



# Bill's Top 10 "Biggest Users"

March 15, 2008



## #1 Water heaters

- Operate efficiently
- How we use them:
  - ✓ Length of shower
  - ✓ Shower saver head rated at 1.5, 2.5, or 5 gallons per minute
  - ✓ Number of showers per day
  - ✓ Distance of the water heater from the bathrooms
  - ✓ Hot or warm water clothes wash
  - ✓ Temperature of hot water is it hotter than set on the thermostat
  - ✓ Circulating pumps keep water warm, but increase kWh consumption
  - ✓ Dripping faucets
  - ✓ Lime build-up in the tank
  - ✓ Located in a cold location - basement or garage



## #2 Water Pumps

- Operative efficiently
- How we use them:
  - ✓ Water logged pump no air in pressure tank
  - ✓ Broken water line pump runs all the time
  - ✓ Pump starts and stops frequently if pressure tank is too small
  - ✓ Well pits with a light bulb or heater to keep pipes from freezing



### #3 Refrigerators & Freezers

- One of the biggest energy improvements
- How we use them:
  - ✓ Proper temperature for the refrigerator is 36 to 40 degrees
  - ✓ Proper temperature for the freezer is 0 to 5 degrees
  - ✓ Stand alone freezer -5 to 0 degrees will keep foods up to 1 year
  - ✓ Location cooler areas is better
  - ✓ Need breathing room do not install in tight areas
  - ✓ Need to be cleaned every 6 month to 12 months, or more for pet owners
  - ✓ Units start running longer over time, using more kwh



## #4 Furnaces

- Operating costs vary by model and type
- New propane & natural gas furnaces are 80% to 95 % energy efficient
  - ✓ High efficiency models have more electric blowers
  - ✓ Blowers drive up kWh consumption
- How we use them:
  - ✓ Need to tune-up once per year
  - ✓ Change filters once per month during peak heating and cooling seasons
  - ✓ Check duct work for leaks
  - ✓ Is ductwork in crawl spaces and attic
  - ✓ Do not block heat ducts
  - ✓ How well are your ducts insulated
  - ✓ The lower the temperature the more efficient
  - ✓ Check thermostat accuracy with a thermometer
  - ✓ Location of thermostat
  - ✓ Running blower 24/7 can add \$40 to \$70 per month to your electric bill



## #5 Dehumidifiers

- They use 500 to 1000 watts per hour depending on size
- How we use them
  - ✓ How many hours a day do they run
  - ✓ Do you have a humidity gauge
  - ✓ Where are they located



## #6 Hot Tubs

- How we use them:
  - ✓ Temperature of water normally at 104 degrees
  - ✓ Have a good tight cover
  - ✓ Have at least one inch of Styrofoam underneath
  - ✓ Location (windy side of house)
  - ✓ Frequency of use
  - ✓ Cost to Operate
    - > \$20 - \$40 per month in the summer
    - > \$40 - \$60 per month in the winter



## #7 Air conditioning

- Window type 500 watts to 1800 watts an hour
- Whole house 1.2 to 5 kwh a hour
- How we use them:
  - ✓ Number of hours it runs per day
  - ✓ What is temperature setting
  - ✓ Location should not be on the sunny side of the building
  - ✓ How well the building is insulated
  - ✓ Change filters once per month



## #8 Television

- Size & types have a lot to do with consumption.
  - ✓ Regular televisions 20" to 25" use one kWh in 6 to 10 hours of viewing
  - ✓ Plasma and LCD 30" to 42" use one kWh in 2.5 to 4 hours of viewing
  - ✓ Projection and larger televisions use one kWh in 1 to 2 hours of viewing



## #9 Lighting

- Very efficient, especially CFL's
- How we use them:
  - ✓ Number of lights, wattage, and operating hours all drive cost
  - ✓ Turn lights off when not needed
  - ✓ CFL's
    - > Sixty watt regular bulb can run for 16.6 hours for 1 kwh
    - > Sixty watt CFL bulb can run for 76 hours for 1 kwh
  - ✓ LED
    - > Cherryland's night light can run 33,333.3 hours for 1 kwh



## #10 Potpourri

- Heat tape:
  - ✓ Thermostat controlled
  - ✓ Roofs - 500 to 1,500 watts per hour
  - ✓ Water Pipes – length of run. Figure 3 watts per foot
- Water pond:
  - ✓ Pumps use 200 watts to 600watts per hour
- Diesel engine heaters:
  - ✓ 500 to 1,500 watts an hour
  - ✓ Control with a thermostat



# Thank You!

CEC Member Forum  
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