—Via Electronic Filing—



November 13, 2023

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

RE: COMPLIANCE – NOTICE PETITION

COMPETITIVE RESOURCE ACQUISITION PROCESS 800 MW OF FIRM DISPATCHABLE GENERATION

DOCKET NO. E002/CN-23-212

Dear Mr. Seuffert:

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission (Commission) this compliance filing pursuant to the Commission's November 3, 2023 Order Approving Petition and Requiring Compliance Filing (Order). The Company is pleased to present this filing and looks forward to publishing these materials on November 22, 2023, in accordance with the Commission's procedural schedule.

On May 24, 2023, the Company filed a petition requesting permission to initiate a competitive resource acquisition process to acquire up to 800 megawatts of firm dispatchable resources to accommodate the retirement of coal units and assist in the integration of renewable resources. The process was designed to facilitate the evaluation of generic firm dispatchable resources through a multi-phase process, focusing on evaluating attributes like resource capacity, energy availability, value of production capabilities during system restoration, environmental impacts, costs, and the ability to foster integration of renewable resources. The Company's petition included Attachments A, B and C, to provide guidance to potential applicants and assist in reviewing proposals through a defined process.

The November 3, 2023 Order approved the Company's petition and accompanying Attachments subject to modifications. This compliance filing was required to align Attachments A, B and C with the November 3, 2023 Order.

#### I. Compliance Filing Materials

We provide the following revised Attachments in accordance with Order Point 5:

- Attachment A Evaluation Process
- Attachment A-Appendix A Scoring Attribute Matrix
- Attachment B Notice
- Attachment C Applicant Guide
- Attachment C-Appendix A Filing Requirements

The specific changes made to each of the listed Attachments are described below:

1. Attachment A – Evaluation Process

Order Point 7 approved the phases found in Attachment A of the Company's petition. No changes were made to the Evaluation Process.

2. Attachment A-Appendix A – Scoring Attribute Matrix

Order Point 2 approved the Company's Scoring Attribute Matrix, as revised in the Company's August 23, 2023 Reply Comments, subject to certain modifications. Notably, metrics 13, 14, 15, 16, 16.5, 17, 18, 21.5, and 35 were removed, metrics 7, 39, 40, 42, 43, 54, 55, 56, 57, and 59 were modified, and three new metrics were added. These revisions and various formatting changes have been made. A clean and redlined version of these changes is included for review.

Regarding Metric 61, we note that the Company's Revised Scoring Attribute Matrix had considered the "Analysis of EJ Factors of Projects in the Candidate Portfolio" in Phase 4b, while the Scoring Attribute Matrix in the Order placed the analysis of EJ Factors into Phase 1. We note that we will not have candidate portfolios until the portfolio scoring and selection phases. Rather than modifying its placement in the evaluation stage, we have added the EJ factors to the Attachment C-Appendix A Filing Requirements, which we believe better captures the Commission's intent.

<sup>&</sup>lt;sup>1</sup> The November 27, 2023 Staff Briefing Papers appear to have unintentionally transcribed the "Analysis of EJ factors in the Candidate Portfolio" Metric from the Company's August 25, 2023 Reply Comment to Phase 1 from Phase 4b. We do not believe this was the Commission's intent as no action to modify Metric 61 was taken at the October 5, 2023 Agenda Meeting.

#### 3. Attachment B – Notice

Order Point 8 approved the Company's Notice, subject to revisions. We have made these revisions as requested, with the discrete change of substituting the term "bids" with "project proposals" to align with the language used elsewhere in the Company's filings. A clean and redlined version of these changes is included for review.

#### 4. Attachment C – Applicant Guide

Order Point 3 approved the Company's Applicant Guide, while Order Point 4 required that the Company modify the Applicant Guide to explicitly state that projects are not required to be blackstart units to apply, and this procurement is not required to result in a blackstart resource. The Company has made the required changes, as well as numerous other changes to align the Applicant Guide with the record in this proceeding and to simplify the document. We have filed a clean and redlined version noting these changes for review.

#### 5. Attachment C-Appendix A – Filing Requirements

Order Point 3 approved the Applicant Guide's Filing Requirements as found in Attachment C-Appendix A of the Company's petition subject to three revisions. These revisions have been made. Additionally, the Company added Metrics 31 and 61 to the Filing Requirements, based on the language of the metric, and to better align with the Record. A clean and redlined version of these changes is included for review.

## II. November 22, 2023 Notice Publication

The Company plans to publish the Notice and Commission-approved documents on its website at: xcelenergy.com/FD2023CN on November 22, 2023. Along with the official Commission-approved documents contained herein, the Company plans to publish its Model PPAs, Model Term Sheets, Copies of Transmission Planning Standards, and Data Intake form clearly noting they are supplemental resources.

The Data Intake form, while not a filing requirement, will assist the Company in obtaining the information needed for our EnCompass model to evaluate proposals. Applicants are encouraged to prepare this material with their Applications, as obtaining these inputs in a timely manner will allow the Company to efficiently analyze proposals in a fair and accurate manner.

In addition to publishing on our website, we plan to place paid ad spaces in Platts Megawatt Daily, Edison Electric Institute, American Public Power Association, National Rural Electric Cooperative Association, and EnergyCentral. However, in subsequent discussions with these vendors, we experienced cost and operational limitations on word count and publishing formats preventing us from publishing the full Notice. In the cases where we were required to shorten the Notice in order to publish it with the trade publications, and industry newsletters, we have hyperlinked to the Commission-approved Notice text on the Company's website. We believe this satisfies the intent of alerting potential applicants to this proceeding so that they may submit proposals, while accounting for the practical and economic limitations with various mediums.

#### Conclusion

In conclusion, the Company has adhered to the requirements set forth in the Order. The revised Attachments A, B and C, as detailed above, have been updated to reflect the Commission's directives and to ensure compliance with the record.

We believe that these revisions not only satisfy the Commission's requirements but will also facilitate a more effective and transparent competitive resource acquisition process. This process is crucial for meeting our objectives of integrating resources into our system while ensuring reliable and cost-effective service to our customers. We appreciate the Commission's guidance in this matter and are prepared to make any further adjustments as directed.

We have electronically filed this document with the Minnesota Public Utilities Commission, and copies have been served on the parties on the attached service list. Please contact Alex Cutchey at <a href="mailto:alex.cutchey@xcelenergy.com">alex.cutchey@xcelenergy.com</a> or (612) 216-8084 or me at <a href="mailto:monsherra.s.blank@xcelenergy.com">monsherra.s.blank@xcelenergy.com</a> if you have any questions regarding this filing.

Sincerely,

/s /

MONSHERRA S. BLANK DIRECTOR, REGULATORY AND STRATEGIC ANALYSIS

Enclosures cc: Service List

# **Proposed Evaluation Process**

Included with our Notice Petition, the Company submits a Proposed Evaluation Process. The **p**urpose of the Proposed Evaluation Process is to provide a framework to assist the Commission, and parties, in weighing applications to meet the firm dispatchable resource need in a reliable and cost-effective manner.

This Proposed Evaluation Process sets up a five-phased process to evaluate proposal applications. The five phases of the process include:

- 1. Threshold Requirement Per Proposal
- 2. Individual Scoring Per Proposal
- 3. Portfolio Optimization in EnCompass
- 4. Portfolio Viability Assessment & Scoring
- 5. Cost to Value Modeling and Portfolio Selection

Together, these phases will help in framing the proceeding and ensure that the Company can procure the necessary resources to provide capacity and energy availability to satisfy the firm dispatchable need. The Company proposes that Phase 1 occur as part of the Commission's completeness determination, and the Company would provide testimony detailing the outcome of Phases 2 through 5 as part of our initial testimony after any applications received are deemed complete and passing proposal threshold requirements. Further detail regarding the Proposed Evaluation Process is provided below.

## Phase 1: Proposal 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: Proposal 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 shall be moved forward to Phase 3.

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#### 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.

All other portfolios will be identified using an iterative optimization process that selects from the highest scoring proposals moved forward from Phase 2, as follows:

- 1) Allow all proposals moved forward from Phase 2 to be selected resource options in EnCompass, including any proposals that are part of the Reference Portfolio.
- 2) Conduct capacity expansion plan modeling in EnCompass to identify the most economic combination of all proposals on a PVSC basis.
  - a. Once a capacity expansion plan is identified, conduct production cost modeling in EnCompass on that plan.
- 3) To create subsequent portfolios, we will create a process that removes proposals selected in step 2 and reoptimizes the capacity expansion plan one or more times to identify the "next best" portfolio(s).

# Phase 4: Portfolio Viability Assessment & Scoring

a. Viability Assessment

Each of the portfolios identified in Phase 3 will be analyzed through additional system modeling to address the following:

- 1) As per MISO Blackstart Service BPM Manual 022, can the Transmission Operator achieve the goals of its System Restoration Plan with this portfolio?
- 2) Does an unacceptable level of LOLH or EUE occur during the planning period when the NSP system is modeled with this proposed portfolio<sup>1</sup>?

<sup>&</sup>lt;sup>1</sup> LOLH and EUE will be measured at years 5, 10, and 15 of the planning period.

3) Does Steady State or Stability modeling of the NSP system with this proposed portfolio meet transmission planning criteria<sup>2</sup>?

Should a portfolio fail any of the 3 questions above, the type and size of necessary infrastructure required for the portfolio to pass the question(s) will be identified ("Necessary Infrastructure") for subsequent use in Phase 5.

#### b. Additional Portfolio Evaluation Criteria

After the viability assessment in part 4 a., the portfolios from Phase 3 shall be scored on several additional factors, which will serve as additional evaluation criteria. These factors include:

- 1) Does this portfolio improve inertial/stability response relative to the Reference Portfolio?
- 2) Does this portfolio improve system ramps relative to the Reference Portfolio?
- 3) Does this portfolio decrease reliance on MISO market purchases relative to the Reference Portfolio?
- 4) Does this portfolio improve system restoration time relative to the Reference Portfolio?
- 5) Does this portfolio have more than 5 days of onsite fuel storage?
- 6) Is the carbon impact of this portfolio lower than that of the Reference Portfolio, assuming:
  - a. Any physical fuel assets in the proposed portfolio use only the primary fuel(s) indicated in their application?
  - b. Any physical fuel assets in the proposed portfolio substitute zero-carbon delivered fuels for fossil fuels if enough data has been provided in in each application to allow for such analysis?
- 7) Does this portfolio have less LOLH and EUE relative to the Reference Portfolio under identical test conditions?
- 8) Is the PVRR of the portfolio lower than the PVRR of the Reference Portfolio?

## 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. The following adjustment is then made to each of the portfolios from Phase 4:

<sup>&</sup>lt;sup>2</sup> Transmission Planning Criteria Manual for the NSPM and NSPW Transmission System, V7, accessible at www.xcelenergy.com, or most current manual at the time of evaluation.

Modeled EnCompass Value from Phase 3 (PVSC Results (\$))

+ Cost of Necessary Infrastructure from Phase 4a (\$)

Adjusted Portfolio Value (Calculated in Phase 5)

For all portfolios identified in Phase 3, both cost (represented by each portfolio's Adjusted Portfolio Value) and the additional evaluation criteria in 4b) will be compared to identify the portfolio ultimately recommended for selection.

Appendix A Scoring Attribute Matrix

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ID	Attribute Category	Metric	Phase 1: Threshold Requirement Per Proposal	Phase 2: Individual Scoring Per Proposal	Phase 3: Portfolio Formation	Phase 4a: Portfolio Viability Assessment	Phases 4b & 5: Portfolio Scoring & Selection
1	Capacity	Nameplate capacity of commercially operable project is > 5 MWac.	X				
2	Capacity	Commercially operable project must be transmission-interconnected.	X				
3	Capacity	Commercially operable project must interconnect in MISO Zone 1 with uninterrupted interconnection path to MISO Load.	X				
4	Capacity	Must achieve COD by 12/31/2028	X				
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 operation at equivalent analog criteria.	X				
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.	X				
7	Capacity	For New Projects Only: Minimum design life or PPA contract term of 10 years	X				
8	Capacity	For Proposals containing a BESS Project: Must provide estimate of capacity degradation rate via warranty or independent evaluation.	X				
9	Capacity	For Power Purchase Agreements Only: O&M plan must be provided and must be sufficient for proposed contract term	X				
10	Capacity	For Build-Transfer Projects Only: Compliance with Company Technical Specifications	X				
11	Capacity	Level of capacity degradation over project life or PPA contract term relative to other proposals, with a better score for lower degradation.		x			
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.		x			
13	Energy availability	<u>Fuel Access For Physical Fuel Assets:</u> Demonstrated firm fuel transport (i.e., contract for firm fuel delivery)		x			
14	Energy availability	For Inverter-Based, Physical Resources Utilizing Renewable Energy: High net capacity factor of renewable component relative to other proposals		X			
15	Energy availability	Does an unacceptable level of LOLH or EUE occur during the planning period when the portfolio is modeled?				x	
16	Energy availability	Does this portfolio have less LOLH and EUE relative to the Reference Portfolio under identical test conditions?					X

