



## Office of the Ohio Consumers' Counsel

Your Residential Utility Consumer Advocate

# CONSUMERS' FACT SHEET

### Office of the Ohio Consumers' Counsel

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# SMART ENERGY TIPS

With Ohioans averaging nearly \$2,200 of their yearly budgets on electricity and natural gas costs, looking for ways to cut down on those energy bills is a worthwhile investment. There are many areas of the home that can be improved to cut down on heating, cooling, lighting, cooking and running other appliances where 75 percent of utility dollars are spent. In fact, one family of four can spend nearly \$33 per month on hot showers alone.

By incorporating a few of these simple smart energy tips, a typical household can reduce its energy and water costs and save up to 30 percent each year on electric, natural gas and water bills.

### Room-by-room savings

The Office of the Ohio Consumers' Counsel (OCC) has developed several tips you can use to help save energy in your home. From easy, no-cost improvements to long-term energy efficiency projects, these tips may be able to help keep your energy costs manageable.

### Living/Family Room

#### Simple Savings

- ▶ Minimize the use of the fireplace. As much as 14-30 percent of heated or conditioned air can escape through the chimney. Make sure the fireplace damper is closed unless a fire is burning. If the fireplace is never used, plug and seal the chimney flue.
- ▶ Use draperies to better regulate home temperatures throughout the year. In

the winter, draperies can be used to help reduce chills around windows. In the summer, they can be used to block light and heat in the middle of the day.

- ▶ Move heat generating items, such as a television, away from the thermostat. The thermostat sensor may be able to detect the heat from these electronics and could cause problems maintaining comfortable temperatures in the home. This also could result in higher energy bills.
- ▶ Use ceiling fans to help circulate heated or conditioned air more efficiently. Box fans also are a good option to move conditioned air. By circulating air, you can adjust the thermostat 5 degrees and maintain the same comfort level.

### Small Investment

- ▶ Install a programmable thermostat. A properly set programmable thermostat can save homeowners \$180 per year if they maintain those settings.
- ▶ Use a smart power strip with electronics. These power strips, which cost \$25-\$40, allow consumers to turn selected electronics completely off, avoiding vampire power. Using a regular power strip also may be a convenient way to switch off multiple electronics and save energy. For more information about vampire power, see the OCC's fact sheet called, "Learn about Vampire Power."

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### Kitchen

#### Simple Savings

- ▶ Use kitchen ventilation fans wisely. In just one hour, these fans can circulate air throughout the house.
- ▶ When baking, keep preheating time to a minimum. Use the smallest pan possible so that less energy is used to heat it. Limit the number of times you open the oven door since you lose heat with each opening. To cut cooking times even more, use glass or ceramic bakeware instead of metal since they conduct heat better.
- ▶ Cover pots and pans with lids to retain heat and reduce cooking time.
- ▶ Keep your refrigerator or freezer away from direct sunlight or warm air (range, dishwasher, heating ducts, etc.) so that the appliance doesn't have to use more energy to remain cold.

#### Long-term energy planning

- ▶ Replace old kitchen appliances with newer Energy Star-rated models. Energy efficient dishwashers can save \$40 per year in utility costs and Energy Star refrigerators use 20 percent less energy.

### Bathroom

#### Simple Savings

- ▶ Install low-flow showerhead and faucet aerators. Water heating accounts for about 18 percent of your utility bill.
- ▶ During the winter, allow the warm steamy air from a shower to circulate into the rest of the house. Humidity in the air can help you feel warmer.
- ▶ Avoid running the water while brushing your teeth. You can waste up to 7.5 gallons of water when you brush your teeth for three minutes.
- ▶ Use bathroom ventilation fans sparingly. These fans can temporarily help remove humidity during and after a bath or shower. Overuse of fans can pull heated or cooled air out of the home and wastes electricity.

#### Small Investment

- ▶ Fix leaks promptly. A leaking faucet dripping one water drop per second

can waste about 3,000 gallons per year. A leaky toilet can waste 200 gallons per day.

#### Long-term energy planning

- ▶ Replace an old toilet with a high-efficiency WaterSense-rated version. An old toilet can use up to seven gallons per flush. WaterSense-rated models are 20 percent more efficient than federal standards which currently require toilets to use no more than 1.6 gallons per flush.

