



414 Nicollet Mall
Minneapolis, MN 55401

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

March 6, 2023

—Via Electronic Filing—

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

RE: PETITION
LONG-DURATION ENERGY STORAGE SYSTEM PILOT PROJECT AT SHERCO
DOCKET NO. E002/M-23-_____

Dear Mr. Seuffert:

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission the enclosed Petition for Approval for the Company to implement an energy storage system pilot project. This exciting project with Form Energy, located near our retiring Sherco coal plant in Becker, Minnesota, will allow us to test exciting new emerging technologies that can help us provide 100 percent carbon-free energy to our customers in the coming decades while maintaining reliable, safe, and affordable electric service.

Portions of the enclosed documents are marked “NOT PUBLIC” as they contain information the Company considers to be trade secret data as defined by Minn. Stat. §13.37(1)(b). This data includes confidential pricing and vendor information. This information has independent economic value from not being generally known to, and not being readily ascertainable by, other parties who could obtain economic value from its disclosure or use.

Attached to this cover letter, we provide the required information as specified in Minn. R. 7829.1300 and Minn. R. 7829.0700, including to whom information requests should be directed.

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

We have electronically filed this document with the Commission, and copies have been served on the parties on the attached service lists. Please contact Karin Haas at karin.b.haas@xcelenergy.com or me at monsherra.s.blank@xcelenergy.com if you have any questions regarding this filing.

Sincerely,

/s/

MONSHERRA BLANK
DIRECTOR, REGULATORY AND STRATEGIC ANALYSIS

Enclosures
cc: Service Lists

REQUIRED INFORMATION

I. SUMMARY OF FILING

A one-paragraph summary is attached to this filing pursuant to Minn. R. 7829.1300, subp. 1.

II. SERVICE ON OTHER PARTIES

Pursuant to Minn. Stat. § 216.17, subd. 3, we have electronically filed this document with the Commission. Pursuant to Minn. R. 7829.1300, subp. 2, the Company has served a copy of this filing on the Department of Commerce and the Office of the Attorney General. A summary of the filing has been served on all parties on the enclosed service list.

III. GENERAL FILING INFORMATION

Pursuant to Minn. R. 7829.1300, subp. 3, the Company provides the following information.

A. Name, Address, and Telephone Number of Utility

Northern States Power Company doing business as:
Xcel Energy
414 Nicollet Mall
Minneapolis, MN 55401
(612) 330-5500

B. Name, Address, and Telephone Number of Utility Attorney

Matt Harris
Managing Attorney
Xcel Energy
414 Nicollet Mall, 401 – 8th Floor
Minneapolis, MN 55401
(612) 330-7641

C. Date of Filing

The date of this filing is March 6, 2023.

REQUIRED INFORMATION

D. Statute Controlling Schedule for Processing the Filing

This filing is made pursuant to Minn. Stat. § 216B.50; Minn. Stat. § 216B.16; and specifically Minn. Stat. § 216B.16, subd. 7e, which allows a utility to petition the Commission to recover costs associated with energy storage system pilot projects approved by the Commission.

Commission Rules define this filing as a “miscellaneous filing” under Minn. R. 7829.0100, subp. 11 since no determination of Xcel Energy’s overall revenue requirement is necessary. Minn. R. 7829.1400, subp. 1 and 4 permit comments in response to a miscellaneous filing to be filed within 30 days and reply comments to be filed no later than 10 days thereafter.

E. Utility Employee Responsible for Filing

Monsherra S. Blank
Director, Regulatory and Strategic Analysis
Xcel Energy
414 Nicollet Mall, 401 – 7th Floor
Minneapolis, MN 55401
monsherra.s.blank@xcelenergy.com

IV. MISCELLANEOUS INFORMATION

Pursuant to Minn. R. 7829.0700, the Company requests that the following persons be placed on the Commission’s official service list for this proceeding:

Matt Harris
Managing Attorney
Xcel Energy
414 Nicollet Mall, 401 – 8th Floor
Minneapolis, MN 55401
Matt.b.harris@xcelenergy.com

Christine Schwartz
Regulatory Administrator
Xcel Energy
414 Nicollet Mall, 401 – 7th Floor
Minneapolis, MN 55401
regulatory.records@xcelenergy.com

Any information requests in this proceeding should be submitted to Ms. Schwartz at the Regulatory Records email address above.

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

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

IN THE MATTER OF THE PETITION OF
NORTHERN STATES POWER COMPANY
FOR APPROVAL OF A LONG-DURATION
ENERGY STORAGE PILOT PROJECT AT
SHERCO

DOCKET NO. E002/M-23-____

PETITION

INTRODUCTION

Northern States Power Company, doing business as Xcel Energy, submits this Petition requesting approval of a 10 megawatt (MW)/1,000 megawatt-hour (MWh), long-duration energy-storage pilot project (Pilot) at the Sherco facility site.

Xcel Energy has a Company-wide vision to provide our customers in all of our states with 100 percent carbon-free electricity by 2050. This vision directly aligns with the State of Minnesota's policy goals and statutes, including the state's latest standard requiring utilities to achieve 100 percent carbon-free energy by 2040. We are on track to achieve the new clean energy standard; under our recently approved 2020-2034 Upper Midwest Integrated Resource Plan (IRP), more than 80 percent of the electricity we provide all of our customers in the Upper Midwest will come from carbon-free sources by 2030. We recognize that advanced and evolving technologies, including energy storage, will play a critical role in helping us eliminate the remaining carbon emissions from our system while maintaining safe, affordable, and reliable electric service at times when renewable energy output is low. As such, we are dedicated to supporting emerging technologies that can help us meet our and the state's energy goals while providing benefits to our customers.

