

# Your Electricity Usage

Learn how to hunt for

## VAMPIRE POWER!



**TEAMING UP  
TO SAVE  
YOU MONEY!**



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## ELECTRICITY USAGE

Electricity use is on the rise in most homes. One reason we're using more electricity is because we're using more equipment and gadgets. Along with our traditional home appliances we have computer systems, entertainment centers, video games, battery chargers for our cell phones and MP3 devices, and the list continues to grow!

Before you turn on your television, or plug in your new refrigerator, take a minute to think about how much electricity it will use. How much does it impact your utility bill? Does your bill seem high lately and you don't know why? You can solve the mystery by learning basic measurements of electricity and by using the handy **ENERGY USAGE CHART** on the next few pages. Remember, the chart provides average use – energy-efficiency appliances will use less, older models will use more.

## HOW TO ESTIMATE ENERGY USE AND COST

Appliance and equipment wattage and operating time can vary greatly. The following information will show you how to determine where your energy dollars are being spent.

### Step 1 – How is it measured?

The cost of electricity is determined by the number of kilowatt-hours (kWh) used during a billing period. The first step is to determine your cost per kilowatt-hour.

$\$ \text{ Amount of Electric Bill} / \text{kWh used} = \text{kWh Cost}$

**Example:**  $\$100 / 1000 \text{ kWh} = \$.10 \text{ per kWh}$

### Step 2 – How much does it use?

Since the wattage of an appliance determines the electrical usage per hour, the second step is to determine the wattage. The wattage of an appliance is found on the serial plate. But it is possible that the electrical use will be expressed in volts and amperes, rather than watts. If so, multiply volts by amperes to determine the wattage.

**Example:**  $120 \text{ volts} \times 12.1 \text{ amps} = 1,452 \text{ watts}$

**Microwave Serial Plate:**

Amps 12.1	Volts 120
Hertz 60	Watts 1452
Form no. 00000	Model no. 0000
Code 0	Serial no. 00000

### Step 3 – What is the cost?

If you have an appliance that is rated at 1000 watts (1 kilowatt) and you use it for 1 hour, you have used 1 kilowatt-hour of electricity ( $\text{watts}/1,000 = \text{kilowatts (kW)}$ )  $\text{kW} \times 1 \text{ hour of use} = 1 \text{ kilowatt hour (kWh)}$ . How much does this cost you? Multiply the kWh by the rate to find your hourly cost.

$\text{kWh use} = 1000 \text{ watts} \times 1 \text{ hour} / 1,000 \text{ watts} = 1 \text{ kWh}$

Your cost =  $1 \text{ kWh} \times \$.10 = \$.10$  or 10 cents

**Example:** A kitchen light with two 75 watt bulbs, on 2.5 hours per day:  
 – 2 bulbs x 75 watts = 150 watts  
 – 150 watts x 2.5 hours = 375 watt-hours per day  
 – 375 watt hours/1000 = .375 kWh per day  
 – .375 kWh x 30 days = 11.25 kWh per month  
 – 11.25 kWh x \$.10 = \$1.125/month

## HOW TO REDUCE YOUR ENERGY USE

When you're ready to replace your appliances or equipment, look for products with the ENERGY STAR® label. They use less energy while providing the same performance and features as conventional models. You'll also get great rebates on your purchase of ENERGY STAR® products through Austin, Owatonna, and Rochester Public Utilities' CONSERVE & SAVE rebate program. See the back cover of this brochure for more information.



