EnergyUnited
YOUR LOCAL CONNECTION

MAC Meeting

February, 2023

WELCOME

- **MAUREEN MOORE**
- **CORPORATE COMMUNICATIIONS MANAGER**

Important Building Information

SAFETY FIRST

SAFETY MESSAGE

A Safety Message for Tonight

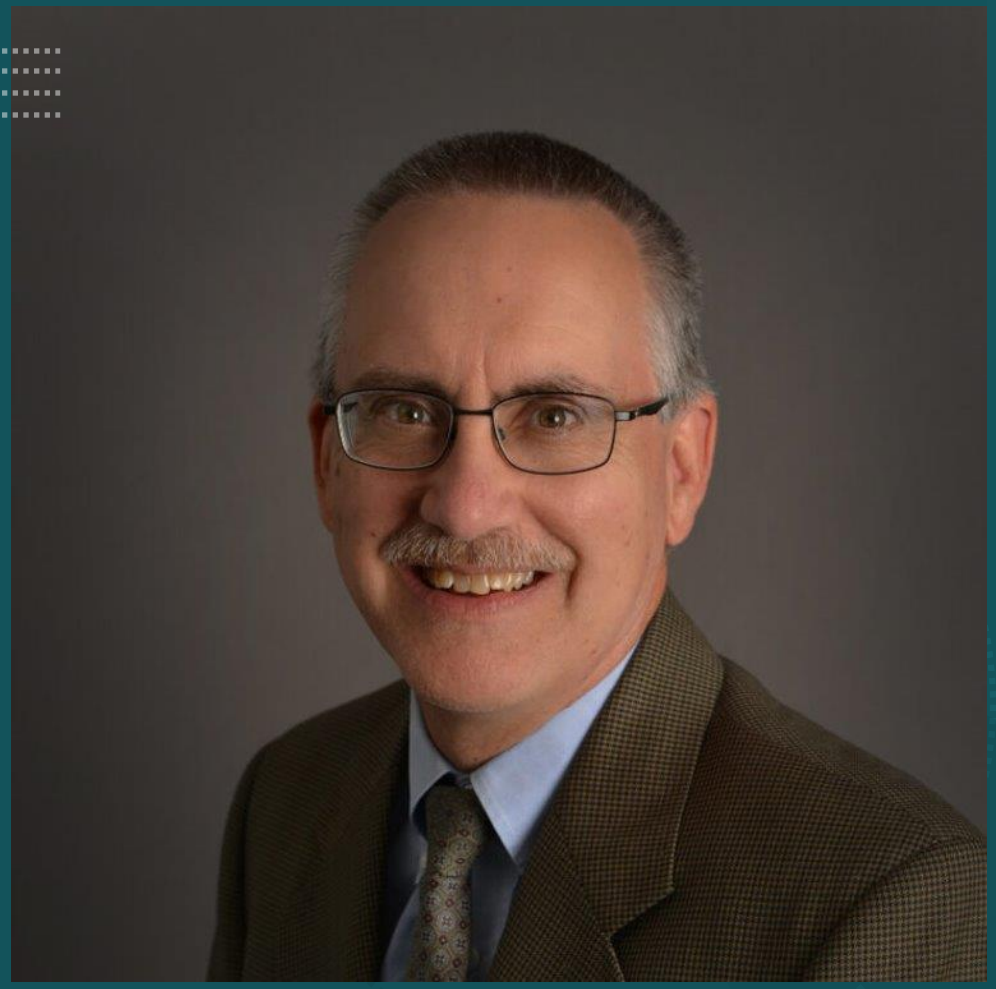
Welcome New MAC Members

- William Rakatansky
- Linda Perri
- Michelle Dean
- Roger Henry

Welcome Prospective Members!

