

## March—Electronics

On May 13, 2009, the International Energy Agency published a report that estimates energy used by computers and consumer electronics will not only double by 2022, but increase threefold by 2030.



It is clear that a significant amount of money can be saved and reduced emissions can be attained by focusing on reducing the power consumption by computers and electronic equipment. Mike Lee reports that most computers are being turned off at night, but rarely are other items such as monitors, scanners, printers, speakers, external disk drives or calculators. That's why the Green Team would like you to

help us focus on unplugging and turning off these energy gobbling devices this month.

Most of the time, there is no down-side to turning off the equipment when it is not in use. So this month, please turn off all equipment or contact the I.T. Department ([support@gunnisoncounty.org](mailto:support@gunnisoncounty.org) or create a Kaseya ticket) if you need to set the power management options on your computer to cause your computer to hibernate after periods of inactivity.

### Did you Know?

- If all 151 computer systems at Gunnison County were left on all day, every day, these calculations estimate electricity costs over \$7,000 annually, not counting printers, scanners or any other peripheral equipment! So turning off your electronic equipment outside of business hours can easily save over \$5,000 per year.
- Most of the electronic equipment today use an electronic switch that is controlled by a circuit that is always turned on. When the equipment is turned off it keeps feeding this circuit, and that is why we say that the equipment is under standby mode, as it is still pulling current from the AC outlet, what wouldn't happen if it was really turned off. Consumption when turned "off" can be greater than 10 watts! Removing the equipment from the AC outlet or using a mechanical switch like a power strip is the only way to stop power consumption when equipment is in standby mode and presumably turned off.
- The common misconception that the equipment's life is shortened by turning it on and off has led some to leave electronics on all the time. Others are reluctant to switch their computers on and off a couple times during their workday despite only using this equipment for a fraction of that time. Desktop computers are designed to protect the internal circuitry from power damage from on/off switching. Turning electronic equipment off at night or on and off a few times a day will not appreciably affect its useful life. Electronic equipment life is a function of operating hours and heat — both these factors are reduced when equipment is switched off. Modern hard drives are designed and tested to operate reliably for thousands of on/off cycles.
- The second myth is the belief that startup current surges consume more energy than leaving the equipment running. Not true. Startup power surges are of short duration and consume, at most, a few seconds of average running time energy. We are better to turn off equipment that is not being used for a few minutes, or switch to a lower power setting.

Desktop Computer Wattage~	70
LCD Monitor Wattage~	33
<b>Total Wattage for Computer System</b>	<b>103</b>
Hours Per Year	*8,760
	/1000
Kilowatt Hours (kWh)	902.28
City of Gunnison Commercial Usage Charge/kWh	\$ 0.066230
Cost per Computer per Year	\$ 59.76
<b>Cost Per Year for Gunnison County (151 computers)</b>	<b>\$ 7,170.96</b>

~Averages courtesy of USDOE Lawrence Berkeley National Laboratory



In order to become eligible for this month's \$50 drawing, send an email to the Green Team [GTeam@gunnisoncounty.org](mailto:GTeam@gunnisoncounty.org) by March 31, 2011 stating that you will become your office's "Energy Champion".

This job entails that you are willing to become the designated person to ensure the lights, computers, hall photocopiers, etc. in your department are turned off each day.

### GUNNISON COUNTY

200 E. Virginia Ave.  
Gunnison, CO 81230

Phone: 970-641-0248

E-mail: [gteam@gunnisoncounty.org](mailto:gteam@gunnisoncounty.org)