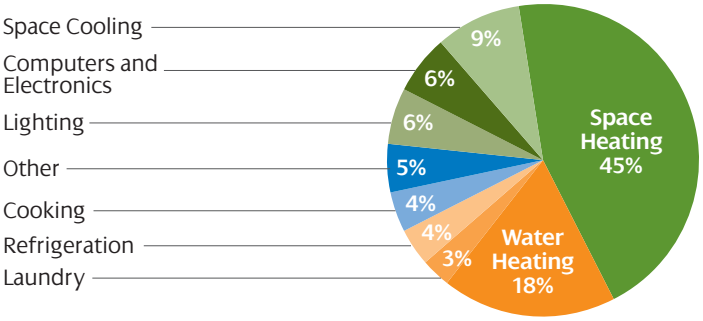
Home Energy Use Guide

>> Understanding how your energy dollars are spent can help you make wise decisions about your energy use.

Energy Use – Typical Household



Source: Buildings Energy Data Book, Table 2.1.1 Residential Primary Energy Consumption, by Year and Fuel Type.

Your energy consumption will vary, depending on the number of people in your household, seasonal changes, the size, age and efficiency rating of your appliances, and how much your appliances are used. **For accurate measurements, check your own bill for your current price of kWh and price per therm for natural gas.**

For more information about supply costs, including historical prices, NYSEG customers can go to **nyseg.com** and RG&E customers can go to **rge.com**. If you purchase your supply from an energy services company (ESCO), contact your ESCO. Please note whether you are paying a fixed or variable price for your electricity supply. If you are paying a variable price, your energy costs will fluctuate.

Figures represented in this guide are estimates from various sources. The appliance costs are based on 11 cents per kilowatt hour (kWh) and $1.30 per therm for natural gas.

Electricity Operating Costs

Your electricity use is measured in kilowatt-hours (kWh). One kWh equals 1,000 watts of electricity used for one hour. For example, a 100-watt light bulb that burns for 10 hours consumes one kWh of electricity.

The cost of operating an electrical appliance can be estimated using this formula:

$$\frac{\text{Watts}}{1{,}000} \times \text{Hours Used} \times \text{Cents per kWh} = \text{Operating Costs}$$

For example: Calculate how much it would cost to operate a portable electric space heater for four hours with the heat setting on high (1,500 watts). In this example, we're using an electricity price of 11 cents per kWh.

$$(1{,}500 \text{ watts} \div 1{,}000) \times 4 \text{ Hours} \times 11 \text{ Cents} = 66 \text{ cents}$$

Wattage

Wattage is usually listed on the appliance nameplate or serial number plate, or in the owner's manual. If wattage is not listed, you can estimate it by multiplying amps by volts:

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

For example, to calculate the wattage from the nameplate at right:

$$120 \text{ Volts} \times 0.6 \text{ Amps} = 72 \text{ Watts}$$

Model No.:	**ABC12345**
Volts:	**120**
Frequency:	**60 cycles**
Watts:	**75**
Amps:	**0.6**

Motors

It's also good to know that electric motors are commonly rated in horsepower (hp), and 1 hp equals approximately 746 watts.

Time-of-Use and Day-Night Rates

Your operating costs will also vary if you are billed on NYSEG's optional Day-Night or residential Time-of-Use rates or RG&E's Time-of-Use rates.

- **NYSEG Day-Night Rate:** If you use at least 1,000 kWh of electricity per month and 20% of your energy usage occurs during nighttime service hours, you may benefit from our Day-Night Rate. During nighttime service hours, we sell electricity at a slightly lower price to many of our residential customers. This optional service is available to residential customers who qualify, and it applies to all electricity used between approximately 11:30 p.m. and 7 a.m. Eastern Standard Time (12:30 a.m. to 8 a.m. Eastern Daylight Time).
- **Time-of-Use Rate:** With the Time-of-Use service rate, your cost varies according to the period in which you use the electricity. If you use electricity when demand is high (on-peak), your cost will be higher. However, if you use electricity when the demand is low (off-peak), your cost will be lower. If you use electricity during mid-peak hours, your cost will be in between the on-peak and off-peak rates. If you can shift large portions of electricity use to different times of the day, you may benefit from our Time-of-Use Rate.

