



# energy and water saving tips

## Save Energy, Water And Money At Home

"Much of our residential energy, 48 percent, is used to heat and cool our homes. An additional 16 percent goes for heating water, the second-largest individual home energy user and expense. Refrigerators and freezers use 12 percent. The remaining 24 percent goes into lighting, cooking, and running appliances."

"We can cut our energy use and help control living costs by making our homes energy efficient, even if we have to spend some money to do it. The money we spend now can help hold down energy costs."

**In this booklet, you will find ideas and tips that if used, should assist you in maintaining maximum energy efficiency and water conservation.**

Think Green. Save Green.  
In the following pages, learn  
what you can do to conserve  
around your home and lifestyle.



# energy and water saving tips

## Caution

Some older people may require higher indoor temperatures – above 65°F at all times – to avoid accidental hypothermia, (a possibly fatal drop in body temperature). People with circulatory problems or those taking certain types of drugs (e.g., phenothiazines, commonly used to treat anxiety and nausea) may also be vulnerable. In such instances, follow a physicians counsel on both winter and summer thermostat settings in your home.”

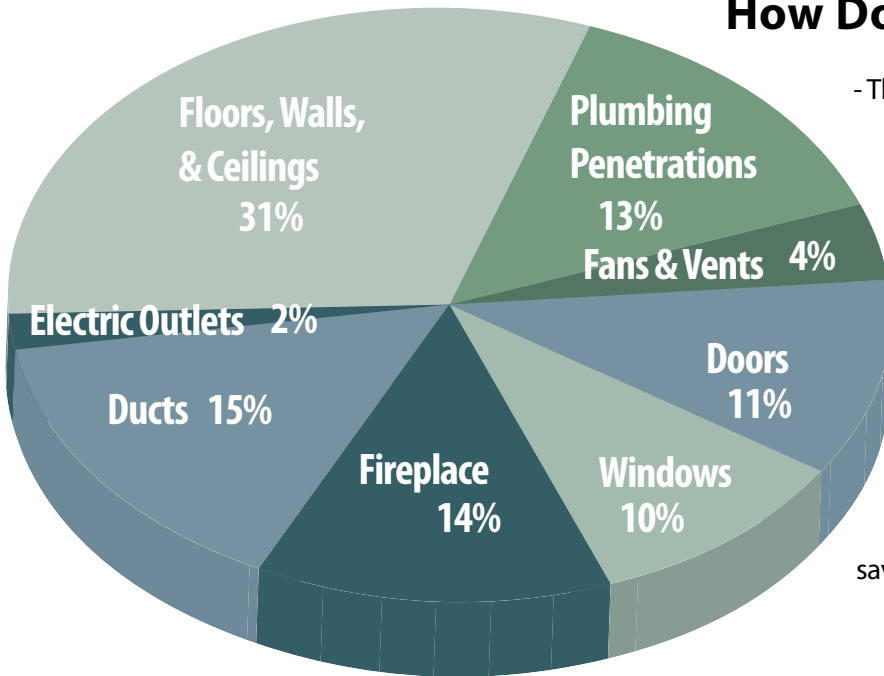


**If you have a medical condition that requires electric (i.e.: oxygen, respirators, monitors) contact the**

**Plant Board  
Customer Service Department  
by calling 352-4372 and have your name added to the  
Plant Board Emergency Alert List.**

## Reaching Maximum Energy Efficiency

### How Does The Air Escape?



- The most cost-efficient way to reduce energy waste is to make sure your home is well insulated.
- Make sure windows and doors are airtight by passing a lighted candle around the frames. Be sure to caulk and weather-strip around doors and windows.
- Installing storm windows and doors could increase savings in extremely cold or hot climates.
- Checking for leaks through walls, ceilings, fireplaces, making sure to seal cracks, holes and gaps in insulation.
- Insulating attic floors, ceilings, exterior walls and floors over crawl spaces and garages can keep energy loss to a minimum. These R-values provide the optimal level for energy savings and comfort for our area. Ceilings: R-49, Walls: R-15, Floors: R-30, Basement Walls: R-13



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## Heating And Cooling

- Filters should be cleaned or replaced regularly.
- Keep unoccupied rooms closed off including vents. Do not close off vents if you have a heat pump. This could harm your heating system.
- Minimize use of kitchen, bath, and other ventilating fans. These fans can pull out a house full of warmed air in just one hour.
- Always close fireplace damper when not in use.
- Properly seal and insulate duct work. A home's duct system can be a cause of wasted energy & money. Check for air leaks & poorly insulated ducts.
- Have heating and cooling equipment serviced regularly.
- If buying new heating or cooling equipment, check for energy efficiency.