In this Petition, we are proposing an innovative 10 MW/1,000 MWh long-duration energy-storage pilot project. The 100-hour, multi-day energy storage system will feature Form Energy's cutting-edge iron-air battery storage technology, as illustrated in Figure 1, which offers distinct economic and technical benefits when compared to

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

lithium-ion battery technologies. For example, the duration of its output is far greater than is available from lithium-ion batteries, a characteristic that is needed to ensure reliability during extended renewable energy droughts. Additionally, the battery's technology is based on iron—which is extremely prevalent—as opposed to rare-earth elements.

Figure 1: Form Energy Storage System (Illustrative)



Battery Module



Enclosure



Courtesy of Form Energy

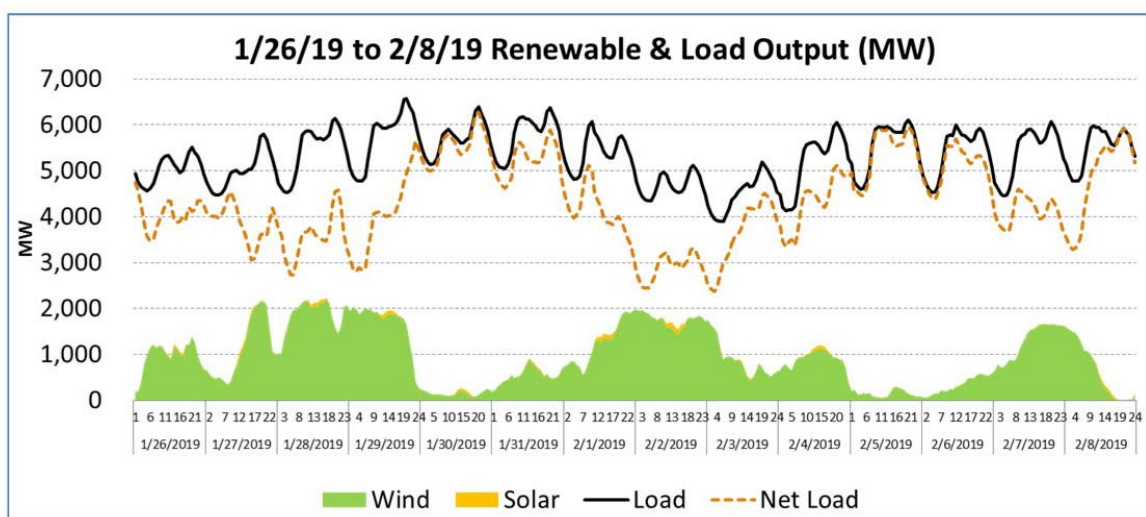
Furthermore, the Pilot will serve as another important investment to support the Becker community's energy transition plan by creating an estimated 15-20 union jobs during the construction phase and approximately \$9 million in local tax revenue over the 10-year project life. Locating the energy storage system at Becker will also provide benefits to all of the Company's customers. That is because, under the recently passed

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

Inflation Reduction Act (IRA), the Pilot will not only qualify for the standard 30 percent investment tax credit (ITC), but also an additional 10 percent bonus for being developed at our Sherco facility site, which qualifies as an “energy community.” Form Energy’s commitment to meeting domestic content requirements may also qualify the Pilot for an additional 10 percent bonus. In addition, we are actively pursuing competitive grants from the U.S. Department of Energy (DOE) and other funders that, if awarded, would further reduce the project costs. Should our grant applications be successful, we will provide updated costs to the Commission.

From a system perspective, it is important for the Company to have the ability to test and pilot emerging energy technologies that can potentially help facilitate the efficient and reliable integration of new renewables and manage peak demand. In addition, it is critical that the Company invest in storage technologies that will allow us to smooth out the production curves of renewables on the system. Given the inherent variability of wind and solar generation, we have encountered multi-day periods with low renewable generation and high loads. For example, as shown below in Figure 2, this was the case during both the January 29-31, 2019 polar vortex, which was an extreme weather event marked by historic, severe, and sustained cold temperatures combined with high winds, as well as February 5, 2019, a normal winter peak period. Multi-day energy storage technologies, such as Form Energy’s, will be crucial to meet our customers’ energy requirements, without carbon emissions, every hour of every day.

**Figure 2: Renewable Output and Load
January 26 – February 8, 2019**



**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

Conversely, there are many times during the year when renewable energy resources produce energy in excess of demand or transmission capacity, leading to congestion or curtailment of such resources. Long-duration storage facilities, like the one proposed in this Petition, have the potential to absorb such excess energy for dispatch at times when there is greater demand.

To that end, this Pilot aligns with the Minnesota Department of Commerce’s (Department’s) recommendation in its 2019 analysis of energy storage, which recommends to “specifically focus on gaining experience in operating energy storage and understanding potential operational constraints as well as opportunities to increase storage’s value to the grid.”¹ This Pilot will do exactly that by allowing us to test an energy storage system and how we can use it to provide reliability and resiliency to customers. Additionally, the approach the Company has pursued for this Pilot allows us to carefully test an emerging energy storage technology ahead of potential, larger investments in energy storage while also minimizing costs to our customers.

Beyond the Pilot’s numerous benefits for our customers, communities, and system, we further note that – while Form Energy’s iron-air technology is still in the early stages of its deployment – we are particularly excited about the technology’s use of iron (as opposed to lithium) given its potential as an economic opportunity for Minnesota, which has a long history of being one of the world’s richest iron ore reserves. Form Energy recently announced that it will build its first iron-air battery manufacturing facility in Weirton, West Virginia, and has indicated that Minnesota could serve as one potential source of iron for its supply chain as it continues to scale its energy storage solution.

Importantly, this Pilot is consistent with the Commission’s April 15, 2022 Order approving our IRP, which – among several different Order points discussing energy storage – directs the Company to deploy cost-effective energy storage technologies on a schedule faster than our Alternate Plan.² The Company was also directed by the Commission to provide a deeper analysis of energy storage resource options in our next IRP; we believe the development of this Pilot will help inform and allow for such analysis in our next IRP, which is due to be filed by February 1, 2024. Furthermore, as this Pilot would be placed in service by year-end 2025, it will provide some key insights as we seek to add additional solar and/or solar-plus-storage hybrid resources

¹ Minnesota Department of Commerce, “Minnesota Energy Storage Cost-Benefit Analysis,” December 31, 2019, page 10.

