Typical Residential Electricity Use and Cost

How to determine the cost of running appliances:

Wattage x hours used ÷ 1,000 = kilowatt hours (kWh)
Kilowatt hours x cost per kilowatt hour = cost to operate ($)
(note: there are 720 hours in a 30 day month)

Appliance	Typical Wattage	Monthly Hours of Use	Monthly kWh	Approximate Cost to Operate per Month***
Air conditioner - Room**	1000 - 1400	60 - 180	60 - 252	$5.69 - $23.89
Air purifier	30 - 100	240 - 480	7 - 48	$0.68 - $4.55
Blue-Ray disc player (ENERGY STAR)*	13	30 - 150	1 - 2	$0.06 - $0.18
Compact Disc (CD) player*	13	30 - 150	1 - 2	$0.07 - $0.19
Clothes dryer, standard	3400 - 5000	8 - 16	27 - 80	$2.58 - $7.58
Clothes dryer, standard - SINGLE LOAD	3400 - 5000	0.3 - 0.5	1 - 3	$0.11 - $0.24
Clothes washer, excluding water heating energy use & cost of water (ENERGY STAR)	250	8 - 16	2 - 4	$0.19 - $0.38
Clothes washer, including water heating energy use	425 - 1000	8 - 16	3 - 16	$0.32 - $1.52
Clothes washer, including water heating energy use & cost of water - SINGLE LOAD	425 - 1000	0.3 - 0.5	0 - 1	$0.37 - $0.40
Coffee maker	1100 - 1500	9 - 60	10 - 90	$0.94 - $8.53
Computer monitor *	20 - 150	30 - 240	1 - 36	$0.06 - $3.41
Computer, desktop *	40 - 120	30 - 480	1 - 58	$0.11 - $5.46
Computer, laptop *	12 - 50	30 - 480	1 - 24	$0.08 - $2.28
Copier (small)*	300 - 500	1 - 10	1 - 5	$0.09 - $0.47
Copier (large)*	1400 - 1600	1 - 10	2 - 16	$0.19 - $1.52
Dehumidifier (30 - 70 pint capacity)**	350 - 720	30 - 120	11 - 86	$1.00 - $8.19
Dehumidifier (100 -180 pint capacity)**	1000 - 1350	30 - 120	30 - 162	$2.84 - $15.36
Digital Video Disc (DVD) player (ENERGY STAR)*	17 - 25	30 - 150	1 - 4	$0.05 - $0.36
Dishwasher (ENERGY STAR)*	633	30 - 60	19 - 38	$1.80 - $3.60
Dishwasher (non ENERGY STAR)*	822 - 1800	30 - 60	25 - 108	$2.34 - $10.24
Electric blanket	100	12 - 120	1 - 12	$0.11 - $1.14
Fan - Ceiling-mounted	65 - 175	30 - 330	2 - 58	$0.18 - $5.47
Fan - Furnace fan, efficient variable speed motor (intermittent)**	100 - 300	150 - 200	15 - 60	$1.42 - $5.69
Fan - Furnace fan, standard motor (continuous)	500	720	360	$34.13
Fan - Furnace fan, standard motor (intermittent)**	500	150 - 200	75 - 100	$7.11 - $9.48
Fan - Exhaust fan (such as a bathroom fan)	150	15 - 150	2 - 23	$0.21 - $2.13
Fan - Capture hood fan, for ventilation, 435 cubic feet per minute	116	540 - 720	63 - 84	$5.94 - $7.92
Fan - Capture hood fan, for ventilation, 745 cubic feet per minute	198	540 - 720	107 - 143	$10.14 - $13.51
Fan - Oscillating 16", 300 cubic feet per minute	90 - 100	30 - 720	3 - 72	$0.26 - $6.83
Freezer - Compact, chest (ENERGY STAR)**	160 - 200	180 - 260	29 - 52	$2.73 - $4.93
Freezer - Upright w/auto defrost (ENERGY STAR)**	200 - 240	190 - 270	38 - 65	$3.60 - $6.14
Freezer - non-ENERGY STAR **	240 - 273	200 - 280	48 - 76	$4.55 - $7.25
Hairdryer	1200 - 1875	3 - 9	4 - 17	$0.34 - $1.60
Hot tub (pump and electric heater) - meeting California efficiency code**	3200 - 4500	35 - 45	112 - 203	$10.62 - $19.20
Hot tub (pump and electric heater) - typical**	4700 - 5800	40 - 55	188 - 319	$17.82 - $30.24
Humidifier	75	30 - 120	2 - 9	$0.21 - $0.85
Light - Incandescent lamp - 60 Watt	60	17 - 200	1 - 12	$0.10 - $1.14
Light - Light emitting diode (LED) - 60 Watt equivalent	9	17 - 200	1 - 2	$0.08 - $0.17
Light - Compact fluorescent lamp (CFL) - 60 Watt equivalent	13 - 18	17 - 200	1 - 4	$0.09 - $0.34
Light - Metal halide or high-pressure sodium - 250 Watt	295	360 - 540	106 - 159	$10.07 - $15.10
Light - Metal halide or high-pressure sodium - 400 Watt	461	360 - 540	166 - 249	$15.73 - $23.60
Light - Metal halide or high-pressure sodium - 1000 Watt	1080	360 - 540	389 - 583	$36.86 - $55.29
Light - high-intensity LED (250 Watt equivalent)	75 - 100	360 - 540	27 - 54	$2.56 - $5.12
Microsoft Xbox 360® - always on*	119	720	86	$8.11 - $8.11
Microsoft Xbox 360® - turned "off" when not in use	88	90 - 180	8 - 16	$0.75 - $1.50

