Ductless Heat Pump Business Opportunities

…in electrically heated homes
About Jonathan

• National Ductless HVAC Expert
  o Working with HVAC Contractors, Distributors and Manufacturers to help grow ductless H/P sales

• Member of the NW Ductless Heat Pump Project Implementation Team (2018 and 2019)
Questions & Answers

1) Which utility service areas do you work in?
2) In the last 90 days, how many ductless heat pumps have you installed?
3) How often do you work in “all electric” homes?
Have you ever wondered...

Who does what?
About NEEA...
About the Evaluation Work of NW Ductless H/P Project

- It’s called the M-PER or ”Market Progress Evaluation Report”
- There have been 7 M-PERs since 2008
- The M-PER is AMAZING!
  - It tells us so much about the market DHPs in OR, WA, ID, MT and beyond

LET’S CHECK IT OUT!
About the MPER:

Who gets surveyed?

People who:
1. Purchased a DHP
2. Got a bid, but didn't purchase
3. Didn't get a bid even though they were interested in a DHP

Over 283 homeowners were interviewed from across the 4 states.
Since 2008, an estimated 204,742 DHPs have been installed in the region.

83,700 (41%) were installed in NW Ductless Program’s “Target Markets”.
Where did the +/- 120,000 “non-target” DHPs go? ¹

- ≈ 65,000 went into commercial applications
- ≈ 55,000 went into “other” residential applications
  - ≈ 17,500 » new construction homes
  - ≈ 17,500 » additions to existing homes
  - ≈ 10,000 » homes that heat with gas, propane, oil, wood, etc.
  - ≈ 7,000 » manufactured homes that heat with gas, propane, oil, wood, etc.
  - ≈ 3,000 » multi-family

¹ NOTE: Extrapolated from MPER 6
### NEEA’s Target Markets: Total Size

<table>
<thead>
<tr>
<th>Rank</th>
<th>Market Description</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Single Family Residential Homes w/ Electric Zonal Heat</td>
<td>505,066</td>
</tr>
<tr>
<td>#2</td>
<td>Single Family Residential Homes w/ Electric Forced Air Heat</td>
<td>222,981</td>
</tr>
<tr>
<td>#3</td>
<td>Manufactured Homes w/ Electric Forced Air Heat</td>
<td>280,585</td>
</tr>
<tr>
<td></td>
<td><strong>Total:</strong></td>
<td><strong>1,008,632</strong></td>
</tr>
</tbody>
</table>

**Note:** Multifamily is not included here (and it is another huge market).
Results so far…

<table>
<thead>
<tr>
<th>Target Markets</th>
<th>Available Units</th>
<th>Installed to Date (2008-2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Single Family Residential Homes w/ Electric Zonal Heat</td>
<td>505,066</td>
<td>71,970</td>
</tr>
<tr>
<td>#2 Single Family Residential Homes w/ Electric Forced Air Heat</td>
<td>222,981</td>
<td>8,467</td>
</tr>
<tr>
<td>#3 Manufactured Homes w/ Electric Forced Air Heat</td>
<td>280,585</td>
<td>3,262</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>1,008,632</strong></td>
<td><strong>83,700</strong></td>
</tr>
</tbody>
</table>

So much more opportunity!
Year Over Year Changes…

Topline: 19.6% Growth Y-o-Y

Incentives: 17.4% Growth Y-o-Y
State by State Results

Figure 2. Incented Installations by State and by Year

- **Washington**
- **Oregon**
- **Idaho**
- **Montana**

<table>
<thead>
<tr>
<th>Year</th>
<th>Washington</th>
<th>Oregon</th>
<th>Idaho</th>
<th>Montana</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>121</td>
<td>1,569</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>1,945</td>
<td>3,144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>2,303</td>
<td>5,567</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>2,069</td>
<td>4,893</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>2,818</td>
<td>5,289</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>4,541</td>
<td>7,688</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>5,133</td>
<td>8,701</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>4,762</td>
<td>10,176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>5,272</td>
<td>9,946</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>5,882</td>
<td>12,179</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Electric Heat is Everywhere!

