



Electric Appliance Energy Guide



Every time you flip a switch, push a button, turn a knob or set a thermostat, you are making a decision to buy electricity.

Most of these are cost-effective decisions that give you good value.

However, unlike other buying decisions, you usually don't know the cost of what you are about to buy with electricity.

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Energy Requirements and Operating Costs

This profile has been prepared to help customers compare the energy usage of various home appliances. Total usage and cost will vary from home to home, depending on factors such as appliance age, family size and lifestyle.

To represent the varying summer and winter rates and fuel costs an average cost of 15.9 cents per kilowatt-hour was used in these calculations.

Appliances

	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption kWh	Estimated Monthly Cost
Food Preparation				
Bread Maker	680	4.0	2.7	\$0.43
Broiler in electric oven	1,400	6.3	8.8	\$1.40
Coffee Maker (drip)	900	9.8	8.8	\$1.40
Crock Pot	200	57.0	11.4	\$1.81
Dishwasher (1 load/day)	1,201	25.2	30.3	\$4.82
Electric Frying Pan	1,196	13.0	15.5	\$2.47
Microwave Oven	1,400	12.0	12.0	\$1.91
Range with Oven	12,200	4.8	58.6	\$9.32
6" Burner on High	1,400	20.0	28.0	\$4.45
8" Burner on High	2,600	20.0	52.0	\$8.27
Toaster	1,146	2.8	3.2	\$0.51
Toaster Oven	1,250	2.1	2.6	\$0.41
Garbage Disposal	445	1.0	0.45	\$0.07
Food Preservation				
Frost Free Freezer 10-15 years old	-	-	125.4	\$19.94
New Model (Upright) (16 cu. ft.)	-	-	43.7	\$6.95
Ref./Freezer Frost Free 10-15 years old	-	-	170.5	\$27.11
New High Efficiency Model (18 cu. ft.)	-	-	43.1	\$6.85
Laundry				
Clothes Dryer	5,500	17.0	93.5	\$14.87
Iron	1,100	4.9	5.39	\$0.86
Washing Machine (1 load/day)				
Horizontal Axis	660	15.5	10.23	\$1.63
Vertical Axis	1,808	15.5	28.02	\$4.46
Water Heater (52 gal.)	4,500	-	600.00	\$95.40
Water Heater (heat pump)	-	-	146.0	\$23.21

Appliances

	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption kWh	Estimated Monthly Cost	
Comfort Conditioning					
Dehumidifier	500	240	144.0	\$22.90	
Electric Blanket	169	240	40.6	\$6.46	
Fan (ceiling, no bulbs)	72	152	10.9	\$1.73	
Fan (circulating)	88	170	15.0	\$2.39	
Fan (whole house)	486	134	65.1	\$10.35	
Fan (window)	200	150	30.0	\$4.77	
Heat Lamp	280	2.5	0.7	\$0.11	
Home Jacuzzi	5,500	15.2	83.6	\$13.29	
Humidifier	177	76.8	13.6	\$2.16	
Portable Heater	1,500	240	360.0	\$57.24	
Waterbed Heater (king size)	375	285	106.9	\$17.00	
Health & Beauty					
Hair Dryer	1,600	6.8	10.9	\$1.73	
Hot Rollers /Curlers	350	4.5	1.6	\$0.25	
Shaver	15	2.8	0.04	\$0.01	
Housewares					
Clock	2	730	1.5	\$0.18	
Sewing Machine	75	12.3	0.9	\$0.12	
Vacuum	660	6.1	4.0	\$0.51	
Home Entertainment					
Fountain Pump (small)	45	15	0.7	\$0.11	
Fish tank (50 gal.)	236	215	50.7	\$8.06	
Radio	75	100.9	7.6	\$1.21	
Stereo	80	83.3	6.7	\$1.07	
Cable Box		720	24.0	\$3.82	
Television – Color	Solid State	200	180	26.1	\$4.15
VCR		27	120	3.2	\$0.51
Large Screen		275	180	49.5	\$7.87
Fish Pond		350	240	84.0	\$13.36
Video Games		200	30	6.0	\$0.95
Home Office					
Computer (w/color monitor/printer)	280	30	8.4	\$1.34	
Fax Machine – copying	60	1	0.06	\$0.01	

Heating Systems

	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption kWh	Estimated Monthly Cost
Forced Warm Air - (Furnace Fan)				
(1/3 Hp Air Handler)	250	420	168.00	\$26.71
(1/2 Hp Air Handler)	400	420	294.00	\$46.75
Hydronic Heating - (hot water heating)				
Circulator Pump (small)	92	258	23.7	\$3.77

Well Pump

	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption kWh	Estimated Monthly Cost
Water Well Pump (Deep Well)	1350	15	20.3	\$3.23

Summer Season June 1 - September 30 (4 Months)