² ORDER APPROVING PLAN WITH MODIFICATIONS AND ESTABLISHING REQUIREMENTS FOR FUTURE FILINGS, Docket No. E002/RP-19-368, April 15, 2022 (IRP Order), Order Point 5.

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

to our system between 2027 and 2032. Given the significant amount of new resources that need to be added to meet our system needs in the coming years, we believe the optimal window of opportunity for us to test and gain experience with energy storage technologies is now.

We submit this Petition pursuant to Minn. Stat. § 216B.50 as well as Minn. Stat. § 216B.16, subd. 7e, which allows a utility to petition the Commission to recover costs associated with energy storage system pilot projects approved by the Commission. This legislation was adopted in 2019 and is specifically intended to spur greater investments in energy storage pilot projects in Minnesota.

While Minn. Stat. § 216B.16, subd. 7e allows for the creation of an energy storage system rider, the Company is not seeking a new energy storage rate rider at this time. Instead, since this Pilot will provide the Company with valuable learnings in managing a long-duration energy-storage system – learnings which will help ensure reliability, resiliency, and the future integration and optimization of more renewables on our system – we believe that recovery of the project costs through the Renewable Energy Standard (RES) Rider would be appropriate. As such, we are seeking Commission approval to recover all Pilot costs through the RES Rider.

Given the Pilot’s alignment with our IRP Order, the requirements of Minn. Stat. § 216B.16, subd. 7e, and the RES Statute, as well as the many other project benefits discussed throughout this Petition, we respectfully request that the Commission approve this Pilot.

I. DESCRIPTION AND PURPOSE OF FILING

A. Background

In recent years, there has been significant, growing interest among legislators, regulators, utilities, and other key stakeholders in exploring the benefits of energy storage systems on Minnesota’s electricity grid.

In 2019, the Minnesota State Legislature enacted legislation intended to spur the development of energy storage system pilot projects within the state. Minn. Stat. § 216B.16, subd. 7e authorizes a public utility to petition the Commission to recover costs associated with implementing an energy storage system pilot project. As part of a petition, the public utility must submit the following information regarding the proposed energy storage system pilot project: storage technology used; energy storage capacity and duration of output at that capacity; proposed location; purchase and

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

installation costs; how the project will interact with existing distributed resources on our grid; and the goals that the project proposes to achieve.

On December 31, 2019, the Department released its “Minnesota Energy Storage Cost-Benefit Analysis,” which recommended energy storage become a regular part of the resource planning and competitive bidding processes. Furthermore, the Department emphasized the importance of gaining experience in operating energy storage and understanding both its limits and benefits to the grid:

Pursue targeted initiatives and programs in the next several years that prioritize the use cases that are identified as being cost-effective in this timeframe to further build experience and expertise on energy storage technologies and deployment. During this timeframe specifically focus on gaining experience in operating energy storage and understanding potential operational constraints as well as opportunities to increase storage’s value to the grid.³

Beyond Minn. Stat. § 216B.16, subd. 7e and the Department’s analysis, the Commission’s April 15, 2022 Order approving the Company’s last IRP includes several order points involving the analysis, consideration, and/or expedited deployment of energy storage resources. Order Point 5 specifically directs the Company to consider opportunities to deploy energy storage technologies on a schedule faster than our approved Alternate Plan, and that if such technologies are cost-effective and would maintain reliability and support decarbonization, the Company is required to pursue them:

Xcel shall consider opportunities to deploy renewable resources, storage technologies, and resources powered by hydrogen or clean fuel alternatives on a schedule faster than in its Alternate Plan. If deployment would be cost-effective, maintain reliability, and aid in achieving compliance with decarbonization policies, Xcel shall pursue them.⁴

Furthermore, Order Point 12 requires the Company to provide a deeper analysis of storage options in our next IRP:

Xcel shall include in its next resource plan a deeper analysis of (1) storage options, including options combining solar generation and

³ Minnesota Department of Commerce, page 10.

⁴ IRP Order at p. 33.

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

*battery storage, and (2) the role of hydrogen and clean fuel alternatives
in Xcel's resource mix.*⁵

As discussed in our compliance filing submitted on June 14, 2022 in Docket No. E002/RP-19-368, the Company is fully committed to considering and testing a wide range of cost-effective advanced energy technologies, including energy storage, that can help us further decarbonize our system and benefit our customers. This Pilot marks an important step in our clean energy transition. By partnering with Form Energy on an innovative 10 MW/1,000 MWh multi-day energy storage system pilot – one that achieves bonus ITC qualification and is a candidate for further funding from DOE and other grantors – the Company can gain important experience and insights related to managing an energy storage system at a reduced cost to customers.

In the following sections, we provide the specific information required under Minn. Stat. § 216B.243, subd. 7e for energy storage system pilot projects:

- A description of the storage technology;
- The capacity and duration of output of that capacity for the proposed storage technology;
- The proposed project location;
- Purchase and installation costs;
- Information on how the project will interact with existing distributed generation resources; and
- Goals that the project proposes to achieve.

1. Storage Technology

As mentioned earlier, the Pilot will utilize iron-air battery storage technology provided by Form Energy. Form Energy utilizes rechargeable iron air – often described as “rusting and unrusting” – to charge and discharge energy from the battery, as depicted in Figure 3 below.

⁵ *Id.* at p. 37.



- Scalable: The technology uses materials available at the global scale needed for a zero-carbon economy, including iron ore, which is readily available in Minnesota.
- Safe: The technology utilizes non-flammable aqueous electrolyte, possesses no risk of thermal runaway, and uses no heavy metals.
- Modular: It can be sited anywhere on the grid with modular architecture that can be configured to unique site requirements, including our Sherco facility site.

