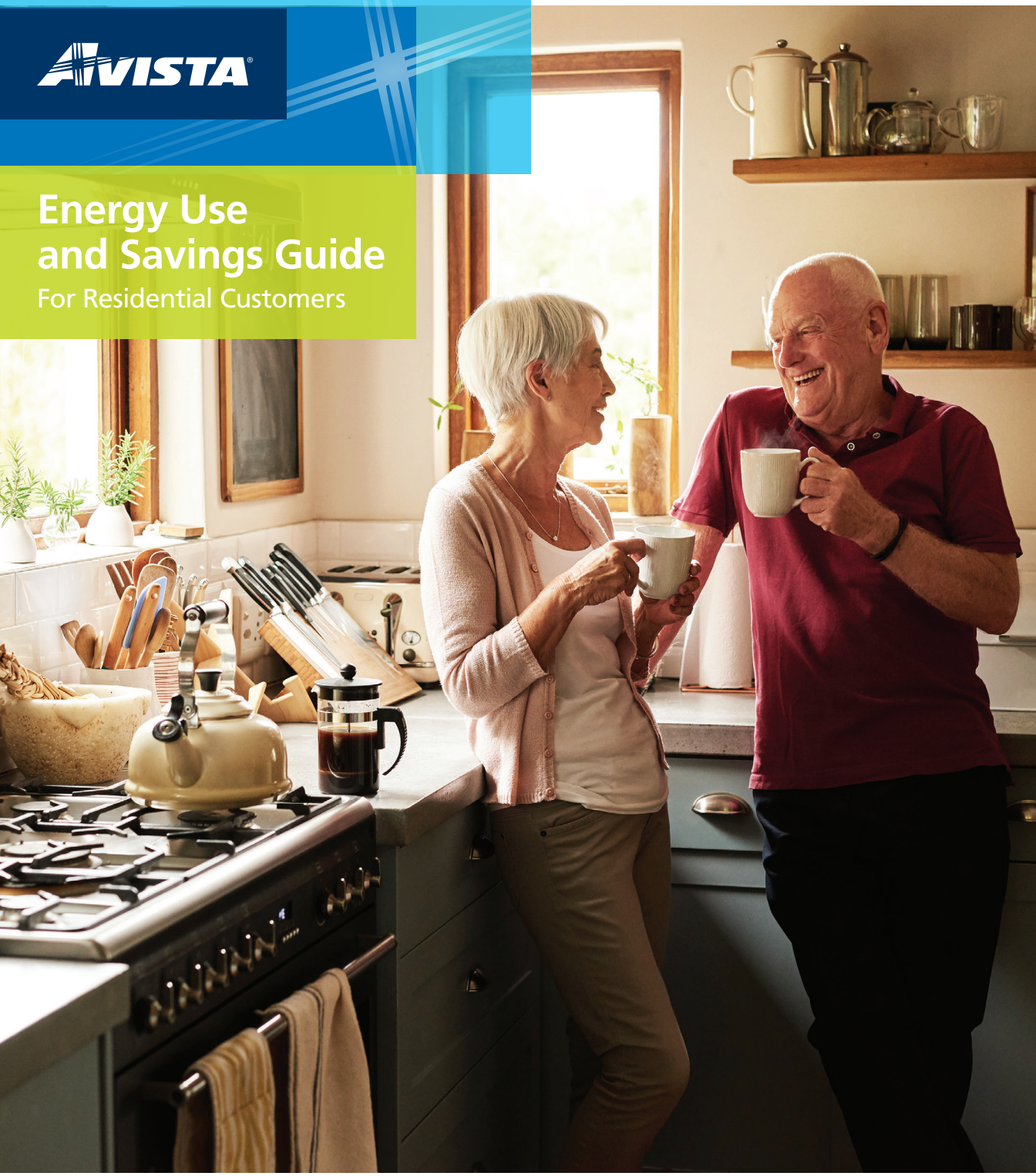
Energy Use and Savings Guide

For Residential Customers



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Typical Energy Use in Your Home

The energy bill for a **typical U.S. single family** home averages $2,200 per year. Where does all this money go? The cost of heating and cooling your home can represent 40% to 60% of your total energy bill. The chart to the right shows the breakdown of energy use by category and starts to give you a sense of where savings can be found. Reducing energy consumption by just 15% could save you over $300 a year in energy costs.

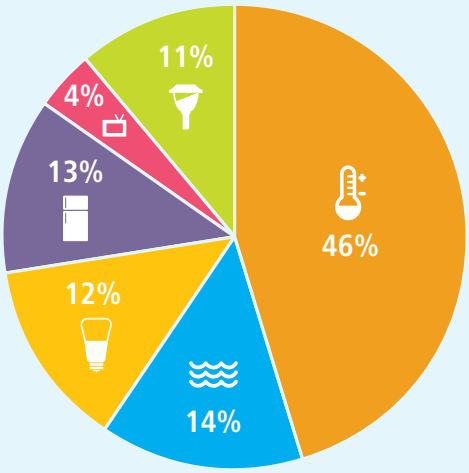
Managing Your Energy Budget

Having a budget is always a good idea. Developing a budget starts with understanding your resource needs. Each month, you need food, clothing, transportation and energy to run your home. Understanding your energy usage is the first step to creating that portion of your budget. Inside this booklet, you'll find many energy saving tips to help you manage your resources.

This booklet contains ideas and suggestions on how you can monitor— and better control—your energy consumption. You may already be familiar with some of our energy savings suggestions, though some may surprise you.

Individual lifestyle and energy use habits, number and age of occupants, as well as the size, design, levels of insulation and heating system in your home, all combine to determine how much energy you will use for heating.

The statistics in this booklet are based on national averages. The wattage or energy usage and efficiencies of your appliances, your own use habits, as well as the size of your family will vary. Keep this in mind when you're reviewing your own energy use.



- Heating & Cooling – 46%
- Water Heating – 14%
- Lighting – 12%
- Appliances – 13%
  (Includes refrigerator, dishwasher, clothes washer and dryer)
- Electronics – 4%
  (Includes computer, monitor, TV and DVD player)
- Other – 11%
  (Includes external power adapters, set-top boxes, ceiling fans, vent fans and home audio)

Understanding This Guide

Listed below are terms and definitions that will be used throughout this guide. All numbers and costs included are a representation based on national average use with average Avista rates.

Kilowatt Hours (kWh): We measure electrical energy in watt hours. One kilowatt hour equals 1,000 watt hours. The kilowatt hours on your bill equals the rate or speed of use (kilowatts) x the length of time electricity was used. Running a 5,000-watt (5 kilowatt) clothes dryer for 1 hour uses 5 kilowatt hours of electricity. Burning a 100-watt light bulb for 10 hours uses 1 kilowatt hour.

Therms: Your gas energy use is measured in a unit called therms. Therms identify the heating value provided by gas. One therm equals the heating capacity of approximately 100,000 wooden kitchen matches.