ENERGY DELIVERY

- **STEVE MCCACHERN**
- **VICE PRESIDENT ENERGY DELIVERY**



Winter Storm Elliott and Storm Response

- Prepare for Outages
- Receive Outage Call
- Restore Power
- Analyze Outage Cause and Review Restoration Techniques

Winter Storm Elliott and Storm Response

- When a major event is called for EnergyUnited does several things to prepare:
  - Monitor the progress of the storm – we use several weather sites to monitor the path of the storm and what impact the storm may have on our system.
  - Ensure we have adequate stock of warehouse materials for storm restoration (poles, splices for wire, crossarms, etc.) Our major supplier is TEMA which is a statewide cooperative organization. They stock all major items and can ship items to us next day. We also maintain other relationships with major suppliers and other utilities if we have extra needs.
  - Ensure we have adequate workers depending upon the predicted damage – We maintain relationships with all statewide cooperatives as well as cooperatives in the entire region we can call upon if needed. We also maintain relationships with various contractors that we can call upon.
  - We maintain relationships with local caterers to supply food if needed.
  - We maintain contacts with local hotels to ensure adequate housing needs.

The steps to restoring power

Illustration by Katherine Fowler

Step 1. Transmission towers and lines supply power to one or more transmission substations. These lines seldom fail, but they can be damaged by a hurricane or tornado. Tens of thousands of people could be served by one high-voltage transmission line, so if there is damage here it gets attention first.

Step 2. A co-op may have several local distribution substations, each serving thousands of consumers. When a major outage occurs, the local distribution substations are checked first. A problem here could be caused by failure in the transmission system supplying the substation. If the problem can be corrected at the substation level, power may be restored to a large number of people.

Step 3. Main distribution supply lines are checked next if the problem cannot be isolated at the substation. These supply lines carry electricity away from the substation to a group of consumers, such as a town or housing development. When power is restored at this stage, all consumers served by this supply line could see the lights come on, as long as there is no problem farther down the line.

Step 4. The final supply lines, called tap lines, carry power to the utility poles or underground transformers outside houses or other buildings. Line crews fix the remaining outages based on restoring service to the greatest number of members.

Step 5. Sometimes, damage will occur on the service line between your house and the transformer on the nearby pole. This can explain why you have no power when your neighbor does. Your co-op needs to know you have an outage here, so a service crew can repair it.

(not the co-op) are responsible for damage to the service installation on the building. Your co-op can't fix this. Call a licensed electrician.

Transmission substation

Local substation

Local substation

Local substation

Tap Line

Tap Line

Other co-ops

During a major outage, other cooperatives are prepared to help. They send line crews to assist with restoring power. These additional crews, as well as equipment and supplies, are coordinated through The Tarheel Electric Membership Association in Raleigh, a central purchasing and supply cooperative owned by all the state's 28 electric co-ops.

Report your outage to the cooperative office. Employees or response services use every available phone line to receive your outage reports. Remember that a major outage can affect thousands of other members. Your cooperative appreciates your patience.

Co-op office

Individual households may receive special attention if loss of electricity affects life support systems or poses another immediate danger. If you or a family member depends on life support, call your cooperative before an emergency arises. When a significant outage occurs, your co-op will fix your problem as quickly as possible, or will call to let you know to seek shelter elsewhere.

DANGER! Stay clear of fallen lines

Hurricanes and ice storms. Tornadoes and blizzards. Electric cooperative members have seen them all in the last few years. And with such severe weather comes power outages. Restoring power after a major outage is a big job that involves much more than simply throwing a switch or removing a tree from a

The main goal is to restore power safely to the greatest number of members in the shortest time possible.

