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Direct Testimony
Greg P. Chamberlain

STATE OF NORTH DAKOTA
BEFORE THE
NORTH DAKOTA PUBLIC SERVICE COMMISSION

In the Matter of the Application of Northern States Power Company
for an Advance Determination of Prudence for the 460 MW Sherco Solar Facility

Case No. PU-21-____
Exhibit___(GPC-1)

Policy

April 26, 2021

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I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, OCCUPATION AND JOB RESPONSIBILITIES.

A. My name is Greg P. Chamberlain. I am the Regional Vice President for Northern States Power Company (Xcel Energy or the Company), a Minnesota corporation operating in North Dakota. In this role, I am responsible for state government relations and regulatory filings with the utility commissions in Minnesota, North Dakota, and South Dakota, including proceedings related to rates, resource planning, and service quality filing.

Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I joined Xcel Energy in 2000 and since that time have held various positions in the Company, including in the Transmission and Energy Supply business areas where I worked prior to serving as Regional Vice President for Government and Community Relations, which was the position I held before moving to my current role. While serving as Director of Transmission Portfolio Delivery for the Company, I was responsible for the engineering, project management, project controls, and permitting of a $4 billion electric transmission capital portfolio across 10 states. In addition, I acted as Xcel Energy's management committee representative on each of the four CapX2020 projects. As General Manager of Power Generation, I was responsible for the operation of the Company's non-nuclear fleet of power plants in the upper Midwest. I have a Master of Business Administration degree from the University of Minnesota's Carlson School of Management and a Bachelor of Science degree in Chemical Engineering from Purdue University. Exhibit ___ (GPC-1), Schedule 1 summarizes my qualifications.

Q. FOR WHOM ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of Xcel Energy.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to provide support for the Company's request for an Advance Determination of Prudence (ADP) for 460 MW of grid-scale photovoltaic (PV) capacity at the Company's Sherburne County (Sherco) Generating Station site (Sherco Solar or Project).

Q. HOW IS YOUR TESTIMONY STRUCTURED?

A. My testimony covers the following topics:

- Regulatory Matters;
- Description and Purpose of the Proposed Acquisition;
- Cost Assignment Proposal;
- Prudence of the Project; and
- Presentation of Witnesses.

II. REGULATORY MATTERS

Q. PLEASE DESCRIBE THE COMPANY'S REQUIREMENTS WITH RESPECT TO THIS ADP.

A. North Dakota Century Code (N.D.C.C.) section 49-05-16 allows a public utility to seek an ADP from the Commission at the utility's discretion. However, pursuant to the Settlement Agreement in Case No. PU-07-776, the Company is obligated to file an application for an ADP for any proposed new

construction or acquisition of a generating resource above 50 MW where the Company proposes to allocate all or part of the costs to the North Dakota jurisdiction.[1] In Case No. PU-12-59, Xcel Energy committed to filing its ADP applications within 14 days of seeking similar approvals in Minnesota.[2]

Q. IS THE COMPANY MEETING NORTH DAKOTA FILING REQUIREMENTS WITH THIS APPLICATION AND SUPPORTING TESTIMONY?

A. Yes. This Application complies with the requirements of N.D.C.C. § 49-05-16 and the Settlement Agreement in Case No. PU-07-776. Additionally, in accordance with our commitment in Case No. PU-12-59, the Company is submitting the Application within 14 days of filing a petition seeking approval for the Project in Minnesota, which occurred on April 12, 2021. Finally, the Application and supporting testimony demonstrate the prudence of the Company's acquisition of the facility and its cost assignment proposal.