(continued below)

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(note: there are 720 hours in a 30 day month)

EWEB

Appliance	Typical Wattage	Monthly Hours of Use	Monthly kWh	Approximate Cost to Operate per Month***
(continued from above)				
Modem - Cable or digital subscriber line (DSL) - always on*	6	720	4	$0.41
Nintendo Wii™ - always on*	14	720	10	$0.94
Oven & cooktop combination unit	1250 - 2500	10 - 30	13 - 75	$1.19 - $7.11
Oven - Microwave 1.25 cu.ft.	1500	6 - 12	9 - 18	$0.85 - $1.71
Oven - Self-cleaning	5000 - 7200	3 - 12	15 - 86	$1.42 - $8.19
Oven - Toaster	1200	4 - 8	5 - 10	$0.46 - $0.91
Popcorn maker	1400	1 - 5	1 - 7	$0.13 - $0.66
Printer - Inkjet*	45 - 120	1 - 12	1 - 2	$0.05 - $0.22
Printer - Laser*	150 - 1500	1 - 12	1 - 18	$0.05 - $1.71
Pump - 1/8 HP (typical for a small pond) - always on	93	720	67	$6.35
Pump - 250 Watt (typical for a 50-gallon aquarium) - always on	250	720	180	$17.06
Pump - 1/2 HP (typical for a pond or small swimming pool) - always on	373	720	269	$25.46
Refrigerator - ENERGY STAR **	150 - 170	200 - 260	30 - 44	$2.84 - $4.19
Refrigerator - top-mount freezer, without icemaker **	170 - 220	215 - 280	37 - 62	$3.46 - $5.84
Refrigerator - side-mount freezer, with icemaker **	210 - 250	215 - 280	45 - 70	$4.28 - $6.64
Satellite dish	15	80 - 120	1 - 2	$0.11 - $0.17
Sony PlayStation 3® (2007) - always on	150	720	108	$10.24
Sony PlayStation 3® (2007) - Active & Standby modes*	150	60 - 180	9 - 27	$0.85 - $2.56
Space heater **	1000 - 1500	30 - 120	30 - 180	$2.84 - $17.06
Stereo component system	60	30 - 60	2 - 4	$0.17 - $0.34
Stereo - portable	7	30 - 60	1 - 2	$0.07 - $0.14
Swimming pool cleaner - booster pump powered	1500	70 - 120	105 - 180	$9.95 - $17.06
Swimming pool cleaner - robotic	180	70 - 120	13 - 22	$1.19 - $2.05
Television - Cathode ray tube (CRT) 45-inch*	298	60 - 180	18 - 54	$1.70 - $5.09
Television - Liquid crystal display (LCD) or Light emitting diode (LED) 45-inch*	110 - 213	60 - 180	7 - 38	$0.63 - $3.63
Television - Plasma 45-inch*	110 - 339	60 - 180	7 - 61	$0.63 - $5.78
Vacuum cleaner (central or portable)	650 - 1600	2 - 6	1 - 10	$0.12 - $0.91
Water heater - submersible aquarium heater	200 - 400	80 - 120	16 - 32	$1.52 - $3.03
Water heater - 50-gallon standard-efficiency**	4500 - 5500	80 - 90	360 - 495	$34.13 - $46.93
Water heater - Heat pump 60-gallon and 80-gallon**	500 - 4500	85 - 105	43 - 193	$4.03 - $18.25
Wireless Internet Router - always on*	6 - 7	720	4 - 5	$0.41 - $0.43

The typical Wattages, hours of use, and kWh above are based on EWEB research using a variety of industry sources. Research sources include independent and robust sources such as E Source, US DOE, EPRI, ACEEE, Lawrence Berkeley and Oak Ridge National Laboratories.