## Heating

- Invest in a programmable thermostat that will automatically turn the heat down before you wake. By turning your thermostat back 10 – 15% for 8 hours you can save as much as 10% a year on heating & cooling. (Do not use Programmable Thermostats with Heat Pumps.)
- Heat Pumps provide three times more heat than the equivalent amount of energy they consume in electricity. In moderate climates, they are the most efficient form of electric heating and can cut the amount of electricity used for heating as much as 30% to 40%.
- Set the thermostat between 50° – 55° F when using your fireplace.
- Keep all doors and warm air ducts in the fireplace room closed & ½ to 1 inch opening of a window near the fireplace.
- Consider a fireplace insert, glass, screen or a convective grate for your open fireplace. (24,000 cubic ft. of warm air per hour can be exhausted to the outside by a roaring fire.)
- Windows near your thermostat need to be tightly closed.
- Clean radiators and baseboard heaters as needed making sure furniture, carpeting, and drapes do not block them. If they require painting use only flat paint, it generates heat better.
- Open shades and curtains on sunny days, and keep them closed at night or on cloudy days.
- Wear warm clothing and keep your thermostat turned down.



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## Cooling

- Set the thermostat at 78°F or as high as tolerable.
- When turning on the air condition don't set the thermostat at a lower temperature than normal.
- Always leave the fan speed on high. When the weather is very humid set the speed on low.
- Air conditioning filters need to be replaced or cleaned every month.
- If you will be leaving for several hours, turn off your room window air conditioners.
- The use of a fan with a window air conditioner can help cool additional space.
- Do not place any appliance (i.e. lamps, TVs, etc.) that would generate heat, next to your thermostat.
- Close blinds, or curtains to keep out the sun during the day.
- Turn lights off or as low as they will go.
  - They can generate heat that will make the cooling process less effective.
- On less humid days, instead of using your air conditioner, open windows.
- In the summer, turn off the furnace pilot light.
- Dress for the weather (lightweight clothes).

## Water Heaters

- Check the insulation around your hot water heater. Poor insulation will result in energy loss.
  - Water heater Jacket kits work well and are available at hardware stores.
- Reduce your water heater temperature to around 120°F. If you have a dishwasher be sure to check the recommended temperature for that model.
- Every Three months drain a quart of water from your water tank to remove sediments. Sediments lower the efficiency of your heater & impede heat transfer.

## Kitchen - Dishwasher

- If you are looking at new dishwashers, be sure to look for energy – efficient models with overnight dry and/or air power settings.
- Before loading the dishwasher, scrape all dishes. Try not to use the “rinse hold”. This will use more energy.
- Always fill the dishwasher. A full load of dishes will use the same amount of water & energy as a half load.
- Air – dry your dishes.



