HOT WATER ENERGY SAVINGS

KEEP HOME ENERGY COSTS FROM GOING DOWN THE DRAIN

The main way you can lower your water heating costs is simply by using and wasting less hot water in your home. To conserve hot water, you can fix leaks, install low-flow fixtures, and purchase an energy-efficient dishwasher or clothes washer when it's time to replace those appliances.

Fix Leaks

You can significantly reduce hot water use by simply repairing leaks in pipes, or in fixtures such as faucets and showerheads. Hot water leaks will waste energy as well as water. One drip per second of hot water may cost you $2 to $4 a month, to heat water that you'll never use. And if your water heater's tank leaks, you need a new water heater.

Install Low-Flow Fixtures

Federal regulations since 1992 mandate that new showerhead flow rates can't exceed more than 2.5 gallons per minute (gpm) at a water pressure of 80 pounds per square inch (psi). New faucet flow rates can't exceed 2.5 gpm at 80 psi or 2.2 gpm at 60 psi. Showerheads and faucets with the EPA WaterSense label or those labeled as 'low flow' must be even more efficient. You can purchase quality, low-flow fixtures for around $10 to $20 apiece and achieve water savings of 25 to 60 percent compared to older fixtures.

Showerheads

For the greatest water efficiency, select a showerhead with a flow rate of less than 2.5 gpm. There are two basic types of low-flow showerheads: aerating and laminar-flow. Aerating showerheads mix air with water, forming a misty spray. Laminar-flow showerheads form individual streams of water. If you live in a humid climate, you might want to use a laminar-flow showerhead because it won't create as much steam and moisture as an aerating one.

Before 1992, some showerheads had flow rates of up to 5.5 gpm. If you have fixtures that pre-date 1992, consider replacing them if you're not sure of their flow rates.

Here's a quick test to determine whether you should replace a showerhead:

- Place a bucket -- marked in gallon increments -- under your shower head.
- Turn on the shower at the normal water pressure you use.
- Time how many seconds it takes to fill the bucket to the 1-gallon (3.8 liter) mark.
- If it takes less than 20 seconds to reach the 1-gallon mark, you could save water by using a low-flow shower head.

Faucets

The aerator -- the screw-on tip of the faucet -- ultimately determines the maximum flow rate of a faucet. Typically, new kitchen faucets come equipped with aerators that restrict flow rates to 2.2 gpm, while new bathroom faucets have ones that restrict flow rates from 1.5 to 0.5 gpm.

Aerators are inexpensive to replace, and they can be one of the most cost-effective water conservation measures. For maximum water efficiency, purchase aerators that have flow rates of no more than 1.0 gpm. Some aerators even come with shut-off valves that allow you to stop the flow of water without affecting the temperature. When replacing an aerator, bring the one you're replacing to the store with you to ensure you get a replacement with a proper fit.

SETTING AND MAINTAINING YOUR WATER HEATER

Set your water heater thermostat to 120 degrees F or lower. Savings resulting from turning down your water heater temperature are based on two factors: reduced standby losses (heat lost from water heater into surrounding basement area); and less consumption (from water demand or use in your home).

- Set at 120 degrees F, you will save energy and money while keeping water hot enough for most home uses.
- Set too high, or at 140 degrees F, your water heater may waste anywhere from $30 to $60 annually in standby heat losses and more than $400 in water use losses.
- To help keep your hot water from cooling off before it gets to the tap, you can insulate the hot water piping leaving the water heater for more savings. This is especially helpful if your hot water pipes go through an unheated crawlspace before reaching the tap. Don't forget to turn off electric water heaters and turn down gas water heaters when going away on a vacation.
- Flush or clean your water heater as often as recommended by the manufacturer for its best efficiency.

PURCHASE ENERGY-EFFICIENT DISHWASHERS AND CLOTHES WASHERS

The biggest cost of washing dishes and clothes comes from the energy used to heat the water. You may reduce your energy costs significantly if you purchase and use an energy-efficient dishwasher or clothes washer.

Dishwashers

It's commonly assumed that washing dishes by hand saves hot water. However, washing dishes by hand several times a day can be more expensive than operating an energy-efficient dishwasher. You can consume less energy with an energy-efficient dishwasher when it is properly used and operated with full loads. If you
want to ensure that your new dishwasher is energy efficient, consider choosing one with an ENERGY STAR® label.

- **Wash Full Loads .** The dishwasher uses the same amount of water whether it's half-full or completely full, so nothing will save more energy than waiting to run your dishwasher until it is full. If you find that it takes a day or two to get a full load, use the rinse and hold feature common on

newer models. This will prevent buildup of dried-on food while saving time and water compared to pre-rinsing each item. The rinse feature typically uses only one to two gallons of water.

- **Use Energy-Saving Cycle Options.** Pay attention to the cycle options on your dishwasher and select the cycle that requires the least amount of energy for the job. Shorter cycles require less water, reducing energy costs. Use the no-heat air-dry feature on your dishwasher if it has one. If the feature is selected, at the end of the rinse cycle room air is circulated through the dishwasher by fans, rather than using an electric heating element to bake the dishes dry. On a heated-dry cycle, an electric heating element is generally used to dry dishes at the end of the final rinse, consuming about seven percent of dishwasher energy use.
- When purchasing a new dishwasher, check the EnergyGuide label to see how much energy it uses. Dishwashers fall into one of two categories: compact capacity and standard capacity. Although compact-capacity dishwashers might appear to be more energy efficient on the EnergyGuide Label, they hold fewer dishes, which may force you to use it more frequently. In this case, your energy costs could be higher than with a standard-capacity dishwasher.
- One feature that makes a dishwasher more energy efficient is a booster heater. A booster heater increases the temperature of the water entering the dishwasher to the 140 degrees F recommended for cleaning. Some dishwashers have built-in boosters, while others require manual selection before the wash cycle begins. Some also only activate the booster during the heavy-duty cycle. Dishwashers with booster heaters typically cost more, but they can pay for themselves with energy savings in about one year if you also lower the water temperature on your water heater.

Clothes Washers

Unlike dishwashers, clothes washers don't require a minimum temperature for optimum cleaning. Therefore, to reduce energy costs, you can use either cold or warm water for most laundry loads. Cold water is always sufficient for rinsing. If you want to ensure that your new clothes washer is energy efficient, purchase one with an ENERGY STAR label.

- Inefficient clothes washers can cost three times as much to operate than energy-efficient ones.
- Select a new machine that allows you to adjust the water temperature and levels for different loads. Efficient clothes washers spin-dry your clothes more effectively too, saving energy when drying as well. Also, front-loading machines use less water and, consequently, less energy than top loaders.
- Small-capacity clothes washers often have better EnergyGuide label ratings. However, a reduced capacity might increase the number of loads you need to run, which could increase your energy costs.