BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Valerie Means	Commissioner
Matthew Schuerger	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

In the Matter of Xcel Energy's Competitive Resource Acquisition Process for up to 800 Megawatts of Firm Dispatchable Generation	ISSUE DATE: November 3, 2023 DOCKET NO. E-002/CN-23-212 ORDER APPROVING PETITION AND REQUIRING COMPLIANCE FILING

PROCEDURAL HISTORY

On May 24, 2023, Xcel Energy (Xcel or the Company) filed a petition requesting to initiate the competitive resource acquisition process to acquire 800 megawatts (MW) of firm dispatchable generation.

By August 11, 2023, the Commission received comments on the proposal from: Onward Energy Holdings, LLC (Onward)[1]; the Department of Commerce, Energy, Environmental Review and Analysis (EERA) staff; the Clean Energy Organizations;[2] the Department of Commerce, Division of Energy Resources (the Department); and Xcel.

By August 28, 2023, the Commission received reply comments from: the City of Minneapolis; Xcel; Laborers' International Union of North America (LIUNA); and jointly from the International Union of Operating Engineers Local 49 (IUOE Local 49) and the North Central States Regional Council of Carpenters (NCSRCC).

On September 8, 2023, the Clean Energy Organizations filed supplemental comments.

On October 5, 2023, the Commission met to consider the matter.

[1] Onward owns and operates the Mankato Energy Center, which is a 720 MW natural gas combined-cycle power plant located in Mankato.

[2] The Clean Energy Organizations include: Clean Grid Alliance, Fresh Energy, Minnesota Center for Environmental Advocacy, and the Sierra Club.

FINDINGS AND CONCLUSIONS

I. Xcel's Request

Xcel stated that the Company initiated a competitive resource acquisition process for up to 800 megawatts (MW) of firm dispatchable resources as authorized by the Commission's decision in the Company's 2019 resource plan (2019 Resource Plan Order).[3] According to the Company, firm dispatchable resources would assist the Company in achieving reductions in carbon emissions by more than 85% by 2030, as well as meeting capacity needs to ensure reliable service at all times. Firm dispatchable resources are intended to meet customer demand, system restoration needs, and capacity requirements as baseload plants retire and additional renewable generation comes online. This purpose of this proceeding is to identify and select resources best suited to fulfill the firm dispatchable need identified by the Commission in the 2019 Resource Plan Order.

The Company further stated that several large thermal baseload units are retiring and that several smaller firm dispatchable resources are reaching the end of their current lives or are subject to contracts that will expire in the 2020s. This includes the accelerated retirement of all remaining coal units on the Upper Midwest System. As the system continues to transition away from coal to increasing levels of renewable resources, the Company stated that attributes provided by firm dispatchable resources are critical to maintaining system reliability and integrating further additions of renewable resources.

To facilitate the acquisition process, the Company proposed using the established Xcel-Bid Contested Case/Track 2 Process, which the Commission directed the Company to use in the 2019 Resource Plan Order and which requires that the Company and third-party developers submit proposed projects to the Commission to be evaluated through a contested case process.

To assess the ability of a proposal to provide capacity, the Company compiled a list of approximately 60 metrics to use in the evaluation process and requested Commission approval of those metrics.

According to the Company, the acquisition process would involve the following phases.

Phase 1. Project Threshold Review: As part of the Commission's completeness review, each proposal will be evaluated to ensure it meets the minimum requirements outlined in the Commission's Order and approved materials supplied by the Company after the Commission decision to open the competitive process.

Phase 2. Project Scoring: Each proposal will be scored according to its capabilities to provide preferred individual proposal attributes with particular attention to cost, reliability, and environmental impact attributes. At the end of this phase, the top scoring proposals will be moved forward to Phase 3.

[3] *In the Matter of the 2020–2034 Upper Midwest Integrated Resource Plan of Northern States Power Company d/b/a Xcel Energy*, Docket No. E-002/RP-19-368, Order Approving Plan with Modifications and Establishing Requirements for Future Filings (April 15, 2022).

Phase 3. Portfolio Formation: Proposals will be combined into candidate portfolios that will be evaluated further in Phases 4 and 5. The first candidate portfolio is the Reference Portfolio, consisting of proposals that the Company has submitted into the acquisition process. The Company will perform production cost modeling in EnCompass to evaluate the present value of societal cost (PVSC) and present value of revenue requirements (PVRR) of the proposals and set a baseline to which other portfolios will be compared.

