

Currently, there are about 3,000 people living in the residence halls. Let's underestimate and say that half of those people do not own a computer. That leaves about 1,500 people with laptops in the halls. If you add the total amount of computers in the residence halls' labs (90), you get about 1,590. Let's round that up to 1,600 computers. Desktops consume 60-250 watts of power, while laptops only take up 15-45 watts of power. Now, let's say those people never unplug their power strip from their computer. Because of how power cables function, each power strip consumes 2.8 watts while it is plugged in. For those who don't know, a watt is Joules/second (J/s). So, that means that if something is consuming 100 watts of power, that object is using 100 joules every second. If you take the average amount of power drawn from both laptop and desktop, the power consumed by laptops and desktops is 201,042 kW\*h and 50,917.5 kW\*h respectively, coming to a grand total of 251,959.5 kW\*h a year. This costs the school \$30,000 to maintain, along with pumping 178 tons of Carbon Dioxide into the atmosphere which is equal to what 24.5 houses produce a year.

### **Calculating kW\*h**

A kilowatt is 1000 watts

A kilowatt hour is 1000 watt-hrs

If the appliance uses 45 Watts, you divide by 1000 to convert it into kilowatts and then multiply that by the number of hours (giving you kilowatt hours) .

So  $45 \text{ W} * 3.5 \text{ hrs} / 1000 = 0.1575 \text{ KWH}$

Sources:

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