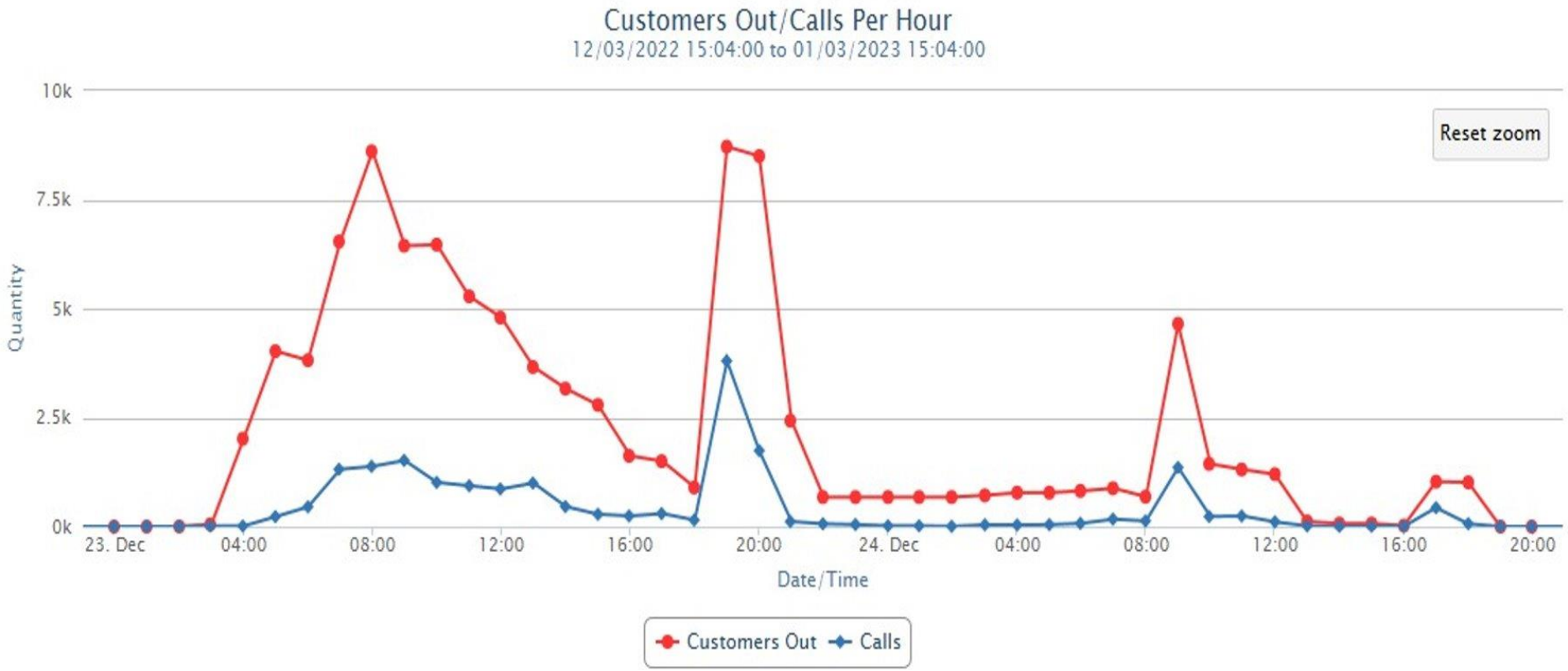
The major cause of outages is damage caused by fallen trees. That's why your electric cooperative has an ongoing right-of-way maintenance program.

The illustration on these pages explains how power typically is restored after a major disaster, such as a hurricane or tornado. While power restoration priorities may differ from co-op to co-op, electric system repairs generally follow a plan similar to the one illus-

Winter Storm Elliott and Storm Response

- In the early morning on Friday, December 23rd the area was hit by Winter Storm Elliott
- Wind gusts hit between 45 MPH and 50 MPH across EnergyUnited's territory
- At peak we had 8714 members out of power
- Outages started around 4:00 AM on 12/23 and crews worked until 8:00 PM on 12/24 (Christmas Eve)
- Our employee's response to this storm was excellent
- Assisting us in the restoration we had crews from Union EMC, Four County EMC, Lee Electrical Contractors
- You will see on the next slide we had two major events during this storm. Late in the day on Friday, the 23rd we had a transmission outage that caused us to lose several substation. On the morning of Saturday, the 24th we lost power to our Wesley Chapel Substation that was due to cold load pickup as we restored power from the storm.

