

Northern States Power Company
Doing business as Xcel Energy

MINNESOTA PUBLIC UTILITIES COMMISSION

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DIRECT TESTIMONY OF AARON BRIXIUS

APRIL 6, 2022

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SCHEDULES

- **Schedule A:** Statement of Qualifications of Aaron Brixius
- **Schedule B:** Joint Letter from Xcel Energy and City of Becker

I. INTRODUCTION & QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Aaron Brixius, and my business address is 13999 Industrial Blvd, Becker MN, 55330.

Q. With whom are you employed?

A. I am employed by Xcel Energy Services Inc., the service company subsidiary of Xcel Energy Inc., and affiliate of Northern States Power Company ("Xcel Energy").

Q. What is your position with Xcel Energy?

A. I am currently the Senior Project Manager of Capital Projects for the Sherco Site Transformation.

Q. Please describe your educational and professional background.

A. I have a Bachelor of Science in mechanical engineering from North Dakota State University, and I am a licensed professional engineer in the State of Minnesota. I have worked for Xcel Energy for approximately 14 years in the Energy Supply Projects and Operations departments, where my responsibilities have included project management, engineering design, quality control, field construction, and start-up and commissioning for coal, gas, and solar facilities, as well as working in the development and execution of rate cases and integrated resource plans. My statement of qualifications is attached as **Schedule A**.

Q. Describe your role with respect to the Sherco Solar Project ("Project").

A. My role in the Sherco Solar Project is as the Project Manager and my responsibilities include overall Project development and coordination of resources.

II. OVERVIEW

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to provide an overview of the proposed Sherco Solar Project, including Project updates, layout and facility design, local government coordination, land use compatibility and responses to the City of Becker's ("City") request to exclude the Project from certain property near the City. I will also provide Xcel Energy's comments concerning the Environmental Assessment ("EA") prepared by the Department of Commerce, Energy Environmental Review and Analysis. The information I reference regarding the Project is primarily described in the joint Application for a Site Permit and Two Route Permits for the Sherco Solar Project submitted on April 20, 2021 ("Application").

Q. What schedules are attached to your Direct Testimony?

A. The following schedules are attached to my Direct Testimony:

- **Schedule A**: Statement of Qualifications
- **Schedule B**: Joint Letter from Xcel Energy and City of Becker

Q. What portions of the Application are you sponsoring?

A. I am sponsoring the entire Application, with the exception of Section 5.

III. SHERCO SOLAR PROJECT OVERVIEW

Q. Please provide a summary of the Project.

A. The Project includes an up to 460-megawatt ("MW") alternative current ("AC") solar project ("Solar Project") and two 345 kilovolt ("kV") transmission lines ("HVTL Projects") to interconnect the Solar Project to the grid (collectively, the Project). The Project is proposed in Sherburne County, Minnesota, to partially replace energy production of the approximately 700 MW Sherco Generating Plant Unit 2 ("Sherco Generating Plant"), a coal-powered facility. In 2016, the Commission approved the Company's plan to retire Unit 2 of the Sherco Generating Plant at the end of 2023. The Solar Project would be located within agricultural fields between U.S. Highway 10

60 and the Mississippi River, and on the east and west sides of the existing Sherco
61 Generating Plant.

62
63 **Q. Who is developing the Project?**

64 A. The Project represents a joint development between Xcel Energy and National Grid
65 Renewables Development, LLC (“NG Renewables”). NG Renewables was developing
66 a solar project on the west side of the Sherco Generating Plant while Xcel Energy was
67 developing a solar project on the east side of the Sherco Generating Plant. The
68 companies entered into a Purchase and Sale Agreement on January 15, 2021
69 whereby NG Renewables will act as an authorized representative on behalf of Xcel
70 Energy to secure a site permit and two routes permits for the Project. Xcel Energy, as
71 the applicant and permittee under the site and route permits, will construct, own, and
72 operate the Project.

