



HEAT PUMP WATER HEATERS



Heat pump water heaters use electricity to move heat from one place to another, rather than to generate heat, so the unit uses roughly half the electricity of a conventional water heater.



REASONS TO CHOOSE AN ENERGY STAR® HEAT PUMP WATER HEATER (HPWH)

- Efficiency – Reduce water heating energy consumption by up to 70 percent compared to standard electric water heaters. Heat pump water heaters use significantly less energy to heat the same amount of water by transferring heat instead of creating it.
- Cost savings – Save up to 15 percent on your household electric bill.
- Smart investment – While a HPWH can cost more up front, the savings can pay back the difference in two to three years for a typical household of four. With utility incentives, the unit will pay for itself even sooner.
- Incentives and tax credits – Cooperative incentives are available for ENERGY STAR heat pump water heaters and federal tax credits may apply.
- Control – Dial in efficiency and find the setting that best meets your hot water needs. Heat pump water heaters have operational controls that offer homeowners more flexibility.
- Added benefits – During hot and humid times of the year, a heat pump water heater can help cool and dehumidify the space where it is installed.
- Safety – No flame, no carbon monoxide, no exhaust fumes or gas leaks.

FOR MORE INFORMATION VISIT

U.S. Department of Energy (DOE)
Energy Efficiency and Renewable Energy
www.energysavers.gov

ENERGY STAR
www.energystar.gov

Iowa Energy Center
www.iowaenergycenter.org



Energy Efficient



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ADDING VALUE TO YOUR ELECTRIC SERVICE



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Sources: Hotwatersolutionsnw.org
Energystar.gov



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HOW THEY WORK



HEAT PUMP (HYBRID) WATER HEATER

It's generally easier to move something than to make something. Putting this principle to use, heat pump water heaters use electricity to move heat from one place to another instead of generating heat directly. Think of a refrigerator, but in reverse. While a refrigerator moves heat from inside the unit to the air around it, a heat pump water heater pulls heat from the surrounding air to warm the water in the storage tank.

Heat pump water heaters come with control panels that allow you to select from different operating modes, which include:

- Efficiency/economy – Maximizes energy efficiency and savings by only using the heat pump to heat water.
- Auto/hybrid – Provides energy-efficient water heating while automatically switching to standard resistance heating during periods of high peak demand.

- Electric/heater – This high-demand setting is the least energy-efficient, using only the electric element to heat water.
- Vacation & timer (not available on all models) – Save on your energy when away from home by placing the unit in "sleep" mode until you return.

THINGS TO CONSIDER

Where should it be installed?

HPWHs should be installed in interior spaces that remain above 50° F year-round, and provide 1,000 cubic feet of surrounding air (approximately the space of a 12 foot by 12 foot room). They generally don't operate as efficiently in colder spaces, and can cool the spaces they are in. If possible, consider installing in a space with excess heat, such as a furnace room.

The height should offer sufficient clearance above the heat pump water heater unit. HPWHs are usually taller than traditional storage tank water heaters to accommodate the heat pump. The heat pump water heater should be located in an unoccupied space where cooling and noise will not be an issue.

Since HPWHs produce condensate, the location should be able to accommodate a condensate drain or pump.

OTHER CONSIDERATIONS

- **Plan ahead if you can.** Don't get caught in an emergency situation by planning ahead and taking time to research your next water heater replacement and select the best technology for your situation.
- **Check product availability.** Find out what certified models are available on the market by viewing the ENERGY STAR Product List at www.energystar.gov.
- **Estimate the capacity you'll need by considering the variables.** How much heated water will you need at any given time?
- **Contact a contractor or manufacturer.** Ideally, you should find a local contractor who can assess your site, provide recommendations, install a system, and then perform periodic maintenance.
- **Search for incentives.** You may be able to reduce your costs by taking advantage of incentives offered by your cooperative.
- **Don't forget about maintenance.** HPWHs may also require annual maintenance, including changing air filters. Review the manufacturing operating instructions, or ask your contractor for more information.
- **Make the purchase that protects the environment.** If all residential electric water heaters less than 55 gallons sold in the United States were ENERGY STAR certified HPWHs, the energy cost savings would be \$8.2 billion each year, and 98 billion pounds of annual greenhouse gas emissions would be prevented, equivalent to the emissions from nine million vehicles.

HOW IT WORKS