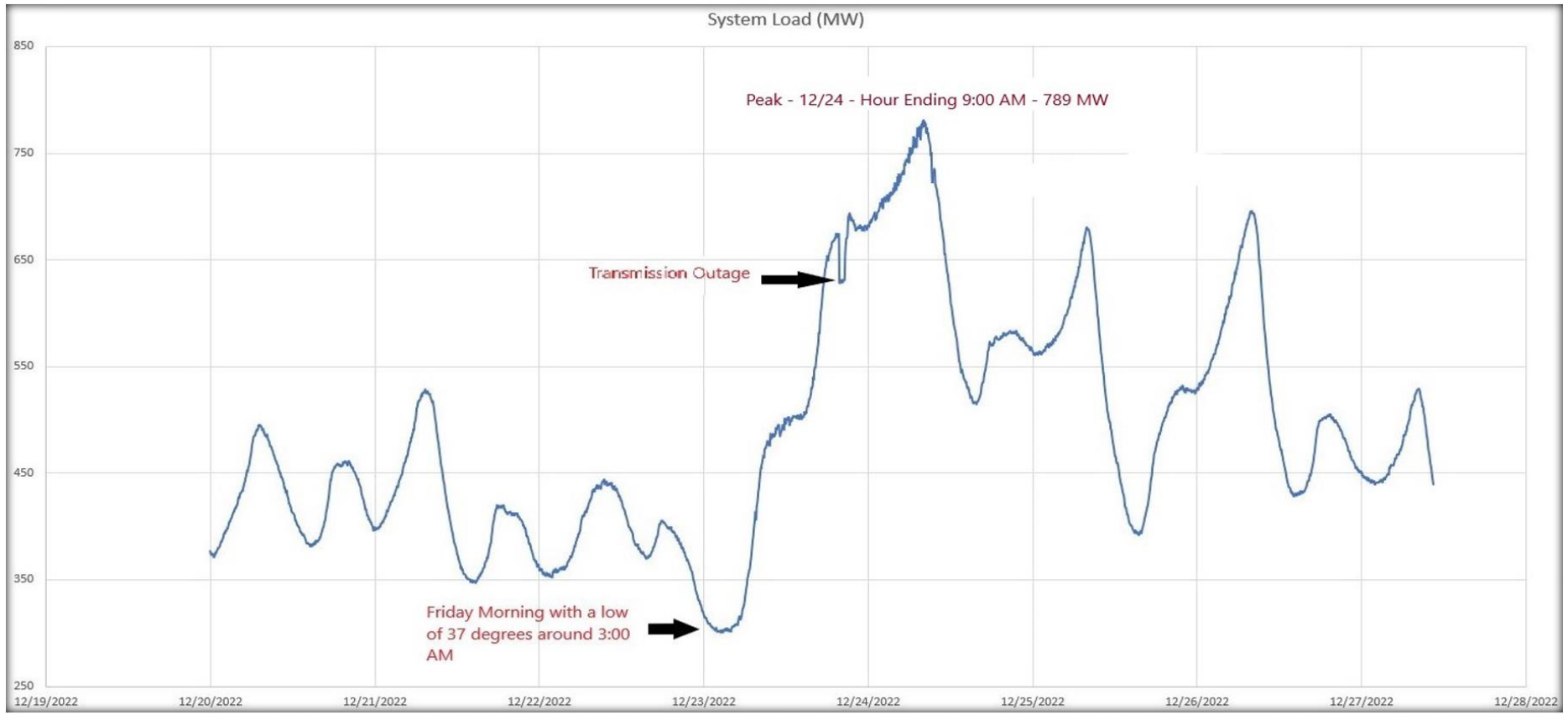
Winter Storm Elliott – Members Out



Winter Storm Elliott

- This was followed by the temperature going down to 5 to 7 degrees across our system on the morning of the 24th
- Our system hit a peak of 789 MW at 9:00 AM. Our old peak was 758 MW back in January of 2018
- Overall, our system responded well to this extreme cold
- Duke Energy did call for emergency reduction and started rolling blackouts on the morning of the 24th.
- We activated our Demand Side Management programs included load management, Beat the Peak, Peak Time Perks and Voltage Reduction systems.
- We were also impacted by Duke's Rolling Blackouts on the distribution side when they cut power to our Stokesdale Delivery for a little over two hours.

Winter Storm Elliott – Total Load



Load Shed Event December 24th

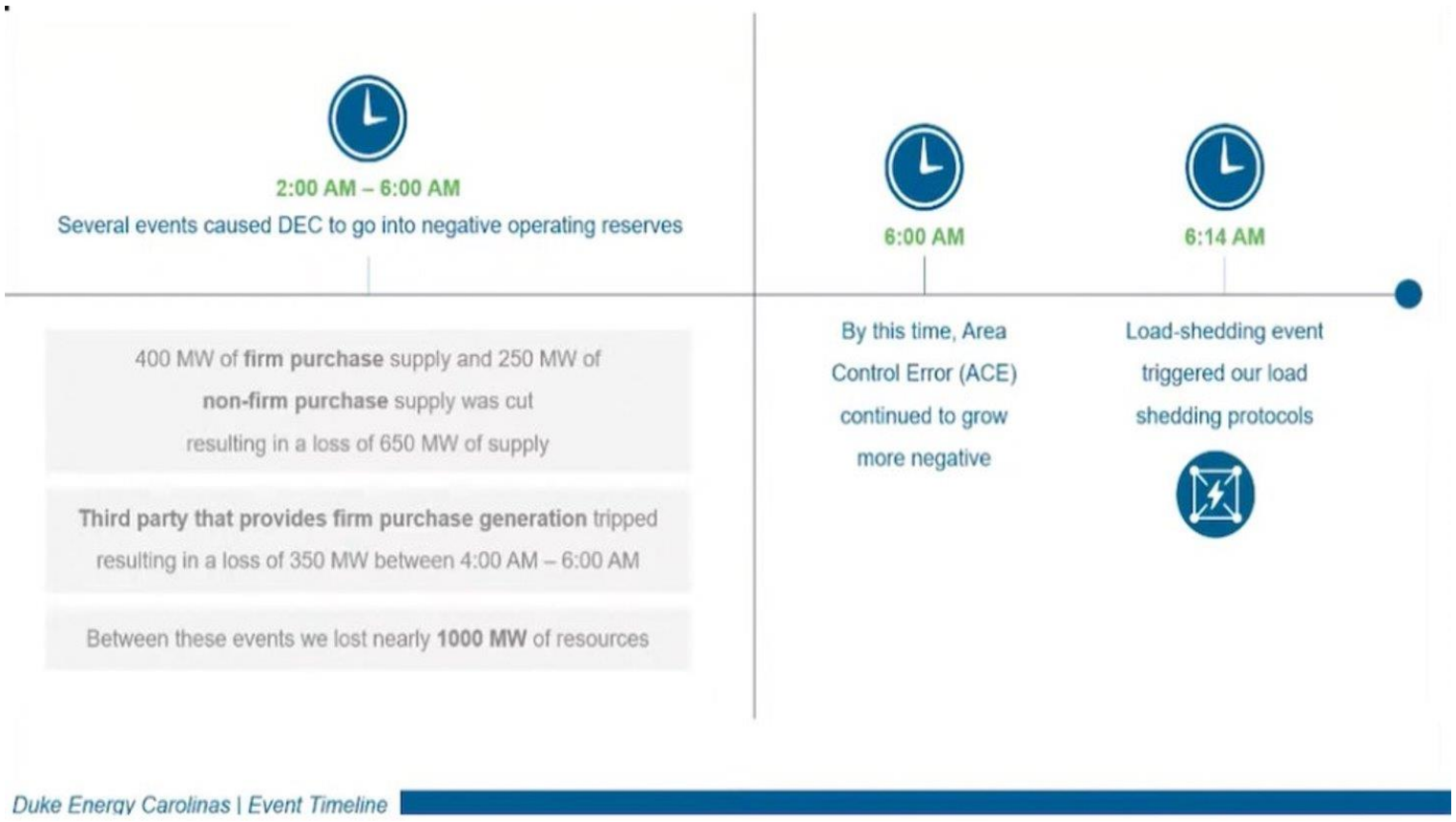
- On the morning of December 24th Duke Energy called for emergency load reduction and they implemented their Load Shed protocol that included rolling blackouts to reduce their load.
- This was done in response to a shortage of generation available to serve their projected load.
- Their plan called for them to reduce loading by rotating through their system and taking outages on their distribution circuits. The original plan called for outages to last between 15 and 30 minutes. Due to several system problems outages often extended to greater than two hours.
- We activated our Demand Side Management programs included load management, Beat the Peak, Peak Time Perks and Voltage Reduction systems.
- We were also impacted by Duke's Rolling Blackouts on the distribution side when they cut power to our Stokesdale Delivery for a little over two hours.