### Bedroom

#### Simple savings

- ▶ Unblock all heating registers, air supplies and return vents
- ▶ Plug all holes in walls including light switches, electrical outlets and windows to keep air from leaking out or in.
- ▶ If a window air conditioner is used, turn it off or reduce the settings when leaving the room.
- ▶ Clean registers, baseboard heaters and radiators.

### Attic/Basement/Utility Room

#### Simple Savings

- ▶ Only run the washing machine with full loads to maximize energy efficiency.
- ▶ Wash as many loads as possible using cold or warm water, instead of hot water.
- ▶ Do not overfill the dryer. This allows warm air to efficiently circulate and dry the clothes.
- ▶ Replace or clean the furnace filter as recommended by the furnace manufacturer. Some filters should be changed or cleaned monthly to ensure air is flowing and the furnace is running efficiently.
- ▶ Set the water heater temperature between 115 and 120 degrees. Higher temperatures cause more heat to be lost from the tank.
- ▶ Wrap older water heaters with an insulation blanket. A blanket is inexpensive and can save between 10-40 percent on water heating costs.

Do not wrap a water heater less than five years old since it has sufficient insulation and wrapping it may cause the tank to overheat.

- ▶ Drain a quart of water from the water heater every three months to remove sediment which can impede heat transfer.
- ▶ Insulate water pipes to reduce heat loss. Foam pipe sleeves can help raise water temperature 2-4 degrees allowing for a lower water heater temperature.

#### **Small Investment**

- ▶ Have a professional tune up and inspect your furnace once a year.
- ▶ Control moisture in basements and crawl spaces. Moisture control is an important part of improving energy efficiency. Vapor barriers, such as waterproof paint on walls and heavy plastic sheeting on crawl space floors, can help control moisture.
- ▶ Install a radiant barrier. Typically installed in attics, a radiant barrier can help reduce summer heat gain and winter heat loss by reflecting radiant heat. Consult a professional to determine if a radiant barrier would be effective home option.

#### **Long-term energy planning**

- ▶ Add insulation to your attic and around air ducts in unheated spaces. Consult a professional for major insulation projects. The U.S. Department of Energy recommends insulation thickness of at least R38 for attics, R13 for wall cavities and R25 for floors in Ohio. R-values indicate insulation's ability to resist heat flow. The number of inches required to reach these R-values depends on the type of insulation used.
- ▶ When replacing a water heater, consider an energy efficient model. Energy Star models can save \$30 per year in natural gas costs.
- ▶ Replace an old clothes washer with an Energy Star-rated model. These models use a one-third less energy and can save more than 50 percent in water costs.

- ▶ When replacing a furnace, look for models that have annual fuel efficiency ratings of 85 and 90 percent or greater. These models are up to 15 percent more efficient. Remember to properly size the furnace for the space that needs to be heated. A unit that is too big costs more upfront and will increase heating costs because it is likely to turn on and off more frequently.

#### **All Rooms**

##### **Simple Savings**

- ▶ Add humidity to rooms in the winter by keeping houseplants. Humid air feels warmer and is helpful to reduce winter colds and dry skin.
- ▶ Consumers with older windows can use insulation kits in the winter to help create temporary storm windows.
- ▶ Always turn off lights when you are not using them. Consider installing timers or sensors to reduce the amount of time your lights are on.
- ▶ Know what products in your home use vampire power. Items such as computers and other electronics continue to consume electricity even if they are turned off. Plug these items into a power strip and turn off the power strip to eliminate vampire power. See the OCC's fact sheet on vampire power for more information.
- ▶ Ensure all windows are closed before turning on heat or air conditioning.

##### **Small Investments**

- ▶ Install storm windows to existing pane windows. This is a cheaper, yet effective, option to replacing windows.
- ▶ Apply low-emissivity window film to south-facing windows. This film helps reduce heat gain from entering the home.
- ▶ Replace incandescent light bulbs with LED bulbs. LEDs use 85 percent less energy and last up to 10 times longer. Changing 10 60-watt incandescent light bulbs that are used six hours per day to 9-watt LEDs will save more than \$130 per year in electricity costs.