# energy and water saving tips

## Kitchen - Cooking

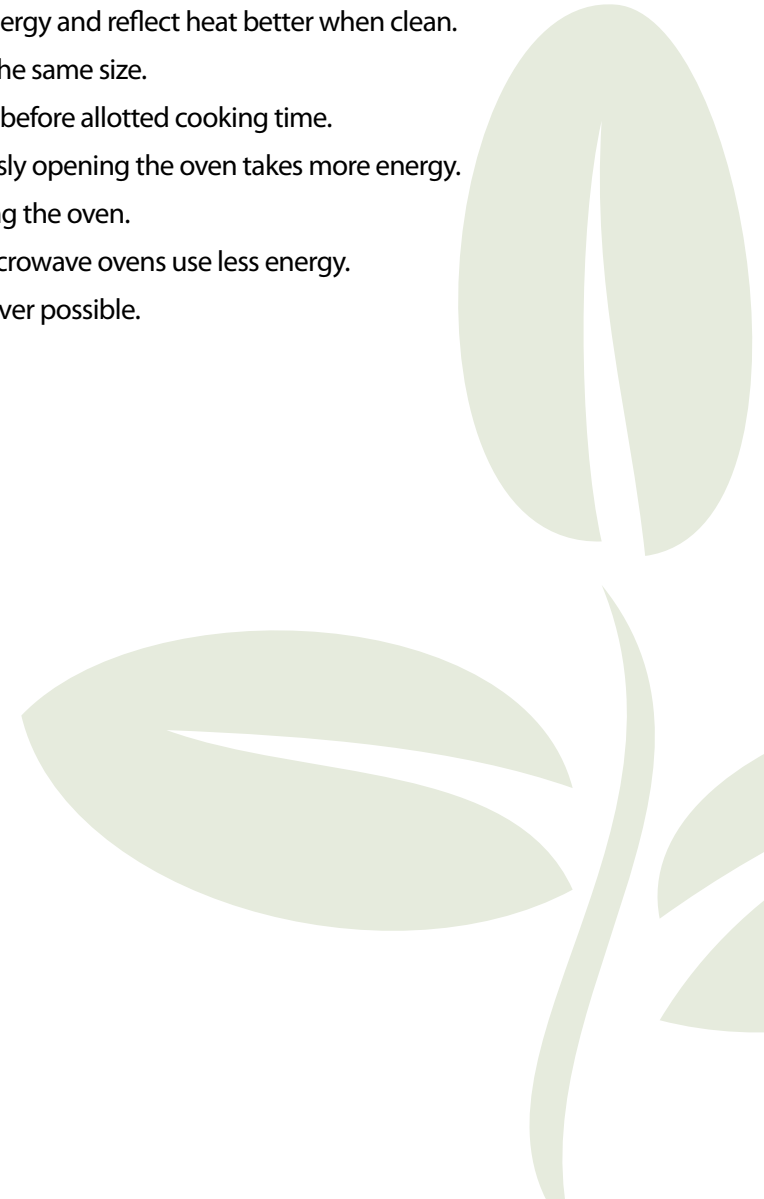
- If you have a food disposer, use cold water instead of hot water.
- Consider installing an aerator in your kitchen sink faucet. Less water will be used when the faucet is on.
- Boil water in a covered pan. Less water will be evaporated.
- Range-top burners and reflectors will save energy and reflect heat better when clean.
- Make sure the heating element and pan are the same size.
- If you have an electric range, turn off burners before allotted cooking time.
- When using the oven, use a timer. Continuously opening the oven takes more energy.
- Cook more than one dish at a time when using the oven.
- Electric pans, ovens, pressure cookers and microwave ovens use less energy.
- Use the range top instead of the oven whenever possible.

## Refrigerator/Freezer

- Coils on your refrigerator should be kept clean. Vacuum twice a year.
- Refrigerator temperature should be kept around 38° – 40°F and freezer temperature should be around 5°F.
- Refrigerators and freezers that are manually defrosted use less energy but have to be defrosted regularly.
  - Frost buildup should never amount to more than an inch.
- Make sure refrigerator and freezer doors are airtight.
- Hot foods should be cool before placing in refrigerator.
- Keep your freezer full, but not over-packed, making sure to leave room for air circulation.

## Laundry - Washing Machine

- Only use hot water when necessary to wash clothes.
  - You can save energy by using warm water to wash & cold water to rinse.
- Do not overload wash or use too much detergent.
- For heavily soiled clothes, presoak or use the soak cycle.





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## Laundry - Clothes Dryers

- Do not overload dryer.
- Lint screen should be kept clean.
- Regularly check outside exhaust vent for clogs.
- If available, use automatic dry cycle.
- Consecutive load drying will use less energy.
- Remove garments when there is still a trace of moisture.  
Not only will this save energy; it will also save time-spent ironing.
- Clothes should be separated by weight for drying.
- Lightweight items should be dried last.

## Laundry - Ironing

- Hand irons will consume the same amount of energy as ten 100-watt light bulbs.
- Hanging clothes in the bathroom while showering will take wrinkles out & save ironing

## Bathroom

- Taking a "quick" shower instead of a bath will use less water.
- Install a flow controller in the pipe at the shower head.
- Bathroom ventilating fans will remove warm air from your house and should be used sparingly.

## Outdoor Lighting

- Turn off decorative outdoor gas lamps, or convert them to electricity.  
You could heat an average – sized home an entire winter with the amount of natural gas 8 lamps burning year around will use.
- Outdoor lights should only be used when needed.

A great way to save energy is the old-fashioned way, hanging clothes on a clothesline.



