September 2019 "Your Electric Connection Since 1938"

FEC POWER Source

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Protect Your Sensitive Equipment

Now that was some storm last night! The power was off until the wee hours of the morning! As you go about your daily chores, you discover that the DVR and your computer are no longer working. In a panic, you begin checking other electronics and appliances… Sound familiar? Have you ever stopped to think about all the things you use that operate electronically? It seems like nearly everything is electronically controlled these days: your clocks, your microwave, your refrigerator, your oven, your coffee maker, your computer, your DVR, your TV; the list goes on and on. It would be easier to list things that are not electronically controlled.

Today's home appliances and electronics are filled with transistors and microprocessors that are wonders of modern technology, unfortunately, they are also highly susceptible to fluctuations in electrical voltage. Protecting your equipment from voltage fluctuations represents a tremendous value when compared to the cost of repair, replacement, inconvenience, and frustration caused by failed equipment. Problems with sensitive electronic equipment and the electricity they need are called "power quality" problems. There are four primary causes of power disturbances: voltage fluctuations, transients, electronic noise, and power outages.

Voltage Fluctuations: Dimming lights or "shrinking" computer or TV displays are the most common visual indications of voltage problems. These voltage problems can be caused by overloaded electric circuits, or the starting of large electric motors. If the condition is continuous, it can cause errors in data storage and retrieval as well as permanent damage to equipment.

Transients: Transients are very brief voltage "spikes" above the normal voltage level carried on the power lines. Most transients (70 – 90 percent by some estimates) originate inside the home or business and are generally caused by electric motors coming on and going off. Lightning is also a very damaging cause of spikes. These spikes or surges can cause computer programs to stop running or erase data stored in memory or, in the case of lightning, cause a total equipment "melt down."

Noise: Electrical noise or harmonics can be created by radio transmissions, fluorescent lighting, LED lighting, and light dimming devices, just to name a few. Electronic noise can cause unexplained "glitches" in computer programs. Transients and noise are the most common source of power disturbances that affect computer performance.

Power Outages: Power outages are the total interruption of power supply to your home or business. They may be caused by overloaded circuits within the home or may be widespread, involving the Cooperative's distribution system., (i.e. bird contact, lightning strikes, vehicle collisions with equipment, etc.). A power outage may cause the complete and total loss of any information in a computer's memory, and whatever precipitated the outage may also damage sensitive equipment.

To minimize problems from power disturbances, you should want to invest in a surge arrestor, (surge suppressor), and/or power conditioner. It was once said by a winning football coach, "the best offense is a good defense." This is also true when it comes to pro-

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Manager's Message...

Lance Adkins, GM

FEC Celebrates Safety!

Recently, Farmers' Electric (FEC) achieved an important milestone, reaching One-Million man-hours worked without a serious lost-time injury. A serious lost-time injury is defined as a work-related injury requiring one or more full days off work to recover from the injury. In an industry where the very nature of day to day operations requires working with high-voltage electricity, working long hours in extreme weather conditions to restore service to the membership, this accomplishment is no small achievement. For FEC, one-million-man hours worked represents more than ten years of safe work practices.

Emphasizing safety has been an important and integral part of FEC operations for many years. FEC has earned formal Safety Accreditation through the National Rural Electric Cooperative Association (NRECA), recognizing FEC's strong commitment to safety for both employees and the members we serve. Safety Accreditation is a three-year process involving employee training and working to educate the public about potential dangers posed by high-voltage power lines and the safe use of electricity around the home, farm, or business. Formal documentation of activities related to safe work practices, employee training and wellness, and inspection and maintenance of the electric system is a key component of the Accreditation process. FEC has earned continuous Accreditation since 1979.

Several years back, I participated in a roundtable discussion organized by NRECA and Federated Rural Electric Insurance Exchange (Federated), FEC's general liability insurance carrier, regarding some key observations in examining serious electrical contacts. Observations were compiled from across the United States, taking an in-depth look at public electrical contacts and work-related injuries. Statistics revealed, that while serious electrical contacts for the general public and electric utility workers had been steadily declining for more than twenty years, serious injury and fatality rates for utility workers had reached a plateau. More alarming, electrical contacts were occurring with experienced, trained line-workers who acknowledged "taking a shortcut," violating safe work practices and procedures as the primary cause for their injury.