Load Shed Event December 24th

- The shortage in generation was caused by a multitude of issues all occurring at the same time.
- Load projections did not accurately project the load for the morning of the 24th. They originally projected they would have 1500 MWs in reserve to serve the load in the Duke Carolinas area. As the date got closer their projections did rise but going into the 24th they still believed they had 900 to 1000 MWs in reserve.
- As the morning progressed, they realized that their projections were still low and they attempted to purchase power from neighboring utilities, but all utilities in the area were experiencing the same issue and had no extra reserves to supply.
- They had several problems at some of their generation plants that caused them to go offline or reduce generation. This included their Dan River Plant that had to be derated due to instrumentation freezing and generation had to be reduced. This same thing happened at other plants leading to a reduction in available generation.

Load Shed Event December 24th

Load Shed Event December 24th



Pleasant Hill Substation Incident

On Tuesday, January 17th, early in the morning we received alarms from our Pleasant Hill Substation.

A Technician responded to the alarms and found that both a regulator and the substation transformer had been shot multiple time.

Crews were able to backfeed all the circuits out of Pleasant Hill Substation and remove the station from service.

The Local Sheriff's office, the FBI, SBI and other authorities were notified. In an incident such as this we are required to notify multiple agencies of the event.

The damaged equipment has been replaced and the site cleaned from the oil that spilled from the equipment.

Shortly after the incident both the Sheriff's office and EnergyUnited did a press release to get ahead of the news agencies. We received many interview requests and requests from both local, state and national news agencies.

After the event in Moore County we were already looking at ways to improve substation security and will continue to evaluate our protocol in such an event.

Prior to the event we were already working with E-ISAC (Electricity Information Sharing and Analysis Center) on scheduling an on-site review of best practices in substation security.

E-ISAC is the arm of NERC (North American Electric Reliability Corporation) in charge of both cyber and physical security for the electric grid.

We are currently reviewing all security at all our facilities, including offices. You have seen many improvements in security recently including badges, gate protocol and other initiatives that will improve our overall security stance.

Pleasant Hill Substation Incident

Co-Op Updates

Maureen Moore

Corporate Communications Manager

Youth Tour Update

- Interviews concluded January 24
- Special thanks to Ryan DeAndrea, Denise Cascardi and Kevin Cox for participating in these interviews!

- And the winners are....

Cooperative Leadership Camp

- Organized by Cooperative Council of NC
- Will be held June 26 - 30, 2023 at Camp Monroe in Laurel Hill, NC.
- EnergyUnited will sponsor two students
-
- The winners are....

