

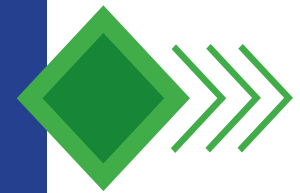


WATER HEATERS

Water heaters, especially when hidden away in a crawl space, attic or closet, can frequently get the out-of-sight, out-of-mind treatment. But to minimize surprises, it's helpful to check in regularly with our home appliances.

According to the U.S. Department of Energy, water heaters represent 14% to 18% of a home's overall energy consumption, up there with our heating and cooling systems. This amount, though, can vary based on the kind of water heater you have – there are a bunch of types and efficiency levels available.

As noted below, the broad categories of storage and tankless water heaters come in gas and electric versions. Digging deeper, there are units specific to each fuel source, so it would be helpful to know what yours runs on. You don't have to stick with the same fuel when you get a replacement, and newer technologies are making it easier to switch, if that's of interest. This resource will focus mostly on electric water heaters.



GOING TANKLESS?

Tankless, or on-demand, equipment heats water only when needed, and it does not have a tank. Manufacturers specify some models for indoor use and others for outdoor installation. As a benefit, tankless water heaters take up less space and generally operate less often, but these units tend to cost more upfront and may require a larger instantaneous supply of gas or electricity.

Before purchasing an electric tankless water heater, contact your electric cooperative member service field representative. If the electric service to your home is not sized to accommodate the large load (amps) of a newly installed electric whole-house tankless water heater, electrical issues may result. Ask your cooperative representative to determine whether a service upgrade for sizing would be necessary. Inquire about added cost, and then evaluate your water heating options.



STAYING TRADITIONAL WITH TANK STORAGE?

Storage water heaters are more traditional, relying on a tank to supply hot water. Electric storage water heaters come in two main forms. Standard models call on electric resistance heat (like your toaster). There are also super-efficient heat pump versions (like your heat pump for indoor heating and cooling). Heat pump water heaters use electricity to absorb heat from the surrounding air and use that to heat water in a storage tank. This equipment is two to four times more efficient than electric resistance water heaters but has certain temperature and space constraints.

It is recommended to keep tank temperature settings¹ at or above 120 degrees F. Accessible water pipes (cold and hot) by water heater should be insulated to min. R-3 with pipe insulation.

¹<https://www.energy.gov/energysaver/do-it-yourself-savings-project-lower-water-heating-temperature>

WATER HEATERS



ELECTRIC RESISTANCE VERSION

BENEFITS

- ▶ Comes in a variety of sizes for your water heating needs
- ▶ Lower purchase price
- ▶ More insulation provides better efficiencies and helps reduce standby losses

CONSIDERATIONS

- ▶ Be sure to check "first hour rating" along with size
- ▶ Higher operating costs



HEAT PUMP VERSION

BENEFITS

- ▶ Comes in a variety of sizes for your water heating needs
- ▶ Can be a direct replacement for standard electric water heaters
- ▶ Newer 120-volt versions can make changing from gas easier and cheaper
- ▶ 2-4x more efficient than standard electric water heaters
- ▶ Can provide dehumidification as a byproduct in summer

CONSIDERATIONS

- ▶ Be sure to check "first hour rating" along with size
- ▶ Higher purchase price
- ▶ Cool exhaust air can increase heating load in winter
- ▶ Must be located with large air space for good air circulation
- ▶ Contact your electric cooperative to inquire about incentives or rebates
- ▶ Noisier than standard water heaters

Water heating is the 2ND LARGEST



energy-related expense in your home, accounting for **14-18%** of your utility bills.



TIPS FOR REDUCING YOUR WATER HEATING BILLS²

- ▶ Install low-flow faucets and showerheads.
- ▶ Wash your clothes in cold water.
- ▶ Purchase ENERGY STAR® appliances, such as dishwashers and clothes washers.
- ▶ Fix leaks, as a leak of one drip per second can cost \$1 a month.
- ▶ Follow the manufacturer's recommendations for ways to insulate your water heater tank and pipes.



COMMON MANUFACTURERS

A.O. Smith • Bradford White • Eco2 • Rheem • Stiebel Eltron

²<https://www.energy.gov/energysaver/articles/new-infographic-and-projects-keep-your-energy-bills-out-hot-water>