



BLINKS AND OUTAGES

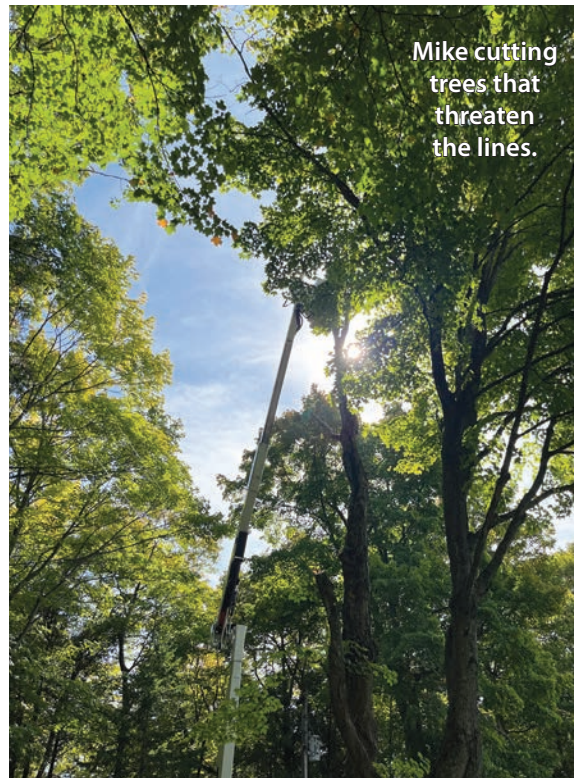
Causes can be tricky to uncover

Storms are obvious causes of outages. High winds, lightning, heavy snow, and the like can cause damage that turns your lights out and forces us out into the weather to make repairs. A big old tree blown across the lines is generally pretty easy to find, albeit a lot of work to fix. In spite of all the trimming and service work we have done on our system, we still experience outages and blinks.

We are certain that you all have seen a blink or experienced an outage that occurred with no wind and no inclement weather. Lately, we have seen a fair number of blinks on our system. This is not only frustrating for you, but even more so for us. It is much easier to track down an outage and make repairs than it is to find an intermittent problem that might not even be on the Island. That's right...the blink might not be due to anything here on the Island, but rather a problem on the mainland.

Since the grid is wholly interconnected, you might see a blink due to a problem on the mainland if you are on the same phase. If the blink is caused by a strong enough fault, it might cause the recloser at Northport to operate, causing the entire Island to blink. When we see a blink in the office, we generally look on our meter management program and try to narrow it down to an area, which is not easy to do since, as noted, all meters on a phase will see the same blink.

Sometimes we will get lucky and hear Wisconsin Public Service dispatching crews to an outage on the mainland shortly after the blink, and then we know we don't have to look for it. Sometimes the fault causing the blink will correct itself as



Mike cutting trees that threaten the lines.

in the case of fall leaves getting in the lightning arrestor gap of a transformer. They may cause a blink and blow or burn away.

Sometimes our meter system will indicate an area affected to a greater degree than others, and we will then go out and patrol the lines looking for such things as branches hanging on the lines, an animal on top of a transformer, a stranded wire or some other such problem that would likely be the source. Sometimes we will hang a fault indicator on suspect locations and if it begins flashing after a blink, it can help us get closer.

One such blink issue was occurring on Old West Harbor Rd. and no matter how hard we looked, we could not find it...until the blink became an outage. A stranded wire in a wooded right-of-way that was incredibly difficult to see finally welded itself to the neutral and we were able to find it and make the repair. The strands on our

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*Merry
Christmas
and Happy
New Year*

On behalf of the board of directors and employees of the Washington Island Electric Cooperative, Inc., to all our members near and far, we want to wish you the very best and happiest holiday season and nothing but good things for the new year.



WORK CONTINUES ON FIBER INSTALLATION

Winter weather will determine for how long

The small cell at Schoolhouse Beach is well underway and is utilizing a 50-foot pole with a 16-foot extension on top that essentially will put antennas at 60 feet above ground level. A similar installation will occur near the visitor center at the Ferry Dock. The small cell that will be located on the tower that once held the cooperative's useless wind generator (seagull killer) is also under way. You may or may not have noticed that this 80-foot tower was tipped down and the generator removed earlier this fall. This was a bit of an experience as everything went as planned until the last 15 or 20 feet, which went much more quickly than the first 60 feet. The anchor for the pulley that we used to bring down the tower, which had been used numerous times in the '80s and '90s, pulled out of the concrete. Luckily we had taken every safety precaution and nothing (and no one) was damaged. When you next see this tower in the air, it will have a small cell installation on the top and hopefully we will all begin to notice improved cellular service on the Island.



