

Northwest Ductless Heat Pump Project



Reaching and Teaching People about
“Heatless Duct Pumps”

Presented by **Jeff Pratt**

Northwest Ductless Heat Pump Project

“Heatless Duct Pumps”?

(allow me to explain)

Northwest Ductless Heat Pump Project

The two main things I have learned working with the Project this past year:

1. This DHP stuff ain't that hard.
2. This DHP stuff ain't that easy.

Not That Hard

Installing Ductless Heat Pumps correctly is not that hard...

...just read the installation manual and do what it says to do. Period.

- R410a tools and techniques
- Leak checking, charging and commissioning

Not That Easy

Communicating Ductless Heat Pumps to real people is not that easy...

...most don't really grasp heat pumps

...much less "ductless" heat pumps

... and we (in the industry) are not helping!

Not That Easy

What the consumer hears about ductless heat pumps from all of us:

“Inverter-driven/variable speed ductless mini-split air conditioners and (reversible) heat pumps with auto change over and power diffusers

410A refrigerant with zero ozone depletion potential

High SEERs/EERs/HSPFs

IAQ plasma, flash and apple-catechin/green tea filters

Mr. Slim/Halcyon/Absolute Comfort/Life’s Good....”

Not That Easy

Life is good, but what real people call DHPs is bad:

We have heard everything...our voice mail was a hoot!

“Ductless thingies”

“Mini-split pump heaters ”

...and my favorite... (hence the title)

“Heatless duct pumps!”

One lady...

Reaching and Teaching People about “Heatless Duct Pumps”

Originally, the Project asked me to present:

“Getting the Most Out of Your Ductless Heat Pump”

I’ll get to that, but consumers can’t get the most out of their ductless thingy unless they own one.

And they are not going to own one unless they can get their arms around what it is!

Reaching and Teaching People about “Heatless Duct Pumps”

So I grew the presentation to include how we reach and teach the consumers targeted by the Project about “Heatless Duct Pumps” ;-)

- » Marketing and Sales
- » Customer Orientation

We use...

The New Electric Heat

If you have the old electric heat,
you need...



The New Electric Heat?

Why do we use **The New Electric Heat** to promote DHPs?

Because the “Ductless Heat Pump” could be the next Compact Fluorescent Lamp.

Compact Fluorescent Lamps?

What do CFLs have to do with Ductless Heat Pumps?

1. Ductless Heat Pumps may very well be the next big thing when it comes to residential energy efficiency (like CFLs were 15 years ago); and,
2. The **name** “Ductless Heat Pump” could be a “ball and chain” just like the name Compact Fluorescent Lamp was in lighting:
 - We fought the **name** Compact Fluorescent Lamp for 20 years:
 - » Named by technoweenies for sure.
 - » Compact? Fluorescents? Lamps?
 - » We went for CFLs, but acronyms are for involved nerds. DHPs anyone?
 - » We made it with CFLs, but it took longer and was more expensive than necessary. That new bulb needed an identity.
 - » In the end, the people know them by names like “spiral”, “twist” and the “ice cream cone looking bulb”, not CFLs
 - » Heatless Duct Pumps? Probably fine if you don’t want to do too many or you have lots of time and money for incentives.

The New Electric Heat?

Another reason we use **The New Electric Heat** to promote DHPs:

Because it clearly and concisely communicates the customer's problem and the solution.

The Old Electric Heat

The customers with “the old electric heat” have a problem and they know it.

Most live with compromised comfort and are unhappy about the high cost of operation.

Many have looked at whole house solutions and received “sticker shock”.

Some have purchased Amish Miracle Heat or wood/pellet stoves only to be disappointed or grow weary from operation routines.

Most would like air conditioning, but based on the lack of affordable options, many think “window shaker” room ACs are their best option.



"CAUTION" High temperature risk of fire. Keep Electrical cords, drapery, furnishings and other combustibles at Least 3 Feet (.9m) from front of the heater and away from side and rear.



COMFORT
ZONE

60

80

50

90

LO





Got The Old Electric Heat?

Ductless Heat Pumps are...



The New Electric Heat? Says Who?

