

Clatskanie PUD's Home Energy User Guide



Kitchen Appliances

Appliance <small>*Indicates appliance is thermostatically controlled</small>	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption in kWh	Estimated Monthly Operating Costs in Dollars
Blender	375	20 Minutes / Month	0.1	less than \$.01
Bread Maker	680	Twice Weekly	8.1	\$0.32
Can Opener	125	50 Times / Month	0.3	\$0.01
Drip Coffee Maker *	1,100	Twice / Daily	10.0	\$0.40
Dishwasher *(Includes Hot Water)	120	15 Times / Month	60.0	\$2.37
Electric Frying Pan *	1,150	4 Hours / Month	4.6	\$0.18
Electric Knife	92	5 Minutes / Month	0.0	less than \$.01
Exhaust Fan (90 CFM)	200	30 Minutes / Month	3.0	\$0.12
Food Dehydrator *	600	40 Hours / Month	12.0	\$0.47
Freezer / Manual Defrost (15 CF)	350	Continuously	90.0	\$3.56
Freezer / Frost-Free (15 CF)	440	Continuously	150.0	\$5.93
Garbage Disposal	445	2 Minutes / Daily	0.4	\$0.02
Hot-Water Dispenser	750	1 Gallon / Daily	49.0	\$1.94
Microwave Oven	750	15 Minutes / Daily	5.7	\$0.23
Mixer (Hand-held)	125	15 Minutes / Month	0.0	less than \$.01
Mixer (base Model)	200	15 Minutes / Month	0.1	less than \$.01
Oven *	3,500	30 Hours / Month	68.0	\$2.69
Oven (Self-Cleaning Feature Only) *	3,500	Once / Month	4.0	\$0.16
Popcorn Popper (Air)	1,400	Once / Week	1.0	\$0.04
Range (Large Element) *	2,100	20 Minutes / Daily	16.8	\$0.66
Range (small Element) *	1,600	30 Minutes / Daily	19.0	\$0.75
Refrigerator - Freezer (12.5 CF)	325	Continuously	100.0	\$3.95
Refrigerator -Freezer Frost-Free (17.5 CF)	615	Continuously	140.0	\$5.53
Refrigerator-Freezer Frost-Free (20 CF)	800	Continuously	182.0	\$7.19
Toaster (2 Slice)	1,000	15 Minutes Daily	3.0	\$0.12
Toaster Oven *	1,150	15 Minutes Daily	5.0	\$0.20
Trash Compactor	400	Daily	0.1	less than \$.01
Waffle Iron *	1,200	1 Hour / Month	1.0	\$0.04

Laundry / Utility

Appliance <small>*Indicates appliance is thermostatically controlled</small>	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption in kWh	Estimated Monthly Operating Costs in Dollars
Clothes Dryer *	5,000	26 Loads / Month	81.0	\$3.20
Iron *	1,000	4 Hours / Month	2.2	\$0.09
Washing Machine (Includes Water Heating	512			\$0.00
Cold / Cold			10.4	\$0.41
Warm / Cold			59.8	\$2.36
Hot / Cold			111.8	\$4.42
Warm / Warm			111.8	\$4.42
Hot / Warm			163.8	\$6.47
Hot / Hot			215.8	\$8.52

Comfort Conditioning

Appliance <small>appliance is thermostatically controlled</small>	*Indicates	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption in kWh	Estimated Monthly Operating Costs in Dollars
Air Conditioner (Wall Mounted) *		1,100	5 Hours / Daily	134.0	\$5.29
Dehumidifier		250	4 Hours / Daily	30.0	\$1.19
Electronic Air Cleaner - Furnace		85	6 Hours / Daily	15.3	\$0.60
Electronic Air Cleaner - Portable		50	8 Hours / Daily	12.0	\$0.47
Electric Blanket (Queen-size) *		175	8 Hours / Daily	2.0	\$0.08
Exhaust Fan (Bathroom)		200	40 mins / Daily	4.0	\$0.16
Fan (ceiling, no bulbs)		85	6 Hours / Daily	15.3	\$0.60
Fan 12" - Portable		66	6 Hours / Daily	11.9	\$0.47
Fan 24" - Portable		170	6 Hours / Daily	30.6	\$1.21
Furnace Fan (1/3 hp)		420	7 Hours / Daily	90.0	\$3.56
Heating Pad *		65	2 Hours / Month	0.1	\$0.00
Portable Heater - Standard *		1,500	6 Hours / Daily	270.0	\$10.67
Water bed *		400	Continuously	175.0	\$6.91
(king-size room 65° - 95°)		-			
Water Heater * (52 Gallon @ 140) °		4,500	Continuously	500.0	\$19.75
Water Heater * (with R-11 Wrap - 52 Gallon @ 140) °		4,500	Continuously	460.0	\$18.17