Many counties have at least 50% electrically heated homes.

Note: Only 3 in Idaho and 1 in Montana

Note: based on 2014 data
### Eugene, OR

#### Drive-Time Radius

<table>
<thead>
<tr>
<th></th>
<th>15 Min</th>
<th>30 Min</th>
<th>45 Min</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Households</strong></td>
<td>100,627</td>
<td>130,696</td>
<td>141,805</td>
</tr>
<tr>
<td><strong>Med Value</strong></td>
<td>$237,578</td>
<td>$235,625</td>
<td>$236,952</td>
</tr>
<tr>
<td><strong>Med Income</strong></td>
<td>$40,895</td>
<td>$42,892</td>
<td>$43,823</td>
</tr>
<tr>
<td><strong>Owner Occ.</strong></td>
<td>50.3%</td>
<td>55.0%</td>
<td>56.6%</td>
</tr>
<tr>
<td><strong>Med Year Built</strong></td>
<td>1974</td>
<td>1975</td>
<td>1975</td>
</tr>
<tr>
<td><strong>Electric Heat</strong></td>
<td>73.3%</td>
<td>71.8%</td>
<td>70.7%</td>
</tr>
<tr>
<td><strong>Electricity / Mo.</strong></td>
<td>$122~</td>
<td>$127~</td>
<td>$129~</td>
</tr>
</tbody>
</table>

**Note:** based on 2014 data
### Portland METRO

#### October 25th

**Drive-Time Radius**

<table>
<thead>
<tr>
<th></th>
<th>15 Min</th>
<th>30 Min</th>
<th>45 Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households</td>
<td>159,912</td>
<td>402,998</td>
<td>866,327</td>
</tr>
<tr>
<td>Med Value</td>
<td>$256,577</td>
<td>$292,054</td>
<td>$299,039</td>
</tr>
<tr>
<td>Med Income</td>
<td>$49,595</td>
<td>$55,730</td>
<td>$59,690</td>
</tr>
<tr>
<td>Owner Occ.</td>
<td>52.8%</td>
<td>55.8%</td>
<td>58.2%</td>
</tr>
<tr>
<td>Med Year Built</td>
<td>1971</td>
<td>1975</td>
<td>1978</td>
</tr>
<tr>
<td>Electric Heat</td>
<td>47.0%</td>
<td>45.9%</td>
<td>45.1%</td>
</tr>
<tr>
<td>Electricity / Mo.</td>
<td>$132~</td>
<td>$155</td>
<td>$165~</td>
</tr>
</tbody>
</table>

*Note: based on 2014 data*
Bend, OR

October 19th

Drive-Time Radius | 15 Min | 30 Min | 45 Min
--- | --- | --- | ---
Households | | | 
Med Value | | | 
Med Year Built | | | 
Electric Heat | | |
**Grants Pass, OR**

**October 17th**

<table>
<thead>
<tr>
<th>Drive-Time Radius</th>
<th>15 Min</th>
<th>30 Min</th>
<th>45 Min</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Households</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Med Value</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Med Year Built</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Electric Heat</em></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NEED INFO**

NW DUCTLESS HEAT PUMP PROJECT

DRAFT
Ductless Customer Satisfaction…HIGH

- 91% of respondents with electric furnaces said they were satisfied.
- 72% of respondents with zonal heating equipment said they were satisfied.

NOTE: As reported in MPER 6.
Opportunity to Make Happier Customers

For Zonal Electric Heat Customers:

1) Be sure to give them a thorough introduction to the DHP.

2) Remind them that they need to turn on ZONAL heat when they feel cold.
   - Email each Fall?

3) Leave behind the support handout produced by the NW Ductless Heat Pump Project.
Customer Awareness...Strong! ¹

- Overall Awareness is 38% – When shown a picture they could name the product: “mini-split” or “ductless”
- With increasing household income, awareness increases!

¹ NOTE: As reported in MPER 6
Sale Price Analysis...Encouraging! ¹

Also Encouraging: Education, Income and Current Heating Type **DO NOT** greatly influence this trend!