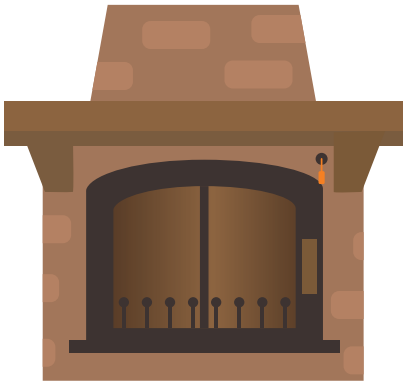
Approximate Watts: The wattage is the consumption rate of electricity a device exhibits while operating. This energy consumption may occur when a computer is turned on, when a kitchen mixer is in use or when light bulbs are turned on in a light fixture.

Monthly kWh Usage: The monthly kWh usage for each device is based on an assumed typical month of operation, estimating the hours the device is operating in conjunction with its power consumption as noted in the watt rating.

Estimated Monthly Cost: The estimated monthly cost is based on the energy consumption at $0.10 per kilowatt hour for electricity or $0.80 per natural gas therm which are typical for Avista residential customers.

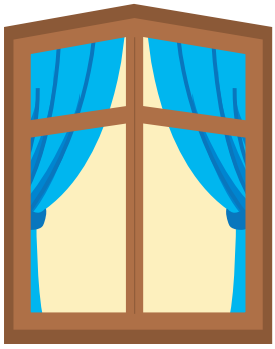
Heating and Cooling

Heating and Cooling Energy Saving Tips



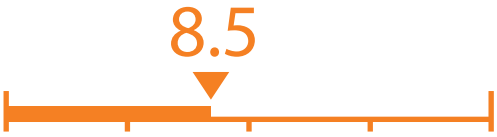
Fireplace dampers should be kept closed when you're not using the fireplace. A chimney can draw off as much as 25% of the heated air in your house if the damper is left open. Safely block off unused fireplaces when possible.

On sunny winter days, open your **draperies** to get full benefit of sun shining through the windows. In summer, close the draperies to help keep out unwanted heat.



Turn down the heat in winter. Keep your **thermostat** at or below 68° F; setting your thermostat three degrees lower in the winter can reduce your bill by about 10%.

When selecting an **air conditioning unit**, both room or central, check its Seasonal Energy Efficiency Ratio (SEER). The SEER indicates a unit's relative energy efficiency. Most units are tagged with this information, or your dealer can help you determine the SEER. The higher the SEER, the better. A SEER of 13 or above is preferred, 18 or above is exceptional.

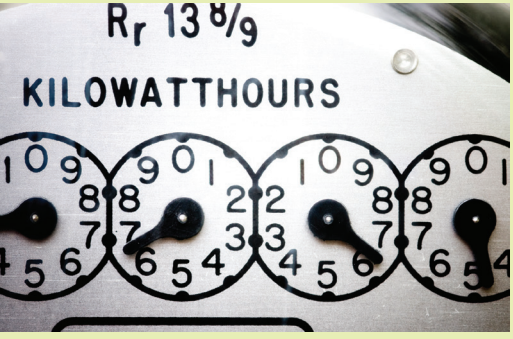


When selecting a **heat pump**, check its Heating Seasonal Performance Factor (HSPF). The HSPF indicates a heat pump's relative annual heating efficiency. A HSPF of 8.5 and above will provide lower operating costs for heating.

Heating and Cooling

Energy Saving Checklist

- ☐ **Block drafts.** Check caulking and weather stripping around windows and doors. If you see cracks, light, or feel a draft, make repairs where needed.
- ☐ **Seal leaks.** Ductwork exposed to outside air or in unconditioned spaces should be sealed using mastic paste and wrapped securely with insulation; insulation joints should be sealed with insulation tape.
- ☐ **Check furnace filter.** Check filters at least once a month; clean or replace them when dirty.
- ☐ **Bring in a professional.** A qualified serviceman should check heating and cooling equipment at the beginning of each season to ensure efficient operation.
- ☐ **Use drapes or shades.** Window coverings are one of the easiest ways to help insulate your house. Keep them closed on cold days and open on sunny ones.
- ☐ **Use fans in the summer.** Try using fans in the summer before switching on the air conditioning. Old A/C equipment can be equivalent to using 30 or more fans. If you must use your air conditioner, set it at 78° F; each degree over 78° in the summer will save you approximately 3% on your cooling bill.
- ☐ **Program your thermostat.** Adjust temperature settings according to a preset schedule. This way you can warm up or cool down your rooms when you know you'll be awake or at home. Consider a Wi-Fi enabled smart thermostat that learns your settings.



Reading Your Meter

Electric and natural gas meters are not difficult to read and they can provide you with information about your energy consumption.

Visit **myavista.com/readyourmeter** to learn more about how to read your meter.

Heating and Cooling

Energy Use Guide–Electric

	Average Watts	Monthly kWh Usage	Estimated Monthly Cost
Air purifier	70	51.1	$5.11
Air purifier – ENERGY STAR	20	14.6	$1.46
Humidifier	75	11.3	$1.13
Whole home steam humidification	1200	144.0	$14.40
Portable fan	100	7.3	$0.73
Whole home air conditioning, 10 hrs/day	2400	720.0	$72.00
Room air conditioner, 5 hrs/day	1500	225.0	$22.50
Room air conditioner, 1 hr/day	1500	45.0	$4.50
Space heater, 5100 BTU, 10 hrs/day	1500	450.0	$45.00
Space heater, 5100 BTU, 1 hr/day	1500	45.0	$4.50

Energy Use Guide–Natural Gas

	Therm	Monthly Therm Usage	Estimated Monthly Cost
Fireplace, 75,000 BTU, 10 hrs/day	0.75	225	$180.00
Fireplace, 25,000 BTU, 10 hrs/day	0.25	75	$60.00
Fireplace, 25,000 BTU, 10 hrs/month	0.25	2.5	$2.00

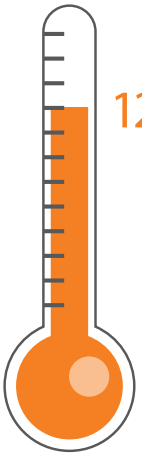
Find rebates and save

Upgrading to high-efficiency equipment using rebates can save you energy and money.

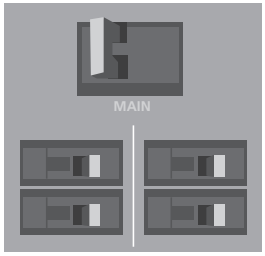
Visit **myavista.com/getrebates** to find available rebates and incentives.

Water Heating

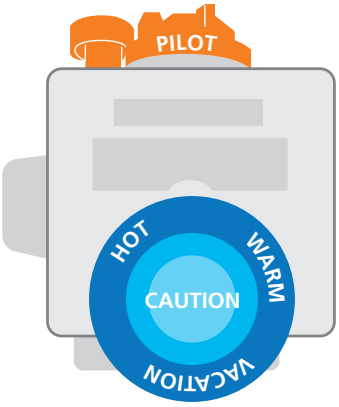
Water Heating Energy Saving Tips



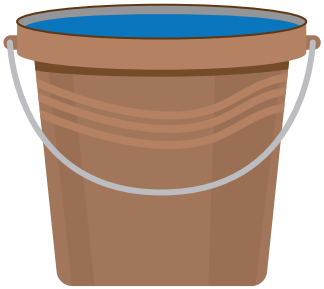
Set **water heater temperature** at 120° F. If you have a dishwasher, check the manufacturer's instructions for suggested temperature setting. Generally, residential water heaters should not exceed 140° F or be below 115° F.



