

The Ice Storm Process



MESSAGE FROM GENERAL MANAGER AND CEO JERRY D. WILLIAMS

Since the December Ice Storm one question continues to pop up. Why did my neighbor have power and not me? My biggest challenge in answering that question is that most folks don't really want to know the full answer. We live in a world of abbreviated "text" words and "tweets." Facebook messages are short and you only get the full story if you click on "more." Television news headlines are often followed with an abbreviated short blurb with few facts. We have gotten so accustomed to having our communication in short bursts while we fill in the blanks, that a short answer is now expected for everything. The short answer is; electricity follows a specific route along wires all the way from a generating station to your house and if the flow is interrupted anywhere along this path, your lights go out. Ok, so that is not very short. How is this? Your neighbor is connected to a different wire.

In case some of you were on vacation or live on the East side of Red River County; we had a major ice storm in North Texas. It started the night of December 5 and was in full swing by Friday morning December 6. By Wednesday evening of the following week, all but a couple hundred folks had power. That Wednesday night, we received only one telephone call. By Thursday December 12 at 8 PM, all that could receive power had it. This storm has been described by the Chairman of the Texas Public Utility Commission as one of the worst in Texas history. Others describe it as worse than the 2000 storm.

A few facts may help you understand why the storm was so bad. Light rain began to fall Thursday afternoon in areas of Lamar, Red River and Delta Counties. As expected, the news media focused on roads and bridges, while we focused on trees and electric wires. The temperature

hovered around 30 degrees in some areas causing the rain to begin coating tree limbs and electric wires suspended 30 feet above the ground. The rain continued all night. In most places the earth was not cold enough to form ice on the ground. By daylight on Friday morning some tree limbs and electric wires were coated with a 1/2 inch thick coat of ice.

Lamar Electric crews that should have completed their work day by 3:30 PM Thursday afternoon were still working Friday evening. During the early part of the night Thursday, progress could be made and limbs were removed, power restored and crews moved to another line. At various points thru the night 200 people would lose power, have it restored and crews moved to another line. By the time the next line was cleared up, the first line would be back out. This continued throughout the night, with the total number of people out of power steadily increasing till over 4,000 folks were out by 8 AM Friday morning.

People ask; Why not rest, let the storm damage occur, assess the damage and formulate a plan of attack. That sounds good on paper, but not very practical. A good example is the freezing rain during the early morning hours of Tuesday November 26. Crews went to work before day break and had everyone on by 6 pm that evening. The temperature warmed up just a few degrees and the ice was melting by noon. We call that a small ice storm. This illustrates that when an ice storm starts, the outcome is unpredictable and just 3 or 4 degrees of temperature can make a vast difference.

The December ice storm was different than most. Historically, most ice storms will apply a thick layer of ice for several hours, followed with warmer temperatures. That did not happen. Moisture continued to fall on Friday (some on Saturday) and temperatures did not get above freezing for over 4 days. By Satur-

day our outage count had risen to 6,500 people as trees continued to fall. Electric lines that were cleared Saturday were weighed down with more tree tops and limbs by Sunday night. On Friday there were only a handful of broken electric poles. During the next three days, over 40 more poles were broken by falling trees and limbs. In many places the earth was so saturated, the weight of ice on the wires caused anchors pull out of the ground, which allowed the pole to lean over or break. Many of these anchors and poles were in locations that were not easily accessible. A more complex anchor system had to be used, which involved screwing the anchor into the ground with extensions, till the anchor finally bit into enough soil to hold. In some cases that was 20 feet deep or more.

Given the complex nature of this ice storm damage, many have asked how Lamar Electric responded. The first step is preparation. Knowing exactly how much preparation is a difficult task. Many times the weather forecast will call for icing conditions, that turn out to bypass our area. This ice storm almost bypassed us. The edge of this ice storm followed a Northeast line from Cooper to Idabel. Because the leading edge of the storm followed this Northeast path, the area directly behind the leading edge teetered close to the freezing point. Areas further west of us had a lower temperature, which caused the moisture to freeze "before" it came into contact with the electric wires. Being on the edge of the ice, resulted in a lot more ice accumulation on wires and trees and thus some of the worst damage in Texas.

