



# HOT WATER HEATERS

## How Water Heaters Work

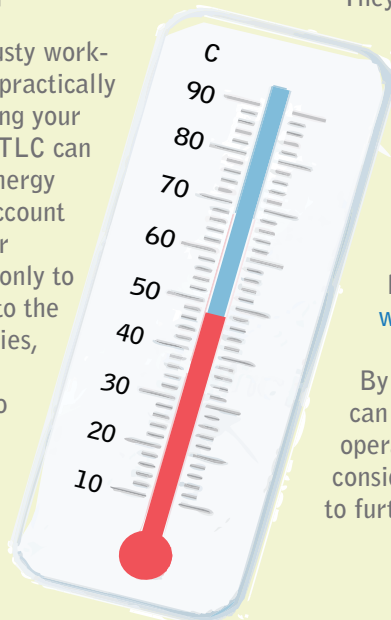
When you turn on the hot water tap, heated water is drawn into your home's pipes from the top of your water heater. To replace the water being used, fresh cold water flows into the bottom of the tank, activating the heating element.

Gas and electric storage water heaters operate this same way. However, gas heaters have a pilot light at the bottom to ignite the burner when needed. They also have a flue running through the center of the tank to exhaust combustion gases.

Both models feature a temperature/pressure release valve near the top of the tank. This valve will allow steam or hot water to escape safely, should a thermostat malfunction occur. It should be checked annually to ensure that it's working properly to keep it running at maximum efficiency.

## Energy-Saving Options

A water heater is like a trusty work-horse: steady, reliable and practically maintenance-free. But giving your water heater a little extra TLC can significantly reduce your energy costs. Water heating can account for up to 20 percent of your home's energy use, second only to space heating. In addition to the above maintenance strategies, there are a couple of other actions that you can take to save water and heating energy:



### 1. Thermostat Control

Your tank may be keeping your water hotter than necessary. The B.C. Building Code stipulates that in every residential dwelling, the hot water supply equipment shall be "capable of heating to at least 45°C [113°F] and not above 60°C [140°F]." Most heaters are set at 60°C, and this high a setting is only needed if you have a dishwasher without a booster heater. Turn the temperature down to 49°C [120°F] (midway between low and medium on a gas heater dial), and you'll cut your water-heating costs by six to ten percent. If you are unsure how to do this, call a qualified plumber.

### 2. Insulating Wrap

Add an insulation blanket to electric water heaters to help reduce standby heat loss, especially if they are older than seven years.

They are easy to apply and can pay for themselves in less than a year.

Due to the possibility of the blanket slipping and blocking off combustion air to the burner, external insulation blankets are not recommended on gas water heaters. For information on how to properly wrap your older electric hot water tank, please visit [www.bchydro.com](http://www.bchydro.com).

By following these simple steps, you can ensure that your water heater will operate efficiently. To save even more, consider insulating your hot water pipes to further reduce standby heat losses.



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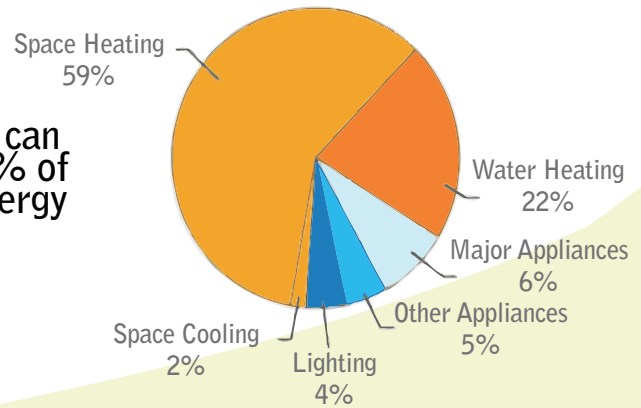
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Water heating can account for 22% of your home's energy use.



## New Water Heaters

If you're in the market for a new water heater, you're in for a nice surprise: Today's models are considerably more energy-efficient. Before you buy, consider both purchase and operating costs. Models with the lowest price tags are often the most expensive to operate. And unless the owner's manual specifically states not to, wrap your new water heater in an insulating blanket and, if possible, put it in a heated space.

## Water Heater Maintenance

A leaking hot water heater can do a lot of damage to your home. Even a small, slow leak can soak into the subflooring and cause the subfloor to decay. Leaking water may also seep into carpeting, create mildew and permanently stain your walls. Fortunately, most water heater problems can be avoided with proper maintenance.

1. All water heaters should be frequently checked for leaks. It's important to check the pipe connections, the valves and underneath the unit. Simple preventive maintenance will help you avoid lasting damage from a leaking water heater.
2. Check the temperature and pressure relief valve on your hot water heater annually to be sure the valve is functioning. Consult the operating manual for the procedure. If the valve does not work, have it replaced.
3. Every six months, open the drain valve near the hot water heater tank bottom and drain 1 or 2 gallons of water from the hot water heater into a bucket or through a garden hose to remove any sediment that may have accumulated in the tank bottom. Draining the tank is a fairly simple procedure that a competent do-it-yourselfer should be able to handle. However, if you are at all unsure, you may want to consider having an experienced plumber assist you with this project.
4. Annually inspect the exhaust stack on gas fired hot water heaters to ensure that all pipe connections are secure and free of rust, corrosion, and obstructions. (Note: It is essential that fuel fired hot water heaters vent their gasses to the outside; escape of gasses inside the home could be lethal & pose a fire hazard.)
5. If you have installed an insulation blanket around the tank of your hot water heater, about every three months you should check to ensure that the insulation has remained in the proper position.

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