

# Take Control & Save<sup>®</sup>

A Cooperative Effort for Energy Efficiency

[www.TakeControlAndSave.coop](http://www.TakeControlAndSave.coop)

## Heat pump water heaters

### What is a heat pump water heater?

Most homeowners who have heat pumps use them to heat and cool their homes. However, a heat pump also can be used to heat water. Heat pumps operate by using compressors, refrigerant, heat exchangers and the difference in outside air temperature versus indoor temperatures to produce heating and cooling for homes and businesses.

A heat pump water heater (HPWH) works like a refrigerator in reverse. It absorbs heat from the surrounding air using it to heat water within the tank. Because the HPWH uses heat pump technology, it can be 2 to 3 times more efficient than a traditional resistance electric water heater. This means it will cost you less to produce hot water for your home.

### *Money saving tip!*

Contact your local electric cooperative as they may offer up to a \$500 rebate for ENERGY STAR heat pump water heaters.



### Pay more now, save more later

Heat pump water heater systems typically have higher initial costs than conventional storage water heaters. However, they have lower operating costs, which can offset their higher purchase and installation prices.

Most heat pump water heaters will pay for themselves in 2 to 3 years. However, they may not be the right choice for every situation. If your water heater is over 10 years old, you should be looking at a replacement anyway to avoid the risk of water damage should the tank fail. Take the time to weigh the pros and cons of a HPWH as a replacement by viewing the chart on the back.

Go to the Department of Energy's website at [bit.ly/DOE\\_HPWH\\_CALC](https://bit.ly/DOE_HPWH_CALC) to learn how to calculate potential savings on a traditional electric water heater to a HPWH.

## Special requirements

Heat pump water heaters require installation in locations that remain 40 to 90 degrees year-round and provide at least 1,000 cubic feet of air space around the water heater. Cool air can be exhausted to the room or outdoors. Install them in a space with excess heat, such as a furnace room. Heat pump water heaters will not operate efficiently in a cold space, and tend to cool the spaces they occupy.

## Sizing your water heater

Before you can choose and compare the costs of various models, you need to determine the correct size water heater for your home. A properly sized water heater will meet your household's hot water needs while operating more efficiently. Therefore, before purchasing a water heater, make sure it is the correct size. To learn how to properly size your water heater, go to the Department of Energy's (DOE) website at [bit.ly/DOE\\_WaterHeaterSizing](http://bit.ly/DOE_WaterHeaterSizing).

## Installation and maintenance of the water heater

Proper installation and maintenance optimize energy efficiency. Climate, local building codes and safety issues need to be considered. Therefore, it's best to have a licensed plumbing and heating contractor install it.



Do the following when selecting a qualified professional:

- Request cost estimates in writing
- Ask for references
- Check the company with your local Better Business Bureau
- Verify the company understands local building codes and will obtain any necessary permits.

Periodic maintenance can significantly extend your water heater's life and minimize loss of efficiency. Read your owner's manual for specifics.

## Take Control & Save on your energy costs!

Be sure to contact your local electric cooperative prior to purchasing and installing a heat pump water heater, as they may offer *a rebate of up to \$500* on ENERGY STAR qualified models.

You can also try some energy-saving strategies to help lower your water heating bills. Fix leaks, install low-flow fixtures and purchase an energy-efficient dishwasher and clothes washer.

For more energy saving ideas, visit [www.TakeControlAndSave.coop](http://www.TakeControlAndSave.coop).

## Advantages

Efficiency can be as much as 2.5 times higher than an electric resistance water heater

Cools surrounding space in the summer, making the area more comfortable

Uses waste heat from the central furnace during winter months

May qualify for \$500 rebate from your electric cooperative

Can save \$330 annually for a family of four, depending on water use and electric rates<sup>1</sup>

## Disadvantages

Costs more than traditional electric resistance water heaters

The compressor will make a noticeable noise. Insulating the room can reduce the sound, but doing so reduces the amount of warm air for the unit's use

Physical size of a HPWH can be greater than an electric resistance water heater

Requires additional space for air flow (1,000 cubic feet)

Requires a condensation drain or pump to remove excess water that has condensed from the warm air that is drawn into the unit to heat the water

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