Health & Beauty

Appliance <small>appliance is thermostatically controlled</small>	*Indicates	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption in kWh	Estimated Monthly Operating Costs in Dollars
Curlers		400	20 Mins / Daily	4.0	\$0.16
Curling Iron		40	15 Mins / Daily	0.3	\$0.01
Electric Toothbrush		1	Twice / Daily	0.1	less than \$0.01
Hair Dryer		1,200	10 Mins / Daily	6.0	\$0.24
Heat Lamp (Infrared)		200	20 Mins / Daily	4.0	\$0.16
Shaver		15	5 Mins / Daily	0.0	less than \$0.01

Home Entertainment

Appliance <small>appliance is thermostatically controlled</small>	*Indicates	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption in kWh	Estimated Monthly Operating Costs in Dollars
Radio		10	1 Hour / Daily	0.30	\$0.01
Stereo (Receiver, Turntable, CD, Cassette)		80	2 Hours / Daily	4.90	\$0.19
Television - 19" B&W (Tube Type)		100	7 Hours / Daily	21.00	\$0.83
Television - 19" B&W (Solid State)		45	7 Hours / Daily	9.50	\$0.38
Television - 19" Color (Solid State)		85	7 Hours / Daily	18.00	\$0.71
Television - 25" Color (Solid State)		125	7 Hours / Daily	26.60	\$1.05
Television - 35" Color (Solid State)		185	7 Hours / Daily	39.40	\$1.56
VCR		30	30 Hours / Month	0.90	\$0.04

Household

Appliance <small>appliance is thermostatically controlled</small>	*Indicates	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption in kWh	Estimated Monthly Operating Costs in Dollars
Clock		2	Continuously	1.4	\$0.06
Fish Tank / Aquarium (20 Gallon with pump, light & heater)		130	Continuously	18.7	\$0.74
Home Computer System (CPU, Monitor, Printer)		585	30 Hours / Month	17.5	\$0.69
Home Computer System (CPU, Monitor, Printer, modem, fax, answering machine)		248	Continuously	248.0	\$9.80
Sewing Machine		75	8 Hours / Month	0.6	\$0.02
Vacuum Cleaner		640	4 Hours / Month	2.6	\$0.10

Lighting					
Appliance appliance is thermostatically controlled	*Indicates	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption in kWh	Estimated Monthly Operating Costs in Dollars
Christmas Lights - snap in base (100 lights)		36	6 Hours / Daily	7.0	\$0.28
Christmas Lights - lg screw in base (50 lights)		350	6 Hours / Daily	64.0	\$2.53
4 Foot Fluorescent Tube (4-lamp, T-12, 2 Magnetic Ballasts)		192	10 Hours / Daily	58.0	\$2.29
4 Foot Fluorescent Tube (4-lamp, T-8, 1 Magnetic Ballasts)		114	10 Hours / Daily	35.0	\$1.38
Incandescent Flood Light (exterior)		150	10 Hours / Daily	46.0	\$1.82
High Pressure Sodium (exterior)		35	10 Hours / Daily	13.0	\$0.51
Incandescent Bulb		60	10 Hours / Daily	18.0	\$0.71
Compact Fluorescent Bulb		15	10 Hours / Daily	5.0	\$0.20
Incandescent Bulb		75	10 Hours / Daily	23.0	\$0.91
Compact Fluorescent Bulb		18	10 Hours / Daily	5.0	\$0.20
Incandescent Bulb		100	10 Hours / Daily	30.0	\$1.19
Compact Fluorescent Bulb		27	10 Hours / Daily	8.0	\$0.32
Mercury Vapor Area Light		175	10 Hours / Daily	60.0	\$2.37
High Pressure Sodium Area Light		100	10 Hours / Daily	35.0	\$1.38
Metal Halide		100	10 Hours / Daily	43.0	\$1.70
Mercury Vapor Area Light		250	10 Hours / Daily	87.0	\$3.44
High Pressure Sodium Area Light		150	10 Hours / Daily	52.0	\$2.05
Metal Halide		175	10 Hours / Daily	64.0	\$2.53