73
74 **Q. Why has Xcel Energy proposed the Project?**

75 A. The Project is being proposed to reuse transmission interconnection rights that will
76 become available due to ceasing operations of Unit 2 of the Sherco Generating Plant
77 by the end of 2023. Upon cessation, existing interconnection capacity must be
78 repowered within three years or retired by Xcel Energy under the Midcontinent
79 Independent System Operator (“MISO”) generating facility replacement process. The
80 Project will replace a portion of the nearly 700 MW of capacity generated by the
81 Sherco Generating Plant and represents a key milestone step in Xcel Energy’s clean
82 energy transition, which targets 100 percent carbon free electricity by 2050 and 80
83 percent less carbon by 2030. In addition, the Project is part of a set of investments
84 Xcel Energy proposed in response to a request from the Commission to identify
85 projects that could create jobs and assist the clean energy transition while also
86 keeping bills low for its customers in the wake of the COVID-19 pandemic. The
87 construction of the Project will provide an estimated \$115 million in wages from nearly
88 900 union construction jobs.

Q. Is a certificate of need required for the Project?

A. No. Although I am not an attorney, I understand that typically, a certificate of need is required for a “large energy facility”, which includes an electric power generating plant with a capacity of 50,000 kilowatts or more.¹ However, there are several exemptions to this requirement and, on July 6, 2021, the Commission issued its Order Granting Certificate of Need Exemption for the Project in Docket M-20-891 (*In the Matter of Xcel Energy’s Petition for Approval of the Sherco Solar Project*). In that order, the Commission granted the Project an exemption from the certificate of need requirement under Minn. Stat. § 216B.2422, subd. 5(b), which provides that a certificate of need is not required for any electric power generating plant “selected in a bidding process approved or established by the Commission.” The Commission determined that the Project qualifies for this exemption because it was selected using Xcel Energy’s Modified Track 2 bidding process. As such, a certificate of need is not required for the Project.

Q. Please describe the Solar Project in further detail.

A. Xcel Energy proposes to construct the Solar Project, a solar energy conversion facility with an up to 460 MW AC nameplate capacity, in Clear Lake and Becker Townships, Sherburne County. The Project would interconnect into the Sherburne County Substation, which is adjacent to the Solar Project. The Solar Project is proposed in two distinct blocks, which collectively create the Solar Project Area. The West Block is located on the west side of the Sherco Generating Plant in Clear Lake Township, and the East Block is located on the east side of the Sherco Generating Plant in Becker Township. The Project’s facilities are anticipated to be located within the Project Footprint and include solar panels and racking, inverters, security fencing, two collector substations, on-site below-ground or hybrid electrical collection and communication lines, and up to 12 weather stations (up to 20 feet tall). There are seven laydown areas proposed – five within the fence of the Solar Project and two temporary laydown areas totaling 20.1 acres located on Xcel Energy-owned land, to

¹ Minn. Stat. § 216B.2421, subd. 2(1); Minn. Stat. § 216B.243, subd. 2.

120 be used only during construction. The Solar Project will require two collector
121 substations: The West Collector Substation, which will collect power from the West
122 Block of the Solar Project Area and the East Collector Substation, which will collect
123 power from the East Block. Additional detail concerning the Solar Project is included
124 in Section 2 of the Application.

125
126 **Q. Please provide additional detail concerning the HVTL Projects.**

127 A. Xcel Energy is proposing to build two new 345 kV transmission lines to connect the
128 East and West Blocks of the Solar Project to the existing Sherburne County
129 Substation:

- 130 • The West HVTL Project would be a new, approximately 3.2 mile, single-
131 circuit 345 kV transmission line located in Clear Lake Township and the City
132 of Becker. The West Route will begin at the West Collector Substation and
133 then generally travel south and east to the existing Sherburne County
134 Substation. Additional detail concerning the West HVTL Project is included
135 in Section 3 of the Application.
- 136 • The East HVTL Project would be a new, approximately 1.7 mile, single-
137 circuit 345 kV transmission line located in Becker Township and the City of
138 Becker. The East Route will begin at the East Collector Substation and then
139 generally travel west and north to the existing Sherburne County
140 Substation. Additional detail concerning the East HVTL Project is included
141 in Section 4 of the Application.

