Why is my Electric Bill so HIGH??!! How to be a Power Sleuth!

by Lee Ann Kreig

Our electric bills are way too high, so I determined to became a Kilowatt Detective.

To find out how much power the house used "at rest," I read our meter before leaving for the day, making sure that all lights were out. Nothing was running but the freezer, fridge, and the computer, which is always left on. Plus there is the Tivo and cable box, answering machine, electric toothbrushes and an assortment of clocks throughout the house quietly doing their thing. Then I read the meter when I came home and started calculating. To my surprise, the empty "sleeping" house was using .74 kilowatts every hour. That is 6500 kilowatts every year!

I bought a handy-dandy gadget called a Kill-a-watt (pictured above, $25) and began plugging in appliances to figure out which of them was eating me out of house and home. Here is what I found about my faithful helpers:

The old freezer was using 1900 kilowatts per year. A $360 brand new, near exact Energy Star replacement would use only ONE QUARTER the electricity and would pay for itself in less than two years. We replaced it!

The refrigerator uses 800 kilowatts per year, but we may keep it a bit longer as the payback for a replacement is 10 years. A modern replica costs about $550 on sale but would save only about 300 kilowatts per year.

Even though the Tivo and cable modems each use about 200 kilowatts a year, and although I don't watch much TV, I enjoy it when I do — I am keeping them.

Here was the shocker. The computer, which is on 24/7, uses a whopping 2100 kilowatts a year with wireless, cable modem, speakers, monitor, CPU, and backup drives. Turning the computer off when not using is the best power saver, but by simply changing my computer's power settings to hibernate when not in use, I can cut the power cost in half!

Anything that generates heat devours power. I now let my dishes drip dry in the dishwasher. The clothes dryer uses so much that I wonder how Laundromats stay in business! Or how about beauty shops with hair dryers blasting away all day!

In addition to saving money, I learned that saving electricity also reduces CO_2 emissions. Every kWh saved avoids 1.43 pounds of CO_2 from electricity generation. How about that!

Typical Wattages of Various Appliances

Some examples of the range of wattages for various household appliances (from Dept of Energy):

- Aquarium = 50–1210 Watts
- Clock radio = 10
- Coffee maker = 900–1200
- Clothes washer = 350–500
- Clothes dryer = 1800–5000
- Dishwasher = 1200–2400 (using the drying feature greatly increases energy consumption)
- Dehumidifier = 785
- Electric blanket- *Single/Double* = 60 / 100
- Fans
  - Ceiling = 65–175
  - Window = 55–250
- Hair dryer = 1200–1875
- Heater *(portable)* = 750–1500
- Clothes iron = 1000–1800
- Microwave oven = 750–1100
- Personal computer
  - CPU - awake / asleep = 120 / 30 or less
  - Monitor - awake / asleep = 150 / 30 or less
  - Laptop = 50
- Radio *(stereo)* = 70–400
- Refrigerator *(frost-free, 16 cubic feet)* = 725
- Televisions (color)
  - 19" = 65–110
  - 27" = 113
  - 36" = 133
  - 53"-61" Projection = 170
  - Flat screen = 120
- Toaster = 800–1400
- Toaster oven = 1225
- VCR/DVD = 17–21 / 20–25
- Vacuum cleaner = 1000–1440
- Water heater *(40 gallon)* = 4500–5500
- Water bed *(with heater, no cover)* = 120–380

To calculate annual costs:
(Watts x hours/day used x days/year used) / 1000
     x cents/kWh

Example, Hairdryer:
1200 watts x .25 hours x 365 / 1000 = 110 kWh
110 kWh x $.09/kWh = $9.86 per year