

Electric Appliance Operating Cost List

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Here is an extensive list of electric appliances and an estimate of how much electricity each may use in an average home with average usage patterns. Note the assumptions that were made for each appliance, especially how much electricity the appliance draws (watts) and how often the appliance might be used in a typical household. These two factors along with the age of the appliance are the most important variables that determine operating costs.

The assumptions listed for each appliance determine the “Monthly Cost Estimate.” The assumptions examples. These references allow you to compare your appliance and your personal usage patterns with the estimate shown below. Your exact usage will likely vary from these examples, but a list like this is still very helpful to learn which appliances affect your electric bill the most.

Cost per kilowatt hour

One of the most important factors in determining the cost to operate your appliances is your cost of electricity. This is usually stated as a “cost per kilowatt hour” (kWh). Your personal cost per kWh can be calculated by dividing your most recent electric bill’s dollar amount by the number of kWhs on that bill. For example, a monthly bill of \$90.00 that used 1100 kWhs would have an average cost per kWh of $\$90.00 \div 1100$ or about \$.082 (8.2 cents) per kWh.

If your personal cost per kWh is significantly different from this, you can still use this table to estimate your appliance costs. Multiply the “Monthly kWh Estimate” shown for each appliance by your personal cost per kWh to determine a more accurate estimate for the appliances in your home.

The estimated costs below have been calculated with a cost of: \$.082 per kWh

Appliance Description	The appliance wattage, size and usage assumptions listed, determine the monthly kWh and cost estimate	Monthly kWh Estimate	Monthly Cost Estimate
Air compressor	1000 watts, 3 uses per week, 1 HP, 2 hours per use	8.5	\$0.70
Air purifier, portable for one room	100 watts, 24 hours per day, fan and filter type (wattage varies widely)	72.0	\$5.90
Air purifier, portable for one room	40 watts, 24 hours per day, ultraviolet light(s) always on	28.8	\$2.36
Air purifier, UV in furnace	70 watts, 24 hours per day, ultraviolet light(s) always on	50.4	\$4.13
Appliance power adaptor	6 watts, 24 hours per day, plug-in transformer converting AC power to DC (wattage varies widely)	4.3	\$0.35
Aquarium air pump	5 watts, 24 hours per day, always on	3.6	\$0.30
Automobile battery charger	235 watts, 1 use per week, 2 hours per use	2.0	\$0.17
Automobile engine heater	1000 watts, 12 hours per day, winter months, coolant flow heater	360.0	\$29.52
Automobile engine heater	300 watts, 12 hours per day, winter months, block heater	108.0	\$8.86

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Battery recharger for cordless appliance	6 watts, 24 hours per day, always on (wattage varies widely)	4.3	\$0.35
Blanket, electric	150 watts, 8 hours per day, 50% cycle time	18.0	\$1.48
Blender	330 watts, 2 uses per week, 3 minutes per use	0.1	\$0.01
Bread maker	650 watts, 1 use per week, 2 hours per use, cycles off & on	2.8	\$0.23
Broiler	1350 watts, 1 use per week, 1 hour per use, cycles off & on	2.9	\$0.24
Bug killer light	40 watts, 2 hours per day, used each evening	2.4	\$0.20
Can opener	220 watts, 20 uses per week, 30 seconds each	0.2	\$0.01
Carving knife	100 watts, 2 uses per week, 5 minutes per use	0.1	\$0.01
Christmas/holiday light strands	600 watts, 5 hours per day, older bulbs, 6 watts@, per strand of 100	90.0	\$7.38
Christmas/holiday light strands	40 watts, 5 hours per day, typical mini lights, .4 watts@, per strand of 100	6.0	\$0.49
Christmas/holiday light strands	8 watts, 5 hours per day, New LED lights, .08 watts@, per strand of 100	1.2	\$0.10
Clocks	2 watts, 24 hours per day, plug in, not battery	1.4	\$0.12
Clock radio	10 watts, 6 hours per day, older model with radio on	1.8	\$0.15
Coffee maker	350 watts, 1 hour per day, brew & keep warm	10.5	\$0.86
Coffee maker	1500 watts, 10 minutes per day, brew & turn off	7.5	\$0.62
Coffee percolator	660 watts, 15 minutes per day, percolate and then turn off	5.0	\$0.41
Compact disc player	50 watts, 4 hours per day	6.0	\$0.49
Computer, desktop	65 watts, 2 hours per day, actual wattage varies with different work loads	3.9	\$0.32
Computer, desktop in sleep mode	15 watts, 24 hours per day, wattage varies with different units	10.8	\$0.89
Computer, laptop	15 watts, 2 hours per day, wattage varies with different work loads	0.9	\$0.07
Computer monitor, 15" CRT	35 watts, 2 hours per day, wattage varies with different units	2.1	\$0.17