** This appliance has different energy-use modes.* ***Active*** *mode is when the device is being used as intended (e.g., drying with a hairdryer).* ***Standby*** *mode is when the device is in a lower-power mode. This includes Idle mode (for example, a computer in sleep mode) or Off (for example, a TV that is off but needs to respond instantly to a signal from a remote control). See also the Standby Power Costs table below.*

*** This appliance turns on and off to maintain a set-point (for example, a refrigerator is always plugged in but the compressor cycles on and off to keep things cold). The hours of use for this appliance will depend on its set-point and ambient conditions.*

**** Costs are based on Eugene Water & Electric Board residential rates in effect as of Feb 1, 2022, at 9.48 cents per kWh.*

Standby Power Costs

Standby Power is the power draw of a device in its low-power modes. This includes Idle mode (for example, a computer in sleep mode) or Off (for example, a TV that is off but needs to respond instantly to a signal from a remote control). This type of power draw is often referred to as "phantom power." As shown below, standby power draw is relatively low. However, modern homes often have multiple smartphones, TVs, computers, and other items plugged in. The total power used by these devices adds up. To make sure your devices do not consume standby power, you can unplug them from the wall, or plug them into a power strip and turn the power strip off when not in use.

Appliance	Mode	Typical Wattage	Average Cost per Month
Audio Mini System/CD/Radio	Off	8	$0.55
	On but not playing	14	$0.96
Blue-ray disc player	Off	1	$0.07
CD Player	Off	5	$0.34
	On but not playing	9	$0.61
Clock Radio	On	2 - 10	$0.14 - $0.68
Coffee Maker	Off	1	$0.07
Computer Modem , Cable	Off/Standby	4	$0.27
	On	6	$0.41
Computer Monitor, CRT	Off	1	$0.07
	On/Sleep	12	$0.82
Computer Monitor, LCD	Off	1	$0.07
	On/Sleep	1	$0.07
Computer, Desktop	Off	3	$0.20
	On/Sleep	21	$1.43
Computer, Notebook	Off	9	$0.61
	On/Sleep	16	$1.09
Copier/Printer	Off	3	$0.20
	On/Sleep	20	$1.37
DVD/VCR Player	Off	5	$0.34
	On but not playing	14	$0.96
Fax, Inkjet	Off	5	$0.34
	On but not being used	6	$0.41
Fax, Laser	Off	1	$0.07
	On but not being used	6	$0.41
Game Console	Off	1	$0.07
	On but not being used	23	$1.57
Garage Door Opener	On but not being used	5	$0.34
Heating, Furnace Fan	Off	4	$0.27
Microwave Oven	Off	3	$0.20
TV Set-top Box, Digital Cable w/ DVR	Off	33 - 44	$2.25 - $3.00
	On but not recording	33 - 44	$2.25 - $3.00
TV Set-top Box, Digital Cable	Off	18 - 20	$1.23 - $1.37
	On but not being used	120 - 25	$1.71
Telephone, Mobile Charger	Power supply only	0 - 1	$0.02 - $0.07
	On, charging	4	$0.27
Telephone, Cordless w/ Answering Machine	Off	3	$0.20
	On but not being used	4	$0.27
Television, CRT	Off	4	$0.27
Television, non-CRT (including LED, LCD)	Off	1	$0.07
Toothbrush, electric	Off	2	$0.14
Wireless Internet Router	On but not being used	2	$0.14

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Residential Light and Appliance Daily Electric Cost Worksheet

You can use the worksheet on the back to estimate the daily cost of your home lighting and appliance energy use. With this information you can make choices about your energy usage.

Instructions

1. List all lights (ceiling and freestanding) and appliances plugged into the electrical outlets in each room of your house in the first column.

2. Enter the watts of each light or appliance in the second column. Look on the rating label. Most appliances are rated by watts (w) (sometimes called "va"). If neither of these is shown, most rating labels will at least indicate Amps (a) and Volts (v). Calculate watts by multiplying the two together: Amps (a) x Volts (v) = Watts. If you cannot locate an appliance's electrical rating label, use the EWEB Typical Residential Electricity Use and Cost sheet to estimate the watts.

3. Enter the estimated hours per day the light or appliance operates in the "Hours per day" column.

4. Enter the electric rate you want to use to estimate your energy costs. Your electric rate will be the sum of the distribution charge and the power charge shown on your EWEB electric bill, currently:

Delivery Charge	$0.0272
Power Charge	$0.0676
"Electric Rate"	**$0.0948**

5. Perform the calculations across each line and total your costs at the bottom.

Remember:

1. Electric use for lights and appliances is only a percentage of your total bill. Other uses, such as space and water heating typically represent the greatest portion of the bill.

2. Appliances do not use energy unless they are plugged in and turned on.

3. Any appliance with a remote control, clock, or programmable timer is always using some power, even when turned off. (See Standby Power Costs, above)

Daily Electric Cost Worksheet

Appliance or Light	Watts	X	Hours per day	÷	1000	=	KWh	X	Rate	=	Cost/Day
Coffee Maker * Example	1100	X	1	÷	1000	=	1.1	X	$0.0948	=	$ 0.10
		X		÷	1000	=		X		=	
		X		÷	1000	=		X		=	
		X		÷	1000	=		X		=	
		X		÷	1000	=		X		=	
		X		÷	1000	=		X		=	
		X		÷	1000	=		X		=	
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		X		÷	1000	=		X		=	
					Total	=		X		=	