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

Form Energy was founded in 2017 by a group of energy storage veterans motivated to reshape the global electric system by creating a new class of low-cost, multi-day energy storage systems. Form Energy's iron-air technology is optimized to store electricity for 100 hours at system costs competitive with legacy power plants.

Further, although the Pilot will not involve iron from Minnesota, the commercialization of iron-air battery storage technology could represent an important economic opportunity for Minnesota, given the state's long history as a leading global supplier of iron ore. Consistent with this opportunity, Form Energy intends to source iron domestically in the long-term.

2. Energy Storage Capacity and Duration of Output at that Capacity

The Pilot will be a 10 MW/1,000 MWh, fully integrated modular energy storage system offering 100-hour (multi-day) duration that can deliver grid-scale reliable capacity year-round. The intended operating temperature of the asset is approximately -40 degrees Fahrenheit to 122 degrees Fahrenheit, consistent with expected annual temperature ranges in Minnesota. The expected life of Form Energy's energy storage system is 10 years.

3. Proposed Location

The Pilot will be strategically located at our Sherco facility site and will include hundreds of storage enclosures across approximately five acres. Figures 4 and 5 illustrate the project's proposed proximity to the Sherco facility and other projects.

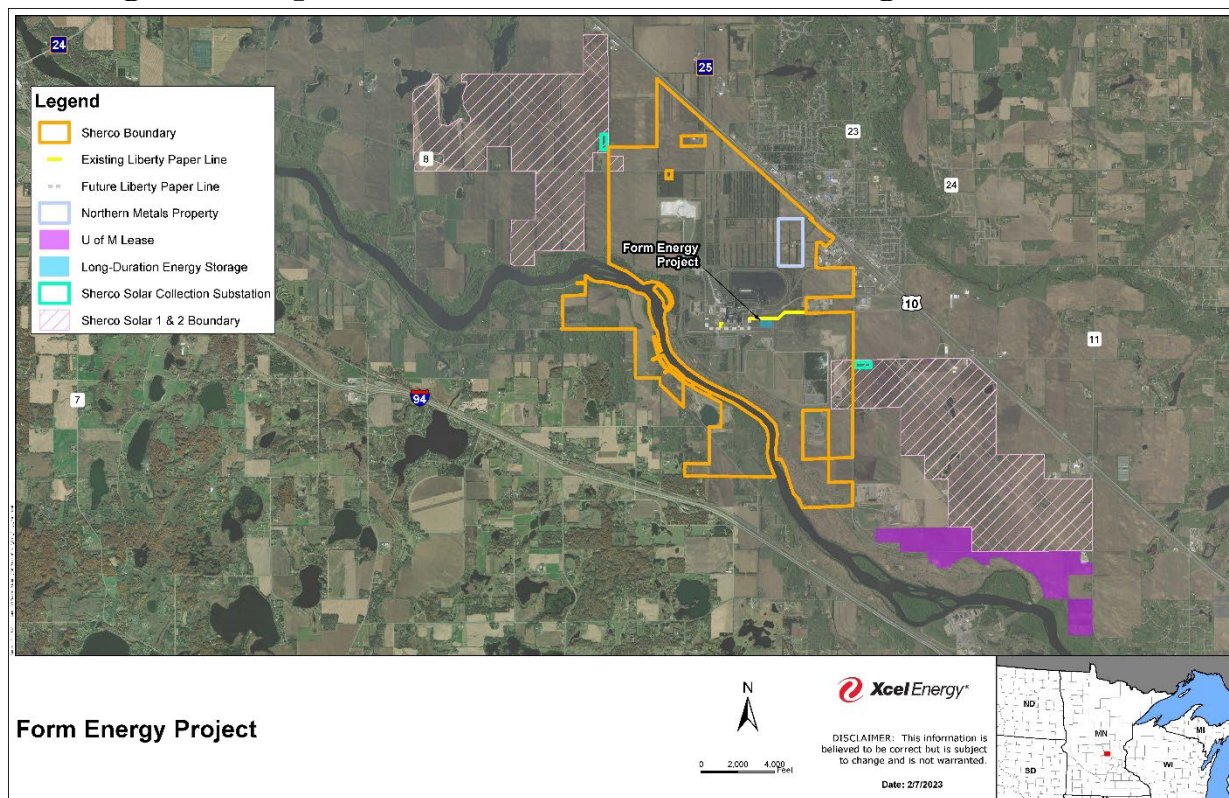
**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

Figure 4: Proposed Site Area for Long Duration Energy Storage Pilot Project



**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

Figure 5: Proposed Pilot Location and Surrounding Sherco Site Area



The Company is proposing to develop this project at the Sherco facility site to further support the Becker community’s economic transition, support new solar resources, and qualify for the ITC bonus credit, which will further reduce costs to customers.

Under the recently passed IRA, an ITC bonus credit of 10 percent is applied to new energy storage projects developed in energy communities, which is defined as either “brownfield sites” or “fossil fuel communities.” Given Becker’s status as an impacted power plant host community, it is the Company’s interpretation that the Pilot will qualify for the bonus credit. We provide further detail on the ITC bonus in the following section.

4. Purchase and Installation Costs

As mentioned earlier, by being located at our Sherco facility site in an energy community, the Pilot will qualify for 30 percent investment tax credit and an additional 10 percent bonus for being located in an Energy Community. The Pilot may also qualify for another 10 percent bonus from Form Energy’s commitment to meeting domestic content requirements.