III. DESCRIPTION AND PURPOSE OF THE PROPOSED ACQUISITION

A. Project Background and Description

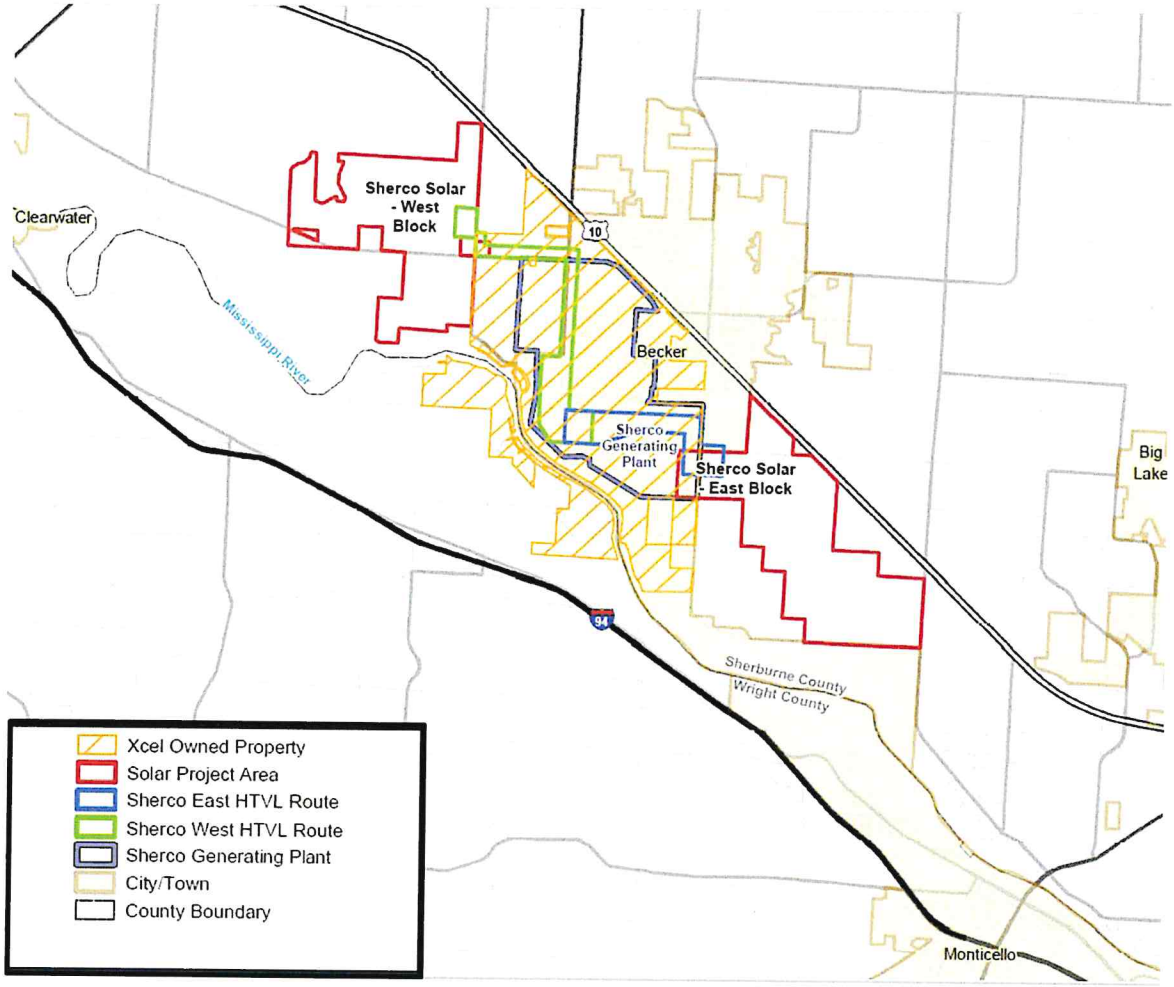
Q. PLEASE DESCRIBE THE PROPOSED SHERCO SOLAR PROJECT.

A. The Sherco Solar Project is a joint development between National Grid Renewables (NG Renewables, f/k/a Geronimo Energy) and Xcel Energy that will be located adjacent to the Company's Sherco Generating Station in

[1] *N. States Power Co. Elec. Rate Increase Application*, Case No. PU-07-776, ORDER ADOPTING SETTLEMENT AGREEMENT at 6 of Settlement Agreement (Dec. 31, 2008).
[2] *N. States Power Co. Advance Prudence – Geronimo Wind Application*, Case No. PU-12-59, LETTER OF COMMITMENT (Nov. 5, 2012).

Becker, Minnesota. As part of the Project, the Company is acquiring a 230 MW site west of the existing Sherco Generating Station from NG Renewables (West Block), and combining it with a project developed on land to the east for which Xcel Energy holds leases (East Block), bringing the overall Project to 460 MW. The proposed solar generation site boundary encompasses approximately 3,480 acres of land which is predominantly used for agriculture, with a mix of hay/pasture, row crops, and irrigated farmland. The Project will include two collector substations, one for each block of land that will be developed, and two 345 kV generation-tie (gen-tie) lines which will connect the collector substations to the point of interconnection at the existing Sherburne County Substation. NG Renewables will continue to develop the Project and secure, on Xcel Energy's behalf, Minnesota permits for the Project site and routes for the high voltage transmission lines connecting the Project to the Sherburne County Substation. Figure 1 below shows the Sherco Solar Project site boundary, including the East and West Blocks outlined in red.

