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November 20, 2012

VIA ELECTRONIC FILING

Public Utility Commission of Oregon
550 Capitol Street, NE, Suite 215
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Attention: Filing Center

Re: UM 1565 – Opening Testimony
Investigation of Fuel Switching and Cross Fuel Energy Efficiency Issues

Enclosed please find an original and five (5) copies of Opening Testimony and supporting Exhibits of Northwest Natural Gas Company, dba NW Natural (“NW Natural” or “Company”).

Please call me if you have questions.

Sincerely,

NW NATURAL

/s/ Mark R. Thompson

Mark R. Thompson
Manager, Rates & Regulatory Affairs

enclosures



CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing OPENING TESTIMONY OF NW NATURAL upon each party listed on the service list in docket UM 1565, by electronic mail only as all parties have waived paper service.

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DATED this 20th day of November, 2012

Respectfully submitted,

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BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

UM 1565

NW Natural

Direct Testimony of Bill Edmonds

EXHIBIT 100

November 2012

**UM 1565 - NWN / EXHIBIT 100
DIRECT TESTIMONY OF BILL EDMONDS**

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1 **I. Introduction and Summary**

2 **Q. Please state your name and position with NW Natural.**

3 A. My name is Bill Edmonds. I am the Director of Environmental Management and
4 Sustainability (EM&S) at Northwest Natural Gas Company (“NW Natural” or “the
5 Company”). As Director of EM&S, I work on matters relating to environmental policy,
6 energy efficiency, the administration of the programs of Energy Trust of Oregon (“Energy
7 Trust”), and other matters, including NW Natural’s compliance with environmental
8 regulations.

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

10 A. I graduated from Williams College with a BA in Political Science and Environmental
11 Studies in 1984. I received my Masters of Public Policy from the University of California
12 at Berkeley in 1988. I joined NW Natural in 2006 as the Director of Environmental
13 Policy. Prior to joining NW Natural, I was employed by PacifiCorp for 15 years in various
14 environmental policy functions. Prior to that, I worked for the California Public Utilities
15 Commission for four years as a member of the Commission Staff and the Division of
16 Ratepayer Advocates.

17 **Q. Please provide a summary of your testimony.**

18 A. In this testimony, I:

- 19 • Provide background on NW Natural’s involvement in this docket;
20 • Provide NW Natural’s responses to the questions presented in the Issues List
21 issued in this docket; and

1 Commission to direct the [Energy Trust] how to handle cross fuel energy efficiency
2 issues, particularly those associated with residential space heating equipment choices.”¹

3 **Q. How was the Issues List in this docket developed?**

4 A. After informal workshops with parties regarding the matters that I discuss in this
5 testimony, it became apparent to NW Natural that the process would benefit by having
6 NW Natural lay out its concerns in writing, to allow for a more formal discussion of these
7 issues.

8 The parties sought to develop a jointly-recommended issues list for this process,
9 and made some progress in identifying the issues that they believed should be
10 considered in this case. Ultimately, the Commission and the Administrative Law Judge
11 (ALJ) determined that a narrower list of issues (“Issues List”) should be addressed in this
12 docket—at least at this phase. These issues include 1) Energy Trust’s policies and
13 practices with respect to space conditioning incentives, 2) whether fuel switching is
14 occurring, and 3) whether, in light of the information developed to answer the first two
15 questions, Energy Trust’s policies should be modified.

16 The Issues List established that the docket would proceed with a “first phase”
17 and it excluded the question of whether fuel switching is uneconomic to ratepayers from
18 the first phase.² However, the Order establishing the Issues List stated that the question
19 could be considered in a subsequent phase, and that parties were free to discuss “the

1 See Staff Memo, Regular Agenda, November 29, 2011, p. 3.

2 Ruling, UM 1565, May 15, 2012, p. 2.

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1 significance of this information” and to explain why “additional phases are warranted
2 based on the information provided.”³

3 This testimony addresses, of course, only the questions in the Issues List.
4 However, as contemplated in the Administrative Law Judge’s order, this testimony also
5 explains why the Commission should consider other questions that have been excluded
6 from the issues list in this phase if it determines that it does not have enough information
7 to adopt NW Natural’s proposals.

8 **III. NW Natural Response to Issue 1, Part 1: “What are Energy Trust’s**
9 **policies and practices regarding residential fuel switching**
10 **related to space conditioning?”**
11

12 **Q. Please describe generally Energy Trust’s policies and practices regarding**
13 **residential fuel switching related to space conditioning?**

14 A. Energy Trust and Staff provided a significant amount of information on this topic in their
15 June 6 joint opening testimony, and so I will not repeat it all here. But, in general,
16 Energy Trust seeks to achieve cost-effective energy efficiency by providing incentives or
17 otherwise paying for energy efficiency measures to be implemented.⁴

18 As part of its efforts, Energy Trust offers an incentive for customers to install high
19 efficiency electric heat pumps. Customers receive a payment from Energy Trust of \$450
20 or \$250 for installing this equipment, depending on their prior heating system.

21 **Q. Does Energy Trust have an express policy on fuel-switching?**

22 A. Yes, it does. Energy Trust’s fuel switching policy states, in relevant part:

3 *Id.* at 1.

4 See Joint Opening Testimony of Energy Trust and OPUC Staff, p. 1, lines 15-16.

1 *Energy Trust should not advocate fuel-switching*, but may provide
2 fuel-neutral technical information on efficiency options. That is,
3 Energy Trust may undertake technical studies to identify efficiency
4 opportunities and make recommendations for making an
5 application more efficient for an energy source specified by the
6 energy user. If the energy user expresses interest in converting to
7 another energy source, Energy Trust may perform analysis
8 showing the economics of alternative systems, including the
9 savings and incentives for installing high-efficiency options for the
10 energy source. This type of assistance should help customers
11 consider the merits of their options. However, *the Energy Trust*
12 *should not provide financial incentives for converting or replacing*
13 *electric or gas equipment to another fuel*. Energy Trust should
14 work with gas and electricity suppliers who wish to provide
15 efficiency information and/or incentives for conversion, where the
16 customer deems that appropriate. Energy Trust should revisit the
17 Policy periodically to assess whether the Energy Trust is missing
18 compelling opportunities.⁵
19

20 In short, Energy Trust's policy states that Energy Trust does not provide

21 incentives for fuel switching.

22 **Q. Given Energy Trust's policy to not provide financial incentives for switching**
23 **customers' fuel usage, does Energy Trust exclude gas customers from receiving**
24 **the incentive for electric heat pumps?**

25 A. No. Energy Trust provides this incentive to customers regardless of whether they had
26 previously heated their homes with gas or electric equipment.

27 **Q. How does Energy Trust reconcile its practice of providing gas customers with**
28 **electric heat pump incentives with its fuel switching policy?**

29 A. In its opening testimony, Energy Trust reconciles its policy with this action by explaining
30 that it "do[es] not provide financial incentives to *induce* customers to convert to another

5 Policy is available on the Energy Trust website, at <http://energytrust.org/library/policies/4.03.000-P.pdf>.
(emphasis added).

1 fuel or to replace electric or gas equipment with equipment that uses another source.”⁶

2 In essence, Energy Trust applies an interpretation that establishes *intent* as the
3 determining factor for whether it provides an incentive, rather than *actual* fuel switching.
4 That is, Energy Trust does not intend that their incentive will induce fuel switching and
5 so, they argue, it does not.

6 **Q. Does Energy Trust take steps to inform customers that the incentive is not**
7 **intended to induce fuel switching and take steps to ensure that the incentive is**
8 **not causing fuel switching?**

9 A. No. NW Natural is not aware of any specific actions Energy Trust takes to inform
10 customers that the incentive is not designed or intended to switch customers from gas
11 heat, or to otherwise ensure that the incentive is not causing fuel switching. Instead, it
12 appears that the incentives are promoted broadly and paid to customers after simply
13 confirming that they have installed a high efficiency heat pump, so long as they meet the
14 other applicable qualifications.

15 **IV. NW Natural Response to Issue 1, Part 2: “What outreach and messaging**
16 **does Energy Trust engage in related to this type of fuel switching.”**
17 **i.e., residential fuel switching related to space conditioning?**
18

19 **Q. Please describe Energy Trust’s outreach and messaging related to fuel switching**
20 **for space conditioning.**

21 A. Energy Trust actively promotes its heat pump incentives, through two main ways. First,
22 it engages in direct mass marketing, using avenues of communication such as the
23 internet, events, and media.⁷ It also coordinates marketing of incentives with the utilities,

6 CITE. (emphasis added).

7 See Joint Testimony of Staff and Energy Trust, p. 5, lines 10-15.

1 through efforts such as jointly sponsored bill inserts and mailings.⁸ The intent of these
2 communications is, of course, to influence customers' perceptions and behavior, to
3 make them aware that the incentives are available, and to increase the likelihood that
4 customers will install high efficiency heat pumps.