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ID	Attribute Category	Metric	Phase 1: Threshold Requirement Per Proposal	Phase 2: Individual Scoring Per Proposal	Phase 3: Portfolio Formation	Phase 4a: Portfolio Viability Assessment	Phases 4b & 5: Portfolio Scoring & Selection
	•	ow are required only for those units within a proposal tart unit.					
17	Blackstart and system restoration	Initial Unit (Blackstart Unit) must register with MISO as a Blackstart Resource	X				
18	Blackstart and system restoration	Unit capability to operate in isochronous mode	X				
19	Blackstart and system restoration	Unit capability to operate in islanded operation	X				
20	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	X				
21	Blackstart and system restoration	The ability to control voltage level within acceptable limits during energization/block loading (-10%/+5%).	X				
22	Blackstart and system restoration	The ability to control frequency within 58.7 Hz to 61.8 Hz during energization/block loading	X				
23	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	X				
24	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); 2) operability in remote load control service (up and down).	X				
25	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	X				
26	Scro	Ability to close to a dead bus	X				
27	Blackstart and system restoration	Locational benefit of unit placed in area with renewables but no current owned/contracted blackstart resource		Х			
28	Blackstart and system restoration	Amount/presence of blackstart unit capacity.		х			
29	Blackstart and system restoration	<b>Attribute:</b> Flexibility of blackstart units and/or planned target unit (restoration support unit). Evaluated in item #30.				X	
30	Blackstart and system restoration	Does the proposed portfolio meet the goals of the TOP's System Restoration Plan?				X	
31	Blackstart and system restoration	Does the portfolio improve system restoration time relative to the Reference Portfolio?					X

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ID	Attribute Category	Metric	Phase 1: Threshold Requirement Per Proposal	Phase 2: Individual Scoring Per Proposal	Phase 3: Portfolio Formation	Phase 4a: Portfolio Viability Assessment	Phases 4b & 5: Portfolio Scoring & Selection
32	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.		X			
33	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.		X			
34	Environmental Impacts	Innovative & Emerging Technologies: Long Duration Storage, Hydrogen, Advanced Geothermal, and Others					X
35	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.					X
36	Environmental Impacts	Carbon impact of portfolio relative to NSP Reference Portfolio					X
37	Costs	Low levelized cost of installed capacity in relation to other proposals. Costs of on-site fuel storage and/or potential conversion to cleaner fuels must be included.		X			
38	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.		X			
39	Costs	Does this portfolio decrease MISO market purchases relative to the Reference					X
40	Costs	Low PVRR relative to other portfolios					X
41	Costs	Low PVSC relative to other candidate portfolios					X
42	Costs	Cost to Value Modeling/Adjusted Value Comparison					X

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ID	Attribute Category	Metric	Phase 1: Threshold Requirement Per Proposal	Phase 2: Individual Scoring Per Proposal	Phase 3: Portfolio Formation	Phase 4a: Portfolio Viability Assessment	Phases 4b & 5: Portfolio Scoring & Selection
43	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.		x			
44	Flexibility	Demonstrated ability to start quickly, through registration or capability to provide one or more MISO products prioritizing rapid starts (i.e., including Quick-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.		x			
45	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))		x			
46	Flexibility	Increased cycling capability relative to other proposals, demonstrated by minimal cycling costs and lack of technical constraints		x			
47	Flexibility	Large range of dispatchable capacity relative to other proposals		X			
48	Flexibility	Ability of portfolio to improve system ramps relative to the Reference Portfolio					X
49	Essential Reliability Services	Demonstrated capability to provide voltage control/support through registration in MISO Markets to provide Spinning or Regulating Reserves		x			
50	Essential Reliability Services	Demonstrated capability to provide frequency regulation through registration in MISO Markets to provide Spinning or Regulating Reserves		x			
51	Essential Reliability Services	Demonstrated capability to provide spinning reserve through registration in MISO Operating Reserves Market		x			
52	Essential Reliability Services	Demonstrated capability to operate in dynamic voltage support (demonstrated by providing .dyr file for stability modeling)				X	
52	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				X	
53	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				x	
54	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				x	
55	Essential Reliability Services	Attribute: Short-Circuit Current. Portfolio must provide enough Short-Circuit Current to maintain bulk power system stability. Evaluated in item #56.				x	
56	Essential Reliability Services	Does Steady State or Stability modeling of the NSP system with this proposed portfolio meet transmission planning criteria?				X	

			Phase 1:	Phase 2:	Phase 3:	Phase 4a:	Phases 4b & 5:
			Threshold	Individual Scoring	Portfolio	Portfolio Viability	Portfolio Scoring &
			Requirement	Per Proposal	Formation	Assessment	Selection
ID	Attribute Category	Metric	Per Proposal				
57	Essential Reliability Services	<b>Attribute:</b> Inertial Response. Level of inertial response the portfolio contains above the minimum amount needed to maintain bulk power system stability. Evaluated in item #58.					X
58		Does the portfolio contribute to any demonstrated need for inertial/stability response relative to the Reference Portfolio?					X
59	Bidder Financial Strength & Experience	Bidder has financial viability & demonstrated experience on same type of project.	X				
60	Energy Justice	Does the proposal utilize union labor?	X				
61	Energy Justice	Analysis of EJ factors of projects in the candidate portfolio.					X

<sup>\*</sup> These Phase 1 Metrics do not apply to demand response.

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ID	Attribute Category	Primary Relevant IRP Orde	Other Relevant Requirements or Reference Material	Metric	Phase 1: Threshold Requirement Per Proposal	Phase 2: Individual Scoring Per Proposal	Phase 3: Portfolio Formation	Phase 4a: Portfolio Viability Assessment	Phases 4b & 5: Portfolio Scoring & Selection
1	Capacity	3A	MISO RASC Availability capacity attribute	Nameplate capacity of commercially operable project is > 5 MWac.	X				
2	Capacity	3A	MISO RASC Availability capacity attribute	Commercially operable project must be transmission-interconnected.	x				
3	Capacity	3A	MISO RASC Availability capacity attribute	Commercially operable project must interconnect in MISO Zone 1 with uninterrupted interconnection path to MISO Load.	x				
4	Capacity	3A	MISO RASC Availability capacity attribute	Must achieve COD by 12/31/2028	x				
5	Capacity	<del>3A</del>	MISO RASC Availability capacity attribute; NERC EOP 012 001	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 operation at equivalent analog criteria.	X				
6	Capacity	<del>3A</del>	MISO RASC Availability capacity attribute	For Existing Projects—Only: Minimum remaining operational life or PPA contract term of 10 years after COD of contract selected in this competitive resource acquisition.	x				
7	Capacity	<del>3A</del>	MISO RASC Availability capacity attribute	For New Projects Only: Minimum design life or PPA contract term of 10 years	x				
8	Capacity	<del>3A</del>	MISO RASC Availability capacity attribute	For Proposals containing a BESS Project: Must provide estimate of capacity degradation rate via warranty or independent evaluation.	X				
9	Capacity	<del>3A</del>	MISO RASC Availability capacity attribute	For Power Purchase Agreements Only: O&M plan must be provided and must be sufficient for proposed contract term	x				
10	Capacity	<del>3A</del>	MISO RASC Availability capacity attribute	For Build-Transfer Projects Only: Compliance with Company Technical Specifications	X				
11	Capacity	3A	MISO RASC Availability capacity attribute	Level of capacity degradation over project life or PPA contract term relative to other proposals, with a better score for lower degradation.		x			
12	Capacity	<del>3A</del>	Use of standard set of accreditation assumptions that NSP makes for all resources in resource planning modeling: class average, declining ELCC for non-thermal resources; MISO prevailing thermal unit assumptions).	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.		X			
13	<del>Capacity</del>	<del>3A</del>		Portfolio has 400 MW of commercially operable capacity by 2027 and 800 MW by 2029			×		
14	Energy availability	3B1 and IRP Hearing discussion	MISO RASC energy adequacy attribute: Long Duration Energy at High Output	Capability of dispatching for 50 continuous hours.	×				
<del>15</del>	Energy availability	3B1 and IRP Hearing discussion	MISO RASC energy adequacy attribute: Long Duration Energy at High Output	Physical Fuel Assets: On-site fuel storage*.	×				
<del>16</del>	Energy availability	3B1 and IRP Hearing discussion	MISO RASC energy adequacy attribute: Long Duration Energy at High Output	<u>Inverter-Based, Physical Resources:</u> Pairing with an on-site generator that is capable of producing energy from an on-site fuel source (I.e., wind, solar or other local source)*	×				
<del>16.5</del>	Energy availability	3B1 and IRP Hearing discussion	MISO RASC energy adequacy attribute: Long Duration Energy at High Output	Capability of dispatching for at least 100 continuous hours.		*			
<del>17</del>	Energy availability	3B1 and IRP Hearing discussion	Internal Company requirement used for Wheaton; Company testimony from PSCo ERP, Fuel Assurance energy adequacy attribute from MISO RASC; MISO SAC BPM Tariff	Fuel Storage For Physical Fuel Assets: On-site fuel storage for continuous dispatch at 100% output for at least 50 hours.		×			

		Primary Relevant IRP Ord	l <del>er</del>		Phase 1: Threshold Requirement	Phase 2: Individual Scoring Per Proposal	Phase 3: Portfolio Formation	Phase 4a: Portfolio Viability Assessment	Phases 4b & 5: Portfolio Scoring & Selection
ID	Attribute Category	Point	Other Relevant Requirements or Reference Material	Metric	Per Proposal	•			
<del>18</del>	Energy availability	3B1 and IRP Hearing discussion	Internal Company requirement used for Wheaton; Company testimony from PSCo ERP, Fuel Assurance energy adequacy attribute from MISO RASC	Fuel Access For Inverter-Based, Physical Resources: Technical capability—through size, design, planned state of charge, etc - to utilize on-site/surrounding fuel (wind, solar, or stored energy, or other local sources) for at least 50 hours at 100% output without accessing other grid energy sources.		*			
19	Energy availability	3B1 and IRP Hearing- discussion	Fuel Assurance energy adequacy attribute from MISO RASC	Fuel Access For Physical Fuel Assets: Demonstrated firm fuel transport (i.e., contract for firm fuel delivery)		X			
20	Energy availability	3B1 and IRP Hearing discussion	Fuel Assurance energy adequacy attribute from MISO RASC	For Inverter-Based, Physical Resources Utilizing Renewable Energy: High net capacity factor of renewable component relative to other proposals		X			
21	Energy availability	3B1 and IRP Hearing discussion	MISO RASC energy adequacy attribute: Long Duration Energy at High Output	Does an unacceptable level of LOLH or EUE occur during the planning period when the portfolio is modeled?				x	
<del>21.5</del>	Energy availability	3B1 and IRP Hearing discussion	Internal Company requirement used for Wheaton; Company testimony from PSCo ERP, Fuel Assurance energy adequacy attribute from MISO RASC	Does the portfolio have more than 5 days of onsite fuel storage?					×
22	Energy availability	3B1 and IRP Hearing- discussion	MISO RASC energy adequacy attribute: Long Duration Energy at High Output	Does this portfolio have less LOLH and EUE relative to the Reference Portfolio under identical test conditions?					x

						Propos	sed Evaluation	Stage	
		Primary Relevant IRP Ord	er Other Relevant Requirements or Reference Material		Phase 1: Threshold Requirement	Phase 2: Individual Scoring Per Proposal	Phase 3: Portfolio Formation	Phase 4a: Portfolio Viability Assessment	Phases 4b & 5: Portfolio Scoring & Selection
ID	Attribute Category	<del>rom</del> t	·	Metric	Per Proposal				
	art criteria in the section belocks consideration as a blackst		for those units within a proposal						
23	Blackstart and system restoration	<del>3B2</del>	NERC Standard EOP-005-3, requirement 11	Initial Unit (Blackstart Unit) must register with MISO as a Blackstart Resource	X				
24	Blackstart and system restoration	<del>3B2</del>	MISO Blackstart Service BPM 022, Technical Requirements section 2.2	Unit capability to operate in isochronous mode	x				
25	Blackstart and system restoration	<del>3B2</del>	MISO Blackstart Service BPM 022, Technical Requirements section 2.2	Unit capability to operate in islanded operation	x				
26	Blackstart and system restoration	<del>3B2</del>	NERC Standard EOP-005-3	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	X				
27	Blackstart and system restoration	3B2	NERC Standard EOP-005-3	The ability to control voltage level within acceptable limits during energization/block loading (-10%/+5%).	X				
28	Blackstart and system restoration	<del>3B2</del>	NERC Standard EOP-005-3	The ability to control frequency within 58.7 Hz to 61.8 Hz during energization/block loading	X				
29	Blackstart and system restoration	<del>3B2</del>	MISO Blackstart Service BPM 022, Technical Requirements section 2.2, TOP System Restoration Plan	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	X				
30	Blackstart and system restoration	<del>3B2</del>	NERC & TOP System Restoration Plan	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); 2) operability in remote load control service (up and down).	X				
31	Blackstart and system restoration	<del>3B2, 3B5-</del>	MISO Blackstart Service BPM 022, Technical Requirements section 2.2	Sufficient reactive reserve capability to allow energization of the transmission system within the station to supply the facility with restoration power	X				
32	Scro	<del>3B2, 3B5</del>	MISO Blackstart Service BPM 022, Technical Requirements section 2.2	Ability to close to a dead bus	x				
33	Blackstart and system restoration	<del>3B2, 3B5</del>	NERC & TOP System Restoration Plan	Locational benefit of unit placed in area with renewables but no current owned/contracted blackstart resource		x			
34	Blackstart and system restoration	<del>3B2</del>	TOP System Restoration Plan	Amount/presence of blackstart unit capacity.		X			
<del>35</del>	Blackstart and system restoration	<del>3B2-</del>	NERC & TOP System Restoration Plan	Portfolio has at least 25 MW of capacity from blackstart units			*		
	Blackstart and system restoration	<del>3B2</del>	TOP System Restoration Plan	<b>Attribute:</b> Flexibility of blackstart units and/or planned target unit (restoration support unit). Evaluated in item #36.				x	
36	Blackstart and system restoration	<del>3B2-</del>	MISO Blackstart Service BPM 022, Technical Requirements section 2.2	Does the proposed portfolio meet the goals of the TOP's System Restoration Plan?				x	
37	Blackstart and system restoration	<del>3B2</del>	NERC & TOP System Restoration Plan	Does this the portfolio improve system restoration time relative to the Reference Portfolio?					X