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

We anticipate refining the final project costs after the Internal Revenue Service (IRS) issues guidance on some of the requisite ITC provisions included in the IRA. Based on the Company's current assessment of project costs, we expect the entire 10 MW/1,000 MWh energy storage system to cost approximately **[PROTECTED DATA BEGINS [REDACTED] PROTECTED DATA ENDS]** including AFUDC, but not including any potential future grant funding. We estimate **[PROTECTED DATA BEGINS [REDACTED] PROTECTED DATA ENDS]** decommissioning costs (net of any salvage) based on the high end of the range provided by Form Energy. The decommissioning costs are included in depreciation over the 10-year life of the asset. We note that while this represents our best current estimate, decommissioning costs could change as disposal technology improves and estimates are refined. After factoring in the applicable ITC treatment, we estimate that the Pilot will cost approximately **[PROTECTED DATA BEGINS [REDACTED] PROTECTED DATA ENDS]** on a levelized basis. As with other recent renewable energy projects, should the Company realize additional tax savings from the IRA, we are committed to passing those savings onto our customers to further improve the Pilot's economics.

In addition, the Company is in the process of compiling an application to DOE in response to its Funding Opportunity Announcement for battery storage projects, and we are pursuing other competitive grants as well. If our applications are successful, any grant awards from DOE or others would further reduce the cost of the project. We expect DOE to make its grant selections in summer of 2023. We will provide updated cost information in this docket, should we receive grant funding.

5. *How the Project will Interact with Existing Distributed Generation Resources on the Utility's Grid*

The Pilot will connect to the transmission system via surplus interconnection at the Sherco Solar collector substation. The Pilot will interact and coordinate with the Sherco Solar Project to ensure stable operation and provide needed reliability and resiliency as the Company continues to integrate more renewable resources on our system. It will also provide valuable learnings on how to incorporate a long duration energy storage system in our operations, which will help facilitate the integration and optimization of future renewables.

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

6. *Goals the Project Proposes to Achieve*

This Pilot proposes to gain experience and insights related to the operation of energy storage systems on our grid. Specifically, we hope to better understand the value of energy storage systems with:

- Dispatching during extended renewable droughts;
- Controlling frequency or voltage;
- Mitigating transmission congestion;
- Providing emergency power supplies during outages;
- Reducing curtailment of existing renewable energy generators;
- Reducing peak power costs; and
- Reducing carbon emissions by facilitating the efficient integration of new renewables.

Beyond these Pilot learnings, we hope to help advance a more just energy transition by siting the project in a community directly impacted by the clean energy transition.

In sum, based on the innovative nature of this Pilot, the benefits it will provide to our customers and the local community, the learnings it will provide to the Company, and the efforts the Company has taken to minimize its costs, the Pilot is in the public interest.

B. Authorization to Acquire Energy Storage System

In this section, we discuss the statute and rules governing our proposed acquisition of the proposed energy storage system from Form Energy.

1. *Minn. Stat. § 216B.50*

Minn. Stat. § 216B.50 governs the transfer of utility assets exceeding \$100,000:

No public utility shall sell, acquire, lease, or rent any plant as an operating unit or system in this state for a total consideration in excess of \$100,000 . . . without first being authorized so to do by the commission. . . . If the commission finds that the proposed action is consistent with the public interest, it shall give its consent and approval. . . . In reaching its determination, the commission shall take into consideration the reasonable value of the property, plant, or securities to be acquired or dispatched of, or merged and consolidated.

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

We respectfully request that the Commission find that our proposed acquisition of the energy storage system is in the public interest for the reasons discussed above, and thus complies with Minn. Stat. § 216B.50.

2. *Minn. R. 7825.1800*

Acquisitions of property also are governed by Minn. R. 7825.1800, subps. B, C, and D of which state that petitions to acquire property shall contain the following:

B. Petitions for approval of a transfer of property shall be accompanied by the following: all information as required in part 7825.1400, items A to J; the agreed upon purchase price and the terms for payment and other considerations.

C. A description of the property involved in the transaction including any franchises, permits, or operative rights, and the original cost of such property, individually or by class, the depreciation and amortization reserves applicable to such property, individually or by class. If the original cost is unknown, an estimate shall be made of such cost. A detailed description of the method and all supporting documents used in such estimate shall be submitted.

D. Other pertinent facts or additional information that the commission may require.

Below we discuss compliance with this rule and respectfully request that the Commission waive application of Minn. R. 7825.1800, subp. B, consistent with prior similar acquisitions.

3. *Minn. R. 7825.1800, subp. B – Variance Request*

Minn. R. 7825.1800, subp. B requires detailed information (items A through J) set forth in Minn. R. 7825.1400. That rule—entitled, Filing Requirements for Capital Structure Approval—however, concerns capital structure filings and is geared toward the issuance of securities, which is not at issue here.

Accordingly, we respectfully request that the Commission waive application of Minn. R. 7825.1800, subp. B. The Commission has previously granted a variance to the requirements to provide the information outlined under Minn. R. 7825.1400 (A)-(J) in

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

proposed acquisition of property transactions. The Commission has found that Minn. R. 7825.1400 is applicable to capital structure filings and, therefore, the information does not pertain to petitions to acquire property. The Company respectfully requests a similar variance in this case pursuant to Minn. R. 7829.3200. Minn. R. 7829.3200 allows the Commission to vary its rules if it finds:

- (a) Enforcement of the rule would impose an excessive burden upon the applicant or others affected by the rule;*
- (b) Granting the variance would not adversely affect the public interest; and*
- (c) Granting the variance would not conflict with standards imposed by law.*

The Company can satisfy all three elements. First, as noted above, the proposed transaction does not implicate the information sought by Minn. R. 7825.1400 (A)-(J) and, thus, its provision would impose an excessive burden on the Company. Second, because the proposed transaction does not involve the issuance of securities, granting a variance does not conflict with the public interest. Third, as evidenced by previous Commission precedent waiving these requirements under similar circumstances, a waiver will not violate any standards imposed by law.

With regard to Minn. R. 7825.1800, subps. C and D, we provided applicable project cost and other pertinent information above.