	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption kWh	Estimated Monthly Cost
Swimming Pool Pump				
1/2 HP	400	240	216.0	\$34.34
3/4 HP	600	240	293.8	\$46.71
1.0 HP	800	240	360.0	\$57.24
1.5 HP	1200	240	607.7	\$96.62
2.0 HP	1600	240	662.4	\$105.32
Central A/C (3 ton)				
SEER of 8 (old)	4,500	180	810.0	\$128.79
SEER of 10 (standard)	3,600	180	648.0	\$103.03
SEER of 12 (high-efficiency)	3,000	180	540.0	\$85.86
Central A/C (5 ton)				
SEER of 8 (old)	7,500	180	1,350.0	\$214.65
SEER of 10 (standard)	6,000	180	1,080.0	\$171.72
SEER of 12 (high-efficiency)	5,000	180	900.0	\$143.10
Room A/C (5,000 BTU)				
EER of 8	625	180	112.5	\$17.89
EER of 10	500	180	90.0	\$14.31
EER of 12	417	180	75.1	\$11.94
Room A/C (6,500 BTU)				
EER of 6.6	985	180	175.5	\$27.91
EER of 9	722	180	130.0	\$20.67
EER of 12	541	180	97.4	\$15.49
Room A/C (9,500 BTU)				
EER of 6.6	1,439	180	256.5	\$40.73
EER of 9	1,055	180	189.9	\$30.19
EER of 12	791	180	142.4	\$22.64

Summer Season June 1 - September 30 (4 Months)

	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption kWh	Estimated Monthly Cost
Room A/C (12,000 BTU)				
EER of 8	1,500	180	270.0	\$42.93
EER of 10	1,200	180	216.0	\$34.34
EER of 12	1,000	180	180.0	\$28.62
Room A/C (18,000 BTU)				
EER of 8	2,250	180	352.3	\$56.02
EER of 10	1,800	180	324.0	\$51.52
EER of 12	1,500	180	270.0	\$42.93

Heat Pumps

	Estimated Summer kWh Used	Estimated Summer Cooling Cost	Estimated Winter kWh Used	Estimated Winter Heating Cost	Estimated Total Annual Cost
Air Source Heat Pump*	2,310	\$323.40	15,649	\$1,424.06	\$2,488.19
Geothermal Heat Pump*	1,417	\$198.38	6,494	\$ 590.95	\$1,032.55

*Based on 2,000 sq. ft. house, average heat rate \$0.091 per kWh and average cooling rate \$0.140 per kWh, 29% of heating is electric resistance.

Residential Electric Cost Profile

Annual Electric Bills

Appliances*

	Estimated Annual		
	kWh	Cost	Percent
Air Conditioning (2 window units)	1024	\$ 162.82	10.52
Frost-Free Refrigerator/Freezer (18 cu. ft.)	2,046	\$ 325.31	21.02
Frost-Free 16 cu. ft. new freezer	524	\$ 83.32	5.38
Range with oven	2200	\$ 349.80	22.60
Microwave	144	\$ 22.90	1.48
Dishwasher	363	\$ 57.72	3.72
Clothes Washer	336	\$ 53.42	3.45
Clothes Dryer	1,122	\$ 178.40	11.52
Color Television	250	\$ 39.75	2.57
Stereo	80	\$ 12.72	0.82
Lighting	900	\$ 143.10	9.24
Heating System Operation**	500	\$ 79.50	5.14
Miscellaneous Small Appliances	47	\$ 7.47	0.48
Computer	200	\$ 31.80	2.05
Total	9,763	\$ 1,548.03	100.0

* For homes with appliances other than those shown, substitute the values indicated in the tables.

** Represents electricity for circulators, blowers and motors to run oil or gas heating equipment.

Kilowatt Hours and Operating Costs

Appliance energy capacity is rated in watts. Your electric bill is based on the number of watts of electricity you use and the number of hours you use them. Electric usage is measured in kilowatt-hours (kWh.) To convert to kilowatts divide Watts by 1,000 . One kilowatt used for one hour is one kilowatt-hour.

You can approximate the electrical cost for any electrical appliance in your home as follows:

$$\frac{\text{Appliance Wattage} \times \text{Hrs. used in one month} \times \text{Cost per kWh}}{1000} = \text{Approx. Monthly Cost}$$

The calculations in this brochure are based upon an average cost of 15.9 cents per Kilowatt hour. The Excess Fuel Cost Surcharge, which reflects costs incurred by LIPA in purchasing fuel used to generate electricity and for electric power purchased from other generators, is part of your total electric bill. This surcharge helps LIPA recover costs not included in the base electric rates. For additional information on about the Excess Fuel Cost Surcharge, please visit www.lipower.org or call 1-800-490-0025.

Home Lighting

Home lighting is one of the variables in household energy consumption that must be evaluated on an individual basis. The best way to inventory lighting energy is to survey your home room by room, adding up the wattage of your lightbulbs and estimating the hours each is on during the month.

If, in your living room or family room there are two lamps, each with a 100 watt bulb, and these lamps are usually on five hours a day, then this room would use:

Example:

$$\frac{200 \text{ Watts} \times 5 \text{ Hours Per Day} \times 30 \text{ Days}}{1000}$$

or 30 kWh per month for lighting this room. If you were to replace the 100 watt incandescent bulbs with 29 watt efficient fluorescent bulbs you could reduce your usage to 8.7 kWh/month.

LIPA
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