		Primary Relevant IRP Orde	_		Phase 1: Threshold	Phase 2: Individual Scoring	Phase 3: Portfolio	Phase 4a: Portfolio Viability	Phases 4b & 5: Portfolio Scoring &
ID	Attribute Category	Point	Other Relevant Requirements or Reference Material	Metric	Requirement Per Proposal	Per Proposal	Formation	Assessment	Selection
41.5	Environmental Impacts	<del>3B4</del>	EERA Initial Comments	Placeholder for including requirements suggested by EERA 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.		X			
39	Environmental Impacts	<del>3B3</del>		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.		X			
38	Environmental Impacts	3B3		Innovative & Emerging Technologies: Long Duration Storage, Hydrogen, Advanced Geothermal, and Others					x
40	Environmental Impacts	<del>3B3</del>		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 forfossil 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.					X
41	Environmental Impacts	<del>3B3</del>		Carbon impact of portfolio relative to NSP Reference Portfolio					X
42	Costs	<del>3B4</del>		Low levelized cost of installed capacity in relation to other proposals. Costs of on-site fuel storage and/or potential conversion to cleaner fuels must be included.		X			
43	Costs	<del>3B4</del>		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.		X			
44	Costs	<del>3B4</del>		Does this portfolio decrease MISO market purchases relative to the Reference Portfolio?					x
45	Costs	<del>3B4</del>		Low PVRR relative to other portfolios					x
46	Costs	<del>3B3, 3B4</del>		Low PVSC relative to other candidate portfolios					X
47	Costs	<del>3B4</del>		Cost to Value Modeling/Adjusted Value Comparison					x

						110p0s	sed Evaluation	Diage	
ID	Attailauta Catagogara	Primary Relevant IRP Ord	ler Other Relevant Requirements or Reference Material	Metric	Phase 1: Threshold Requirement Per Proposal	Phase 2: Individual Scoring Per Proposal	Phase 3: Portfolio Formation	Phase 4a: Portfolio Viability Assessment	Phases 4b & 5: Portfolio Scoring & Selection
48	Attribute Category  Flexibility	<del>3B5-</del>	MISO RASC Ramp Up Capability flexibility attribute; NERC   ERSTF Measures Framework   November 2015	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.	·	X			
49	Flexibility	<del>3B5</del> -	MISO RASC Rapid Start Up flexibility attribute; NERC   ERSTF  Measures Framework   November 2015	Demonstrated ability to start quickly, through registration or capability to provide one or more MISO products prioritizing rapid starts (i.e., including Quick-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.		X			
50	Flexibility	<del>3B5</del>	Current requirements for MISO Short Term Reserve product; MISO RASC Rapid Start-Up flexibility attribute	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))		X			
51	Flexibility	<del>3B5</del>	Power Plant Cycling Costs, NREL, (2012)	Increased cycling capability relative to other proposals, demonstrated by minimal cycling costs and lack of technical constraints		X			
52	Flexibility	<del>3B5</del>	MISO RASC Ramp Up Capability flexibility attribute	Large range of dispatchable capacity relative to other proposals		X			
53	Flexibility	<del>3B5</del> -	MISO RASC Ramp Up Capability flexibility attribute; NERC   ERSTF Measures Framework   November 2015	Ability of portfolio to improve system ramps relative to the Reference Portfolio					X
54	Essential Reliability Services	<del>3B5</del> -	MISO RASC Voltage Stability essential reliability services attribute	Demonstrated capability to provide voltage control/support through registration in MISO Markets to provide Spinning or Regulating Reserves		X			
55	Essential Reliability Services	<del>3B5-</del>	NERC   ERSTF Measures Framework   November 2015	Demonstrated capability to provide frequency regulation through registration in MISO Markets to provide Spinning or Regulating Reserves		X			
56	Essential Reliability Services	<del>3B5-</del>	NERC   ERSTF Measures Framework   November 2015	Demonstrated capability to provide spinning reserve through registration in MISO Operating Reserves Market		X			
57	Essential Reliability Services	<del>3B5</del>	NERC Essential Reliability Services Sufficiency White Paper;  December 2016	Demonstrated capability to operate in synchronous condenser mode dynamic voltage support (demonstrated by providing dyr file for stability modeling)		*		X	
57.25	Essential Reliability Services	<del>3B5</del> -	MISO RASC Voltage Stability essential reliability services attribute	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				x	
57.5	Essential Reliability Services	<del>3B5</del> -	NERC   ERSTF Measures Framework   November 2015	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				X	
57.75	Essential Reliability Services	<del>3B5</del> -	NERC   ERSTF Measures Framework   November 2015	Portfolio demonstrates adequate capability of providing spinning reserve, including through asset(s) that have capability for registration in MISO Operating Reserves Markets				x	
	Essential Reliability Services	<del>3B5</del>	NERC   ERSTF Measures Framework   November 2015	Attribute: Short-Circuit Current. Portfolio must provide enough Short-Circuit Current to maintain bulk power system stability. Evaluated in item #58.				X	
58	Essential Reliability Services	<del>3B5</del>	Transmission Planning Criteria Manual for the NSPM and NSPW- Transmission System, V7	Does Steady State or Stability modeling of the NSP system with this proposed portfolio meet transmission planning criteria?				X	
	Essential Reliability Services	<del>3B5-</del>	Stability requirements in Transmission Planning Criteria Manual for the NSPM and NSPW Transmission System, V7	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.					X
59	Essential Reliability Services	<del>3B5</del>	NERC Essential Reliability Services Sufficiency White Paper;  December 2016	Does the portfolio contribute to any demonstrated need for inertial/stability response relative to the Reference Portfolio?					x
60	Bidder Financial Strength & Experience	<del>n/a</del>	Proprietary Company requirements	Bidder has financial viability & demonstrated experience on same type of project.	X				
61	Energy Justice	<del>n/a</del>	Company's Initial Comments to Notice Petition (Docket No. E002/CN 23 212)	Does the proposal utilize union labor?	X				

						Propo	sed Evaluation	Stage	
		Primary Relevant IRP Orde	<del></del>		Phase 1: Threshold Requirement	Phase 2: Individual Scoring Per Proposal	Phase 3: Portfolio Formation	Phase 4a: Portfolio Viability Assessment	Phases 4b & 5: Portfolio Scoring & Selection
ID	Attribute Category	Point	Other Relevant Requirements or Reference Material	Metric	Per Proposal				
65	Energy Justice	<del>a/a</del>	Energy Justice terms proposed by Company in Initial Comments to  Notice Petition (Docket No. E002/CN 23-212) and EERA Initial  Comments	Analysis of EJ factors of projects in the candidate portfolio.					X

<sup>\*</sup> These Phase 1 Metrics do not apply to demand response.

Notice: MN Public Utilities Commission to Conduct a
Competitive Resource Acquisition Process for up to
800 MW of Firm Dispatchable Resources to Serve
Xcel Energy's Upper Midwest Service Territory.

The Minnesota Public Utilities Commission has opened a Competitive Resource Acquisition proceeding to select up to 800 MW of generic firm dispatchable resources to meet Xcel Energy's electrical power requirements in the Company's Upper Midwest service area.

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. The Commission has ordered Xcel Energy to conduct updated modeling to refine this need. Qualifying project proposals will be used as inputs of the modeling process. The Commission will make such a determination after weighing competing proposals as part of a contested case proceeding.

The firm dispatchable resources must be able to provide up to 800MW of capacity and energy. The Commission may consider the resources' production capabilities, environmental impacts, costs, and the ability to foster the integration of renewables. Any interested party's proposal to meet this need, and the Company's competing proposal, must be filed with the Commission no later than:

# January 22, 2024

Documents associated with this proceeding can be found at Docket No. E002/CN-23-212. To receive notification of filings in the docket, you can subscribe via the Commission's eSubscription service available at <a href="mailto:eDockets/Public Utilities (mn.gov">eDockets/Public Utilities (mn.gov)</a> (click on "Subscribe"). The Company will also provide this information on its website at: xcelenergy.com/FD2023CN.

Notice Petition - Compliance Filing - C-Competitive Resource Acquisition Process
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#### **Notice**

The Company proposes to distribute a Notice of the competitive resource acquisition process to trade organizations, and industry publications for paid publication. The announcement will contain the following notice.

Notice: MN Public Utilities Commission to Conduct a Competitive Resource Acquisition Process for up to 800 MW of Firm Dispatchable Resources to Serve Xcel Energy's Upper Midwest Service Territory.

The Minnesota Public Utilities Commission has opened a Competitive Resource Acquisition proceeding to select up to 800 MW of generic firm dispatchable resources to meet Xcel Energy's electrical power requirements in the Company's Upper Midwest service area.

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 2029While 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. The Commission has ordered Xcel Energy to conduct updated modeling to refine this need. Qualifying project proposals will be used as inputs of the modeling process. The Commission will make such a determination after weighing competing proposals as part of a contested case proceeding.

The firm dispatchable resources must be able to provide up to 800MW of capacity and energy. The Commission may consider the resources' production capabilities, environmental impacts, costs, and the ability to foster the integration of renewables. Any interested party's proposal to meet this need, and the Company's competing proposal, must be filed with the Commission no later than:

## January 22, 2024 [Insert Approved Date]

\_Docket No. E002/CN-

Notice Petition - Compliance Filing - C-Competitive Resource Acquisition Process
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can subscribe via the Commission's eSubscription service available at <a href="https://www.puc.state.mn.us-eDockets/Public Utilities (mn.gov">www.puc.state.mn.us-eDockets/Public Utilities (mn.gov)</a> (click on "Subscribe" to a Docket"). The Company will also provide this information on its website at: xcelenergy.com/FD2023CN.

# Northern States Power Company-Minnesota & Northern States Power Company-Wisconsin 2023 Firm Dispatchable Proceeding

#### **Applicant Guide**

#### Section 1. Introduction

On May 24, 2023, Xcel Energy filed a Notice Petition to initiate a competitive resource acquisition process to acquire up to 800 megawatts of firm dispatchable resources. On November 3, 2023, the Minnesota Public Utilities Commission (Commission) issued an Order Approving Petition and Requiring Compliance Filing, and initiating the proceeding. As part of this proceeding, Xcel Energy plans to submit a proposal for our preferred resources to fulfill the identified firm dispatchable need. Other applicants are also encouraged to submit their own proposals. The Minnesota Public Utilities Commission will select the projects to serve Xcel Energy's customers from among those considered in this proceeding. The purpose of this Applicant Guide is to provide further information to potential applicants who may wish to submit a proposal to meet the identified firm dispatchable need.

## Section 2. Company Information

Xcel Energy Inc., headquartered in Minneapolis, Minnesota, is a U.S. investor-owned holding company parent of four major electric and natural gas utilities. The four Xcel Energy operating companies have regulated utility operations in the eight western and midwestern states of: Minnesota, Wisconsin, North Dakota, South Dakota, Michigan, Colorado, Texas, and New Mexico. The operating companies of Xcel Energy provide energy-related products and services to approximately 3.7 million electricity customers and 2.1 million natural gas customers collectively. More information about Xcel Energy is available at www.xcelenergy.com.

Northern States Power Company (NSPM), a Minnesota corporation, is the Xcel Energy operating company in North Dakota, South Dakota and Minnesota, and Northern States Power Company (NSPW), a Wisconsin corporation, is the Xcel Energy operating Company in Wisconsin and Michigan. The retail electric service territories for NSPM and NSPW are shown below in Figure 1.

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Figure 1. NSPM and NSPW Retail Electric Service Territory

The firm dispatchable resources subject to this proceeding will electrically serve NSPM and NSPW.

#### Section 3. Project Requirements

In this competitive acquisition process, a "project" will be interpreted as all assets that are part of a single proposal that together interconnect to the grid at a single point of interconnection.<sup>1</sup> An applicant may submit multiple proposals to fill the identified firm dispatchable resource need.

A summary of the eligible project types and parameters are included in Table 1 below:

Table 1. Summary of Firm Dispatchable Resource Project Types

Parameter	Project T	Гуреѕ			
Category	Required For All Proposals	Optional Functionality			
Resource Types	Firm Dispatchable,	Blackstart Service <sup>2</sup>			
	Commercially Operable				
Vintage	Newly Built or Existing				
MW Target	Up to 800 MW				
Minimum	> 5 MW Per Project				
Project Size	·				

<sup>&</sup>lt;sup>1</sup> In other words, a project may contain more than a single generation asset.

<sup>&</sup>lt;sup>2</sup> Projects containing one or more Blackstart Units (BSUs) with the capability of energizing the network from an on-site auxiliary supply.

Parameter	Project Types		
Project Structure	Power Purchase Agreement ("PPA"), Build Transfer ("BT"), Company self-build	Power Purchase Agreement ("PPA"), Build Transfer ("BT"), Company self- build	
Timing for Commercial In-servicing	Up to 800 MW by 12/31/2028	Operational by 12/31/2028	
Geography & Interconnection	MISO Zone 1; must have uninterrupted interconnection path to MISO Load. <sup>3</sup> All interconnections must have NRIS deliverability. <sup>4</sup>	Same as requirement for commercially operable load.	
Bidder Financial Strength & Experience	Financial viability & demonstrated experience on same type of project.	Financial viability & demonstrated experience on same type of project.	
Further Project Required Attributes	Meets required capacity attributes.	Meets blackstart and system restoration attributes in addition to attributes already required for commercial operation.	

While Table 1 provides a high-level summary of project parameters, further detail on a number of the parameters is provided below.

