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How Smart Should the Grid Be?



MESSAGE FROM MANAGER JERRY D. WILLIAMS

ast month, we discussed the grid of high-voltage electric wires across the state of Texas and the whole United States. The subject of an electric smart grid seems to appear almost daily on news shows and keeps popping up in the newspapers. The definition of a smart grid will depend on who the author is—sort of like "going green" has a lot of meanings.

The smart grid phrase seems to have originated with a description of electronic devices connected to the high-voltage transmission lines. Generally speaking, these devices will detect all sorts of problems and send a signal to trigger another device or a person that will take an action to disconnect the wires or correct the problem. The correction may be to reroute the electric flow or turn on devices that will clear up the problem automatically. What started out as a "fuse" has advanced into sets of complicated electronic devices that do much more than a fuse.

Due to advances in electronics. many of these same pieces of electronic equipment (computers) are economical for use with the lower-voltage electric distribution wires that distribute the electricity from the nearest substation to the transformer at your home. Most of you are aware that Lamar Electric has had "breakers" on the distribution electric lines for many years that will turn your power off momentarily while a tree limb falls free, a squirrel with a frisky tail falls off the transformer, or a bolt of lightning finds a path to ground; the breaker then turns the power back on. In case the

limb stays on the wire, the breaker will try to restore power three times before manually tripping off. These devices have gotten a lot smarter over the years, and some of them can now be monitored and controlled by a radio signal from the office. Adding smart devices to the electric distribution grid has helped us provide better service.

Over 10 years ago, Lamar Electric added electronic devices to the meters at your house that allow us to read the meter through the electric wires. Some meters even have a device that allows us to turn your power off with a signal from our office. This intelligence has

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saved all of us money by reducing the time spent disconnecting and reconnecting the same account month after month. The phrase "automated meter reading" (AMR) has been replaced with "advanced metering infrastructure" (AMI) in the past few years, as equipment has become available that will allow us to do more than just read the meter. At this point, Lamar Electric is sticking with reading the meter and remote disconnect until the economics, usefulness and reliability of more infrastructure can be proven.

What seems to be getting a lot of people excited is applying similar devices beyond the electric meter. The concept is a signal from your electric meter that can control your A/C-heating unit, refrigerator, water heater, lights, clothes dryer and more. Your

electric meter can receive a signal that originates from a point as far back as the main electric generator. If the transmission line becomes overloaded or some wind turbines stop turning and the result is more costly electricity, the signal could be sent to temporarily turn your water heater or A/C unit off.

The problem is determining how many people will actually make or allow a change that affects their comfort or convenience based on the pricing of electricity. The fact is that utilities are charged with the responsibility of constructing enough generators to supply the power needs when usage of electricity peaks, regardless of how many times that peak quantity of power is needed. If there were a way to alter people's habits so we did not all cook supper at the same time or wash clothes at the same time, a lot of money could be saved by not building power generators to handle the peaks.

In college we called this "elasticity of price." I can still remember the days when all gas stations were full service and we simply told the attendant if we wanted regular or ethyl. Now, most everyone pumps his or her own gasoline. The importance of automobile fuel economy has also changed. My wife will probably always remember one of her first jobs trying to sell Chrysler New Yorker cars right after the Arab oil embargo in the early 1970s caused the price of gasoline to double. History has proven that when the price gets high enough, we will all change our habits.

Some scholars will tell you the time is near when everyone will modify their home activities based on the price signal for electricity. Major manufacturers are already producing appliances that can be controlled with a remote signal. Meters are already on the market that will text your cell phone with an alert with the current price of electricity or that appliances are being temporarily turned off. There

LAMAR ELECTRIC COOPERATIVE

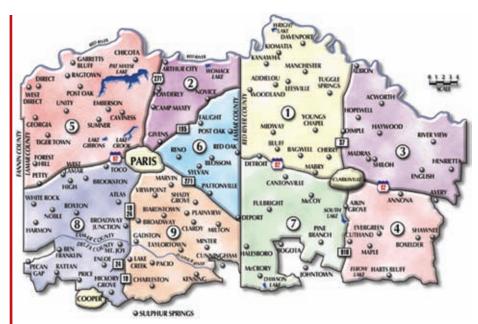
are electric meters that can now be accessed from your laptop, Blackberry or iPhone. This concept is now called the "smart grid."

Is all this really needed? Do a lot of people really want to add concerns over the current price of electricity to their already busy lifestyle? At today's prices, probably not. But there are a lot of folks who are working hard to increase the price you pay for electricity in an attempt to force you to give more consideration to reducing your use of electricity.

Have you wondered why there is a big push for wind generators? Some will tell you solar and wind power is free. In reality, when government subsidies are removed, wind and solar generation of power is actually close to 25 cents per kilowatt-hour, and we cannot rely on either source for uninterrupted power when the need for power is greatest. That is more than three times the current price Lamar Electric Cooperative pays for wholesale power, because we are purchasing electricity generated with clean Texas natural gas. But burning natural gas, as well as exhaling it from your lungs, releases carbon dioxide and the Environmental Protection Agency has declared carbon dioxide a hazardous gas that will destroy the world. Personally, I think God had it all figured out when he made natural gas and man.