Isabella Pritchard
Alexander Central High

We are now recruiting for the 2023 *Empowering the Future* Scholarship program!

EnergyUnited will be awarding two $5,000 college scholarships to high school seniors this April.

The deadline to apply is March 31

Empowering the Future

We are now recruiting for our 2023 Sports Camp program! If you know a young boy or girl in the fifth or sixth grade who enjoys playing basketball, please encourage them to apply!

Deadline to apply is March 31

Touchstone Energy®

Sports Camp Scholarships

Program will launch April 1, 2023.

K-12 teachers (public, private, charter) who work for any school within our 19-county service area are eligible to apply!

Please encourage all educators to visit energyunited.com to learn more and apply on or after April 1.

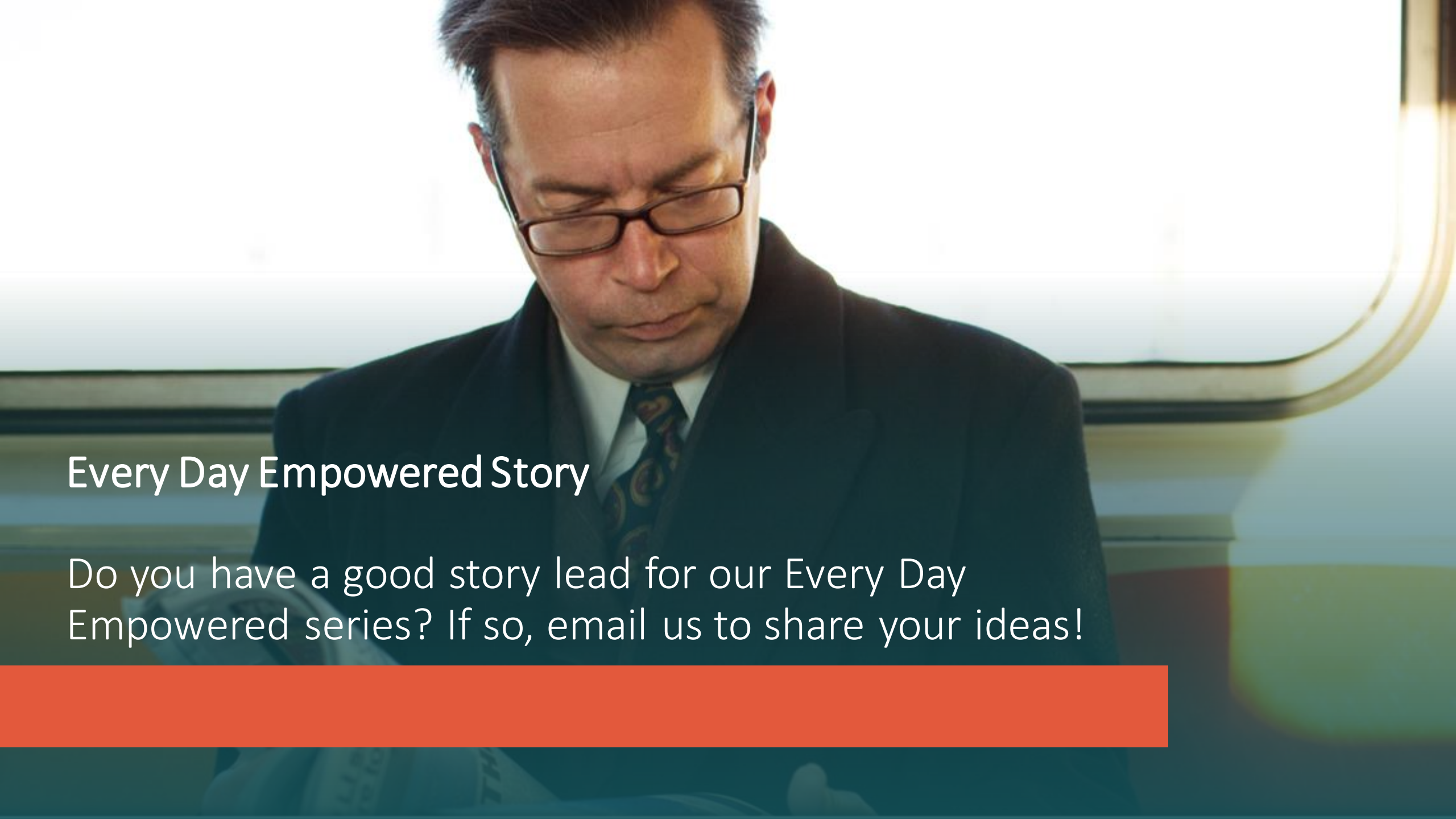
Bright Ideas
EDUCATION GRANTS

2022 Reports

- **2022 Sustainability Report**
  - Content production in progress.
