

HOME ENERGY USE GUIDE



Salem Electric

SERVING KEIZER AND SALEM

HOME ENERGY USE GUIDE

Salem Electric's Goal

Our hope is that by educating our members in the field of electric energy usage we can influence their choices when using our product. If you use electricity wisely and conserve where possible, we can help delay the need to build new and much more expensive sources of power generation.

How to Use This guide

This booklet is divided into several sections, allowing easy access to locate specific electric equipment, appliances, and devices. Simply turn to the section that includes the item and you will find the energy usage, estimated operating costs, helpful tips, and available conservation programs that deal with that area of your home or business.

General Information

If you have an item that is not listed, there is a simple method to calculate the cost of operation.

Three Key Elements:

- ◆ Wattage
- ◆ Hours of Operation
- ◆ Cost per Kilowatt Hour

$$\frac{\text{Wattage} \times \text{Hours}}{1000} = \text{kWh}$$
$$\text{kWh} \times \text{Rate} = \text{Operating Cost}$$

Electronic Protection

Surge suppressors are the simplest, least expensive and most effective way to prevent problems with electronic equipment and appliances. Installed between the appliance and the wall outlet, they reduce the size of voltage surges to a safe level.

Make sure the suppressor has 3-way protection and is UL (Underwriters Laboratory) listed for compliance with the 1449 TVSS standard.

Features to look for in a plug-in type surge protector include:

- multiple outlets
- on/off switches
- indicator lights to let you know the suppressor is working
- connections for telephone or data cable lines
- use the correct voltage rating for the equipment you want to protect
- the lower the voltage clamping level, the better
- the higher the joule rating, the better

NOTE: All operating costs are figured at our residential rate of 7.42¢ per kWh. Operating costs have been rounded to the nearest cent. Thermostatically controlled appliances will vary on operating costs.

Example: A 75-watt light bulb is used 7 hours a day, 7 days a week (212 hours a month). Salem Electric charges 7.42¢ per kilowatt hour for residential customers.

$$\frac{75 \text{ Watts} \times 212 \text{ Hours}}{1000} = 15.9 \text{ kWh}$$
$$15.9 \text{ kWh} \times \$0.0742 = \$1.18$$

Therefore, it costs \$1.18 to operate a 75-watt bulb for 212 hours.

Helpful Formulas

If you know the voltage, amperage or wattage of an appliance, you can determine a number of things:

$$\text{Volts} \times \text{Amps} = \text{Watts}$$

$$\frac{\text{Watts}}{\text{Volts}} = \text{Amps} \quad \frac{\text{Watts}}{\text{Amps}} = \text{Volts}$$

$$1000 \text{ Watts} = 1 \text{ Kilowatt (KW)}$$

$$\text{Kilowatts (KW)} \times \text{Hours} = \text{Kilowatt Hours (KWH)}$$

$$1 \text{ Kilowatt Hour costs } \$0.0742$$

Rule of Thumb:

$$\text{A 1-horsepower motor} = 1 \text{ Kilowatt}$$

ENTERTAINMENT

	APPROXIMATE WATTAGE	AVERAGE USAGE	ESTIMATED MONTHLY OPERATING COST (\$)	ESTIMATED ANNUAL OPERATING COST (\$)
DVD Player	14	30 hrs monthly	0.03	0.36
Radio	10	1 hr daily	0.02	0.27
Stereo System (Receiver, CD, Cassette)	80	2 hrs daily	0.36	4.36
Console Games (Includes standby losses)				
Playstation 2	23	2 hrs daily	0.24	2.85
Xbox 360	145	2 hrs daily	0.82	9.88
Gamecube	20	2 hrs daily	0.11	1.34
VCR	30	30 hrs monthly	0.06	0.80
Television				
27" CRT (Cathode Ray Tube)	70	6 hrs daily	0.91	10.93
36" CRT	90	6 hrs daily	1.17	14.05
42" Plasma	95	6 hrs daily	1.29	15.48
50" Plasma	125	6 hrs daily	1.70	20.40
60" Plasma	193	6 hrs daily	2.62	31.44
32" LCD	47	6 hrs daily	0.64	7.68
40" LCD	67	6 hrs daily	0.95	11.40
46" LCD	80	6 hrs daily	1.09	13.08
55" LCD	93	6 hrs daily	1.27	15.24

CRT = Cathode Ray Tube

LCD = Liquid Crystal Display

All estimated energy costs are calculated at 7.42¢ per kWh.

OPERATING TIPS

- When vacationing, connect your radio to a timer rather than leaving it on 24 hours a day for security.
- Make sure your sensitive electronic equipment and appliances are plugged into a surge protector.