5 **Q. Does Energy Trust tailor its messaging or outreach depending on whether a**
6 **customer heats their home with gas or electricity?**

7 A. No. NW Natural is not aware of any tailoring that is done to ensure that the marketing is
8 targeted to reach customers depending on their current fuel used for space conditioning.

9 **V. NW Natural Response to Issue 2: "Is fuel switching actually occurring?"**

10 **Q. Is fuel switching occurring with respect to space conditioning?**

11 A. Yes. Energy Trust has stated that at least 1,440 customers have switched from using
12 gas to heat their homes to using a high efficiency heat pump, and Energy Trust has paid
13 incentives to these gas customers.⁹ NW Natural believes, however, that this information
14 understates the extent to which fuel switching is occurring.

15 **Q. Why does NW Natural believe that there are more customers who are switching to**
16 **electricity from gas than the numbers Energy Trust provided?**

17 A. It is difficult to verify the amount of fuel switching that is occurring. NW Natural does not
18 actively maintain information about the heating equipment changes that its customers
19 make, and does not have access to customer information for electric utility customers

8 See Joint Testimony, p. 5, lines 15-20.

9 See Staff-ETO/105. This exhibit shows 1,384 customers who were incented to install a heat pump, who had previously used gas for heating fuel. On March 5, 2012, Energy Trust provided a memo to Staff showing that the updated number for 2011 was 173, rather than the preliminary number of 117 showed on Staff-ETO/105. See NWN/101, Memo from Energy Trust of March 5, 2012. When the updated 2011 number is substituted into Staff-ETO/105, the updated total becomes 1,440.

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1 that may be necessary to verify customers' fuel for space conditioning. However, NW
2 Natural did undertake efforts to determine the extent to which its customers may be
3 installing electric equipment to heat their homes.

4 **Q. What efforts did NW Natural undertake to determine the extent to which its**
5 **customers are switching to electric equipment to heat their homes?**

6 A. NW Natural pulled actual historical mechanical permit records from various cities, which
7 show the issuance of permits for the installation of, among other things, electric heat
8 pumps. The cities from which permit data was pulled included Portland, Gresham,
9 Tigard, Milwaukie, Lake Oswego, Albany, and Salem, as well as Washington County.
10 NW Natural then matched the addresses for those records with tax assessment data
11 and NW Natural premise billing data to determine if those customers are gas customers.

12 This exercise showed that there were at least 5,395 customers that installed heat
13 pumps that were not indicated to be replacements during the 2006-2011 timeframe in
14 those areas.¹⁰ Additionally, it showed that 52% of those heat pumps that were installed
15 during this period went into homes of NW Natural gas customers. See Exhibit
16 NWN/102.

17 **VI. NW Natural Response to Issue Number 3: "Do the answers to**
18 **Issues 1 and 2 indicate a need to modify Energy Trust policies or practices**
19 **or ratepayer-funded messaging?" What is "the significance of this information"?**
20

21 **Q. Is there a need to modify Energy Trust's policies or practices, or ratepayer-funded**
22 **messaging.**

23 A. Yes. Specifically, Energy Trust's program should be modified by:

10 This number excludes customers in Forest Grove, which is not served by an electric investor-owned utility that participates in Energy Trust programs.

- 1 1) Limiting the provision of incentives for heat pumps to customers that do
2 not heat their homes with gas currently; and
3
4 2) Tailoring Energy Trust’s messaging and marketing to better focus on the
5 intended purposes of the incentive, and to avoid unintended negative
6 consequences that may be occurring.
7

8 **Q. Why do you believe that Energy Trust should not be giving heat pump incentives**
9 **to customers that use natural gas to heat their homes?**

10 A. There are several reasons why this change should be made:

- 11 • First, this change would make Energy Trust’s heat pump incentive program more
12 consistent with its fuel switching policy.
- 13 • Second, NW Natural is concerned that the current practices cause harm to gas
14 customers by increasing their costs for space conditioning, and all utility customers
15 by unnecessarily increasing the costs of the energy system as a whole.
- 16 • Third, NW Natural believes that the incentive’s availability for gas customers is being
17 used by other parties in a way that is not intended by Energy Trust or the
18 Commission.
- 19 • Fourth, NW Natural believes that the availability and promotion of the incentive to
20 gas customers is resulting in customer perceptions that are inconsistent with the
21 intended purposes of the program, and in ways that may be harming customers
22 financially and imposing costs on the energy system.

23 **Q. Please explain how it would be more consistent with Energy Trust’s fuel switching**
24 **policy if Energy Trust were to not provide heat pump incentives to gas customers.**

25 A. As described above, Energy Trust’s fuel switching policy states that Energy Trust should
26 “not advocate fuel switching” and that it does “not provide financial incentives for

1 converting or replacing electric or gas equipment with another fuel.” Limiting the
2 incentive as NW Natural proposes would certainly be *consistent* with this policy because
3 doing so would avoid “advocating fuel switching” and would avoid paying a “financial
4 incentive” for substituting gas equipment with equipment for another fuel. In fact, NW
5 Natural has trouble understanding how the current practices can be squared with Energy
6 Trust’s policy.

7 NW Natural acknowledges that Energy Trust interprets its policy as prohibiting
8 itself from *seeking to induce* fuel switching with incentives. However, to customers that
9 receive an incentive in order to do just that, Energy Trust’s motivation is likely irrelevant.
10 NW Natural believes that Energy Trust’s interpretation of its policy essentially serves to
11 nullify the fuel switching policy by allowing the activity, so long as Energy Trust claims
12 that it was not intended. And, even if Energy Trust’s interpretation regarding *intent* to not
13 induce fuel switching is appropriate, NW Natural finds it problematic that Energy Trust
14 does not take steps to inform customers of that intent or design its practices to achieve
15 that intent.

16 **Q. Why is NW Natural concerned that providing electric heat pump incentives to gas
17 customers results in harm to customers?**

18 A. NW Natural is aware of at least two studies specific to our region that show it would be
19 more economical for gas customers to heat their homes with gas rather than to switch to
20 electric heat pumps. The first is the recent study completed by the Northwest Power and
21 Conservation Council, entitled *Direct Use of Natural Gas: Economic Fuel Choices from*

1 *the Regional Power System and Consumer's Perspective*.¹¹ In very brief summary, that
2 study concluded that where customers have gas available to them, they should heat
3 their homes with gas, rather than using electrical equipment.¹²

4 The second study was conducted by Forefront Economics, on behalf of NW
5 Natural. This study relied on the avoided costs of the region's electric utilities and NW
6 Natural, and determined that gas customers who choose to heat their homes with a high
7 efficiency heat pump rather than a high efficiency furnace end up spending about \$3,800
8 more over the life of that equipment on fuel and equipment costs. The Forefront
9 Economics study also found that, over the equipment life, customers spend more money
10 on a heat pump than they do on an air conditioner plus a gas furnace, meaning that
11 even when the cooling aspect of heat pumps are taken into account, they do not make
12 economic sense for customers that have gas available to them. Finally, the Forefront
13 Economics study found that heat pump installations impose more costs on the "energy
14 system" as a whole (i.e. the combined system of gas and electric infrastructure) than do
15 installations of gas furnaces in homes that have gas available.

16 I am aware that, in this phase, the Commission is not going to answer the
17 question of whether fuel switching is uneconomic to ratepayers. I refer to these studies
18 so the Commission and parties can fully understand the significance of Energy Trust
19 practices and NW Natural's reasons for its proposed modifications. NW Natural
20 understands that the merits or application of those studies will not be decided in this
21 phase of this docket, but encourages the Commission to continue with an additional

11 Available at <http://www.nwcouncil.org/library/2012/2012-01.pdf>

12 NWPPC Report at p. 18 concludes: "Gas forced air furnaces with central air conditioning appear more attractive from both a regional and consumer perspective where gas service is already available."

1 phase to further consider these studies in the event the Commission determines that
2 doing so is necessary before it can determine whether Energy Trust's practices should
3 be modified. NW Natural does not believe that doing so is necessary, however, given
4 the other reasons we offer for modifying Energy Trust's practices.

5 **Q. Please explain NW Natural's concern that the heat pump incentive's availability for**
6 **gas customers is being used by third parties in a way that is not likely intended by**
7 **Energy Trust or the Commission?**

8 A. My understanding is that the incentive for heat pumps operates as a significant "selling
9 point" for contractors when they seek to install a heat pump at a gas customer's home.
10 My understanding is also that a contractor's profit margin for installing a heat pump is
11 generally more than for the installation of a gas furnace, meaning that contractors have
12 an interest in selling a heat pump rather than a furnace. NW Natural believes that this is
13 an important consideration that argues in favor of limiting the availability of heat pump
14 incentives to gas customers.