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Computer monitor, 17" CRT	80 watts, 2 hours per day, wattage varies with different units	4.8	\$0.39
Computer monitor, 17" LCD	35 watts, 2 hours per day, wattage varies with different units	2.1	\$0.17
Computer system left on	150 watts, 24 hours per day, PC, monitor, printer all left on with no sleep mode	108.0	\$8.86
Convection oven	1500 watts, 2 uses per week, bake 60 minutes per use	6.5	\$0.53
Crock cooker	150 watts, 1 use per week, on high power, cycling 4 hours	1.3	\$0.11
Crock cooker	70 watts, 1 use per week, on low power, cycling 8 hours	1.2	\$0.10
Deep fryer	1400 watts, 1 use per week, 1 hour per use	3.0	\$0.25
Dehumidifier, runs constantly	400 watts, 24 hours per day, In "always-moist" location	288.0	\$23.62
Dehumidifier, cycles 50% of time	400 watts, 24 hours per day, normal application, cycling 50%	144.0	\$11.81
Dishwasher and heater	1200 watts, 4 uses per week, using heater to dry	10.3	\$0.85
Dishwasher	300 watts, 4 uses per week, wash cycle only	4.1	\$0.34
Disposer	400 watts, 2 minutes per day, 4) 30 second uses	0.4	\$0.03
Dryer, clothes	5500 watts, 6 uses per week, average family of 4, 45 minutes per load	83.0	\$6.81
Dryer - clothes, portable	1200 watts, 10 uses per week, one hour cycles	51.6	\$4.23
Electronic air filter - on central HVAC system	40 watts, 24 hours per day, always on, (see furnace fan for additional)	28.8	\$2.36
Evaporative cooler	325 watts, 24 hours per day, always on	234.0	\$19.19
Exercise, treadmill	1500 watts, 5 uses per week, 2 HP treadmill, 30 minutes per use	16.1	\$1.32
Fan, attic fan	400 watts, 12 hours per day, in home ceiling, exhaust to attic	144.0	\$11.81
Fan, furnace fan	500 watts, 24 hours per day, ½ HP, always on	360.0	\$29.52
Fan, ceiling fan	65 watts, 12 hours per day, high efficiency, Energy Star ceiling fan on high speed	23.4	\$1.92