OUTDOOR EQUIPMENT

	APPROXIMATE WATTAGE	AVERAGE USAGE	ESTIMATED MONTHLY OPERATING COST (\$)	ESTIMATED ANNUAL OPERATING COST (\$)
Air Compressor (1HP)	1,000	2 hrs monthly	0.15	1.78
Garage Door Opener	300	4 times daily	0.04	0.44
Hedge Trimmer (18", electric)	310	3 hrs monthly	0.07	0.80
Pressure Washer (electric)	240	4 hrs monthly	0.07	0.89
Pumps (water feature/well)				
½ Horsepower	500	6 hrs daily	6.76	81.20
¾ Horsepower	750	6 hrs daily	10.15	121.81
1 Horsepower	1,000	6 hrs daily	13.54	162.50
1½ Horsepower	1,500	6 hrs daily	20.31	243.70
Shop Vacuum				
3-gallon	780	4 hrs monthly	0.23	2.76
16-gallon	1,340	4 hrs monthly	0.40	4.80
Lawn Mower (electric)	1,200	4 hrs monthly	0.36	4.27
Leaf Blower (electric)	1,080	4 hrs weekly	1.39	16.65
Spa* (fiberglass, 300 gallon, well-insulated with cover, 104°, 1½ HP pump, 1.5 kW heater)		8 hrs daily w/timer	22.26	267.12
		continuous	33.39	400.68

*Thermostatically controlled

All estimated energy costs are calculated at 7.42¢ per kWh.

OPERATING TIPS




- \$ Save approximately 30% by operating your spa on a timer (8 hours on, 16 hours off).
- \$ Cover your spa with a tight-fitting insulated cover.

BATHROOM





	APPROXIMATE WATTAGE	AVERAGE USAGE	ESTIMATED MONTHLY OPERATING COST (\$)	ESTIMATED ANNUAL OPERATING COST (\$)
Blow Dryer	1,500	10 mins daily	0.56	6.68
Curlers	400	20 mins daily	0.30	3.56
Curling Iron	40	15 mins daily	0.02	0.27
Electric Toothbrush	1	twice daily	Less than 1¢	0.05
Exhaust Fan	200	40 mins daily	0.30	3.56
Heat Lamp (Infrared)	250	40 mins daily	0.37	4.45
Shaver	15	5 mins daily	Less than 1¢	0.03

All estimated energy costs are calculated at 7.23¢ per kWh.

Salem Electric **PROGRAMS**

-  Free high-performance shower heads and faucet aerators can be installed at no charge for Salem Electric members with electric water heaters.
-  Receive a rebate for the purchase of a qualifying energy-efficient electric water heater.
-  Water heater wraps are installed free of charge by Salem Electric (electric water heaters only).

OPERATING TIPS

-  Take short showers rather than baths.
-  Repair leaking pipes or dripping faucets immediately. (60 drops of hot water per minute can add \$2–\$3 to your monthly bill).
-  Use your exhaust fan to exhaust humid air, avoiding moisture problems in your home.
-  Set the thermostats on your water heater no higher than 140°F, preferably at 120°F.



LAUNDRY ROOM

	APPROXIMATE WATTAGE	AVERAGE USAGE	ESTIMATED MONTHLY OPERATING COST (\$)	ESTIMATED ANNUAL OPERATING COST (\$)
Clothes Dryer	5,000	26 loads monthly	6.01	72.12
Iron*	1,000	4 hrs monthly	0.16	1.91
Washing Machine	512			
Cold/Cold		26 loads monthly	0.64	7.66
Warm/Cold		26 loads monthly	5.79	69.48
Hot/Cold		26 loads monthly	9.65	115.80
Warm/Warm		26 loads monthly	11.58	138.96
Hot/Warm		26 loads monthly	13.50	162.00
Sewing Machine	75	8 hrs monthly	0.04	0.53
Water Heater* – 4 Person Household				
52 Gallon, Set at 140°F (0.88 Energy Factor)	4,500	daily	30.83	370.00
52 Gallon, Set at 120°F (0.88 Energy Factor)	4,500	daily	24.57	294.00
52 Gallon, Set at 120°F (0.92 Energy Factor)	4,500	daily	23.22	238.00







*Thermostatically controlled

All estimated energy costs are calculated at 7.42¢ per kWh.

Salem Electric PROGRAMS

-  Receive a rebate for the purchase of an ENERGY STAR-rated clothes washer (electric water heaters only) and use 50% less water and 60% less energy.
-  Receive a rebate for the purchase of a qualifying energy-efficient electric water heater or a heat pump water heater which reduces energy use by about 60%.

