



Reducing appliance energy use

FACT SHEET



APARTMENT & CONDO EFFICIENCY SERVICES



ENERGY STAR PRODUCTS



HOME PERFORMANCE WITH ENERGY STAR



WISCONSIN ENERGY STAR HOMES

For more information call 800-762-7077 or visit focusonenergy.com

Electricity use is on the rise in most homes. One reason we're using more electricity is because we're using more electronic equipment. We have home computer systems, home entertainment systems, VCRs and answering machines as well as the traditional home appliances (refrigerators, stoves, washers, etc.). Some of these appliances use electricity even when they are turned off. The average Wisconsin homeowner spends about \$400 per year on electricity to run their appliances and household electronic equipment.

BUYING EFFICIENT APPLIANCES

One way to reduce appliance energy use is to buy the most energy efficient appliances available. When you're in the market for a new appliance or other household electronic equipment, look for ENERGY STAR qualified products. The ENERGY STAR is awarded to those products that meet or exceed established criteria for energy efficiency and are as much as 10 percent to 50 percent more efficient than their conventional counterparts. They use less energy and save you money.

Refrigerators and air conditioners

In many households, the refrigerator uses more energy than any other household appliance. An average older model uses more than 1,000 kWh per year. New models that meet the federal appliance efficiency standards use only 800 kWh per year. ENERGY STAR qualified refrigerators are at least 10 percent more efficient with some units as much as 30 percent more efficient than the Federal Standard. Replacing an older refrigerator with an ENERGY STAR qualified model can save you up to \$100 in annual energy costs. Even if your old refrigerator still runs, it makes economic sense to replace it.

Conventional room air conditioners are also high energy users. Even if your current air conditioner still runs, it may be cost-effective to replace it with an ENERGY STAR qualified model. Doing so can save you an average of \$14 a year in energy costs.



REFRIGERATORS (18.5–20.5 CUBIC FEET)

| TYPE AND YEAR OF PURCHASE | TYPICAL KWH/MONTH | ESTIMATED YEARLY COST* |
|--|-------------------|------------------------|
| Top freezer—purchased before 1990 | 100 | \$96.00 |
| Top freezer—purchased between 1990 & 1993 | 70 | \$67.20 |
| Top freezer—purchased after 1993 | 55 | \$52.80 |
| ENERGY STAR—top freezer | 37 | \$35.52 |
| Side-by-side—purchased before 1990 | 135 | \$129.60 |
| Side-by-side—purchased between 1990 & 1993 | 100 | \$96.00 |
| Side-by-side—purchased after 1993 | 70 | \$67.20 |
| ENERGY STAR—side-by-side | 48 | \$46.08 |

*CALCULATED AT 8¢ PER KWH

Computers and monitors

Frequently, computer equipment is turned on and left on even if it is not being used. ENERGY STAR qualified computer equipment has a "sleep" mode that reduces the power consumption when the equipment is on but not being used.

An ENERGY STAR qualified monitor consumes up to 90 percent less energy than models without power management features.

| COMMON HOUSEHOLD APPLIANCES | | | | |
|---|-----------------|--------------------------|---------------|-----------------------|
| EQUIPMENT | TYPICAL WATTAGE | HOURS IN USE (PER MONTH) | KWH/MONTH | ESTIMATED YEARLY COST |
| Air Conditioner | | (typical July) | | |
| Central (30,000 BTU) | | | | |
| Conventional SEER 7.5 | 4,000 | 180 | 720 | \$691.20 |
| Conventional SEER 10 | 3,000 | 180 | 540 | \$518.40 |
| ENERGY STAR SEER 13 | 2,300 | 180 | 414 | \$397.44 |
| Room (8,000 BTU) | | | | |
| Conventional EER 7.5 | 1,070 | 180 | 193 | \$184.92 |
| Conventional EER 10 | 800 | 180 | 144 | \$23.04 |
| ENERGY STAR EER 11 | 730 | 180 | 131 | \$126.12 |
| Aquarium Pump | Varies | 730 | Varies | up to \$480.00 |
| Blender | 300 | * | * | up to \$1.20 |
| Broiler (portable) | 1,200 | 7 | 8 | \$7.68 |
| Can Opener | 100 | * | * | up to \$1.20 |
| Clock Radio | 8 | 730 | 6 | \$5.64 |
| Clothes Dryer | 5,500 | 16 | 88 | \$84.48 |
| Clothes Washer (25 loads/month) | | | | |
| (Electric Water Heater) | | | | |
| Conventional | NA | NA | 68 | \$65.52 |
| ENERGY STAR | NA | NA | 29 | \$27.48 |
| (Gas Water Heater) | | | | |
| Conventional | NA | NA | see footnotes | \$31.20 |
| ENERGY STAR | NA | NA | bottom left | \$13.32 |
| Coffee Maker (drip) | | | | |
| Brew Cycle | 1,100 | 8 | 9 | \$8.64 |
| Warm | 70 | 57 | 4 | \$3.84 |
| Convection Oven (portable) | 1,500 | 3 | 5 | \$4.80 |
| Corn Popper | | | | |
| Hot Air | 1,400 | 1 | 1 | \$4.80 |
| Oil | 575 | 2 | 1 | \$0.96 |
| Curling Iron | 40 | * | * | up to \$1.20 |
| Deep Fryer | | | | |
| Regular Size | 1,500 | 2 | 3 | \$2.88 |
| Small Size | 600 | 2 | 1 | \$0.96 |
| Dehumidifier | | | | |
| Conventional (40 pint) | 900 | 240 | 216 | \$207.36 |
| ENERGY STAR (40 pint) | 600 | 240 | 144 | \$138.24 |
| Dishwasher (one load/day) | | | | |
| Not including hot water | | | | |
| Conventional Unit | 2,000 | 25 | 58 | \$56.04 |
| ENERGY STAR Unit | 1,800 | 25 | 46 | \$44.40 |
| With hot water from electric water heater | 1,200 | 100 | 120 | \$115.20 |
| With hot water from gas water heater | NA | NA | 1 Therm | \$7.68 |
| Electric Blanket | 75 | 240 | 18 | \$17.28 |
| Fan | | | | |
| Ceiling | 100 | 250 | 25 | \$24.00 |
| ENERGY STAR Ceiling | 40 | 250 | 10 | \$9.60 |
| Window | 200 | 150 | 30 | \$28.80 |
| Food Processor | 720 | * | * | up to \$1.20 |