Phase 4. Portfolio Viability Assessment and Scoring: Each of the portfolios identified in Phase 3 will be analyzed through additional system modeling.

Phase 5. Cost to Value Comparison and Portfolio Selection: In this phase, the cost of any necessary infrastructure identified in Phase 4 is calculated for each portfolio.

In developing attributes used to consider proposed projects, the Company relied on the 2019 Resource Plan Order, which states that "firm dispatchable" means a resource or combination of resources capable of providing capacity and energy. The Commission also stated that other characteristics for a firm dispatchable resource that may be considered include the following:

- energy availability to meet load for extended durations of energy in the context of the system as a whole;
- the value from production capabilities during potential system restoration events of unknown duration;
- environmental impacts;
- costs; and
- the ability to foster integration of renewable resources.

The Company's proposal requests consideration of the following attributes:

- resource capacity;
- energy availability;
- value of production capabilities during system restoration;
- environmental impacts;
- costs; and
- ability to foster integration of renewable resources.

To accomplish this process in a timely manner, the Company agreed to the following schedule:

- November 13, 2023: Compliance filing
- November 22, 2023: Xcel Notice Published
- January 22, 2024: Xcel and Interested Competitors File Proposals to Meet the Need
- March 28, 2024: Commission Determination of Completeness, referral to the Office of Administrative Hearings (OAH), if warranted
- October 25, 2024: Administrative Law Judge's Report, if referred to OAH
- December 19, 2024: Commission decision on competitive process

The Company also requested approval of a notice to potential applicants, as well as an Applicant Guide and Filing Requirements.

II. Comments on Xcel's Request

Commenters generally supported Xcel's proposal, with recommended clarifications, particularly to the proposed metrics for evaluating the attributes of each proposal. The Department, EERA, and the Clean Energy Organizations recommended modifications of the metrics to clarify language and ensure that the process is broad enough to consider a range of viable options to meet the need for firm dispatch resources.

Ultimately, the parties concurred on a number of modifications to the metrics. But LIUNA requested clarification of a possible change recommended by the EERA that would identify whether a project would be located in an environmental justice area. LIUNA stated that EERA's proposed metric could be construed to exclude (or discourage consideration of) projects in environmental justice areas even if the project offered economic benefits to the community. In other words, a project's location in an environmental justice area—if treated as a negative attribute—could unfairly exclude such communities from consideration without their consultation.

In response, the EERA clarified that the intent of the metric is to identify whether the project would be located in an environmental justice area for the purpose of further analysis without treating the project's location as a presumptively negative attribute. The EERA stated that the metric would not limit the Commission's full consideration of the potential impacts of such projects–including positive impacts, as well as consideration of mitigation measures to avoid or reduce adverse environmental effects. The Clean Energy Organizations echoed the Department's clarification that the metric would not be used to exclude environmental justice areas from consideration as project locations and would be a factor for the Commission to consider when evaluating a project.

The parties otherwise largely concurred on changes and clarifications as shown in the attachment to this order. Under these changes, some metrics would be removed, others modified, and several added, as follows:

- Metrics 13, 14, 15, 16, 16.5, 17, 18, 21.5, and 35 would be removed.
- Metrics 7, 39, 40, 42, 43, 54, 55, 56, 57, and 59 would be modified.
- Three new metrics would be added.

III. Commission Action

The Commission appreciates the extensive work of the parties to identify and address Xcel's proposal for acquiring 800 MW of firm dispatchable resources consistent with the Commission's directive in the 2019 Resource Plan Order. The decisions herein are intended to facilitate the resource acquisition process by providing guidance and direction to proposers and to identify metrics that will be used to enable the Commission to evaluate proposed projects. The Commission will therefore take the following steps to facilitate a robust acquisition process in a timely manner.

First, the Commission will approve the process schedule shown above; no party objected to the timelines therein.

Second, the Commission will approve Xcel's revised resource attributes matrix, with modifications as stated above and as attached to this order.