Figure 1: Sherco Solar Project Site Boundary



Q. WHAT IS THE ESTIMATED SCHEDULE FOR THE PROJECT?

A. We currently expect primary construction activities for the Sherco Solar Project will occur in **[TRADE SECRET BEGINS** **TRADE SECRET ENDS]**. However, other engineering and procurement activities **[TRADE SECRET BEGINS** **TRADE SECRET ENDS]**. The project will be placed in service on a rolling basis, with full

Project operation by the fourth quarter of 2024. The Company anticipates beginning commercial operations for portions of the Project via a phased approach beginning in 2023 to accommodate the planned in-service date for the entire Project.

B. Project Need and Selection Process

1. Project Need

Q. WHY IS THE COMPANY PROPOSING TO ADD THE SHERCO SOLAR PROJECT?

A. The Company's current integrated resource planning (IRP) analysis indicates a 92 MW capacity need beginning in 2026, growing to 1,016 MW by 2030. Company Witness Ms. Farah Mandich discusses our mid-2020s capacity need further in her Direct Testimony.

Q. DOES THE PROJECT FILL THE IDENTIFIED NEED?

A. Yes. Sherco Solar fills the need identified in our most recent resource planning process.

Q. DID THE COMPANY'S IRP SPECIFICALLY SELECT A SOLAR RESOURCE TO MEET THE IDENTIFIED NEED?

A. Yes. To partially fill the identified capacity need in the mid-2020s, the Company's preferred generation expansion plan in our most recent IRP Supplement (Preferred Plan) selected 500 MW of large scale solar to be added to the NSP System in 2025. The Preferred Plan factors in the externality values of various generation types, carbon-reduction goals set by policymakers and the Company, and other Minnesota policy priorities, and in our view best positions the Company to achieve our carbon goals while maintaining a

reliable system and keeping our customers' bills low. The Project was selected on this basis.

Q. DOES THE SELECTION OF THE PROJECT COMPLY WITH THE COMPANY'S UNDERSTANDING OF NORTH DAKOTA POLICY DIRECTIVES AND NORTH DAKOTA LAW?

A. No. The selection of a solar resource was due, in part, to the use of externality values in our planning assumptions. Although I am not a lawyer, I understand that the use of externality values in the planning, selection, or acquisition of resources is contrary to North Dakota law. That said, Sherco Solar was selected to fill a particular capacity need.

Q. WHAT TYPE OF CAPACITY RESOURCE WOULD HAVE BEEN COMPLIANT WITH NORTH DAKOTA LAW AND POLICY DIRECTIVES?

A. As the Commission is aware, the Settlement in Case No. PU-07-776 requires the Company to include in its Resource Plans an analysis of a Resource Plan scenario compliant with Federal and North Dakota laws only (North Dakota Plan). Under the North Dakota Plan in the most recent IRP Supplement, the model selected 374 MW of Firm Dispatchable capacity to fill the capacity need in 2025, rather than the 500 MW solar addition included in our Preferred Plan.

Q. WHY IS THE COMPANY UNDERTAKING SHERCO SOLAR NOW IN LIGHT OF A 2026 RESOURCE NEED?

A. The Company is accelerating the in-servicing of Sherco Solar to: (1) meet the Minnesota Commission's request that the Company explore opportunities for accelerated investments in light of the COVID-19 Pandemic; (2) to ensure

that the Company can capture the valuable interconnection capacity at the Sherco site under the applicable Midcontinent Independent System Operator (MISO) rules; and (3) to capture the current value of the Federal Investment Tax Credit (ITC). Consequently, the Company solicited bids for solar projects at the Sherco site and then selected a project based on those bids.

2. Project Selection

Q. PLEASE DESCRIBE THE PROJECT SOLICITATION PROCESS.

A. In light of the capacity need identified in the IRP, and in response to the Minnesota Public Utility Commission's (MPUC) request that the Company explore projects which might provide economic stimulus in light of recessionary conditions resulting from the COVID-19 pandemic, the Company issued a Request for Proposals (RFP) and conducted a competitive solicitation for solar projects at the Sherco site. The RFP was specific to the Sherco site in order to ensure that the Company's existing interconnection rights at the Sherco site are reused by the new project. As noted in our ADP Application for the Heartland Divide II wind project (Case No. PU 20-433), greenfield renewable projects in the MISO West region currently face substantial cost challenges due to MISO-assigned transmission upgrades, and many proposed projects have withdrawn from the queue as a result. The expected retirement of Sherco Unit 2 in 2023 will free up substantial interconnection capacity at the Sherco site but under MISO rules, that free interconnection capacity must be reused by the Company within three years or the Company will lose this valuable asset. Due to the current state of the MISO West queue, in order to develop new generation resources over the

next decade it is essential that the Company make efficient use of its existing interconnection rights.

