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Cutting the Cost of Heating Water

By Saskatchewan Office of Energy Conservation

In response to rising energy costs, many people are taking energy conservation more seriously. Since the water heater is typically the biggest household energy consumer after the furnace, consumers may want to take measures to cut the amount of gas or electricity used to heat water.

There are several ways to reduce the amount of energy used by your water heater. The first is simple: turn the temperature setting down.

Often water heaters are set higher than required for a warm shower or to wash dishes. Set the tank thermostat at 50-55^0 C for gas-fired tanks and 55-60^0 C for electric tanks. This will keep water sufficiently hot for most uses and hot enough to avoid bacterial growth in the tank, a possible health risk.

When you are away from the house for long periods, or even a long weekend, adjust the heater to vacation or pilot mode. It only takes an hour or so for water to reheat when you get home.

Most heaters have insulation built in to cut down heat loss, but this can be improved by adding an exterior insulation blanket. Insulate the tank to RSI 3.5 (R 20) with glass fiber insulation with an aluminum backing or foil-backed bubble pack insulation. Use wire to hold the insulation securely and ensure that neither of the controls, the draft hood, or the combustion air sources is covered (visit the OEC website for further information). And remember, it is not recommended to add insulation to an oil fuelled water heater.

Another measure is to insulate water lines using foam pipe insulation. Use at least one length on the cold water supply line into the water heater and as many as possible on the hot water lines. The cost per metre of pipe insulation is approximately 35 cents for half-inch pipe. Adding a second layer of pipe insulation meant for thicker pipes would further increase the insulation value.

It is also important to maintain your heater properly to ensure peak performance. In addition to saving energy costs, it will also save you money by increasing the life of your water heater.

Most storage tank water heaters include a device called an anode rod to prevent corrosion. The rod wears away over time and should be replaced every six years.

It is also important to clean the tank of sediments that reduce the efficiency of the heater. Unless it is equipped with a swirling dip tube to minimize sediment, clean the heater tank every three months by opening the valve at the bottom of the water heater to flush the tank.

It is important to follow the proper procedure to do this safely. Instructions are available on the Office of Energy Conservation website at www.oec.ca/images/WaterHeaters.pdf or call the OEC hotline at 1-800-668-4636.

Dirty burners and heat transfer surfaces also reduce the performance of water heaters. An expert inspector can examine these surfaces and check other performance and safety factors. An inspection should occur every two years.

There are also ways to cut costs by reducing the amount of hot water you use.

- Shower, instead of bathe to conserve water, use a low flow showerhead, and take shorter showers. Flow regulators can also be added to other taps.
- Wash clothes in cold water using a cold-water detergent.
- When it is time to replace your washing machine, purchase a front-loading machine. Front loaders use less water, are more energy efficient, and provide a cleaner wash.

If your budget permits, you may also want to consider purchasing a power vented water heater (which has no pilot light) or an instantaneous water heater. Installing heat traps on the water lines running into the heater will also save energy and lower costs.

The Office of Energy Conservation (OEC) is a resource for information on cost-effective energy conservation initiatives and practices for Saskatchewan. More information on OEC and energy efficient programs can be found at www.oec.ca or by calling the OEC hotline at 1-800-668-4635.