  For NYSEG customers, go to **nyseg.com**, click on "Your Home, "Pricing and Rates" and then on the Time of Use rates icon. Or call **1.800.572.1111**.

  For RG&E customers, go to **rge.com** click on "Your Home, "Pricing and Rates" and then on Time of Use rates icon. Or call **1.800.743.2110**.

Electrical Appliances

Seasonal Home Comfort

	Average Wattage	Estimated monthly hours	Energy use kWh/month	Cost/month @ 11 cents/kWh
Air Conditioning				
Room A/C 5,000-6,000 Btu	684	163	111.5	$12.26
Room A/C 7,000-9,000 Btu	942	163	153.5	$16.89
Room A/C 10,000-12,000 Btu	1378	163	224.6	$24.71
Room A/C 18,000 Btu	2000	163	326.0	$35.86
Cent A/C 24,000 Btu	2400	190	456.0	$50.16
Cent A/C 36,000 Btu	3600	190	684.0	$75.24
Cent A/C 48,000 Btu	4800	190	912.0	$100.32
Space Heating				
Portable Heater	1500	92	138.0	$15.18
Heating/Cooling System Support				
Furnace Fan	438	238	104.2	$11.47
Oil Burner Motor	235	284	66.7	$7.34
Heat System Circulator	154	253	39.0	$4.29
Fans				
Fan Attic	382	216	82.5	$9.08
Fan Ceiling	100	226	22.6	$2.49
Fan Window	175	221	38.7	$4.25
Fan Table/Box	100	120	12.0	$1.32
Air Quality				
Humidifier	176	237	41.7	$4.59
Dehumidifier 25 Pints	616	367	226.1	$24.87
Dehumidifier 40 Pints	632	362	228.8	$25.17
Dehumidifier 50 Pints	733	367	269.0	$29.59
Air cleaner with Furnace Fan	400	180	72.0	$7.92
Portable Air Cleaner	113	30	3.4	$0.37

Water Heating & Delivery

	Wattage	Estimated monthly hours	Energy use kWh/month	Cost/month @ 11 cents/kWh
Water Heating				
Electric Hot Water Heater	4500	99	445.5	$49.01
Water Delivery and Quality				
Sump Pump (1/3 hp)	395	10	4.0	$0.44
Well Pump (3/4 hp)	575	49	20.0	$2.20
Heating Tape (25 ft.)	206	62	12.8	$1.40
Water Pipes	240	540	129.6	$14.26
Recreational*				
Pool Filter (1/2 hp)	373	720	268.6	$29.54
Pool Filter (3/4 hp)	560	540	302.3	$33.25
Day/Night rate	880	360	316.8	$34.85
Pool Filter (1 hp) Night Rate	880	225	198.0	$21.78

KEY

Usage that is affected by the number of people in the household is based on a family of four.

Seasonal Home Comfort calculations not affected by number of people in household.

* Some high-use appliances are not on this list because of variability of usage and amount of kilowatt-hours used. Talk with your home-energy appliance dealer.

Refrigeration

	Wattage	Estimated monthly hours	Energy use kWh/month	Cost/month @ 11 cents/kWh
Standard Refrigerator	233	Daily	58.0	$6.38
Frost Free Refrigerator	478	Daily	143.0	$15.73
Freezer - Manual Defrost	340	Daily	83.0	$9.13
Freezer - Automatic Defrost	440	Daily	133.0	$14.63