Resource Types: Xcel Energy is seeking firm dispatchable generation projects that have an established development plan and that convey all energy, capacity, ancillary services including reactive supply and voltage control, full dispatch control,<sup>5</sup> and any environmental benefits generated from the project. All projects are expected to be able to supply accredited capacity as a Planning Resource to meet our resource adequacy requirements within the MISO Resource Adequacy construct.

<sup>&</sup>lt;sup>3</sup> Due to overlap in the boundaries between MISO and SPP; projects cannot interconnect to infrastructure physically islanded by SPP.

<sup>&</sup>lt;sup>4</sup> Regardless of whether the project uses a new interconnection in the MISO queue or the replacement generation process.

<sup>&</sup>lt;sup>5</sup> For BESS components in Power Purchase Agreements.

Projects that contain at least one Blackstart Unit (BSU) as defined in Appendix A to Xcel Energy's Notice Petition must also meet the blackstart and system restoration attributes in Appendix A to Attachment A.<sup>6</sup>

Project Structure: Xcel Energy is seeking projects under either a BT, PPA, or Self Build (SB) arrangement. Under the BT model, Xcel Energy will assume 100 percent ownership of the project via a negotiated Purchase and Sale Agreement (PSA). Under the PPA model, the applicant will retain ownership of the project and Xcel Energy will negotiate an offtake contract for the unit's capacity, energy, and any environmental attributes. Model PPA and BT contract language will be published to Xcel Energy's website. If a project is proposed to be added at the site of an existing commercially operable generator, the applicant must own the existing commercially operable generator or provide proof of consent from generation owner. Under a SB structure, Xcel Energy will self-build the project.

**Expected Online Date:** Proposals must be for facilities that are complete and commercially operable, including all facilities necessary to generate and deliver energy at the point of interconnection by the commercial operation dates specified in the proposal.

Required Project Attributes & Verification: Projects must possess the following attributes as listed below. In order to ensure projects possess the required attributes, applicants are encouraged to provide demonstrated proof of each attribute in Appendix A to this Applicant Guide.<sup>7</sup> Additional supporting documents are included on the Company's website at FD2023CN@xcelenergy.com.

1. Additional Capacity Requirements. Projects must be operable at regional extreme maximum temperatures.<sup>8</sup> New projects must have a minimum design

<sup>&</sup>lt;sup>6</sup> Since Appendix A to Xcel Energy's Notice Petition is confidential, the definition of a BSU from that document is also provided here: A BSU has the capability of energizing the network from an on-site auxiliary supply.

<sup>&</sup>lt;sup>7</sup> For example, in order to provide proof of capability to operate in hot and cold temperatures, provide warranty materials.

<sup>&</sup>lt;sup>8</sup> Must be able to operate commercially at the highest 0.2 percentile hourly temperature from January 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.

life or PPA contract term of at least 10 years after the COD of a contract selected through this competitive acquisition process. Projects already in operation (i.e., "existing projects") must have a minimum remaining operational life or propose a PPA contract term of at least 10 years after the COD of a contract selected through this competitive acquisition process. PPA projects must have an Operation and Maintenance (O&M) plan sufficient for a proposed contract term. Build-Transfer projects must comply with applicable company technical specifications.<sup>9</sup>

2. Additional Requirements for BSU Project. 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:

Any project wishing to be considered as a BSU must register with MISO as a Blackstart Resource. Projects must possess the capability to operate in isochronous mode. Projects must possess the capability to operate in islanded operation. Projects must possess 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. Projects must possess the capability to control voltage level within acceptable limits during energization/block loading (-10%/+5%). Projects must possess the capability to control frequency within 58.7 Hz to 61.8 Hz during energization/block loading. Projects must possess the capability 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. Projects must possess the capability to 1) run in a continuous stable and controllable mode over their entire design operating range to zero load; 2) operate in remote load control service up and down. Projects must possess sufficient reactive reserve capability to allow energization of the transmission system within the station to supply the facility with restoration power. Projects must possess the ability to close to a dead bus.

<sup>&</sup>lt;sup>9</sup> Xcel Energy will publish Tech Specs to the Company's website at <u>xcelenergy.com/FD2023CN</u> upon approval of the Notice Petition.

<u>Preferred Project Attributes & Portfolio Evaluation</u>: In addition to the listed required project attributes above, projects are preferred based on additional defined attributes. For a complete list of preferred attributes, please see Appendix A to Attachment A, of the Proposed Evaluation Process.

As seen in Attachment A, proposals will be modeled from several perspectives throughout the evaluation process, including individually from spreadsheet-based levelized cost of capacity perspectives and as part of candidate portfolios in software model(s) of the larger NSP system.

#### Section 4. Company Information Policy

Xcel Energy created a website to share relevant information related to this proceeding with potential applicants once materials are approved by the Commission.

### xcelenergy.com/FD2023CN

This website includes the Notice Petition Order, any Commission approved documents relating to this proceeding, model agreements, responses to applicant questions, and a link to the Commission's Docket. Our hope is that the provided information may be assistive in preparing proposals for potential applicants.

To obtain any additional information that may be needed to prepare a proposal, applicants may submit inquires via email at:

## FD2023CN@xcelenergy.com

We will maintain a log of all inquiries and coordinate the preparation of written responses. Responses to questions will periodically be posted to the website. Applicants are responsible for monitoring the website and eDockets for updated information. Questions may be submitted up until three days prior to the deadline for submitting proposals with the Commission.

#### Section 5. Schedule

In its Notice Petition Order, the Commission set a procedural schedule for the proceeding. The procedural schedule for this proceeding is listed in Table 2:

Date	Action
November 22,	Notice published
2023	
January 22,	Proposals to Meet the Need
2024	filed in Docket
March 28, 2024	Commission Determination of Completeness, referral to the
	Office of Administrative Hearings, if warranted
October 25,	Administrative Law Judge Report, if referred
2024	
December 19,	Commission decision on competitive process
2024	

Table 2: Procedural Schedule

Proposals will be accepted until 4:30 P.M. Central Daylight Time on January 22, 2024. Proposals received later than the due date and time indicated will be rejected. All proposals must be filed electronically in accordance with Commission rules, in the Commission's eDocket system. The Docket for this proceeding can be found at:

## Docket No. E002/CN-23-212

To receive notification of filings in the Docket, you can subscribe via the Commission's eSubscription service available at <u>eDockets/Public Utilities (mn.gov)</u> (click on "Subscribe").

## Section 6. Filing Requirements

The filing requirements for this proceeding are outlined in the Xcel-Bid Contested Case/Track 2 Process and Commission rules. The Xcel-Bid Contested Case/Track 2 Process provides that Xcel Energy and interested competitors (or alternative projects) must provide their proposals with Certificate of Need-like detail.

The Commission's Certificate of Need rules are laid out at Minn. Chapter 7849. Alternative proposals are granted the following exemptions to the Minn. Chapter 7849 filing requirements:

- 7849.0240 subpart 2, part A (socially beneficial uses)
- 7849.0250 subpart B (alternatives to the facility)

- 7849.0250 subpart C (the portion pertaining to alternatives)
- 7849.0270 (peak demand and annual consumption forecasts)
- 7849.0280 (system capacity)
- 7849.0290 (conservation programs)
- 7849.0300 (consequences of delay)
- 7849.0340 (required within 7849.0310, information regarding the alternative of no facility)

However, alternative proposals are required to submit a list of supplementary data that includes the following information.

- A. Developer experience and qualifications.
- B. Pricing of the proposal, including but not limited to the following:
- 1. The term,
- 2. In-service date,
- 3. Contract capacity,
- 4. Capacity payment,
- 5. Fixed operations and maintenance payment,
- 6. Variable operations and maintenance payment,
- 7. Fuel payment, and
- 8. Tax-related payments and other costs.
- C. Scheduling provisions, including but not limited to –
- 1. Planned maintenance,
- 2. Expected minimum load,
- 3. Ramp rates, and
- 4. Limitations on operations.
- D. Discussion of the guaranteed performance factors, such as construction costs, unit completion, availability, and efficiency.
- E. Any other key contract terms the provider requires.

A list of the applicable rules and filing requirement are included in Appendix A to this Applicant Guide. Proposals must include all applicable content requirements described in Appendix A, and the modeling data intake,<sup>10</sup> including clear and complete written descriptions of all information required. Proposals must be sufficiently detailed so that

<sup>&</sup>lt;sup>10</sup> The data intake form is structured to collect proposed contract payments that do not result in finance leases. Please see the data intake Form for additional detail.

the Commission can effectively initiate the contested case proceeding and so that no proposal is advantaged or disadvantaged by the level of information provided.

Regardless of whether the proposal is a PPA, self-build, or BT, pricing must be for a complete project, including but not limited to balance of plant equipment, operations and maintenance, required transmission or interconnection costs. If the proposal includes a BESS, the proposal price must also include all equipment associated with the energy storage system.

We note that these requirements may have to be expanded should Xcel Energy and the Commission need additional information to support the evaluation of the attributes in Appendix A to this Applicant Guide. Proposals that do not include the information required in this section will be deemed incomplete and ineligible for further consideration, unless the Commission finds that the requested information is not applicable or relevant to a given proposal. Further, in conducting our own evaluations of each proposal, Xcel Energy may ask additional due diligence questions in order to verify that the attributes claimed in proposals are indeed possessed by each project.

### Section 7. Completeness Review

The completeness review ensures compliance with the Commission's filing requirements. The Commission may reject any, all, or portions of any proposal received for failure to meet the criteria set forth in Section 6, Filing Requirements, Appendix A to this Applicant Guide, and the Threshold Requirements Per Project listed in Appendix A of Attachment A.

#### Section 8. Evaluation Process

The Commission defined and provided characteristics of firm dispatchable resources as resources that are able to provide capacity and energy. However, the Commission may also consider the firm dispatchable resources':

- 1. Energy availability to meet load for extended durations of energy in the context of the system as a whole,
- 2. The value from production capabilities during potential system restoration events of unknown duration,
- 3. Environmental impacts,
- 4. Costs, and
- 5. Ability to foster integration of renewable resources.

To further assist in this proceeding, Xcel Energy has proposed a 5 Phase Evaluation Process to assist in identifying proposals that meet the resource objectives in a reliable and cost-effective manner. These five phases include:

- 1. Threshold Requirement Per Project (to occur as part of the completeness review)
- 2. Individual Scoring Per Project
- 3. Portfolio Optimization in EnCompass
- 4. Portfolio Viability Assessment & Scoring
- 5. Cost to Value Modeling and Portfolio Selection

While the Commission is not bound to the proposed evaluation process, the process provides a framework for evaluating proposals against each other, that Xcel Energy will use to establish how well proposals would satisfy the identified firm dispatchable resource need. Further information on the Evaluation Process is outlined in Attachment A to our Notice Petition.

#### Section 9. Commission Determination

Based upon the results of the complete evaluation, the Commission will determine which proposals will be selected.

## Section 10. Negotiations

If the Commission selects an option that is not Xcel Energy's proposal, Xcel Energy will negotiate a PPA or PSA based on our model agreements. Applicants must comply with all material terms of our model agreements. Following the negotiation, Xcel Energy will then petition the Commission for approval of the contract(s). If the parties are unable to reach agreement, Xcel Energy will file an explanation with the Commission and requested instruction (such as switching to an alternative proposal or to our original proposal).

## Section 11. Regulatory Approvals

At the completion of the contract negotiation process, Xcel Energy will file the signed transactional agreements with the applicable regulatory commissions in the states in which we operate for all necessary review and approvals.

## Appendix A Filing Requirements

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# Northern States Power Company-Minnesota & Northern States Power Company-Wisconsin 2023 Firm Dispatchable Proceeding

### **Applicant Guide**

#### Section 1. Introduction-

On May 24, 2023, Xcel Energy filed a Notice Petition to initiate a competitive resource acquisition process to acquire up to 800 megawatts of firm dispatchable resources. On November 3, 2023, the Minnesota Public Utilities Commission (Commission) issued an Order Approving Petition and Requiring Compliance Filing, and initiating the proceeding. As part of this proceeding, Xcel Energy plans to submit a proposal for our preferred resources to fulfill the identified firm dispatchable need. Other applicants are also encouraged to submit their own proposals. The Minnesota Public Utilities Commission will select the projects to serve Xcel Energy's customers from among those considered in this proceeding. The purpose of this Applicant Guide is to provide further information to potential applicants who may wish to submit a proposal to meet the identified firm dispatchable need.

## Section 2. Company Information

Xcel Energy Inc., headquartered in Minneapolis, Minnesota, is a U.S. investor-owned holding company parent of four major electric and natural gas utilities. The four Xcel Energy operating companies have regulated utility operations in the eight western and midwestern states of: Minnesota, Wisconsin, North Dakota, South Dakota, Michigan, Colorado, Texas, and New Mexico. The operating companies of Xcel Energy provide energy-related products and services to approximately 3.7 million electricity customers and 2.1 million natural gas customers collectively. More information about Xcel Energy is available at www.xcelenergy.com.

Northern States Power Company (NSPM), a Minnesota corporation, is the Xcel Energy operating company in North Dakota, South Dakota and Minnesota, and Northern States Power Company (NSPW), a Wisconsin corporation, is the Xcel Energy operating Company in Wisconsin and Michigan. The retail electric service territories for NSPM and NSPW are shown below in Figure 1.

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DISMARCE MININEAPOLIS & ST PAUL

O'PIERRE

MARISON

Figure 1. NSPM and NSPW Retail Electric Service Territory

The firm dispatchable resources subject to this proceeding will electrically serve NSPM and NSPW.

#### Section 3. Project Requirements

In this competitive acquisition process, a "project" will be interpreted as all assets that are part of a single proposal that together interconnect to the grid at a single point of interconnection.<sup>1</sup> An applicant may submit multiple proposals to fill the identified firm dispatchable resource need.