C. Cost Recovery

As mentioned earlier, Minn. Stat. § 216B.16, subd. 7e provides that a utility may petition the Commission to approve a rate schedule that provides for the automatic adjustment of charges to recover prudently incurred investments, expenses, or costs associated with energy storage system pilot projects approved by the Commission. Rather than set forth the specific elements of such a rate schedule, however, Minn. Stat. § 216B.16, subd. 7e states that any such rate schedule “must include the elements listed in Minn. Stat. § 216B.1645, subd. 2a, clauses (1) to (4),” the statute authorizing the Company’s RES Rider.

Given that the Commission has authorized the Company’s RES Rider under Minn. Stat. § 216B.1645, subd. 2a, clauses (1) to (4), and given that creation of a new rate rider specifically for this one energy storage pilot project would therefore be unnecessary, the Company requests approval to recover the costs of this Pilot through the RES Rider. Beyond this statutory support for such an approach, RES Rider

**PUBLIC DOCUMENT –
NOT PUBLIC DATA HAS BEEN EXCISED**

recovery of this Project is broadly consistent with the goals of both the RES statute, Minn. Stat. § 216B.1691, as the Pilot is designed to provide reliability, resiliency, and valuable learnings that can help foster the integration and optimization of more renewables in the future. Based on the foregoing, the Company requests that the Commission allow the Company to pursue recovery of all project costs – less applicable tax credits and bonuses and potential future grant awards – in a future RES Rider filing.

CONCLUSION

As the Company continues to integrate more renewable energy resources as part of our plan to provide 100 percent carbon-free energy, it is vitally important to have the ability to explore and pilot storage technologies that can allow for the efficient integration of new renewables and manage peak demand. This innovative Pilot in partnership with Form Energy will allow us to test a new, cutting-edge storage technology and gain valuable lessons with energy storage while minimizing cost impacts to our customers. Beyond that, the Pilot will allow the Company to continue supporting the Becker community's energy transition plan while also qualifying for improved ITC treatment. This Pilot is in the public interest, and we ask that it be approved. Specifically, we respectfully request that the Commission:

- Approve this 10 MW/1,000 MWh long-duration energy-storage pilot project, to be located at our Sherco facility site;
- Approve the Company's acquisition of the batteries pursuant to the Battery Supply Agreement with Form Energy provided as Attachment A;
- Approve the Company's request for a variance of the requirements of Minn. R. 7825.1800, subp. B, and
- Allow the Company to pursue cost recovery of all project costs, less potential future grant funding and applicable tax credits and bonus credits, through the RES Rider.

We appreciate the Commission's time and consideration of this innovative energy storage Pilot in Minnesota.

Dated: March 6, 2023

Northern States Power Company

**NOT PUBLIC DOCUMENT –
NOT FOR PUBLIC DISCLOSURE**

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

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

IN THE MATTER OF THE PETITION OF
NORTHERN STATES POWER COMPANY
FOR APPROVAL OF A LONG-DURATION
ENERGY STORAGE PILOT PROJECT AT
SHERCO

DOCKET NO. E002/M-23-____

PETITION

SUMMARY OF FILING

Please take notice that on March 6, 2023, Northern States Power Company doing business as Xcel Energy filed with the Minnesota Public Utilities Commission a Petition requesting approval of a 10 megawatt (MW)/1,000 megawatt-hour (MWh), long-duration energy storage pilot project (Pilot) at the Sherco facility site.

Battery Supply Agreement

This Battery Supply Agreement (together with all exhibits and schedules, this “Agreement”) is entered into as of November 22, 2022 (the “Execution Date”), between Form Energy, Inc., a Delaware corporation (“Form Energy”), and Northern States Power Company, a Minnesota corporation (“Buyer”). Form Energy and Buyer are herein collectively referred to as the “Parties” and individually as a “Party”.

RECITALS

WHEREAS, Buyer wishes to purchase certain Battery Equipment (as defined herein) from Form Energy for incorporation into a 10 MW/1000 MWh iron-air battery energy storage system (“Project”) to be located at the Project Site (as defined herein); and

WHEREAS, Form Energy desires to sell and deliver such Battery Equipment to Buyer, subject to the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual promises and agreements of the Parties herein expressed, the Parties, intending to be legally bound, hereby agree as follows:

1. Definitions. Capitalized terms used in this Agreement without other definition shall have the following respective meanings:

“Batteries” means the Form Energy Multi-Day Battery Modules as defined in the Battery Equipment Specifications.

“Battery Equipment” means the battery equipment (in accordance with the Battery Equipment Specifications) to be provided by Form Energy to Buyer pursuant to the terms of this Agreement, including the Batteries, battery enclosures, and the battery management system, as set forth in Exhibit A.

“Battery Equipment Specifications” means the technical specifications for the Battery Equipment as set forth in Exhibit B.

“Buyer-Caused Delay” means Buyer’s failure to provide auxiliary power, electric interconnection, site water, or the internet connection required to be provided by Buyer to the Project at the Project Site, in each case, in accordance with the requirements of this Agreement or the EPC Agreement.

“Credit Rating” means the rating assigned to such entity’s unsecured, senior long-term debt obligations (not supported by third party credit enhancements).

“DDP” means “delivery duty paid” as defined by International Commercial Terms 2020.

“Date of Delivery” means the date that Form Energy has Delivered the Battery Equipment or Electrolyte, as applicable, to the Project Site.

“Delivery” means the physical transportation of the Battery Equipment or Electrolyte, as applicable, to the Project Site. The corollary terms “Deliver” and “Delivered” shall have similar meanings to “Delivery”.

“Effective Date”

“Electrolyte” has the meaning set forth in the Battery Equipment Specifications.

PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C

“EPC Agreement” means that certain Engineering, Procurement and Construction Agreement to be entered into between Buyer and Form Energy or its affiliate.

“Estimated Delivery Dates” means the schedule of dates set forth for Delivery of the Battery Equipment in Exhibit E.