- Your local utility,
- The State of Oregon, and
- The Federal Government

All have incentives to help you upgrade to **The New Electric Heat** because using less of the old electric heat is good for the environment and our electric system.

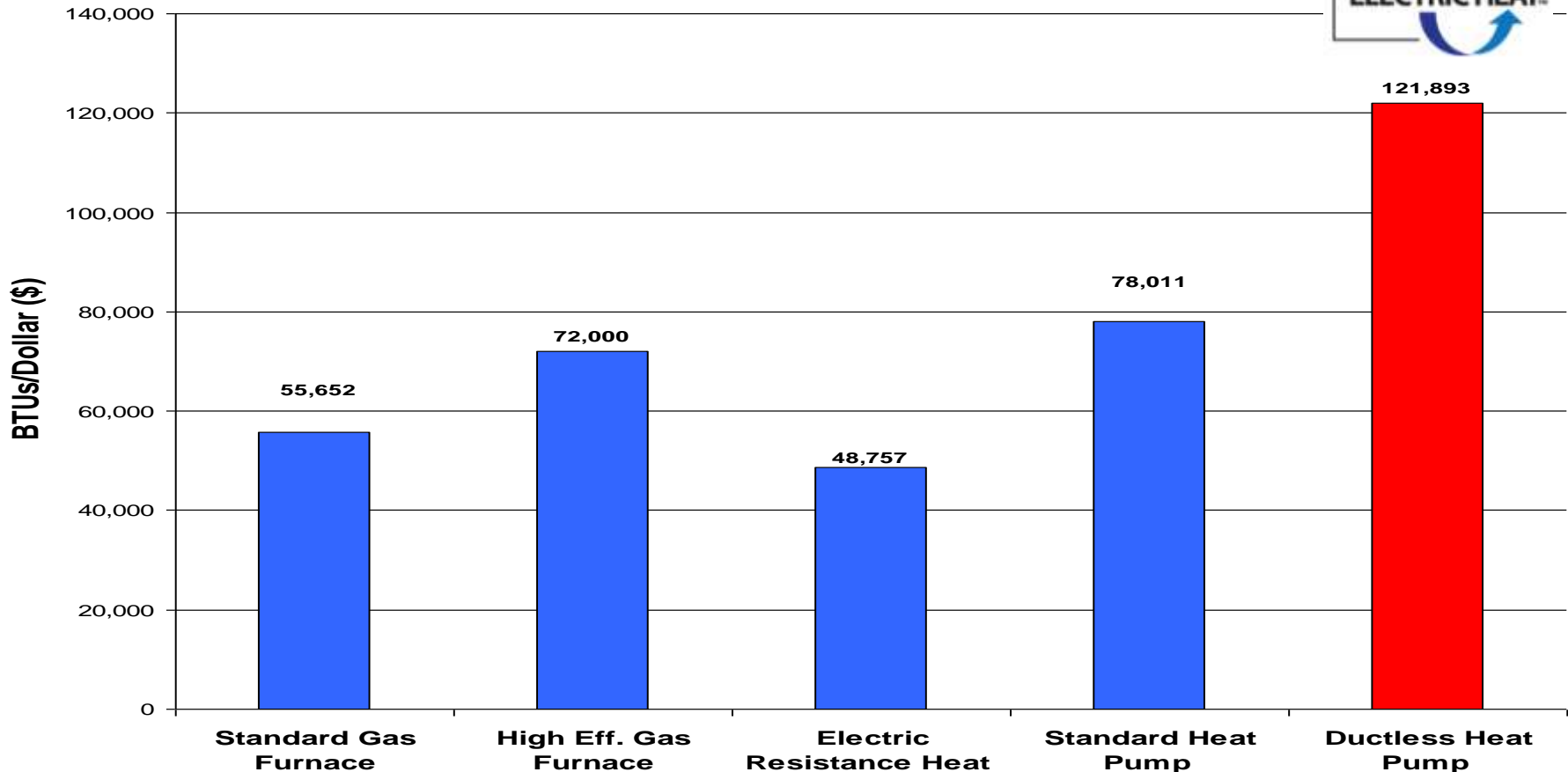
And of course, using other people's money and saving energy is good for your bottom line.



