

# ELEC - O - NEWS

Our offices will be closed on Friday, April 14th.



## Annual Meeting to be Held on April 6, 2017

Attending the Upshur Rural Electric Annual Meeting is a great way to be actively involved in your Cooperative.

At the Annual Meeting, you will have the opportunity to meet our Board of Directors and Cooperative staff. You will learn about Upshur Rural Electric's plans for the future as well

as hear reports regarding this past year. You will also have a chance to enjoy some snacks, hear some good music and take part in our door prize giveaways.

Instead of voting for your Board of Directors in person at the meeting, our by-laws allow member-owners to vote by ballot prior to

the meeting. When you receive your ballot in the mail in late March, simply complete the ballot, tear off the ballot and return it in the postage-paid envelope that is provided. Members who return their ballots by the "Early Bird" deadline will be entered into a drawing for a \$150 credit on your electric bill.

Our Annual Meeting will be held in the auditorium of the Upshur Rural Electric office in Gilmer which is at 1200 W. Tyler Street. The registration and entertainment will begin at noon, and the meeting will begin at 1:30 p.m. We hope to see you there!



## Scholarships For Seniors

Upshur Rural Electric strives to provide quality service as well as provide support in our communities. One example of our commitment is our scholarship program. Upshur Rural will award 34 scholarships this May to graduating seniors.

Applications are available from school counselors, at our office or off our website at [www.urecc.coop](http://www.urecc.coop).

Deadline to submit an application is April 17, 2017.



Upshur Rural Electric is teaming up with KLTN Channel 7 in sponsoring Project Tornado. We want our members to be safe as tornado season approaches! Mark Scirto will be traveling to area schools teaching students about tornado safety.

Affordable ~ Diversified ~ Reliable

## April is National Lineman Appreciation Month

Upshur Rural Electric proudly recognizes all electric linemen for the services they perform around the clock in dangerous conditions to keep power flowing and protect the public's safety. "Our line workers are the first responders of our electric distribution system, and they work around the clock on high-voltage lines," said Rob Walker, General Manager. "Conditions can be dangerous, but they power through to ensure reliable service for our members."

Upshur Rural Electric invites members to take a moment and thank a lineman for the work they do!



## Ask the General Manager-OUTAGES

We often get multiple type comments from members during larger scale outages ranging from wondering why one house might be out but another is not, to the fact they the member has not had a truck near their home, to why is it taking so long when there appears to be so little damage around the member's residence. While outage restoration is more complex than can typically be described in a short article and the fact remains that even moderately scaled outages are both unique in some attributes but similar to most in others, hopefully the following might bring some relief to the comments like those described above.

First lets discuss generally how an electric distribution system, notably our rural electric system, is designed to deliver electricity. Upshur Rural Electric (URECC) has three main layers of system to deliver to a residence. First is the transmission system. The transmission system takes power off the higher voltage RTO grid at a delivery point. In URECC's instance we take delivery at four main delivery points within our ten county system at 138,000 volts (138 kV). Some of the delivery points are more capable than others and some are at higher voltages prior to delivery to us than others. From these delivery points URECC either keeps the voltage at 138kV or steps it down to a lower 69,000 volt (69kV) transmission voltage where power is delivered around our system. URECC owns over 300 miles of 138 kV and 69 kV transmission lines. Many of these lines have back feed capabilities which means we can close field switches and feed parts of the transmission system from other directions while other areas have only radial or singular feeds to them. One aspect of future plans at URECC will include the incremental upgrade to several key transmission lines connecting them in as network feeds. A network feed simply means we feed a section of transmission line from two or more directions at the same time. As you might expect this requires much better control and protection as well as higher capability transmission lines. The net effect, however, is less outages with these multiple feeds connected together. Transmission lines feed into and out of substations where the voltage change occurs.

The next layer of delivery involves the distribution system. These are the circuits that a member typically see running up and down the highways and yards around our system. The typical voltage on these lines is set to 12,470 volts (12.47 kV) but newer circuits will eventually operate at 25 kV. These poles will typically have two to four wires sitting on insulators and arms on them. The circuits feed from substations all the way out to homes, shops and businesses around our ten county system. As the circuits proceed farther away from the substation, the size and number of wires drop based on the amount and type of loads they serve. A typical substation will have approximately four circuits in it. These circuits are outfitted with breakers at the substation and on the main three phase line which later change to line fuses all of which are coordinated to provide safety and protection to the public as well as limit the range of an outage to a limited number of members.

Finally, we reach the home or business where the voltage is stepped down to 240 volts typically using a distribution transformer on the pole or on a pad in a subdivision. This is the service level where the power runs into the residence. The transformer itself is protected by fuses and a lightening arrester to limit (arrest) the effect of lightning strikes on and around the distribution system.

So the next point in an outage scenario that arises is which part of the system has operated to turn off the power flow to a residence. It does range, of course, from the member's own internal residential breakers, to the transformer fuse on the pole near the house, to a feeder/tap fuse or breaker, to the substation circuit breaker all the way up to the transmission line controls. And, as you go up that chain, the larger the outage becomes. Add to that the concept that when weather becomes involved it seldom is localized but impacts larger swaths of our ten county area. In each of the weather related outages, the cause or outage scenario ranges as just mentioned.

How then does URECC deal with each outage across the system? We have a program that helps us predict or define the device or devices that likely opened up the system. These predictions are based on data that flows in from the field devices as well as the outage reports made by members whether by telephone or through the SmartHub app. We also have the ability to poll some meters on our system and ask the device directly what it is seeing. After we get a prediction as to which device is out, we dispatch crews to repair that location. Therefore an outage at your residence may actually be caused by a tree that fell some feet or some miles away from your home depending upon the situation. Once on the scene, our crews not only verify the device out but then follow out the system below it until the cause is found. For lines running along a road this is not as difficult a task as following out lines that run behind homes, across lakes and swamps, and through pastures and forest. The further off the beaten path the longer it takes to inspect. After the cause is found, it is repaired as quickly as possible and then the device upstream is closed back into service. Outage damages sometimes are simple to repair and take only parts of an hour once found, but others like broken poles may take several hours to repair. And the higher the voltage the longer the repair typically takes as well. So when you see a truck running up and down the road or crawling through a pasture during an outage it's typically the crews looking for the causes to an outage so they can restore it.

What is the greatest cause of outages for URECC? Being in East Texas it is TREES, TREES and more TREES. Secondly then is storms, but even that is typically tied to, you guessed it, a tree! Hopefully this will shed some light on how URECC manages an outage and will also answer a couple of questions you might have had.