OPERATING TIPS

-  Clean the lint trap in your dryer after each load.
-  When purchasing a dryer, look for a temperature-sensing control and save about 10% on energy usage. Also save an additional 15% with a moisture-sensing control.
-  Hang your clothes to dry rather than using your dryer.
-  Wash only full loads.
-  Don't overload your washer or dryer.
-  Vent your dryer to the outside, avoiding moisture damage to your home.

LIGHTING

	APPROXIMATE WATTAGE	AVERAGE USAGE	ESTIMATED MONTHLY OPERATING COST (\$)	ESTIMATED ANNUAL OPERATING COST (\$)
ENERGY STAR-rated Light Fixture	15	10 hrs daily	0.37	4.45
Holiday Decorative Lights				
Snap-in Base (100 lights)	36	6 hrs daily	0.52	N/A
Large Screw-in Base (50 lights)	350	6 hrs daily	4.74	N/A
Efficient Replacement: LED (100 lights)	4	6 hrs daily	0.05	N/A
4 Foot Fluorescent Tube				
4-Lamp, T-12, 2 Magnetic Ballasts	192	10 hrs daily	4.30	51.64
Efficient Replacement: 4-Lamp, T-8, 1 Electronic Ballast	114	10 hrs daily	2.59	31.16
Incandescent Flood Light (exterior)				
Efficient Replacements: Compact Fluorescent	22	10 hrs daily	0.52	6.23
LED	9	10 hrs daily	0.22	2.67
Incandescent Bulb				
Efficient Replacements: Compact Fluorescent	15	10 hrs daily	0.37	4.45
LED	6	10 hrs daily	0.15	1.86
Incandescent Bulb				
Efficient Replacements: Compact Fluorescent	20	10 hrs daily	0.44	5.34
LED	9	10 hrs daily	0.22	2.67
Incandescent Bulb				
Efficient Replacements: Compact Fluorescent	26	10 hrs daily	0.59	7.12
LED	13	10 hrs daily	0.31	3.73
Mercury Vapor Area Light				
Efficient Replacements: High-Pressure Sodium	100	10 hrs daily	2.59	31.16
Metal Halide	100	10 hrs daily	3.19	38.28
LED	35	10 hrs daily	0.84	10.15
Mercury Vapor Area Light				
Efficient Replacements: High-Pressure Sodium	250	10 hrs daily	6.67	80.13
Metal Halide	250	10 hrs daily	6.52	78.35
LED	70	10 hrs daily	1.64	19.76

All estimated energy costs are calculated at 7.42¢ per kWh.

*The life of the light makes a difference: incandescent – 1,200 hrs; compact fluorescent – 8,000 hrs; LED – 50,000 hrs.

Salem Electric PROGRAMS



Energy-efficient, ENERGY-STAR-rated, screw-in, compact fluorescent lamps are available for reduced prices at Salem Electric.



Efficient yard and area lights are available for rent through Salem Electric.

OPERATING TIPS

- \$** Consider using photo cells, or better yet, motion sensors to control exterior lights.
- \$** Use minimum wattage bulbs where possible.
- \$** Turn lights off when not in use, including fluorescents.
- \$** Lighter shades of paint are more reflective indoors.
- \$** Use timers to control security lighting during vacations.
- \$** Occupancy sensors are available for indoor lighting.
- \$** Use a timer on your holiday lights.





