SOUTHEAST COLORADO POWER ASSOCIATION

SEPTEMBER 2024

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Our primary mission is to provide high-quality, reliable electric service at a reasonable cost to our members, improve their quality of life through new technologies and services, be a visible and active member of the community and serve our members with respect, courtesy and responsiveness.

NRECA

POWER SUPPLY AND TRANSMISSION IN SOUTHEAST COLORADO

BY **KEVIN BRANDON** CEO | KEVINB@SECPA.COM

KEVIN BRANDON

The afternoon of July 15, 2024, was hot with temperatures reaching 100 degrees or higher throughout the Southeast Colorado Power Association (SECPA) service territory. At the peak of the high temps that day, SECPA, and other area power providers, started experiencing large outages and voltage fluctuations for much of the afternoon.

I want to explain to the best of my knowledge, what happened that day: why did we experience the big swings in voltage? Why were some areas were out of power and others were not? I also want to address what can be done or is being done to minimize disruptions like this in the future.

First, it's important to explain how power gets to most of SECPA's members in this area. SECPA members from La Junta East to the Kansas State line including members in Baca, Bent, Crowley, Kiowa, Las Animas, Otero, and Prowers counties are all fed from SECPA substations that are fed by Tri-State Generation and Transmission (SECPA's power supplier) by a combination of two transmission lines. The first line is a Tri-State owned and operated 115kV line that comes from the Boone substation near Pueblo and goes to Lamar. The second transmission line that feeds the area is a 230kV line that is jointly owned by Tri-State and Xcel Energy, and operated by Xcel, that also runs between the Boone substation and Lamar, but is located several miles North of the 115kV line.

These two lines run in parallel with each other, and most of the year, this arrangement offers redundant power paths to the area. The reason I said "most of the year" is because when temperatures reach the 100s and we have peak air conditioning and irrigation loads, the 115kV line simply does not have the capacity to carry all of the load by itself if the 230kV line is not available.

The information we received about the events of July 15, is that the 230kV line was possibly struck by lightning somewhere East of Boone which tripped a breaker and de-energized the line. As a precaution, Xcel did not want to re-energize the line until they could inspect it for damage to be sure there were no conductors on the ground that could start a fire with the dry vegetation and the hot and dry weather conditions that day. When the 230kV line was de-energized, that caused an immediate overloading of the 115kV line which led to the low voltage we experienced around the area. Tri-State started shedding load by opening breakers to various substations around the area in an attempt to stabilize the system. As Tri-State would de-energize a substation, the voltage would rise for a short time, then the voltage would drop again. This pattern continued until enough load had been shed to stabilize the system and get the 115kV line under its capacity limit. Tri-State also reached out to non-member systems that are fed by Tri-State lines (ARPA member systems) asking them to conserve energy and shed load on their systems as well. At one point that day, SECPA had five substations and two large gas compressor stations offline which finally allowed the voltage to stabilize. Around 7:30 that evening, Xcel completed their inspection and re-energized the 230kV

line. This allowed all of the load that had been shed that day to be re-energized and returned to normal.

To help avoid situations like this in the future, Tri-State is well underway with their Eastern Colorado Transmission Project which will bring another 230kV transmission line to the area, creating additional redundancy that also has the capacity to supply all the power needs to the area even in peak usage. The new line that Tri-State is building will come from Burlington, going South to Lamar to interconnect with the other transmission lines. This will not only fix the capacity issue in the area during peak times, it will also improve the power quality in the area throughout the year while also allowing for more growth. This new line is scheduled to be operational in early 2025.

We strive to provide reliable power to our members, but sometimes the cause for an outage is beyond our control, such as was the case on July 15 as described above. But, we are grateful that Tri-State is adding additional transmission lines to this area that will prevent this scenario in the future and also increase overall electric reliability and capacity for SECPA, our members, and the rest of the Southeast corner of the state.

DO NOT OVERLOOK OVERHEAD POWER LINES

It can be easy to overlook things that we see every day — including overhead power lines. However, failure to notice overhead lines can be deadly. If you or an object you are touching contacts or gets too close to a power line, you could be seriously injured or killed.

