

Southern California Edison recently sent letters to many customers in Ventura County notifying them of the possibility power may be shut off in high risk areas during times of dangerous fire conditions. Electronics and food are two major categories of waste resulting from power outages, but this waste can be prevented.

Eco-Tip for 9-30-18

Avoiding waste from power outages. Part 1: Electronic devices

By David Goldstein, Ventura County PWA, IWMD

A sudden loss of power, such as during a power outage, may result in data loss, and repeated instances may cause bad sectors in a hard drive. However, the real danger comes the moment electricity is restored. Overvoltage sometimes surges through power lines, posing a risk to the electronic devices.

Anthony Delgaudio, owner of All PC Solutions in Moorpark, says some people worry about the risk to computer motherboards from surges, but in the 15 years he has been in the computer repair business, he has rarely seen this fear backed up by evidence. Instead, he much more commonly sees power supplies unable to turn back on following surges.

He points out the much more common threat to computer power supplies is overheating, which can be addressed in some cases by cleaning fans and avoiding the accumulation of dust. However, the problems with power outages and surges are easily solved. An uninterruptable power supply can save data during an outage, and a surge protector can prevent damage from a surge.

Surge protectors absorb or ground over-voltage from spikes. Each time a surge protector does its job, resulting damage can reduce effectiveness for the next surge.

Of course, lightning storms pose an even greater danger to computers. The safest way to avoid damage to your electronic devices from a surge is to unplug them during a lightning storm. Unplugging during a power outage is not as crucial, especially if you have a surge protector.

Surge protectors are often used for televisions, computers, and other small electronic devices, but even some appliances need protection. Refrigerators, for example, can have separate, vulnerable electronic control boards for the refrigerator, freezer, and icemaker.

However, the General Electric website states “it is not recommended to add a surge protector to GE refrigerators and freezers.” According to the website, new GE appliances have compressors capable of detecting current overloads and shutting down before a surge can affect the device. This provides no better protection than a surge protector, but the difference is the GE device can

then sense when normal power is restored and can re-start itself. A surge protector would override this feature, resulting in food spoilage.

A whole house surge suppressor provides an alternative to separate external suppressors for each electronic device. Whole house devices cost approximately \$100, but installation by a qualified electrician is likely to cost another \$100 or more. Use a professional electrician for installation, since it requires working inside or around your circuit breaker panel.

In her “Smart Money” column at bankrate.com, Karen Haywood Queen quotes Randy Carney, Executive Director of the Professional Service Association, who advises consumers to “power cycle” their appliance before calling a repair person. Unplug it, wait two minutes, then plug it back in.

Notes (not for publication):

Hard drives are rated for a number of hours. Moving parts, like fans, have bearings, collect dust. Overheat. Parts that work eventually fail.

Electrostatic discharge is more common problem when working on computers.. Static electricity. Especially when working with microchips. People should be grounded. ESD wrist straps. Grounds by attaching to a case.

Overheating is also a major cause of mother board failure. Can happen with surge protector.

The GE website (<https://products.geappliances.com/appliance/gea-support-search-content?contentId=16877>) says "It is not recommended to add a surge protector to GE refrigerators and freezers. The compressor is sensitive to temperature and current overloads and will shut itself down with a surge. It will also restart itself. A surge protector will override this system, and if there is a power surge, your refrigerator will not restart. This could cause food spoilage."

Some new refrigerators have "smart" features, including an additional electronic board for on-line connectivity. Although they come with built in surge protectors, these are not as effective as external protectors, according to <https://www.bankrate.com/finance/smart-spending/power-surge-protector-needed.aspx> .

anthonydelgaudio@yahoo.com

owner, All PC Solutions, in Moorpark

(805) 529-5070

<http://www.tomshardware.com/answers/id-3438633/power-cut-damage.html>

to <https://www.ricksdailytips.com/do-surge-protectors-go-bad/> .

<https://www.bankrate.com/finance/smart-spending/power-surge-protector-needed.aspx>