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5 Ways To Conserve Water and Energy



Introduction

Conserving water makes sense for many good reasons. Of course, money is a big reason – just a few water conservation steps can save you \$100 or more each year. But more than that, water conservation is energy-friendly. Many of the tips in this brochure can save you thousands of gallons annually. You also may save energy in your home or office, as well as the energy that would normally be used to treat and pump the water.

Will These Tips Really Make a Difference?

Believe it or not, you can save substantial energy with the simple tips in this brochure. For instance, it takes about 40 kiloWatt hours (or kWh) of electricity to transport water from your supplier to your home annually. Your water supplier uses another 55 kWh to treat the water going to and from your home. You pay for this energy indirectly on your water bill and through mill levies for water plant improvements so you may save money on both your electric and water bills. When you consider how many homes are in NorthWestern's service territory, you can see how much energy we're talking about. For instance, Mountain Water Company serves about 19,000 customers. They estimate that home leaks waste about 570 million gallons of water each year. In electrical terms, that's almost two million kWh that could be saved – enough electricity to serve 250 typical homes for an entire year!

Five Places to Save Water and Energy

1. The Toilet

Avoid needless flushing. Use the trash rather than the toilet for tissues. Two extra flushes daily waste almost 19 kiloWatt hours each year (a kiloWatt hour, or kWh, is 1,000 watts of power used for one hour). Check for leaks. Put a few drops of food coloring in your toilet tank and wait (don't flush). If the food coloring leaks into the toilet bowl, you have a leak. A moderate toilet leak can waste 78 kWh each year. Put a jug of water in the toilet tank. Each time you flush, the jug will save a gallon. In a year, that's 1,000 gallons. Install a "low volume" toilet. A 1-1/2 gallon flush toilet uses almost 36 fewer kWh annually. The tips under "Five places to save water and energy" include energy saved by water treatment and pumping facilities.

2. The Bathtub/Shower

Take shorter showers. Your water heater is the second biggest energy-eater in your home. Taking five-minute showers (rather than ten minutes) can save 990 kWh annually.

Install a water-saving showerhead/aerator, Save an additional 18,250 gallons each year.

Take shallower baths, If you prefer baths to showers, cut down on the amount of water you use. Forty gallons instead of fifty gallons will save 395 kWh annually.

3. The Sinks

Turn off the water when you're shaving or brushing your teeth. This is one of the more wasteful activities we do daily, sending an extra 742 kWh down the drain each year.



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Form No. 2899 01/15

Only fill your glass with as much water as you'll drink. Drinking half a glass then pouring the other half down the drain is another easy-to-break energy-wasting habit.

Repair leaky faucets. That dripping faucet is more than an annoyance when you're trying to sleep at night. It can rob 136 kWh in a year.

4. The Kitchen

Keep drinking water in the refrigerator. Naturally, we all want a cold drink. But when you let the faucet run while waiting for the water to get cold, you waste 912 gallons annually.

Defrost foods in the refrigerator instead of the sink. It's a safer way to defrost food, and it saves the water you'd normally keep in the sink while defrosting.

ENERGY STAR® is the government seal of approval for energy efficiency and it can be found on products from many manufacturers. The label makes shopping easy for the most efficient products available.

You'll be glad to know using an ENERGY STAR dishwasher instead of hand washing will save you energy, time and money.

ENERGY STAR qualified dishwashers can help you save energy and water — Do you have a dishwasher made before 1994? If so, you're paying approximately \$40 more a year on your utility bills compared to owning a new ENERGY STAR qualified model. Replace one of these old dishwashers with ENERGY STAR and save enough money to pay for dishwasher detergent all year. Save loads of water — a dishwasher built before 1994 wastes more than 10 gallons of water per cycle. A new ENERGY STAR qualified dishwasher will save, on average, 1,300 gallons of water over its lifetime.

ENERGY STAR certified dishwashers uses advanced technology to clean your dishes while using less water and energy. Dishwasher technology has improved dramatically over the last decade. New ENERGY STAR certified models include several



innovations that reduce energy and water consumption and improve performance.