Food Preparation

	Wattage	Estimated monthly hours	Energy use kWh/month	Cost/month @ 11 cents/kWh
Broiler	1260	6	7.6	$0.83
Carving Knife	100	15	1.5	$0.17
Coffee Maker - Percolator	725	11	8.0	$0.88
Coffee Maker - Drip	1225	9	11.0	$1.21
Deep Fryer	1487	5	7.4	$0.82
Food Processor	405	6	2.4	$0.27
Fry Pan	1274	7	8.9	$0.98
Griddle/Waffle Iron/Sandwich Grill	1200	5	6.0	$0.66
Hot Plate	1200	7	8.4	$0.92
Kettle (Tea)	1500	4	6.0	$0.66
Mixer/Blender	142	2	0.3	$0.03
Microwave Oven (1.25 cu. Ft.)	1463	7	10.2	$1.13
Popcorn Popper (Hot Air)	1400	2	2.8	$0.31
Popcorn Popper (Oil)	575	2	1.2	$0.13
Range with Oven	12133	9	109.2	$12.01
Range Self-Cleaning	12200	8	97.6	$10.74
Rotisserie	1400	4	5.6	$0.62
Slow Cooker (Crock Pot)	179	23	4.1	$0.45
Toaster Oven	1440	7	10.1	$1.11
Toaster	1149	3	3.4	$0.38

Household Care

	Wattage	Estimated monthly hours	Energy use kWh/month	Cost/month @ 11 cents/kWh
Laundry				
Clothes Dryer	5000	20	100.0	$11.00
Washing Machine	500	19	9.5	$1.05
Kitchen				
Dishwasher	1075	15	15.9	$1.75
Dishwasher (With Electric Hot Water)	430	30	12.9	$1.42
Dishwasher (With Natural Gas Hot Water)	350	30	10.5	$1.16
Dishwasher Using Heat Dryer	1033	30	31.0	$3.41
Dishwasher Using Air Dry	900	30	27.0	$2.97
Electricity to Heat Water	1300	30	39.0	$4.29
Garbage Disposal	445	3	1.2	$0.13
Trash Compactor	400	8	3.2	$0.35
Can Opener	150	26	3.8	$0.42
Miscellaneous				
Sewing Machine	85	13	1.1	$0.12
Vacuum Cleaner	637	7	4.1	$0.46
Portable or Canister Vacuum	800	5	4.0	$0.44
Central Vacuum	1600	6	9.6	$1.06
Lawn and Garden				
Weed Trimmer	525	5	3	$0.33
Electric Lawn Mower	3,000	10	30	$3.30
Hedge Trimmer	300	3	0.8	$0.08
Bug Zapper	45	10	0.5	$0.05
Home Security				
Security/Fire Alarm	20	720	14.4	$1.58
Garage Door Opener	373	10	3.5	$0.39

Personal Care

	Wattage	Estimated monthly hours	Energy use kWh/month	Cost/month @ 11 cents/kWh
Health and Beauty				
Electric Curlers	350	5	1.5	$0.17
Curling Iron	190	7	1.0	$0.11
Electric Toothbrush	4	76	0.1	$0.01
Germicidal Lamp	20	588	11.8	$1.29
Hair Dryer	1125	4	5.0	$0.55
Hair Dryer Hand Held	1233	3	4.0	$0.44
Shaver	15	4	0.0	$0.00
Sunlamp	286	6	1.7	$0.18
Vaporizer	480	6	2.5	$0.28
Personal Comfort				
Heating Pad	65	20	1.3	$0.14
Electric Blanket	174	97	16.9	$1.86
Electric Blanket for Single Bed	75	120	9.0	$0.99
Electric Blanket for King Size Bed	150	120	18.0	$1.98
Waterbed Heater	375	273	102.4	$11.26
Cool Air Vaporizer	40	240	9.6	$1.06
Warm Air Vaporizer	750	240	180	$19.80
Home Medical Care				
Oxygen Concentrator	400	240	96.0	$10.56
Nebulizer	185	60	11.1	$1.22
Kidney Dialysis	1450	65	94.3	$10.37
Portable Water Purification System	440	65	28.6	$3.15
Specialty Adjustable Bed	85	2	0.1	$0.01

Life-sustaining equipment: Anyone who uses life-sustaining equipment that operates on electricity should contact NYSEG or RG&E. We may enroll you in one of our critical customer programs or provide you with specific advice on how to prepare for power interruptions.

