel

	2004	2005	2006	2007	2008	2009	2010	2011	Total
Gas	5	6	2	0	0	2	2	1	18
N/A ¹	1	3	5	1	0	0	1	1	12
Electric	0	2	0	0	0	3	0	0	5
Other ²	0	0	0	0	1	0	0	0	1
Total	6	11	7	1	1	5	3	2	36

Percentage of Gas Through the Wall Heaters Incited by Previous Heating Fuel

	2004	2005	2006	2007	2008	2009	2010	2011	Total
Gas	83%	55%	29%	0%	0%	40%	67%	50%	50%
N/A ¹	17%	27%	71%	100%	0%	0%	33%	50%	33%
Electric	0%	18%	0%	0%	0%	60%	0%	0%	14%
Other ²	0%	0%	0%	0%	100%	0%	0%	0%	3%

Sum of Gas Through the Wall Heater Savings (therms) by Previous Heating Fuel

	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Gas	171	205	34	0	0	68	68	34	582
N/A ¹	34	103	137	34	0	0	34	34	377
Electric	0	68	0	0	0	103	0	0	171
Other ²	0	0	0	0	34	0	0	0	34
Total	205	377	171	34	34	171	103	68	1,164

Percentage of Gas Through the Wall Heater Savings by Previous Heating Fuel

	2004	2005	2006	2007	2008	2009	2010	2011*	Total
Gas	83%	55%	20%	0%	0%	40%	67%	50%	50%
N/A ¹	17%	27%	80%	100%	0%	0%	33%	50%	32%
Electric	0%	18%	0%	0%	0%	60%	0%	0%	15%
Other ²	0%	0%	0%	0%	100%	0%	0%	0%	3%

Sum of Gas Through the Wall Heater Incentives (\$) by Previous Heating Fuel

	2004	2005	2006	2007	2008	2009	2010	2011	Total
Gas	\$500	\$600	\$200	\$0	\$0	\$200	\$200	\$100	\$1,800
N/A ¹	\$100	\$300	\$700	\$100	\$0	\$0	\$100	\$100	\$1,400
Electric	\$0	\$200	\$0	\$0	\$0	\$300	\$0	\$0	\$500
Other ²	\$0	\$0	\$0	\$0	\$100	\$0	\$0	\$0	\$100
Total	\$600	\$1,100	\$900	\$100	\$100	\$500	\$300	\$200	\$3,800

Percentage of Gas Through the Wall Heater Incentives by Previous Heating Fuel

	2004	2005	2006	2007	2008	2009	2010	2011	Total
Gas	83%	55%	22%	0%	0%	40%	67%	50%	47%
N/A ¹	17%	27%	78%	100%	0%	0%	33%	50%	37%
Electric	0%	18%	0%	0%	0%	60%	0%	0%	13%
Other ²	0%	0%	0%	0%	100%	0%	0%	0%	3%

* 2011 Results to date as of 10/14/2011.

1. N/A includes fields left blank and new construction.
2. Other includes one instance of a wood pellet stove.



Rates & Regulatory Affairs

UM 1565
Investigation of Fuel Switching and
Cross Fuel Energy Efficiency Issues

Data Request Response

Request No. UM 1565-CUB-DR 3:

On page 12 of NWN/100 at lines 8 – 9, Bill Edmonds states that his “understanding is that the incentive for heat pumps operates as a significant „selling point” for contractors when they seek to install a heat pump at a gas customer’s home.” Please provide copies of all interview transcripts, questionnaires, studies, transcripts of phone calls, email exchanges, or other materials of any nature upon which the statement above is based.

Response:

The understanding referred to above is primarily based on conversations between the Company and dealers, but is not documented in a transcript, questionnaire, study, email exchange, or other material. NW Natural has found that HVAC dealers strongly support keeping any and all incentives, as they know such incentives are a valuable tool in driving sales, and for this reason are reluctant to publicly support or document any support for limits on incentives.

However, NW Natural can provide minutes that document that Scott Inman, representing Oregon Remodelers Association at the July 25, 2012 Conservation Advisory Committee of the ETO, shared his perspective on the disparate incentives and is recorded in the minutes as saying: “If I was selling heat pumps, I could use that \$250 incentive as a huge selling tool to get customers to switch from gas, especially if I don’t sell gas.” See CUB-DR 3-Attachment 1.



Rates & Regulatory Affairs

UM 1565
Investigation of Fuel Switching and
Cross Fuel Energy Efficiency Issues

Data Request Response

Request No. UM 1565-PGE-DR 008:

Please provide the terms of all Northwest Natural air conditioning incentives from 2006 to present, including the numbers of incentives provided and the per incentive dollar amount of the incentives.

Response:

Please note that any air conditioning promotions that NW Natural offered were promotional concessions, paid for by shareholders, unrelated to heating equipment and not tied to ETO rebates or incentives. NW Natural believes that discussion regarding these incentives is, therefore, outside the scope of this docket. Notwithstanding, and without waiving this objection, NW Natural provides the information in DR 008 Attachment-1.

From: Eckman, Tom [mailto:teckman@nwcouncil.org]
Sent: Tuesday, January 15, 2013 8:21 AM
To: Lauren Shapton
Subject: RE: Direct Use of Gas summary statement

Sure. The Council's report is the official record, so it should be the final word on what the findings of the study were.

