

# Simple Tips to Conserve Hot Water and Start Saving Money



## Use Aerators

Install faucet aerators on the sinks in your business.



Aerating mixes air into the water stream so that steady pressure is maintained but less water is actually used. If your sewer charges are based on the gallons of water used, you'll save on your sewer bill and your water bill!

## Turn Water Heater's Thermostat Down by Five Degrees

Turn down the thermostat on the water heater to 115°F or 120°F. The unit will still provide hot water but will use substantially less energy. For example, a typical 52-gallon water heater set back from 140°F to 120°F will save 410 kWh/year of electricity or about

17 therms/year of gas. At \$0.10/kWh, \$41.00 would be saved, and at \$1.80/therm, \$30.60 would be saved, every year.

To turn down the thermostat on an electric tank-style water heater, first be sure to **switch off the circuit breaker for the heater before removing the cover plates over the thermostats**. Electric tank water heaters typically have an upper and a lower element. Set the upper thermostat five degrees higher than the lower one.

For gas water heaters, simply turn the knob down to the desired temperature.

In either case, gradually adjust the temperature over a period of days until you find the minimum satisfactory setting. Some health codes have minimum setting for water heating in commercial applications. Be sure to adhere to codes.



## Insulate the Water Heater Tank

By adding additional insulation, you can produce significant savings. You can buy a tank insulation kit or simply wrap the heater with two layers of aluminum foil/"bubble-pack" insulation or wrap the water heater with six inches of fiberglass insulation. Tie the insulation with wire or cord and seal the seams with duct or aluminum foil tape. **Be sure not to obstruct the pressure-and-temperature relief valve near the top of the tank. Ideally, for safety, piping from the relief valve should be plumbed to the floor or to the outside with the pipe aimed at the floor or ground.** On electric tank water heaters, cut out a plug of insulation over each thermostat, allowing easy access to the thermostat adjustment knobs. The plug of insulation can be reinserted after the tank is wrapped.



For gas-fired heaters, **make absolutely sure not to cover up the combustion air intake vents at the base of the unit. Also leave a gap a couple of inches wide between the insulation and the flue pipe at the top of a gas or oil heater.**

## Prevent Heat Loss in Pipes

Insulate all exposed hot water pipes with pipe insulation rated R-4 or better. Also insulate cold water supply pipes starting six to eight feet out from the hot water tank all the way to the tank itself. This will reduce heat loss from pipes and will at times allow hot water to flow immediately from the taps (alleviating the need to wait while cold water is flushed from the lines).



## Install a Timer on Your Electric Water Heater

If your business only uses hot water during one or two distinct periods during the day, a timer on your electric water heater could save you money. Energy can be conserved by installing a timer in line with the water heater tank's power supply. The timer can be set up to allow the heater to come on prior to those times hot water use is highest. During times of low use, the timer prevents the heating elements from energizing. Electric elements in an electric water heater should be energized 30 minutes before hot water is needed to allow ample time for water to get hot.



Typically water heater timers cost \$30 to \$50 and take about one hour to install.

## Avoid Heating Water During Peak Energy Demand Periods

If your business incurs a demand charge on its electric utility bill, consider setting the timer so that heating does not occur when your business is drawing its peak power.

A demand charge is a monthly fee assessed on the maximum electricity drawn, typically averaged over a 15-minute period. It is defined as the largest monthly power draw for the facility. Depending on how much you are charged per kW of peak demand (vs. kWh of electric energy used), preventing a standard electric water heater from energizing during a peak power usage event can save your business as much as \$50 every month.

## Consider Tankless

If your electric tank water heater is only providing hot water to one or two sinks used for hand washing, consider replacing your electric tank with an electric instantaneous water heater that heats only on demand. LP gas and natural gas instantaneous models are also available for larger quantities of water use. These systems can reduce energy used for water heating by 10%.