142 **Q. What is the schedule for the Project?**

143 A. The Project was originally planned to facilitate a phased in-service with the first phase
144 of the Project completed by the fourth quarter of 2023 and the remaining portion by
145 the fourth quarter of 2024, as stated in Section 1.3 of the Application. Because of
146 delays in the site and route permit regulatory approval timeline, substantial work
147 during the 2022 construction season is no longer viable, though some work likely will
148 be possible in the fall of 2022. Relatedly, the expected in-service dates are now the

fourth quarter of 2024 for the first phase and the fourth quarter of 2025 for the remaining portion of the Project.

IV. PROJECT UPDATES

Q. Do you have any updates to provide concerning the Project's layout?

A. Yes. As reflected in **Schedule B**, after further coordination with the City of Becker, Xcel Energy has agreed to remove five parcels of land (parcels 20-134-1100, 20-134-1400, 20-134-4100, 05-005-2400, and 05-005-3000, totaling approximately 246.7 acres within the Project area) from the Project ("Exclusion Parcels"). Xcel Energy is now requesting approval of a modified site alternative 1 ("Site Alternative 1A"). Site Alternative 1 considered in the EA for the Project involves the removal of the Exclusion Parcels from the Project and a corresponding decrease in the nameplate capacity of the Project. However, rather than decreasing the nameplate capacity of the Project, Xcel Energy proposes to keep the proposed nameplate capacity of the Project at 460 MW AC so that it can work to select equipment and refine the design of the Project to achieve up to 460 MW AC within the remaining land. Accordingly, Site Alternative 1A would involve the removal of the Exclusion Parcels but would not decrease the allowable up to 460 MW AC nameplate capacity for the Project. Xcel Energy will continue to evaluate Site Alternative 1A to identify possible design measures that would allow to maximize the construction of up to 460 MW AC of nameplate capacity in the Project area.

Q. Do you have any other updates concerning the Project?

A. Yes. The Project is actively engaged in the procurement of major equipment and construction services. The main step-up power transformers have been purchased, and proposals were due March 25, 2022 for the PV Module supply. The recent announcement on March 28, 2022 from the U.S. Department of Commerce regarding their investigation into circumvention of Anti-Dumping ("AD") and Countervailing Duties ("CVD") by solar manufacturers in Cambodia, Malaysia, Thailand, and Vietnam has introduced additional financial and schedule risk into procurement of equipment for the Project. The Project has been working to align major financial commitments

with regulatory certainty for the Project. Further regulatory approval delays or supply chain impacts from the AD/CVD investigation could delay in the commercial operation dates of the Project.

V. SITE SELECTION

Q. Why did Xcel Energy ultimately select this general area for the proposed Project?

A. Xcel Energy and NG Renewables selected this location based on a number of factors, but a key consideration in the selection process was the Project's proximity to existing electrical infrastructure at the Sherco Generating Plant, existing transmission lines, and the Sherburne County Substation, which will soon have capacity as a result of ceasing operation of Unit 2 of the Sherco Generating Plant. The Commission previously approved ceasing operations of Unit 2 and upon cessation, existing interconnection capacity must be repowered within three years or retired by Xcel Energy under the MISO generating facility replacement process.² In order to affordably achieve the level of renewables identified in Xcel Energy's recent Commission-approved Integrated Resource Plan, it is essential that Xcel Energy make efficient use of its existing interconnection rights. Replacing a portion of the existing coal generation from Unit 2 with new solar capacity that can reutilize the interconnection service at the Sherco Generating Plant is one way to effectively steward that resource, to the benefit of Xcel Energy's customers and the environment. Additionally, the agricultural areas surrounding the Sherco Generating Plant provide abundant opportunity for solar generation on relatively flat landscapes, with few sensitive resources, that have been previously disturbed by agricultural activities.