Q. PLEASE ELABORATE ON THE MISO RULES REGARDING TRANSFER OF INTERCONNECTION RIGHTS.

A. The general timing rules for generator interconnection replacement set forth in Attachment X of the MISO Tariff require that: (1) a request for generator interconnection replacement be submitted at least one year prior to the date that an existing generation facility will cease operation, Attach. X § 3.7.1(ii), and (2) the expected commercial operation date for a replacement facility must be within three years of the date that the existing facility ceases operation, Attach. X § 3.3.1. The rules allow the owner of an existing facility to request to itself replace the facility with another facility. The rules do not allow the owner of an existing facility to submit a request for a third party to build a replacement facility that will use the owner's existing interconnection rights. This is why the Company needed to purchase the West Block of the Project from NG Renewables and why we only solicited Build-Transfer proposals (not PPAs) in our RFP.

Q. WHAT WOULD BE THE IMPACT OF LOSING THE INTERCONNECTION RIGHTS ASSOCIATED WITH SHERCO UNIT 2?

A. The planned retirement of Sherco Unit 2 in 2023 will free up nearly 700 MW of interconnection capacity to be reused at the Sherco site. However, under the MISO rules described above, if a replacement resource is not put in service within three years of Sherco Unit 2's retirement the Company will lose these interconnection rights forever. In light of current MISO queue issues that we

expect to persist for several years, these and other interconnection rights that the Company currently holds are highly valuable. Reusing these existing rights under the MISO rules can significantly reduce or eliminate the transmission expansion costs that can accompany renewable resource additions. Further, by interconnecting into an area of the system that previously supported baseload resources, Sherco Solar will not materially impact the operation of the transmission grid spurring additional upgrades to be built. Based on current constraints in the MISO interconnection queue and the Company's observation of recent planning study cycles and assigned interconnection upgrade costs, we estimate that the potential opportunity cost of foregoing full reutilization of the interconnection rights associated with Sherco Unit 2 is approximately $140 million to $350 million.

Q. WHAT WAS THE RESPONSE TO THE RFP?

A. There was substantial interest in the RFP, generating many questions, and it ultimately resulted in three bid submissions that we reviewed under the oversight of our independent auditor (IA). Our IA, Guidehouse, validates our process, certifying that it believes the goals of our RFP were achieved, that project assessments were performed in a fair and consistent manner, and that there is no evidence that we unfairly advantaged any interested party or respondent to the RFP. The RFP process used for the Sherco Solar Project, consistent with prior MPUC orders and under the supervision of the IA, included protections to ensure that the Company's self-build proposals were not unfairly advantaged or given preferential consideration.

Q. PLEASE DESCRIBE THE PROJECT SELECTION PROCESS.

A. After conducting the thorough and competitive RFP process described above, and under the oversight of our IA, we determined the Company's combined bid with NG Renewables offered the most beneficial project to meet our solar needs under Minnesota law and the Company's own goals. The Company's combined bid with NG Renewables was the least cost of the three bids received; the bid price of the project that was selected was **[TRADE SCRET BEGINS TRADE SECRET ENDS]**, while the other two bids were priced at **[TRADE SECRET BEGINS TRADE SECRET ENDS]**. Ultimately, by leveraging the expertise of both Xcel Energy and NG Renewables, we will be able to ensure the project maximizes benefits to customers.

Q. DID THE COMPANY COMPARE THE COST OF THE PROJECT TO OTHER RECENTLY-DEVELOPED SOLAR PROJECTS IN THE REGION?

A. Yes. In addition to the RFP, which offered valuable insight into alternative project pricing, we compared the Project to other solar resources on the NSP System and in the region. This evaluation found that the proposed Sherco Solar Project would provide lower cost energy than several recently-developed solar facilities in the region. For example, the 300 MW Badger Hollow and Two Creeks Solar projects developed by Wisconsin Public Service were priced at $1,299/kWac; the 250 MW Darien Solar Energy Center and 200 MW Paris Solar Farm developed by Wisconsin Electric Power Company were priced at $1,298/kWac and $1,301/kWac, respectively; and the 675 MW of six Wisconsin Power & Light solar project sites was priced at $1,277/kWac. All of these recent projects are priced above the **[TRADE SECRET BEGINS**

TRADE SECRET ENDS] estimated price of Sherco Solar, once management costs and upgrades are included. Furthermore, our evaluation showed that at the price bid, Sherco Solar will provide cheaper energy than any solar facility currently operating on the NSP system, and is less than half the price of the average Community Solar Garden project. Thus from a Minnesota perspective, the Sherco Solar project is least cost.