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Fan, ceiling fan	8 watts, 12 hours per day, high efficiency, Energy Star ceiling fan on low speed	2.9	\$0.24
Fan	60 watts, 12 hours per day, portable - 12"	21.6	\$1.77
Fan	180 watts, 12 hours per day, portable - 20"	64.8	\$5.31
Fax machine	10 watts, 24 hours per day, newer, Energy Star model, always on	7.2	\$0.59
Fax machine	43 watts, 24 hours per day, older model, always on	31.0	\$2.54
Floor polisher	400 watts, 1 use per week, 15 minutes per use	0.4	\$0.04
Food processor	400 watts, 1 use per week, 5 minutes per use	0.1	\$0.01
Freezer, new	335 watts, 24 hours per day, medium size	60.3	\$4.94
Freezer, old	450 watts, 24 hours per day, medium size	97.2	\$7.97
Gaming, electronic	50 watts, 1 hours per day, Playstation 2	1.5	\$0.12
Gaming, electronic	74 watts, 1 hours per day, X-box original	2.2	\$0.18
Gaming, electronic	160 watts, 1 hours per day, X-box 360	4.8	\$0.39
Garage door opener, small size, (with light)	250 watts, 2 minutes per day, 1/4 HP, 4 cycles per day	0.3	\$0.02
Garage door opener, medium size, (with light)	500 watts, 2 minutes per day, 1/2 HP, 4 cycles per day	0.5	\$0.04
Grill, outdoor electric	1500 watts, 2 uses per week, 40 minutes per use	8.6	\$0.71
Grill - sandwich	1200 watts, 2 uses per week, 10 minutes per use	1.0	\$0.08
Hair curling iron	100 watts, 15 minutes per day	0.8	\$0.06
Hair dryer	1200 watts, 14 uses per week, 5 minutes per use	6.0	\$0.49
Hair rollers	400 watts, 3 uses per week, 15 minutes per use	1.3	\$0.11
Heater, high heat setting	1500 watts, 3 uses per week, portable heater, cycling 50%, 12 Hrs per use	116.1	\$9.52
Heater, low heat setting	750 watts, 3 uses per week, portable heater, cycling 50%, 12 Hrs per use	58.1	\$4.76

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Appliance Description	The appliance wattage, size and usage assumptions listed, determine the monthly kWh and cost estimate	Monthly kWh Estimate	Monthly Cost Estimate
Heater, constant use in warm space	1000 watts, 24 hours per day, portable heater, cycling 50% in warm living space	360.0	\$29.52
Heater, constant use in cold space	1500 watts, 24 hours per day, portable heater, maximum heat in cold space	1080.0	\$88.56
Heating pad	60 watts, 3 uses per week, 30 minutes per use	0.4	\$0.03
Heating cable, roof overhang	600 watts, 24 hours per day, always on, 6 watts/foot, cost per 100 ft	432.0	\$35.42
Heating mat, sidewalk	5000 watts, 24 hours per day, average 50 watts/sq ft, 100 sq ft, cycles off & on 50%	1800.0	\$147.60
Heating tape, water line	150 watts, 24 hours per day, average 6 watts/foot, 25 ft, cycles off & on 50%	54.0	\$4.43
Heat lamp	250 watts, 24 hours per day, always on, in a cold location	180.0	\$14.76
Hedge clipper	300 watts, 0.25 uses per week, 1 hour per use	0.3	\$0.03
Hot tub heater, electric	5500 watts, 3 uses per week, 2 hours per use, heating only when tub is used	141.9	\$11.64
Hot tub heater, electric	5500 watts, 24 hours per day, heater left on, insulated tub and covered, heat cycles 15%	594.0	\$48.71
Hot tub heater, electric	5500 watts, 24 hours per day, heater left on, poorly insulated tub and/or no cover, heat cycles 50%	1980.0	\$162.36
Hot tub pump	1800 watts, 3 uses per week, jets, 1½ HP, 2 hours per use	46.4	\$3.81
Hot tub pump	300 watts, 24 hours per day, low speed, circulation pump	216.0	\$17.71
Humidifier, tabletop warm mist	300 watts, 24 hours per day, always on	216.0	\$17.71
Humidifier, tabletop cool mist	90 watts, 24 hours per day, always on	64.8	\$5.31
Humidifier, console cool mist	170 watts, 24 hours per day, always on	122.4	\$10.04
Humidifier, on furnace	25 watts, 24 hours per day, fan powered model, always on	18.0	\$1.48