Third, the Commission will approve Xcel's Applicant Guide and Filing Requirements as found in Attachment C and Attachment C's Appendix A of the Company's petition subject to the following modifications:

- Mark as exempt Minn. R. 7849.0250, item B.
- Delete the reference to Minnesota Statutes § 216B.1612.
- Delete the reference to Minnesota Statutes § 216H.03, subd. 3.
- Modify the Applicant Guide to explicitly state under "Required Attributes and Verification" subpart 3, "Additional Requirements for blackstart unit (BSU) Project," the following: "Projects are not required to be BSU to apply, and this procurement is not required to result in a blackstart resource acquisition. For those that wish to be considered as a BSU, the following requirements apply."

Fourth, the Commission will direct Xcel to file a compliance filing of the approved portions of the petition with the required modifications. To facilitate timely record development, the Commission will delegate authority to the Executive Secretary to modify, via notice, the timelines and deadlines established herein.

Fifth, the Commission will approve Xcel's proposed evaluation process phases as found in Attachment A of the Company's petition.

Finally, the Commission will approve Xcel's proposed notice as found in Attachment B of the Company's petition subject to the following modifications:

- Remove "While having made a finding on the need and characteristics of the resources needed to meet the need, the Commission has not made a finding as to the type of resources, or their location" and add "It is more likely than not that there will be a need for approximately, but not more than, 800 MW of generic firm dispatchable resources between 2027 and 2029."
- Add "The Commission has ordered Xcel to conduct updated modeling to refine this need. Qualifying bids received will be used as inputs of the modeling process."

ORDER

1. The Commission approves the proposed process schedule as set forth above.

2. The Commission approves Xcel's revised resource attributes matrix as attached to this order and based on Attachment A of the Company's August 25, 2023, reply comments subject to the modifications attached hereto.

3. The Commission approves Xcel's Applicant Guide and Filing Requirements as found in Attachment C and Attachment C's Appendix A of the Company's petition subject to the following modifications:

a. Minnesota Rules 7849.0250 subpart B should be marked as exempt.

b. Reference to Minnesota Statutes § 216B.1612 should be deleted.

c. Reference to Minnesota Statutes § 216H.03, Subd. 3 should be deleted.

4. The Commission modifies the Applicant Guide to explicitly state under "Required Attributes and Verification" subpart 3, "Additional Requirements for BSU Project," the following: "Projects are not required to be BSU to apply, and this procurement is not required to result in a blackstart resource acquisition. For those that wish to be considered as a BSU, the following requirements apply."

5. Xcel must file a compliance filing of the approved portions of the petition with the required modifications.

6. The Commission delegates authority to the Executive Secretary to modify, via notice, the timelines and deadlines established herein.

7. The Commission approves Xcel's proposed evaluation process phases as found in Attachment A of the Company's petition.

8. The Commission approves Xcel's proposed notice as found in Attachment B of the Company's petition subject to the following modifications:

a. Remove "While having made a finding on the need and characteristics of the resources needed to meet the need, the Commission has not made a finding as to the type of resources, or their location" and add "It is more likely than not that there will be a need for approximately, but not more than, 800 MW of generic firm dispatchable resources between 2027 and 2029."

b. Add "The Commission has ordered Xcel to conduct updated modeling to refine this need. Qualifying bids received will be used as inputs of the modeling process."

9. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

Will Seuffert
Executive Secretary

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Resource Attributes Matrix

ID	Attribute Category	Metric	Phase
1	Capacity	Nameplate capacity of commercially operable project is > 5 MWac.	1
2	Capacity	Commercially operable project must be transmission-interconnected.	1
3	Capacity	Commercially operable project must interconnect in MISO Zone 1 with uninterrupted interconnection path to MISO Load.	1
4	Capacity	Must achieve COD by 12/31/2028	1
5	Capacity	*For Physical Assets:* Must be able to operate commercially at the highest 0.2 percentile hourly temperature from Jan 1, 2000 until the date the temperature is calculated, using the NOAA NCEI station nearest to the generator, and for cold weather, the smallest of the 50 year regional extreme cold temperature as defined by the NOAA NCEI station nearest to the generator or the Extreme Cold Weather Temperature Defined in NERC EOP-012, whichever is colder. *For Demand Response Assets*: Capable of commercial operator at equivalent analog criteria.	1
6	Capacity	For Existing Projects: Minimum remaining operational life or PPA contract term of 10 years after COD of contract selected in this competitive resource acquisition.	1
7	Capacity	For New Projects Only: Minimum design life or PPA contract term of 10 ~~y~~ears	1
8	Capacity	For Proposals containing a BESS Project: Must provide estimate of capacity degradation rate via warranty or independent evaluation.	1
9	Capacity	For Power Purchase Agreements Only: O&M plan must be provided and must be sufficient for proposed contract term	1
10	Capacity	For Build-Transfer Projects Only: Compliance with Company Technical Specifications	1
11	Capacity	Level of capacity degradation over project life or PPA contract term relative to other proposals, with a better score for lower degradation.	2