*CALCULATED AT 8¢ PER KWH

¹Conventional Gas Water Heater—based on 6 kWh of electricity and 3 therms of gas.

²ENERGY STAR qualified Gas Water Heater—based on 3 kWh of electricity and 1 therm of gas.

*Uses less than one kWh/month; costs less than 10 cents per month to operate.

| COMMON HOUSEHOLD APPLIANCES | | | | |
|------------------------------------|-----------------|--------------------------|-----------|-----------------------|
| EQUIPMENT | TYPICAL WATTAGE | HOURS IN USE (PER MONTH) | KWH/MONTH | ESTIMATED YEARLY COST |
| Freezer (16 cu.ft., upright) | 200 | 375 | 75 | \$72.00 |
| Frying Pan | 1,200 | 7 | 8 | \$7.68 |
| Garage Door Opener | 350 | 3 | 1 | \$0.96 |
| Garbage Disposal | 445 | * | * | up to \$1.20 |
| Hair Dryer (hand held) | 1,400 | 2 | 3 | \$2.88 |
| Heat Lamp (infrared) | 250 | 4 | 1 | \$0.96 |
| Hot Tub | Varies | Varies | Varies | \$360.00 |
| Humidifier (portable) | 175 | 149 | 26 | \$24.96 |
| Iron (steam) | 1,200 | 4 | 5 | \$4.80 |
| Mattress Pad Heater (full-queen) | 180 | 122 | 22 | \$21.12 |
| Microwave Oven (full power) | 1,500 | 7 | 10 | \$0.96 |
| Nightlight | 7 | 730 | 5 | \$4.92 |
| Radio | 8 | 730 | 6 | \$5.64 |
| Range (electric) | 12,200 | 6 | 75 | \$72.00 |
| Refrigerator (see table on page 1) | | | | |
| Sandwich Grill | 1,150 | 3 | 3 | \$2.88 |
| Sewing Machine | 75 | 13 | 1 | \$0.96 |
| Slow Cooker | 200 | 50 | 10 | \$0.96 |
| Space Heater | 1,500 | 90 | 135 | \$129.60 |
| Swimming Pool Pump (1/2 hp) | 600 | 730 | 432 | \$420.48 |
| Toaster (two slice) | 1,100 | 3 | 3 | \$2.88 |
| Toaster Oven/Broiler | | | | |
| Toaster | 1,500 | 2 | 3 | \$2.88 |
| Oven | 1,500 | 3 | 5 | \$4.80 |
| Broiler | 830 | 5 | 4 | \$3.84 |
| Toothbrush (with charger) | 1 | 730 | 1 | \$0.72 |
| Trash Compactor | 460 | 2 | 1 | \$0.96 |
| Vacuum Cleaner | 1,000 | 6 | 6 | \$5.76 |
| Waterbed (king size 90°F) | | | | |
| Room 70°F With Comforter | 370 | 332 | 123 | \$118.08 |
| Room 60°F With Comforter | 370 | 527 | 195 | \$187.20 |
| Water Heater (52 gal.—electric) | 4,500 | 76 | 342 | \$328.32 |
| Water Pump | 460 | 43 | 20 | \$19.20 |
| Water Softener | 4 | 730 | 3 | \$2.76 |

*CALCULATED AT 8¢ PER KWH

*Uses less than one kWh/month; costs less than 10 cents per month to operate.