# energy and water saving tips

## Indoor Lighting

- If a room is not being used, turn off the lights.
- Reduce lighting in non working areas by removing one bulb in a multi light fixture making sure to replace it with a burned out bulb.
- Install dimmers or high low switches when replacing light switches.
- For an area where bright light is needed use one large bulb instead of several small ones.
- Only use long – life bulbs in places that are hard to reach.
- Three – way switch lamps allow you to choose the required lighting level.
- Use 4-watt night light bulbs instead of 7-watt.
- Fluorescent lights produce more lumens per watt & last 6 times longer.  
(ex. 40 watt fluorescent = 80 lumens per watt while a 60 watt incandescent = 14.7 lumens per watt)
- Fluorescent lighting is an excellent choice for kitchens, bathrooms & utility rooms.
- Regularly check all lamps & lighting fixtures for dirt.  
Dirt will affect the amount of light produced therefore, making fixtures use more energy.

## Appliances

- Never leave appliances running when not in use (ex. TVs, radio's).
- Appliances should be kept in good working order.
- Compare operating cost and energy use information when buying appliances.
- Use appliances wisely.

Save 50% on your lighting energy bill by replacing 25% of your high use area lights with fluorescent lights.





# energy and water saving tips

## Estimating Appliance Operating Cost

To understand how appliances use electricity, you will need to know two factors.

1. The amount of power it takes to operate the appliance.
2. The number of hours that it runs.

Follow the guide below to calculate the amount of energy an appliance uses.

Multiply nameplate wattage by the number of hours it runs.

(If a nameplate shows amps, convert to watts by multiplying Amps by the voltage  
– outlets are usually 120 volts)

### EXAMPLE

Nameplate = 5 Amps  $5 \times 120 = 600$  watts

$600 \text{ watts} \times 10 \text{ hours per month} = 6000 \text{ watt hours or } 6 \text{ kWh}$

**Knowing how to read the energy guide label can help you purchase energy-efficient appliances.**

**From an energy label you can acquire important information.**

1. The model's estimated yearly energy cost.
2. Comparable models in the size range.
3. Based on your average cost per kWh of electricity, how much you will pay to operate this appliance each year.
4. The bar chart shows where this model falls on the scale of least costly to most costly.
5. The national average cost for electricity on which the estimated year energy cost is based.
6. Type of appliance.





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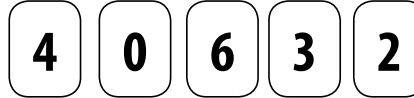
# energy and water saving tips

## How To Read Your Residential Electric Meter

Knowing how to read your meter can be one of the most valuable tools to help you understand your energy usage. Your meter measures the amount of electricity you use in kilowatt-hours (kWh).

Most new meters are now easy-to-read digital meters.

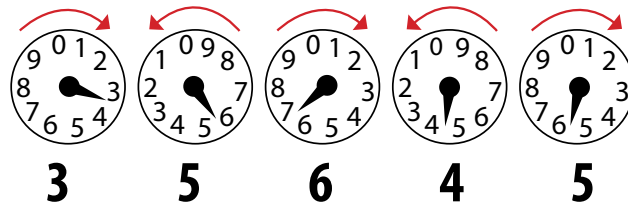
If you have a digital meter, read it left to right. This illustration reflects 40632



Some other meters are the mechanical dial type. Here are some simple rules for reading your dial type meter:

- Starting with the right dial record the number indicated on the face of each dial. Always record the lowest number if the hand points between two numbers.
- Sometimes, a hand will seem to be pointing exactly at a number. To find out if the hand has really reached that number, look at the dial to the right. If the hand on that dial has passed zero, then you should record the number; otherwise, record the lower number.
- Continue until you have read all the dials.

The meter runs much like the odometer on your car. Starting with the first dial on the right, write down the last number passed by each dial pointer. Remember that some dials turn clockwise and others counterclockwise. Subtract your previous meter reading from your last electric bill, from this reading. The result will show how many kilowatt-hours (kWh) of electricity you have used since then.



To get an estimate of your base load (day-to-day living) electricity use, read your meter daily. Make sure this is during a period when your living habits are typical and you are not using heating or air conditioning.

Be sure to monitor your daily usage again, as the weather becomes warmer or colder. Heating or cooling equipment will run considerably longer during periods of extreme heat or cold. Reading your meter during this time will help you understand the relationship between energy use & weather conditions.