12	Capacity	Level of accredited capacity over project life or PPA contract term relative to other proposals, with a better score for higher level of accreditation assumptions.	2
19	Energy availability	Fuel Access For Physical Fuel Assets: Demonstrated firm fuel transport (i.e., contract for firm fuel delivery)	2
20	Energy availability	For Inverter-Based, Physical Resources Utilizing Renewable Energy: High net capacity factor of renewable component relative to other proposals	2
21	Energy availability	Does an unacceptable level of LOLH or EUE occur during the planning period when the portfolio is modeled?	4a
22	Energy availability	Does the portfolio have less LOLH and EUE relative to the Reference Portfolio under identical test conditions?	4b & 5
Blackstart criteria in the section below are required only for those units within a proposal that seeks consideration as a blackstart unit.			
23	Blackstart and system restoration	Initial Unit (Blackstart Unit) must register with MISO as a Blackstart Resource	1
24	Blackstart and system restoration	Unit capability to operate in isochronous mode	1
25	Blackstart and system restoration	Unit capability to operate in islanded operation	1
26	Blackstart and system restoration	The capability to accept instantaneous loading of demand blocks, % of rated output but not less than 1 MW, while controlling frequency and voltage levels within acceptable limits during block loading process	1
27	Blackstart and system restoration	The ability to control voltage level within acceptable limits during energization/block loading (-10%/+5%).	1
28	Blackstart and system restoration	The ability to control frequency within 58.7 Hz to 61.8 Hz during energization/block loading	1
29	Blackstart and system restoration	The ability to dispatch at any time if needed and run in a continuous stable and controllable mode for at least 48 hours without violating any environmental or other restrictions	1
30	Blackstart and system restoration	Blackstart capacity must have technical capability to 1) run in a continuous stable and controllable mode over entire design operating range of resource (to 0 load);	1

		2) operability in remote load control service (up and down).	
31	Blackstart and system restoration	Sufficient reactive reserve capability to allow energization of the transmission system within the station to supply the facility with restoration power	1
32	Blackstart and system restoration	Ability to close to a dead bus	1
33	Blackstart and system restoration	Locational benefit of unit placed in area with renewables but no current owned/contracted blackstart resource	2
34	Blackstart and system restoration	Amount/presence of blackstart unit capacity.	2
	Blackstart and system restoration	**Attribute**: Flexibility of blackstart units and/or planned target unit (restoration support unit). Evaluated in item #36.	4a
36	Blackstart and system restoration	Does the proposed portfolio meet the goals of the TOP's System Restoration Plan?	4a
37	Blackstart and system restoration	Does the portfolio improve system restoration time relative to the Reference Portfolio?	4b & 5
38	Environmental Impacts	Innovative & Emerging Technologies: Long Duration Storage, Hydrogen, Advanced Geothermal, and Others	4b&5
39	Environmental Impacts	Carbon-free or low-carbon generation resource, with points assigned based on the duration and certainty of emissions avoided. For purposes of this metric, a non-generating resource will receive the same points as a carbon-free resource.	2
40	Environmental Impacts	Carbon impact of portfolio relative to NSP Reference Portfolio, assuming opportunities to substitute zero-carbon delivered fuels for fossil fuels if provided in portfolio. Any analysis of carbon impact cannot assume the ability to substitute zero-carbon fuels for fossil fuels unless it also properly includes the costs of doing so during the evaluation of project and fuel costs and as part of cost inputs to the capacity expansion modeling. Scoring will account for the certainty and timing of potential fuel substitutions, with higher scores for more certain emissions avoidance and longer durations of zero-carbon operation.	4b & 5
41	Environmental Impacts	Carbon impact of portfolio relative to NSP Reference Portfolio	4b & 5