When it became apparent the weather pattern would swipe across Lamar and Delta County, we began checking with other cooperatives and asking that crews be placed on standby. We have a national mutual aid agreement with most every rural electric



cooperative in the nation. When the ice continued to accumulate, additional crews started traveling from beyond the storm area, to the Lamar Electric service area. As the damage got worse on Friday more crews were called for. On Saturday, still more crews were called in. This continued till around 330 men and women (yes two crews had a woman) were brought in from other rural electric cooperatives and contract companies. Some crews drove from as far away as Woodward, Oklahoma, Alexandria Louisiana and Bandera Electric Cooperative, West of San Antonio. Lamar Electric has a staff of 32 people, including me, so you can see that just managing these additional crews was a task in its self.

We had a plan and we followed the plan. In a major disaster it is often not practical to manage every detail from the control center. This task must be delegated to specified individuals in the field. Each circuit out of a Substation or sections of long circuits was assigned to a Lamar Electric employee, who became the work manager for all work crews assigned to his circuit. Rather than relay specific situations (like a wire is down) from dispatch to the field employee; the field employee (we call them Bird Dogs) would start at the beginning of their circuit (often the Substation) and work everything to the end of the circuit. If a wire is down, their job is to find it.

The first step in this process is to sectionalize the main feeder lines coming out of each substation and get this on first. This is usually the three phase electric lines. The main feeders would be energized in sections, until the entire main line is restored. As this process continues, more trees fell which caused a lot of backtracking to work on sections that had been restored. The next step is to work on the taps off the main feeder lines that serve several meters. This is followed by work on taps that serve only a few meters. The last step is individual houses.

This process of working a major disaster is frustrating to many folks that don't understand the process. A brief diagram of this process was sent for publication in Texas Co-op Power several months ago, and appeared in the issue you received around December 30. The fact is that many homes are located near major power circuits, with their transformer actually being located on a major power circuit pole and their power comes back on as soon as the main circuit is energized. Others live down a long drive way and their tap is disconnected till someone can make sure it is safe to energize.

As you would expect, many folks were frustrated due to the many hours and days without electric power. Yes, even my wife sat at home in the dark cold house while I was at work. I would like to address a few messages I received from frustrated members.

Some of the questions and comments we received: "Our neighbors get power an hour or so before we do, because we have to call a second time for you to come back out and trip a breaker so we can have power." "I chased down a Lamar Electric truck that happen to pass by and told the man the situation and all I got out of him was a bunch of electrical jargon that didn't make any sense to me and that I would get power the next day, when all he had to do was turn his truck around and drive one mile back down the road and trip a breaker. Twenty-eight hours after everyone on my street got electricity, we finally got power. What was really frustrating is that we have



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Your "Local Pages"

This section of Texas Co-op Power is produced by LEC each month to provide you with information about current events, safety, special programs and other activities of the cooperative. If you have any comments or suggestions, please contact the local office.

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two houses on our lot, one that we use for storage that got power and the house we live in five hundred feet behind that didn't."

This member didn't really want to hear the electrical jargon; he just wanted lights at his house and we understand, but still have to answer the question truthfully. The fact is his storage house is served off a transformer that is mounted on the main circuit (three phase line) pole beside the road. His residence is served off a fused tap that has three poles that are about 10 feet or so, inside his property line. There is a fence at the property line and trees have grown up in the fence row which allows them to bend over into the wire leading to his house, but we can't cut the trees to the ground because they are on the wrong side of the fence. The fuse connecting the tap would have been opened up if it was not already open, while the main line is being energized.

On Saturday morning, December 7, another person wrote: "Key West Road in Reno has been without service for over 24 hours. Even though I realize LEC crews are working diligently to make repairs, the lack of current information to affected customers is severely deficient! The line that is down is located on Old Clarksville Road, right by the road in front and across a home owner's driveway! Does LEC need to call in assistance from other line crews? It might help to send a message to these customers without service and provide an estimate of when to expect restoration of service and if that estimate is surpassed, establish another estimate; keep doing so until service is restored!"

We knew the wires were down and the road was out of power. The South end of this road receives power from a main feeder circuit that extends down Airport Road. We knew that until we were able to restore power to the main feeder on Airport Road, it would have been senseless to work on the wires along old Clarksville road. On Airport Road, among other issues, the weight of the ice on the lines pulled the anchors out of the ground, leaned two poles over, allowing the wires to short out and burn down. Of course if he was interested in the north end of Key West Road, the answer would have been entirely different because it is served off an entirely different feeder circuit in the substation that extends along Highway 82 and was off for other reasons. Just because you see a wire down in a major disaster, don't assume that one wire is the only problem.

