

ONE LICENSE FOR ONE INDUSTRY



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Upcoming Courses:

- Nov/Dec CEU's are scheduled: NEC Code Update, RCW/WAC, Trainees Courses.
- Electrical Specialty Prep class- December in Spokane, call for details
- Gas Codes & Installation under 400, 00 btus- Spokane, SEE REGISTRATION INSERTS

DUCTLESS HEAT PUMP PROJECT FOR IDAHO AND WASHINGTON

Utilities throughout the Northwest are moving forward with a Ductless Heat Pump (DHP) project to determine the costs and potential energy savings of DHPs in housing where electrical space heating exists. The Northwest Energy Efficiency Alliance ("NEEA") will administer the project and evaluate the results of this project and analyze the potential market growth for DHP's in the industry.

DHP manufacturers are claiming that these mini-splits are ready for the market and can provide increased efficiencies and zonal controls as compared to previous market ratings. The Northwest DHP project will "displace" and not replace existing electric space heat, to allow for cost-effectiveness evaluations and to allow for secondary backups in areas of the living space.

Bonneville Power and private utilities are preparing for 2500 DHP installations by our local HVAC/R dealers by December 2009. Homeowners must meet some of these basic criteria to be approved for the program; existing single family home, must have electric zonal heat as their primary system, not have gas service to their home. Rebates may vary from utility to utility and range up to \$1500 per customer.

DHP manufacturers attribute the main advantages of mini splits to their small size and flexibility for zoning or heating and cooling individual rooms. Many models can have various indoor air handling units (for zones or rooms) connected to one outdoor unit. The number depends on how much heating or cooling is required for the building or each zone (which in turn is affected by how well the building is insulated). Since each of the zones will have its own thermostat, you only need to condition that place when someone is there. This will save energy and money (source: US Department of Energy).

Oregon Department of Energy documents DHP's as efficient since the heated or cooled air is delivered directly to the room, ductless heat pumps avoid efficiency losses associated

with ductwork - typically 15-20 percent. Variable speed compressor models, usually labeled "inverter technology," avoid on-off cycling losses and are able to provide usable heat efficiency on all but very cold days. And, because they provide heat/cooling to specific areas of the house, they can be more efficient since each "zone" can be heated to the desired temperature.

Ductless heat pumps are installed using conventional methods for heat pump/air conditioner installation. However, extra care must be taken to prevent refrigeration leaks and to ensure proper operating pressures. Surveys show that it takes approximately two qualified installers about a day to install a system having up to three zones.

Wiring for power and controls is easier than with a conventional unit since wires can be run along with the refrigerant lines, however, contractors doing installations in Washington State must once again be aware of "increased installation costs" due to scope of work issues directly related to the new wire. One electrical journeyman, not HVAC/R technicians must perform the electrical hookups. These costs should be considered when estimated the install, the local utility rebate offered to configuring the overall profit margin as a DHP project contractor participant.

Contractors who desire to participate in the program must attend a certification training sponsored by Fluid Market Strategies and associated with various DHP's manufacturer. For more certification information, please contact the HVAC/R Association and we will locate the nearest training for your company.