C. Project Costs and Output

Q. WHAT ARE THE EXPECTED COSTS OF THE PROJECT?

A. The total installed capital costs for the Project are estimated to be approximately **[TRADE SECRET BEGINS**

TRADE SECRET ENDS]. Importantly, the Project is positioned to take advantage of the recent solar investment tax credit (ITC) extension, and we expect our project to qualify for **[TRADE SECRET BEGINS**

TRADE SECRET ENDS].

Table 1 below presents a breakdown of project costs by category and block:

Table 1: Sherco Solar Project Costs

Category	East Block	West Block	Total
	[TRADE SECRET BEGINS		
Capital			
Transmission			
Interconnection Substation			
AFUDC			

Total			**TRADE SECRET ENDS]**

Q. WHAT IS THE EXPECTED OUTPUT AND CAPACITY FACTOR OF THE PROJECT?

A. The Sherco Solar project will have a total installed capacity of 460 MW. The Company estimates that the net annual delivered energy will be **[TRADE SECRET BEGINS TRADE SECRET ENDS]** after both the West and East Blocks are placed in-service. the net capacity factor (NCF) is expected to be within the range of **[TRADE SECRET BEGINS TRADE SECRET ENDS]**. This range in the NCF was calculated by using manufacturer's supplied equipment performance data modeled using the PVSyst tool with third-party commercial meteorological data projections for the site. The Company believes this range is reasonable. The approximate midpoint of this range, **[TRADE SECRET BEGINS TRADE SECRET ENDS]**, was used for the purposes of calculating project performance and costs.

Q. WHAT IS THE LEVELIZED COST OF ENERGY OF THE PROJECT?

A. Based on the Project's lifetime costs and expected production, the Company has calculated the levelized cost of energy (LCOE) of Sherco Solar to be **[TRADE SECRET BEGINS TRADE SECRET ENDS]**.

IV. COST ASSIGNMENT PROPOSAL

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. In this section of my testimony, I describe the Company's cost assignment proposal with respect to Sherco Solar.

Q. WHY IS THE COMPANY PROPOSING A COST ASSIGNMENT METHODOLOGY FOR SHERCO SOLAR?

A. We recognize that Sherco Solar represents a direct conflict between the resource selection process in Minnesota and the resource selection process in North Dakota. Although the Company believes that Sherco Solar is a prudent resource addition – and a necessary addition for the Company to meet its 100 percent carbon free goals – we recognize that under North Dakota law and the Commission's strict "need plus least cost" planning priorities, the Project is unlikely to be deemed prudent by the Commission and therefore eligible for cost recovery. Consequently, the Company is proposing a novel cost assignment methodology to: (1) ensure that an appropriate cost is recovered from North Dakota customers for the capacity and energy provided by the Project to the integrated NSP System; and (2) preserve the integrated nature of the NSP System for the benefit of all of the customers it serves across five states.

The Company's cost assignment methodology will ensure that North Dakota customers pay for the capacity and energy benefits of the Project serving them while not paying for the policy attributes of the solar resource. To that end, the Company is proposing to allocate all of the ancillary benefits of Sherco

Solar to our Minnesota customers. These ancillary benefits include the value of solar renewable energy credits and the benefits of any legislative changes to tax laws that may accrue. I discuss the Company's proposal in the context of the multistate NSP System later in my Direct Testimony.

Q. PLEASE ELABORATE ON THE BENEFITS THAT COULD ACCRUE DUE TO CHANGES IN TAX LAW.

A. Tax reform legislation that is currently under discussion at the Federal level could change the application of certain tax rules on the rate treatment of projects such as Sherco Solar. Should this or similar legislation be enacted, it could result in a reduction in the LCOE of Sherco Solar in the future. However, this legislation is still in development, so the full impact it could have on Sherco Solar is unknown at this time.

Q. AT A HIGH LEVEL, HOW DOES THE COMPANY PROPOSE TO RECOVER COSTS FROM NORTH DAKOTA CUSTOMERS FOR SHERCO SOLAR?

A. The Company is requesting an ADP for the Sherco Solar Project that would institute a cost assignment methodology to allow Minnesota customers to take advantage of the policy attributes of the solar project while allocating to North Dakota customers those costs more consistent with North Dakota planning priorities – namely those costs of a dispatchable resource such as a combustion turbine (CT), which was found to be both needed and least cost in our North Dakota-focused resource planning analysis. To that end, instead of applying the traditional jurisdictional demand and energy allocators to the full cost of the Project, the Company proposes to assign a smaller share of the costs of the Project to North Dakota via proxy prices for both the capacity of

and energy from the Sherco Solar project. In sum, the Company proposes to recover from North Dakota customers costs based on a generic new resource addition and market prices for the energy generated by the Project. This methodology is explained in greater detail in the Resource Planning Testimony of Ms. Farah L. Mandich, but I provide a brief overview below.

