As a field technician I am often asked if a computer should always be left on when not in use. My answer is yes, for one simple reason: Heat.

When you turn on a computer, it gets hot. Disk drives, CPU and other chips on the motherboard get much warmer when running, especially the CPU and GPU (Graphics Processor Unit). When it gets hot, it expands and grows, then shrinks when turned off. This repeated expansion and contraction can cause wear on the circuits and can lead to breaks in those connections. Leaving the computer running regulates the temperature, reducing the stress on the circuitry and increasing the reliability of the hardware.

The cost of one repair call plus the cost of replacement parts is substantially higher than the approximate $100 per year* cost in electricity.

A computer going unused for days at a time, should be put in a low power mode. This leaves the computer running but using only a few watts of power, and allows for faster startups when you need the computer again.

You can reduce power consumption by making sure the monitor goes into sleep mode when unused. This is as simple as going into the power options and set the display to sleep after 10 to 15 of inactivity. Further savings can be achieved by using SSD drives rather than the traditional hard drives. Also, in general, newer computers are more power friendly than those that are older.

An even greater resource to protect your computing investment is a UPS. A UPS is an Uninterruptible Power Supply. In the case of a power fluctuation or failure, the UPS uses its own battery to provide power to your computer until the power quality returns. A standard UPS can protect nearly all computing equipment excluding high power devices such as copiers and laser printers. Most basic UPSs can be purchased for around $75.00 to $150.00.

Choosing which ups is right for you is specific to your computing equipment. Most desks can be supported sufficiently by a 750VA or greater unit. Basically, the bigger the number, the longer your equipment can run without utility power. Power lean computers like Mac Mini’s, and

mini-PC's will run for extended periods of time on the UPS. Gaming systems and high-end workstations will require around a 1000VA or greater system to get reasonable battery runtime.

Knowing that you need a UPS is important, but it is also important to know how to use the UPS. Most UPSs have two sections or power port groups. One will provide ONLY surge protection. The other group provides continuous power in all circumstances. The surge protection side is useful for devices such as laser printers, copiers, and other non-critical devices. The UPS (battery protected) side should be used for the computer, monitor, phone and other important equipment.

Be certain to install the power management software. Installing this utility will automatically shut down the computer before the battery power runs out. This is important as a sudden power loss can cause hard drive corruption and data loss. A clean shutdown prevents this.

If you leave the computer running with reliable power provided by a quality UPS, you can expect an additional one to four years of trouble free service from your computer, and reap the savings of lost time, frustration and tech support expenses.

If you have a technical question you would like answered, please contact me here with your questions.

* Based on 12 cents per kilowatt hour and approximate average of 100 watts of power usage. Some computers can use substantially more or less than this amount.