HOUSEHOLD ITEMS

	APPROXIMATE WATTAGE	AVERAGE USAGE	ESTIMATED MONTHLY OPERATING COST (\$)	ESTIMATED ANNUAL OPERATING COST (\$)
Air Conditioner (Window mounted)*	1,100	10 hrs daily	19.88	59.65 ^(3 mo.)
Alarm System	0.5	daily	0.03	0.36
Aquarium (20 Gal., Pump, Light, Heater*)	130	daily	1.39	16.65
Attic Fan (5 amp)*	550	6 hrs daily	1.06	3.18 ^(3 mo.)
Ceiling Fan	85	6 hrs daily	1.13	13.62
Clock	2	daily	0.10	1.24
Computer: Data Processing Unit	200	4 hrs daily	1.80	21.67
Monitor: 17"	80	4 hrs daily	0.72	8.67
Monitor: 17" Flat Screen (LCD)	25	4 hrs daily	0.22	2.67
Desktop Printer	50	1 hr monthly	Less than 1¢	0.04
Scanner	20	2 hrs monthly	Less than 1¢	0.04
Dehumidifier	250	4 hrs daily	2.22	26.71
Electric Blanket (Queen Size)*	175	8 hrs daily	1.63	19.59
Electronic Air Cleaner: Furnace	85	6 hrs daily	1.13	13.62
Portable	50	8 hrs daily	0.89	10.68
Evaporative Cooler (Swamp Cooler)	170	10 hrs daily	3.83	11.49 ^(3 mo.)
Fan: 12" Portable	66	6 hrs daily	0.88	2.65 ^(3 mo.)
24" Portable	170	6 hrs daily	2.27	6.81 ^(3 mo.)
Furnace Fan (1/3 HP)	420	7 hrs daily	6.68	60.10 ^(9 mo.)
Heating Pad	65	2 hrs monthly	Less than 1¢	0.09
Nebulizer	720	3 hrs daily	4.80	57.69
Space Heater (Portable)*	1,500	5 hrs daily	13.35	40.06 ^(3 mo.)
Vacuum Cleaner (Portable)	640	4 hrs monthly	0.19	2.31
Vacuum Cleaner (Central)	1,600	4 hrs monthly	0.47	5.69
Water Heater* – 4 Person Household				
52 Gallon, Set at 140°F (0.88 Energy Factor)	4,500	daily	30.83	370.00
52 Gallon, Set at 120°F (0.88 Energy Factor)	4,500	daily	28.75	345.00
52 Gallon, Set at 120°F (0.92 Energy Factor)	4,500	daily	23.22	278.00









All estimated energy costs are calculated at 7.42¢ per kWh.

* Thermostatically controlled

Salem Electric PROGRAMS

-  Water heater wraps are installed free of charge by Salem Electric (electric water heaters only).
-  Receive an incentive for weatherizing your electrically heated home through the WeatherWise program. Low interest loans are also available.
-  Receive a rebate for the purchase of a qualifying energy-efficient conventional electric water heater or heat pump water heater.
-  Rebates or low interest loans are available for installing high-efficiency heat pumps.

OPERATING TIPS

-  Turn your electric water heater off at the electric service panel if you're gone for two days or longer.
-  Save 3% of the operating cost for each 10°F you reduce the temperature on your electric water heater.
-  Change furnace filters regularly.
-  If you **don't** have a heat pump, reduce your thermostat setting for your heating system when you leave for three hours or longer and during the sleeping hours.
-  If you **do** have a heat pump, select and maintain a comfortable thermostat setting or install a heat pump-compatible programmable thermostat.
-  Close fireplace chimney dampers when not in use.
-  Keep baseboard or wall heaters clean and unobstructed.
-  Program your computer's monitor for "sleep mode" and reduce usage to 10 watts. Visit energystar.gov for details.

KITCHEN APPLIANCES

	APPROXIMATE WATTAGE	AVERAGE USAGE	ESTIMATED MONTHLY OPERATING COST (\$)	ESTIMATED ANNUAL OPERATING COST (\$)
Blender	375	20 mins monthly	Less than 1¢	0.09
Bread Maker	680	twice weekly	1.70	20.47
Can Opener	125	50 times monthly	0.02	0.26
Crock Pot	225	8 hours monthly	0.13	1.60
Drip Coffeemaker*				
Brew Cycle	1,100	twice daily	0.74	8.90
Warm Cycle	70	4 hrs daily	0.66	8.01
Dishwasher (Includes Hot Water)	1,200	15 times monthly	4.45	53.42
Electric Frying Pan*	1,150	4 hrs monthly	0.34	4.09
Electric Knife	92	5 mins monthly	Less than 1¢	Less than 1¢
Espresso Machine	60	1 hr weekly	0.02	0.22
Exhaust Fan	200	30 mins daily	0.22	2.67
Food Dehydrator*	600	40 hrs monthly	0.89	10.68
Food Processor	375	2 hrs monthly	0.05	0.62
Freezer (15 cu.ft.)*				
Manual Defrost	350	daily	6.67	80.13
Auto Defrost	440	daily	11.13	133.56
Garbage Disposal	445	2 mins daily	0.03	0.36
Hot Water Dispenser	750	1 gal daily	3.63	43.62
Microwave Oven	750	15 mins daily	0.42	5.07
	1,000	15 mins daily	0.56	6.76
Mixer				
Hand Held	125	15 mins monthly	Less than 1¢	0.02
Counter Top Model	200	15 mins monthly	Less than 1¢	0.04
Oven*	3,500	30 hrs monthly	5.04	60.54
Self-Clean Oven Feature Only*	3,500	once monthly	0.29	3.56
Popcorn Popper (Air)	1,400	once weekly	0.07	0.89
Range*				
Large Element	2,100	20 mins daily	1.24	14.95
Small Element	1,600	30 mins daily	1.40	16.91
Refrigerator (Compact 2.3 cu. ft.)	88	daily	2.00	24.04
Refrigerator/Freezer*				
12-16 cu. ft. Manual Defrost	325	daily	7.42	89.04
16-18 cu. ft. Auto Defrost	615	daily	10.38	124.65
20-23 cu. ft. Auto Defrost	800	daily	13.50	162.05
Toaster (2 Slice)	1,000	twice daily	0.22	2.67
Toaster Oven	1,150	15 mins daily	0.37	4.45
Trash Compactor	400	daily	Less than 1¢	0.09
Waffle Iron*	1,200	1 hr monthly	0.07	0.89


*Thermostatically controlled


All estimated energy costs are calculated at 7.42¢ per kWh.