Inset above: Wind generator (seagull killer) goes down—quickly—after snapping the anchor from the concrete.

Left: Michels crew wades through the swamp to install the fiber.



Small cell installation underway at Schoolhouse Beach

Left: The pole to be installed at Schoolhouse Beach is loaded on the truck.

Middle row: The concrete base for the tower is poured.

Bottom row: The pole and its 16-foot extension are put in place.



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Copperweld primary conductor are roughly 1/16th of an inch in diameter and are 30 ft. in the air. When the background is wooded, full of branches that look very much like the strand in question, our job is difficult.

We have also had issues where a squirrel got into the arrestor gap on a transformer and caused a blink. The squirrel, now deceased on top of the transformer, has a tail that the wind occasionally blows back into and out of the gap, causing more blinks.

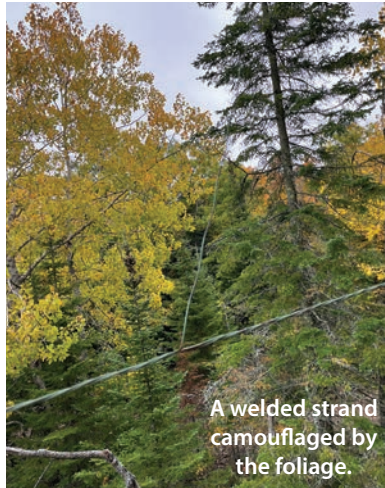
A chickadee can land in the arrestor gap (this gap is meant to be wide enough that the primary current won't jump it, but lightning will and thus be directed to ground rather than into our system and possibly your home) and either fall out of the gap, causing a blink, or die in the gap and cause an outage.

Believe it or not, we have had the carcass of a dead bird or animal that was rotting away on top of a transformer be the indirect cause of blinks because the flies that were attracted would occasionally fly through the arrestor gap, effectively making the transformer a giant, overpowered bug zapper!

A couple of weeks ago on a calm, sunny day, we had an outage reported and even though the fault indicators pointed the direction, it was still difficult to find because it was a squirrel on top of a pole that caused the outage.

Notice anything different about the top of the pole pictured bottom left? I actually drove by it once and only noticed the anomaly on the return trip when looking at the pole from a different angle. Even zoomed in with the camera, with branches behind, it is hard to see.

The bottom line is, blinks are just as frustrating for us as they are for you and, crazy as it sounds, we would rather deal with outages simply because, usually, they are much easier to find.



While the squirrel we discovered at the top of this pole might look relaxed here, it was far from being a "spa day" for the little bugger.

CHALLENGES LEAD TO RATE INCREASES

We have been discussing the likely need for rate increases and don't want to belabor what we have discussed in nearly every issue of this magazine for the last year. We have discussed how increases in our demand charges are leading to \$4,000 to \$5,000 per month larger bills (\$50,000 per year). We have discussed how the premature and fast transition to less reliable generation sources has forced us to buy on the MISO market at significantly higher rates than our standard wholesale costs and how this is leading towards as much as \$100,000 per year in additional MISO-related costs. And, we have discussed how increased cost of fuel and volatility in the natural gas market have led to higher wholesale electric costs totaling as much as \$80,000 per year.

All of this leads to what amounts to a crappy Christmas present to all of us as members. Last year the cooperative operated in the black to the tune of approximately \$40,000. This was entirely eaten up by these increased costs and is forcing us to raise our base charge by \$5 per month and our retail energy rates by \$0.01 per kWh across the board. If kWh sales remain steady, with 1,100 meters, this should increase revenue by somewhere between \$140,000 and \$180,000 per year and put us back in the break-even range. A copy of the new rate sheet detailing this increase will be posted on our website and the change will become effective for the January 2024 billing cycle.

Work will continue on investigating a rate structure that accurately reflects where the costs are. We discussed this in the November issue.

Robert Cornell, Manager

1157 Main Road, Washington Island, WI 54246

920-847-2541

info@wiecoop.com

Hours: Monday-Friday, 9 a.m.-5 p.m.