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# energy and water saving tips

Appliances	Approx. Average Wattage	Monthly Hours Of Use	Monthly kWh	Approximate Cost*
Air Cleaner (Room & Furnace)	40	250-720	10-29	.54 - 1.57
Air Conditioner (Room) 6,000 BTU	750	120-720	90-540	4.88 - 28.23
Air Conditioner (Room) 9,000 BTU	1050	120-720	126-756	6.84 - 38.19
Air Conditioner (Central) 2.5 Tons	3500	240-860	850-3000	42.52 - 141.65
Barbecue Grill	1350	5-10	7-14	.38 - .76
Block Heater	500	120-480	60-240	3.25 - 13.06
Broiler	1400	4-12	5-17	.27 - 22.14
Car Interior Heater	850	120-480	102-408	5.53 - 22.14
Can Opener	175	1/12-1	.01-.18	.00 - .01
Carving Knife	90	1-2	.1-2	.00 - .01
Ceiling Fan	60	15-330	1-20	.05 - 1.08
Clock	5	720	4	0.21 - 5.86
Clothes Dryer	5000	6-28	30-140	1.62 - 7.61
Clothes Washer (Electric Water Heat)	500	7-40	33-196	1.79 - 10.66
Clothes Washer (Non Electric Water Heat)	500	7-40	3-16	.16 - .86
Coffee Maker	900	4-30	4-27	.21 - 5.86
Computer (Monitor & Printer)	200	25-160	5-32	.27 - 1.73
Deep Fat Fryer	1500	5-10	8-15	.43 - .81
Dehumidifier	350	120-720	42-252	2.28 - 13.71
Dishwasher (electric water heating)	1300	8-40	20-102	1.08 - 5.53
Dishwasher (non electric water heating)	1300	8-40	3-16	.16 - .86
Drill	300	3-7	1-2	.05 - .10
Electric Blanket	180	30 - 90	5 - 16	.27 - .86
Electric Heater (portable)	1000	30-90	30-90	1.62 - 4.88



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# energy and water saving tips

Appliances	Approx. Average Wattage	Monthly Hours Of Use	Monthly kWh	Approximate Cost*
Fan (Portable)	115	18-52	2-6	.10 - .65
Floor Polisher	300	3-7	1-2	.05 - .10
Food Blender	390	3-5	1-2	.05 - .10
Food Freezer (15 cu. Ft.)	335	180 - 420	60-140	3.25 - 7.61
Food Mixer (Hand & Table)	100	1-5	.10-.50	.00 - .02
Frying Pan	1150	10-20	12-23	.65 - 1.24
Furnace Fan Motor (Intermittent)	350	160-415	56-145	3.04 - 7.88
Furnace Fan Motor (Continuous)	350	720	252	13.71
Hair Dryer (Portable)	1000	1-10	1-10	.05 - .54
Heat Exchange / HRV's	125	300-720	37-150	2.00 - 8.15
Heat Lamp (Infrared)	250	2-4	.5-1	.02 - .05
Hedge Trimmer	125	4-8	.5-1	.02 - .05
Hot Plate	1320	2-6	3-8	.16 - .43
Humidifier (Portable)	100	80-540	8-54	.43 - 2.93
Iron (Hand)	1000	1-10	1-10	.05 - .54
Kettle	1500	1-10	1-15	.05 - .81
Lawn Mower	1500	2-4	3-6	.16 - .32
Lighting Single Lamp (60W)	60	17-200	1-12	.05 - .65
Compact Fluorescent (60W Equiv.)	18	17-200	.3-3.6	.01 - .19
Ceiling Fixture (3 Bulbs)	180	6-195	2-35	.10 - 1.90
Tri-Light (Table Lamp)	100	10-200	1-20	.05 - 1.08
Chandelier (5 Lamp)	300	10-183	3-55	.16 - 2.98
Fluorescent (2 Tube 4 Ft.)	100	10-200	1-20	.05 - 1.08
Microwave Oven	1000	5-30	5-30	.27 - 1.62



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# energy and water saving tips