A summary of the eligible project types and parameters are included in Table 1 below:

Table 1. Summary of Firm Dispatchable Resource Project Types

Parameter	Project Types		
Category	Required For All Proposals	Optional Functionality	
Resource Types	Firm Dispatchable,	Blackstart Service <sup>2</sup>	
	Commercially Operable		
Vintage	Newly Built or Existing		
MW Target	<u>Up to </u> 800 MW		
Minimum	> 5 MW Per Project		

<sup>&</sup>lt;sup>1</sup> In other words, a project may contain more than a single generation asset.

<sup>&</sup>lt;sup>2</sup> Projects containing one or more Blackstart Units (BSUs) with the capability of energizing the network from an on-site auxiliary supply.

Parameter	Project Types		
Project Size			
Project Structure	Power Purchase Agreement ("PPA"), Build Transfer	Power Purchase Agreement ("PPA"), Build Transfer	
	("BT"), Company self-build	("BT"), Company self- build	
Timing for	Approximately 400 MW by	Operational by	
Commercial	<del>12/31/2026;</del> <u>Up to</u> 800 MW by	12/31/2028	
In-servicing	12/31/2028		
Geography &	MISO Zone 1; must have	Same as requirement for	
Interconnection	uninterrupted interconnection	commercially operable	
	path to MISO Load.3 All	load.	
	interconnections must have		
	NRIS deliverability.4		
Bidder Financial	Financial viability &	Financial viability &	
Strength	demonstrated experience on	demonstrated experience	
& Experience	same type of project.	on same type of project.	
Further Project	Meets required <u>c</u> ←apacity_ <del>,</del>	Meets blackstart and	
Required	Energy Availability, Essential	system restoration	
Attributes	Reliability Services, and	attributes in addition to	
	Flexibility attributes.	attributes already required	
		for commercial operation.	

While Table 1 provides a high-level summary of project parameters, further detail on a number of the parameters is provided below.

**Resource Types:** Xcel Energy is seeking firm dispatchable generation projects that have an established development plan and that convey all energy, capacity, ancillary services including reactive supply and voltage control, full dispatch control,<sup>5</sup> and any environmental benefits generated from the project. All projects are expected to be able

<sup>&</sup>lt;sup>3</sup> Due to overlap in the boundaries between MISO and SPP; projects cannot interconnect to infrastructure physically islanded by SPP.

<sup>&</sup>lt;sup>4</sup> Regardless of whether the project uses a new interconnection in the MISO queue or the replacement generation process.

<sup>&</sup>lt;sup>5</sup> For BESS components in Power Purchase Agreements.

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to supply accredited capacity as a Planning Resource to meet our resource adequacy requirements within the MISO Resource Adequacy construct.

For projects containing a Battery Energy Storage System (BESS) asset, the BESS asset must be co-located with a generation resource. Projects that contain at least one Blackstart Unit (BSU) as defined in Appendix A to Xcel Energy's Notice Petition must also meet the blackstart and system restoration attributes in Appendix A to Attachment A.<sup>6</sup>

Project Structure: Xcel Energy is seeking projects under either a BT, PPA, or Self Build (SB) arrangement. Under the BT model, Xcel Energy will assume 100 percent ownership of the project via a negotiated Purchase and Sale Agreement (PSA). Under the PPA model, the applicant will retain ownership of the project and Xcel Energy will negotiate an offtake contract for the unit's capacity, energy, and any environmental attributes. Model PPA and BT contract language will be published to Xcel Energy's website. If a project is proposed to be added at the site of an existing commercially operable generator, the applicant must own the existing commercially operable generator or provide proof of consent from generation owner. Under a SB structure, Xcel Energy will self-build the project.

Expected Online Date: As noted above, Xcel Energy targets bringing at least 400 MW of commercially operable capacity online by December 31, 2026, and the remaining 400 MW online by December 31, 2028. Proposals must be for facilities that are complete and commercially operable, including all facilities necessary to generate and deliver energy at the point of interconnection by the commercial operation dates specified in the proposal.

Geography & Interconnection: Projects must interconnect to MISO in Zone 1, and at minimum, have completed MISO Decision Point #2 or have received the MISO DPP Phase 2 Draft Study.

<sup>&</sup>lt;sup>6</sup> Since Appendix A to Xcel Energy's Notice Petition is confidential, the definition of a BSU from that document is also provided here: A BSU has the capability of energizing the network from an on-site auxiliary supply.

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Required Project Attributes & Verification: Projects must possess the following attributes as listed below. In order to ensure projects possess the required attributes, applicants are encouraged to provide demonstrated proof of each attribute in Appendix A to this Applicant Guide. As indicated in the Notice Petition, Xcel Energy intends to provide Δ additional supporting documents for each applicant to use in preparation of proposal are included on the Company's website at FD2023CN@xcelenergy.coms or for submission along with each proposal. Further information about the types of materials that can help support a proposal's claim to have attributes will be provided as part of the support the documents.

- 1. Additional Capacity Requirements. Projects must be operable at regional extreme maximum temperatures.<sup>8</sup> New projects must have a minimum design life or PPA contract term of at least 20-10 years after the COD of a contract selected through this competitive acquisition process. Projects already in operation (i.e., "existing projects") must have a minimum remaining operational life or propose a PPA contract term of at least 10 years after the COD of a contract selected through this competitive acquisition process. PPA projects must have an Operation and Maintenance (O&M) plan sufficient for a proposed contract term. Build-Transfer projects must comply with applicable company technical specifications.<sup>9</sup>
- 2. Additional Energy Availability Requirements. Projects must be capable of dispatching for a minimum of 50 continuous hours and bidders shall provide certification of the same. Projects must also be capable of producing energy from an on-site fuel source, either from physical on-site fuel storage or—for inverter-based resources—pairing with an on-site generator.

<sup>&</sup>lt;sup>7</sup> For example, in order to provide proof of capability to operate in hot and cold temperatures, provide warranty materials.

<sup>&</sup>lt;sup>8</sup> Must be able to operate commercially at the highest 0.2 percentile hourly temperature from January 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.

<sup>&</sup>lt;sup>9</sup> Xcel Energy will publish Tech Specs to the Company's website at FD2023CN@xcelenergy.com xcelenergy.com/FD2023CN\_ upon approval of the Notice Petition.

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2. Additional Requirements for BSU Project. 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:

Any project wishing to be considered as a BSU must register with MISO as a Blackstart Resource. Projects must possess the capability to operate in isochronous mode. Projects must possess the capability to operate in islanded operation. Projects must possess 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. Projects must possess the capability to control voltage level within acceptable limits during energization/block loading (-10%/+5%). Projects must possess the capability to control frequency within 58.7 Hz to 61.8 Hz during energization/block loading. Projects must possess the capability 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. Projects must possess the capability to 1) run in a continuous stable and controllable mode over their entire design operating range to zero load; 2) operate in remote load control service up and down. Projects must possess sufficient reactive reserve capability to allow energization of the transmission system within the station to supply the facility with restoration power. Projects must possess the ability to close to a dead bus.

Additional Essential Reliability Services Requirements. Projects must be able to provide voltage control/support. Finally, projects must have the capability to provide frequency regulation, and spinning reserve.

<u>Preferred Project Attributes & Portfolio Evaluation</u>: In addition to the listed required project attributes above, projects are preferred based on additional defined attributes. For a complete list of preferred attributes, please see Appendix A to Attachment A, of the Proposed Evaluation Process.

As seen in Attachment A, proposals will be modeled from several perspectives throughout the evaluation process, including individually from spreadsheet-based

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levelized cost of capacity perspectives and as part of candidate portfolios in software model(s) of the larger NSP system.

### Section 4. Company Information Policy

Xcel Energy created a website to share relevant information related to this proceeding with potential applicants once materials are approved by the Commission.

### xcelenergy.com/FD2023CN

This website includes the Notice Petition Order, any Commission approved documents relating to this proceeding, model agreements, responses to applicant questions, and a link to the Commission's Docket. Our hope is that the provided information may be assistive in preparing proposals for potential applicants.

To obtain any additional information that may be needed to prepare a proposal, applicants may submit inquires via email at:

### FD2023CN@xcelenergy.com

We will maintain a log of all inquiries and coordinate the preparation of written responses. Responses to questions will periodically be posted to the website. Applicants are responsible for monitoring the website and eDockets for updated information. Questions may be submitted up until three days prior to the deadline for submitting proposals with the Commission.

#### Section 5. Schedule

In its Notice Petition Order, the Commission set a procedural schedule for the proceeding. The procedural schedule for this proceeding is listed in Table 2:

Table 2: Procedural Schedule

<u>Date</u>	<u>Action</u>
November 22,	Notice Ppublished
<u>2023</u>	
January 22,	Proposals to Meet the Need
<u>2024</u>	<u>Ffiled in Docket</u>

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March 28,	Commission Determinationes of the Completeness, and Rreferral					
<u>2024</u>	to the s Matter to Office of Administrative Hearings OAH, if					
	<u>warranted</u>					
October 4025,	Administrative Law Judge Report, if referred					
<u>2024</u>						
December 19,	Commission PUC decision on competitive process					
<u>2024</u>						

**Insert Approved Procedural Schedule** 

Proposals will be accepted until 4:30 P.M. Central Daylight Time on January 22, 2024[Insert Approved Date]. Proposals received later than the due date and time indicated will be rejected. All proposals must be filed electronically in accordance with Commission rules, in the Commission's eDocket system. The Docket for this proceeding can be found at:

### Docket No. E002/CN-23-[Insert Docket Number] 212

To receive notification of filings in the Docket, you can subscribe via the Commission's eSubscription service available at <a href="https://www.puc.state.mn.us\_eDockets/Public Utilities">www.puc.state.mn.us\_eDockets/Public Utilities</a> <a href="https://www.puc.state.mn.us\_eDockets/Public Utilities">(mn.gov)</a> (click on "Subscribe" to a Docket").

### Section 6. Filing Requirements

The filing requirements for this proceeding are outlined in the Xcel-Bid Contested Case/Track 2 Process and Commission rules. The Xcel-Bid Contested Case/Track 2 Process provides that Xcel Energy and interested competitors (or alternative projects) must provide their proposals with Certificate of Need-like detail.

The Commission's Certificate of Need rules are laid out at Minn. Chapter 7849. Alternative proposals are granted the following exemptions to the Minn. Chapter 7849 filing requirements:

• 7849.0240 subpart 2, part A (socially beneficial uses)

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- 7849.0250 subpart B (alternatives to the facility)
- 7849.0250 subpart C (the portion pertaining to alternatives)
- 7849.0270 (peak demand and annual consumption forecasts)
- 7849.0280 (system capacity)
- 7849.0290 (conservation programs)
- 7849.0300 (consequences of delay)
- 7849.0340 (required within 7849.0310, information regarding the alternative of no facility)

However, alternative proposals are required to submit a list of supplementary data that includes the following information.

- A. Developer experience and qualifications.
- B. Pricing of the proposal, including but not limited to the following:
- 1. The term,
- 2. In-service date,
- 3. Contract capacity,
- 4. Capacity payment,
- 5. Fixed operations and maintenance payment,
- 6. Variable operations and maintenance payment,
- 7. Fuel payment, and
- 8. Tax-related payments and other costs.
- C. Scheduling provisions, including but not limited to –
- 1. Planned maintenance,
- 2. Expected minimum load,
- 3. Ramp rates, and
- 4. Limitations on operations.
- D. Discussion of the guaranteed performance factors, such as construction costs, unit completion, availability, and efficiency.
- E. Any other key contract terms the provider requires.

A list of the applicable rules and filing requirement are included in Appendix A to this Applicant Guide. Proposals must include all applicable content requirements described

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in Appendix A, and the modeling data intake, <sup>10</sup> including clear and complete written descriptions of all information required. Proposals must be sufficiently detailed so that the Commission can effectively initiate the contested case proceeding and so that no proposal is advantaged or disadvantaged by the level of information provided.

Regardless of whether the proposal is a PPA, self-build, or BT, pricing must be for a complete project, including but not limited to balance of plant equipment, operations and maintenance, required transmission or interconnection costs. If the proposal includes a BESS, the proposal price must also include all equipment associated with the energy storage system.

We note that these requirements may have to be expanded should Xcel Energy and the Commission need additional information to support the evaluation of the attributes in Appendix A to this Applicant Guide. Proposals that do not include the information required in this section will be deemed incomplete and ineligible for further consideration, unless the Commission finds that the requested information is not applicable or relevant to a given proposal. Further, in conducting our own evaluations of each proposal, Xcel Energy may ask additional due diligence questions in order to verify that the attributes claimed in proposals are indeed possessed by each project.

### Section 7. Completeness Review

The completeness review ensures compliance with the Commission's filing requirements. The Commission may reject any, all, or portions of any proposal received for failure to meet the criteria set forth in Section 6, Filing Requirements, Appendix A to this Applicant Guide, and the Threshold Requirements Per Project listed in Appendix A of Attachment A.

### Section 8. Evaluation Process

The Commission defined and provided characteristics of firm dispatchable resources as resources that are able to provide capacity and energy. However, the Commission may also consider the firm dispatchable resources':

<sup>&</sup>lt;sup>10</sup> The data intake form is structured to collect proposed contract payments that do not result in finance leases. Please see the data intake Form for additional detail.

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- 1. Energy availability to meet load for extended durations of energy in the context of the system as a whole,
- 2. The value from production capabilities during potential system restoration events of unknown duration,
- 3. Environmental impacts,
- 4. Costs, and
- 5. Ability to foster integration of renewable resources.

