

# WATER HEATERS



The Power of  
Human Connections



comfort

affordability

peace of mind

## Your Water Heater:

The underappreciated home appliance

### Your Water Heater is Important

Hidden in the depths of your basement, or in a main floor closet, is one of the most useful—yet often neglected—home appliances: your water heater.

They give you hot showers, wash your dishes, clean your clothes and help soothe your muscles in a warm bath. But when the hot water stops coming out of your faucet, it is past time to pay attention to this important appliance that does so much for your family.

Experts say that 85 percent of the nine million water heaters sold in the U.S. each year are replacements for old, leaking or inefficient water heaters. There are many others that probably should be—but are not—replaced.

The Iowa Energy Center reports that 15-20 percent of your home's total energy cost each year goes for water heating. So, it pays to spend some time thinking about how to make the most of your underappreciated water heater.

### Buying a Water Heater

Buying a water heater is a task homeowners may undertake only a few times, since the average lifespan of a water heater is 13 years, according to the U.S. Department of Energy. Due to minerals in much of Iowa's water, many units have a shorter average lifespan.

Most consumers purchase water heaters only in an emergency situation because of water heater failure. When they see rusty water leaking all over the basement, they call a plumber and often buy the first water heater they can find.

According to the Iowa Energy Center, familiarizing yourself with water heater options today will allow you to make an informed and energy-wise purchase tomorrow.

Even if what you have is still working, it often makes sense to replace an inefficient water heater. Energy savings alone could pay for the new system within a few years.



### Web Resources

- Iowa Energy Center Water Heater Guide  
<http://www.energy.iastate.edu/efficiency/residential/home-series/waterheaters/index.htm>
- U.S. Department of Energy Tips on Saving Money and Energy  
[http://www.eere.energy.gov/consumerinfo/energy\\_savers/](http://www.eere.energy.gov/consumerinfo/energy_savers/)
- American Council for an Energy Efficient Economy Consumer Guide to Energy Savings  
<http://www.aceee.org/consumerguide/index.htm>
- Western Area Power Administration Energy Efficient Water Heater Guide (pdf)  
[http://www.es.wapa.gov/pubs/files/water\\_heating.pdf](http://www.es.wapa.gov/pubs/files/water_heating.pdf)

According to the U.S. DOE, if your water heater is more than 10 years old, it probably has efficiency of 50 percent or less. In that case, a new water heater may pay for itself very quickly.

Although there are many types of water heaters today, most homeowners install the dependable storage type units. Owning one of these high-efficiency electric water heaters is easy with programs offered by your electric cooperative. The REC also provides energy-saving tips to reduce your overall need for hot water that save you money.

### Factors to Consider When Replacing Your Water Heater

1) **The demands of your family.** If your current water heater doesn't provide enough hot water, if your family is growing (or your children are teenagers), or if you plan to add new hot-water-using appliances, you may want to increase your water heater size. The water heater you choose must keep up with those demands of steam showers, whirlpools, soak-tubs and other water-consuming items.



2) **On-demand or storage?** Conventional heaters are storage heaters—when you turn on the faucet, water is drawn from the top of the tank. When the thermostat signals a drop in water temperature, the heater element starts working.

On-demand units heat water as required, rather than continually heating and storing it. However, they often have a low flow rate and may not be ideal for large families. These heaters are susceptible to mineral build-up inside their heat exchange coils, and have larger electric service requirements.

3) **Efficiency.** Water heaters are not all alike. The water heater's Energy Guide label lists the approximate cost to operate the appliance for a year. Be sure to use your own local fuel rates when comparing units.

When buying a water heater, a consumer often asks how much it costs to operate. Just like determining the fuel mileage of your vehicle, it depends on your "driving habits"—your lifestyle and hot water habits have a big impact on how much it costs.

Energy efficiency items to look for include energy factor (water heater rating on a 100-point scale) and standby losses (affected by how much insulation is on the outside of the unit).

4) **Materials it's made of—environmental and practical.** Consider the materials used in the manufacture of the water heater. A major reason water heaters fail is rusting and corrosion. Water heaters made from rust-free materials will last longer.

5) **Warranty.** Warranties may range from one year to a lifetime warranty. If you plan to stay in your home for a few years, you may want to look for a long warranty...so you don't have to purchase another water heater in the future.

### Consider an Electric Water Heater

As natural gas and propane prices rise dramatically, an electric water heater becomes a better choice. Electric-resistance models are inexpensive, and easy to install and maintain. They convert power at 100 percent efficiency and have energy factor ratings higher than gas water heaters.

Many Touchstone Energy® cooperatives offer installation incentives or rebates to make buying a new water heater more economical.

### Reasons to Choose Electric:

- **Affordable**—Electric water heaters cost less money to buy, install and maintain. Electric water heaters use electricity, which has a long history of price stability.
- **Air quality**—As homes become tighter, air quality becomes more and more of an issue. With electric water heaters, you won't have to worry about unburned hydrocarbons in the air your family breathes.
- **Superior safety**—With gas appliances, venting problems and toxic gas build-ups are real concerns. Electric water heaters have no flame, no carbon monoxide, no potential leaks in exhaust flues or fuel lines.
- **Energy efficiency**—Electric water heaters have highly insulated tanks and require no combustion air that robs heat from your house.
- **Long life**—Many electric water heaters have lifetime warranties and are made of durable, non-rusting materials. A lifetime warranty can mean a lower average yearly cost.
- **Low maintenance**—Electric water heaters have fewer parts to fail.
- **Easy to install near hot water needs**—Electric water heaters can be installed anywhere in the home, such as under steps or in a closet. Since they require no flue or fossil fuel lines, electric water heaters often can be installed closer to where you need the hot water, meaning better efficiency and more convenience.
- **Many sizes are available.**
- **Ease of operation**—Electric water heaters can be easily turned off or on with a flick of a switch to save energy, or when you are away from home for several days. There is no need to worry about gas fumes or lighting a pilot.