41.5	Environmental Impacts	For a new resource, an applicant must provide the information required of generating facilities under Minn. R. 7849.0320 and 7849.1500, subd. 2. State whether the proposal is located in an environmental justice area using the census criteria identified in Minnesota Statute, section 216B.1691, subd. 1(e). A proposer must provide a climate change analysis of the proposal consistent with the Minnesota Environmental Quality Board's environmental assessment worksheet guidance for developing a carbon footprint and incorporating climate adaptation and resilience.	2
42	Costs	Low levelized cost of installed capacity in relation to other proposals Low levelized cost of accredited capacity in relation to other proposals. Costs of on-site fuel storage and/or potential conversion to cleaner fuels must be included.	2
43	Costs	Low levelized cost of accredited capacity in relation to other proposals. The costs of on-site fuel storage and/or potential conversion to cleaner fuels must be included.	2
44	Costs	Does this portfolio decrease MISO market purchases relative to the Reference	4b & 5
45	Costs	Low PVRR relative to other portfolios	4b & 5
46	Costs	Low PVSC relative to other candidate portfolios	4b & 5
47	Costs	Cost to Value Modeling/Adjusted Value Comparison	4b & 5
48	Flexibility	Demonstrated up and down ramp capability, through registration or capability to provide one or more MISO products prioritizing ramping capability (i.e., including Short-Term Reserve and Fast Ramping Resources); more points awarded for participation products with a higher level of change capability in terms of capacity per time.	2
49	Flexibility	Demonstrated ability to start quickly, through registration or capability to provide one or more MISO products prioritizing rapid starts (i.e., including Quick-	2

		Start Resource, Short Term Offline Reserve, offline Supplemental Reserves, and Fast- Start Resource) and more points awarded for products with the shorter lead time requirements.	
50	Flexibility	Lack of constraints on run time (small minimum run time constraint (i.e., 4 hours or less); ability to deploy rapid response product(s) for a minimum duration of time (i.e., 60 minutes))	2
51	Flexibility	Increased cycling capability relative to other proposals, demonstrated by minimal cycling costs and lack of technical constraints	2
52	Flexibility	Large range of dispatchable capacity relative to other proposals	2
53	Flexibility	Ability of portfolio to improve system ramps relative to the Reference Portfolio	4b & 5
54	Essential Reliability Services	Demonstrated capability to provide voltage control/support through registration in MISO Markets to provide Spinning or Regulating Reserves	1
55	Essential Reliability Services	Demonstrated capability to provide frequency regulation through registration in MISO Markets to provide Spinning or Regulating Reserves	1
56	Essential Reliability Services	Demonstrated capability to provide spinning reserve through registration in MISO Operating Reserves Market	1
57	Essential Reliability Services	Demonstrated capability to operate in dynamic voltage support (demonstrated by providing .dyr file for stability modeling)	4a
57.25	Essential Reliability Services	Portfolio demonstrates adequate voltage control/support capability, including containing asset(s) who have capability for registration in MISO Markets to provide Spinning or Regulating Reserves	4a
57.5	Essential Reliability Services	Portfolio demonstrates adequate capability of providing frequency regulation, including through asset(s) that have capability for registration in MISO Markets to provide Spinning or Regulating Reserves	4a
57.75	Essential Reliability Services	Portfolio demonstrates adequate capability of providing spinning reserve, including through asset(s) that have capability for registration in MISO Operating Reserves Markets	4a
	Essential Reliability Services	**Attribute**: Short-Circuit Current. Portfolio must provide enough Short-Circuit Current to maintain bulk power system stability. Evaluated in item #58.	4a
58	Essential Reliability	Does Steady State or Stability modeling of the NSP system with this proposed portfolio meet transmission	4a

	Services	planning criteria?	
	Essential Reliability Services	**Attribute**: Inertial Response. Level of inertial response the portfolio contains above the minimum amount needed to maintain bulk power system stability. Evaluated in item #59.	4b & 5
59	Essential Reliability Services	Does the portfolio contribute to any demonstrated need improve for inertial/stability response relative to the Reference Portfolio?	4b & 5
60	Bidder Financial Strength & Experience	Bidder has financial viability & demonstrated experience on same type of project.	1
61	Energy Justice	Does the proposal utilize union labor?	1
65	Energy Justice	Analysis of EJ factors of projects in the candidate portfolio.	1