Home/Office and Entertainment

	Wattage	Estimated monthly hours	Energy use kWh/month	Cost/month @ 11 cents/kWh
Home/Office Communications				
Home Computer with 17" Color Monitor and Speakers	250	120	30.0	$3.30
Laptop Computer	50	120	6.0	$0.66
Printer - Ink/Bubble Jet (on Standby)	3	120	0.4	$0.04
Printer - Ink/Bubble Jet (in Use)	180	15	2.7	$0.30
Printer - Laser (on Standby)	35	180	6.3	$0.69
Printer - Laser (in Use)	800	15	12.0	$1.32
Typewriter	35	8	0.3	$0.03
Modem - Cable or Phone	20	180	3.6	$0.40
Scanner	45	3	0.1	$0.01
Fax Machine - Thermal Paper	95	2	0.2	$0.02
Fax Machine - Laser	257	2	0.5	$0.06
Copier (Desktop) 1,000 Copies per Month	800	38	30.4	$3.34
Video Game without TV	13	200	2.6	$0.29
Video Game with TV	200	30	6.0	$0.66
Answering Machine	20	720	14.4	$1.58
Cordless Telephone	3	720	2.2	$0.24
Fax Machine (Standby)	5	720	3.6	$0.40
Copier (Standby)	100	160	16.0	$1.76
Copier (In Use)	1500	20	30.0	$3.30
Audio Systems				
Stereo System (Tuner/Receiver, Speakers)	150	50	7.5	$0.83
Portable Stereo (Boom Box)	30	50	1.5	$0.17
Audio System (Dual Tape Deck)	40	60	2.4	$0.26
Alarm Clock or AM/FM Clock Radio	4	720	2.9	$0.32
CD Player (5 Disc Changer)	20	60	1.2	$0.13

Home/Office and Entertainment (continued)

	Wattage	Estimated monthly hours	Energy use kWh/month	Cost/month @ 11 cents/kWh
Televisions and Video Systems				
CRT Television - 13" Black and White	48	185	8.9	$0.99
CRT Television Color - 14-19" color	125	185	23.1	$2.54
CRT Television Color - 21-26" color	150	185	27.8	$3.05
CRT Television Color - Larger than 26"	200	185	37.0	$4.07
Television Color - 50" High-definition Projection	250	185	46.3	$5.09
Television LCD 32"	125	185	23.1	$2.54
Television LCD 42"	210	185	38.9	$4.27
Television Plasma 42"	270	185	50.0	$5.49
Television Plasma 50"	340	185	62.9	$6.92
Cable TV Converter Box	25	180	4.5	$0.50
Satellite Dish	100	180	18.0	$1.98
VCR	38	50	1.9	$0.21
DVD Player	20	60	1.2	$0.13

Lighting

	Wattage	Estimated monthly hours	Energy use kWh/month	Cost/month @ 11 cents/kWh
Fluorescent (Bulbs, Tubes, Circles, Globes, etc.)				
9-watt	9	135	1.2	$0.13
15-watt	15	135	2	$0.22
27-watt	27	135	3.6	$0.40
40-watt	40	135	5.4	$0.59
80-watt	80	135	10.8	$1.19
Incandescent (Bulbs - Standard and Energy Saving)				
7.5-watt	7.5	135	1	$0.11
40-watt	40	135	5.4	$0.59
60-watt	60	135	8.1	$0.89
75-watt	75	135	10.1	$1.11
100-watt	100	135	13.5	$1.49
Outdoor/Security (Floodlights, Dusk to Dawn, High Pressure Sodium, Mercury Vapor, Ornamental, etc.)				
Dusk to Dawn (HP Sodium)	75	300	22.5	$2.48
Dusk to Dawn (MV)	175	300	52.5	$5.78
Incandescent Floodlight	150	300	45	$4.95
Mercury Vapor Floodlight	150	300	45.0	$4.95
Security (HP Sodium)	70	300	21.0	$2.31
Landscape Lights (per Bulb)	40	300	12	$1.32