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Appliance Description	The appliance wattage, size and usage assumptions listed, determine the monthly kWh and cost estimate	Monthly kWh Estimate	Monthly Cost Estimate
Ice cream maker	140 watts, 0.25 uses per week, 1 hour per use	0.2	\$0.01
Iron	1100 watts, 4 uses per week, 30 minutes per use	6.6	\$0.54
Jacuzzi (see hot tub)			
Kiln, small	1000 watts, 1 use per week, 8 hours per use	34.4	\$2.82
Kiln, large	10,000 watts, 1 use per week, 8 hours per use, cycling 50% of time	172.0	\$14.10
Lawn edger	600 watts, 1 use per week, 30 minutes per use	1.3	\$0.11
Lawn mower	1200 watts, 1 use per week, 60 minutes per use	5.2	\$0.42
Lawn trimmer	460 watts, 1 use per week, 30 minutes per use	1.0	\$0.08
Lighting, by the hour, compact fluorescent	25 watts, 1 hour per day, equivalent light of a 100 watt incandescent	0.8	\$0.06
Lighting, by the hour, incandescent	100 watts, 1 hour per day, bulb or spot light	3.0	\$0.25
Lighting, indoors, small home	600 watts, 5 hours per day, for average family of four, 8) 75 wt bulbs	90.0	\$7.38
Lighting, indoors, small home, 5 most used lights are CFLs	325 watts, 5 hours per day, 5) 20 wt compact fluorescent lights & 3)75 wt bulbs	48.8	\$4.00
Lighting, indoors, well lit larger home	1875 watts, 8 hours per day, 25) 75 wt bulbs, many ceiling can lights or home office well lit	450.0	\$36.90
Lighting, shop light	80 watts, 1 hours per day, 2, four foot fluorescent bulbs	2.4	\$0.20
Lighting, outdoors	50 watts, 12 hours per day, small mercury vapor	18.0	\$1.48
Lighting, outdoor, quartz	150 watts, 12 hours per day, quartz light	54.0	\$4.43
Lighting, outdoor pole light with photocell	175 watts, 12 hours per day, mercury vapor security light	63.0	\$5.17
Lighting, outdoor pole light with photocell	100 watts, 12 hours per day, high pressure sodium, security light	36.0	\$2.95
Lighting, outdoor with photocell	100 watts, 12 hours per day, typical incandescent yard light	36.0	\$2.95
Medical, Nebulizer	100 watts, 30 minutes per day, average size	1.5	\$0.12

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Medical, Oxygen Concentrator	400 watts, 12 hours per day, average size & output	144.0	\$11.81
Microwave oven	800 watts, 30 minutes per day, average usage	12.0	\$0.98
Mixer, portable	100 watts, 2 uses per week, 5 min per use	0.1	\$0.01
Mixer, standard	350 watts, 2 uses per week, 5 min per use	0.3	\$0.02
Oven, electric	3500 watts, 3 uses per week, single oven, one hour per use, cycling	15.0	\$1.23
Oven, electric, cleaning	3500 watts, 0.25 uses per week, self clean cycle, 3 hrs	5.6	\$0.46
Popcorn popper	500 watts, 2 uses per week, small, 5 minutes per use	0.4	\$0.03
Popcorn popper	1400 watts, 2 uses per week, large, 5 minutes per use	1.0	\$0.08
Tool, grinder	370 watts, 1 use per week, 5 minutes per use	0.1	\$0.01
Tool, electric chain saw	1200 watts, 1 use per week, 30 minutes per use	2.6	\$0.21
Tool, circular saw	1320 watts, 1 use per week, 10 minutes per use	0.9	\$0.08
Tool, cordless tool battery charger	6 watts, 24 hours per day, Always charging	4.3	\$0.35
Tool, drill	360 watts, 1 use per week, 15 minutes per use	0.4	\$0.03
Tool, belt sander	900 watts, 1 use per week, 15 minutes per use	1.0	\$0.08
Tool, pad sander	360 watts, 1 use per week, 15 minutes per use	0.4	\$0.03
Tool, scroll saw	420 watts, 1 use per week, 15 minutes per use	0.5	\$0.04
Tool, soldering gun	600 watts, 1 use per week, 15 minutes per use	0.6	\$0.05
Radio	15 watts, 6 hours per day, small desk radio	2.7	\$0.22
Range/stove top	1600 watts, 5 uses per week, small surface unit, 20 minutes per use	5.7	\$0.47
Range/stove top	2700 watts, 3 uses per week, large surface unit, 20 minutes per use	3.8	\$0.31
Refrigerator, new, medium size	300 watts, 24 hours per day, rough estimate based on 4 in family	71.9	\$5.90