² See Commission Order dated January 11, 2017 in the Matter of Xcel Energy's 2016-2030 Integrated Resource Plan in Docket E-002/RP-15-21.

Q. Why did NG Renewables and Xcel Energy choose to locate the Project this close to the existing Sherco Generating Plant?

A. Both NG Renewables and Xcel Energy endeavored to site the Project as close to the existing transmission infrastructure associated with the existing Sherco Generating Plant as possible. By siting the Project close to this transmission infrastructure, Xcel Energy will be able to utilize existing transmission capacity that will become available when Unit 2 of the Sherco Generating Plant ceases operation while also minimizing the need for new transmission infrastructure to the extent practicable. Minimizing the amount of transmission infrastructure minimizes the impacts to the environment and surrounding communities while reducing the loss of electricity over the length of the transmission line (i.e., line losses) and electricity costs to Xcel Energy's rate payers. Existing infrastructure in the immediate vicinity of the Project, together with Xcel Energy-owned property, allows Xcel Energy to minimize the need to construct ancillary facilities on private land not owned by Xcel Energy and to consolidate existing and new power generation and electrical transmission infrastructure as much as possible.

Q. How was land identified for inclusion in the Project?

A. Both NG Renewables and Xcel Energy targeted land within Becker Township and Clear Lake Township that is currently utilized for row crop agriculture. Landowners were approached to discuss their willingness to participate in the Project. Willing landowners either signed voluntary lease and easement agreements or purchase options to support the Project. Most participating landowners requested we lease all of their land in or near the Project rather than reserving portions of their land for farming or other uses.

Q. If Unit 2 of the Sherco Generating Plant and Sherburne County Substation, are in the City of Becker, why didn't you locate the Project in the City?

A. First, a portion of the land within the City is occupied by the Sherco Generating Plant. Xcel Energy is not able to utilize the existing Sherco Generating Plant site for this

Project due to its plans to continue coal generation operations at the existing site through 2030.

Second, both NG Renewables and Xcel Energy avoided siting the Project within the City of Becker, except for a temporary laydown yard and the two associated transmission lines, because Xcel Energy has reserved approximately 1,300 acres of land within and surrounding the existing Sherco Generating Plant to aid the City of Becker in its efforts to expand commercial and industrial development within the City. While a solar facility would make up a portion of the lost revenue, commercial and industrial development may be able to do more to offset the reduced electrical production tax revenue the City will lose when the Sherco Generating Plant ceases operations. Additional Xcel Energy-owned land within the City may become available for development after all coal generation operations cease at the Sherco Generating Plant. Xcel Energy has been committed to working collaboratively with the City to help its redevelopment plans related to Xcel Energy-owned property.

Q. How did you know about the City of Becker's plans to expand commercial and industrial developments within the City?

A. Xcel Energy has been working extensively with the City of Becker on its plans to utilize significant portions of the land within City limits to expand the Becker Business Park. Based on those discussions and publicly available documents and the information provided to Xcel Energy and NG Renewables prior to Application submittal, the City's Business Park expansion area was primarily located within the City of Becker, but also included some land in Becker Township directly abutting the City. In all respects, the Project was designed to completely avoid the City's planned Business Park expansion areas, as depicted in those publicly available documents, plans and studies.

Q. How is Xcel Energy continuing to work with the City of Becker on the Project and other economic development opportunities?