Overhead power lines require 10 feet of clearance in all directions. This distance rule applies to the power lines draped from pole to pole that line roads (distribution lines), as well as the drop-down lines that service homes or other structures.

If your job requires you to operate equipment in the vicinity of large transmission lines and towers, they require even more clearance than distribution and drop-down lines. That clearance is determined by the Occupational Safety and Health Administration (OSHA). OSHA mandates line clearance distances for all types of power lines.

Be mindful of overhead power lines when completing the following tasks:

Home maintenance

Always be aware of the location of power lines, particularly when using long tools, such as ladders, pool skimmers, and pruning poles. Lower long tools and equipment before moving or transporting them. Other safety tips include:

- Carry ladders and other long items horizontally whenever possible. WIN *Richard Fowler acct 6049xxxxx
- Be careful when working on or around your roof.
- Never go on a roof in windy or bad weather.

Yard work

When trimming trees, do not allow yourself or trimmers to come within 10 feet of overhead power lines, including service lines to your home or outbuilding. In addition:

- Do not trim trees near power lines; instead, leave this to certified line clearance tree trimmers.
- Do not use water or blower extensions to clean gutters near electric lines.

Farming

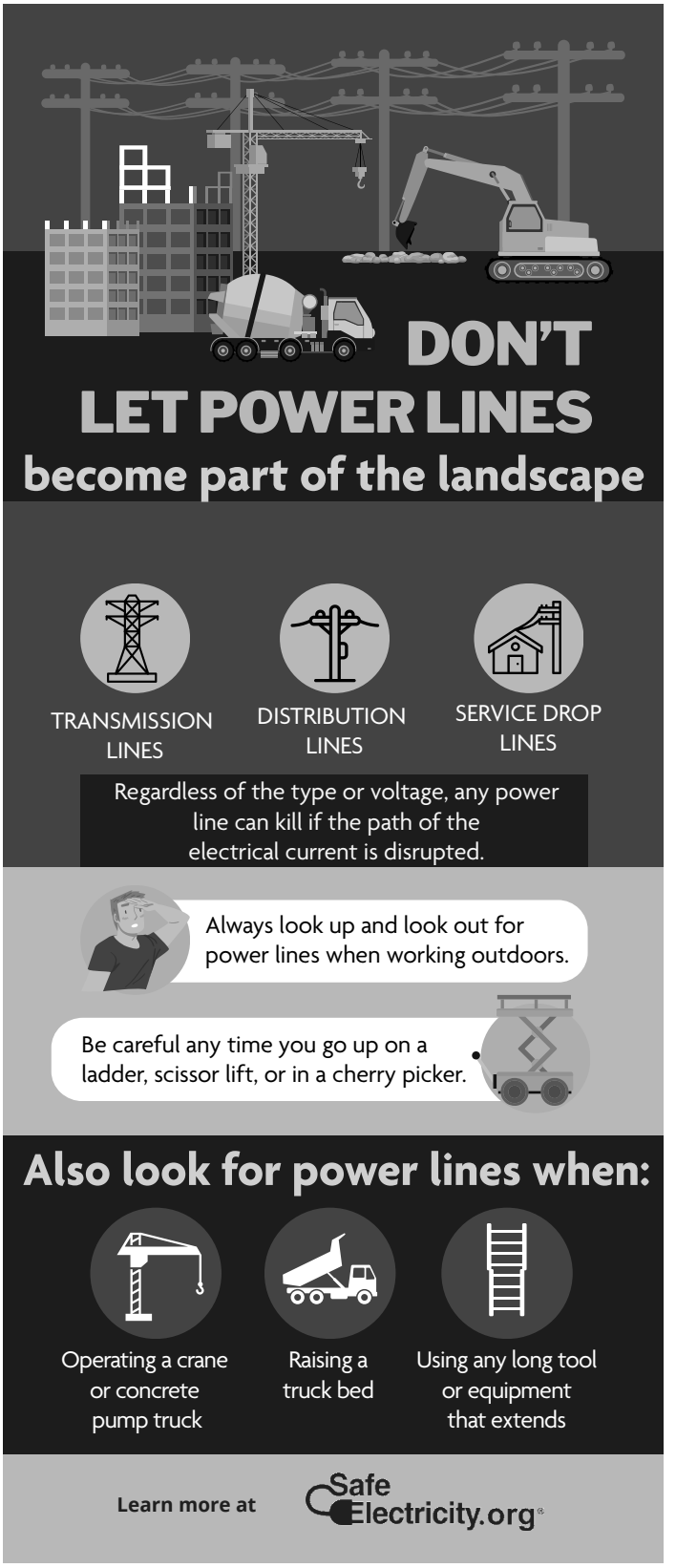
Review power line locations and other potential electrical hazards with all workers at morning safety meetings. Equipment that could get too close or contact a power pole or line includes sprayer tips, tall equipment, dump trucks, augers, and other extensions.