Bottom Line – The Cost of Heat

\$1 Worth of Heat in Monmouth

(@ \$1.15/therm of NG and \$0.07/kWh Electricity)



Bottom Line – The Cost of Heat (other fuels)

<i>Heating System</i>	<i>Unit</i>	<i>BTUs Per unit</i>	<i>Cost Per Unit</i>	<i>Fuel Cost Per Million BTU</i>	<i>System Efficiency</i>	<i>Distribution Efficiency</i>	<i>Combined Efficiency</i>	<i>Delivered Cost Per Million BTU</i>	<i>BTUs Per \$1</i>
Natural Gas Furnace	Therm	100,000	\$1.15	\$11.50	70%	70%	0.49%	\$23.47	42,609
Natural Gas High Eff. Furnace	Therm	100,000	\$1.15	\$11.50	94%	80%	0.75%	\$15.29	65,391
Electric Resistance Heat	kWh	3,413	\$0.07	\$20.51	100%	100%	1.00%	\$20.51	48,757
Heat Pump	kWh	3,413	\$0.07	\$20.51	200%	80%	1.60%	\$12.82	78,011
Ductless Heat Pump	kWh	3,413	\$0.07	\$20.51	250%	100%	2.50%	\$8.20	121,893
Fuel Oil	Gallon	138,000	\$3.00	\$21.74	70%	70%	0.49%	\$44.37	22,540
Propane	Gallon	92,000	\$2.59	\$28.15	70%	70%	0.49%	\$57.45	17,405
Wood	Cord	12,000,000	\$175.00	\$14.58	60%	100%	0.60%	\$24.31	41,143
Pellets (wood)	Ton	16,000,000	\$180.00	\$11.25	70%	100%	0.70%	\$16.07	62,222

The New Electric Heat?

But the main reason we use **The New Electric Heat** to promote DHPs?

Because it works.

The New Electric Heat



How do we know it works?

Several of the more successful utilities and contractors in the Project used “the new electric heat” messaging:

- McMinnville Water and Light
- Monmouth Power and Light
- Met-Fab in Clark County, WA
- First Call Jewell in Idaho Falls

The New Electric Heat



How do we know it works? (cont'd)

Because The Heat Pump Store used a small group of completely inexperienced, low-tech sales people manage to sell more DHPs in the Project than any other contractor in the region:



One year ago:

Jan was a Registered Dietitian

Diane “Mary Kay” was closing in on a pink Cadillac selling make-up

Rick (not pictured) was a hillbilly minister and small homebuilder

Johnny was an All State foosball player (he is a DHP installer – proof installation is not that hard!)

And now a word from our sponsor...



The New Electric Heat™



The New Electric Heat is a proprietary and registered trademark.

Through Use Agreements, the brand and related messages are available to:

Utilities that want to implement exemplary DHP programs and influence markets (with or without large incentives);

Contractors and other market actors who want to effectively differentiate themselves from the competition in the electric heat market

jeff@theheatpumpstore.com

Teaching After Reaching

The day The New Electric Heat is installed, we carefully review :

- The installation (inside, outside, electrical)
- The equipment and controls
- Our version of the Home Owner's Guide which has been on www.nwductless.com for almost a year.

Getting the Most Out of Your DHP After the Sale

General Operation Guidelines

- Set the mode of operation – use the “HEAT” or “COOL” setting is most “responsive”. “AUTO” will monitor within a 4F dead-band.
- Set the fan speed – use the “AUTO” setting to automatically use the optimal fan speed.
- Set the temperature to “your 70F”
- Avoid “over adjusting” the temperature setting; moderate night time set back

Getting the Most Out of Your DHP After the Sale

Heating Operation Guidelines

- Determine the “effective zone”
- Make the DHP your primary heating system in the “effective zone”:
 - Set the existing heating system to operate as “back-up” ($\Delta 5F-15F$)
 - In severe weather, make adjustments to provide continued comfort
- Check existing electric heating system settings regularly
- Understand the Defrost Function

Getting the Most Out of Your DHP

Maintenance Guidelines

- Clean the Filters (really – show them how)
- Use the “Coil Dry” Function after Air Conditioning
- Sounds (don’t freak out)
- Call us if you need help.

The End

Then we cash their check. 

Any questions?