



April 10, 2019

Daniel P. Wolf, Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
Saint Paul, MN 55101-2147

***Subject: Dakota Electric Association Comments In the Matter of a
Commission Inquiry into the Impact of Severe Weather in
January and February 2019 on Utility Operations and Service
Docket No. E,G-999/CI-19-160***

Dear Mr. Wolf:

On March 18, 2019, the Minnesota Public Utilities Commission (Commission or MPUC) issued a *Notice for Comment Period – Information from Utilities* (Notice) in the above-referenced docket.

Dakota Electric Association® (Dakota Electric® or Cooperative) submits these comments that summarize the Notice and respond to the topics/information that applies to Dakota Electric.

Overview of Notice for Comment

The Commission's March 18 Notice states that the following issues are under review in this docket:

- What impact did the cold weather in January and February 2019 have on utility operations and service?
- Were there lessons learned from this severe weather event that can be used to keep utility systems operating reliably and safely under extreme, challenging circumstances in the future?

The Notice lists questions for natural gas utilities, electric utilities, and all utilities.

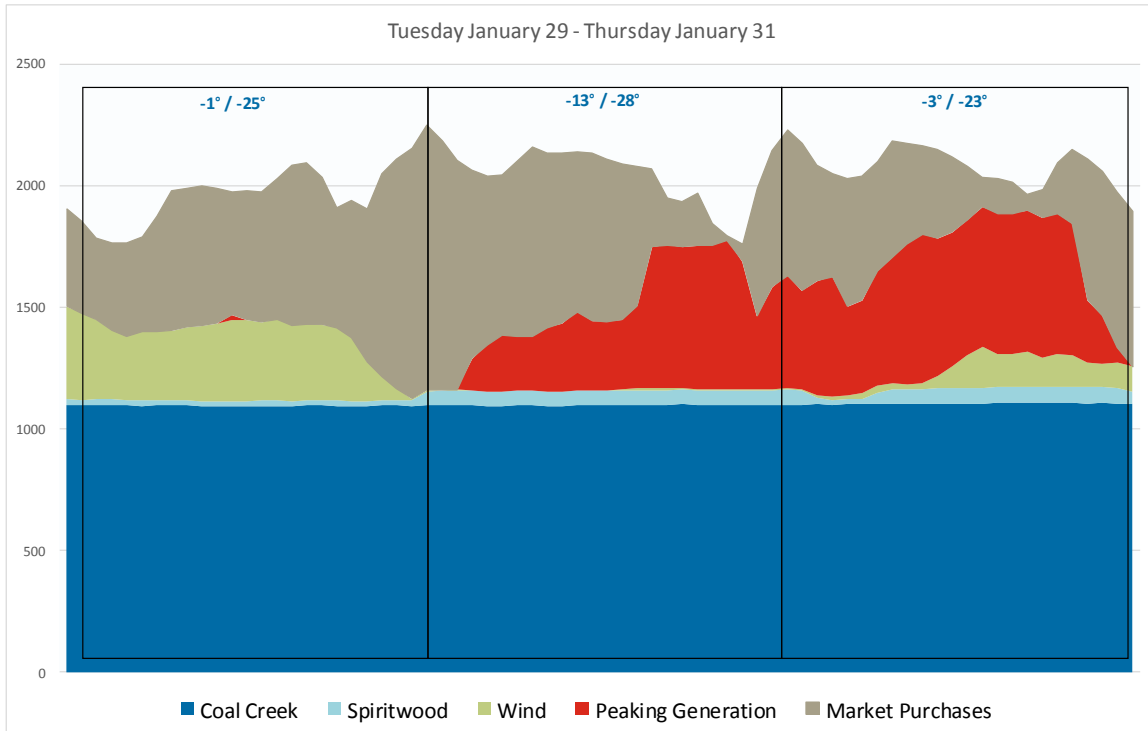
Dakota Electric Response

As a distribution electric cooperative that purchases wholesale power from Great River Energy, only one of the questions for electric utilities contains elements that apply to Dakota Electric. Question #5 states:

5. Electric utilities shall provide status of all their generation units, Demand Resources and purchased power agreements from January 28, 2019 to January 31, 2019. The status includes hourly MISO offer price, Economic Maximum MW, Emergency Maximum MW, offered MW, deployed MW, commitment status (FRAC, IRAC, Day Ahead or Real Time), and dispatch status. Also, the status includes unit level fuel availability of primary and secondary source, fuel contract status (firm, non-firm, or on site) of primary and secondary source, and Generating Availability Data System report data.