Sent from Tom's DROID (503.803.5047)

-----Original message-----

From: Lauren Shapton <Lauren.Shapton@pgn.com>
To: "Eckman, Tom" <teckman@nwcouncil.org>
Sent: Tue, Jan 15, 2013 01:15:56 GMT+00:00
Subject: RE: Direct Use of Gas summary statement
Hi Tom,

I left you a voicemail about this as well. Would you be OK with PGE attaching this email to its testimony? Please let me know (testimony due 1/17).

Thank you,
Lauren

From: Eckman, Tom [mailto:teckman@nwcouncil.org]
Sent: Thursday, January 10, 2013 4:33 PM
To: Lauren Shapton
Subject: Re: Direct Use of Gas summary statement

Lauren,

Bills summary isn't quite correct. We found that the switching to gas was generally only economical 1) where gas was available and 2) for water heating, not space heating. The comment on CO2 you make is accurate.

Sent from Tom's DROID (503.803.5047)

-----Original message-----

From: Lauren Shapton <Lauren.Shapton@pgn.com>
To: "Eckman, Tom" <teckman@nwcouncil.org>
Sent: Thu, Jan 10, 2013 21:37:52 GMT+00:00
Subject: Direct Use of Gas summary statement
Hi Tom,

Thanks for taking a look at this. Please provide any edits you would make to our characterization.

Lauren

NWN has cited two studies that have claim support their argument that “it would be more economical for gas customers to heat their homes with gas rather than switch to electric heat pumps. Does PGE agree with conclusions made by NWN regarding the studies referenced?

PGE does not agree with NWN’s interpretations of NWPPC’s study, Direct Use of Natural Gas: Economic Fuel Choices from the Regional Power System and Consumer’s Perspective.

Bill Edmonds Testimony: In very brief summary, that study concluded that where customers have gas available to them, they should heat their homes with gas, rather than using electrical equipment.

PGE characterizes the conclusion of the NWPPC study as follows:

From a consumer economic perspective, the operating costs of gas furnaces and heat pumps for space heating depend on the gas and electric utility rates and on the location’s climate. In some areas a heat pump may be a better choice, while in other areas, gas may be the preferred choice. From a regional perspective, there is little difference between gas equipment and heat pumps in terms of CO2 emissions.

Lauren S. Shapton | Manager, Customer Mass Programs | Portland General Electric
121 SW Salmon St, 3WTC0407 | Portland, Oregon 97204 | : 503.464-1211
121 SW Salmon St, 3WTC0407 | Portland, Oregon 97204 | : 503.464-1211

CERTIFICATE OF SERVICE

I hereby certify that I have this day caused **PORTLAND GENERAL ELECTRIC COMPANY'S RESPONSE TESTIMONY** to be served by electronic mail to those parties whose email addresses appear on the attached service list for OPUC Docket No. UM 1565.

DATED at Portland, Oregon, this 17th day of January 2013.



Randall J. Dahlgren
Portland General Electric Company
121 SW Salmon St., 1WTC0702
Portland, OR 97204
503.464.7021 Telephone
503.464.7651 Fax
randy.dahlgren@pgn.com

**SERVICE LIST –
OPUC DOCKET # UM 1565**

Maureen P. Bock OREGON DEPARTMENT OF ENERGY maureen.p.bock@state.or.us	Vijay A. Satyal OREGON DEPARTMENT OF ENERGY vijay.a.satyal@state.or.us
Janet L. Prewitt OREGON DEPARTMENT OF JUSTICE Janet.prewitt@doj.state.or.us	David J. Meyer AVISTA CORPORATION david.meyer@avistacorp.com
Shawn Bonfield AVISTA UTILITIES shawn.bonfield@avistacorp.com	Linda Gervais AVISTA UTILITIES linda.gervais@avistacorp.com
Allison Spector CASCADE NATURAL GAS Allison.spector@cngc.com	Jim Abrahamson CASCADE NATURAL GAS jim.abrahamson@cngc.com
Oregon Dockets CITIZENS' UTILITY BOARD dockets@oregoncub.org	Gordon Feighner CITIZENS' UTILITY BOARD gordon@oregoncub.org
G. Catriona McCracken CITIZENS' UTILITY BOARD catriona@oregoncub.org	Benjamin Walters CITY OF PORTLAND – CITY ATTORNEY'S OFFICE ben.walters@portlandoregon.gov
David Tooze CITY OF PORTLAND – PLANNING & SUSTAINABILITY David.tooze@portlandoregon.gov	Steve Lacey ENERGY TRUST OF OREGON steve.lacey@energytrust.org
John Volkman ENERGY TRUST OF OREGON john.volkman@energytrust.org	Renee M France OREGON DEPARTMENT OF ENERGY renee.m.france@doj.state.or.us
E-Filing NW NATURAL efiling@nwnatural.com	Jennifer Gross NW NATURAL Jennifer.gross@nwnatural.com
Wendy Gerlitz NW ENERGY COALITION wendy@nwenergy.org	Sarah Wallace PACIFIC POWER Sarah.Wallace@pacificcorp.com
Mary Wiencke PACIFIC POWER Mary.wiencke@pacificcorp.com	Oregon Dockets PACIFICORP dba PACIFIC POWER Oregondockets@pacificcorp.com
Juliet Johnson PUBLIC UTILITY COMMISSION OF OREGON juliet.johnson@state.or.us	Johanna Riemenschneider PUC STAFF - DEPARTMENT OF JUSTICE johanna.riemenschneider@state.or.us
John W. Stephens ESLER, STEPHENS & BUCKLEY stephens@eslerstephens.com mec@eslerstephens.com	