Appliances	Approx. Average Wattage	Monthly Hours Of Use	Monthly kWh	Approximate Cost*
Oil Furnace (Burner)	260	96-288	25-75	1.35 - 4.07
Power Saw	275	2-4	.6-1	.03-.05
Range	12500	10-50	125-625	6.79 - 32.15
<b>Self Cleaning Cycle Only</b>	3200	.5-1.5	2-5	.10 - .27
Refrigerator-Freezer Frost Free (17 cu. ft.)	500	150-300	75-150	4.07 - 8.15
Non Frost Free (13 cu. ft.)	300	190-300	56-90	3.04 - 4.88
Sewing Machine	75	4-14	.3-1	.01 - .05
Shaver	15	3-5	.05-.08	.00 - .01
Stereo	30	1-170	.03 - 5.1	.00 - .27
Sun Lamp	280	1-4	.28 - 1	.01 - .05
Swimming Pool Filter Motor 1/2 HP	900	720	648	33.21
Swimming Pool Filter Motor 3/4 HP	1200	720	864	43.17
Swimming Pool Filter Motor 1.0 HP	1500	720	1080	53.12
Swimming Pool Filter Motor 1.5 HP	2100	720	1512	73.04
Television	80	60-440	5-35	.27 - 1.9
Toaster	1150	1-3.5	1-4	.05 - .21
Toaster Oven	1250	2-24	2.5-30	.13 - 1.62
Toothbrush	10	1-2	.01-.02	.00 - .01
Vacuum Cleaner (Portable)	800	2-6	2-5	.10 - .27
Vacuum Cleaner (Central)	1600	2-6	4-10	.21 - .54
VCR	40	50-200	1-8	.05 - .43
Waffle Iron	1100	1-2	1-2	.05 - .10
Water Bed Heater	400	150-300	60-120	3.25 - 6.52
Water Heater Typical Family of 4	3800	98-138	375-525	20.41 - 27.54
Water Heater Typical Family of 2	3800	66-92	250-350	8.17 - 19.05



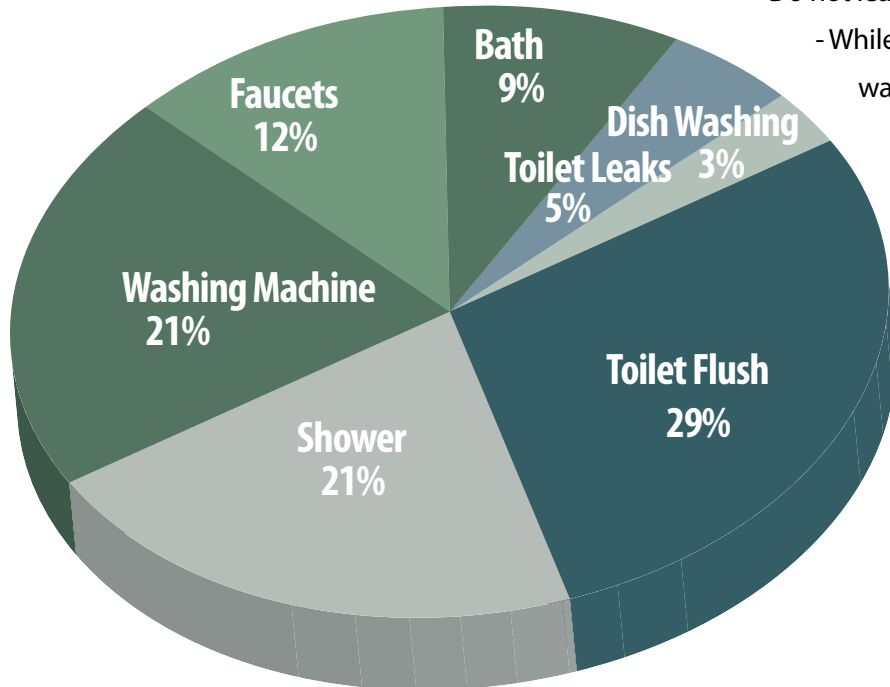
# energy and water saving tips

## Conserving Water & Saving Money

The average person uses approximately 85 gallons of water each day. The following chart indicates the estimated amount and usage of that water.

### Daily Water Consumption

- Toilet leaks account for 5% of a persons daily water use. In your toilet tank, place a few drops of food coloring. Do not flush. If you notice color in the bowl, you have a leak that needs immediate repair.
- Do not use the toilet as a wastebasket or ashtray. Five to seven gallons of water is wasted every time you flush a cigarette butt or small bit of trash.
- To save ten or more gallons of water a day, place plastic bottles filled with sand or pebbles in your toilet tank away from operating mechanisms.
- Limit showers.
- Install flow restrictors or water-saving shower heads.
- Take baths instead of showers.



