

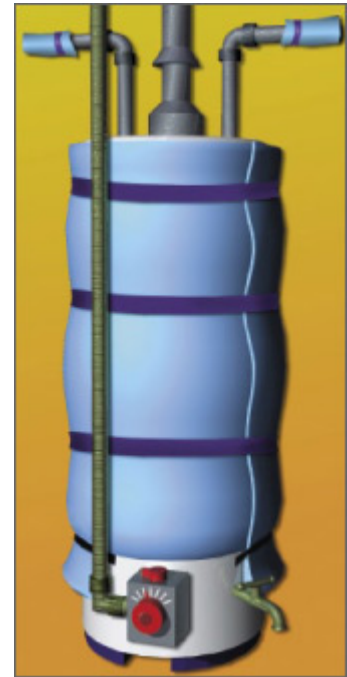
**U.S. Department of Energy - Energy Efficiency and Renewable Energy  
Energy Savers**

## **Water Heating**

Water heating is the third largest energy expense in your home. It typically accounts for about 13% of your utility bill. There are four ways to cut your water heating bills: use less hot water, turn down the thermostat on your water heater, insulate your water heater, or buy a new, more efficient water heater.

### **Water Heating Tips**

- Install aerating, low-flow faucets and showerheads.
- Repair leaky faucets promptly; a leaky faucet wastes gallons of water in a short period of time.
- Lower the thermostat on your water heater; water heaters sometimes come from the factory with high temperature settings, but a setting of 120°F provides comfortable hot water for most uses.
- Take more showers than baths. Bathing uses the most hot water in the average household.
- Insulate your electric hot-water storage tank, but be careful not to cover the thermostat. Follow the manufacturer's recommendations.
- Insulate your natural gas or oil hot-water storage tank, but be careful not to cover the water heater's top, bottom, thermostat, or burner compartment. Follow the manufacturer's recommendations; when in doubt, get professional help.
- Insulate the first 6 feet of the hot and cold water pipes connected to the water heater.
- If you are in the market for a new dishwasher or clothes washer, consider buying an efficient, water-saving [ENERGY STAR®](#) model to reduce hot water use. See [Appliances](#) for more information.
- Install heat traps on the hot and cold pipes at the water heater to prevent heat loss. Some new water heaters have built-in heat traps.
- Drain a quart of water from your water tank every 3 months to remove sediment that impedes heat transfer and lowers the efficiency of your heater. The type of water tank you have determines the steps to take, so follow the manufacturer's advice.
- Although most water heaters last 10-15 years, it's best to start shopping for a new one if yours is more than 7 years old. Doing some research before your heater fails will enable you to select one that most appropriately meets your needs.



### **Keep Your Energy Bills Out of Hot Water**

Insulate your water heater to save energy and money.

- **\$ Long-Term Savings Tip:** Buy a new energy-efficient water heater. While it may cost more initially than a standard water heater, the energy savings will continue during the lifetime of the appliance. Look for the [EnergyGuide Label](#).
- **\$ Long-Term Savings Tip:** Consider installing a drain water waste heat recovery system. A recent DOE study showed energy savings of 25% to about 30% for water heating using such a system.
- **\$ Long-Term Savings Tip:** Consider natural-gas on-demand or tankless water heaters. Researchers have found savings can be up to 30% compared with a standard natural-gas storage tank water heater.
- **\$ Long-Term Savings Tip:** Heat pump water heaters are very economical in some areas.

### Average Hot Water Use

Activity	Gallons per Use
Clothes washing	32
Showering	20
Bathing	20
Automatic dishwashing	12
Preparing food	5
Hand dishwashing	4

### Solar Water Heaters

If you heat water with electricity, have high electric rates, and have an unshaded, south-facing location (such as a roof) on your property, consider installing a solar water heater. The solar units are environmentally friendly and can now be installed on your roof to blend with the architecture of your house. More than 1.5 million homes and businesses in the United States have invested in solar water heating systems, and surveys indicate over 94% of these customers consider the systems a good investment. Solar water heating systems are also good for the environment. Solar water heaters avoid the harmful greenhouse gas emissions associated with electricity production. During a 20-year period, one solar water heater can avoid over 50 tons of carbon dioxide emissions. When shopping for a solar water heater, look for systems certified by the Solar Rating and Certification Corporation or the Florida Solar Energy Center.

- **\$ Long-Term Savings Tip:** Visit the [Database of State Incentives for Renewable Energy](#) Web site to see if you might qualify for tax credits or rebates for buying a solar water heater.