Turn off electricity at your **circuit breaker/fuse box** before adjusting thermostats on the water heater for safety, or when you are going away from home for three days or more to save energy.



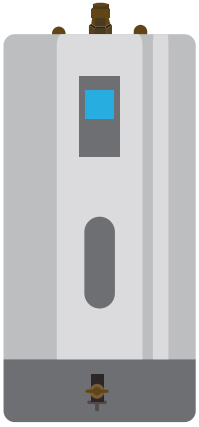
Turn **gas water heater** to pilot only if you are going away from home for a week or more.



Once every three months, **drain a pail or two of water** from the drain at the bottom of your water heater. This removes sediment and mineral deposits, which make your water heater less efficient.

Water Heating

Water Heating Energy Saving Tips



If you do not have access to natural gas, consider a **heat pump water heater** to save energy.

Showers generally take less hot water than baths and **dishwashers** generally take less water than hand washing.

Buy
ENERGY STAR
appliances.

If you don't have hard water or you do have a water softener, consider a **tankless natural gas water heater** that reduces standby losses.

Water Heating

Energy Saving Checklist

- ☐ **Keep showers short.** Try to keep your shower to no longer than five minutes.
- ☐ **Adjust your temperature settings.** Set your water heater at 120° F.
- ☐ **Replace washers on faucets that drip.** A leaky faucet can waste 2,500 gallons of hot water per year at a rate of one drip per second.
- ☐ **Install a low-flow shower head.** It can reduce your home water consumption as much as 50%, and reduce your energy cost of heating the water also by as much as 50%. When purchasing a new shower head you should look for shower heads that use no more than 1.5 gallons per minute (water consumption) and preferably no more than 0.6 gallons per minute.

Energy Use Guide–Electric

Water heater, 50-gallon heat pump	182.9	$18.29
Water heater, 50-gallon high-efficiency	385.2	$38.52
Water heater, 50-gallon standard-efficiency	404.8	$40.48

Assuming 25 gallons per day

Energy Use Guide–Natural Gas

Water heater, 50-gallon	20	$16.00
Water heater, 40-gallon	17.5	$14.00
Instantaneous water heater	11.5	$9.20

Lighting

Lighting Energy Saving Tips

Light bulbs differ in energy efficiency. Wattage measures only the amount of energy needed to light the bulb. Light actually given off is measured in **lumens**. The law now requires that manufacturers list the wattage, the lumen output and the approximate life span of each bulb on the package. The most energy efficient bulb is the one that gives off the most lumens per watt. Compare bulb ratings by dividing lumens by watts.

An 18-watt **LED bulb** will produce more light than a 100-watt incandescent bulb and can be used in kitchens, baths, laundry and work areas.

Security lights are a wise precaution. Outside post lights and floodlights can be controlled by a photoelectric cell for automatic dusk-to-dawn lighting or controlled by an infrared sensor to turn on when someone comes near the fixture and turn off when they leave.

Use **automatic timers** to turn lights on or off when you're not at home.

Only use
DIMMING LEDS
in dimming sockets.

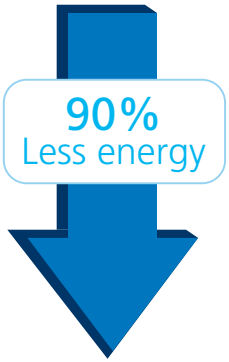
Purchase
ENERGY STAR LABELED BULBS.
And make sure your dimmers are rated for dimming LED's.

Lighting

Lighting Energy Saving Tips

LIGHT-COLORED CEILINGS

reflect the light downward for better lighting efficiency.



Light-emitting diode (LED) bulbs use up to 90% less electricity to produce the same amount of light as their traditional incandescent counterparts.

Energy Saving Checklist

- ☐ **Turn it off.** Turn off lights when you are not using them.
- ☐ **Make the switch.** Change out all regular incandescent lamps with ENERGY STAR qualified LED bulbs.
- ☐ **Keep bulbs and lenses clean.** Dust can cut light output by as much as 25%.
- ☐ **Dispose of your used bulbs properly.** Recycle your old compact fluorescent lamps (CFLs) at a participating recycling center near you.

Lighting

Energy Use Guide

Approximate Lumens	Type	Max Watts	Monthly kWh Usage	Estimated Monthly Cost
250	Incandescent	20	1.8	$0.18
	Halogen	19	1.7	$0.17
	CFL	7	0.6	$0.06
	LED	3	0.3	$0.03
500	Incandescent	40	3.6	$0.36
	Halogen	32	2.9	$0.29
	CFL	10	0.9	$0.09
	LED	6	0.5	$0.05
800	Incandescent	60	5.4	$0.54
	Halogen	42	3.8	$0.38
	CFL	15	1.4	$0.14
	LED	9	0.8	$0.08
1200	Incandescent	75	6.8	$0.68
	Halogen	54	4.9	$0.49
	CFL	20	1.8	$0.18
	LED	12	1.1	$0.11
1800	Incandescent	100	9.0	$0.90
	Halogen	72	6.5	$0.65
	CFL	27	2.4	$0.24
	LED	18	1.6	$0.16
2500	Incandescent	150	13.5	$1.35
	Halogen	130	11.7	$1.17
	CFL	42	3.8	$0.38
	LED	25	2.3	$0.23
Night Light	Incandescent	5	1.5	$0.15
	LED	1	0.3	$0.03

Assumes "on" average of three hours a day.

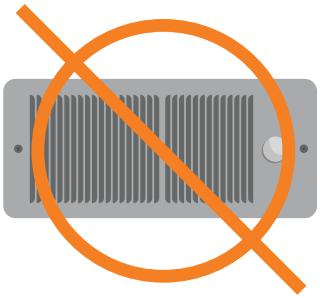
Major Appliances

Refrigeration Energy Saving Tips

Choose a **well-insulated, energy-efficient refrigerator** with a separate door for the freezer compartment (that way, when removing an item from the freezer, you avoid opening the refrigerator door unnecessarily).

Cover all foods and liquids. In frost-free models, evaporation of the liquid will force the unit to work harder to remove the moisture.

Don't put warm foods directly into the refrigerator. Allow hot foods to cool, then refrigerate. Cooked meats, however, should be refrigerated immediately.

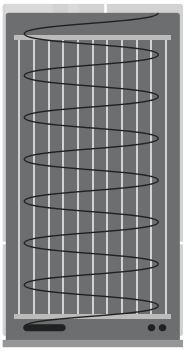


Do not locate the unit near a heat source.

Check the tightness of your **refrigerator door gasket** by shutting a piece of paper in the door. If the paper slides out without resistance, your refrigerator may be leaking cold air. Consider replacing the door seals.