A. Capacity Costs

Q. PLEASE DESCRIBE THE COMPANY'S PROPOSAL TO ASSIGN THE COSTS OF THE CAPACITY OF THE PROJECT TO NORTH DAKOTA CUSTOMERS.

A. As I explained above, the Sherco Solar Project will help fill an identified capacity need on the Company's system beginning in 2026 and expanding thereafter. To ensure equitable contribution to the capacity costs and value of the Project consistent with state policy priorities, the Company proposes to recover from North Dakota customers only the costs of what would be a least cost resource under North Dakota law. As specified in the most recent IRP Supplement, under North Dakota planning requirements, Firm Dispatchable capacity is selected as the least cost resource to fill the 2026 capacity need. As a result, for North Dakota ratemaking and as a means to maintain the integrated nature of the NSP System, the Company proposes to develop a capacity charge to North Dakota based on firm dispatchable (*i.e.*, a CT) capacity that would be applied to the Sherco Solar capacity value. In other words, the Company proposes to recover from the North Dakota customers only the North Dakota jurisdictional share of the cost of a generic greenfield CT – beginning at the time it would need to be placed in-service in 2025 to meet the capacity need in 2026 – rather than the full cost of the Sherco Solar project.

Q. PLEASE ELABORATE ON THE COMPANY'S PROPOSAL TO ASSIGN THE COSTS OF THE CAPACITY OF THE PROJECT TO NORTH DAKOTA CUSTOMERS.

A. The Company proposes that the cost of a generic new CT be determined using MISO's planning year 2024-2025 "Cost of New Entry" (CONE) price. The MISO CONE is an industry-standard, all-in estimate of the cost of constructing a new CT. MISO determines an appropriate CONE value for each of its Local Resource Zones (LRZ) on an annual basis, using, among other things, the most recent Energy Information Administration (EIA) report on Capital Cost Estimates for Utility Scale Electricity Generation Plant (EIA Report). The EIA Report contains detailed specifications for a hypothetical advanced CT, including information regarding the differences in project costs for an advanced CT with a nominal capacity of 237 MW, based upon the state where the facility is constructed. We believe the MISO CONE price provides an appropriate, third-party developed basis for identifying the capacity cost of adding a new, generic, and least cost resource under North Dakota policy principles.

To accomplish this proposal from a ratemaking perspective, the Company proposes to calculate the capacity charge amounts and make the corresponding line item adjustments in future North Dakota rate case Test Years beginning in 2025, the year the resource needs to be built to serve the capacity need that was identified in our IRP. To calculate the charge, the MISO CONE price, which is provided in terms of $/MW-year, will be multiplied by the MISO accredited capacity value of the Sherco Solar plant and then allocated to North Dakota based on the 12 coincident peak (12CP)

jurisdictional allocator in place in 2025. The expected life of the Sherco Solar Project is 35 years, which is comparable to the 40-year book life of a generic CT.

Company Witness Ms. Mandich discusses the reasonableness of using MISO CONE as the appropriate capacity proxy price in her Direct Testimony.

B. Energy Costs

Q. PLEASE DESCRIBE THE COMPANY'S PROPOSAL TO ASSIGN THE COSTS OF THE ENERGY OF THE PROJECT TO NORTH DAKOTA CUSTOMERS.

A. For energy the Project produces, the Company proposes to charge North Dakota customers using a proxy price of the day-ahead Locational Marginal Price (LMP) at the Project's MISO commercial pricing (CP) node. The energy the Project produces will be priced on an hourly basis using the day-ahead LMP at the Sherco Solar site and these costs will be assigned to the North Dakota jurisdiction and recovered through the FCR. Because the Project is being developed in part to meet Minnesota policy objectives and all renewable attributes of the Project will flow to Minnesota customers, North Dakota customers should pay no more than market rates for the energy that the Project generates, and our proposed structure would accomplish this aim.

C. Interjurisdictional Considerations

Q. IS THE COMPANY MAKING COST ASSIGNMENT PROPOSALS FOR SHERCO SOLAR IN MINNESOTA AND SOUTH DAKOTA?

A. In its April 12, 2021 Petition to the Minnesota Commission (MPUC Docket No. E002/M-20-891), the Company proposed to recover all costs and assign

all benefits of Sherco Solar to its Minnesota customers. The Company also proposed to credit back to Minnesota customers any revenue the Company received from other NSP System jurisdictions representing the capacity and energy costs of Sherco Solar to those jurisdictions. In doing so, the Company can recover the full costs of the Project which is necessary for the Company to achieve its long-term carbon goals; Minnesota customers can enjoy the benefits of the solar resources driven by Minnesota planning and policy priorities; and customers in other NSP System jurisdictions will pay a proxy cost for the capacity and energy value of this needed resource addition.

