Electricity And Conservation

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Hamilton Utilities Corporation
The Business of Public Service

Today's Topic

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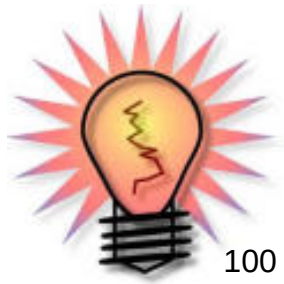

100 Watt Bulb

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25 Watt Bulb

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What is a Light Bulb For?

Why Is A CFL Better?

The problem with incandescent light bulbs is that the heat wastes a lot of electricity. Heat is not light, and the purpose of the light bulb is light, so all of the energy spent creating heat is a waste. Incandescent bulbs are therefore very inefficient. They produce perhaps **15 lumens per watt** of input power.

A fluorescent bulb produces less heat, so it is much more efficient. A fluorescent bulb can produce **between 50 and 100 lumens per watt**. This makes fluorescent bulbs **four to six times more efficient** than incandescent bulbs. That's why you can buy a 15-watt fluorescent bulb that produces the same amount of light as a 60-watt incandescent bulb.

Lamp Cost Comparison

- **100 Watt Incandescent Bulb**
- .50 ¢ to buy
- 1000 hour lifespan
- 90 percent of electricity used is wasted as heat
- Bulbs need replacing more often
- Uses 8.6 ¢ of electricity in 10 hours

- **25 Watt Compact Fluorescent**
- $ 6.00 to buy
- 10,000 hour lifespan
- 90 percent of electricity used is for light
- Fewer bulb replacements
- Uses 2.15 ¢ of electricity in 10 hours

Replacement Bulb Chart

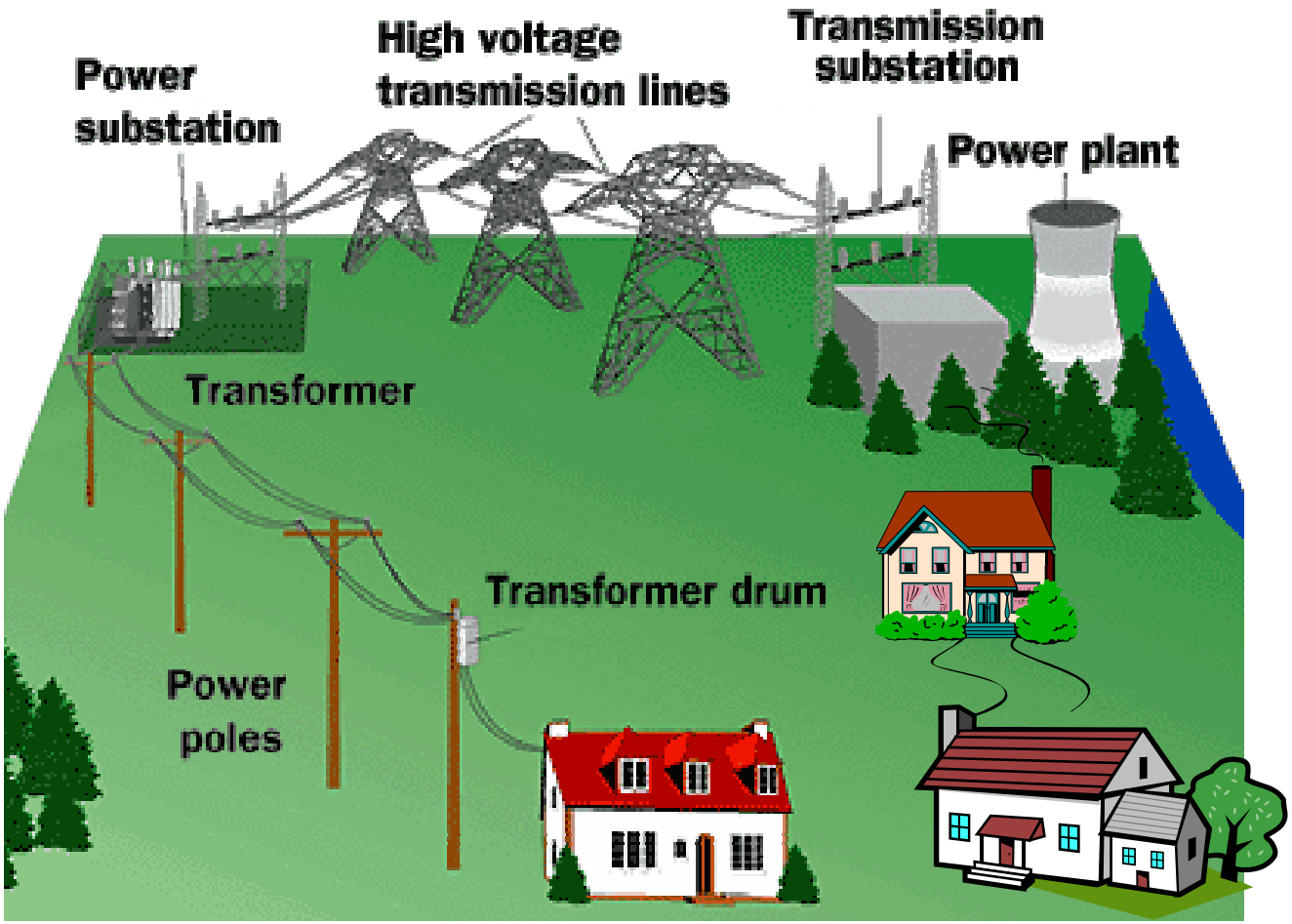
Compact Fluorescent wattage	Incandescent Equivalent
13	50
15	60
20	75
23	90
25	100