## ENERGY USAGE CHART

Appliance or Equipment	Typical Wattage Rating	Avg Hours used per Month*	Avg kWh Used per Month	Avg Cost per Month (10¢ per kWh)
<b>COMFORT CONDITIONING</b>				
<b>Air Conditioning Central (30,000 BTU)</b>				
Conventional SEER 7.5	4,000	180	720	\$72.00
Conventional SEER 10	3,000	180	540	\$54.00
Energy Star SEER 13	2,300	180	414	\$41.40
<b>Air Conditioning Room (8,000 BTU)</b>				
Conventional EER 7.5	1,070	180	193	\$19.30
Conventional EER 10	800	180	144	\$14.40
Energy Star EER 11	730	180	131	\$13.10
<b>Electric Space Heater</b>	1,500	240	360	\$36.00
<b>Fans</b>				
Conventional Ceiling	100	240	24	\$2.40
Energy Star Ceiling	40	240	9.6	\$0.96
Portable	150	240	36	\$3.60
Window	200	240	48	\$4.80
<b>Dehumidifier</b>				
Conventional (40 pint)	900	240	216	\$21.60
Energy Star (40 pint)	600	240	144	\$14.40
<b>Electric Blanket</b>	175	240	42	\$4.20
<b>Humidifier (portable)</b>	175	180	31.5	\$3.15

\*based on 720 hours/month

Appliance or Equipment	Typical Wattage Rating	Avg Hours used per Month*	Avg kWh Used per Month	Avg Cost per Month (10¢ per kWh)
<b>HOME ENTERTAINMENT</b>				
<b>CD Player</b> (5 disk Changer)	20	10	0.2	\$0.02
<b>Computer Components</b>				
CPU	60	120	7.2	\$0.72
Modem	20	120	2.4	\$0.24
Monitor (CRT)	80	120	9.6	\$0.96
Wireless Router	7	720	5.04	\$0.50
Laptop	50	120	4.5	\$0.45
<b>Printers</b>				
Ink Jet Printer	180	5	0.9	\$0.09
Laser Printer	650	5	3.25	\$0.33
<b>DVD Player</b>	20	10	0.2	\$0.02
<b>Radio</b>	8	730	6	\$0.60
<b>Satellite Dish</b>	100	120	12	\$1.20
<b>Stereo</b>	30	10	0.3	\$0.03
<b>TIVO</b>	40	720	28.8	\$2.88
<b>VCR</b>	40	10	0.4	\$0.04
<b>Video Games</b>				
Nintendo® Wii™	17	30	0.51	\$0.05
Sony Playstation®3	197	30	5.91	\$0.59
Xbox 360	187	30	5.61	\$0.56
<b>Television</b> (4 hours per day)				
Digital Cable TV Box	25	120	3	\$0.30
Standard TV – 36"	87	120	10.44	\$1.04
LCD 50"	290	120	34.8	\$3.48
Energy Star LCD 50"	220	120	26.4	\$2.64
Plasma 50"	350	120	42	\$4.20
Energy Star Plasma 50"	300	120	36	\$3.60
<b>KITCHEN</b>				
<b>Blender</b>	200	10	2	\$0.20
<b>Bread Maker</b>	600	15	9	\$0.90
<b>Coffee Maker</b> (drip)				
Brew Cycle	1,100	8	9	\$0.90
Warm	70	57	4	\$0.40
<b>Microwave</b> (full power)	1,500	7	10	\$1.00
<b>Toaster</b> (two slices)	1,100	3	3	\$0.30
<b>Toaster Oven</b>	1,250	1	1.25	\$0.13
<b>Slow Cooker</b>	200	50	10	\$1.00
<b>Oven</b>				
Standard	3,200	12	38.4	\$3.84
Range	1,000	15	15	\$1.50
<b>Dishwasher</b> (1 load/day) (not including hot water)				
Conventional Unit	2,000	25	58	\$5.80
Energy Star Unit	1,800	25	46	\$4.60