South Dakota does not have a pre-approval process for resource additions. Therefore, the Company has not made a particular request of the South Dakota Public Utilities Commission (SDPUC) regarding Sherco Solar and will not likely do so until the Project is placed in-service. That said, the Company is currently using a similar methodology for other solar resources in South Dakota whereby the MISO CONE capacity price is included in rates in the year there is a need for a particular project and day-ahead LMP at the generator node is used as an energy pricing proxy. The Company expects to utilize a similar proxy methodology in South Dakota for the Project, at the appropriate time.

Q. IS THE COMPANY'S COST ASSIGNMENT PROPOSAL CONSISTENT WITH THE COMPANY'S RESOURCE TREATMENT FRAMEWORK (RTF) PROPOSAL IN CASE NO. PU-12-813?

A. Yes. For Sherco Solar, the Company is proposing to implement the "proxy pricing" and "full recovery" methodologies discussed in the RTF filing. Under

these mechanisms, the "full recovery" methodology is being implemented in Minnesota in light of the Minnesota policies (and Company goals) driving the ultimate selection of Sherco Solar as a capacity resource for the NSP System. Further, the Company is proposing the "proxy pricing" methodology for rate recovery in North Dakota.

Q. THE COMPANY DID NOT PROPOSE TO USE THESE TWO MECHANISMS IN THE RTF, WHY IS IT PROPOSING TO USE THEM NOW?

A. As the Company discussed in the RTF proceeding, the "full recovery" and "proxy pricing" cost allocation mechanisms are not sufficiently robust to accommodate system-wide planning and are most appropriately applied to specific resources driven by clearly indicated differences in policy priorities with respect to their selection in one state and potential disapproval in another state. Further, the Company noted that both of these methodologies can be difficult to apply when there isn't a clear state-mandated policy outcome that is directing a particular resource outcome. The Company still believes that neither method is sufficiently robust to be applicable to every resource addition proposed by the Company but that, in certain circumstances, it may represent the best option for accommodating state policy differences in the selection of resources.

I note that the combination of two RTF-developed methods – where full recovery (less a credit based on other jurisdictions' proxy pricing) is requested in one state and proxy pricing proposed in another – helps to strengthen the ability to utilize these types of methodologies to keep the NSP System integrated. This combination of methods was not considered when the RTF

was developed, but the Company now realizes there is considerable merit in this approach. Combining full recovery and proxy pricing methods mitigates the cost recovery risk to the Company through requesting full recovery in one state and allocating the costs and benefits of the project to that state, while ensuring that customers in other states are paying for the capacity and energy value the project provides to the NSP System at a reasonable level. The two methods work together by mitigating the impact to the Company of any disagreement among states on the appropriate proxy pricing methods.

Additionally, the different outcomes in our resource planning analysis utilizing Minnesota-based assumptions and North Dakota-based assumptions provide a clear indication that state policy priorities are driving the selection of Sherco Solar in Minnesota and that the selection of Sherco Solar is not consistent with North Dakota resource planning directives. Therefore, Sherco Solar presents an opportunity to appropriately request full recovery (less a proxy-price credit) in Minnesota and proxy pricing in other states.

Q. DOES THIS MEAN THAT THE COMPANY IS SEEKING TO IMPLEMENT THE RTF FOR THE NSP SYSTEM?

A. No. As I discussed in my Direct Testimony in the Company's currently pending electric rate case (Case No. PU-20-441), the pressures on system integration appear to have abated in the years following our RTF proposal and there has been more alignment on resource decisions throughout the NSP System states in recent years. Therefore, the need for system separation of some sort is less, perhaps, than contemplated at the time the RTF was proposed. Further, the Company's own stated carbon elimination goals –

while closely aligned with Minnesota policy – do drive the need for the Company to achieve those goals in a manner consistent with the needs of all of the states we serve.

That said, the RTF proceeding allowed us to develop useful tools for situations where there is a clear state policy divergence with respect to resource additions. Sherco Solar is a clear example of this. Minnesota planning assumptions selected a solar resource while North Dakota planning assumptions selected a firm dispatchable resource. Consequently, implementation of a specially applicable cost assignment methodology in this instance is appropriate.