**Turn the page for applicable
programs and operating tips...**

KITCHEN APPLIANCES

Salem Electric PROGRAMS

 Rebates are available for purchasing qualifying ENERGY STAR-rated refrigerators and freezers.

 Energy-efficient, ENERGY STAR-rated, screw-in compact fluorescent lights are available for reduced prices at Salem Electric.

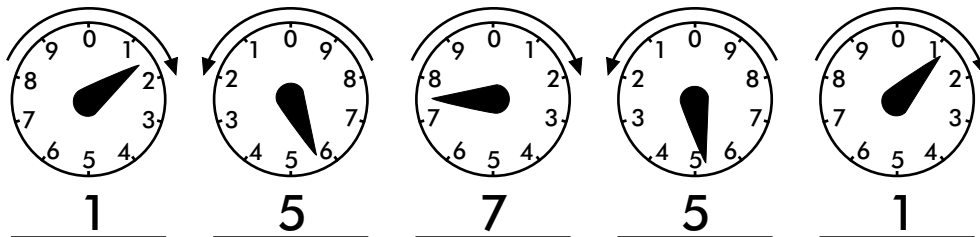
Look for this ENERGY STAR symbol to purchase new energy-efficient appliances and electronics.



OPERATING TIPS

- § Use the microwave whenever possible.
- § Match the size of the stove burner to the size of the pan.
- § When boiling water, bring it to a boil then reduce the burner temperature to maintain the boil.
- § Let your leftovers cool slightly before putting them in the refrigerator or freezer.
- § Cover pans when cooking.
- § Adjust your refrigerator temperature to 36°F–40°F and your freezer temperature to 0°F.
- § Keep refrigerator and freezer coils clean.
- § Refrigerators and freezers operate most economically when filled to capacity — avoid interfering with the air circulation.
- § Chest freezers use less energy than upright freezers.

METER READING



How to read a five dial meter:

1. Read the meter dials from right to left and record the reading in the same way.
2. When the pointer is between two numbers, record the smaller (lower) number.
3. If you are not sure whether or not the pointer has reached the next number, check the dial to the right. Unless the pointer on the dial to the right is on or slightly past the zero, record the lower number. If the pointer on the dial to the right is on nine, the left hand dial will appear to be on a number but you read one digit lower.
4. Subtract the last reading from your present reading. (If your meter has a multiplier, multiply by that number.) This will tell you the amount of kilowatt hours you have used.

Some meters have four dials which should be read in the same manner as a five dial meter. Cyclometer meters display kWh usage by numbers, making it easy to determine your usage.

PROGRAMS FOR SALEM ELECTRIC MEMBERS



ENERGY STAR Home Lighting: Incentives to install hard-wired ENERGY STAR-rated light fixtures.



Security Lighting: Pole-mounted street lights and flood lights installed and maintained by Salem Electric.



Water Heater Efficiency: Free water heater wraps, high-performance shower heads, and faucet aerators (Electric water heaters only).



Bright Way Solar: Low interest loans or rebates for installing a qualifying solar water heater.



Heat Pump Program: Low interest loans or rebates for high-efficiency heat pump installations.



Appliance Program: Rebates for qualifying energy-efficient appliances.



WeatherWise: Incentives for weatherizing electrically heated homes. Electricity must be the sole source of heat.



Compact Fluorescent Light Bulbs: High-efficiency, ENERGY STAR-rated, screw-in compact fluorescent lamps are sold at our office.



Energy Savings Plan: Incentives for industrial conservation.



Energy Smart Design: Incentives for commercial conservation.



Easy Pay Options: Simple, convenient ways to pay your monthly bill... automatically or on-line.



Habitat Improvement Program: Helping improve local native fish and wildlife habitat.

Salem Electric

SERVING KEIZER AND SALEM

633 Seventh Street NW

PO Box 5588, Salem, Oregon 97304-0055

Ph: 503 362-3601 FAX: 503 371-2956

E-mail: se@salemelectric.com

salemelectric.com