- Do not leave water running while brushing your teeth.
- While shaving, rinse your razor in a few inches of warm water in the sink, instead of running water.
- Check all faucets and pipes for leaks. The smallest drip can waste 20 or more gallons of water a day.

### Kitchen & Laundry

- Use your washing machine and dishwasher only for full loads.
- Do not leave water running when washing dishes by hand.
- When cleaning vegetables, never let the water run. Fill sink with water.
- A bottle of drinking water should be kept in the refrigerator. Water is wasted when you cool tap water for drinking.



# energy and water saving tips

## Outside

- Water early in the morning.
- Plant drought-resistant trees and plants.
- Mulch around trees and plants.
- When cleaning driveways, use a broom and not a hose.
- While washing your car, use the hose only to rinse.
- Check for leaks in hoses.

## Leaks

Leaks are more costly than people believe. They can amount to hundreds, even thousands of dollars a year. The following shows approximately how many gallons of water is used per day when leaks are present.

### Faucets

- Slow Drip - 36 gallons per day
- Steady Drip - 180 gallons per day
- ¼ Open - 684 gallons per day
- Full Open - 3600 gallons per day

### Toilets

- Seeping Flush valve - 30 gallons per day
- Leaking Slightly - 250 gallons per day
- Constantly Running - 6000 gallons per day

Toilet tanks are responsible for 90% of residential leaks. Toilet leaks are easy to detect. First, check to see if the float arm is working properly. Second, make sure the plunger ball and overflow pipes are working properly. Last, listen for the water flow to shut off.

## Leak Detection List to help maintain maximum water control.

- Toilets:**
- \_\_\_\_\_ Basement
  - \_\_\_\_\_ Main Floor
  - \_\_\_\_\_ Bedroom Floors

- Basement**
- \_\_\_\_\_ Basement
- Garage:**
- \_\_\_\_\_ Main Floor
  - \_\_\_\_\_ Bedroom Floors

- Outdoors:**
- \_\_\_\_\_ Water Faucets
  - \_\_\_\_\_ Automatic Sprinklers
  - \_\_\_\_\_ Swimming Pools
  - \_\_\_\_\_ Service Line

- Faucets:**
- \_\_\_\_\_ Sinks In Basement
  - \_\_\_\_\_ Kitchen Sink
  - \_\_\_\_\_ Bathroom Sinks On All Floors
  - \_\_\_\_\_ Sinks On Bedroom Floors
  - \_\_\_\_\_ Attic Sink

- Main Floor:**
- \_\_\_\_\_ Refrigerator (& ice-maker)
  - \_\_\_\_\_ Dishwasher
  - \_\_\_\_\_ Bathtubs and Showers



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## CALL 811 BEFORE YOU DIG



Know what's below.  
Call before you dig.

Call Kentucky Underground Protection Center two business days before you dig. They will contact member utility companies and have the lines marked where you will be digging.

## Kentucky Color Codes For Locating Utility Lines

- **RED** – Electric power lines, cables conduit and lighting cables
- **YELLOW** – Gas, oil, steam, petroleum, or gaseous materials
- **ORANGE** – Communications, alarm and signal lines, Conduit
- **BLUE** – Water and slurry lines
- **GREEN** – Sewer and drain lines
- **PURPLE** – Cable Television
- **PINK** - Survey
- WHITE** – Proposed excavation

For more information and conservation, visit our online, home energy, audit tool (find the audit tool under ELECTRIC on the menu bar, then ENVIRONMENT). This information booklet is provided as a customer service tool to equip concerned customers with limited information on energy and water conservation. We do not purport to present an exhaustive treatment of the subject matter. All information was acquired via the following periodicals:

- Tips for energy savers – U.S. Department of Energy Washington, D.C.
- Low-cost No-Cost Ways to Energy Save
- Leak Prevention
- Water Conservation – American Water Works
- Appliance Usage – Hydro Mississauga



Thank you for allowing The Frankfort Plant Board the opportunity to serve your residential electrical and water needs. Please feel free to contact a Customer Service Representative at 502-352-4372 should you have comments, concerns, or questions. We value our relationship with you as a customer.