COMPUTER EQUIPMENT

| EQUIPMENT | WATTS USED WHEN "ON" | WATTS USED IN STANDBY | HOURS IN USE (PER MONTH) | HOURS ON BUT NOT IN USE | KWH (PER MONTH) | ESTIMATED YEARLY COST* |
|-----------------------|----------------------|-----------------------|--------------------------|-------------------------|-----------------|------------------------|
| Conventional computer | 300 | 55 | 15 | 20 | 22.1 | \$21.22 |
| ENERGY STAR computer | 300 | 15 | 15 | 20 | 9.3 | \$8.93 |
| Conventional monitor | 40 | 40 | 15 | 20 | 13.04 | \$12.86 |
| ENERGY STAR monitor | 40 | 2 | 15 | 20 | 1.24 | \$1.19 |

*CALCULATED AT 8¢ PER KWH

**HOME ELECTRONIC EQUIPMENT**

| EQUIPMENT | WATTS USED WHEN "ON" | WATTS USED WHEN "OFF" OR "ASLEEP" | HOURS IN USE (PER MONTH) | KWH (PER MONTH) | ESTIMATED YEARLY COST* |
|----------------------------------|----------------------|-----------------------------------|--------------------------|-----------------|------------------------|
| Conventional TV | 75.0 | 5.9 | 180 | 16.7 | \$16.02 |
| ENERGY STAR TV | 71.6 | 2.5 | 180 | 14.3 | \$13.67 |
| Conventional VCR | 12.5 | 5.1 | 10 | 3.7 | \$3.60 |
| ENERGY STAR VCR | 10.9 | 3.5 | 10 | 2.6 | \$2.49 |
| Conventional DVD | 17.8 | 4.5 | 70 | 4.5 | \$4.00 |
| ENERGY STAR DVD | 14.1 | 0.9 | 70 | 1.8 | \$1.51 |
| Stereo (rack system) | 51.9 | 3.2 | 30 | 3.8 | \$3.61 |
| ENERGY STAR stereo (rack system) | 49.6 | 0.9 | 30 | 2.1 | \$2.02 |

*CALCULATED AT 8¢ PER KWH

The amount of electricity used is measured as a kilowatt-hour, which is equal to one kilowatt (or 1,000 watts) of electricity used steadily for one hour. For example, ten 100-watt light bulbs, left on for one hour, would use one kilowatt-hour (or 1,000 watt hours) of electricity.

LEARN MORE

focusonenergy.com

Contact Focus to learn more about smart energy choices.

energystar.gov

ENERGY STAR Appliances: This site provides information on energy efficient appliances that meet ENERGY STAR standards. The product information page has a link to a calculator that lets you compare operating costs and energy use of an ENERGY STAR qualified appliance with a non-ENERGY STAR qualified appliance.

Home electronic equipment

Many home electronics use electricity even when the equipment is switched off. Standby electricity accounts for about four to seven percent of total electrical consumption in Wisconsin homes (40 to 70 watts—equivalent to leaving an incandescent light bulb burning all the time). Any appliance with an external power supply, remote control or clock display requires standby electricity. ENERGY STAR qualified home electronics use as much as 50 percent less energy to perform these same functions at the same price as less efficient models.

USING A WATT METER TO MEASURE APPLIANCE ENERGY USE

A watt meter is an electronic instrument that can help you determine exactly how much energy your appliances are using. Plug the meter into the appliance and you can measure how much electricity your appliances are using and what they are costing you. The meter will display wattage, cumulative kilowatt hours and cumulative cost. In many Wisconsin communities, you can borrow a watt meter from your public library.

homeenergy.org/consumerinfo/refrigeration2/article.htm

Home Energy Magazine, Consumer Information: "Identifying Refrigerators to Recycle Early: Replacing Your Refrigerator." This online article provides information on determining whether it is cost effective to replace your refrigerator. Includes links to a database of older model refrigerators.

homeenergy.org/consumerinfo/fans/ceilingfanw.html

Home Energy Magazine, Consumer Information: "Getting the Most from Your Fan: Tips for Maximizing Energy Savings."

Focus on Energy is a public-private partnership offering energy information and services to energy utility customers throughout Wisconsin. The goals of this program are to encourage energy efficiency and use of renewable energy, enhance the environment, and ensure the future supply of energy for Wisconsin. For information about the Focus on Energy services and programs, call 800.762.7077 or visit focusonenergy.com.