15 I do not believe that Energy Trust or the Commission would intend that the heat
16 pump incentive be used to *encourage* gas customers to switch to electric heat. In fact,
17 even under Energy Trust's interpretation of its policy, such intent is not appropriate. The
18 fact that the incentive is used by a third party with such an intent should also be
19 considered, and argues in favor of the limitation NW Natural proposes.

20 NW Natural also points out that the unlimited availability of Energy Trust
21 incentive allows electric utilities to market heat pumps to gas customers, and can result
22 in messaging to gas customers that is inconsistent with Energy Trust's policy of not
23 encouraging fuel switching. For example, on August 6 of this year, NW Natural is aware

1 that Portland General Electric sent letters to customers stating that they could save up to
2 \$1,250 by installing an electric heat pump, and noting that Energy Trust offers an
3 incentive to do that. The PGE direct mail letter states, “Ducted heat pumps use a
4 secondary heat source only when it’s extremely cold outside. Either way, you’ll
5 experience the utmost in energy efficiency and comfort all year long.” In another direct
6 mail letter, dated October 3 of this year, PGE lists the incentives stating: “Because heat
7 pumps are so energy-efficient, some installations may qualify for a \$200 instant
8 discount, available through PGE-approved contractors, a state energy tax credit and an
9 Energy Trust of Oregon cash incentive.” From the information in this docket, NW
10 Natural is aware of at least six different mailings that were sent to customers between
11 March 16, 2011 and October 3, 2012 marketing heat pumps and referencing Energy
12 Trust incentive.¹³ Based on the receipt of letters by our gas customer employees as well
13 as information presented by CUB, it is my understanding that most, if not all, of these
14 letters went to gas heat customers as well as electric customers. Additionally, PGE
15 indicates that many of these mailings were paid for with customer-provided dollars, using
16 SB 838 funds.¹⁴

17 I would note that PGE has said that there may have been some internal error
18 associated with these letters going out, but it highlights the problematic ways that third
19 parties can leverage Energy Trust incentive if it is made available to gas customers as
20 well as electric customers.

13 See NWN/103; See also, attachments to CUB’s proposed issues list, filed June 20, 2012 in this docket.

14 See NWN/103. PGE Response to NWN DR No. 1.

1 **Q. Why do you believe that the availability and promotion of the heat pump incentive**
2 **to gas customers may be resulting in customer perceptions that are inconsistent**
3 **with the intended purposes of the program?**

4 A. I believe that it is beyond dispute that incentives are effective at accomplishing their
5 purpose of influencing customers' behavior and potential purchase of the products with
6 which the incentives are associated. And, there is no reason to believe that this is not
7 the case with respect to the heat pump incentive.

8 Under Energy Trust's current practices for marketing and delivering heat pump
9 incentives, customers are clearly receiving the following messages:

- 10 • There is an incentive available to you for switching the heat source for your home
11 from gas to an electric heat pump;
- 12
- 13 • There is no incentive available to you for remaining on gas and installing a high
14 efficiency furnace; and
- 15
- 16 • Heat pumps have an added benefit of providing cooling during the summer
17 months.
- 18

19 It follows, then, that customers using gas to heat their homes may well be getting
20 the impression that it is more desirable for them to install a heat pump than it is to install
21 a gas furnace. In fact, they may be getting the impression that this is the very intent of
22 the incentive. Certainly, this message could be communicated even expressly to
23 customers by third parties, such as contractors. This messaging is inconsistent with the
24 stated purposes of Energy Trust's heat pump incentive program, and NW Natural's
25 proposed modifications would remedy this problem.

26 Further, in light of the studies I described above, which indicate that it may be
27 economically harmful for gas customers to switch to electric heat, even with a high

1 efficiency heat pump, this message is especially problematic. Moreover, it is easy to
2 imagine that gas customers receiving this messaging may not even distinguish
3 appropriately between high efficiency heat pumps and standard efficiency heat pumps,
4 meaning that the messaging could result in a perceived preference for heat pumps in
5 general, regardless of their efficiency.

6 **Q. Even if the Commission agreed that there is a problem with the availability of the**
7 **heat pump incentive to gas customers for the reasons you described above, is the**
8 **magnitude of the problem large enough to warrant the changes NW Natural is**
9 **proposing?**

10 A. Yes, it is. Although the absolute number of “switches” that NW Natural has been able to
11 verify may not be high in comparison to the number of gas heat customers, the number
12 is relatively large when compared to the number of incentives that Energy Trust
13 provides. And, as explained above, in light of the fact that over 50% of the heat pump
14 conversions installed in NW Natural’s service territory are for gas customers, the market
15 dynamics that we are seeking to address are clearly large enough to warrant
16 consideration.

17 Additionally, I will point out that the changes NW Natural is proposing are not
18 costly. They require only a change in Energy Trust’s administration of the program,
19 which could be accomplished by including an additional qualification for receiving the
20 heat pump incentive. Especially given that the current construct may be economically
21 harming customers, I certainly believe the changes we have proposed are warranted,
22 since they affect several thousand customers.

1 Said differently, if there is a problem with the message, NW Natural believes that
2 it should be changed.

3 **Q. Are there any other reasons the heat pump incentive should not be provided to**
4 **gas customers?**

5 A. Yes. I believe it is important to note that, unlike the situation for the electric utilities, not
6 every individual in our service territory is a customer of the gas utility. Many homes
7 operate totally without gas and rely only on electricity for their heating, lighting, or other
8 appliances. This means that NW Natural does, in fact, compete for business with the
9 electric companies. The current practice, which provides gas customers with payment
10 for switching to electric heating equipment is a direct interference in the competitive
11 relationship that NW Natural has with the electric utilities.

12 NW Natural is, of course, happy to compete with electric utilities, but believes
13 that the field should be level and fair—based on factors such as price, product qualities,
14 and service, not the availability of an incentive that can be used to serve purposes for
15 which it was not intended. This problem is exacerbated by the fact that Energy Trust no
16 longer offers an incentive for high efficiency gas furnaces.

17 **Q. You stated above that NW Natural also is proposing that Energy Trust tailor its**
18 **messaging and marketing to better focus on the intended purposes of the**
19 **incentive, and to avoid unintended consequences that may be occurring. Please**
20 **explain further what actions you are proposing Energy Trust take?**

21 A. NW Natural is proposing that Energy Trust take steps to avoid sending direct marketing
22 materials related to heat pump incentives to gas customers, and that Energy Trust put
23 qualifications on its messaging that better convey the purpose of the incentive.

1 The first proposal—that Energy Trust avoid sending marketing materials to gas
2 customers—would be a natural step once the heat pump incentive offering has been
3 limited as NW Natural is requesting. Limiting direct marketing would also help avoid
4 misunderstandings by customers about the purpose of the incentive. For example, it
5 would help avoid the situation of a customer perceiving the marketing as stating that
6 heat pumps, in general, are “preferred” above gas equipment for heating one’s home,
7 which could lead to the installation of even standard efficiency heat pumps. NW Natural
8 understands that Energy Trust has available to it the information that would be required
9 to remove gas customers from lists of customers to whom it sends direct mailings, or
10 mailings on which it collaborates with utilities.

11 The second proposal—to put qualifications on Energy Trust’s messaging that
12 better convey the purpose of the incentive—could be accomplished easily, and would
13 further ensure against the misperception customers could have about the purpose of the
14 heat pump incentive. Specifically, NW Natural would recommend that materials and
15 messaging that Energy Trust produces about its heat pump incentives state something
16 along the lines of “. . . for where gas is not available” or “intended to produce savings in
17 homes that are already heated with electricity or oil.”

18 **Q. Are there other ways in which Energy Trust should change its messaging and**
19 **outreach?**

20 A. Yes. NW Natural believes that Energy Trust should modify its messaging regarding the
21 heat pump incentive to avoid implying that the incentive is offered in order to encourage
22 the installation of cooling equipment. For example, in promoting the heat pump

1 incentive, Energy Trust’s website lists the incentive under a title of “Heating + Cooling”
2 and states:

3 There’s nothing like a cozy home on a frigid Pacific Northwest night, or a
4 nice, cool house that helps you escape the summer heat. Heating and
5 cooling systems do more to keep us comfortable than any other home
6 components—and also use more energy. Addressing old, inefficient
7 equipment can increase your comfort and save you money, especially in
8 a properly weatherized home.¹⁵
9

10 Energy Trust’s website further describes the heat pump incentive by stating:

11 Qualifying high-efficiency electric heat pumps provide year-round comfort
12 by *heating your home in winter and cooling it in summer*—not to mention
13 increasing your home’s energy efficiency and saving you money.¹⁶
14

15 NW Natural believes that such messaging is inappropriate because it encourages
16 customers to install heat pumps in order to receive cooling benefits in addition to
17 heating, which *increases* the region’s electric loads, especially at summer peak times.
18 NW Natural understands that Energy Trust does not offer the heat pump incentive based
19 on any analysis that heat pumps will reduce electric loads or save customers money as
20 compared to a stand-alone air conditioning unit. Rather, it is offered because high
21 efficiency heat pumps are preferred over standard efficiency heat pumps. Also, as
22 stated above, NW Natural believes that there is information that indicates that customers
23 with gas would be better off financially by heating their homes with gas and cooling with
24 central air conditioning, rather than relying on a heat pump in order to accomplish
25 heating and cooling.

