

You asked.

We're answering.

This is the sixth in a series of responses to concerns expressed by members.

Member comment: "We seem to have a lot of short outages when the lights blink even when it's a beautiful day. Sometimes we just get done resetting our clocks and it's another blink. This needs to improve."

Our response: We know short power outages or blinks are extremely aggravating for our customers. Sometimes this aggravation turns into a real headache and possibly an expense especially for those who work from home and rely on computers and other electronic equipment to do their jobs.

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By Mark Pendergast, President and CEO

Ten years ago blinking lights were near the top of the list of customer complaints. Today it still makes the top ten list but, because of a more aggressive approach by the co-op to eliminate some of the root causes of these blinks, it's no longer the heartache for everyone it once was.

In 2001 we rolled out a new right-of-way maintenance program. We established and enforced uniform tree trimming and removal specifications under and around our 900 miles of overhead power lines. As a result, trees coming in contact with overhead lines are no longer the number one reason your lights blink. The big three reasons today for blinking lights are lightning, animals and co-op equipment failure.

When your lights blink it's a sign there is a disruption on either the high voltage electric transmission system or the lower voltage distribution network operated by St. Croix Electric. Our cooperative is responsible for the delivery of power from the substation to the meter at our customer locations. Dairyland Power Cooperative operates and maintains the high voltage transmission lines bringing power to 13 of St. Croix's substations. We also take power at three substations from Xcel Energy transmission lines. Because of this shared electric network between multiple power generating and power transmission utilities, some of the factors impacting your electric service are beyond our direct control.

A blink or multiple blinks is the result of a circuit breaker detecting a short-circuit on either the high voltage transmission system or the lower voltage distribution system maintained by St. Croix Electric. When your lights blink but the power stays on, it means the circuit breaker is doing its job. When a tree limb falls into the line a breaker will open the circuit (blink) momentarily and then closes or resets (lights back on). If the tree limb is still across the line the breaker will cycle two more times on/off in less than five seconds to see if the tree limb has fallen through or burned off. If the limb is still on the line after the

third blink the breaker will lock out and an outage occurs.

When lightning hits a high voltage transmission line a breaker as far as 40 miles from your home will operate and blink your lights. On a sunny day when a hawk lands in the wrong place to hunt for a meal in your neighborhood, your lights will blink. When a car four miles from your home slides off the road, hits a pole and the wires slap together, your lights will blink. And remember even if you have underground power lines in your area an above ground line feeds power into these underground lines so everyone's power is affected by weather and what else happens above ground. We have about 400 of the protective circuit breakers installed on our distribution lines.

Technology is really helping us find and correct some of the utility equipment or maintenance problems causing breaker operations and the blinking lights. These problems might be from a cracked insulator or a loose connection.

Earlier this year we started using a new computer program to analyze information from each of our member's meters. Once a week we run a report and now every time a meter sees a momentary loss of power, we see it too.

If we see multiple blinks and can't tie them to a known outage or other event our line crews will go out and inspect the line in question.

These line inspections can be tedious and may include crews using a thermal imaging camera to look for a hot spot in a cracked insulator or lightning arrester. The most frustrating breaker operation for us and you is the random one or two blinks we can't tie to weather or some other event.

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When your lights blink we, too, now know it blinked. The cause of the blink may be local and within our ability to correct or it may be upstream on the high voltage transmission network many miles from your home. Wherever the disruption is on the electric network, we are concerned about it and if the problem is within our ability to correct it will be done.



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