\*based on 720 hours/month

Appliance or Equipment	Typical Wattage Rating	Avg Hours used per Month*	Avg kWh Used per Month	Avg Cost per Month (10¢ per kWh)
<b>KITCHEN</b>				
<b>Freezer</b>				
Freezer (16 cf, upright)	200	375	75	\$7.50
Energy Star Freezer	180	375	67.5	\$6.75
<b>Refrigerator</b>				
Standard Side-by-side, 25 cf	-	-	60	\$6.00
Energy Star Side-by-side, 25 cf	-	-	48	\$4.80
Standard Top Freezer 18 cf	-	-	48	\$4.80
Energy Star Top Freezer 18 cf	-	-	38	\$3.80
10-15 Year old, 17 cf	-	-	80	\$8.00
<b>LAUNDRY</b>				
<b>Clothes Dryer</b>	3,500	25	87.5	\$8.75
<b>Clothes Washer</b>				
Standard Washer (not including hot water)	256	25	6.4	\$0.64
Energy Star Washer (not including hot water)	166	25	4.15	\$0.42
<b>Iron, Hand</b>	1,200	4	5	\$0.50
<b>Sewing Machine</b>	75	13	1	\$0.10
<b>LIGHTING</b>				
<b>Nightlight</b>	7	730	5	\$0.50
<b>100 Watt Incandescent</b>	100	150	15	\$1.5
<b>27 Watt Compact Fluorescent</b> (= 100 watt)	27	150	4.05	\$0.41
<b>75 Watt Incandescent</b>	75	150	11.25	\$1.13
<b>23 Watt Compact Fluorescent</b> (= 75 watt)	23	150	3.45	\$0.35
<b>60 Watt Incandescent</b>	60	150	9	\$0.90
<b>13 Watt Compact Fluorescent</b> (= 60 watt)	13	150	1.95	\$0.20
<b>SMALL APPLIANCES/HOUSEWARES</b>				
<b>Clock Radio</b>	8	720	5.76	\$0.58
<b>Cell Phone Charger</b> (on, charging)	4	90	0.36	\$0.04
<b>Cordless Phone &amp; Answering Machine</b> (24 hrs/day always on)				
6	720	4.32	\$0.43	
<b>Digital Picture Frames</b> (6 hours a day)				
12	180	2.16	\$0.22	
<b>Electric Blanket</b>	75	240	18	\$1.80
<b>Garage Door Opener</b>	350	3	1	\$0.10
<b>Hair Dryer</b> (hand held)	1,400	2	3	\$0.30
<b>i-Pod</b> (charging)	4	12	0.048	\$0.005
<b>Medical – Oxygen Concentrator</b>	400	360	144	\$14.40
<b>Vacuum Cleaner</b>	1,000	6	6	\$0.60
<b>MISCELLANEOUS</b>				
<b>Hot Tub – Electric Heater</b> (240v)	5,000	183	915	\$91.50
<b>Hot Tub Pump</b> (Circulation)	1,000	183	183	\$18.30

\*based on 720 hours/month

## VAMPIRE POWER – JOIN THE HUNT FOR VAMPIRES!

Although you may not realize it, your house is full of vampires! As you sleep, when you're awake, and while you're out, these vampires have the run of your house.

Vampire Power is a phenomenon most of us passively permit. It is a plague that consumes electricity while draining your wallet and polluting the atmosphere in the process. A vampire load is the power that is sucked from a piece of electronic equipment when it is seemingly turned off but still in standby mode, or not in use. A growing number of household electrical devices are designed to draw power 24 hours a day, seven days a week. Even when they are turned "off" these devices continue to use electricity to operate features such as clocks, timers, and touch pads, or to receive signals from remote controls.

### THE HUNT

The first challenge is to identify products that draw Vampire Power. Here are clues to recognizing products that draw power continuously:

#### Products with Vampire Power use:

- A remote control
- An external power supply
- A digital display, LED status light, or digital clock
- A battery charger
- A soft-touch keypad



### 5 TIPS TO STRIP THE FANGS OUT OF VAMPIRE POWER:

**1. Get unplugged:** All of your chargers (cell phone, MP3, laptop, and even electric toothbrushes) continue to draw electricity even when the device is not charging. Only 5 percent of the power drawn by a cell phone charger is used to charge the phone – the other 95 percent is wasted when it is left plugged into the wall.

**2. Use a power strip:** Choose a power strip with a switch to control clusters of products. When you're not using products, turn the power strip off. The most likely targets for clusters are computer equipment (PC, monitor, printer, scanner, speakers, etc.), entertainment centers (TV, DVD player, speakers, game consoles), audio equipment (receiver, amplifier, CD player), and battery chargers.