15 Energy Trust website, <http://energytrust.org/residential/incentives/heating-and-cooling> (November 15, 2012).

16 Energy Trust website, <http://energytrust.org/residential/incentives/heating-and-cooling/HeatPumps1>
(November 15, 2012) (emphasis added).

1 NW Natural understands that Energy Trust may be taking steps to modify its
2 communications so that they are not read as encouraging customers to install air
3 conditioning equipment. NW Natural appreciates that indication, and hopes that Energy
4 Trust will quickly implement these changes. NW Natural believes that it would make
5 more sense for Energy Trust to encourage cooling technologies that are less expensive
6 to the region's energy system (e.g. attic fans, single room cooling, etc.).

7 **Q. Does NW Natural have reason to believe that customers may be actually installing**
8 **heat pumps in order to receive air conditioning, rather than installing them for**
9 **heating purposes?**

10 A. Yes. NW Natural reviewed the data it collected by pulling mechanical permits for the
11 installations of heat pumps in its service territory. This information showed that
12 customers generally install heat pumps during the summer months, as one would expect
13 would be the case with air conditioning units. See Exhibit NWN/104, which shows NW
14 Natural data on heat pump installations by month. Customers' installations of heat
15 pumps during the winter months was significantly reduced compared to the summer
16 months. This leads NW Natural to believe that customers view the cooling aspects of a
17 heat pump to be a primary reason for installation, meaning that they may be installing
18 heat pumps without even realizing or fully understanding that the incidental effect may
19 be that the unit will be heating their home in the winter time at a greater expense than a
20 gas furnace.

21 This timing of heat pump installations also leads NW Natural to believe that
22 contractors may use the heat pump incentive to encourage the installation of heat
23 pumps for gas customers when customers inquire about cooling options—another use of

1 the heat pump incentive that is inconsistent with Energy Trust's intended purposes for
2 the incentive.

3 **Q. Before the Commission adopts NW Natural's proposals, wouldn't it need to be**
4 **certain that Energy Trust's provision of heat pump incentives to gas customers is**
5 **actually causing fuel switching?**

6 A. As stated above, there is no dispute that incentives work to change customers'
7 perceptions and behavior. NW Natural believes that the Commission can, therefore,
8 safely assume that the heat pump incentive is working in that way when marketed and
9 provided to gas customers. NW Natural does not believe it would make sense for the
10 Commission to fail to act until NW Natural can establish absolute "causation," which
11 would be difficult to prove in any event, and which should be assumed based on
12 common knowledge about how incentives operate. Moreover, NW Natural believes the
13 Commission should ask whether the current practices of providing heat pump incentives
14 to gas customers is sending them the right, or intended message. If not, it should be
15 modified.

16 **VII. Other Considerations**

17 **Q. Given that NW Natural's proposals in this docket simply relate to tailoring Energy**
18 **Trust's practices, why is it necessary for the Commission to get involved?**
19 **Couldn't Energy Trust undertake these changes without the Commission's**
20 **direction?**

21 A. NW Natural believes that Energy Trust could undertake the changes that NW Natural
22 has proposed without any direction from the Commission. However, NW Natural

1 understands that Energy Trust is hesitant to make these changes without Commission
2 guidance. For this reason, Commission guidance is being sought in this docket.

3 NW Natural also notes that the electric utilities involved in this docket have
4 expressed opposition to NW Natural's proposals, and that they would rather Energy
5 Trust continue to provide an incentive to gas customers to switch to electric heating
6 equipment. NW Natural does not have information that it can present in this docket
7 regarding the motives of the electric companies in preserving the heat pump incentive
8 for gas customers, but NW Natural notes that increasing electric loads, especially peak
9 loads, could drive up their costs and rates, and that the Commission should seek to
10 avoid that happening unnecessarily, or as an unintended consequence of the heat pump
11 incentive.

12 **Q. Are there other positions of the parties that you would like to address in this**
13 **testimony?**

14 A. NW Natural expects that some parties may make the argument that precluding gas
15 customers from receiving the high efficiency heat pump incentive is problematic because
16 the incentive may be necessary in order to keep gas customers from installing standard
17 efficiency heat pumps. NW Natural does not believe that this argument justifies the
18 maintenance of the incentive for gas customers.

19 Although the Commission is not seeking to make a determination on the
20 economics of fuel-switching in this phase of this docket, NW Natural believes that the
21 economics would *have to* be considered in order for the Commission to address this
22 argument. According to the Forefront Economics analysis previously referenced, the
23 Total Resource Cost (TRC) of incentivizing a gas customer to choose a high efficiency

1 heat pump over a standard efficiency unit is a positive \$400. However, if a gas customer
2 – who otherwise would not switch from gas – is swayed to install a heat pump based on
3 heat pump incentives and communications, the TRC impact is a *negative*
4 \$4,900. Therefore, the program would need to move more than 12 gas customers from
5 a standard to a high efficient heat pump to compensate for the economic damage done
6 by every *one* customer who is incented to fuel switch from gas to electric.

7 Again, NW Natural understands that the Commission is not seeking to determine
8 the economics of fuel switching at this stage of the docket, but offers this information
9 because it would be important for the Commission to consider before it finds that NW
10 Natural's proposals could have some detrimental consequence.

11 **Q. Is NW Natural advocating that the Commission conduct a second phase in this**
12 **docket in order to consider the economics of fuel switching?**

13 A. NW Natural does not necessarily believe that a second phase, or a determination of that
14 question is necessary. As described above, NW Natural believes that there are many
15 reasons, several of which are based on common knowledge about how incentives
16 operate, that justify the recommendations that NW Natural is making. If however, the
17 Commission were to determine that the economics of fuel switching must be determined
18 before it can offer guidance to implement NW Natural's proposals, then NW Natural
19 would urge the Commission to conduct such an inquiry through a second phase. In
20 such a phase, NW Natural could present further evidence concerning the economics
21 associated with fuel switching for space conditioning, and may also advocate that
22 Energy Trust should take certain other measures to counter the competitive and

1 economic problems caused by the current practices, such as considering whether a high
2 efficiency furnace incentive should be reinstated.

3 **Q. Does this conclude your direct testimony?**

4 A. Yes it does.

23 – DIRECT TESTIMONY OF BILL EDMONDS



MEMO

Date: March 5, 2012
To: Juliet Johnson, OPUC
From: Amber Cole, Energy Trust
Subject: HVAC equipment receiving incentives by previous fuel type

2011 Residential Heat Pumps Incented by Prior System Fuel

Fuel	Count	%
Electric	1156	78%
Gas	173	12%
Other ¹	82	6%
n/a ²	63	4%
Grand Total	1,474	100%

1. Other includes oil (62), propane (9), and wood (11) systems.
2. N/A includes fields that were left blank, or otherwise indiscernible values.

2011 Residential Furnaces Incented by Prior System Fuel

Fuel	Count	%
Gas	149	82%
Oil	16	9%
n/a ¹	10	5%
Electric	7	4%
Grand Total	182	100%

1. N/A includes fields that were left blank, or otherwise indiscernible values.

2011 Residential Heat Pump Savings by Prior System Fuel

Fuel	kWh	%
Electric	1,630,134	90%
Gas	69,448	4%
Other ¹	52,273	3%
n/a ²	54,345	3%
Grand Total	1,806,200	100%

1. Other includes oil (62), propane (9), and wood (11) systems.
2. N/A includes fields that were left blank, or otherwise indiscernible values.

2011 Residential Furnace Savings by Prior System Fuel

Fuel	therms	%
Gas	9,667	81%
Oil	1,129	9%
n/a¹	706	6%
Electric	494	4%
Grand Total	11,995	100%

1. N/A includes fields that were left blank, or otherwise indiscernible values.

New Heat Pump Installations*

(2006-2011)

Heating Fuel	Installations	Percent of Total
Gas	2,790	52%
Non-Gas	2,605	48%
Total	5,395	100%

* Installations which are not replacing an existing heat pump.
Data taken from mechanical permit records obtained from:
City of Albany
City of Gresham
City of Lake Oswego
City of Milwaukie
City of Portland
City of Salem
City of Tigard
Washington County



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

October 30, 2012

Email / US Mail

efiling@nwnatural.com
jennifer.gross@nwnatural.com

NW Natural
Attn: Jennifer Gross
220 NW Second Avenue
Portland OR 97209

Re: UM 1565 PGE Response to NWN Data Request Nos. 001-003

Ms. Gross:

Enclosed are PGE's Responses to NWN Data Request Nos. 001-003.