To further assist in this proceeding, Xcel Energy has proposed a 5 Phase Evaluation Process to assist in identifying proposals that meet the resource objectives in a reliable and cost-effective manner. These five phases include:

- 1. Threshold Requirement Per Project (to occur as part of the completeness review)-
- 2. Individual Scoring Per Project
- 3. Portfolio Optimization in EnCompass
- 4. Portfolio Viability Assessment & Scoring
- 5. Cost to Value Modeling and Portfolio Selection

While the Commission is not bound to the proposed evaluation process, the process provides a framework for evaluating proposals against each other, that Xcel Energy will use to establish how well proposals would satisfy the identified firm dispatchable resource need. Further information on the Evaluation Process is outlined in Attachment A to our Notice Petition.

### Section 9. Commission Determination

Based upon the results of the complete evaluation, the Commission will determine which proposals will be selected.

## Section 10. Negotiations

If the Commission selects an option that is not Xcel Energy's proposal, Xcel Energy will negotiate a PPA or PSA based on our model agreements. Applicants must comply with all material terms of our model agreements. Following the negotiation, Xcel Energy will then petition the Commission for approval of the contract(s). If the parties are unable to reach agreement, Xcel Energy will file an explanation with the Commission and requested instruction (such as switching to an alternative proposal or to our original proposal).

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## Section 11. Regulatory Approvals

At the completion of the contract negotiation process, Xcel Energy will file the signed transactional agreements with the applicable regulatory commissions in the states in which we operate for all necessary review and approvals.

Appendix A Filing Requirements

Authority	Required Information					
Minn. R. 7849.0200,	Cover Letter					
Subp. 4						
Minn. R. 7829.2500,	Brief summary of filing on separate page sufficient to apprise potentially interested parties of its nature and general content					
Subp. 2						
Minn. R. 7849.0200,	Title Page and Table of Contents					
Subp. 2						
Minn. R. 7849.0240	Need Summary and Additional Considerations					
Subp. 1	Summary of the major factors that justify the need for the proposed facility					
Subp. 2	Relationship of the proposed facility to the following socioeconomic considerations:	Example				
A. B.	Socially beneficial uses of the output of the facility;  Promotional activities that may have given rise to the demand for the facility; and	Exempt				
С.	Effects of the facility in inducing future development.	Exempt				
Minn. R. 7849.0250	Proposed LEGF and Alternatives					
A.	A description of the facility, including:					
(1)	Nominal generating capability of the facility, and discussion of economies of scale on facility size and timing;					
(2)	Description of anticipated operating cycle, including expected annual capacity factor;	İ				
(3)	Type of fuel used, including the reason for the choice, its projected availability over the facility's life, and alternate fuels, if any;					
(4)	Anticipated heat rate of the facility; and					
(5)	To fullest extent known to applicant, the anticipated area(s) the facility could be located;					
В.	Discussion of available alternatives, including:	Exempt				
(1)	Purchased power;					
(2)	Increased efficiency of existing facilities, including transmission lines;					
(3)	New transmission lines;					
(4)	New generating facilities of different size or using different energy sources; and  Any reasonable combination of the above;					
(5) C.	For proposed facility and alternatives discussed in item (B) that could provide electric power to meet the identified need:	Exempt				
(1)	Capacity cost/kW in current dollars;	Exempt				
(2)	Service life;					
(3)	Estimated average annual availability;					
(4)	Fuel costs/kWh in current dollars;					
(5)	Variable O&M costs/kWh in current dollars;					
(6)	Total cost of a kWh generated in current dollars;					
(7)	Estimate of effect on rates systemwide and Minnesota, assuming a test year beginning with in-service date;					
(8)	Estimated heat rate; and					
(9)	Major assumptions for subitems (1)–(8), including projected escalation rates for fuel and O&M, and project capacity factors;					
D.	A map showing applicant's system; and					
E. <b>P.</b> 7040.0270	Other information about the facility and alternatives relevant to determination of need.	F .				
Minn. R. 7849.0270 Subp. 1	Peak Demand and Annual Consumption Forecasts  Peak demand and annual consumption data for applicant's service area and system, indicating when data is not available, historical, or	Exempt				
	projected;					
Subp. 2	The following data for each forecast year:					
A.	Annual consumption by ultimate consumers within applicant's Minnesota service area;					
B. (4)	Estimates of total ultimate consumers and their annual consumption for each of the following consumer categories:					
(1)	Farm;					
(2)	Irrigation and drainage pumping;					
(3)	Nonfarm residential; Commercial;					
(4) (5)	Mining;					
(6)	Industrial;					
(7)	Street and highway lighting;					
(8)	Transportation;					
(9)	Other (including municipal water pumping, oil/gas pipeline pumping, military, all other consumers not reported in subitems (1)-(8)); and					
(10)	Sum of subitems (1)-(9);					
C.	Estimate of demand on applicant's system at time of annual system peak demand, including breakdown of demand into consumer categories in item B;					
D.	Applicant's system peak demand by month;					
E.	Estimated annual revenue requirement/kWh for system in current dollars; and					
F.	Applicant's estimated average system weekday load factor by month;					

Authority	Required Information					
Subp. 3	Detail of forecast methodology employed, including					
Α.	Overall methodological framework that is used;					
В.	Specific analytical techniques used, their purpose, and components to which they were applied;					
C.	Manner in which specific techniques relate to forecast;					
D.	Where statistical techniques have been used:					
(1)	Purpose of technique;					
(2)	Typical computations, specifying variables and data; and					
(3)	Results of appropriate statistical tests;					
E.	Forecast confidence levels/ranges of accuracy for annual peak demand and consumption, and description of their derivation;					
F.	Brief analysis of methodology used, including:					
(1)	Strengths and weaknesses;					
(2)	Suitability to the system;					
(3)	Cost considerations;					
(4)	Data requirements;					
(5)	Past accuracy; and					
(6)	Other significant factors;					
G.	Explanation of discrepancies between application's forecast and applicant forecasts in other proceedings;					
Subp. 4	Data base used in forecast, including:					
A.	Complete list of all data used in forecast, including a brief description of each and how it was obtained;					
В.	Clear identification of any adjustments to raw data to adapt them for use in forecasting, including:					
(1)	Nature of adjustment;					
(2)	Reason for adjustment; and					
(3)	Magnitude of adjustment					
Subp 5	Essential forecast assumptions made regarding:					
A.	Availability of alternate sources of energy;					
В.	Expected conversion from other fuels to electricity or vice versa;					
C.	Future electricity prices in applicant's system and their effect on system demand;					
D.	Subpart 2 data that is not available historically nor created by applicant for forecast;					
Е.	Effect of conservation programs on long-term demand; and					
F.	Any factor considered in preparing forecast;					
Subp. 6	Coordination of forecasts					
A.	Description of extent applicant coordinates load forecasts with other systems; and					
В.	Description of forecast coordination, including problems experienced.					
Minn. R. 7849.0280	System Capacity Description	Exempt				
Α.	Brief discussion of power planning programs applied to applicant's system;	r P				
В.	Applicant's seasonal firm purchases/firm sales for each utility involved in each transaction for each forecast year;					
C.	Applicant's seasonal firm participation purchases/sales for each utility involved in each transaction for each forecast year;					
<u> </u>	Load and generation capacity data for sub-items below for summer and winter seasons for each forecast year, including anticipated					
D.	purchases, sales, and capacity retirements/additions:					
(1)	Seasonal system demand;					
(2)	Annual system demand;					
(3)	Total seasonal firm purchases;					
(4)	Total seasonal firm sales;					
(5)	Seasonal adjusted net demand;					
(6)	Annual adjusted net demand;  Annual adjusted net demand;					
	Net generating capacity;					
(7) (8)	Total participation purchases;					
	Total participation sales;					
(9)	Adjusted net capability;					
(10)	Net reserve capacity obligation;					
(11)	Total firm capacity obligation; and					
(12)	Surplus or deficit capacity;					
(13)						
E.	Load and generation capacity data requested in item D/sub-items (1)-(13) for summer and winter seasons for each forecast year subsequent to the year of application, including purchases, sales, and generating capability contingent on the proposed facility:					
	to the year of application, including purchases, sales, and generating capability contingent on the proposed facility;					
F.	Load and generation capacity data requested in item D/sub-items (1)-(13) for summer and winter seasons for each forecast year subsequent					
C	to the year of application, including all projected purchases, sales, and generating capability;					
G.	List of proposed additions/retirements in net generating capability for each forecast year subsequent to the year of application;					
Н.	Graph showing monthly adjusted net demand, monthly adjusted net capability, and difference between adjusted net capability and actual,					
т	planned, or estimated maintenance outages of generation/ transmission for specified time periods; and					
I.	Discussion of method and appropriateness of determining system reserve margins.					

Authority	Required Information			
Minn. R. 7849.0290	Conservation Programs	Exempt		
Α.	Name of committee, department, individual responsible for applicant's energy conservation/efficiency programs, including load management;			
В.	List of applicant's conservation/efficiency goals and objectives;			
C.	Description of specific energy conservation/efficiency programs considered, a list of those implemented, and reasons why other programs have not been implemented;			
D.	Description of major energy conservation/efficiency accomplishments by applicant;			
E.	Description of applicant's energy conservation/efficiency plans through the forecast years; and			
F.	Quantification of how energy conservation/efficiency programs affect the 7849.0270, subp. 2 forecast, a list of total program costs, and discussion of expected program effects in reducing need for new generation and transmission.			
Minn. R. 7849.0300		Evomot		
Minn. R. 7849.0310	Consequence of Delay  Required Environmental Information	Exempt		
Minn. R. 7849.0320	Information for Generating Facilities and Alternatives	New Resources		
A.	Estimated land requirements for facility water storage gooling system, and solid waste storages.	Only		
В.	Estimated land requirements for facility, water storage, cooling system, and solid waste storages;  Estimated amount of vehicular, rail, and barge traffic due to construction and operation;			
C.	For fossil-fueled facilities:			
(1)	Expected regional sources of fuel;			
(2)	Typical hourly and annual fuel requirement;			
(3)	Expected rate of heat input in Btu/hour;			
(4)	Typical range of fuel's heat value and typical average of fuel's heat value; and			
(5)	Typical ranges of sulfur, ash, and moisture content of fuel;			
D.	For fossil-fueled facilities:			
(1)	Estimated range of emissions of sulfur dioxide, nitrogen oxides, and particulates in pounds/hour; and			
	Estimated range of maximum contributions to 24-hr ground level concentrations of sulfur dioxide, nitrogen oxides, and particulates in			
(2)	micrograms per cubic meter;			
E.	Water use by the facility for alternate cooling system, including:			
(1)	Estimated maximum use, including groundwater pumping rate in gallons/minute and surface water appropriation in cubit feet/second;			
(2)	Estimated groundwater appropriation in million gallons/year; and			
(3)	Annual consumption in acre-feet;			
F.	Potential sources/types of discharges to water;			
G.	Radioactive releases, including:			
(1)	For nuclear facilities, typical types/amounts of radionuclides released in curies/year; and			
(2)	For fossil-fueled facilities, estimated range of radioactivity released in curies per year;			
Н.	Potential types/quantities of solid wastes produced in tons/year;			
I.	Potential sources/types of audible noise;			
J.	Estimated work force required for construction and operation; and			
K.	Minimum number/size of transmission facilities required for reliable outlet.			
Minn. R. 7849.0340	No-Facility Alternative	Exempt		
IRP Order	Supplementary Data Required for Alternative Providers	Required Supplementary		
Α.	Developer experience and qualifications.			
В.	Pricing of the proposal, including but not limited to the following:			
1	The term;			
2	In-service date;			
3	Contract capacity;			
4	Capacity payment;			
5	Fixed operations and maintenance payment;			
6	Variable operations and maintenance payment;			
7	Fuel payment; and			
8	Tax-related payments and other costs.			
C.	Scheduling provisions, including but not limited to:			
1	Planned maintenance;			
2	Expected minimum load;			
2	Ramp rates; and			
3	Limitations on operations.			
4				
	Discussion of the guaranteed performance factors, such as construction costs, unit completion, availability, and efficiency.			
4	Discussion of the guaranteed performance factors, such as construction costs, unit completion, availability, and efficiency.  Any other key contract terms the provider requires.			
4 D.		Required Supplementary		
4 D. E.	Any other key contract terms the provider requires.	•		