Current information to our members is always a concern. This ice storm created a fluid situation that constantly changed for several days. By Saturday morning, only part of the damage to our electric system had occurred. In addition to having local people in our office answering the telephone 24/7, we used our web page, Facebook page and local radio stations to help keep our members informed and updated on additional assistance in place and en-route. The problem is, when the damage to electric wires and broken poles continues to change for several days, any estimate of when repairs will be completed is simply not possible until the destruction stops. I am not sure how this individual expected us to single out one road that is fed off two different circuits and send a message to those customers with relevant information, but we are working on a Text system that members can use to report outages and allow us to send out mass texts.

We at Lamar Electric would have preferred the ice storm events be different, but sometimes you simply do the best you can with the weather prediction and deal with the weather we receive. It would be nice to always have an extra 300 or so men and equipment just standing by to pick up the pieces in case the ice knocks it down, but it is not economical or feasible.

As the events unfolded most members were very patient and understanding. Some built camp fires and had hot coffee and cocoa waiting for crews. Others cooked chili for crews to grab a bite when they came by the office to pick up more supplies. Beef briskets and Gumbo were provided by others. Treats intended for Christmas in the Camp, were delivered for crews to take into the field for quick energy. East Paris Baptist opened their doors and hosted over 70 men with a warm place to sleep. Others donated cots and blankets. On behalf of all the employees and outside crews we want to thank all that played a part in helping deal with this major disaster.



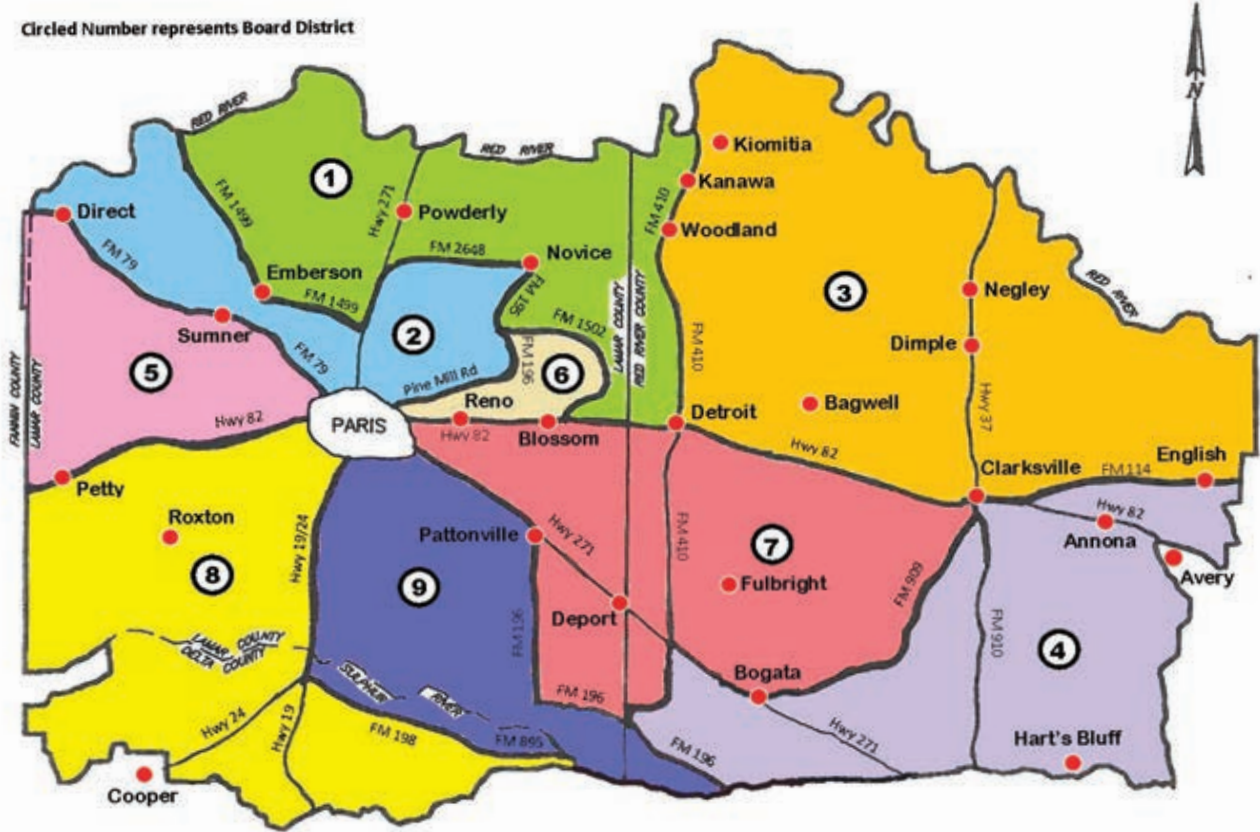
Apply Now To Win a Trip to D.C.