**3. Use a Kill A Watt™ Meter:** Austin, Owatonna, and Rochester Public Utilities all have Kill A Watt™ meters that you can use in your home for free! This device will tell you how much electricity products are using whether turned on or off. Once you know how much power is being



used when devices are running, or deceptively idle, you'll truly discover how much energy and money can be saved by replacing, unplugging, or using a smart power strip to cut off any power to that item.

**4. Turn your computer off:** Computers in sleep mode can cost an additional \$70 per year. If you are unable to do so, at least make sure the computer goes into a low-power sleep, standby, or hibernate mode. And watch out for those screen savers! Graphic intense screen savers can actually waste power.

**5. Look for the STAR:** Products that have earned the ENERGY STAR® use less energy while providing the same performance and features as conventional models. The ENERGY STAR® is awarded to products that meet or exceed the established criteria for energy efficiency; they are as much as 10 to 50 percent more efficient than conventional counterparts. They use less energy and save you money.



You'll also get great rebates on your purchase of ENERGY STAR® products through Austin, Owatonna, and Rochester Public Utilities' CONSERVE & SAVE rebate program. See the back cover of this brochure for more information.

### VAMPIRE POWER CHART

	Watts in Standby Energy (Vampire Load)	Estimated Hours Off per Month (Vampire Energy)*	Avg kWh/Used per Month	Estimated Monthly Cost (10¢ per kWh)
<b>Cell Phone Charger</b> (not charging, but plugged in)	1	630	0.63	\$0.06
<b>Coffee Pot</b>	1	655	.66	\$0.06
<b>Desktop PC</b> (computer and LCD Monitor)	5	600	3.00	\$0.30
<b>Computer Speakers</b>	2	600	1.20	\$0.12
<b>Computer Printer</b>	6	715	4.29	\$0.43
<b>Digital Cable Box</b>	35	600	21.00	\$2.10
<b>Dishwasher</b>	1.8	695	1.20	\$0.12
<b>Standard DVD</b>	4.5	710	3.20	\$0.32
<b>Energy Star DVD</b>	0.9	710	0.64	\$0.06
<b>Garage Door Opener</b>	2.5	717	1.79	\$0.18
<b>i-Pod Charger</b> (not charging, but plugged in)	1	630	0.63	\$0.06
<b>Microwave</b>	3	713	2.14	\$0.21
<b>Oven</b>	3	670	2.01	\$0.20
<b>Standard TV</b>	5.9	600	3.54	\$0.35
<b>Energy Star TV</b>	2.5	600	1.50	\$0.15
<b>Standard Stereo</b> (rack system)	3.2	710	2.27	\$0.23
<b>Energy Star Radio</b>	0.9	710	0.64	\$0.06
<b>Standard VCR</b>	5.1	710	3.62	\$0.36
<b>Energy Star VCR</b>	3.5	710	2.49	\$0.25
<b>Video Game Console</b>	1	690	0.69	\$0.07

\*based on 720 hours/month

# CONSERVE & \$AVE

## WHAT IS CONSERVE & SAVE?

Austin Utilities, Owatonna Public Utilities, and Rochester Public Utilities offer dozens of rebates to customers who purchase energy efficient appliances and equipment.

**Visit our web sites for a complete, up-to-date list of eligible products.**

With CONSERVE & SAVE, our rebates will save you money on your purchase, and the new appliances and equipment will save you energy and money on your utility bills. Saving energy also helps our environment by using less of our valuable natural resources.

## HOW DOES CONSERVE & SAVE WORK?

- 1) Purchase appliances and equipment with the ENERGY STAR® label or that meet our Minimum Efficiency Requirements. (see applications for Terms & Conditions)
- 2) Get a rebate application from your dealer, contractor, utility, or download them from our web sites:
  - [www.austinutilities.com](http://www.austinutilities.com)
  - [www.owatonnautilities.com](http://www.owatonnautilities.com)
  - [www.rpu.org](http://www.rpu.org)
- 3) Fill out the application completely, attach your sales receipt and any other required documentation, and send it to your utility.

## TEAMING UP TO SAVE YOU MONEY!



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