Outdoor / Miscellaneous					
Appliance appliance is thermostatically controlled	*Indicates	Average Wattage	Estimated Monthly Hours of Use	Estimated Monthly Consumption in kWh	Estimated Monthly Operating Costs in Dollars
Air Compressor (1 hp)		1,000	2 Hours / Month	2.0	\$0.08
Chain saw - Electric		1,260	3 Hours / Month	3.8	\$0.15
Garage door opener		300	1/2 Hour / Daily	4.5	\$0.18
Hedge Trimmer (18")		312	3 Hours / Month	0.9	\$0.04
Kiln *		2,300	5 Hours / Month	50.0	\$1.98
Kiln *		4,600	5 Hours / Week	100.0	\$3.95
Kiln *		6,400	5 Hours / Week	139.0	\$5.49
Lawn Mower (electric)		1,200	4 Hours / Week	4.8	\$0.19
Leaf blower		1,080	4 Hours / Week	18.7	\$0.74
Shop Vacuum / 3 - gallon		780	4 Hours / Week	3.1	\$0.12
Shop Vacuum / 16 - gallon		1,340	4 Hours / Week	5.4	\$0.21
Spa / Hot Tub			Continuously	450.0	\$17.78
Fiberglass, well insulated w/cover, 300 gallon @ 104 , 1 1/2 HP pump, 1.5 KW heater.					
Spa / Hot Tub			w/ Daily 8 hr Timer	300.0	\$11.85
Fiberglass, well insulated w/cover, 300 gallon @ 104 , 1 1/2 HP pump, 1.5 KW heater.					
Weed Eater		250	2 Hours / Month	0.5	\$0.02

These tables reflect estimates only. Costs are based on Clatskanie PUD's energy and distribution charge \$.0395 per kWh.
(cogeneration benefit, acquisition charge and franchise fees not included)

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:

1. Wattage
2. Hours of Operation
3. Cost per kilowatt Hour

Example: A 75 watt light bulb is used 7 hours a day, 5 days a week (35 hours/week). CPUD charges an average of \$0.0395 per kilowatt hour for Rainier Residential Customers.

$$\frac{\text{Wattage} \times \text{Hours Used}}{1000} = \text{kWh}$$

$$\frac{75 \text{ watts} \times 35 \text{ Hours}}{1000} = 2.625 \text{ kWh}$$

$$2.625 \text{ kWh} \times \$0.0395 = \$0.1036$$

$$\text{kWh} \times \text{Rate} = \text{Operating Cost}$$

So, it costs .11 cents to operate a 75 watt light bulb for 35 hours.

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

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

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

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

$$1000 \text{ watts} = 1 \text{ kilowatt (kW)}$$

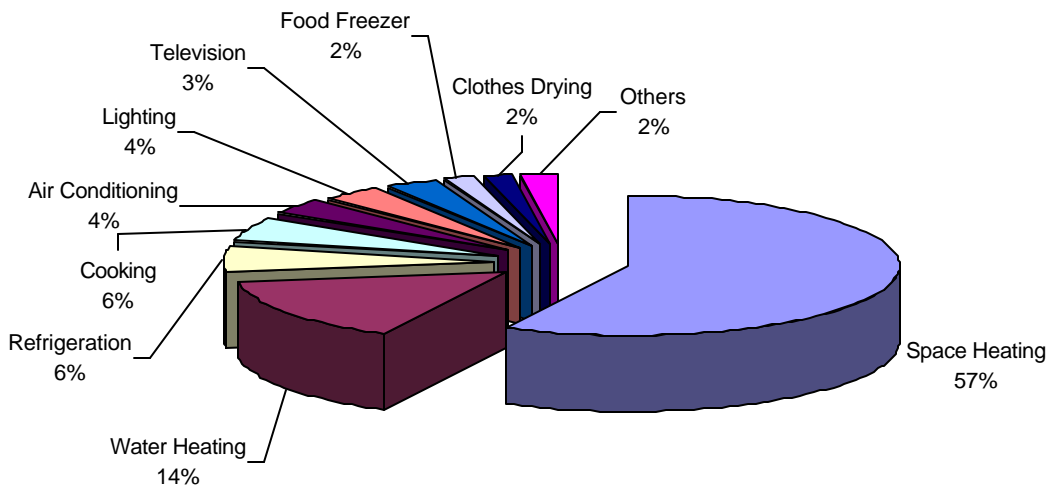
$$\text{kilowatts (kW)} \times \text{Hours} = \text{kilowatt Hours (kWh)}$$

1 kilowatt hour costs \$0.0395 Clatskanie Customer

1 kilowatt hour costs \$0.0495 Rainier Customer

Quick Estimate:
A 1 Horsepower motor = 1 kilowatt
(Actual = 746 Average Watts)

How You Use Energy



As you can see, the big energy users in the house are space heating and water heating, accounting for 72.4% of your total energy consumption. This is where the most can be accomplished in saving energy.