¹ NOTE: As reported in MPER 6
Purchase Influencers

- 68% said that the availability of financing options would increase their likelihood of purchasing a DHP.

- 84% said that the availability of a $600 to $1,200 cash rebate would increase their likelihood of purchasing a DHP.

  - Interesting…Respondents with an annual household income greater than $100,000 were almost twice as likely to purchase with a rebate than were respondents with an annual household income below $50,000.

1 NOTE: As reported in MPER 6
Be Proactive!

1) Get in front of people who live in electrically heated homes.

2) Introduce them to DHPs for the first time.
Our Goal

We want to help you market and sell to electrically heated homes!

Would you be interested in learning more?

• Marketing practices
• Sales skills
• Ideas on new ways to grow your DHP sales
Resources at GoingDuctless.com

Lots of info for Consumers & Contractors

- Learn about DHPs
- Utility rebates
- Training resources
- Manufacturer promotions
Questions?

Give me a call!

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NW Ductless Heat Pump Project Implementation Team  
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jm@mainstreaminnovations.net
Appendix Slides

1) Displacement Technique
2) Information Gaps (experienced by consumers)
3) Price Barriers
Displacement Approach

**Results:** Maximize energy savings, return on investments and sales opportunities

**Existing condition:** Baseboard heating system

**Displacement solution:** Single-head ductless system in primary living area; baseboards remain in place as backup
Conclusion: DHP purchase considerers often conduct online research, but may not find sufficient information on some topics.

More than half of surveyed respondents who considered purchasing a DHP had conducted online research.

Actions Taken When Considering DHP Purchase:
- Talked to friends, family, or colleagues about their DHP: 61%
- Researched DHPs online: 56%
- Talked to contractor(s)/HVAC specialists in person: 24%
- Talked to contractor(s)/HVAC specialists over the phone: 21%
- Got bid(s) from a contractor/HVAC specialist: 11%
- Other: 7%

Most interviewed “non-purchasers” had conducted online research; wanted additional information:

- Product Reviews
- What to ask installers
- DHP information specific to their climate or home characteristics

“I wish I could find the annual operational cost of running a DHP in Seattle for a home of a given size.”
Conclusion: Price continues to be a major barrier; however, consumers may encounter a variety of other purchase barriers.

Half of surveyed consumers who considered purchasing a DHP (but did not) identified cost as the reason.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage of Respondents (n=75)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price/cost</td>
<td>53%</td>
</tr>
<tr>
<td>Still deciding what to do</td>
<td>5%</td>
</tr>
<tr>
<td>Lack of knowledge of DHPs</td>
<td>4%</td>
</tr>
<tr>
<td>DHPs take up too much space</td>
<td>3%</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>3%</td>
</tr>
<tr>
<td>DHPs only heat/cool one area of the home</td>
<td>3%</td>
</tr>
<tr>
<td>Did not feel like it was a necessary purchase</td>
<td>1%</td>
</tr>
<tr>
<td>Did not want to try a new type of equipment</td>
<td>1%</td>
</tr>
<tr>
<td>Contractor did not provide a bid</td>
<td>1%</td>
</tr>
<tr>
<td>Did not provide a response</td>
<td>26%</td>
</tr>
</tbody>
</table>

“Non-purchaser” interviewees identified several barriers:

- **Upfront Investment**
- **Doubts about heating capability**
- **Conventional HP better for whole-house system**
- **Did not meet aesthetic expectations**
- **Installer did not recommend**

“DHPs would exhale mildly warm air as opposed to a gas fireplace system that can heat up the bones of the house.”

“The DHP was a lot more expensive than I thought for not being able to take care of all zones.”
DHP purchase considerers often conduct online research on DHPs; may not find sufficient information on some topics

R E C O M M E N D A T I O N S

Consider providing additional information on goingductless.com, e.g.:
- Product reviews
- DHP cost savings and payback period calculator specific to different Pacific Northwest climate zones and home sizes or number of units
- List of affordable single-head equipment brands and options
- Checklist of questions for respondents to ask installers
- Customer testimonials

Drive customers to goingductless.com (e.g. through search engine optimization), and/or make resources available through other channels (e.g. utility websites)