Authority	Required Information	Alternative Proposals			
Metric 61	Information necessary for consideration of Energy Justice factors:				
	The socioeconomic factors of a project's location;				
	The involvement of local government, community organizations and, where relevant, Tribal Nations;				
	The estimated local tax revenue it will produce;				
	The temporary and permanent jobs it will create;				
	The commitment to the use of diverse suppliers, as demonstrated by a history of use on recent projects; and				
	The payment of prevailing wages, and workforce training opportunities.				
Metric 32	Minn. R. 7849.1500 Subp. 2: Impacts of Power Plants:	New Resources Only			
Α.	The anticipated emissions of the following pollutants expressed as an annual amount at the maximum rated capacity of the project and as an amount produced per kilowatt hour and the calculations performed to determine the emissions: sulfur dioxide, nitrogen oxides, carbon dioxide, mercury, and particulate matter, including particulate matter under 2.5 microns in diameter;				
В.	The anticipated emissions of any hazardous air pollutants and volatile organic compounds;				
C.	The anticipated contribution of the project to impairment of visibility within a 50-mile radius of the plant;				
D.	The anticipated contribution of the project to the formation of ozone expressed as reactive organic gases. Reactive organic gases are chemicals that are precursors necessary to the formation of ground-level ozone;				
E.	The availability of the source of fuel for the project, the amount required annually, and the method of transportation to get the fuel to the plant;				
F.	Associated facilities required to transmit the electricity to customers;				
G.	The anticipated amount of water that will be appropriated to operate the plant and the source of the water if known;				
П	The potential wastewater streams and the types of discharges associated with such a project including potential impacts of a thermal discharge;				
I	The types and amounts of solid and hazardous wastes generated by such a project, including an analysis of what contaminants may be found in the ash and where the ash might be sent for disposal or reuse; and				
J.	The anticipated noise impacts of a project, including the distance to the closest receptor where state noise standards can still be met.				
Minn. Stat. §§ 216B.2422, subd. 4; 216B.243, subd. 3a	Whether the applicant for a project generating nonrenewable energy has demonstrated that the project is less expensive than one generating renewable energy or is otherwise in the public interest.				
Minn. Stat. § 216B.243, subd. 3(10)	Whether the applicant is in compliance with Minnesota's renewable energy objectives, including purchasing energy from C-BED projects.				
Minn. Stat. § 216B.2426	Whether the applicant has considered the opportunities for installation of distributed generation.				
Minn. Stat. § 216B.243, subd. 3(12)	Whether an applicant proposing a nonrenewable energy generating plant has assessed the risk of environmental costs and regulation over the expected useful life of the plant.				
§ 210D.1094, Subd.	Whether the applicant has considered an innovative energy project as a supply option before expanding a fossil-fuel-fired generation facility or entering into a 5+-year purchased power agreement.				
(2)(5)	or entering into a 5+-year purchased power agreement.  N-23-212, Order Approving Petition and Requiring Compliance Filing (Nov. 3, 2023)				

Authority	Required Information	Alternative Proposals
Minn. R. 7849.0200,	Cover Letter	
Subp. 4		
Minn. R. 7829.2500,	Brief summary of filing on separate page sufficient to apprise potentially interested parties of its nature and general content	
Subp. 2		
Minn. R. 7849.0200,		
	Title Page and Table of Contents	
Subp. 2 Minn. R. 7849.0240	Need Summary and Additional Considerations	
Subp. 1	Summary of the major factors that justify the need for the proposed facility	
Subp. 2	Relationship of the proposed facility to the following socioeconomic considerations:	
A.	Socially beneficial uses of the output of the facility;	Exempt
В.	Promotional activities that may have given rise to the demand for the facility; and	Exempt
C.	Effects of the facility in inducing future development.	
Minn. R. 7849.0250	Proposed LEGF and Alternatives	
A.	A description of the facility, including:	
(1)	Nominal generating capability of the facility, and discussion of economies of scale on facility size and timing;	
(2)	Description of anticipated operating cycle, including expected annual capacity factor;	
(3)	Type of fuel used, including the reason for the choice, its projected availability over the facility's life, and alternate fuels, if any;	
(4)	Anticipated heat rate of the facility; and	
(5)	To fullest extent known to applicant, the anticipated area(s) the facility could be located;	
В.	Discussion of available alternatives, including:	Exempt
(1)	Purchased power;	
(2)	Increased efficiency of existing facilities, including transmission lines;	
(3)	New transmission lines; New generating facilities of different size or using different energy sources; and	
(4)	Any reasonable combination of the above;	
(5) C.	For proposed facility and alternatives discussed in item (B) that could provide electric power to meet the identified need:	Exempt
(1)	Capacity cost/kW in current dollars;	Exempt
(2)	Service life;	
(3)	Estimated average annual availability;	
(4)	Fuel costs/kWh in current dollars;	
(5)	Variable O&M costs/kWh in current dollars;	i i
(6)	Total cost of a kWh generated in current dollars;	
(7)	Estimate of effect on rates systemwide and Minnesota, assuming a test year beginning with in-service date;	
(8)	Estimated heat rate; and	
(9)	Major assumptions for subitems (1)–(8), including projected escalation rates for fuel and O&M, and project capacity factors;	
D.	A map showing applicant's system; and	
E.	Other information about the facility and alternatives relevant to determination of need.	
Minn. R. 7849.0270	Peak Demand and Annual Consumption Forecasts	Exempt
Subp. 1	Peak demand and annual consumption data for applicant's service area and system, indicating when data is not available, historical, or projected;	
Subp. 2	The following data for each forecast year:	
A.	Annual consumption by ultimate consumers within applicant's Minnesota service area;	
В.	Estimates of total ultimate consumers and their annual consumption for each of the following consumer categories:	
(1)	Farm;	
(2)	Irrigation and drainage pumping;	
(3)	Nonfarm residential;	
(4)	Commercial;	
(5)	Mining;	
(6)	Industrial;	
(7)	Street and highway lighting;	
(8)	Transportation;	
(9)	Other (including municipal water pumping, oil/gas pipeline pumping, military, all other consumers not reported in subitems (1)-(8)); and	
(10)	Sum of subitems (1)-(9);	
C.	Estimate of demand on applicant's system at time of annual system peak demand, including breakdown of demand into consumer categories in item B;	
D.	Applicant's system peak demand by month;	<u> </u>
E.	Estimated annual revenue requirement/kWh for system in current dollars; and	
F.	Applicant's estimated average system weekday load factor by month;	

Authority	Required Information					
Subp. 3	Detail of forecast methodology employed, including					
Α.	Overall methodological framework that is used;					
В.	Specific analytical techniques used, their purpose, and components to which they were applied;					
C.	Manner in which specific techniques relate to forecast;					
D.	Where statistical techniques have been used:					
(1)	Purpose of technique;					
(2)	Typical computations, specifying variables and data; and					
(3)	Results of appropriate statistical tests;					
E.	Forecast confidence levels/ranges of accuracy for annual peak demand and consumption, and description of their derivation;					
F.	Brief analysis of methodology used, including:					
(1)	Strengths and weaknesses;					
(2)	Suitability to the system;					
(3)	Cost considerations;					
(4)	Data requirements;					
(5)	Past accuracy; and					
(6)	Other significant factors;					
G.	Explanation of discrepancies between application's forecast and applicant forecasts in other proceedings;					
Subp. 4	Data base used in forecast, including:					
A.	Complete list of all data used in forecast, including a brief description of each and how it was obtained;					
В.						
	Clear identification of any adjustments to raw data to adapt them for use in forecasting, including:					
(1)	Nature of adjustment;					
(2)	Reason for adjustment; and					
(3)	Magnitude of adjustment					
Subp 5	Essential forecast assumptions made regarding:					
A.	Availability of alternate sources of energy;					
В.	Expected conversion from other fuels to electricity or vice versa;					
C.	Future electricity prices in applicant's system and their effect on system demand;					
D.	Subpart 2 data that is not available historically nor created by applicant for forecast;					
Е.	Effect of conservation programs on long-term demand; and					
F.	Any factor considered in preparing forecast;					
Subp. 6	Coordination of forecasts					
Α.	Description of extent applicant coordinates load forecasts with other systems; and					
В.	Description of forecast coordination, including problems experienced.					
Minn. R. 7849.0280	System Capacity Description	Exempt				
A.	Brief discussion of power planning programs applied to applicant's system;					
В.	Applicant's seasonal firm purchases/firm sales for each utility involved in each transaction for each forecast year;					
C.	Applicant's seasonal firm participation purchases/sales for each utility involved in each transaction for each forecast year;					
D	Load and generation capacity data for sub-items below for summer and winter seasons for each forecast year, including anticipated					
D.	purchases, sales, and capacity retirements/additions:					
(1)	Seasonal system demand;					
(2)	Annual system demand;					
(3)	Total seasonal firm purchases;					
(4)	Total seasonal firm sales;					
(5)	Seasonal adjusted net demand;					
(6)	Annual adjusted net demand;					
(7)	Net generating capacity;					
(8)	Total participation purchases;					
(9)	Total participation sales;					
(10)	Adjusted net capability;					
	Net reserve capacity obligation;					
(11)	Total firm capacity obligation; and					
(12)						
(13)	Surplus or deficit capacity;					
Е.	Load and generation capacity data requested in item D/sub-items (1)-(13) for summer and winter seasons for each forecast year subsequent to the year of application, including purchases, sales, and generating capability contingent on the proposed facility:					
	to the year of application, including purchases, sales, and generating capability contingent on the proposed facility;					
F.	Load and generation capacity data requested in item D/sub-items (1)-(13) for summer and winter seasons for each forecast year subsequent					
	to the year of application, including all projected purchases, sales, and generating capability;					
G.	List of proposed additions/retirements in net generating capability for each forecast year subsequent to the year of application;					
Н.	Graph showing monthly adjusted net demand, monthly adjusted net capability, and difference between adjusted net capability and actual,					
	planned, or estimated maintenance outages of generation/ transmission for specified time periods; and					
I.	Discussion of method and appropriateness of determining system reserve margins.					

Authority	Required Information				
Minn. R. 7849.0290	Conservation Programs	Exempt			
Α.	Name of committee, department, individual responsible for applicant's energy conservation/efficiency programs, including load management;				
В.	List of applicant's conservation/efficiency goals and objectives;				
C.	Description of specific energy conservation/efficiency programs considered, a list of those implemented, and reasons why other programs have not been implemented;				
D.	Description of major energy conservation/efficiency accomplishments by applicant;				
Е.	Description of applicant's energy conservation/efficiency plans through the forecast years; and				
F.	Quantification of how energy conservation/efficiency programs affect the 7849.0270, subp. 2 forecast, a list of total program costs, and discussion of expected program effects in reducing need for new generation and transmission.				
linn. R. 7849.0300	Consequence of Delay				
Minn. R. 7849.0310	Required Environmental Information				
Minn. R. 7849.0320	Information for Generating Facilities and Alternatives	New Resource Only			
Α.	Estimated land requirements for facility, water storage, cooling system, and solid waste storages;				
В.	Estimated amount of vehicular, rail, and barge traffic due to construction and operation;				
<u>C.</u>	For fossil-fueled facilities:				
(1)	Expected regional sources of fuel;				
(2)	Typical hourly and annual fuel requirement;				
(3)	Expected rate of heat input in Btu/hour;  Typical range of finel's heat value and typical average of finel's heat value; and				
(4)	Typical range of fuel's heat value and typical average of fuel's heat value; and Typical ranges of sulfur, ash, and moisture content of fuel;				
(5) D.	For fossil-fueled facilities:				
(1)	Estimated range of emissions of sulfur dioxide, nitrogen oxides, and particulates in pounds/hour; and				
(1)	Estimated range of maximum contributions to 24-hr ground level concentrations of sulfur dioxide, nitrogen oxides, and particulates in				
(2)	micrograms per cubic meter;				
E.	Water use by the facility for alternate cooling system, including:				
(1)	Estimated maximum use, including groundwater pumping rate in gallons/minute and surface water appropriation in cubit feet/second;				
(2)	Estimated groundwater appropriation in million gallons/year; and				
(3)	Annual consumption in acre-feet;				
F.	Potential sources/types of discharges to water;				
G.	Radioactive releases, including:				
(1)	For nuclear facilities, typical types/amounts of radionuclides released in curies/year; and				
(2)	For fossil-fueled facilities, estimated range of radioactivity released in curies per year;				
Н.	Potential types/quantities of solid wastes produced in tons/year;				
I.	Potential sources/types of audible noise;				
J	Estimated work force required for construction and operation; and				
K.	Minimum number/size of transmission facilities required for reliable outlet.	Erroment			
Minn. R. 7849.0340	No-Facility Alternative	Exempt			
RP Order	Supplementary Data Required for Alternative Providers	Required Supplementar			
A.	Developer experience and qualifications.				
B.	Pricing of the proposal, including but not limited to the following:				
2	The term; In-service date;				
3	Contract capacity;				
4	Capacity payment;				
5	Fixed operations and maintenance payment;				
6	Variable operations and maintenance payment;				
7	Fuel payment; and				
8	Tax-related payments and other costs.				
C.	Scheduling provisions, including but not limited to:				
1	Planned maintenance;				
2	Expected minimum load;				
3	Ramp rates; and				
4	Limitations on operations.				
D.	Discussion of the guaranteed performance factors, such as construction costs, unit completion, availability, and efficiency.				
Е.	Any other key contract terms the provider requires.				
000 FD Order*	Supplementary Data Required for All Providers	Required Supplementar			
Metric 32	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.				
Metric 32	Identifying whether the proposal is located in an environmental justice area using census criteria in Minnesota Statute 216B.1691, subd. 1(e).				