Everyone in Texas will be required to pay more for electricity because billions of dollars are being invested in building electric transmission lines to the remote areas where wind turbines are being constructed. The entire transmission line investments (including a healthy guaranteed return to the investor) will be passed on to you in the form of transmission charges.

You can be assured the folks at Lamar Electric are working hard to keep the cost of electric power as low as possible. Many of these issues are out of our control, but you can be sure, if the price of electric power continues to go up, we have your back. If controlling appliances or sending out price signals is needed to keep your electric bill affordable, we will be ready.



Lamar EC Annual Membership Meeting

amar Electric Cooperative will hold its annual membership meeting at 10 a.m. Saturday, April 9. The meeting will be held at Love Civic Center, 2025 S. Collegiate Drive in Paris.

Each member in attendance at the meeting will receive a registration gift, and a drawing for other prizes will be held. Six \$1,000 scholarships will be awarded at the meeting. Members' children who are high school seniors may submit their names for the drawing. Details can be found in another article in this magazine. There will not be a meal served at the meeting.

There will be an election for the board of directors in Districts 1, 8 and 9. You do not have to be present at the meeting to vote in the director election. Prior to the meeting, ballots will be mailed to members who reside in those districts. If you reside in one of the districts holding an election, you may either vote by mail or in person at the meeting.

Watch for additional details in the next issue of Texas Co-op Power.



Electric cooperatives serve 75 percent of the U.S. land mass and have the largest electric utility network in the nation.

Lamar EC is proud to be part of that network, providing reliable electric service to 8,854 consumer-members.

ILLUSTRATION BY CARL WIFN

Lamar Electric Cooperative

Offering Scholarships to Local Students

amar Electric Cooperative will award six \$1,000 academic scholarships to students who plan to pursue an academic degree or certification from an accredited university, college or junior college. Scholarship payment will be made directly to the college or university in one lump sum. Scholarships must be used within two years of the award date.

Eligibility Requirements For An Academic Scholarship

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

- Live in the home of a parent or legal guardian who is a full-time resident in the Lamar Electric service area and maintains an active Lamar Electric account in good standing.
- 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 drawn and given away at the Lamar Electric Cooperative Annual Meeting on Saturday, April 9. Students need not be present to win. Entry deadline is April 8, 2011.

The application can be found on our website, www.lamarelectric.coop. Once the application is completed, simply click on the e-mail button and send to: scholarship@lamarelectric.coop

Or mail to: Lamar Electric Cooperative Member Services Department

> P.O. Box 580 Paris, TX 75461



2011 SCHOLARSHIP APPLICATION

Deadline is April 8, 2011

NAME
ADDRESS
NAME OF HIGH SCHOOL
PARENT/GUARDIAN NAME
LEC ACCOUNT #
PHONE #



COUNTRY CORNER EVENTS

March 3-6

Annual Wild Hog Hunt in Red River County—Clarksville. For information, contact Red River County Chamber of Commerce at (903) 427-2645 or www.redrivercoc.com.

March 4-5

Kiwanis Pancake Days—6 a.m. to 8 p.m., Red River Valley Fairgrounds in Paris. Tickets are \$5 in advance, \$6 at the door.

March 5

Lamar County Heart Walk—10 a.m. Market Square in Paris. For information, contact Angela at (903) 783-0815 or Cheri at (903) 784-9293.

March 5

Music on Main—First Saturday of each month in Clarksville on the Square. 7 p.m. Free admission. For information, contact (903) 427-3834, ext. 5.

March 4-16

Girl Scouts of N.E. Texas Spring Day
Camp—9 a.m. to 3 p.m. at Camp Gambill.
For information, contact the Paris Girl
Scouts office at (903) 783-0803.

March 18-20, 24-27

Paris Community Theatre presents "The Nerd"—7:30 p.m.

March 19

High Strung Bluegrass Band & guest The Hines Sisters—18 W. Hearne in Paris (next to South Main Café). Matinee 4-5:30 p.m. and evening show 7 p.m. Free admission.

March 26

"I Love Paris" Banquet—Paris High School. 6 p.m. Paris Education Foundation fundraiser for PHS Scholarships.

March 27-31

ASA Tournament—Love Civic Center in Paris. For information, contact Lamar County Chamber of Commerce at (903) 784-2501.

If you have any events that you would like listed for Delta, Lamar or Red River counties, please contact Marci Thompson. Information must be submitted two months in advance for the magazine. E-mail marci@lamar electric.coop or call (903) 783-4911.

Employee **Anniversaries**



DREW CONDER
Lineman
12 years on March 2



CODY JONES
Engineering Technician
12 years on March 15



MARCI THOMPSON Member Services Director 16 years on March 13