Major Appliances

Refrigeration Energy Saving Tips



Every three months **vacuum the condenser coils** located at the bottom or rear of the refrigerator to remove accumulated dust.

Both the refrigerator and the freezer operate most efficiently when they are **full, but not overcrowded**. Be sure to allow enough space between foods and containers for air to circulate freely.

Energy Saving Checklist

- ☐ **Adjust the temperature.** Set your refrigerator between 37 to 40° F and your freezer between 0 to 5° F.
- ☐ **Keep fridge door closed.** Know what you want out of the refrigerator before you open the door. An open door is wasted energy.
- ☐ **Defrost freezer.** Defrost when ice is ¼" thick.
- ☐ **Clean refrigerator coils.** Keep coils clean to keep your refrigerator in peak operating condition. They may be behind or below the fridge.
- ☐ **Cover and wrap food.** Uncovered foods and liquid release moisture, which makes the fridge work harder.
- ☐ **Fill it up.** A full fridge or freezer uses less energy. If fridge or freezer is not full consider turning it off.

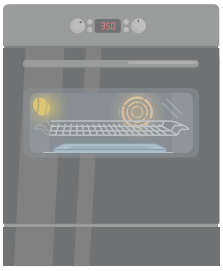
Major Appliances

Energy Use Guide

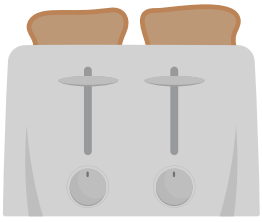
Chest freezer	46.5	33.9	$3.39
Chest freezer – ENERGY STAR	40.9	29.8	$2.98
Refrigerator, bottom-mounted freezer (automatic defrost)	66.7	48.7	$4.87
Refrigerator, bottom-mounted freezer (automatic defrost) – ENERGY STAR	52.0	38.0	$3.80
Refrigerator, bottom-mounted freezer and through-door ice (automatic defrost)	77.1	56.2	$5.62
Refrigerator, bottom-mounted freezer and through-door ice (automatic defrost) – ENERGY STAR	60.1	43.9	$4.39
Refrigerator with or without a top-mounted freezer (automatic defrost)	61.9	45.2	$4.52
Refrigerator with or without a top-mounted freezer (automatic defrost) – ENERGY STAR	48.3	35.3	$3.53
Refrigerator-freezer or refrigerator only (manual or partially automatic defrost)	55.7	40.7	$4.07
Refrigerator-freezer or refrigerator only (manual or partially automatic defrost) – ENERGY STAR	43.5	31.7	$3.17
Side-by-side refrigerator/freezer (automatic defrost)	73.2	53.4	$5.34
Side-by-side refrigerator/freezer (automatic defrost) – ENERGY STAR	57.1	41.7	$4.17
Side-by-side refrigerator/freezer with through- door ice (automatic defrost)	77.7	56.7	$5.67
Side-by-side refrigerator/freezer with through- door ice (automatic defrost) – ENERGY STAR	60.6	44.2	$4.42
Upright freezer (automatic defrost)	75.0	54.8	$5.48
Upright freezer (automatic defrost) – ENERGY STAR	66.0	48.2	$4.82
Upright freezer (manual defrost)	52.5	38.3	$3.83
Upright freezer (manual defrost) – ENERGY STAR	46.2	33.7	$3.37

Major Appliances

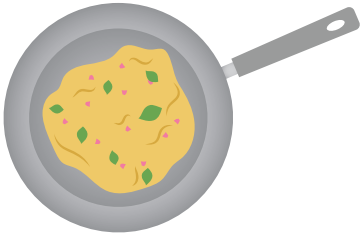
Range / Oven Energy Saving Tips



Each time you open the oven door you can **lose up to 20% of the heat.** If you must look, do so through the oven window. Or rely on your own thermostat and timer. (This will cut down on baking failures too!)

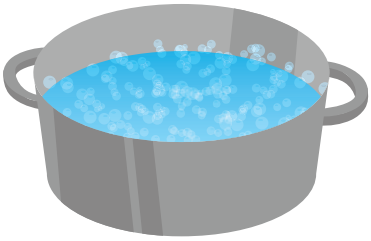


The **oven is a very inefficient toaster.** It costs three times as much to toast bread in the oven as in a pop-up toaster.



Match the size of your cooking pans to the size of the surface units on your range so you won't waste heat. Flat-bottomed pans receive heat directly and conserve energy.

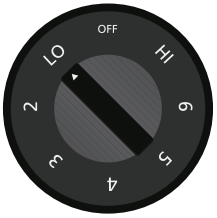
When boiling water, bring the water to a boil on **high heat,** then reduce the heat to your cooking temperature.



Instead of heating water in an open pan, use a **teakettle or microwave**.

Major Appliances

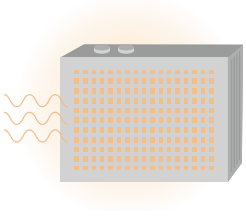
Range / Oven Energy Saving Tips



Food should always be cooked on the **lowest** possible setting.

Leave at least **two inches between pans** in the oven for proper heat circulation. Pans should not touch each other, the oven doors or walls.

If the kitchen is chilly, don't use the electric range for heat. A **small electric heater** will do a much better job.



Thaw frozen foods before placing them in the oven. Putting a frozen roast directly in the oven requires one-third additional cooking time (microwave ovens can be used for quick thawing).

When using glass or ceramic dishes, you can **lower the oven setting 25° F.**

If your electric or gas range has a **self-cleaning feature,** clean it while the oven is still hot after removing a meal. Since a self-cleaning oven must be well insulated, it uses less energy for baking or roasting. Using the self-cleaning feature costs about 15 cents per use.

Major Appliances

Energy Saving Checklist

- ☐ **Keep racks clear.** It's tempting to line oven racks with foil to keep things clean, but don't do it. The hot air needs to be able to circulate to cook food efficiently.
- ☐ **Use lids.** When cooking, lids keep heat and steam in and help food cook more quickly, which saves energy.
- ☐ **Clean the burner pans on your stove.** When clean, burner pans will reflect heat back up to pots and pans.
- ☐ **Don't peek.** You lose heat every time you open the door or lift the lid.
- ☐ **Use the smallest pans possible.** It takes less energy to heat smaller pans.

Energy Use Guide–Electric

Range top, 40 min/day (large burner)	2400	48	$4.80
Self-cleaning oven, 30 min/day (1 clean cycle/month)	3600	57.6	$5.76
Standard oven, 30 min/day (non-self-cleaning)	3300	49.5	$4.95

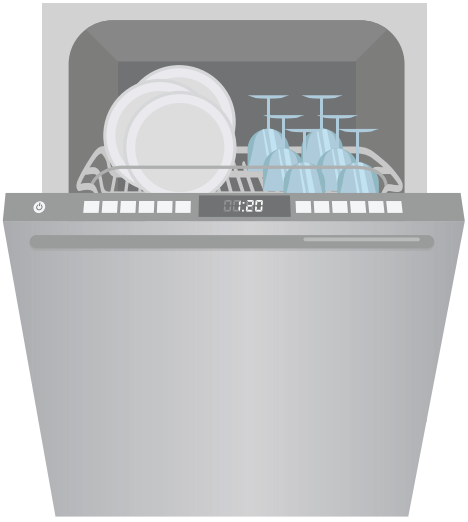
Energy Use Guide–Natural Gas

Range 4 cooktop, 40 min/day	1.83	$1.46
Oven, 30 min/day	3.81	$3.05
Pilot light	5.48	$4.38

When purchasing new gas appliances make sure they are ignited electronically and do not have standing pilots.