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Refrigerator, over 10 years old, medium size	600 watts, 24 hours per day, rough estimate based on 4 in family	143.9	\$11.80
Septic tank aerator	300 watts, 24 hours per day, always on	216.0	\$17.71
Sewing machine	120 watts, 1 use per week, 60 minutes per use	0.3	\$0.02
Shaver	15 watts, 10 minutes per day, plug in, not battery	0.1	\$0.01
Shoe buffer	175 watts, 2 minutes per day, once each day	0.2	\$0.01
Skillet	1250 watts, 3 uses per week, 30 minutes per use	4.0	\$0.33
Smoke detector	2 watts, 24 hours per day, always on	1.4	\$0.12
Sound equipment	5 watts, 3 hours per day, single audio appliance using plug instead of batteries	0.5	\$0.04
Sound equipment	50 watts, 3 hours per day, single, older audio appliance using 120 AC volts	4.5	\$0.37
Sound equipment	300 watts, 3 hours per day, 4 to 5 components in system	27.0	\$2.21
Sun lamp, single bulb	60 watts, 3 uses per week, 15 minutes per use	0.2	\$0.02
Sun lamp, tanning device	800 watts, 3 uses per week, 15 minutes per use	2.6	\$0.21
Swimming pool filter pump	700 watts, 24 hours per day, ½ horse power	504.0	\$41.33
Swimming pool filter pump	1400 watts, 24 hours per day, 1 horse power	1008.0	\$82.66
Swimming pool filter pump	2100 watts, 24 hours per day, 1.5 horse power	1512.0	\$123.98
Swimming pool sweep pump	900 watts, 15 minutes per day, ¾ horse power	6.8	\$0.55
Telephone, charger & answering machine	6 watts, 24 hours per day, always on	4.3	\$0.35
Television, standard	100 watts, 6 hours per day, CRT tube, small	18.0	\$1.48
Television, standard	150 watts, 6 hours per day, CRT tube, large	27.0	\$2.21
Television, projection	220 watts, 6 hours per day, rear projection, average size and wattage	39.6	\$3.25
Television, LCD	150 watts, 6 hours per day, 32 inch LCD screen average size and wattage	27.0	\$2.21

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Television, plasma	350 watts, 6 hours per day, plasma, average size and wattage	63.0	\$5.17
Television, standby electric use	20 watts, 24 hours per day, power use when TV is off, (usage varies widely)	14.4	\$1.18
Toaster	1100 watts, 10 uses per week, 2 minutes per use	1.6	\$0.13
Toaster - broiler oven	1500 watts, 3 uses per week, 10 minutes per use	3.2	\$0.26
Trash compactor	750 watts, 2 minutes per day, once each day	0.8	\$0.06
Vacuum cleaner	740 watts, 1 use per week, 30 minutes per use	1.6	\$0.13
Vaporizer	30 watts, 1 use per week, mini, 4 hour capacity	0.5	\$0.04
Video, DVD	25 watts, 3 uses per week, 2 hours per use	0.6	\$0.05
Video, VCR	35 watts, 3 uses per week, 2 hours per use	0.9	\$0.07
Waffle iron	1400 watts, 1 use per week, 30 minutes per use	1.5	\$0.12
Washing machine	665 watts, 8 uses per week, average for family of four, 45 min cycles (Does not include hot water usage)	12.0	\$0.98
Water bed heater	400 watts, 24 hours per day, cycling 33% on time	95.9	\$7.86
Water heater, electric, general use	4500 watts, 24 hours per day, cycles on 8%, average for family of four. heater located in warm space	259.2	\$21.25
Water heater (this is additional use if clothes washer uses hot wash)	4500 watts, 8 uses per week, average for family of four, hot wash, cold rinse (40 minutes recovery time)	103.2	\$8.46
Water, well pump	1100 watts, 24 hours per day, ¾ HP, run time totals 15 min/day for family of four	15.8	\$1.30
Water, well pump used for irrigation	1600 watts, 4 hours per day, 1 HP	192.0	\$15.74
Wok	1000 watts, 1 use per week, 20 minutes per use	0.7	\$0.06

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