In response, NRECA and Federated developed the "Commitment To Zero Contacts" campaign, as a means to focus on the very practices and procedures vital to preventing injury. Formal Accreditation requires considerable commitment in time, effort, and financial resources to accomplish. In addition, the Accreditation process, and safety in general, must be more than a "paper" program. A strong safety program begins with the full commitment of the Board of Trustees to provide resources for training, equipment, and oversight; continuing with a commitment by each employee to learning and following safe work practices. Employees are encouraged to "speak up, do not accept, or walk by a coworker taking a shortcut to safe work practices and procedures."

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Questions or article ideas should be directed to :
Thom J. Moore,
POWER SOURCE
P. O. Box 550
Clovis, New Mexico
88102-0550
Phone (575) 762-4466
or (800) 445-8541
thom@fecnm.org

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Clovis
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While the cost of providing training, purchasing equipment, and keeping up with the documentation necessary for the Accreditation process can be calculated, the actual monetary value FEC receives from the process is not as easily determined. FEC does receive a discount on general liability insurance premiums as a result of our commitment to safety and a safe work environment. However, there are other benefits that are more difficult to place a monetary value on, including; reduced premiums for worker's compensation insurance coverage due to few work-related injuries and employees are available to work each day instead of recuperating from work-related injuries. We are also aware of more than one instance where children have alerted adults to dangerous conditions involving electric power lines and FEC was quickly notified and able to make repairs to the system in a timely manner. Many of the children in our service area learn about electric safety through programs FEC provides to schools and other organizations.

For FEC, formal recognition of this accomplishment by our peers is the "icing on the cake." The "cake" is a positive and safe work environment for FEC employees and their ability to go home to their families at the end of work each day!

Until next month,

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tecting sensitive electronic equipment. Don't wait until you experience problems to begin searching for solutions. There are currently devices available which are designed to be used on only one appliance or computer. Others are designed to be installed on your home's electric service entrance, providing protection for all

equipment supplied from that power source. The best of protection is at the service entrance and on each separate appliance. For those who are very dependent on power quality in regards to your computer, APC makes a unit, (Line R 600), that regulates the voltage on an "as needed" basis. It also becomes a universal power source (UPS) when there is a power outage. This back-up power generally last up to 15 minutes and will allow you the time to save any program that had been running at the time of the interruption. This neat little gadget can be purchased for around $50.

Other suggestions include:

- Appliance attachment plugs that wobble or pull out of the wall outlet easily should be replaced.
- Never remove the grounding pin from a 3-prong plug.
- Consider a home wiring checkup. Have a qualified licensed electrician check for loose connections and overloaded circuits.
- Have a qualified licensed electrician verify that the home's electrical system is properly grounded.
- Make certain that any surge protection device you purchase has been tested by UL and carries a UL 1449 listing.

Ask The Energy Guys! Re: Water Heater Blankets

Q. Dear Energy Guys: What do you know about water heater blankets? Should I install one?

A. Great Question! Let's see... We think we know a bit about them.

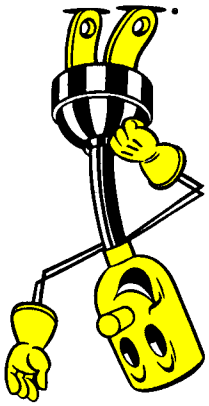
Most older water heaters have only an inch of fiberglass tank insulation, and most newer ones have just an inch of foam insulation. You can reduce your energy consumption by installing an additional blanket of fiberglass insulation. This is one of the most common and effective energy-conservation measures available.

- Water-heater blankets come in kits that contain a blanket, straps and tape. The straps hold the insulation to the water heater, and the tape seals the seams in the insulation.
- Turn the water heater off before installing the blanket. Read all the instructions that come with the blanket.
- Identify the areas where the blanket will be taped to the water heater. Wash these well so the tape will stick.
- Cut the blanket to size with scissors or a sharp knife. Leave some extra until you know for sure how much you'll need.

- Identify the pressure relief valve on either the top or side. Don't cover this important safety device.
- For electric water heaters, you can insulate the top of the tank as well as the sides. Note where two rectangular covers provide access to the thermostats and elements. Cut small flaps in the insulation to provide access to these panels.
- For gas water heaters, don't insulate the top. Note the gas valve and burner access door near the bottom of the tank. Cut the blanket so it is at least two inches away from these.
- Install the blanket so it is snug, and fasten it well so it will stay in place.

This long-lasting conservation measure will save energy day and night for the life of your water heater.

"Owned By Those We Serve"



FARMERS' ELECTRIC COOPERATIVE, INC.
OF NEW MEXICO
3701 Thornton St., P.O. Box 550
Clovis, New Mexico 88102-0550

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