How do I select the right CFL for the amount of light I need?

When comparing CFL bulbs to traditional bulbs, compare the **light output**, or **lumens**, and not the watts.

Watts equal the energy used, not the amount of light. In other words, if the package of a 60W incandescent bulb tells you that it puts out 800 lumens, to get the same amount of light you should look for an CFL bulb that puts out 800 lumens or more.

How the Electricity System Works



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Lighting

- **Turn off lights and appliances** in unoccupied rooms.
- **Avoid using 'long-life' incandescent bulbs**. These bulbs use the same amount of energy as regular bulbs, but give off less light per watt.
- **Clean light bulbs and fixtures** regularly. Dust and dirt reduce light and efficiency.

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Lighting

- **Use timers and motion detectors** for porch and outdoor lights.
- **Use compact fluorescent bulbs** in areas where lights are on three to four hours per day. Compact fluorescent bulbs provide the same amount of light as incandescent bulbs, but use 75 percent less electricity.

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Heating And Cooling

- **Open and close doors**, including the refrigerator's, **quickly**.
- **Turn off kitchen and bath ventilating fans**. Leaving them on continuously can blow out a house-full of heated, or cooled, air.
- **Keep your fireplace damper closed** when not in use. This will prevent up to 8% of your furnace-heated air from going up the chimney.
- **Close-off a bedroom door and/or shut heating vents** during the day when not at home.

Heating and Cooling

- **In winter months, open the shades** to let in the sun's warmth during the day - close them at night to keep the heat inside.
- **Be sure windows are locked**. It tightens the seal to prevent leakage.
- **Adjust your thermostat** - reduce the temperature from 70° to 65° while you are at home, and turn it down even more while you are sleeping or away.
  This will cut your heating bill by about 25 %.

Appliances

- **Put your computer and monitor to sleep** when you walk away from the machine. However, do not leave it in the sleep mode overnight, as it will still draw a small amount of power.

- **If your parents cook with electricity, ask them to turn the stovetop burners off** several minutes before the allotted cooking time. The heating element will stay hot long enough to finish the cooking. The same principle applies to oven cooking.

Appliances

- **Use small electric pans or toaster ovens** for small meals rather than your large stove or oven. A toaster oven uses a third to half as much energy as a full-sized oven.

- **Use a covered kettle** or pan to boil water - it's faster and uses less energy.

Questions?