  - Will share updates on all EnergyUnited's efforts to preserve environment and the service pillars you value most.
  - Will be available online on April 1, 2023.
  - Contact Adam if you would like to review an advanced draft and offer feedback.
- **2022 Annual Report**
  - Content production in progress.
  - Will share corporate updates from 2022.
  - To be published online and mailed with the June issue of Carolina Country.
  - Contact Maureen if you would like to review an advanced draft and offer feedback.

Drive Electric Week – EV Event (Sep. 22 – Oct. 1)

We are currently planning second annual Driving Change EVent this fall for National Drive Electric Week.



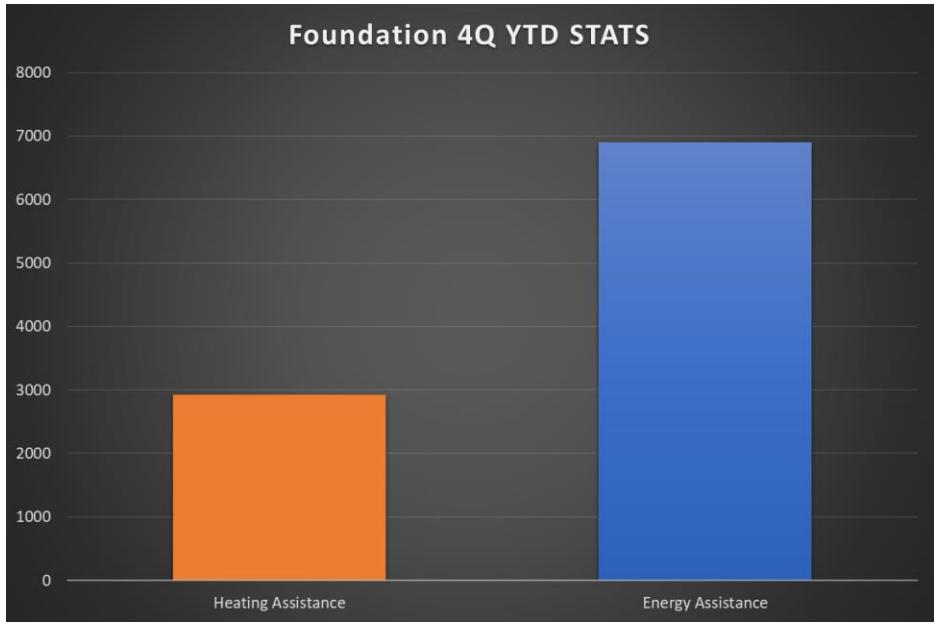
Every Day Empowered Story

Do you have a good story lead for our Every Day Empowered series? If so, email us to share your ideas!

EnergyUnited Foundation

$382,924.11

Total Amount Funded



Assistance Programs

Please Give Us Your Feedback

Annual Report Pulse Survey

Rate Change/Bill Design Feedback