

"Why was my power out?" A review of 2023 outages



Alisha Anker
General Manager

When big storms hit, it is easy to understand the cause of power outages; but not all outages are so easily identifiable. Systemwide our members experienced a grand total of 82,913 consumer-hours of interruptions last year, a significant increase from 2022. Two major storms

greatly contributed to this increase, the March 31 tornadoes and June 29 derecho. These consumer-hours represent the total outage time accounted for when you compile every minute of power interruptions for every member on our system. The actual number of hours service was interrupted anywhere on our system was 2,919 (this number is much lower because each outage could affect multiple consumers).

We strive to provide you with reliable service and work hard to continually improve our system's reliability. Outage cause analysis is just one aspect of ensuring all of our resources are wisely focused. To give you a better understanding of last year's interruptions, we break down all the outage causes here. As you see on the inset chart, weather and outages due to loss of transmission source from our power suppliers lead. As an aside, if the five days of large storm activity are removed from our analysis, the cause indicators become much more balanced.

37% Weather

Last year, unprecedented high winds during two major storms were a driver leading to weather-related events taking the lead. Our electrical facilities — poles, wires and structures — are built

to withstand much of the harshness Mother Nature can bring, but service disruptions due to lightning, tornados, straight-line and derecho winds, ice and rain, and other environmental extremes are an unfortunate consequence of the electric industry.

32% Power supplier (aka transmission)

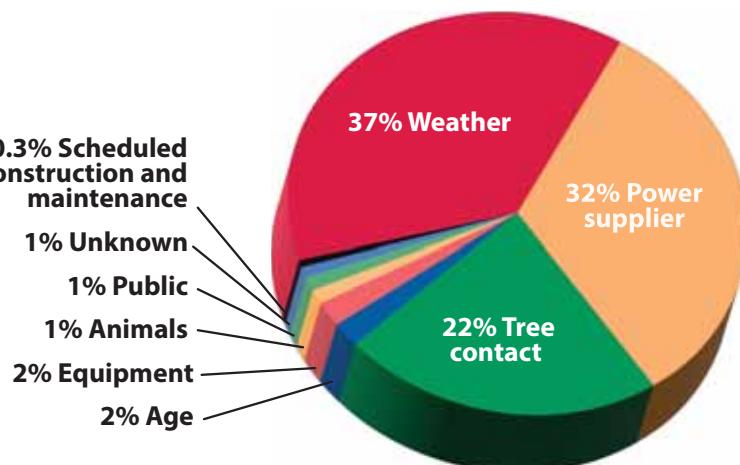
Power supplier outages occur when Prairie Power or Ameren IL lose a

this cause becomes the most frustrating as it is entirely out of our control.

22% Tree contact (aka vegetation)

We do what we can to control this outage cause and diligently work our right-of-way clearing, spraying and vegetation management program. While not popular, the work is necessary to protect our equipment and reduce the number of outages caused by vegeta-

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transmission line serving one of our substations, or when equipment failure occurs within a substation. The service we rely upon from these providers is also impacted by weather conditions. No doubt the two major storms were a driving factor to this cause being the second largest for 2023. During most power supplier outages, we have the ability to backfeed from another substation so service to our members may be restored. However, when not possible,

thank you for your patience when line clearance personnel are in your neighborhoods.

2% Equipment

This cause represents equipment failures separate from weather-related events and is generally due to normal wear and tear on our electrical devices, which is expected on a system our size.

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"2023 outages" continued from page 18A

2% Age-related failure

Our entire electrical distribution system continues to get older. It is important that we continue to perform these rebuilds. We are glad to report supply chain miseries are subsiding.

1% Animals

Despite our efforts to deter animals with the installation of shields and guards, tricky critters (mainly birds and squirrels) climb and snoop around our electric poles and transformers, unaware of the dangers to themselves and our system. We are happy to see our efforts reap benefits as this cause is much lower than in prior years.

1% Public and member accidents

This category involves multiple incidents, including several fires, farm machinery or vehicles making contact with our lines or equipment, and contact with our underground cables by excavators. For your safety, please be alert when navigating vehicles or machinery near our equipment and always call JULIE (dial 811) before you dig.

1% Unknown

Experience and knowledge of our system often lead our linemen to a quick answer as to why an outage has occurred. A few select cases this year remain unsolved mysteries.

0.3% Scheduled construction and maintenance

A very small number of hours our members were without power for the sake of scheduled construction and maintenance. We do our best to alert affected members in advance and to work efficiently to reduce daily life impacts. We appreciate your patience while our crews work safely to make needed repairs.



**HAPPY
PRESIDENTS'
** DAY ****

Our office will be closed Feb. 19.