V. PRUDENCE OF THE SHERCO SOLAR PROJECT

Q. IS THE SHERCO SOLAR PROJECT PRUDENT?

A. Yes. The Sherco Solar Project helps meet a significant capacity need identified in our most recent Resource Plan beginning in 2026. Under our proposed cost recovery and ratemaking structure, described in greater detail in the testimony of Ms. Farah L. Mandich, the share of the Sherco Solar Project for which North Dakota customers are responsible is equivalent to a least cost resource. While the Project is not the optimal resource to fill the Company's capacity need according to the North Dakota Plan in the Company's most recent IRP, the Company's proposed cost recovery mechanism would ensure that North Dakota customers only pay costs of the Project equivalent to a least cost resource under North Dakota law – a generic CT. The proxy price for the generic CT will be determined using the widely-accepted MISO CONE value

for the 2024-25 planning year. Additionally, North Dakota customers would only be responsible for paying the market price for the energy generated by the Project, even if the energy generated by the Project is above market. As with any Company resource, the North Dakota jurisdiction's share of the demand and energy costs will be determined according to the applicable jurisdictional allocator in effect at the time the Project commences operations. Thus, the resource addition is prudent and the ADP should be approved.

Q. PLEASE DESCRIBE THE BENEFITS OF THE PROJECT.

A. The Sherco Solar project will deliver needed capacity to the NSP System as a whole and North Dakota customers in particular. As discussed further in the testimony of Ms. Mandich, the Company's proposed cost recovery mechanism using a proxy value for Sherco Solar will save North Dakota customers nearly $7 million over the life of the Project, when compared to the full cost of the Project.

VI. PRESENTATION OF WITNESSES

Q. WHO ARE THE WITNESSES FOR THE COMPANY IN THIS PROCEEDING?

A. In addition to my Policy Testimony, the Company sponsors the following witness:

- Ms. Farah L. Mandich, Resource Planning Testimony.

VII. CONCLUSION

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

A. For all the reasons set forth above, Xcel Energy respectfully requests the Commission grant an ADP for the proposed 460 MW Sherco Solar Project, subject to the Company's cost assignment proposal.

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF NORTH DAKOTA

NORTHERN STATES POWER COMPANY
ADVANCE DETERMINATION OF PRUDENCE –
460 MW SHERCO SOLAR PROJECT

CASE NO. PU-21-__

VERIFICATION

STATE OF MINNESOTA)
)SS.
COUNTY OF HENNEPIN)

Greg P. Chamberlain, being first duly sworn on oath, deposes and says that he is the Regional Vice President for Applicant Northern States Power Company, a Minnesota corporation, in the above-captioned matter, that the testimony submitted in the above-captioned matter under his name was prepared under his direction, that he knows the contents thereof, and that the same is true and correct to the best of his knowledge and belief.

Greg P. Chamberlain

Subscribed and sworn to before me on this 21st day of April, 2021

Notary Public
My Commission expires: 1/31/2025

Dale George Bowles
NOTARY PUBLIC
MINNESOTA
My Commission Expires 1/31/2025

Schedule 1
Greg P. Chamberlain
Statement of Qualifications

Greg Chamberlain is Xcel Energy's Regional Vice President for Regulatory and Government Affairs. He is responsible for state government relations and regulatory filings with the utility commissions in Minnesota, North Dakota and South Dakota.

He previously served as Regional Vice President for Government and Community Relations for the Company, overseeing state and local government relations for Minnesota, North Dakota, and South Dakota.

Prior to that, Chamberlain served as General Manager of Power Generation, where he was responsible for the operations of the Company's non-nuclear fleet of power plants in the upper Midwest.

As Director of Transmission Portfolio Delivery for the Company, Chamberlain was responsible for the engineering, project management, project controls and permitting of a $4 billion electric transmission capital portfolio across 10 states. In addition, he acted as Xcel Energy's management committee representative on each of four CapX2020 projects. CapX2020 is a joint initiative of 11 transmission-owning utilities in Minnesota and the surrounding region, investing $2 billion to expand the electric transmission grid to ensure continued reliable and affordable service.

Chamberlain joined Xcel Energy in 2000 as a market segment manager with responsibility for marketing power and ancillary services in newly deregulated markets, and then joined the Transmission organization in 2006.

Before joining Xcel Energy, Chamberlain spent five years at Suez leading energy, water and chemical outsourcing initiatives in a variety of heavy industries. Prior to that role, he spent nine years at Hercules, Inc., now part of Ashland Chemical.

Chamberlain earned a Master of Business Administration degree from the University of Minnesota - Carlson School of Management and a Bachelor of Science degree in chemical engineering from Purdue University. He serves on the boards of directors of Catholic Charities of St. Paul and Minneapolis and the Boy Scouts of America Northern Star Council.