Other

	Wattage	Estimated monthly hours	Energy use kWh/month	Cost/month @ 11 cents/kWh
Crafts and Hobbies				
Soldering Gun	600	1	0.6	$0.07
Ceramics Kiln	5,000	21	105.0	$11.55
Animal Care				
Aquarium, 10-gallon (with Light and Heater)	120	8	1.0	$0.11
Aquarium, 20-gallon (with Light and Heater)	155	10	1.6	$0.17
Automotive				
Engine Block Heaters	500	18	8.8	$0.96
Engine Block Heaters - Radiator Hose Type	925	180	166.5	$18.32
Engine Block Heaters - Oil Dipstick Type	400	180	72.0	$7.92
DC Battery Charger	100	2	0.2	$0.02

Natural Gas Operating Costs

Natural gas use is measured by volume in units of 100 cubic feet (ccf). For billing, ccf is converted into therms, a measure of heat content. One therm equals 100,000 British thermal units (Btu). One therm of natural gas is also roughly equal to one ccf.

Most natural gas appliance ratings are expressed as Btu per hour (Btuh). This rating indicates the amount of energy required (input) or energy produced (output) by the unit. Such information can be found on the appliance nameplate or in the owner's manual. To calculate the cost of operating an appliance, it is necessary to first convert your natural gas use to therms as follows:

$$\frac{\text{Btuh rating}}{100{,}000} \times \text{Hours Used} = \text{Therms Used}$$

Then, simply multiply the therms used by the price of natural gas. In this example, we assume the total average price for natural gas is **$1.30 per therm** (supply and delivery).

Keep in mind the price you actually pay for natural gas may vary, depending on what part of the state you live in and whether you receive your natural gas supply from NYSEG/RG&E or an alternate supplier. **Refer to your bill for your actual price per therm**.

Example: Calculate the cost to operate a natural gas clothes dryer with a rating of 20,000 Btuh for five hours per month.

$$(20{,}000 \div 100{,}000) \times 5 \text{ Hours} = 1 \text{ Therm}$$

$$1 \text{ Therm} \times \$1.30 = \$1.30 \text{ per Month}$$

Natural Gas Appliances

Heating, Laundry, etc.	Btu/hour	Estimated monthly hours	Energy use therms/month	Cost/month @ $1.30/therm
Heating System	120,000	92	92	$119.08
Water Heater	39,000	22	22	$28.60
Pool Heater	250,000	27	27	$35.10
Spa/Hot Tub Heater	200,000	33	33	$42.90
Range with Oven	47,000	4	4	$5.20
Clothes Dryer	19,000	5	5	$6.28
Outside Grill	36,000	4	4	$5.20
Outside Gas Light	2,000	6	6	$7.80

KEY

Calculate the cost to operate a natural gas clothes dryer with a rating of 20,000 Btuh for five hours per month. (20,000 ÷ 100,000) x 5 hours = 1 therm. 1 therm x $1.30 = $1.30 per month
Usage that is affected by the number of people in the household is based on a family of four

Important Contact Information

NYSEG

Natural gas odors or emergencies:
1.800.572.1121 (24 hours a day, every day)
or call 911

Electricity interruptions or emergencies:
nyseg.com or 1.800.572.1131
(24 hours a day, every day)

Customer service: 1.800.572.1111

Payment arrangements: 1.888.315.1755

Hearing- and speech-impaired:
Dial 711 (New York Relay Service)

nyseg.com

RG&E

Natural gas odors or emergencies:
1.800.743.1702 (24 hours a day, every day)
or call 911

Electricity interruptions or emergencies:
rge.com or 1.800.743.1701
(24 hours a day, every day)

Customer service: 1.800.743.2110

Payment arrangements: 1.877.266.3492

Hearing- and speech-impaired: Dial 711
(New York Relay Service) or 1.800.962.3293

rge.com