A. First, as I indicated previously in this testimony, Xcel Energy has continued to coordinate with the City of Becker concerning the Project's layout and recently

reached an agreement regarding Site Alternative 1A, which removes five parcels of concern to the City from the Project. I note that this agreement concerns only the Commission's site and route permitting procedures, and not the land lease agreements Xcel Energy entered into for these five parcels or, more generally, how the landowners may choose to use their properties in the future. Further, the City of Becker and Xcel Energy are currently working together to develop a master plan for the redevelopment of Xcel Energy Owned Property and some additional surrounding privately owned land as well as the preparation of an Alternative Urban Areawide Review ("AUAR"), a broad-scale, multi-use environmental review process for urban land development, on the same land. An AUAR will assist in making the land 'shovel ready' for future city economic development efforts. Xcel Energy initiated these efforts with the goal of helping the City undertake the steps necessary to make the available land buildable for others as soon as others choose to purchase the land. Xcel Energy also continues to discuss the Project with Clear Lake Township and Becker Township, as discussed below.

VI. STAKEHOLDER COORDINATION

Q. Did Xcel Energy coordinate with stakeholders during development of the Project?

A. Yes. As part of development of the Project, Xcel Energy and NG Renewables conducted outreach to stakeholders, including members of the public, landowners, and federal, state, and local agencies. Section 6 of the Application provides further detail regarding these outreach efforts.

Q. What is the typical process for local government coordination for a solar farm such as this Project?

A. In my experience, and from what I have learned from William Risse at NG Renewables, proponents of solar energy projects typically reach out to the local governments that govern the land on which the proposed project will be located when they have executed voluntary agreements with willing landowners, conducted environmental studies to understand potential impacts, reviewed publicly available

documents regarding planning, zoning and other land use studies and plans to understand potential for land use conflicts, and when they know they have a solar project that is likely to have or will have an option for interconnection and a potential buyer of the project or the power generated by the project.

Q. Was the typical process for local government coordination followed for this Project?

A. Yes. Both NG Renewables and Xcel Energy were independently conducting their own due diligence and land acquisition activities on the West and East Blocks, respectively. Publicly available planning, zoning, and other land use studies were consulted, and it was determined that the only local government entities with an interest in the land on which the two Blocks were proposed were Clear Lake Township, Becker Township, and Sherburne County. When each of Xcel Energy and NG Renewables understood that it had a project that was feasible and likely to move forward into permitting before the Commission, they each reached out to Clear Lake Township and Becker Township, respectively, because each Block of the Solar Project was proposed in the two townships and no other jurisdiction. Xcel Energy also consulted with the City of Becker prior to Application submittal because of Xcel Energy's long-standing relationship with the City and because the final Project design included the East and West HVTL locations within the City. It is important to note that much of the local agency coordination prior to Application submittal was rather compressed because the Project was being accelerated in response to the Commission's Inquiry into Utility Investments that May Assist in Minnesota's Economic Recovery from the COVID-19 Pandemic. As discussed previously with respect to the City of Becker, and below in more detail with respect to Becker and Clear Lake Townships, Xcel Energy has continued its outreach with these key stakeholders since filing the Application.

Q. Please describe Xcel Energy's coordination with Becker Township.

A. As detailed in Section 6.1.4.5 of the Application, NG Renewables and Xcel Energy presented to the Becker Township Board and officials prior to submitting the Application and have continued to discuss the Project with Becker Township Board

members after the Application was submitted. Becker Township provided Xcel Energy with the township's concerns regarding traffic delays at the Becker Township Business Park and the township's desire to create an alternative exit for 149th Avenue. Xcel Energy commissioned SRF Consulting ("SRF") to complete a traffic study of the Becker Township Business Park and surrounding roads to fully understand the existing traffic issues. The SRF study is presented and summarized in the Direct Testimony of Joshua Maus. Based on the results of the SRF study, Xcel Energy believes a westerly extension of 149th Avenue would not be an effective solution to remedy Becker Township's traffic concerns. Instead, a grade-separated interchange of County State Aid Highway 11 and Highway 10 to create a safer intersection that avoids the railroad would be a more cost-effective solution that would solve Becker Township's concerns as well as regional traffic issues. Xcel Energy will continue to work with Becker Township, Sherburne County, Minnesota Department of Transportation, and other stakeholders on a new grade-separated interchanges of County State Aid Highway 11 and Highway 10.