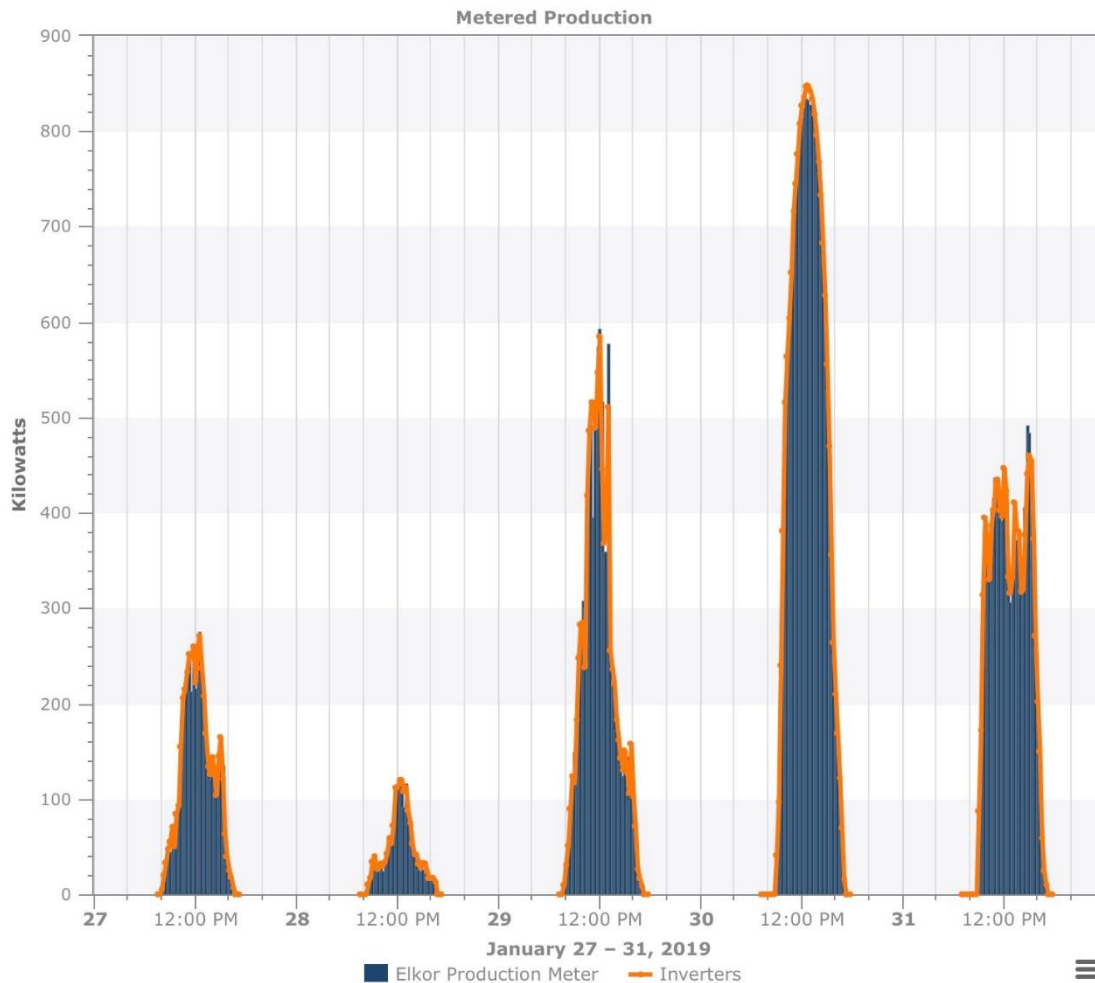
Answer: Of the items identified in this question, Demand Resources (load management) applies to Dakota Electric. During the referenced cold weather period, Dakota Electric was asked to operate our load management system on January 29 and 30. On January 29, Great River Energy implemented residential load control beginning at 4 pm and continuing until about 10 p.m. Dakota Electric initiated load control as requested and we estimated that we shed about 5 MW of load representing about 2% of our total distribution load during the time of load control. On January 30, we received a notification at 10:58 am that Great River Energy would be implementing full load control beginning at 3 pm and continuing to about 9 pm. Dakota Electric initiated load control as requested and we estimated that we shed about 51 MW of load representing nearly 20% of our total distribution load during the time of load control.

While Dakota Electric does not own and operate generating units, we offer the following graph that depicts Great River Energy's resource portfolio during this cold weather period. Great River Energy's baseload coal plants operated near or at capacity throughout the event. Wind generation that was operating January 28 and 29 automatically shut down prior to January 30 due to extreme cold temperatures that were below manufacturer operating limits. Natural gas peaking plants were dispatched using natural gas and fuel oil to provide energy on January 30 and 31.



Attached is an article from Great River Energy describing the Cooperative's overall response and performance during this cold weather period. We note that, on January 30, GRE achieved a record demand reduction of 459 MW through distribution cooperative implementation of load management.