Major Appliances

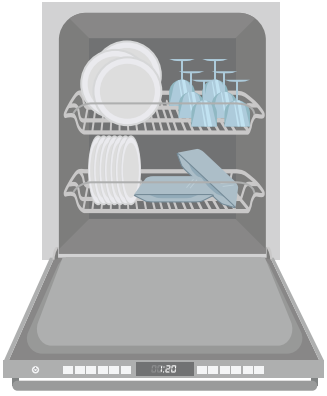
Dishwasher Energy Saving Tips



Hold dishes in your dishwasher until you have a full load. You'll use less hot water and save energy.

According to ENERGY STAR, you can save 5,000 gallons of water each year and **$40 in energy costs** using a dishwasher instead of washing dishes by hand.

One dishwasher load usually uses less hot water than three washings by hand.



Energy Saving Checklist

- ☐ **Fill it up.** It costs exactly the same to wash one dish in the dishwasher as it does to wash a full load.
- ☐ **Scrape dishes instead of pre-rinsing them.** Dishwashers made in the past five to ten years can clean even heavily soiled dishes without pre-rinsing.
- ☐ **Use air-dry options.** Keep your machine from using a heating element to bake your dishes dry and opt to air dry your dishes instead.

Major Appliances

Energy Use Guide–Electric

	Monthly kWh Usage	Estimated Monthly Cost
Dishwasher (including hot water from electric water heater)	40.3	$4.03
Dishwasher (including hot water from electric water heater) – ENERGY STAR	29.6	$2.96

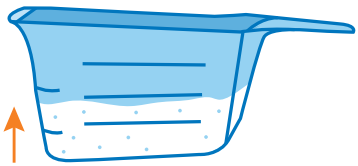
Energy Use Guide–Natural Gas

	Monthly kWh Usage	Estimated Monthly Cost
Dishwasher (including hot water from gas water heater)	1.1	$2.37
Dishwasher (including hot water from gas water heater) – ENERGY STAR	0.7	$1.89

Loads per year: 215

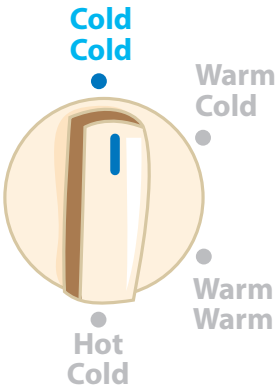
Major Appliances

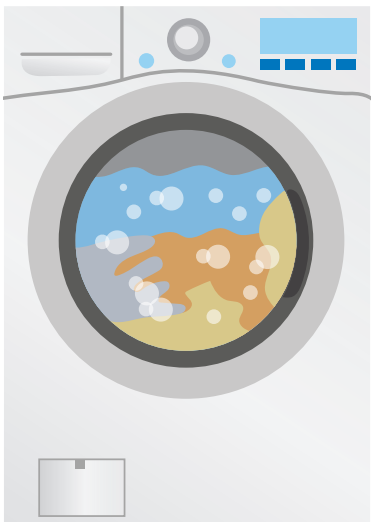
Laundry Energy Saving Tips



Match detergent and water level to the load. If your washer doesn't have a partial load setting, let the machine fill to the desired water level, then turn the dial manually to begin the wash cycle.

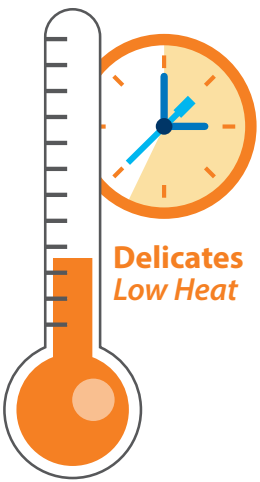
When possible, wash and rinse clothes in **cold water**. However, hot water may be necessary for some types of wash loads, like baby clothes.





For heavily soiled clothes, use the **soak cycle**, or prepare the load for washing and then let stand in the water for 10 to 15 minutes before starting the wash cycle.

Keep your **dryer exhaust** vent clean. If clogged, it can lengthen drying time and increase energy consumption.

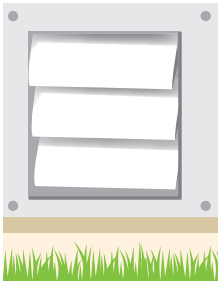


Select the **correct drying temperature and time**. Don't over dry; in addition to wasting energy, over drying gives clothes a harsh feel and causes wrinkling.

Major Appliances

Laundry Energy Saving Tips

Sort clothes by thinness to avoid running an additional cycle for only one or two slow drying items.



Vent your clothes dryer to the outside to reduce buildup of excess heat, moisture, and laundry chemicals.

Don't

OVERLOAD DRYER

because clothes will take longer to dry.

Since an **iron** heats faster than it cools, first iron the fabrics that require lower temperatures, then work up to fabrics requiring a hotter setting.

Energy Saving Checklist

- ☐ **Select cold water.** Hot water only needs to be used for very dirty loads.
- ☐ **Only run full loads.** The machine uses about the same amount of water whether you wash a full load or just one item.
- ☐ **Hang it up.** Instead of using the dryer, dry clothes outside in good weather—sunlight is free.
- ☐ **Clean the lint filter after every load.** Clogged filters drive up drying time and costs.

Major Appliances

Energy Use Guide–Electric

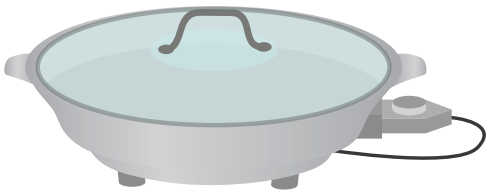
Clothes Dryer, compact (120-volt)	25.4	$2.54
Clothes dryer, compact (240-volt)	28.3	$2.83
Clothes dryer, standard	57.0	$5.70
Clothes iron	16.5	$1.65
Clothes washer (excluding water heating energy use)	6.3	$0.63
Clothes washer (excluding water heating energy use) – ENERGY STAR	2.1	$0.21
Clothes washer (including water heating energy use)	31.2	$3.12
Clothes washer (including water heating energy use) – ENERGY STAR	10.5	$1.05
Clothes washer and dryer	75.1	$7.51
Clothes washer and dryer – ENERGY STAR	38.9	$3.89
Vacuum cleaner	2.8	$0.28

Energy Use Guide–Natural Gas

Clothes dryer, standard	1.8	$1.97

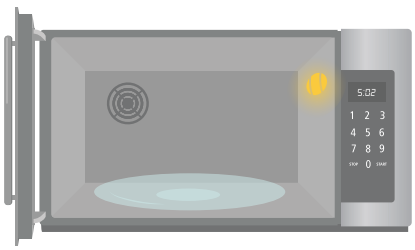
Electronics

Kitchen Electronics Energy Saving Tips



Use **small appliances**, such as your electric fry pan or toaster oven, whenever possible to cook small amounts of food. Use your big oven to bake complete meals, or to bake in quantity (perhaps to freeze for later).