## **DID YOU KNOW?**

### **Electricity**

- ▶ LED light bulbs use 85 percent less energy and last up to 10 times longer than incandescent light bulbs
- ▶ Changing 10 60-watt incandescent light bulbs that are used six hours per day to 9-watt LEDs will save more than \$130 per year in electricity costs

### **Water**

- ▶ You can waste up to 7.5 gallons of water when you allow the water to run while you brush your teeth for three minutes
- ▶ A leaking faucet dripping one water drop per second can waste about 3,000 gallons of water per year

# SMART ENERGY TIPS

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The Office of the Ohio Consumers' Counsel (OCC), the residential utility consumer advocate, represents the interests of 4.5 million households in proceedings before state and federal regulators and in the courts.

The state agency also educates consumers about electric, natural gas, telephone and water issues.

For more information, please visit the OCC website at [www.occ.ohio.gov](http://www.occ.ohio.gov).



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- ▶ Consider using light paint colors on walls and ceilings, and light-colored flooring to help reduce the amount of light you need.

### Outdoors

#### Simple Savings

- ▶ Put outdoor lighting on timers or motion detectors. Outdoor lights are oftentimes on the longest of any household lighting.

#### Small Investments

- ▶ Have a professional tune-up of your outdoor air conditioner or heat pump at least once a year.
- ▶ Install a rain barrel. Summer water use can double because of lawn and water irrigation. A rain barrel can save hundreds of gallons of water per year along with associated energy costs. Check with your county extension or county soil and water district for more information.
- ▶ Solar lighting may be an alternative to your outdoor lighting. Charged during the day, solar lights have a light sensor that triggers them to turn on at night. The rechargeable battery involved is able to provide light for eight to 10 hours with no added electric costs.

### Long-term energy planning

- ▶ If making improvements to the shell of a home (i.e. shingles, siding) consider materials that are light in color to help reflect heat away. Light-colored shingles can save up to 10 percent on annual cooling costs.
- ▶ Insulate and weatherize the garage door. The garage is the largest un-insulated space of a home. If it is connected to the home, the furnace or air conditioner could be working harder than need be to heat or cool living spaces. Replacing weather stripping and insulating the garage door can help increase efficiency.

### For More Information

For fact sheets on how to manage your energy bills through water conservation, energy choice programs and budget billing, visit [www.occ.ohio.gov](http://www.occ.ohio.gov).

### Energy Savings Potential From Energy Efficiency and Conservation

Energy Efficiency/ Conservation Measure	Measure Detail	End-Use Savings % <sup>1,3</sup>
Setback Thermostat <sup>2</sup>	One setback period (5 degrees, 8 hrs)	Up to 10%
Setback Thermostat <sup>2</sup>	Two setback periods (5 degrees, 16 hrs)	Up to 20%
High Efficiency Furnace Replacement	Old pilot light 65% efficiency to 95% efficiency	32%
High Efficiency Furnace Replacement	80% efficiency to 95% efficiency	16%
High Efficiency Boiler Replacement	Old pilot light 65% efficiency to 88% efficiency	25%
High Efficiency Boiler Replacement	80% efficiency to 88% efficiency	8%
High Efficiency Heat pump Replacement	6.8 efficiency to 9.0 efficiency	24%
Home Insulation & Weatherization	Upgrade insulation and seal air leaks	Up to 30%
Window Replacement	Replace older windows with double pane low e glass	10-20%
Duct Sealing & Duct Insulation	Mastic over joints, then insulate ducts in unheated space	Up to 20%
Weather Stripping	Caulking, air sealing, install wall gaskets	Up to 10%
Lower Water Heater Temperature	From 160-180 degrees to 120-140 degrees	5-10%
Low Flow Shower Heads	Hot water savings	10-16%
Water Heater Blankets	For units over 10 years old	Up to 10%

<sup>1</sup>Savings percentages are not additive because of interaction effects from implementing multiple measures.

<sup>2</sup>For heat pump customers, be sure to use an appropriate programmable thermostat.

<sup>3</sup>Savings for conservation measures are dependent on state of home efficiency prior to improvement.