



Heat Pump Water Heater Incentive Program

Have you been wondering if a heat pump water heater would save you money but not sure how it works? Heat pump water heaters work in reverse of a refrigerator. Refrigerators remove heat from an enclosed box and expel heat. A heat pump water heater takes the heat from the surrounding air and transfers it to water in an enclosed tank. The concept is simple, move heat from one place to another. Imagine a normal electric storage water heater and add a compressor on top - now you have a heat pump water heater.

Heat pump water heaters should be installed in an area that remains between 40 to 90 degrees, provide a minimum of 700 cubic feet of air space around the unit and/or vent direct to outside for maximum efficiency. Heat pump water heaters generally cool the area they are in. When in colder temperatures, they operate as a normal electric water heater.

Most standard electric storage water heaters can consume around 4,800 Kwh per year. At today's prices that's \$400. ENERGY STAR certified heat pump water heaters consume on average 1,300 Kwh. That's a saving of \$300 dollars. You can confirm for yourself by looking for the yellow Energy Guide sticker on your existing unit. Savings are dependent on number of people in household and are calculated from a four-person household.

However, because of their compressors, heat pump water heaters do make noise and are not recommended for areas that are close to sleeping quarters. Most people describe the noise as about the same as a refrigerator. Generally, the best place to install a HPWH is in the garage or basement.

Other considerations:

Common things needed when removing gas water heater -

1. Disconnect and plug existing gas line
2. Disconnect flue- cap flue if part of heat system flue
3. Install dedicated electric circuit –electrician
4. Condensate drain- if using a pump it will need electrical outlet
5. Interior install- requires ventilation to unit 700-1,000 cubic feet
6. Earthquake strapping
7. Permit (electrical and plumbing)
8. Maintenance
 - a. Inspect and clean filter and condensate drain
 - b. If interior installing ducting may be required for comfort
9. Wrap water pipes

Typically heat pump water heaters are 12-15 inches taller, water lines may hook up on the side of the new unit versus normally on top, you will need a condensate line and drain, electrical connection

Pros vs. Cons

Environmentally friendly (no fossil fuel usage)	If located inside, HVAC system will need to work harder to counteract the cooling effect.
Connectivity to phone (handy for vacation)	Usually two usages (water draws) then will need to recover (efficiency). Larger volume draws not recommended.
Typical payback is 2-3 years	Noise
Monthly savings	Upfront cost is higher
	Life expectancy is 10-15 years (ERWH is 25 years and gas is 15-20 year)
	Needs sufficient air circulation (around 700-1,000) cubic feet.
	Uses refrigerant that still contributes to higher global warming potential

The city offers an incentive of \$600 for a Tier 3 unit when replacing from an electric or gas storage water heater. To learn more about the incentive or if a HPWH is right for you, please contact me -

Dan Cunningham
City of Ashland
Conservation Residential Energy Analyst
Dan.Cunningham@ashland.or.us
541-552-2063