A **pressure cooker and a microwave oven** can cut down on cooking time and, in many cases, on energy usage.



Keeping the inside of your **microwave clean** allows your food to cook more efficiently.

Energy Saving Checklist

- ☐ **Smaller is better.** For small meals, utilize the microwave, toaster oven, electric pans or other kitchen gadgets to avoid heating up the whole oven for one toasted cheese sandwich.
- ☐ **Skip the oven.** In warm weather, cook outdoors on a grill.
- ☐ **Shut off kitchen fans.** While fans are great for removing smells from the kitchen, they also suck heat out. Shut them off when you don't need them.
- ☐ **Unplug it.** Your toaster or small appliances should only be plugged in when you are using them.

Electronics

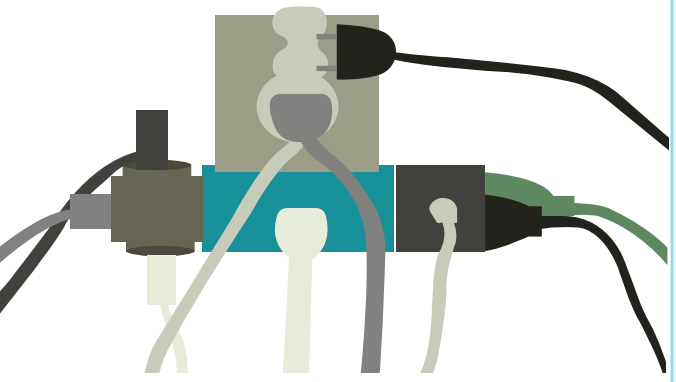
Energy Use Guide

Blender, 3 min/day	300	0.45	$0.05
Can opener, 3 min/day	100	0.15	$0.02
Coffee machine, 20 min/day	1100	11	$1.10
Cooktop, 20 min/day	1200	12	$1.20
Espresso maker, 20 min/day	360	3.6	$0.36
Microwave oven, 10 min/day	1100	5.5	$0.55
Popcorn maker, 3 min/day	1400	2.1	$0.21
Stand mixer, 3 min/day	100	0.15	$0.02
Standard oven, 20 min/day (non-self-cleaning)	3300	33	$3.30
Toaster, 3 min/day	1100	1.65	$0.17
Toaster oven, 3 min/day	1200	1.8	$0.18

Electronics

Family Room / Living Room Electronics Energy Saving Tips

Electronics may continue to use power even when they appear to be off. The little glowing light means they are using energy—up to 10% of your annual electricity usage. You can make sure you're cutting use by switching everything off with one power strip switch.



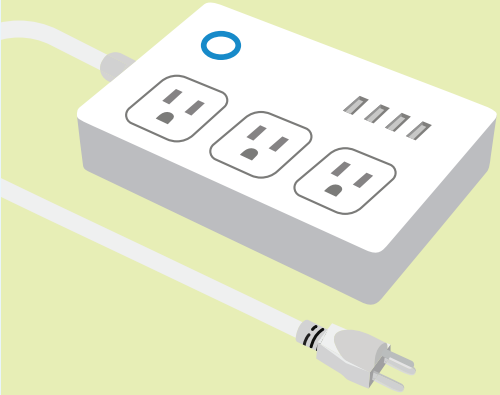
Don't overload circuits by plugging too many electronics into one outlet.

Look for the **ENERGY STAR label** on consumer electronic products. These products use less energy without sacrificing quality or performance.

Electronics

Energy Saving Checklist

- ☐ **Unplug it.** Battery chargers or power adapters for devices like cell phones, eBooks and more may consume energy even when they're not in use—don't let them.
- ☐ **Use power strips.** Plug your video game consoles, stereo, DVD players and any other home electronics into a single power strip so you can switch it off and cut all power to items at once.
- ☐ **Try "smart" power strips.** They can help reduce your power usage by shutting down power to products that are not in use or that go into standby mode.



Smart power strips can save you money

Using smart power strips is a great way to save energy and money. Both traditional and smart power strips allow many devices to be plugged into one electrical outlet at the same time. Traditional power strips are meant to protect your device from electrical surges. But as long as your power strip is on, the devices plugged into a traditional power strip will continue to use energy - even in standby mode. Smart power strips are designed to protect your devices and your wallet. They can detect when a device is in standby mode and cut power off, helping to reduce your energy usage.

Electronics

Energy Use Guide

	Average Watts	Monthly kWh Usage	Estimated Monthly Cost
Answering machine**	1	8.76	$0.88
Apple TV streaming box**	3	26.28	$2.63
Blu-Ray player*	17	1.53	$0.15
Blue-Ray/player – ENERGY STAR*	13	1.17	$0.12
Cordless phone**	3	26.28	$2.63
DVD player*	12	1.08	$0.11
Clock radio**	10	87.6	$8.76
HD DVR set-top box**	2	17.52	$1.75
HD receiver set-top box**	1.5	13.14	$1.31
PlayStation 4*	70	18.9	$1.89
Portable stereo (boom box)**	7	61.32	$6.13
XBOX One*	80	21.6	$2.16
Nintendo Wii, standby**	2	17.52	$1.75
LED/OLED TV 75 inch 4K*	282	25.38	$2.54
LED/OLED TV 55 inch*	155	13.95	$1.40
LED/OLED TV 45 inch*	127	11.43	$1.14
Satellite dish**	1	8.76	$0.88
Security system**	1.2	10.512	$1.05
Small stereo with remote*	24	2.16	$0.22
VCR*	11	0.99	$0.10
Stereo*	60	5.4	$0.54

**3 hours per day*
***continuous use or plugged in*

Electronics

Energy Use Guide

Amazon Echo/Plus	Less than $0.05
Cellphone charging	Less than $0.05
Tablet charging	Less than $0.05
MP3 player charging	Less than $0.05
Nintendo WII	Less than $0.05
Xbox 360 standby	Less than $0.05
Nintendo 3DS/2DS	Less than $0.05
Nintendo Switch	Less than $0.05
DVD player – ENERGY STAR	Less than $0.05
CD player	Less than $0.05
Hardwired smoke detector	Less than $0.05
Digital camera charging	Less than $0.05

Electronics

Office / Den Electronics Energy Saving Tips

Save energy and space with an ENERGY STAR qualified **multi-function device** that combines several capabilities (print, fax, copy, scan). Make sure power management features are enabled for additional savings.

Make sure your computer **doesn't turn on the printer** or other external devices as part of its routine start-up cycle. Those should be turned on separately only when needed.

Laptops are far more efficient than desktop computers, especially ENERGY STAR qualified models.

Save Energy with ENERGY STAR

ENERGY STAR qualified products use less energy, save money, and help protect the environment. Their Product Finder is an online tool that provides access to a list of their products and arms you with the information you'll need to make purchasing decisions based on energy efficiency.

