

## CHOOSING A WATER HEATER

Look for the best water heater for your home, not the least expensive. Paying a little more for a high efficiency model will produce more hot water while providing low operating costs. Consider the cost over the life of the unit, not just the initial price tag.

One useful tool for selecting a new water heater is the yellow Energy Guide label affixed to major appliances. The guide provides an estimate of yearly operating costs as well as other needed energy information.

Water heaters are rated according to the Energy Factor (EF) and the First Hour rating (FHR). The energy factor rates how much of the water heater's fuel energy comes out of the tap in hot water under average conditions. The higher the energy factor, the greater the savings. The first hour rating indicates the amount of hot water the heater can supply per hour (starting with the tank full of hot water).

Other water heating and energy efficiency tips are available from the energy advisor at your local electric cooperative.



## WHY ELECTRIC WATER HEATING IS THE BEST CHOICE FOR YOUR HOME

### CONVENIENT:

Electric storage tank water heaters are easy to install, have no special venting requirements, and don't require gas lines or supply air. Since there's no outside vent, an electric water heater can be placed almost anywhere inside your home.

### SAFE:

Since an electric water heater has no open flame, it's safer to use in an enclosed space.

### ENERGY EFFICIENT:

Electric water heaters carry a higher Energy Factor (EF) than combustion water heaters and more insulation inside the tank to keep the water hot. No flames or outside vent sends more heat into the water, reducing "standby loss" – the energy used to keep the water hot for instant use.

### FIND OUT MORE ABOUT WATER HEATING AND ENERGY EFFICIENCY:

#### **Energy Efficiency and Renewable Energy Clearinghouse**

[www.eere.energy.gov/buildings/info/homes/choosingwater.html](http://www.eere.energy.gov/buildings/info/homes/choosingwater.html)

#### **U.S. DOE/EPA - EnergyStar Program**

[www.energystar.gov](http://www.energystar.gov)

#### **U.S. DOE - EnergySavers Resource Guide**

[www.eere.energy.gov/consumerinfo/energy\\_savers/](http://www.eere.energy.gov/consumerinfo/energy_savers/)



**Your Electric Cooperative**

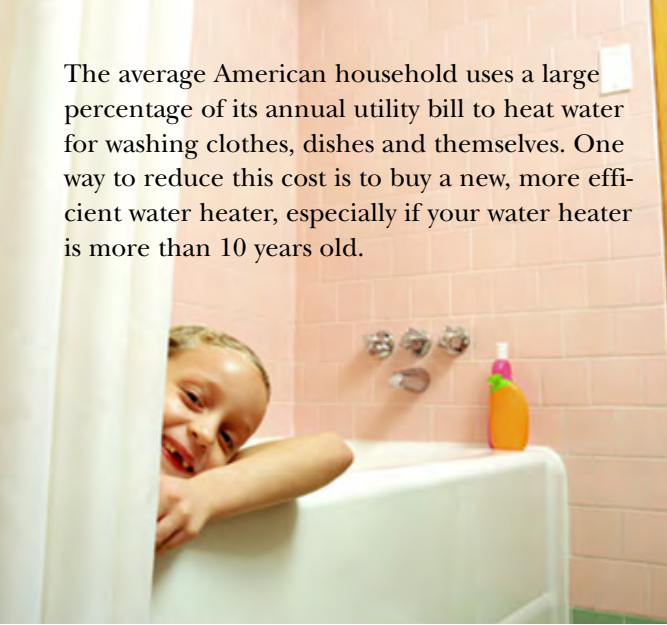
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## COMFORTABLE, EFFICIENT ELECTRIC WATER HEATING



**Your Electric Cooperative**

The average American household uses a large percentage of its annual utility bill to heat water for washing clothes, dishes and themselves. One way to reduce this cost is to buy a new, more efficient water heater, especially if your water heater is more than 10 years old.



**STORAGE TANK WATER HEATERS** are the most frequently used for domestic water heating because of their energy efficiency and flexibility. Electric tank water heaters offer a reservoir of hot water in sizes to meet any family's hot water needs. Electric water heaters provide hot water without any flames or the use of combustible gases. They don't need an outside flue and can be installed almost anywhere inside your home.

No combustion also means a greater degree of safety and lower "stand-by loss." Gas-fired water heaters send a lot of heat energy through the flue pipe into the outside air.



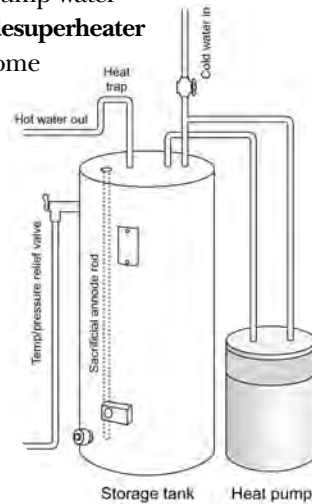
Electric tank water heaters offer a higher energy factor than gas-fired models and operate more efficiently. Improved plastics and special metal coatings add durability and years to the life of an electric water heater.

**HEAT PUMP WATER HEATERS** are a highly energy efficient type of storage tank water heater. Heat pump water heaters extract heat from air (indoor, exhaust or outdoor air) and "pump" it into water. Because it extracts heat from air, the HPWH delivers about twice the heat for the same electricity cost as a conventional electric water heater.

You can buy a complete HPWH package, including tank and back-up resistance heating elements, or purchase the heater to work as an add-on to a conventional water heater. Stand-alone heat pump water heaters need a large open area and warmer air temperatures to work most efficiently. The efficiency can be greatly affected if installed in an unconditioned living space.

One type of heat pump water heater add-on is the **desuperheater** feature available on some air or ground source heat pumps. During the cooling season, the desuperheater actually improves the efficiency of the air conditioning system while providing supplemental water heating at no direct cost.

In an average climate, a desuperheater might meet 20% to 40% of a family's annual water heating demand. Your energy advisor at your electric cooperative can tell you more about this type of energy efficient add-on heat pump water heater.



**TANKLESS WATER HEATERS** are often called **demand** or **point-of-use** water heaters because water is heated only when needed, as it flows through the unit. Separate units can be installed in remote locations such as a detached garage or barn or a bathroom far away from the home's main water heater.

Larger tankless units for use with a shower or clothes or dishwasher are available in both gas and electric models. The modest annual energy savings these units may provide (by heating water only when needed) is offset by many other issues.

While a large tankless unit can provide a shower without running out of hot water, even the largest gas-fired models have trouble supplying enough hot water to run more than one shower or appliance at the same time. Tankless units also have a higher purchase price, more expensive installation and higher maintenance costs than a tank water heater.

In addition, there may be an upgrade charge from your cooperative if a larger transformer outside your home is necessary to handle the increased load of a large electric tankless unit.



There are times when installing a point-of-use water heater makes sense. A conversation with the energy advisor at your electric cooperative can provide you with the information necessary to decide on the best electric water heater for your home.

*Point-of-use water heaters can act as a booster unit in a remote bathroom or laundry.*