Energy Market Capacity – Potential Planned Outages

FAQs – June 2022

Why does a MISO Maximum Generation Event occur?

Max Gen Events are called by MISO (Midcontinent Independent System Operator) – the regional transmission operator – when grid reliability may be at risk. In other words, the amount of electricity available on the grid is critically low and may not be able to meet the demand for electricity. This could occur for multiple reasons:

- Extreme temperatures
- Severe weather conditions
- Generation resources (power plants, solar/wind facilities, etc.) are unexpectedly offline or unavailable
- Higher-than-projected need for electricity
- Transmission line congestion

What is the difference between a Full Load Control event and Max Gen Event?

- **Full Load Control** events are called by Dairyland Power Cooperative – our wholesale power provider – to help reduce electricity demand and help save money on future wholesale power bills
    - Full Load Control events are called only during the summer and winter seasons at pre-determined scheduled start times (2 p.m. summer; 5 p.m. winter)
    - Members with devices enrolled in our load/energy management programs will have their devices automatically controlled during Full Load Control events
- **Maximum Generation Events** are called by MISO for grid reliability reasons
    - Max Gen Events can be called at any time for any duration of time with minimal advance notice
    - Members with devices enrolled in our load/energy management programs may have their devices automatically controlled during Max Gen Events. Members will be notified if devices need to be controlled
    - Ultimately, all members could be affected by a controlled outage if the grid is at risk of collapsing. This would be the very last action called for

If MISO declares a Max Gen Event, will I be controlled? When?

If MISO declares a Max Gen Event, there is a chance members will not be affected other than being asked to help reduce non-essential electricity use. If our load/energy management program is activated, it would begin with control of electric water heaters and air conditioners or interruptible heat, followed by control of C&I generators, irrigation, and grain dryers if additional load reduction is needed. This activation can occur at any time and could be called for by MISO with minimal advance notice.

What is Dairyland doing to try to enhance reliability and prevent controlled outages?
Dairyland is pursuing solutions to reduce the carbon footprint of the electricity we use, while also maintaining safety and reliability in the process. It is critical to have generation resources that can meet members' electricity needs when the wind doesn't blow and sun doesn't shine. Current Dairyland projects that will increase and support the addition of more renewables include:

- Cardinal-Hickory Creek transmission line
- Nemadji Trail Energy Center
- Recent purchase of the RockGen Energy Center
- Badger State Solar

Dairyland and its members also work with large loads within our regional footprint to ensure they have adequate back-up resources and/or the ability to reduced demand when needed.

What would the duration of the controlled outage be?
There is no simple answer. Duration depends on multiple factors that cannot be predicted until the situation arises. It could be two hours to as long as needed to bring the regional grid into balance between load/demand and available generation.

In many cases, **controlled outages would rotate around the service territory** in a pattern where power may be off for a couple of hours, back on for a while and then off again.

What can cooperative members do?
If notified of a Max Gen Event, our load/energy management program may be activated outside of normal program hours. This could happen with minimal advance notice. Consumer members who do not participate in a load/energy management program can still help:

- Turn off or unplug all non-essential lights, televisions, electronics and other appliances
- Cook food in a microwave instead of using a stovetop or oven
- Adjust the thermostat up or down, depending on the season
- Shift high electricity use activities, such as laundry, vacuuming and running the dishwasher until after the Max Gen Event has ended
- Delay electric vehicle charging until after the Max Gen Event

If there's a shortage of capacity, why did Dairyland retire Genoa Station #3 in 2021?
The Genoa Station #3 (G-3) was a 345 MW supercritical coal-fired facility located in Genoa, Wis., from 1969-2021. A decision was made in early 2020 to retire the unit.

Many factors were considered including the age of the facility, system capacity requirements, carbon reduction goals, regulatory requirements, projected maintenance needs and costs, fuel supply, overall cost of power production and regional market prices for energy.

G-3's retirement aligned with Dairyland's Sustainable Generation Plan to diversify its energy

resource mix. This included the addition of renewable resources to Dairyland's generation mix and the purchase of the 503-MW RockGen Energy Center in 2021.

What is MISO and why are we part of it?
MISO (Midcontinent Independent System Operator) is a not-for-profit regional transmission organization (air traffic controller for electricity) that ensures reliable, cost-effective delivery of electricity across all or parts of 15 U.S. states and Manitoba, Canada.

The interconnection of generation resources in this footprint allows Dairyland to secure power purchase agreements throughout the region, such as wind farms west of our service territory or a solar array to the east.

Through MISO, Dairyland sells all the power it generates and purchases the power it needs for its members. This serves Dairyland and its member cooperatives, including Jump River Electric Cooperative, well when their generation resources sell excess power onto the grid. Conversely, if one of Dairyland's generating units is offline, Dairyland purchases power from the MISO market to ensure consumer members have the electricity they need at the flip of a switch.

Dairyland has more than enough capacity to meet the needs of its 24 member cooperatives (including Jump River Electric Cooperative). While being part of MISO has overall benefitted Dairyland, there are times when Dairyland must work with other utilities in MISO to ensure grid reliability. Dairyland's Executive Vice President & Chief Operating Officer Ben Porath addressed this during Dairyland's 2022 Annual Meeting of Members:

"The day the grid becomes unstable because there is more use than there is generation supplied into the grid, all utilities will have to be involved. That's where the rolling blackouts come in. We will all take a little share of the pain to make sure the grid doesn't collapse," he said. "It's a low probability event, but it could happen."