



December 3rd, 2024

E-Filing

Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101

RE: In the Matter of the Investigation into Transmission-Curtailment Matters, Drivers, and Potential Solutions to Limitations Resulting from the Nobles County Substation
Minnesota PUC Docket E999/M-24-316

Dear Mr. Seuffert,

National Grid Renewables (“NG Renewables”) appreciates the opportunity to reply to comments in the above matter, relating to transmission curtailment in certain regions of the state. NG Renewables identified the following grounds to direct our reply comments;

- 1) Mid-term solutions on the three to five year buildout would not necessarily be “whole of transmission” from development to commercial energization. Rather, this mid-term planning timeline would include a renewed, concerted planning effort between the state’s investor-owned utilities, Grid North Partnership, and the Public Utilities Commission (“Commission”).
- 2) Transmission curtailment, as identified in the Biennial Transmission plans and hosting capacity analyses provide additional opportunities for flexible generation to meet load. Neighboring states are identifying opportunities to allow for quasi-“behind-the-meter” generation from resources that would otherwise be curtailed to instead flow directly to new large load users.
 - a. Whether these resources flow to large load users, or IOUs investigate the viability of heightened battery deployment in highly-congested areas, multiple flexible solutions are needed in the short to medium term.

Three to Five Year Transmission Planning

NG Renewables applauds the various transmission planning projects that Xcel, the PUC, and Grid North Partners have all done in the past twenty years to reinforce Minnesota’s transmission system, including the Minnesota PUC’s leadership in approving the Certificate of Public Convenience and Necessity (CPCN) for part of Tranche 1 of MISO’s



Long-Range Transmission Plan (LRTP) in the state. Given the state's energy policy goals, in addition to market-driven renewable energy procurements, more transmission buildout will be needed to deliver clean electrons to load centers. NG Renewables' stance is that the Commission and IOUs should consider additional planning horizons for in-state transmission buildout that complements the 20-year planning horizon for LRTP processes. Generation resources that go through PUC permitting process will receive a permit in 12 months, while MISO's generator interconnection process is three to five years, and new transmission buildout takes up to 13 years, as Xcel noted. The largest bottleneck occurs not necessarily due to permitting delays (although that helps deliver project certainty and gives project financiers more surety in their investments), rather the delays on interconnection, due both the clogged interconnection queues and the apparent lack of transmission buildout contribute to the delays for getting new resources online in the most expedient manner.

The twenty year planning horizons that are currently bringing new transmission projects online are too slow to provide congestion relief to existing projects and provide redundancy to electrons that cannot be delivered to the grid, as well as to provide new transmission facilities for the anticipated clean energy growth in the region. To best capture the renewable energy growth that is needed in the state, NG Renewables would like to encourage a three to five year coordinated effort for transmission planning that starts the process for new transmission buildout that is unrelated to MISO's LRTP. We believe that transmission lines that will be energized in 2034, like LRTP, will lead to further resource bottlenecks as the interconnection queues grow more and more crowded.

While we appreciate the unique challenges to transmission construction in the state, our suggestion of a mid-term (three to five year) planning timeline referred to starting to work on the next phases of transmission buildout now. Given the long timelines of many of these projects, NG Renewables believes that kicking off a process for bridging the gap from now until 2034 will be of vital import to make sure that Minnesota makes incremental progress on its carbon-free electricity by 2040 goal, including some level of transmission consideration on a smaller term. This need not be completed projects, but some concerted effort for expanding transmission capacity in the state beyond grid-enhancing technologies (GETs).

NG Renewables recognizes that three to five years is simply not enough time for full-scale transmission buildout. However, having multiple rounds of transmission-related activity would be possible. This could look like a three to five year sprint for exploring different options such as reconductoring lower-voltage lines to high voltage lines, software and hardware improvements (as already being pursued by IOUs in the state per recently passed



legislation), and identifying the future nodes in the state that will likely be curtailed with increasing deployment of renewables and addressing congestion sooner than later. It is essential to holistic infrastructure planning to invest in strategic improvements on the medium-term to reduce future costs by preventing millions of dollars in spending for curtailment settlements and replacement energy from the wholesale market, in addition to the long-term planning and inter-regional transmission planning initiatives being led by MISO and other stakeholders.

Creative Solutions to Excess Curtailment: Siting Load Close to Generation

NG Renewables appreciates Minnesota Power (“MP”) and EDF Renewables’ insights into the harms to both industry and ratepayers because of curtailment. Economic curtailment on signed and executed power purchase agreements (“PPAs”) jeopardizes the financeability of projects, preventing the delivery of energy for projects that have fairly gone through the generator-interconnection gauntlet and resulting in outsized costs for utilities and generators in terms of replacement energy procurement and settlement payments, respectively. These issues are serious and speak to the need for creative solutions from utilities, the Commission, and broader wholesale load-serving entities to ensure the sanctity of existing contracts while also envisioning novel arrangements for cheap, abundant power that is not being delivered to the grid.

NG Renewables would also encourage the IOUs and the PUC to investigate whether alternative uses could be captured from this curtailed resource. Economic curtailment presents massive risks to existing generators, as well as a potential opportunity where, due to congested wind in this case, excess energy is abundant and cheap. Harnessing negative or zero pricing that is no longer economic if the project has lost its production tax credits could address a growing issue of concern in the state around large load users.

In neighboring states, curtailed energy has been integrated into the system by having new load be built close to generation, with highly curtailed areas being identified as good places to locate load. For example, North Dakota Public Services Commission (“NDPSC”) and Montana-Dakota Utility have identified areas of high curtailment that pose potential opportunities for more large interruptible loads.

NG Renewables’ understanding for Minnesota is that the anticipated data center load growth will be centered on non-interruptible, constant loads (consistent with a hyperscale data center focused on data compute) rather than a more interruptible load (either an energy-intensive, interruptible machine-learning function, or an interruptible load such as bitcoin mining). Given the more non-interruptible use case for Minnesota’s likely incoming large load users, NG Renewables believes that areas with high curtailment for wind



resources could be a viable siting option for renewable energy to be diverted to serve large load users. This could look like adding a data center/large load user ‘preferred location’ area for siting, such that data centers could accept would-be curtailed resources, and adding flexibility—both in policy and financial offtake arrangements—to the siting of new load close to existing generation and future nodes that are likely to be curtailed similarly for abundant renewable resource injection. This also provides greater opportunities for developers and utilities to investigate the viability of short-duration battery energy storage systems (“BESS”) to resolve some amount of curtailment and deliver more abundant resources to load. However, current market and policy signals that conflict with deploying BESS must also be addressed; likewise, the burden for paying for any BESS in highly congested areas must not fall to the developers with signed generator interconnection agreements that fairly went through the MISO queue and who are unfairly bearing the brunt of the costs of the economic curtailment.

National Grid Renewables appreciates the opportunity to reply to other commenters in this proceeding and looks forward to the Public Utilities Commission’s deliberation in this matter moving forward to address congestion issues in manners that protect the interests of ratepayers and organizations executing bilateral contracts around energy delivery to the transmission grid.

Respectfully,

/s/ Lindsay Smith
Vice President, External Affairs
National Grid Renewables



CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document by emailing all persons at the email address provided and indicated on the attached Service List.

/s/ Rock Park
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