If you have any questions or require further information, please call Terri Bowman at (503) 464-8854. Please direct all formal correspondence and requests to the following email address: pge.opuc.filings@pgn.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Karla Wenzel". The signature is written in a cursive, flowing style.

Karla Wenzel
Manager, Regulatory Analysis & Administration

KW/jlt
encl.

October 30, 2012

TO: **Mark R. Thompson**
Manager, Regulatory Affairs, NW Natural

FROM: Karla Wenzel
Manager, Regulatory Analysis & Administration

**PORTLAND GENERAL ELECTRIC
DOCKET UM 1565
PGE Response to NW Natural First Set of Data Requests
Date: October 15, 2012
Question No. 001**

Request:

Please provide a copy of each ad or customer communication from PGE between 2010 and 2012 (year to date) that references heat pumps or air conditioners, and which was paid for in whole or in part by Category A dollars, SB 838 funds, or public purpose funding, and which also makes any reference to the ETO or any incentive provided by the ETO.

Response:

PGE objects to this request on the grounds that it seeks information beyond the scope of this docket. Without waiving its objection, PGE replies as follows:

In 2010 and 2011 PGE's heat pump program ads or customer communications were not paid for by Category A dollars, SB 838 funds, or public purpose funding. The promotional materials were paid for by shareholders. After the first direct mailing in 2012, heat pump promotional materials that mention ETO incentives were paid for by SB 838 funds.

Attachment 001-A provides the following ads and customer communications.

- 1. Spring Promotion (Daiken – May 2012)**
 - a. Direct Mail Letter
 - b. Direct Mail Brochure
 - c. Email

2. Sweepstakes (Gensco – July 2012)

- a. Web Copy

3. Summer Promotion (Gensco – August 2012)

- a. Direct Mail Letter
- b. Direct Mail Brochure/Bill Insert
- c. Email

4. Fall/Winter Promotion (Airefco – October 2012)

- a. Direct Mail Letter
- b. Brochure
- c. Email

y:\ratecase\opuc\dockets\um-1565 (fuel switching)\dr-in\nwn\dr_001.docx

UM 1565

Attachment 001-A

PGE Heat Pump Ads and Customer Communications



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

NWN/103
Edmonds/5

May 3, 2012

*000001



JOHN Q PUBLIC
JANE DOE
111 SW PORTLAND ST STE 500
PORTLAND OR 97204-3575

New ductless heating and cooling delivers comfort and savings.

Dear JOHN Q PUBLIC:

Spring is an excellent time to upgrade your home's heating and cooling technology. New wall-mounted, ductless heat pumps deliver substantial winter energy savings, **reducing heating costs** by up to 60 percent.¹ They also cool your home in the summer, providing better comfort, security, efficiency and less noise than window air conditioning. Ductless heating and cooling can completely replace your electric baseboard heaters, wall-mounted heaters or even an electric furnace. Rather than ductwork, these systems use small, exterior refrigerant piping lines that connect an outdoor unit to one or more wall-mounted indoor units that you can control with a remote, just like your TV.

Receive a free indoor unit when you install by June 30.

To help make this zoned heating and cooling system more affordable, heat pump manufacturer Daikin AC is offering a **free indoor unit** on Daikin systems installed by **June 30, 2012**. Select from a variety of multi- and single-zone systems. The enclosed brochure tells you how to take advantage of this limited-time offer, which is available exclusively for PGE customers.

Many installations qualify for state energy tax credits and cash incentives.

Because ductless heat pumps are so energy-efficient, some installations may qualify for a \$200 instant discount, available through PGE-approved contractors, a state energy tax credit and an Energy Trust of Oregon cash incentive. On qualifying installations, that can add up to as much as **\$1,200 back** in your pocket.² See the enclosed brochure for details.

Get a single-zone system for as little as \$2,835, including the free unit.

By combining Daikin's offer with the above-mentioned incentives, you could install a single-zone system with a final cost as low as \$2,835.³

Talk to an expert today, before the hot weather arrives.

Our PGE-approved contractors can explain why more and more homeowners are opting for ductless cooling and heating. Go to PortlandGeneral.com/HeatPumpOffer or call the PGE Energy Experts at 503-612-3500 or 1-800-722-9287 to find a contractor near you.

Sincerely,

John P. Karasaki
Heat Pump Program Manager

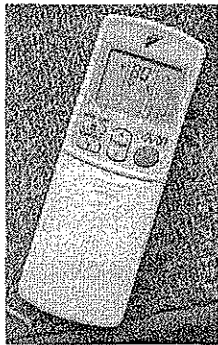
¹ Compared to a standard electric furnace. Ask the PGE Energy Experts or your dealer for more information.

² Ask your PGE-approved contractor or the PGE Energy Experts about qualifying criteria for rebates, tax credits and incentives.

³ \$2,835 system assumes a Daikin single-zone system, with \$200 PGE instant discount and \$800 Energy Trust cash incentive already deducted.

Upgrade to today's efficient heating and cooling technology.

Today's ductless heating and cooling puts technology to work for you, with all the comfort, convenience and energy savings that you deserve.



New ductless, mini-split heat pumps are small, economical, whisper-quiet and easy to install.

Enjoy zoned comfort year round, with heating and cooling delivered when and where you need it — all controlled by a remote just like your TV.

Best of all, you could use up to 60 percent less electricity to heat your home.¹

¹ Compared to a standard electric furnace. Individual circumstances will vary. Ask your dealer or the PGE Energy Experts for more information.

Call now. Show off your technology later.

PGE Energy Experts

PortlandGeneral.com/HeatPump

503-612-3500 • 1-800-722-9287

Get your technology on with this special discount, worth up to \$1,300 off!

PGE and Daikin AC have teamed up to offer a limited-time discount on a ductless, mini-split heat pump installed by a PGE-approved Daikin AC contractor.



Install a qualifying Daikin Absolute Comfort™ ductless, mini-split heat pump and receive one interior unit (zone) FREE¹

- Up to a \$1,300 value, depending on system selected
- Available on systems with 1 to 4 zones
- Quiet, compact, easy-to-install
- Energy-efficient alternative to electric baseboards and wall heaters
- Ideal for homes without ductwork
- Some installations also may qualify for up to \$1,400 in rebates, cash incentives and tax credits

Your final, out-of-pocket cost could be as low as \$2,835.*

DAIKIN AC
absolute comfort

¹On a single-zone system, after rebate and cash incentive. See details on back.

To request this offer:

Go to PortlandGeneral.com/HeatPumpOffer, or call the PGE Energy Experts.

¹Act soon! System must be installed no later than June 30, 2012. Turnover for offer conditions and details.

Get up to **\$1,400 back**
in rebates, tax credits and
cash incentives!

Receive a \$200 instant rebate, courtesy of a PGE-approved contractor, when you install a qualifying, energy-efficient, ductless mini-split heat pump. Many installations also qualify for:

- \$800 Energy Trust of Oregon cash incentive²
- Up to \$400 Oregon energy tax credit³

The PGE Energy Experts can discuss your eligibility for rebates and tax credits.



² System must replace electric resistance heat (baseboards, ceiling and wall heat or electric forced-air furnaces) as the primary heat source. Ask Energy Trust about other requirements. Contact Energy Trust at 1-866-368-7878 or www.EnergyTrust.org.

³ Consult your PGE-approved contractor for details as well as your tax advisor.

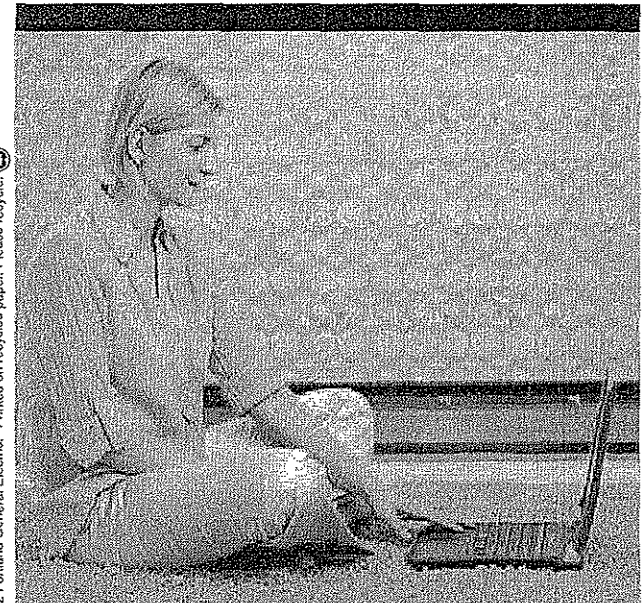
Heat Pump Special Offer Details and Conditions

Heat Pump Special Offer is available on systems installed no later than 5 p.m. on June 30, 2012. Offer is available to legal residents of the U.S. residing in Oregon, age 21 or older, who own a home located in PGE's service territory where the system is installed. Renters, encourage your landlord to request a bid.