Also of interest is the performance of Dakota Electric's wholesale solar installation from which we purchase energy through a PPA. All of this energy is generated and remains on Dakota Electric's distribution system, with none entering the transmission grid or subject to MISO prices. Following is a graph of solar production on each day from January 27 through January 31 from this 1 MW rated solar energy facility. The daily production varies, with January 28 being relatively low while January 30 started to approach maximum output. In all cases, the solar production has ended by the time Dakota Electric (and Great River Energy) reach system peaks in the evening hours.



The March 18 Notice includes three questions for all utilities.

8. The utilities shall provide details of how the Commission could help convey messages to the public during such an event.

Answer: Dakota Electric notes that MISO declared a maximum generation emergency event on January 30 during the period of cold weather referenced in this Notice.

Dakota Electric suggests that, if the Commission desires to provide messages to the public, such messages could reinforce or provide perspective on the messages being distributed by MISO.

9. Utilities shall provide an account of lessons learned and steps to be taken to help prepare for the next severe weather event. Example: Was there anything learned about the functioning of Excess Flow Valves and Regulators that can be used to prevent natural gas outages in the future?

Answer: Dakota Electric (and Great River Energy) load control of retail member-consumers worked well and is an important asset for overall (generation, transmission, and distribution) needs.

10. Please provide any other information that would be helpful to the Commission's understanding of these issues.

Answer: Dakota Electric plans for and designs our distribution system to meet our member electrical requirements even under extreme conditions. Our system performed as expected even during the adverse weather conditions of January 28 through January 31.

Conclusion

Dakota Electric appreciates the opportunity to provide a response to this Notice. If you have any questions about this response, please contact me at 651-463-6258 or at dlarson@dakotaelectric.com.

Sincerely,

/s/ Douglas R. Larson

Douglas R. Larson
Vice President of Regulatory Services
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Certificate of Service

I, Cherry Jordan, hereby certify that I have this day served copies of the attached document to those on the following service list by e-filing, personal service, or by causing to be placed in the U.S. mail at Farmington, Minnesota.

Docket No. E,G-999/CI-19-160

Dated this 10th day of April 2019

/s/ Cherry Jordan

Cherry Jordan



System braves extreme, bold north cold

February 13, 2019

It was the coldest of times the last week of January as temperatures plunged to record lows across the Midwest. When severe winter cold puts the electric grid to the test, Great River Energy's generation and transmission assets are carefully operated and monitored to ensure electricity continues to power member-consumers' homes.

The cooperative's resilient transmission system met the test with no outages or issues.



During the recent cold spell, temperatures dipped to -30 degrees Fahrenheit throughout much of the region. Great River Energy's generation portfolio, including Coal Creek Station near Underwood, N.D., provided member-owner cooperatives with needed power. As seen in the photo, the plant emits a lot of water vapor from the stacks, cooling towers and ponds during such cold temperatures.

"Our system performed great under extreme winter weather conditions thanks to our dedicated employees in the field and system operations. They worked around the clock to keep the grid operating for our member-consumers," said Priti Patel, Great River Energy's vice president and chief transmission officer. "The system performed reliably due to good planning and preparation, solid real-time operations and a bit of luck – thankfully we had all three."

Crews were dispatched Jan. 30 to check on at least 60 cold-weather alarms when the outside temperature felt like -50 F. As is typical during the extreme cold, scheduled maintenance activity on the transmission system was kept to a minimum.

Great River Energy also worked closely with the Midcontinent Independent System Operator (MISO) and neighboring utilities to prepare for possible scenarios. This helped ensure the cooperative could reliably meet its member-owner cooperatives' demand for energy.

On Jan. 28, MISO issued a cold weather alert, which helps provide situational awareness for MISO members as the regional transmission operator works to ensure all necessary resources are available to meet energy demands.

“Our crews worked through the night to ensure our generation facilities had ample fuel supplies to reliably operate the plants,” said Great River Energy Vice President and Chief Generation Officer Rick Lancaster.

MISO declared a maximum generation emergency event Jan. 30. This is a procedure to ensure system reliability by preparing all available generation to be dispatched in case of an emergency. Coal Creek Station and Spiritwood Station operated well in the extreme cold, and some Great River Energy employees braved the cold to ensure the plants continued to operate. A few of its peaking units operated in the morning, and MISO called upon all available Great River Energy peaking stations to begin generating electricity at 2 p.m. Jan. 30 through the evening.

Great River Energy’s demand response programs played a critical role in the response to the extreme weather as well. On Jan. 29, Great River Energy dispatched dual fuel and peak-shave water heaters which resulted in demand reduction of 359 megawatts.

The cooperative also dispatched full load control including all interruptible commercial and industrial generators on Jan. 30. This load control event resulted in a record demand reduction of 459 megawatts. Over the course of the two-day cold weather event, Great River Energy realized estimated load management impacts of 3,112 megawatt-hours. This also helped the cooperative avoid additional real-time purchases from the energy market.



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