Each year, Lamar Electric Cooperative selects two high school students to attend an all-expense-paid tour of Washington, D.C., and visit the U.S. Capitol to meet members of Congress.

Eligible students must be in 10th, 11th or 12th grade, must live full time in a residence served by Lamar Electric or attend one of the four high schools served by Lamar Electric: Detroit, Faith Christian, Prairiland or Roxton. Home-schooled students served by Lamar Electric are also eligible. A completed application and a two-page typed essay on the topic: "What Would You Change If You Were President?" must be received by Lamar Electric no later than 5 p.m. on February 28. It's that easy!

Learn more about the Government-in-Action Youth Tour at lamarelectric.coop. Look for "Washington D.C. Youth Tour" under the Youth Programs tab.

Lamar Electric Annual Membership Meeting



Three positions on the Lamar Electric Cooperative Board of Directors are up for election each year. This year, Districts 1, 8 and 9 will be voting at the annual meeting. Members residing in Districts 1, 8 and 9 who wish to be a candidate for one of the three available board positions must appear in person at the main office of the cooperative and fill out a nomination form no later than February 18, as outlined in the co-op's bylaws. If you are unsure of which district you live in, please refer to the district map above.

Lamar Electric Cooperative will hold its annual meeting at 10 a.m. Saturday, April 19, at Love Civic Center, 2025 S. Collegiate Drive in Paris. If you have any questions, call Laura Williams at (903) 783-4907.

Qualifications for board members are specified in the bylaws. A copy of the qualification portion of the bylaws was published last month in this magazine. A copy of the bylaws is available at the Lamar Electric office and online at lamarelectric.coop.



Mark Your Calendar!

LAMAR ELECTRIC COOPERATIVE

ANNUAL MEETING

Saturday, April 19, 2013 • 10 a.m. • Love Civic Center

Taming Plug Loads

BY BRIAN SLOBODA

As children, most of us were told to turn off the TV when no one was in the room to keep from wasting energy. But with today's televisions, turning off the set doesn't save as much energy as you think. "Off" doesn't necessarily mean off anymore.

Lights, air conditioning and heating use most of your home's electricity. However, all of the TVs, computers, printers, phone chargers and other devices add up. Many gadgets use energy even when you are not using them. These devices are commonly referred to as "parasitic loads" or "energy vampires"—consuming electricity even when switched off. Entertainment centers are full of these energy-sucking devices.

Most televisions slowly sip electricity while waiting for someone to press the "on" button. They use energy to remember channel lineups and the time. DVD players, digital video recorders, and cable or satellite boxes also use energy when we think they're turned off.

In an average home, 5 to 8 percent of electricity consumption stems from small devices that drain energy even when no one is using them. To put that in perspective, the average North American household consumes roughly 10,800 kilowatt-hours of electricity per year. If you estimate that 6.5 percent of your total electricity consumption comes from phantom loads, the amount drained by these vampires equals about 700 kWh annually—or \$70 every year.

So how can you tell which devices are OK to leave plugged in? Here's how to find plug parasites and use smart strips.

Identify Plug Parasites

Microwave ovens and alarm clocks, which use relatively small amounts of standby power, are acceptable to leave plugged in. A DVR uses a fairly significant amount of power when turned off, but if you record programs frequently you will want to leave it plugged in.

You don't have to worry about unplugging items with mechanical on/off switches, such as lamps, hair dryers or small kitchen appliances such as toasters or mixers they don't draw any power when turned off.