Authority	Required Information	Alternative Proposals
Metric 61	Information necessary for consideration of Energy Justice factors:	
	The socioeconomic factors of a project's location;	
	The involvement of local government, community organizations and, where relevant, Tribal Nations;	
	The estimated local tax revenue it will produce;	
	The temporary and permanent jobs it will create;	
	The commitment to the use of diverse suppliers, as demonstrated by a history of use on recent projects; and	
	The payment of prevailing wages, and workforce training opportunities.	
Metric 32	Minn. R. 7849.1500 Subp. 2: Impacts of Power Plants:	New Resources Only
Α.	The anticipated emissions of the following pollutants expressed as an annual amount at the maximum rated capacity of the project and as an amount produced per kilowatt hour and the calculations performed to determine the emissions: sulfur dioxide, nitrogen oxides, carbon dioxide, mercury, and particulate matter, including particulate matter under 2.5 microns in diameter;	
В.	The anticipated emissions of any hazardous air pollutants and volatile organic compounds;	
C.	The anticipated contribution of the project to impairment of visibility within a 50-mile radius of the plant;	
D.	The anticipated contribution of the project to the formation of ozone expressed as reactive organic gases. Reactive organic gases are chemicals that are precursors necessary to the formation of ground-level ozone;	
E.	The availability of the source of fuel for the project, the amount required annually, and the method of transportation to get the fuel to the plant;	
F.	Associated facilities required to transmit the electricity to customers;	
G.	The anticipated amount of water that will be appropriated to operate the plant and the source of the water if known;	
Н.	The potential wastewater streams and the types of discharges associated with such a project including potential impacts of a thermal discharge;	
I	The types and amounts of solid and hazardous wastes generated by such a project, including an analysis of what contaminants may be found in the ash and where the ash might be sent for disposal or reuse; and	
J.	The anticipated noise impacts of a project, including the distance to the closest receptor where state noise standards can still be met.	
Minn. Stat. §§ 216B.2422, subd. 4; 216B.243, subd. 3a	Whether the applicant for a project generating nonrenewable energy has demonstrated that the project is less expensive than one generating renewable energy or is otherwise in the public interest.	
Minn. Stat. § <del>§</del> 216B.1612, subd. 5(c); 216B.243, subd. 3(10)	Whether the applicant is in compliance with Minnesota's renewable energy objectives, including purchasing energy from C-BED projects.	
Minn. Stat. § 216B.2426	Whether the applicant has considered the opportunities for installation of distributed generation.	
<del>Minn. Stat.</del> <del>§ 216H.03, subd. 3(2)</del>	Whether the proposed new large energy facility would contribute to statewide power sector carbon dioxide emissions.	
Minn. Stat. § 216B.243, subd. 3(12)	Whether an applicant proposing a nonrenewable energy generating plant has assessed the risk of environmental costs and regulation over the expected useful life of the plant.	
Minn. Stat. § 216B.1694, subd. (2)(5)	Whether the applicant has considered an innovative energy project as a supply option before expanding a fossil-fuel-fired generation facility or entering into a 5+-year purchased power agreement.	
	N-23-212, Order Approving Petition and Requiring Compliance Filing (Nov. 3, 2023)	
		1

#### **CERTIFICATE OF SERVICE**

I, Marie Horner, hereby certify that I have this day served copies or summaries of the foregoing documents on the attached list(s) of persons.

xx by depositing a true and correct copy thereof, properly enveloped with postage paid in the United States Mail at Minneapolis, Minnesota

or

xx electronic filing

Docket No. E002/CN-23-212

Dated this 13th day of November 2023

/s/

N. . II

Marie Horner Regulatory Administrator

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Stacy	Kotch Egstad	Stacy.Kotch@state.mn.us	MINNESOTA DEPARTMENT OF TRANSPORTATION	395 John Ireland Blvd. St. Paul, MN 55155	Electronic Service	No	OFF_SL_23-212_Official
Kay	Kuhlmann	Teri.Swanson@ci.red- wing.mn.us	City Of Red Wing	315 West Fourth Street  Red Wing, MN 55066	Electronic Service	No	OFF_SL_23-212_Official
Brenda	Kyle	bkyle@stpaulchamber.com	St. Paul Area Chamber of Commerce	401 N Robert Street Suite 150 St Paul, MN 55101	Electronic Service	No	OFF_SL_23-212_Official
Carmel	Laney	carmel.laney@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-212_Official
Peder	Larson	plarson@larkinhoffman.co m	Larkin Hoffman Daly & Lindgren, Ltd.	8300 Norman Center Drive Suite 1000 Bloomington, MN 55437	Electronic Service	No	OFF_SL_23-212_Official
Rachel	Leonard	rachel.leonard@ci.monticell o.mn.us	City of Monticello	505 Walnut St Ste 1  Monticello, MN 55362	Electronic Service	No	OFF_SL_23-212_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Annie	Levenson Falk	annielf@cubminnesota.org	Citizens Utility Board of Minnesota	332 Minnesota Street, Suite W1360 St. Paul, MN 55101	Electronic Service	No	OFF_SL_23-212_Official
Alice	Madden	alice@communitypowermn.	Community Power	2720 E 22nd St  Minneapolis, MN 55406	Electronic Service	No	OFF_SL_23-212_Official
Kavita	Maini	kmaini@wi.rr.com	KM Energy Consulting, LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_23-212_Official
Dawn S	Marsh	dawn_marsh@fws.gov	U.S. Fish & Wildlife Service	Minnesota-Wisconsin Field Offices 4101 American Blvd E Bloomington, MN 55425	Electronic Service	No	OFF_SL_23-212_Official
Emily	Marshall	emarshall@mojlaw.com	Miller O'Brien Jensen, PA	120 S. 6th Street Suite 2400 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-212_Official
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 E 7th St St Paul, MN 55106	Electronic Service	No	OFF_SL_23-212_Official
Mary	Martinka	mary.a.martinka@xcelener gy.com	Xcel Energy Inc	414 Nicollet Mall 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_23-212_Official
Gregg	Mast	gmast@cleanenergyecono mymn.org	Clean Energy Economy Minnesota	4808 10th Avenue S  Minneapolis, MN 55417	Electronic Service	No	OFF_SL_23-212_Official
Daryl	Maxwell	dmaxwell@hydro.mb.ca	Manitoba Hydro	360 Portage Ave FL 16 PO Box 815, Station M Winnipeg, MB R3C 2P4	Electronic Service flain	No	OFF_SL_23-212_Official
				CANADA			

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Taylor	McNair	taylor@gridlab.org		668 Capp Street  San Francisco, CA 94110	Electronic Service	No	OFF_SL_23-212_Official
Melanie	Mesko Lee	Melanie.Lee@burnsvillemn .gov	City of Burnsville	100 Civic Center Parkway  Burnsville, MN  55337-3867	Electronic Service	No	OFF_SL_23-212_Official
Peder	Mewis	pmewis@cleangridalliance. org	Clean Grid Alliance	570 Asbury St. St. Paul, MN 55104	Electronic Service	No	OFF_SL_23-212_Official
Stacy	Miller	stacy.miller@minneapolism n.gov	City of Minneapolis	350 S. 5th Street Room M 301 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_23-212_Official
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Andrew	Moratzka	andrew.moratzka@stoel.co m	Stoel Rives LLP	33 South Sixth St Ste 4200  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-212_Official
Evan	Mulholland	emulholland@mncenter.org	Minnesota Center for Environmental Advocacy	1919 University Ave W Ste 515 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_23-212_Official
Alan	Muller	alan@greendel.org	Energy & Environmental Consulting	1110 West Avenue  Red Wing, MN 55066	Electronic Service	No	OFF_SL_23-212_Official
Carl	Nelson	cnelson@mncee.org	Center for Energy and Environment	212 3rd Ave N Ste 560  Minneapolis, MN 55401	Electronic Service	No	OFF_SL_23-212_Official
J	Newberger	Jnewberger1@yahoo.com	State Rep	14225 Balsam Blvd  Becker, MN 55308	Electronic Service	No	OFF_SL_23-212_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
David	Niles	david.niles@avantenergy.c om	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-212_Official
M. William	O'Brien	bobrien@mojlaw.com	Miller O'Brien Jensen, P.A.	120 S 6th St Ste 2400  Minneapolis,  MN  55402	Electronic Service	No	OFF_SL_23-212_Official
Ric	O'Connell	ric@gridlab.org	GridLab	2120 University Ave  Berkeley, CA 94704	Electronic Service	No	OFF_SL_23-212_Official
Carol A.	Overland	overland@legalectric.org	Legalectric - Overland Law Office	1110 West Avenue  Red Wing,  MN  55066	Electronic Service	No	OFF_SL_23-212_Official
Jessica	Palmer Denig	jessica.palmer- Denig@state.mn.us	Office of Administrative Hearings	600 Robert St N PO Box 64620 St. Paul, MN 55164	Electronic Service	No	OFF_SL_23-212_Official
J. Gregory	Porter	greg.porter@nngco.com	Northern Natural Gas Company	1111 South 103rd St  Omaha,  NE  68124	Electronic Service	No	OFF_SL_23-212_Official
Greg	Pruszinske	gpruszinske@ci.becker.mn. us	City of Becker	PO Box 250 12060 Sherburne Ave Becker, MN 55308	Electronic Service	No	OFF_SL_23-212_Official
Generic Notice	Residential Utilities Division	residential.utilities@ag.stat e.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_23-212_Official
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206  St. Paul,  MN  551011667	Electronic Service	No	OFF_SL_23-212_Official
Isabel	Ricker	ricker@fresh-energy.org	Fresh Energy	408 Saint Peter Street Suite 220 Saint Paul, MN 55102	Electronic Service	No	OFF_SL_23-212_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Nathaniel	Runke	nrunke@local49.org	International Union of Operating Engineers Local 49	611 28th St. NW Rochester, MN 55901	Electronic Service	No	OFF_SL_23-212_Official
Joseph L	Sathe	jsathe@kennedy- graven.com	Kennedy & Graven, Chartered	150 S 5th St Ste 700 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-212_Official
Jeff	Schneider	jeff.schneider@ci.red- wing.mn.us	City of Red Wing	315 West 4th Street  Red Wing, MN 55066	Electronic Service	No	OFF_SL_23-212_Official
Mark	Schoennauer	markwsch@hotmail.com		607 19th St NW Apt 17  Rochester, MN 55901	Electronic Service	No	OFF_SL_23-212_Official
Peter	Scholtz	peter.scholtz@ag.state.mn. us	Office of the Attorney General-RUD	Suite 1400 445 Minnesota Street St. Paul, MN 55101-2131	Electronic Service	No	OFF_SL_23-212_Official
Christine	Schwartz	Regulatory.records@xcele nergy.com	Xcel Energy	414 Nicollet Mall FL 7  Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_23-212_Official
Douglas	Seaton	doug.seaton@umwlc.org	Upper Midwest Law Center	8421 Wayzata Blvd Ste 300 Golden Valley, MN 55426	Electronic Service	No	OFF_SL_23-212_Official
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350  Saint Paul,  MN  55101	Electronic Service	Yes	OFF_SL_23-212_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Janet	Shaddix Elling	jshaddix@janetshaddix.co m	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN	Electronic Service	Yes	OFF_SL_23-212_Official
Andrew R.	Shedlock	Andrew.Shedlock@KutakR ock.com	Kutak Rock LLP	55423 60 South Sixth St Ste 3400 Minneapolis, MN 55402-4018	Electronic Service	No	OFF_SL_23-212_Official
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Ken	Smith	ken.smith@districtenergy.c om	District Energy St. Paul Inc.	76 W Kellogg Blvd St. Paul, MN 55102	Electronic Service	No	OFF_SL_23-212_Official
Beth H.	Soholt	bsoholt@windonthewires.or g	Wind on the Wires	570 Asbury Street Suite 201 St. Paul, MN 55104	Electronic Service	No	OFF_SL_23-212_Official
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Mark	Spurr	mspurr@fvbenergy.com	International District Energy Association	222 South Ninth St., Suite 825 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-212_Official
Byron E.	Starns	byron.starns@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-212_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Scott	Strand	SStrand@elpc.org	Environmental Law & Policy Center	60 S 6th Street Suite 2800 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-212_Official
James M	Strommen	jstrommen@kennedy- graven.com	Kennedy & Graven, Chartered	150 S 5th St Ste 700  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-212_Official
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_23-212_Official
Jayme	Trusty	execdir@swrdc.org	SWRDC	2401 Broadway Ave #1  Slayton, MN 56172	Electronic Service	No	OFF_SL_23-212_Official
Jen	Tyler	tyler.jennifer@epa.gov	US Environmental Protection Agency	Environmental Planning & Evaluation Unit 77 W Jackson Blvd. Mailstop B-19J Chicago, IL 60604-3590	Electronic Service	No	OFF_SL_23-212_Official
Carla	Vita	carla.vita@state.mn.us	MN DEED	Great Northern Building 12th Floor 180 East F Street St. Paul, MN 55101	Electronic Service ifth	No	OFF_SL_23-212_Official
Julie	Voeck	julie.voeck@nee.com	NextEra Energy Resources, LLC	700 Universe Blvd  Juno Beach, FL 33408	Electronic Service	No	OFF_SL_23-212_Official
Amelia	Vohs	avohs@mncenter.org	Minnesota Center for Environmental Advocacy	1919 University Avenue West Suite 515 St. Paul, MN 55104	Electronic Service	No	OFF_SL_23-212_Official
Cynthia	Warzecha	cynthia.warzecha@state.m n.us	Minnesota Department of Natural Resources	500 Lafayette Road Box 25 St. Paul, MN 55155-4040	Electronic Service	No	OFF_SL_23-212_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Alan	Whipple	sa.property@state.mn.us	Minnesota Department Of Revenue	Property Tax Division 600 N. Robert Street St. Paul, MN 551463340	Electronic Service	No	OFF_SL_23-212_Official
Laurie	Williams	laurie.williams@sierraclub. org	Sierra Club	Environmental Law Program 1536 Wynkoop St Ste Denver, CO 80202	Electronic Service 200	No	OFF_SL_23-212_Official
Samantha	Williams	swilliams@nrdc.org	Natural Resources Defense Council	20 N. Wacker Drive Ste 1600 Chicago, IL 60606	Electronic Service	No	OFF_SL_23-212_Official
Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine	225 South Sixth Street, Suite 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-212_Official
Jonathan	Wolfgram	Jonathan.Wolfgram@state. mn.us	Office of Pipeline Safety	445 Minnesota St Ste 147  Woodbury,  MN  55125	Electronic Service	No	OFF_SL_23-212_Official
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Kurt	Zimmerman	kwz@ibew160.org	Local Union #160, IBEW	2909 Anthony Ln  St Anthony Village, MN 55418-3238	Electronic Service	No	OFF_SL_23-212_Official
Emily	Ziring	eziring@stlouispark.org	City of St. Louis Park	5005 Minnetonka Blvd St. Louis Park, MN 55416	Electronic Service	No	OFF_SL_23-212_Official
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