At work

Follow all OSHA distance requirements when operating dump trucks, cranes, concrete pump truck extensions, and when working on a roof or in a bucket.

Other reminders

- Do not come within 50 feet of a downed or damaged power line. Warn others to stay away. Call 911 to report it.
- Never climb trees near power lines.

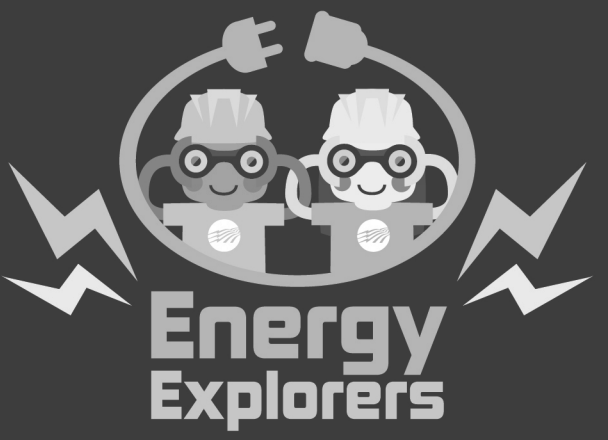


PREPAREDNESS MONTH WORD SEARCH

Did you know September is National Preparedness Month? There are several ways you and your family can be prepared for an emergency.

Read the tips below, then find and circle the bolded words in the puzzle.

(Use the word bank as a guide.)



PREPAREDNESS TIPS:

Keep a list of emergency **phone numbers** in a location that's easy to find.

Learn about different types of **emergency alerts** and understand what they mean.

Make an emergency **kit** that includes items like flashlights, batteries, water, non-perishable food and a First Aid Kit.

Designate a **safe area** in your home in the event of a severe storm. This should be an area in the center of the home, away from windows.

Make sure **smoke alarms** are installed on every floor of your home and outside bedrooms. Test alarms every month to ensure they're working properly.

S	T	R	E	L	A	F	P	E	G	P	R	J	M	H
J	X	N	N	H	W	T	M	R	U	H	L	H	T	U
E	N	P	Z	H	X	E	M	S	C	O	P	D	K	E
V	T	Y	Q	U	R	D	V	R	A	N	R	P	T	R
T	O	W	J	G	G	A	E	M	U	E	W	J	N	X
O	Z	X	E	L	M	E	P	T	X	N	K	D	U	F
U	Z	N	Q	F	O	R	Q	K	R	U	H	Y	W	K
T	C	R	Q	O	V	A	X	C	V	M	R	D	R	W
Y	O	M	O	B	Y	E	A	H	H	B	S	S	Y	P
E	K	J	W	T	F	F	D	N	U	E	T	S	J	S
E	U	B	J	B	H	A	N	C	E	R	A	I	D	G
A	Q	R	B	W	B	S	Q	N	S	S	S	J	K	L
S	M	O	K	E	A	L	A	R	M	S	Z	P	W	P
E	C	U	T	G	Z	B	B	B	I	O	Y	J	M	N
A	Y	M	T	Z	I	G	K	Z	Q	N	B	Y	L	S

WORD BANK: phone numbers, emergency, alerts, kit, safe area, smoke alarms