How do you save energy on the other devices in your home? Try plugging household electronics such as personal computers, monitors, printers, speakers, stereos, DVD and video game players, and cellphone chargers into power strips. Not only do power strips protect sensitive electronic components from power surges, you can quickly turn off several items at once.

Smart Strips = Easy Savings

Power strips, however, are often hidden behind entertainment centers or under desks and forgotten. A better solution may be found in "smart strips."

Most smart strips feature three outlet colors, each with a unique task. The blue outlet serves as a control plug and is ideal for a heavily used device like a TV or computer. Anything plugged into red outlets stays on—electricity to these receptacles never cuts off making them perfect for satellite or cable boxes.

The remaining outlets, generally neutral or green in color, are sensitive to current flowing through the blue outlet, so turning off the TV or computer cuts power to them as well. Some smart power strips can be made even smarter with timers or occupancy sensors that determine when to cut power to various devices.

Smart strips are available online or at specialty electronics retailers, and payback can generally be achieved in less than one year.

Brian Sloboda writes for the Cooperative Research Network.



Stake Energy Vampires with Smart Strips



In an average home, 5 percent to 8 percent of electric use stems from "energy vampires"—devices that use power even when turned off. Smart power strips help you easily unplug energy-draining devices when not in use.

There are typically three different types of outlets on a smart strip:



The blue outlet serves as a control plug (ideal for a TV or computer).



Devices plugged into red outlets stay on—electricity to these receptacles never cuts off, making them perfect for satellite boxes and other items that need constant power.



Remaining outlets, often green or neutral in color, are sensitive to current flowing through the blue outlet. Turning off a device plugged into the blue outlet cuts power to items connected to these outlets.

Smart strips are available online or at specialty electronic retailers and generally cost \$20 or more depending on their size.

Source: Cooperative Research Network, Bits Ltd.

Trey and Magnum

Trey Denny is proud to show off his hard work and his steer, Magnum, which was named the Overall Grand Champion Market Steer at the East Texas State Fair in Tyler after competing against 139 other steers at the show.

Trey and Magnum have won Grand Champion Steer at the Four States Fair and Rodeo in Texarkana, the Detroit FFA Show, the Waskom FFA Show and the Pittsburg FFA Show. They won Reserve Champion Steer in the Red River Valley Fair and the Canton FFA Show. Trey has been to seven shows with Magnum and won five Grands, two Reserves, six belt buckles and other awards.

Trey is an eighth-grader at Chisum Middle School and is a member of Chisum FFA and Lamar County 4-H. His parents are Lamar Electric members Todd and Tracy



Denny of Detroit, and his grandparents are David and Linda Hicks of Detroit and Eddy and Nancy Denny of Bogata.

Lamar Electric Offering Scholarships

This year, Lamar Electric will award six \$1,000 academic scholarships to students who plan to pursue an academic degree or certification from an accredited university, college, junior college, technical school or other post-secondary educational institution. Scholarship payment will be made directly to the college, university or school in one lump sum. Scholarships must be used within two years of the award date. Money may be used for tuition, books, and room and board.

ELIGIBILITY REQUIREMENTS FOR AN ACADEMIC SCHOLARSHIP

To be considered for a Lamar Electric Cooperative scholarship, the student must:

- ▶ Live full time in a residence served by Lamar EC; AND
- ▶ Be a graduating senior attending a high school or an accredited home extended studies program within the counties served by Lamar Electric Cooperative.

Six scholarships will be given away at the Lamar Electric Cooperative Annual Meeting on April 19 in a random drawing of qualified students. The winners need not be present.

The entry deadline is April 11, 2014. The application can be found on our website, lamarelectric.coop. Once the application is completed, simply click on the email button and send to: scholarship@lamarelectric.coop.

OR FILL OUT THE APPLICATION AT RIGHT AND MAIL TO:

Lamar Electric Cooperative, Attn: Dena Beason, P.O. Box 580, Paris, TX 75461

LAMAR ELECTRIC COOPERATIVE 2014 SCHOLARSHIP APPLICATION

Deadline April 11, 2014

NAME

ADDRESS

NAME OF HIGH SCHOOL

PARENT(S)/GUARDIAN(S) NAME

LAMAR ELECTRIC ACCOUNT NUMBER

PHONE

Mail to: Lamar EC, Attn: Dena Beason, P.O. Box 580, Paris, TX 75461