Learn more at **energystar.gov/productfinder**

Electronics

Energy Saving Checklist

- ☐ **Turn computers off.** Sleep and hibernation modes may save energy, but switching computers off at night is the difference between using some and using none.
- ☐ **Use power strips.** Plug your computer, printer, and any other home office equipment into a single power strip so you can switch it off and cut all power to items at once.
- ☐ **Try "smart" power strips.** They can help reduce your power usage by shutting down power to products that are not in use or that go into standby mode.

Energy Use Guide

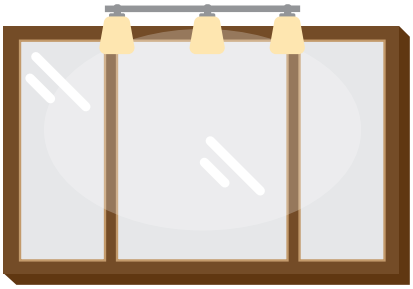
Battery charger (AA batteries)	0.79	$0.08
Color copier (1-49 images/min)	46.06	$4.61
Color copier – ENERGY STAR	42.8	$4.28
Copier (26-50 pages/min)	25.2	$2.52
Copier – ENERGY STAR	12.6	$1.26
Desktop computer	19.89	$1.99
Desktop computer – ENERGY STAR	13.5	$1.35
Wireless router	3.86	$0.39
External computer speakers	1.67	$0.17
Fax (inkjet)	2.33	$0.23
Fax (inkjet) – ENERGY STAR	1.17	$0.12
Fax (laser)	13	$1.30
Fax (laser) – ENERGY STAR	6.5	$0.65
Laptop computer	6.27	$0.63
Laptop – ENERGY STAR	4.3	$0.43
Modem (cable)	4.38	$0.44

Electronics

	Monthly kWh Usage	Estimated Monthly Cost
Modem (DSL)	4.09	$0.41
Monitor	5.52	$0.55
Monitor – ENERGY STAR	4.34	$0.43
Multifunction device (inkjet)	2.25	$0.23
Multifunction device (inkjet) – ENERGY STAR	0.92	$0.09
Multifunction device (laser, color)	75	$7.50
Multifunction device (laser, color) – ENERGY STAR	53.42	$5.34
Printer (inkjet)	1.75	$0.18
Printer (inkjet) – ENERGY STAR	1.33	$0.13
Printer (laser)	62.25	$6.23
Printer (laser) – ENERGY STAR	46.67	$4.67
Scanner	3.67	$0.37

Electronics

Bathroom Electronics Energy Saving Tips



The **bathroom vanity** is one of the highest-use fixtures in the average home. ENERGY STAR qualified LEDs provide bright, warm light, use less energy, and generate less heat than standard lighting.

- ☐ **Unplug it.** Hair dryers, curling irons and other beauty items may consume energy even when they're not in use—don't let them.
- ☐ **Shut off bathroom fans.** While they're great for removing excess steam, they also suck heat out too. Shut them off when you don't need them.

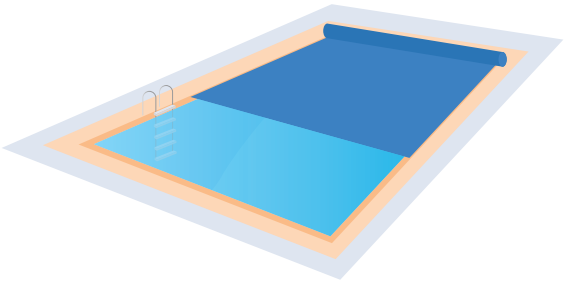
Energy Use Guide

Curling iron*	90	1.35	$0.14
Hair dryer*	1500	22.5	$2.25
Shaver**	1.4	0.126	$0.01
Toothbrush**	1.4	0.126	$0.01

** 1/2 hour per day use*
*** charging*

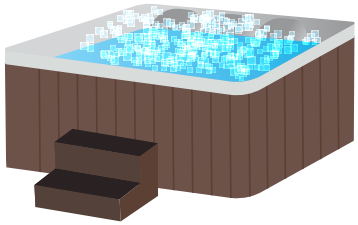
Outdoor

General Outdoor Energy Saving Tips

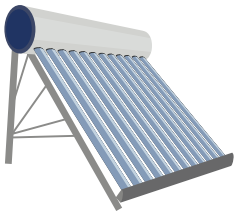


You can save up to **90% on heating costs** by simply using a pool cover. Besides helping to minimize nighttime heat loss, pool covers also help prevent chemical loss and water evaporation.

The American Red Cross recommends that **swimming pool temperature** be 78 to 82° F.



Heat your spa to 102° F or lower to save money without sacrificing comfort.



Installing a **solar water heating system** can reduce the cost of energy used for heating water by more than half.

Outdoor

Energy Saving Checklist

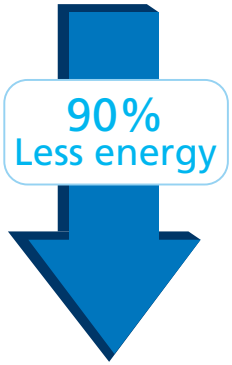
- ☐ **Heat it when you need it.** Heat the spa only when you plan to use it, allowing time for warm-up.
- ☐ **Cover it.** Cover the spa or pool when not using it and when warming it.
- ☐ **Check your thermostat.** An accurate spa thermostat can save you hundreds of dollars each year.
- ☐ **Plant it.** Plant shade trees on the south and west sides of the house to cool in summer and protect in winter. Plant shrubs around the foundation.

Energy Use Guide

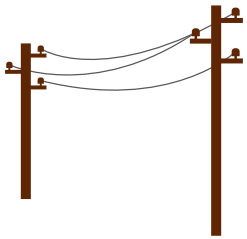
Electric dog fence	1	8.76	$0.88
Garage door opener	350	5.25	$0.53
Hot tub	4500	337.5	$33.75
Power tool (cordless)	33.7	3.033	$0.30
Well pump, 1/2 HP, 1hr/day	375	11.25	$1.13

Seasonal Outdoor

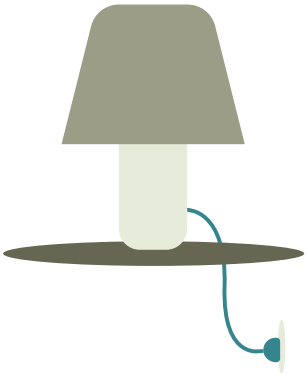
Seasonal Outdoor Energy Saving Tips



Decorative **LED bulbs** use up to 90% less electricity to produce the same amount of light as their traditional incandescent counterparts.



Be aware and watch for **overhead power lines** when installing outdoor lights.



LED lights function **just as well outdoors** as they do indoors. They are constructed in such a way that they are impervious to moisture, heat and cold.

Popular fan-driven inflatable lawn decorations ranging in size from 4' to 12' can add from $1.11 to $1.68 to your monthly bill if run for eight hours a day, or when used for 24 hours a day, the additional monthly cost would be from $3.34 to $5.05 per inflatable.

