



The Risk of Blackouts Could it happen here?

Area Serviceman Joe Alexander at a substation near Greenfield.

The recent rolling blackouts in Texas and California have caused us all some concern. Blackouts have been a relatively rare event in the United States. There have been nine such events that would be considered major blackouts since 1965, ranging from the Northeast

Blackout that affected 30 million people, to the New York City Blackout of 1977, to the more recent Northeast Blackout in 2003 that affected 45 million people in eight states. The root cause of most of these events ranges from human error, to weather, to software bugs.

continued...



Illinois Electric Cooperative

P.O. Box 80, Two South Main Street
Winchester, Illinois 62694

www.e-co-op.com
1-800-468-4732

A Touchstone Energy® Cooperative



This institution is an equal opportunity provider and employer.

Working to improve the quality of life in the communities we serve since 1936.

The recent blackouts in Texas and California happened for very different reasons. Electrical demand on the grid soared due to extreme temperatures. In California, it was hotter than normal temps that caused demand to exceed supply. It was exacerbated by a reliance on intermittent renewable sources and imported power from neighboring states. In the case of Texas, it was colder than normal temps that also caused a spike in demand. The cold temperatures froze wind turbines and natural gas lines, rendering much of their generation inoperable. With demand exceeding supply, transmission operators were forced to implement rolling blackouts to prevent the collapse of the entire grid. The question is, could this happen here?

A few months ago, the North American Electric Reliability Corporation released its Summer Reliability Assessment. The assessment identifies and reports on areas of concern regarding the reliability of the North American Bulk Power system for the upcoming summer season. The report rates the various Independent System Operators (ISO) and Regional Transmission Organizations (RTO) in terms of supply and demand risk. Both ISOs and RTOs are organizations that coordinate, control, and monitor the use of the electric transmission system by utilities, generators, and marketers. Most of Illinois is served by the Midcontinent Independent System Operator (MISO), which is both an ISO and RTO. The findings of the assessment show MISO to be at an “elevated risk” of insufficient supply during peak demand.

In summary, our concerns are valid. We must use caution as we move from traditional means of generation, to renewable energy sources. Coal and natural gas generation plants are dispatchable. Unlike renewable sources, dispatchable generation can be called on 24/7. Renewables are intermittent in nature because of their dependence on the

sun and wind, both of which we have no control. Closing dispatchable plants too soon could put us in the same situation as California and Texas.

Prairie State Energy Campus is wholly owned by not-for-profit electric cooperatives and municipalities in Illinois and other midwestern states, providing affordable and reliable electricity. Under the current comprehensive Illinois legislative energy proposal, Prairie State would be required to close by 2035. Closing our dispatchable plants prematurely will cause greater reliance on intermittent generation, and imported power from other states. During times of high demand, neighboring states may not have excess capacity available. Renewables could also not be available due to their intermittent nature. As we transition from traditional sources of power, to carbon-free energy, we must be careful not to let policy get ahead of technology. Until electricity storage is perfected, we will need baseload, dispatchable power plants to bridge the gap, and ensure reliability.

Reliability is at the forefront of our concerns. The future will definitely be challenging in an environment of changing technologies and energy policies, much of which we can't control. As your electric cooperative, we will do everything possible to continue to provide the safe, and reliable service you've come to expect.

Randy Long,
General Manager



Mapping the Territory

Joe Baalman, Engineering Systems Manager

Calhoun native Joe Baalman started at the co-op as a part-time intern three years ago. At the time, he was finishing up his mechanical engineering degree at Southern Illinois University Edwardsville. When he graduated in 2019, he was hired for a new role at the co-op: Engineering Systems Manager.

Today, his day-to-day role has ever-changing duties, but includes major undertakings like updating the electric system maps for constant accuracy. Maintaining these complex maps means using advanced mapping software called Geographic Information Systems (GIS) to ensure 100% accuracy.

However, it's a tricky system to learn and use. "GIS provides data to a lot of other systems that we use here, including customer information, metering, engineering analysis

software, outage management, and more," Joe said. "That means making a single mistake can cause problems down the line."

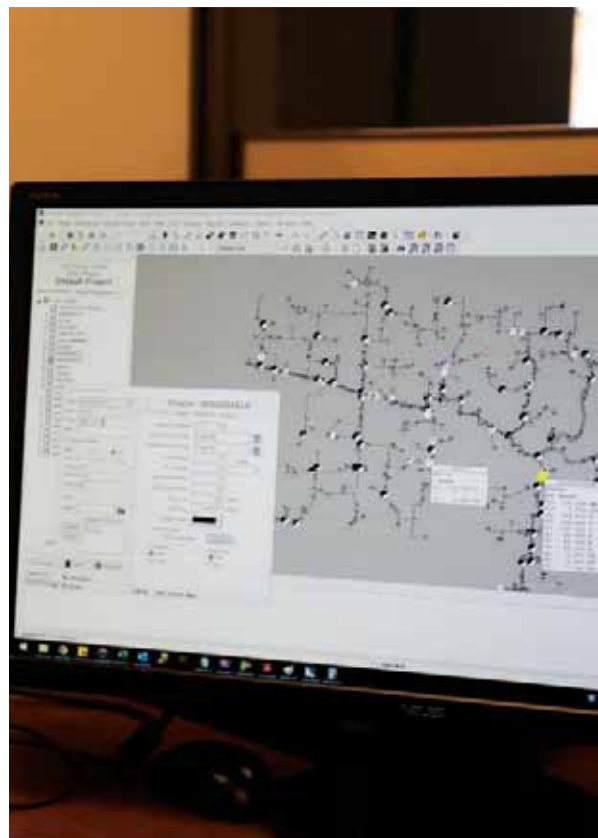
The process for this has evolved over the years. When Joe started at the co-op, paper and digital maps were utilized. Now, however, the entirely digital mapping system improves access, accuracy, and provides valuable real-time information.

"Every piece of equipment in the field is stored in the map, including all 70,000 poles, 10,000 meters, 3,000 miles of conductor, and thousands of other pieces of equipment," Joe said. "Our crews can use the maps on their iPads or computers to get any technical information they need about the electric system, or they can click on service locations to get member information."

The information included here is updated on an ongoing basis. Any time work is done on the electrical system, such as new construction or repair work, a work order is created to document the work done and the materials used. After the work order has made its way through other departments like accounting, it ends up with Joe, where he translates the paper document into the digital map.

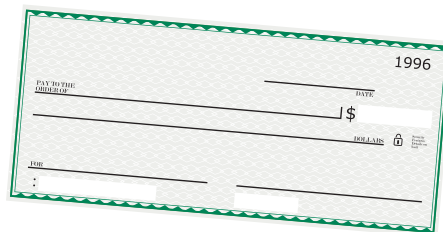
"With new construction or when poles are moved, we'll go out with a GPS unit to make sure everything is as accurate as possible," he said.

With thousands of poles and meters covering such a large footprint, Joe is responsible for many details and assists in lots of tasks. This is one of his favorite parts of working at the co-op. "I enjoy the variety in the day-to-day work. We all have many roles to fill and that keeps it from becoming boring."



Pay Your Bill Online Today at e-co-op.com!

- ✓ **Avoid Late Charges**
- ✓ **View Your Usage**
- ✓ **Schedule a Future Payment**
- ✓ **Pay with Check, Debit, or Credit Card**
- ✓ **Sign Up for Paperless Billing**



facebook

Find us on Facebook at facebook.com/illinoiselectric