



Energy Conservation Tip Sheet

IMPROVING YOUR WATER HEATING EFFICIENCY

Most families in Montana spend \$300-500 per year on hot water, more than other home energy expense except for heating. You can save up to one-quarter of this cost by making some simple improvements to your equipment and adjustments to your habits.

Water heating efficiency improvements come in three distinctive categories. Trimming each requires a different set of conservation measures.

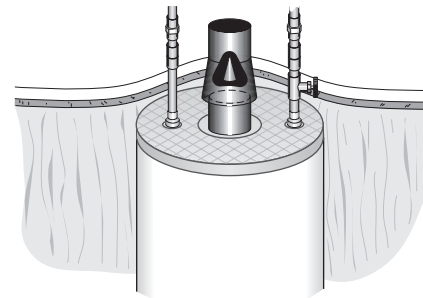
- **Standby losses** occur because your water heater and nearby piping lose heat even when you aren't using hot water. This can be up to one-third your total cost of water heating. It is well worth installing a water heater blanket, insulating the nearby piping, and lowering the temperature of your hot water to control these losses. New water heaters also have lower standby losses.
- **Distribution losses** occur if your hot water lines are not insulated. This can be one-tenth your total cost of water heating. You reduce distribution losses by insulating your hot water lines.
- **Demand** is the hot water you use, and accounts for the majority of your water heating expense. You can reduce demand by installing efficient showerheads and appliances, by changing how you use your appliances.

WRAPPING YOUR WATER HEATER

The best new water heaters include 2 inches or more of built-in foam insulation, totaling at least R-10. Yet water heaters that are more than 10 years old usually have only one inch of fiberglass insulation for a total of R-3. So unless you plan to replace your water heater soon, it is worth install an external water-heater blanket that is at least 3 inches thick. These are available at most home improvement stores and are easy to install. This is an easy job that requires only a tape measure and a sharp knife.

Safety is a primary consideration when installing the blanket, especially with gas water heaters—be sure to follow the manufacturer's instructions that are packaged with the blanket.

Installing a Water Heater Blanket

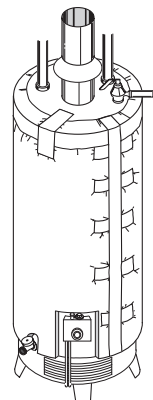


Gas water heater

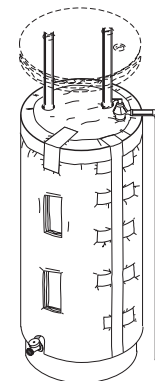
Do NOT insulate the top of gas water heaters.

Electric water heater

You should insulate the top of electric water heaters.



Keep insulation away from a gas water heater's gas valve and burner door.



Cut out small flaps over the elements and controls of electric water heaters.

Water heater blankets slow standby heat loss through the walls of the tank.

For more energy-saving tips, visit the NCC website at www.savemobile.org

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IMPROVING YOUR WATER HEATING EFFICIENCY

INSULATING HOT WATER LINES

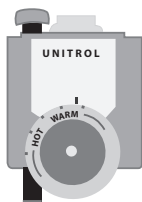
It is always worth the effort to install foam pipe insulation on the first 5 feet of both the hot and cold water lines where they leave your water heater. This reduces the standby heat losses that take place when hot water circulates naturally by convection up into the supply piping. For an added benefit, insulate all your accessible hot water lines to keep water from cooling as it travels to your fixtures. This is an easy job that requires only a knife or pair of scissors.

ADJUSTING YOUR WATER HEATER THERMOSTAT

One of the simplest conservation measure for water-heating is to reduce your hot-water temperature by adjusting your water heater's thermostat. This will reduce the standby losses at your tank. Measure your water temperature with a thermometer at the tap closest to your water heater, and adjust the thermostat so your water is no hotter than 120 degrees F. You may have to adjust it, wait a few hours, re-measure the temperature, and re-adjust as needed.

Adjusting Water Heater Thermostats

Gas



Gas water heater thermostats are easily accessible, but they show only "warm" and "hot" temperatures.

Electric



Electric water heaters have two thermostats hidden under covers on the front of the tank. Turn the power to the water heater off at the electrical panel, then remove the covers to adjust both thermostats.

You can reduce your water heater's standby loss by adjusting its thermostat to a lower temperature.

REDUCING HOT WATER CONSUMPTION

Showering is typically the biggest hot-water use in the home. Energy-saving showerheads save both water and the energy used to heat water. With an old shower head that uses five gallons per minute (5 GPM), a family of four that each takes a daily six-minute shower will use

about 43,000 gallons of hot water per year! Low-flow showerheads will cut that use in half, saving up to a few hundred dollars per year.

You can evaluate the consumption of your current showerhead by measuring the time it takes to fill a one-gallon plastic milk jug from your shower spigot. Cut the top off to fit it over the shower head. If the jug fills in less than 20 seconds, your flow rate is more than 3 GPM. If this is the case, buy a water-saving shower head rated for a flow of 1¹/₂ to 2¹/₂ gallons per minute.

Water-Saving Showerheads



With these new showerheads, you'll never know you're saving energy and water.

Modern low-flow showerheads consume less than 2¹/₂ GPM. And they do this while still producing a satisfying shower—a design advance that includes controlling the size of the droplets and mixing air into the water.

Hot water leaks are always a serious energy waster. Be sure to repair any leaky faucets in your home right, and inspect the plumbing lines in your basement or crawl space to be sure you have no leaks.

Dishwashers and washing machines consume electricity to run their pumps and motors, but their primary energy consumption is embodied in the hot water they use. For both appliances, be sure to use warm or cold water settings whenever possible.

Look for the ENERGY STAR Label

The ENERGY STAR® label identifies products that use the least energy.



If you buy a new appliance, be sure to shop for the ENERGY STAR label to get the most efficient appliance possible.

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