Q. Please describe Xcel Energy's coordination with Clear Lake Township.

A. NG Renewables conducted most of the outreach with Clear Lake Township prior to submittal of the Application. In discussions with William Risse, Clear Lake Township officials were informed of preliminary plans by NG Renewables as early as 2019. As described in Section 6.1.4.4 of the Application and as reflected in a letter from the township filed previously in this docket, Clear Lake Township has expressed its support for the Project, noting the many benefits the Project would have on the local economy.

VII. ENVIRONMENTAL ASSESSMENT

Q. Have you reviewed the environmental assessment prepared for the Project by DOC-EERA?

A. Yes. I would like to clarify statements made in the Application and in the EA regarding the anticipated peak workforce for construction of the Project. We currently anticipate a peak workforce of approximately 400 workers to be working on the Project at a given

point in time and an average of 300 workers over three project construction seasons. In addition, I will discuss the alternatives analyzed in the EA in Section VIII below.

VIII. ALTERNATIVES COMPARISON

Q. Please describe the alternatives analyzed in the EA.

A. The EA analyzes the Project as proposed, as well as two alternatives. Alternative 1 modifies the proposed Project to remove the Exclusion Parcels. The City asserts that the Exclusion Parcels should be removed from the Project to accommodate potential future expansion of the City's Business Park beyond the City's limits. Two of the Exclusion Parcels are located in Becker Township; three are located in Clear Lake Township. Alternative 2 also removes the Exclusion Parcels, but would also add a portion a 900-acre site in Clear Lake Township to the Project; this site is not contiguous to the West Block and would require an additional 1.9-mile corridor of underground collection to transport the energy produced at the new site to the revised West Block boundary.

Q. Does Xcel Energy have a preferred alternative?

A. Yes. As stated in Section IV above, Xcel Energy has reached an agreement with the City of Becker to support a modified version of Alternative 1 (Site Alternative 1A). This alternative balances the need to site the Project close to Sherco Generating Plant infrastructure with the City's need to offset lost Generating Plant Production revenue via new commercial and industrial development.

Q. Why is Site Alternative 1A, as proposed, superior to Alternative 1?

A. Site Alternative 1A, is superior to Alternative 1 because it ensures that up to 460 MW of proposed nameplate capacity can be constructed to serve the needs of Xcel Energy's customers at a reasonable cost. When Unit 2 ceases operation, Xcel Energy will need to replace approximately 700 MW of capacity. When the balance of the Sherco Generating Plant ceases operation, an additional 1,700 MW of capacity will need to be replaced with other generation sources. Accordingly, each opportunity to generate replacement capacity requires that the maximum capacity from each

391 opportunity is achieved. If the maximum capacity is not achieved at each opportunity,
392 it will mean that more projects in more locations will need to be constructed to achieve
393 the same capacity, and that will result in more impacts to areas that may not already
394 be impacted by existing energy generation and transmission infrastructure.
395

396 **Q. Why is Site Alternative 1A, as proposed, superior to Alternative 2?**

397 A. Constructing Alternative 2 will result in the construction of a nearly two-mile-long
398 collector line to connect Alternative 2 to the West Block. As noted in the environmental
399 assessment, this collector line will need to cross a public water to connect with the
400 Project. The addition of this collector line will cost an additional approximately \$2.18
401 million and result in additional line losses of generated energy before it can be
402 delivered to the interconnection location. Utilizing Site Alternative 1A rather than
403 Alternative 2 will allow Xcel select equipment and refine the design of the Project to
404 achieve up to 460 MW AC without realizing the additional environmental impacts and
405 costs associated with Alternative 2.
406

407 **IX. CONCLUSION**

408 **Q. Does this conclude your Direct Testimony?**

409 A. Yes.