ICE ON POWER LINES IS A WEIGHTY SUBJECT



When it comes to getting electricity across power lines and into homes, ice can be a force to be reckoned with.



ICE ON DISTRIBUTION LINES

Ice can quickly lead to broken power poles and other pole equipment. Ice can also make falling tree branches 30x heavier and much more likely to break power lines.

ON A 300-FOOT SPAN OF 1-INCH-THICK POWER LINES

- 1/2 inch of ice adds 281 pounds of weight
- 1 inch of ice adds 749 pounds of weight
- 2 inches of ice adds 2,248 pounds of weight

WHEN ICE MELTS

Melting ice can cause power outages. If ice on the bottom (neutral) line melts before the lines above, it can cause the lines to touch.

OTHER ICE FACTS

- Damage can begin when ice exceeds 1/4 of an inch
- 1/2 inch of ice can cause a line to sag up to 12 inches
- Pressure can also be caused by a broken tree limb
- Both ice and melting ice can cause power outages



Source: Jerri Imgarten-Whitley and Victory Electric Cooperative



Safety Tip

Did you know that mylar balloons can damage the power grid and cause power outages? Mylar and latex balloons eventually fall back to earth and their remnants can cause harm to animals and marine life. Consider alternatives to balloon releases and enjoy balloons indoors.



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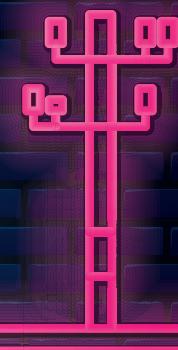
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WHAT IS backfeed?

Avoid deadly backfeed and help keep lineworkers safe.

Backfeed happens when a person connects their portable generator to a wall outlet, which allows power to flow in reverse – that is, the alternate power source feeds energy back through their home's electrical system, their meter and back into the power lines.

Potentially deadly backfeed can also happen with permanently installed generators that are not used or installed correctly. They should be wired into your home by a qualified electrician, who will install either an automatic or manual transfer switch, depending on the generator. The job of this switch is to transfer a power source safely from its primary source to a backup source.



To keep utility crews safe, never plug a portable generator directly into a wall outlet or electrical system, and ensure transfer switches are professionally installed and working properly. Electric lineworkers thank you in advance.

Learn more at:

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Board highlights

Nov. 28, 2023

- All Directors, General Manager & Attorney present.
- Staff members presented department budgets: Director of Accounting & Finance Julie Atwater, Director of Member Services Trish Michels, Operations Manager Dalton Whitley & Engineering Manager Brady Smith.
- Approved revision of Prairie Power Revenue Deferral Plan to eliminate full waiver for 2023, seek full waiver for 2024 & defer 0 mills/kwh throughout year.
- Approved adoption of NRECA Voluntary Contribution Acceleration Program to pre-pay RS plan for 5-year term for 8% reduction factor.
- Anker reviewed October monthly & YTD financial trends. Operating margins \$3,667,798 Compared to \$2,160,323 Last year; equity at 43.09%; 12-mo TIER 3.57 & DSC 2.41.
- Reviewed Operations report w/49 incidents; longest duration of an outage 214 minutes for one member due to bad transformer; largest #

For full minutes visit menard.com
or contact the office.

ENERGY EFFICIENCY TIP OF THE MONTH

- affected by single outage 172 due to windstorm.
- Second FEMA Appeal for disaster 3577EM-IL was granted.
- Appointed Director Jay Frye Authorized Representative & Michels alternate for Illinois Cooperative Worker's Compensation Group & Roschdale Services annual meetings.
- Reaffirmed Director Warren Goetsch as NRECA voting delegate & Director Don McMillan as alternate.
- Approved Policy chgs & addition recommended by ByLaw/Policy Committee: Metering Equipment, Continuity and Discontinuance of Service, Net Metering and Cooperative Credit for Excess Member-Generated Electric Energy, Group Hospitalization and Major Medical Plan, Health Savings Accounts, Paid Time Off and Short-Term Sick Bank, and Paid Leave for all Workers Act.
- Next mtg Friday, Dec. 22, 2023, at 8 a.m.

Area rugs are an easy, cost-effective solution to cold floors. Adding area rugs to hard-surface flooring can add warmth to any room and keep your feet cozy on cold winter days.

Choose rugs made from wool or other natural fibers and plush or high-pile textures for the most insulation. Place rugs in areas where you need additional warmth, like the foot of a bed or under a coffee table. Area rugs can enhance the aesthetic of your home and keep you cozier.



Paperless billing

Tackle your clutter this year! If you do not require a paper bill from us, you may choose paperless billing. Sign up through our online bill payment site to receive an email statement and view your bill electronically each month.

