

WATER HEATERS



The Power of Human Connections



cost-effective

energy-efficient

environmentally responsible

Reasons to Choose Electric

- **Affordable**—Some electric water heaters cost less money to buy, install and maintain while, others (Heat Pump Water Heaters) cost less to operate.
- **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 use less energy in heat loss recovery. Heat Pump Water Heaters use electricity to move heat from one place to another, rather than to generate heat, resulting in the unit using roughly half the electricity of a conventional water heater.
- **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.
- **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.
- **Ease of operation**—Electric water heaters can easily be 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.



Energy Saving Tips

- **Laundry**
 - Wash only with full loads
 - Use cold water rinse cycle
- **Dishwasher**
 - Use the air dry feature
 - Don't pre-rinse by hand
- **Bathroom**
 - Use water-saving shower heads and faucet aerators
 - Turn the tap off while brushing teeth or shaving

Your Water Heater

Experts say that 85 percent of approximately 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.

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 (DOE). 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.

The Iowa Energy Center reports that about 13 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 water heating costs.

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.

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.

Replacing Your Water Heater

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 rebate programs offered by your electric cooperative.



Some factors to consider when replacing your water heater are 1) the demands of your family 2) type of water heating unit that would provide the greatest cost efficiency and 3) warranties and offered rebates.

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).

Options to Consider

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.

There are two types of **heat pump water heaters**. One, the add-on unit, is installed on an existing electric resistance water heater. Two, the integrated unit, replaces an existing electric water heater. Heat pump water heaters can cut water heating costs in the average household by more than half. While heat pump water heaters cost more up-front, the savings will pay back the difference in about three years. If you have time to plan ahead, consider this exciting new technology for your next water heater purchase.



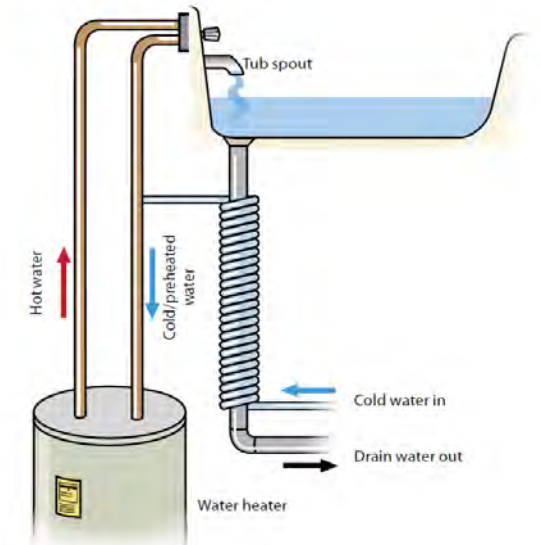
ENERGY STAR®
qualified integrated heat
pump water heater.



Imagine using free sunshine to heat your water. According to ENERGY STAR, a **solar water heating system** can cut your water heating bill in half, and is generally designed for use with an electric backup system.

By installing a **drain water heat recovery system** (see next panel) you could lengthen the life of your existing water heater or eliminate the need for a larger tank. By increasing the hot water output capacity, growing families may discover their once insufficient unit can now deliver enough hot water to meet their needs.

Drain Water Heat Recovery System



Stop dumping dollars down the drain

Typically, 80 to 90 percent of the energy used to heat water in the home goes down the drain and into the sewer system, so recapturing that heat energy and reusing it makes sense. According to the U.S. Department of Energy (DOE), installing a drain water heat recovery system can produce energy savings of 25 to 30 percent for water heating.

The typical non-storage system usually has a copper heat exchanger that replaces a vertical section of a main waste drain. As hot water flows down the drain, incoming cold water flows through a spiral copper tube wrapped tightly around the copper section of the waste drain. This heat energy transfer preheats the incoming cold water that goes to the water heater or a fixture, such as a shower.

This has two benefits that result in energy and cost savings; recycling the warmth from water already heated and cutting the recovery time for a storage tank water heater.