HEAT PUMP CHECKLIST

WHAT TO LOOK FOR IN AN INSTALLER

- ☐ Technician training and certification
  - Track record of successful previous heat pump installs
  - N.A.T.E., HVAC license (not required in WA), Electrical license
  - Refrigeration license
  - Trade school and apprenticeships
- ☐ WA State Labor and Industries (LNI.Wa.gov)
  - Verify a contractor: Complaints, Safety
  - "Protect My Home", "Hire Smart", "Common Contracting Scams" tabs
- ☐ Reviews and referrals matter!
- ☐ Ask a lot of questions: salespeople, installers, inspectors

READY TO PURCHASE/INSTALL? DON'T FORGET TO APPLY FOR A PERMIT:

- ☐ Permits are required for heat pump installations. Get started at www.mybuildingpermit.com

WHERE TO LEARN ABOUT REBATES AND INCENTIVES (NOW AND FUTURE)

- ☐ EnergyStar.gov/rebate-finder
- ☐ wa.switchison.org (includes local incentives if available)
- ☐ PSE.com/rebates

CURRENT INCENTIVES (as of Sep 2024)

Incentive	Valid through	Program Website
Federal tax credit – 30% of costs including labor (up to $2,000)	December 31, 2032	irs.gov/credits-deductions/home-energy-tax-credits
PSE rebate - $1,500 rebate on qualifying heat pump $2,000 rebate instead if you partner with a PSE Recommended Energy Professional (REP) for installation (limited time offer) Income-qualified customers can save up to $2,900	Ongoing REP offer ends October 15, 2024	pse.com/en/rebates/heating/electric-resistance-to-air-source-heat-pump-conversion-rebate

Heat Pump Glossary

AFUE	Annual Fuel Use Efficiency. Applies to gas furnaces and water heaters. 80% AFUE is avg. 90%+ AFUE is high efficiency
Air Conditioner	Machine that cools by moving heat from inside to outside using vapor compression refrigeration cycle
BTU, BTU/h	British Thermal Unit. Measure of heat output of equipment. 1 ton = 12,000 BTU
CFM	Cubic feet per minute. Measure of airflow produced by the heat pump (HP) indoor unit
Condensate	Water condensed from the air by the HP indoor unit during AC operation. Must be drained to outside or sanitary drain connection
CO	Carbon Monoxide. Byproduct of combustion. Odorless and tasteless. Hazardous to humans.
CO2	Carbon Dioxide. Byproduct of combustion. Generally not harmful to humans except in high concentrations. Contributes to global warming.
Compressor	The pump that moves refrigerant in the HP. Similar to a car engine, critical to operation. Can be expensive to replace when fails.
COP	Coefficient of performance. Electrical energy in vs heat energy transferred. Varies with outdoor temperature, usually 2.0 to 4.0
Defrost	Operation of the HP to remove frost that builds on the outdoor unit coils during cold and damp conditions. HP's defrost by going into AC mode. In ducted systems the cold of the AC is offset by an auxiliary electric heater. No auxiliary heater is available on ductless systems.
Efficiency	The ratio of energy in vs energy out by a machine
Energy Code	Similar to other building codes. Specifies materials and methods to insure energy efficient homes. Impacts building materials, mechanical (HVAC) and electrical systems. Code is often updated every few years, becoming more stringent.
GHG	Green house gas. Gases that contribute to global warming. Most common being CO2, but also includes most refrigerants used in HPs.
Heat Exchanger	Device that transfers heat without mixing air or water streams. Furnace heat exchanger separates combustion from warm air being sent down ducts.
Heat Pump	Machine that cools by moving heat from outside to inside using vapor compression refrigeration cycle.

HSPF, HSPF2	Heating Season Performance Factor. A measure of the HP's efficiency. Higher number means higher efficiency. All HPs are rated using same test conditions.
kW, kWh	Kilowatt hour. A measure of electrical energy. 1kWh=3,413 BTU. Utilities charge per kWh used.
Refrigerant	Fluid used inside the heat pump used to absorb and move heat. Typically referred to by their trade numbers i.e., R-22, R-410a, etc.
R-Value	A measure of thermal heat transfer resistance. Higher R number means greater insulation value.
SEER, SEER2	Seasonal Energy Efficiency Ratio. A measure of the HP's efficiency. Higher number means higher efficiency. All HPs are rated using same test conditions.
Setpoints	Heat and cooling temperature set points on the thermostat. Must have a dead band between. Thermostat will have occupied and unoccupied set points.
Sound Rating	Usually expressed in dB. Higher the dB, the higher the sound. Most HP outdoor units have a sound rating. Most municipalities have noise ordinances limiting dB levels at the property line, often slightly lower after 10pm.
Tax Credit	Reduces taxable income. Valuable only if taxpayer has taxable income. More valuable that a tax deduction.
Therm	A measure of natural gas energy. 1 therm = 100,000 Btu. Utilities typically charge per therm used.
Thermostat	Controller used to operate the heat pump. Can be built in, wall mounted or wireless remote, depending on HP type.
U-Value	A measure of thermal heat transfer conduction. Lower U-value number means great insulation value. U=1/R. Often used to describe window efficiency.