Additional details and conditions of ductless heat pump offer by Daikin AC:

- Customer must install a ductless, mini-split heat pump system by Daikin AC. Eligible models include all Daikin single-zone and multi-zone models.
- Customer pays for outdoor unit and receives one indoor unit (zone) at no charge. Install a single-zone system and receive your interior unit free. Install a 2- or more zone system and receive one interior unit free. Labor for installation of free zone may be at an additional cost.
- Value of offer will depend on unit selected by customer. Maximum value up to \$1,300.
- Not all installations will qualify for the full \$1,400 in rebates, cash incentives and tax credits. Ask a PGE-approved Daikin contractor for details.
- \$2,835 system assumes a Daikin single-zone system, with rebate and cash incentive already deducted. System must meet PGE and Energy Trust qualifying criteria. Initial cost will be higher, with cash incentive refunded later. If you qualify for a tax credit in Oregon, you may save even more. Ask your tax advisor for details.

Are you still using
yesterday's heating and
cooling technology?



Today's ductless systems offer year-round, zoned comfort and cut heating costs by up to 60%.



PGE Energy Experts

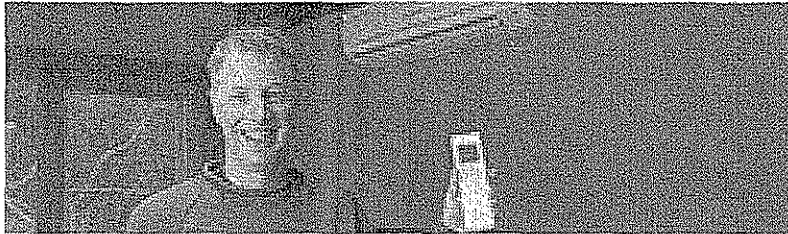
PortlandGeneral.com/HeatPump

503-612-3500 • 1-800-722-9287

Portland General Electric

Enjoy ductless heating and cooling comfort

An economical alternative to baseboards or wall heaters, with
premium efficiency



You don't need ducts to enjoy year-round comfort and energy efficiency. New ductless heating and cooling offers zoned comfort year round, with heating and cooling delivered when and where you need it — all controlled by a remote just like your TV.



Put today's technology to work for you

Ductless heating and cooling units are small, economical, whisper-quiet and easy to install. They are an excellent alternative to electric baseboard and wall heaters. Best of all, they reduce winter heating costs by up to 50 percent.¹

Get a free indoor unit when you install by June 30

PGE has teamed up with heat pump manufacturer Daikin AC to offer a free indoor unit on Daikin systems installed by June 30, 2012. Select from multi- and single-zone systems.

Get up to \$1,450 back in tax credits and incentives

These systems are so energy-efficient that some installations qualify for:

- \$200 instant discount offered by a PGE-approved contractor
- \$600 Energy Trust of Oregon cash incentive²
- Oregon tax credit of up to \$450³

Single-zone systems start as low as \$2,895 after above incentives.

Some contractors offer financing with payments as low as \$37/month.



¹ Compared to a standard electric furnace. Individual circumstances will vary.

² Payment required in electric residential heat pump rebates, ceiling and wall heater electric forced-air (EWH) on the primary. www.energystore.com for requirements. Contact Energy Trust at 1-800-266-7676 or pge.com



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Residential

Ductless Heat Pump Sweepstakes Win a Mitsubishi mini-split heat pump!



- Your Account
- Energy Savings
 - Getting Started
 - Home Efficiency Improvements
- Heating & Cooling
 - Compare Options
 - High-efficiency Heat Pumps
 - Other Forced-air Systems
 - Thermostats
 - Ventilation & Air Conditioning
 - Zonal Heating
- Household Appliances
- Lighting
- Special Offers & Incentives
- Weatherization
- Operation Switch
- Renewable Energy Options
- News
- Outages

- > Ductless Heat Pump Sweepstakes
- > How a Heat Pump Works
- > Savings
- > Money Back
- > PGE-approved Contractors
- > Installation & Operation
- > Ductless Models
- > Ground-source Models

Keep your cool and save

Enter our sweepstakes for a chance to win one of the most quiet and efficient cooling and heating systems. PGE and Gensco have teamed up to provide one lucky PGE customer with a super-efficient Mitsubishi MSZ/MUZ ductless, mini-split heat pump, plus professional installation by Honke Heating.

How do I enter?

Entering is easy. Read our [terms and conditions](#), scroll to the bottom of the page and click the "Accept" button and you'll be taken to the entry form. Fill out the form and click the "Submit" button. Entries must be received by 11:59:59 p.m., July 31, 2012.

Why a ductless, mini-split heat pump is better

Comfort. With a ductless, mini-split, you can heat or cool individual rooms or zones in your home — each controlled by its own thermostat.

Energy efficiency. A ductless, mini-split can cut your heating costs by up to 60 percent.¹

Easy installation. Because they do not require ductwork, these heat pumps are among the easiest and most flexible heating and cooling systems to install.

Aesthetic, small, low-profile and whisper-quiet. They can be ceiling mounted, hung on a wall or floor-standing.

Mitsubishi builds some of the most efficient electric heat pumps available: Efficiency ratings of 25 SEER and greater than 10 HSPF add up to very little energy waste.

Why wait?

There's no risk to buy now, even if you win! [Buy now, enter the sweepstakes](#), and if you win, Honke Heating will reimburse the cost of the heat pump and installation.² If you don't win, you can still get up to \$900 back with an Energy Trust cash incentive and state tax credits.³

¹Compared to a standard electric furnace or electric baseboard heater. Individual circumstances will vary. Ask the PGE Energy Experts, or your dealer, for more



No worries with Auto Pay

Sign up for automatic monthly payment and never fret about paying your bill on time.



Follow us on Twitter

Get company news and updates. Follow us on Twitter at [PortlandGeneral](#).

information.

² Up to the total prize value of \$3,600 will be refunded. All other costs above \$3,600 are paid by the customer, not PGE nor sponsoring distributors and contractors. See official rules for details.

³ Up to \$800 Energy Trust of Oregon cash incentive with qualifying installations replacing electric resistance heat (baseboard, ceiling and wall heat or electric forced-air furnace) as the primary heat source. Contact Energy Trust about other requirements at 866-368-7878 or www.EnergyTrust.org/residential. Up to \$100 State of Oregon tax credit. See our [Rebates, Tax Credits and Special Offers](#) section for details.

[Contact Us](#) [Careers](#) [Site Map](#) [Privacy](#) [Legal Notices](#) [En Español](#) [Reach us by e-mail, phone or visit our offices.](#)

CSWeb Version: 5.0.0 Server: WS2WTC

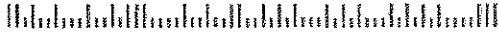


Portland General Electric Company
121 SW Salmon Street • Portland, Oregon 97204

NWN/103
Edmonds/11

August 6, 2012

*000001



JOHN Q PUBLIC
JANE DOE
111 SW PORTLAND ST STE 500
PORTLAND OR 97204-3575

Get cool comfort now and energy savings next winter.

Dear JOHN Q PUBLIC:

Did you know that an energy-efficient heat pump can cool your home just like an air conditioner this summer, while cutting energy costs by up to 60 percent next winter?¹ And it doesn't matter whether or not your home has ductwork because today's heat pump technologies can accommodate either. Ductless heat pumps can completely replace your electric baseboard heaters, wall-mounted heaters or electric furnace, with no back-up heat source needed. Ducted heat pumps use a secondary heat source only when it's extremely cold outside. Either way, you'll experience the utmost in energy efficiency and comfort all year long.

Purchase by Sept 30 and receive a gift card of up to \$1,250.

To help you enjoy the final days of summer and prepare for the heating season, participating PGE-approved contractors are offering PGE customers a MasterCard gift card following the purchase of a qualifying heat pump system. Depending on the system you select, you could receive a MasterCard gift card valued between \$150 and \$1,250. The enclosed brochure tells you how to take advantage of this limited-time offer, which expires Sept 30 and is available exclusively for PGE customers.

Many installations qualify for state energy tax credits and cash incentives.

Because heat pumps are so energy-efficient, some installations may qualify for a \$200 instant discount, available through PGE-approved contractors, a state energy tax credit and an Energy Trust of Oregon cash incentive. On qualifying installations, that can add up to as much as \$1,200 back in your pocket.² See the enclosed brochure for details.

Talk to an expert today.

Our PGE-approved contractors can explain why more and more homeowners are opting for a heat pump to take care of both cooling and heating. Go to PortlandGeneral.com/HeatPumpOffer or call the PGE Energy Experts at 503-612-3500 or 1-800-722-9287 to find a contractor near you.