Seasonal Outdoor

Seasonal Outdoor Energy Saving Tips

Energy efficient holiday LED lights only add about two cents a day to your energy bill.

In addition to saving energy, ENERGY STAR qualified LED lights contain up to **50,000 hours of use**, are cool to the touch which reduces the risk of fire, and are more durable than glass incandescent lights which means less risk of electrical exposure from broken bulbs.

Energy Saving Checklist

- ☐ **Check decorations.** Before decorating, check all light sets for frayed wires, damaged sockets, or cracked insulation. If you find any defects, replace the entire set.
- ☐ **Upgrade to LEDs.** Replace your old holiday lights with LED light strings. Although they cost more initially, LEDs use a fraction of the energy of traditional holiday lights. Plus, they contain up to 50,000 hours of use.
- ☐ **Use a timer.** Plug your indoor and outdoor lighting displays into a timer set to run during the earlier evening hours. If you don't use timers, unplug your lights when you go to sleep or leave home.
- ☐ **Safety first.** Unplug lights before watering the tree and keep cords and light sets away from the water.

Seasonal Outdoor

Energy Use Guide–Electric

Christmas lights 100 C7 bulbs, 360 hours	400	72	$7.20
Christmas lights 100 LED bulbs, 360 hours	96	17.28	$1.73
Insect killer light (monthly)	40	14.4	$1.44
Inflated decoration, 360 hours	90	16.2	$1.62
Stock tank heater (monthly)	1,000	720	$72.00
Swimming pool heater (monthly)	24,000	5760	$576.00

Energy Use Guide–Natural Gas

Swimming pool heater	81,912	245.736	$196.59

Use Less with LEDs

The energy used by 1 traditional bulb could power 140 LED bulbs!

Electric Vehicles

Electric Vehicles Energy Saving Tips

$1/Gallon

Fuel cost for operating **electric vehicles** (EVs) is less than $1.00 per gallon equivalent.

We recommend that you **program your charger** to recharge overnight between the hours of 10 p.m. and 7 a.m., when the grid is usually less heavily loaded.

If you would like to know more about **EVs, charging at home,** or our **Transportation Electrification Plan,** please visit myavista.com/transportation.

Questions or suggestions? Email electrictransportation@avistacorp.com.

EVs have **zero tailpipe emissions.** All upstream generating sources of Avista's electricity generate 80% fewer emissions to power an EV, compared to driving a conventional gasoline vehicle.

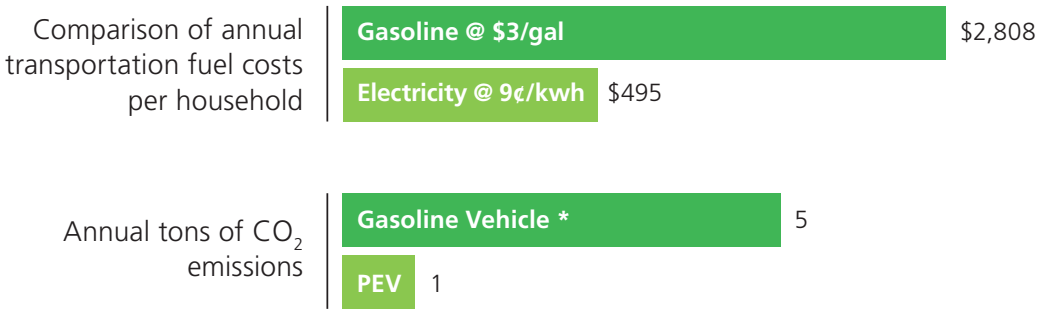
In an effort to make **EVs more affordable,** the Federal Government offers tax credits. Amounts vary by vehicle type. Make sure to check with a sales associate for more details.

Electric Vehicles

Why Support Electric Transportation?

The number of people and companies adopting electric transportation is growing, and it couldn't happen sooner. Plug-in electric vehicles benefit the economy and the environment by saving on fuel costs and lowering air pollution. When equally compared to gasoline, the cost of driving on electricity is less than $1 per gallon. Carbon dioxide (CO_2) emissions are also reduced by 80 percent.

Avista strongly supports the growth of electric transportation and is working hard to minimize electric costs for all our customers. We're also committed to partnering with government and community groups to realize the benefits of electric transportation. Together, we can bring electric transportation to the forefront sooner.



Source: Avista Corp (2015). Electric Integrated Resource Plan. August 31, 2015.

** internal combustion engine*

Phantom Loads

What are Phantom Loads?

Energy consumed when the appliance is not being used while in the off or sleep/ready position.

Energy Use Guide

Leaking Power Cost Based On $0.1/kWhr						
	Off Mode Energy Use			On Mode Energy Use		
	Maximum Watts	Average Watts	Minimum Watts	Average Monthly Cost	Average Watts	24/7 Monthly Cost
Amplifier	5.5	1.4	0	$0.10	31	$2.23
Boom box	7.7	2.2	0.7	$0.16	4.8	$0.35
Cassette deck	6.6	2.7	0	$0.19	2	$0.14
CD player	8	3.1	0	$0.22	16	$1.15
Clock radio	3.2	1.7	0.9	$0.12	8.3	$0.60
DVD player	7.1	4.5	1.6	$0.32	20	$1.44
Equalizer	5.9	3.1	0	$0.22	52	$3.74
Mini-system	29	9.4	1.3	$0.68	34	$2.45
Power speaker	11	4.6	0	$0.33	5.8	$0.42
Preamp/tuner	3.2	2.4	1.4	$0.17	18	$1.30
Rack	15	3.2	1.1	$0.23	6.2	$0.45
Receiver	5.9	1.8	0	$0.13	6.7	$0.48
Tuner	4	2	0	$0.14	6.2	$0.45
Cable box	18	12	4.8	$0.86	13	$0.94
Satellite box	18	15	11	$1.08	15	$1.08

Phantom Loads

Leaking Power Cost Based On $0.1/kWhr						
	Off Mode Energy Use			On Mode Energy Use		
	Maximum Watts	Average Watts	Minimum Watts	Average Monthly Cost	Average Watts	24/7 Monthly Cost
Television	12	4.3	0	$0.31	78	$5.62
VCR	13	5.5	1.5	$0.40	12	$0.86
Hardwired						
Garage door opener	5.4	4	3.2	$0.29	55	$3.96
Security system	22	14	5.4	$1.01	15	$1.08
Heat pump	65	29.8	0.1	$2.15	1875	$135.00
Battery charger	2.2	1.2	0.2	$0.09	7.4	$0.53
Rechargables						
Toothbrush/ clippers	3.6	1.5	0.4	$0.11	NA	$0.11
Cordless power tools	4.6	2.3	0.6	$0.17	NA	$0.17
Transformer	7.1	5.9	4.6	$0.42	NA	$0.42
Cordless phone	5	2.7	1.1	$0.19	3	$0.22
Answering machine	5.2	3	1.8	$0.22	3.6	$0.26

Note: Data taken from Lawrence Berkley Labs Study - http://enduse.lbl.gov/info/ACEEE-Leaking.pdf

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