Soil sensors test how dirty dishes are throughout the wash and adjust the cycle to achieve optimum cleaning with minimum water and energy use.

Improved water filtration removes food soils from the wash water allowing efficient use of detergent and water throughout the cycle. The final clean-water rinse assures your dishes come out sparkling.

More efficient jets use less energy to spray detergent and water over the dishes when cleaning.

Innovative dish rack designs maximize cleaning by strategically situating the dishes.

If your dishwasher does not have an air-dry option, prop the door open after the final rinse to dry the dishes.

Saving energy prevents pollution. By choosing ENERGY STAR, you are helping prevent global warming and promoting cleaner air without sacrificing the product quality and performance you expect.

5. The Laundry/Utility Room

Insulate the water tank and piping. You won't have to run the water so long for it to get hot. And, you'll save 16 kWh annually.

Wash clothes in cold water. Run full loads in the clothes washer. Again, you'll save electricity. Numerous small loads can waste an extra 68 kWh each year.

Air dry clothes whenever possible. Invest in an ENERGY STAR qualified clothes washer.

Energy Star Clothes Washers

The average American family washes about 300 loads of laundry each year. ENERGY STAR can help families cut their related energy and water costs. ENERGY STAR certified clothes washers use about 20% less energy and 35% less water than regular washers. They also have a greater tub capacity which means you can wash fewer loads to clean the same amount of laundry. They clean using sophisticated wash systems to flip or spin clothes through a stream of water. Many have sensors to monitor incoming water levels and temperature. They also rinse clothes with repeated high-pressure spraying instead of soaking them in a full tub of water. Consider the following:

- Use less water. A full-sized ENERGY STAR certified clothes washer uses 15 gallons of water per load, compared to the 23 gallons used by a standard machine. Over the machine's lifetime, that's a savings of 2,500 gallons of water!!
- Use less energy. On average, a new ENERGY STAR certified clothes washer uses 270 kWh of electricity and costs \$91 to run, each year.
- Is your washer over 10 years old? Washers manufactured before 1998 are significantly less efficient than newer models.



ENERGY STAR qualified washers are available in a wide variety of products, features and prices. To locate an authorized retailer in your area, or to find out more information on other ENERGY STAR qualified appliances (refrigerators, dishwashers and room air conditioners), go to this website: www.energystar.gov

How Much Will These Tips Save Each Year?

Assuming you have all electrical appliances, if you follow these tips, you could save more than 2,500 kWh of electricity every year. To find out how much that is on your energy bill, www.NothWesternEnergy.com

ENERGY YOU SAVE*	
Shower/Bath Tips	800 kWh
Sink Tips	710 kWh
Kitchen Tips	993 kWh - ENERGY STAR dishwasher
Laundry Room Tips	84 kWh - ENERGY STAR clothes washer
Total	2,587 kWh

*These savings assume you have all electrical appliances. Natural gas appliances (such as water heaters) will mean less cost savings, but just as much water savings. These savings do not include the energy and expense of treating and pumping water. People who have water meters will save money on their water bills in addition to these energy savings.

Let's All Be Water-Wise

We at NorthWestern Energy are here to help you save energy and money. After all, we want to responsibly manage and conserve our energy resources, as well. If we all do our part to save water and energy, we can make a difference.

Information in this brochure is based on figures from the American Water Works Association and the Mountain Water Company based on energy studies performed on wastewater treatment plants.

NorthWestern Energy offers a number of rebate programs to its residential customers in Montana and South Dakota. Program details are available at www.NorthWesternEnergy.com/Eplus or by calling 800-823-5995.

Residential space and water heat customers in existing homes: Rebates are higher when customers work with a Preferred Contractor- you can find the list of preferred contractors on our web site.

Rebates for qualifying

- insulation improvements,
- programmable thermostats,
- high efficiency water or space-heating equipment, when replacing standard efficiency equipment, and
- water heater wraps, hot water pipe insulation.

Some measures also qualify for tax credits.

Don't forget our Online Energy Efficiency Tools - You may be surprised at what is available to help you make smart energy saving decisions. Visit www.NorthWesternEnergy.com/Eplus for more great tips and ideas to help you with your home energy improvement projects.