Sincerely,

Nani Chesire
Heat Pump Program Manager

¹ Compared to a standard electric furnace. Ask the PGE Energy Experts or your dealer for more information.

² Maximum amount on a ductless system is \$1,200. Maximum amount on a ducted system is \$1,080. Ask your PGE-approved contractor or the PGE Energy Experts about qualifying criteria for discounts, tax credits and incentives.

An energy-efficient heat pump delivers **comfort** in any season.

A heat pump is a great cooling and heating option in our mild climate. During summer, a heat pump captures heat from inside your home and discards it outside. In winter, it extracts heat from outdoors, bringing it inside to heat your home. No matter what the weather, a heat pump delivers the comfort you deserve.

Because a heat pump moves rather than creates heat, it's a big energy saver — using up to 60 percent less electricity to heat your home.¹ Ducted heat pumps use a secondary heat source when it's unseasonably cold outside. Ductless heat pumps operate efficiently with no back-up heat source.

¹ Compared to electric heating, such as an electric furnace or baseboards. Savings on homes without ducts are up to 60 percent. Savings on ducted homes are up to 40 percent.

Heat Pump Special Offer Details and Conditions

Heat Pump Special Offer is available on systems purchased by September 30, 2012. Offer is available to legal residents of the U.S., residing in Oregon, age 21 or older, who own a home located in PGE's service territory where the system is installed. Renters, encourage your landlord to request a bid.

Details and conditions of ducted heat pump offer by Trane:

- \$350 MasterCard gift card; Eligible for customers who install a Trane 9.0 HSPF system (Model XA15 + Indoor Unit + Comfort Control)
- \$500 MasterCard gift card; Eligible for customers who install a Trane 9.0 HSPF variable speed system (Model XL151 + Variable Speed Indoor Unit + Clean Effects + Comfort Control)
- \$800 MasterCard gift card; Eligible for customers who install a Trane 9.5 HSPF system (Model XL161 + Variable Speed Indoor Unit + Clean Effects + Comfort Control)
- \$1,250 MasterCard gift card; Eligible for customers who install a ducted 10 HSPF system (Model XL201 + Variable Speed Indoor Unit + Clean Effects + Comfort Control)

Details and conditions of ductless, mini-split heat pump offer by Mitsubishi:

- \$150 MasterCard gift card; Eligible for customers who install a single-zone system
- \$200 MasterCard gift card; Eligible for customers who install a two-zone system (Model MXZ1820)

Additional details and conditions of both Trane and Mitsubishi systems:

- Value of gift card varies with system selected by customer.
- Allow 8 to 12 weeks for MasterCard gift card delivery after heat pump installation. You must activate and register card prior to first use. MasterCard gift cards may be used anywhere Debit MasterCard cards are accepted. Gift card carries no monthly fees, but full value must be redeemed within five years.
- Not all systems qualify for full Energy Trust cash incentives and tax credits. Ask your PGE-approved Trane or Mitsubishi contractor for details.

Get comfort now. Save energy next winter.



An energy-efficient heat pump offers year-round comfort and can cut energy costs by up to 60 percent.

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Learn more:

PGE Energy Experts

PortlandGeneral.com

503-612-3500 • 1-800-722-9287



Learn more online:

PortlandGeneral.com

PGE Energy Experts

503-612-3500 • 1-800-722-9287

Portland General Electric

Get up to **\$1,200 back** in rebates, tax credits and cash incentives!

Receive a \$200 instant discount, courtesy of a PGE-approved contractor, when you install a qualifying, energy-efficient heat pump. Many installations also qualify for:

- \$250 to \$800 in Energy Trust of Oregon cash incentives³
- \$100 to \$430 Oregon energy tax credit⁴

The PGE Energy Experts can discuss your eligibility for discounts and tax credits.

² Discounts, incentives and tax credits are subject to change. Maximum amount on a ductless system is \$1,200. Maximum amount on a ducted system is \$1,080.

³ Some installations must replace electric resistance heat (baseboard, ceiling and wall heat or electric forced-air furnace) as the primary heat source. Contact Energy Trust about other requirements at 1-866-368-7878 or www.EnergyTrust.org/residential.

⁴ Consult your PGE-approved contractor for details as well as your tax advisor.

⁵ System must be purchased by Sept. 30, 2012. See back panel for offer conditions and details.

⁶ HSPF stands for Heating System Performance Factor.

Plus, take advantage of this cool, **limited-time offer available for PGE customers!**

PGE, Trane® and Mitsubishi Electric have teamed up to offer a MasterCard gift card **valued at up to \$1,250**, when you install a qualifying ducted or ductless heat pump system.



Offer from Trane:

Get a MasterCard gift card of \$350 to \$1,250 when you install a qualifying ducted system.⁵

- Select from four models, some with variable speed and whole-house air filtration.



Trane offer

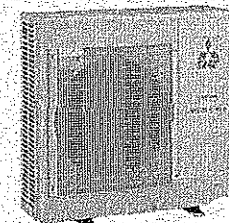
MasterCard value	HSPF ⁶
\$350	9.0
\$500	9.0 loaded system
\$800	9.5
\$1,250	10.0

Plus, get up to \$1,080 back in discounts, cash incentives and tax credits on qualifying installations.

Offer from Mitsubishi:

Get a MasterCard gift card of \$150 to \$200 when you install a qualifying ductless system.⁵

- Select from single- and two-zone options.
- Quiet, compact, ideal for homes without ductwork.



Mitsubishi offer

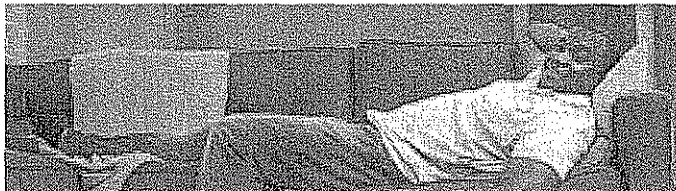
MasterCard value	System
\$150	Single-zone
\$200	Two-zone

Plus, get up to \$1,200 back in discounts, cash incentives and tax credits on qualifying installations.

To request this offer:

Go to PortlandGeneral.com/HeatPumpOffer, or call the PGE Energy Experts.

Get comfortable now, save energy next winter



An energy-efficient heat pump offers comfort in any season and can cut winter energy costs by up to 50 percent.*

[Learn More](#)

One heating and cooling system, year-round comfort

No matter what the weather, a heat pump delivers the comfort you deserve. In summer, a heat pump captures heat from inside your home and discards it outside, just like air conditioning. In winter, it extracts heat from outdoors, bringing it inside to heat your home. It's an excellent cooling and heating option for our mild climate.

Get a MasterCard gift card when you purchase by Sept. 30

Participating FGE-approved contractors are offering FGE customers a MasterCard gift card, valued at between \$150 and \$1,250, on systems purchased by Sept. 30, 2012.** Select from ducted and ductless systems. Ducted systems require a backup heat source as when it's extremely cold outside. Ductless systems do not.

Receive up to \$1,200 back in tax credits and incentives

Heat pumps are so energy efficient that some installations qualify for:

- * \$200 instant discount offered by a FGE-approved contractor
- ** \$250 to 800 Energy Trust of Oregon cash incentive†
- † Oregon tax credit of between \$500 and \$1,200‡

[Request a free estimate](#)

* Compared to electric heating replaced by a ductless system. Savings on a ducted system are up to 45 percent. Individual circumstances will vary.

** Allow 3 to 12 weeks for delivery after installation.

† Some installations must replace electric resistance heat (baseboards, ceiling and hot heat or electric forced-air furnaces) as the primary heat source. Ask Energy Trust about other requirements. Contact Energy Trust at 800-545-6282 or energytrust.org/heatpumps.

‡ Ask your tax advisor for details on tax credits.

This article was paid by: Portland General Electric
125 S.W. Salmon St., Portland, OR, 97204

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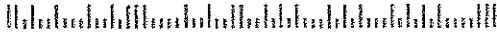


Portland General Electric Company
121 SW Salmon Street • Portland, Oregon 97204

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October 3, 2012

*000001



JOHN Q PUBLIC
JANE DOE
111 SW PORTLAND ST STE 500
PORTLAND OR 97204-3575

Cut waste and boost comfort with new ductless heating.

Dear JOHN Q PUBLIC:

Put today's technology to work for you. **Cut energy waste and improve comfort** by replacing your electric-baseboard, wall-mounted or ceiling heaters with new ductless heating. These wall-mounted units optimize comfort throughout your home, putting control at your fingertips using a remote, just like your TV. Ductless heating can **reduce winter heating costs by up to 60 percent.**¹ These ductless mini-split heat pumps also cool your home in summer, acting just like air conditioning. The enclosed brochure explains more about this exciting technology.

Exclusive offer for PGE customers: receive up to one interior zone free.

To help make these systems more affordable, participating PGE-approved contractors have teamed up with Carrier/Toshiba and Sanyo/Panasonic to offer up to one interior zone free on systems purchased by Nov. 30, 2012. **That's a savings of up to \$500.** Select from a variety of multi- and single-zone systems. This limited-time offer is available exclusively for PGE customers. See the enclosure for details, including the option for financing.

Many installations qualify for up to \$1,200 in additional incentives.

Because heat pumps are so energy-efficient, some installations may qualify for a \$200 instant discount, available through PGE-approved contractors, a state energy tax credit and an Energy Trust of Oregon cash incentive. On qualifying installations, that can add up to as much as **\$1,200 back** in your pocket.²

Talk to an expert today.

Participating PGE-approved contractors can explain why more and more homeowners are opting for ductless heating and cooling. Go to PortlandGeneral.com/HeatPumpOffer or call the PGE Energy Experts at 503-612-3500 or 1-800-722-9287 to take advantage of this offer.

Sincerely,

Nani Chesire
Heat Pump Program Manager

P.S. Have a ducted system? The PGE-approved contractors participating in this offer also have Cool Cash rebates available on qualifying Carrier ducted systems installed by Nov. 30, 2012. Get started using the same contact information above.

¹Compared to standard electric heating. Ask the PGE Energy Experts or your dealer for more information.

²Ask a PGE-approved contractor or the PGE Energy Experts about qualifying criteria for discounts, tax credits and incentives.

The smart, comfortable way to heat your home

Ductless heating offers year-round comfort while using up to 60 percent less electricity to heat your home.¹ It's the smart choice for replacing costly electric baseboard, ceiling and zonal heaters.

Today's technology, no ducts required

New ductless heating and cooling allows you to heat and cool individual rooms or zones in your home — each with its own thermostat that you can control with a remote, just like your TV.

Quiet, reliable comfort

Ductless heating and cooling delivers consistent year-round temperatures keeping you comfortable in any season. It is also very quiet, both inside and out.

Reduce energy waste

This type of system is ideal for our climate. During winter, these ductless, mini-split heat pumps extract heat from outdoors, bringing it inside to heat your home. In summer, the process reverses, cooling your home. Because it transfers rather than creates heat, ductless heating and cooling is highly energy efficient, cutting heating costs by up to 60 percent.¹ In western Oregon, these systems can operate efficiently with no backup heat source.



Simple, affordable installation

Rather than ductwork, ductless heating and cooling uses small, exterior refrigerant piping lines that connect a suitcase-sized outdoor unit to one or more wall-mounted indoor units. Installation is quick with minimal disruption. In most homes, installation costs only \$3,000 to \$5,000 after available incentives. You'll enjoy reliable performance, simple maintenance and years of dependable service.

Save up to \$1,200

Get a \$200 instant discount, courtesy of a PGE-approved contractor, when you install a qualified ductless, mini-split heat pump. Some installations also may qualify for:

- \$800 Energy Trust of Oregon cash incentive²
- \$50-\$200 Oregon energy tax credit³

To be eligible, you must meet program criteria and installation requirements.⁴

Take advantage of our limited-time offer

PGE-approved contractors are offering an additional discount on qualifying systems purchased by Nov. 30, 2012. Learn more on the back panel.

¹ Available for electric heating, such as electric baseboards, in multiple circumstances. See the PGE Energy Experts on your contractor for more information.

² Available for electric baseboard, ceiling and wall heat or heat forced air furnace as the primary heat source. Contact Energy Trust about other requirements at 1-800-367-7878 or www.energytrust.org/ductless.

³ See online contractor list posted by Oregon Department of Energy as your tax advisor or accountant.

⁴ Discounts, incentives and tax credits are subject to change.

Don't miss this special offer on ductless heating

Install a qualifying ductless heat pump system and receive up to one interior zone FREE — that's up to a \$500 value.

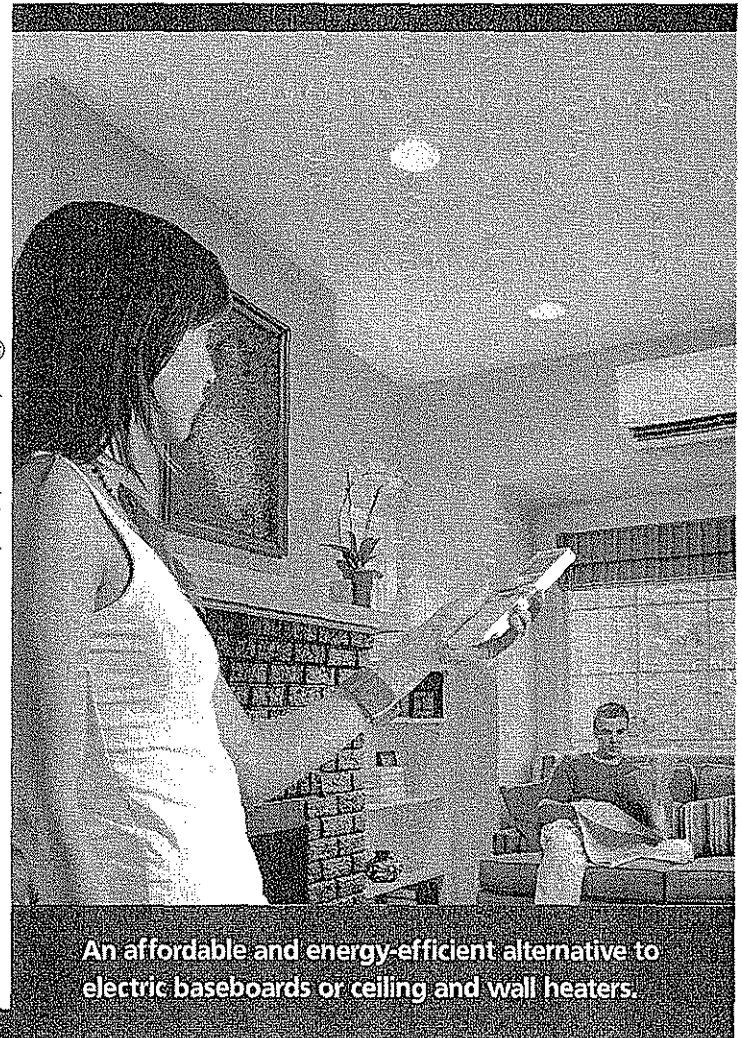
- Buy the outdoor unit and one interior zone, and your second zone is free.
- Buy a single-zone system, and get 50 percent off your indoor unit.
- Available on Carrier/Toshiba or Sanyo/Panasonic systems $\leq 19,000$ Btu/hour (1 to 3 zones).
- Special financing available from 1st Security Bank for qualifying applicants.

Have a ducted system?

Participating PGE-approved Carrier contractors also have manufacturers' rebates available on qualifying ducted systems installed by Nov. 30, 2012.

Learn more and request a free estimate at: PortlandGeneral.Com/HeatPumpOffer or call the PGE Energy Experts.

Get comfort and reduce energy waste with ductless heating



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An affordable and energy-efficient alternative to electric baseboards or ceiling and wall heaters.



Find more information online:
PortlandGeneral.com/HeatPump
Or contact PGE Energy Experts at
503-612-3500 or 800-722-9287.

Portland General Electric

Get cozy this winter and stop wasting energy

Enjoy year-round comfort with a premium-efficiency
ductless heating and cooling system — and cut
heating costs by up to 80 percent.*



Cut waste with today's new heating technology

Say goodbye to wasteful electric-baseboard, ceiling-cable and wall heaters. With new ductless heating and cooling, you'll enjoy zoned comfort year-round, with heating and cooling delivered when and where you need it — all controlled by a remote just like your TV.



Special offer: Free interior zone on a ductless system

FGE-approved contractors and heat pump manufacturers have teamed up to offer FGE customers up to one free interior zone on ductless systems purchased by Nov. 30, 2013. That's a savings of up to \$300. Subject to one- to three-zone systems. Financing is available for qualifying applicants.

Receive up to \$1,200 back in tax credits and incentives

Heat pumps are so energy-efficient that some installations qualify for:

- \$200 instant discount offered by a FGE-approved contractor
- \$300 Energy Trust of Oregon cash incentive**
- Oregon tax credit of between \$50 and \$200†



* Compared to electric baseboard heating by published systems that don't have zoned delivery.
** Some installations may qualify for electric resistance heat (baseboard, ceiling and wall heaters) that have air treated as the primary heat source. See Energy Trust website for requirements: www.EnergyTrust.com or call Energy Trust at 800-455-7878.

† See your tax advisor for details on provisions.

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Heat Pump and Gas Conversions by Month

NWN/104
Edmonds/1

Non-gas to Gas Gas to Heat Pump Non-gas to Heat Pump