“Factory Acceptance Test” shall mean a factory acceptance test for the Battery Equipment conducted in accordance with the Factory Acceptance Test Protocol approved pursuant to Section 6(a).

“Final Completion” has the meaning set forth in the EPC Agreement.

“Final Notice To Proceed” has the meaning set forth in the EPC Agreement.

“Insolvency Event” means, with respect to a Party, that such Party becomes insolvent, files a petition for bankruptcy or commences or has commenced against it proceedings relating to bankruptcy, receivership, reorganization or assignment for the benefit of creditors.

“Mechanical Completion” has the meaning set forth in the EPC Agreement.

“O&M Agreement” means that certain Operations and Maintenance Agreement to be entered into between Buyer and Form Energy or its affiliate.

“Outside Delivery Date” means the date set forth for final Delivery of the Battery Equipment in Exhibit E, which Outside Delivery Date shall be extended on a day for day basis for any delays resulting from a Force Majeure Event, Buyer-Caused Delay, or an event which permits Form Energy to exercise its remedies under Section 20.

“Project Site” means a parcel of land in or near Becker, Minnesota, or other location as is designated by Buyer in its sole discretion.

[REDACTED]

[REDACTED]

[REDACTED]

“Substantial Completion” has the meaning set forth in the EPC Agreement, which shall include the fill of the Electrolytes into the Battery Equipment at the Project Site.

2. Term. The term of this Agreement shall commence on the Effective Date and end upon full performance by Form Energy of its obligations hereunder unless extended by mutual written agreement of the Parties (the “Term”). Buyer shall use best efforts to cause the Effective Date to occur on or before December 16, 2022.

3. [REDACTED]

PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4. Purchase and Sale. Buyer shall purchase from Form Energy, and Form Energy shall sell to Buyer, the Battery Equipment identified in Exhibit A in accordance with the terms set out in this Agreement. Form Energy shall have the right to make reasonable updates to Exhibit A before the date of the Final Notice To Proceed to reflect updates to the description of the Battery Equipment; provided, that any such updates shall be memorialized in a written amendment to this Agreement signed by both Parties. The Battery Equipment shall comply with the Battery Equipment Specifications. Form Energy reserves the right to amend or supplement the Battery Equipment Specifications in its reasonable discretion from time to time with prior written notice to Buyer, provided that any such changes do not adversely affect the Battery Equipment Specifications or Form Energy's obligations, covenants, or the performance of its obligations or covenants hereunder or under the Limited Warranty (as defined in Section 18 below). Form Energy is only responsible for supplying and providing the equipment specifically identified in the description of the "Battery Equipment" in Exhibit A; provided, that Form Energy may supply and provide such additional, other or alternative equipment as Form Energy reasonably determines to be necessary to effectuate the purposes and intent of this Agreement, including additional goods or equipment contemplated by the EPC Agreement, in each case following prior written notice to Buyer.

5. Battery Equipment Price and Payment Schedule. Buyer shall pay Form Energy [REDACTED]

[REDACTED]

[REDACTED]

PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]


6. Factory Acceptance Test; Pre-Delivery Inspections.

- (a) On or before the sixtieth (60th) day prior to the expected date for the first Factory Acceptance Test to be performed pursuant to Section 6(b), Form Energy shall deliver to Buyer a set of factory acceptance test protocols in respect of the Battery Equipment ("Factory Acceptance Test Protocols"). Buyer shall have ten (10) Business Days to review and comment on such Factory Acceptance Test Protocols. Following such ten (10) Business Day period, Form Energy shall address any comments provided by Buyer and resubmit such Factory Acceptance Test Protocols to Buyer for approval, not to be unreasonably withheld, conditioned, or delayed. Buyer's failure to respond in such ten (10) Business Day period shall be deemed acceptance of such Factory Acceptance Test Protocols.

(b) [REDACTED]

7. Delivery; Delays; Auxiliary Power.

- (a) Form Energy shall Deliver the Battery Equipment to the Project Site DDP (Incoterms 2020) except as modified in Section 11 regarding risk of loss, in one or more shipments. Form Energy shall be responsible for all transport and Delivery expenses.

- (b) Form Energy shall use commercially reasonable efforts to Deliver the Battery Equipment in accordance with the Estimated Delivery Dates. Form Energy shall confirm the date of Delivery with Buyer in writing at least ten (10) Business Days prior to the scheduled date of Delivery of such shipment, which dates shall be subject to Buyer's approval if occurring outside of the Estimated Delivery Dates (such approval not to be unreasonably withheld).
 - (c) Buyer shall, as a condition to the obligation of Form Energy to Deliver the Electrolyte to the Project Site, provide and maintain continuous auxiliary power to the Project sufficient for Form Energy to power the Battery Equipment safety, monitoring, and control systems, and otherwise satisfy any requirement under the Battery Specifications necessary to permit the fill of the Electrolytes into the Battery Equipment at the Project Site and to achieve any subsequent Milestones.
 - (d) 
8. Battery Equipment Maintenance. Form Energy shall not be liable, under the Limited Warranty or otherwise, for any Battery Equipment defects or underperformance resulting from installation or maintenance of the Battery Equipment by an entity other than Form Energy or a contractor authorized by Form Energy, unless otherwise authorized by Form Energy in writing.
9. Delayed Acceptance. If, on any date that Form Energy would otherwise Deliver a shipment of Battery Equipment or Electrolyte to Buyer DDP (Incoterms 2020), a Buyer Event Of Default exists (or Form is otherwise permitted to exercise remedies) under Section 20 of this Agreement or any other agreement between Buyer and Form Energy, Form Energy may elect to delay Delivery of the Battery Equipment or Electrolyte without liability; provided, that Form Energy shall promptly Deliver the Battery Equipment or Electrolyte once such Buyer Event Of Default or other matter permitting the exercise of remedies is cured or otherwise resolved.
10. Inspection and Rejection. Form Energy shall grant a representative of Buyer, during the ten (10) Business Day period following each delivery of Battery Equipment to the Project Site, the right to visually inspect the external packaging of such Battery Equipment and the Battery Equipment. Buyer may reject such Battery Equipment if, after such visual inspection, Buyer observes damage, failure, or other defects present in, with, or to such Battery Equipment and provides written documentation (including photos or other evidence, if applicable) to Form Energy. Upon the expiry of such ten (10) Business Day period, unless Buyer has properly rejected the Battery Equipment in accordance with the preceding sentence, Buyer shall be deemed to have accepted the Battery Equipment. Thereafter, Buyer shall have no right to reject the Battery Equipment, except in accordance with the EPC Agreement and Limited Warranty.
11. Title; Risk of Loss. Title to the Battery Equipment passes to Buyer upon Delivery to the Project Site. Risk of loss for the Battery Equipment passes to Buyer upon Mechanical Completion. The foregoing provisions shall apply notwithstanding anything to the contrary that would otherwise be applicable under DDP (Incoterms 2020) obligations.
12. Reserved.
13. Invoicing; Payment; Late Payments.

PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C

- (a) [REDACTED]
- (b) Form Energy shall invoice by electronic mail to Buyer. Buyer shall pay invoices in US Dollars by wire transfer or other electronic means approved by Form Energy. When submitting the invoice, Form Energy shall include for itself and each of its subcontractors an executed conditional lien waiver and release on progress payment, the form of which shall be provided by Buyer, duly completed, and within thirty (30) days after receipt of such payment due under this Agreement, Form Energy shall provide to Buyer for itself and each of its subcontractors an executed unconditional lien waiver and release on progress payment, the form of which shall be provided by Buyer, duly completed. When submitting the invoice for the final payment due under this Agreement, Form Energy shall include for itself and each of its subcontractors an executed conditional waiver and release on final payment, the form of which shall be provided by Buyer, duly completed, and within thirty (30) days after receipt of such final payment due under this Agreement, Form Energy shall provide to Buyer for itself and each of its subcontractor an executed unconditional waiver and release on final payment, the form of which shall be provided by Buyer, duly completed.
- (c) Buyer shall notify Form Energy of any good faith invoice dispute and provide substantiating documentation within ten (10) Business Days of Buyer's receipt of the disputed invoice. Notwithstanding any dispute, Buyer shall pay all amounts not disputed in good faith in accordance with this Section 13. [REDACTED]
- [REDACTED] Buyer shall reimburse Form Energy for all costs incurred in collecting any late payments, including attorneys' fees.
14. Taxes. The Battery Equipment Price is exclusive of, and Buyer is solely responsible for, all sales, use and excise taxes, and any other similar taxes and charges of any kind imposed by any governmental authority on any amounts payable by Buyer. Where required or allowed by law, unless Buyer furnishes to Form Energy lawful evidence of exemption, Form Energy will invoice Buyer for the amount of any such tax and remit such amount to the applicable taxing authority. If Buyer is required by law to deduct or withhold any amount of tax from a payment to Form Energy, Buyer shall (a) promptly remit such amount to the applicable taxing authority and provide Form Energy with a receipt for such remittance and (b) increase the amount of its payment to Form Energy by the amount necessary to ensure Form Energy receives the full amount which it would have received if no deduction or withholding had been made.
15. Set-off Right. Buyer shall have the right and option (but not the obligation) to offset against, and/or recover from, amounts otherwise due and payable by Buyer to Form Energy under this Agreement any amount due to Buyer from Form Energy under this Agreement.
16. Quarterly Update. Within sixty (60) days following the last day of each calendar quarter during the Term, the Parties shall meet telephonically or in person to discuss the status of completion of the Milestones and related obligations of the Parties hereunder, and upon Buyer's reasonable request, Form Energy shall provide Buyer written updates with respect to the status of completion of the Milestones and Form Energy's related obligations hereunder.
17. Decommissioning. Form Energy shall cooperate with Buyer to develop a mutually agreeable plan for the decommissioning of the Battery Equipment and any related balance of plant (e.g., battery enclosures, power conversion system) in accordance with applicable law (the "Decommissioning

Plan”). The Decommissioning Plan shall address the end-of-life management of the Battery Equipment, including the dismantling, removal, transportation, and disposal of the Batteries and any associated solid and hazardous waste in accordance with applicable law, and any restoration of the Project Site, if required. Form Energy shall, no less than annually during the Term, provide written updates in respect of the Decommissioning Plan to Buyer.

18. Limited Warranty.

- (a) Form Energy warrants the Battery Equipment pursuant to the Battery Equipment Limited Warranty attached hereto as Exhibit C (the “Limited Warranty”).
- (b) Except as set out in the Limited Warranty, the EPC Agreement, the O&M Agreement, and this Agreement (each, a “Project Agreement”), Form Energy does not make any other guarantees, warranties or representations, or agree to any conditions, express or implied, of any nature whatsoever, including as to merchantability, fitness for a particular purpose, or use, course of dealing or usage of trade. All such guarantees, warranties, representations and conditions are expressly disclaimed to the fullest extent permitted by law.
- (c) Without limiting any of the other “exclusions” or “items not covered” identified in the Limited Warranty, Buyer acknowledges that it shall be solely responsible for all costs associated with repairing or replacing any components of the Battery Equipment that require repair or replacement as a direct result of electrical, mechanical, and/or data disconnection of the Battery Equipment contradicting Form Energy’s operational instructions (other than as needed to address emergencies or is outside of Buyer’s reasonable control) at any time by any party other than Form Energy or its subcontractors, or that is not otherwise authorized by Form Energy (which authorization should not be unreasonably withheld, conditioned or delayed) at any time during the term of the Limited Warranty. If Form Energy, at Buyer’s written request, incurs costs to remedy warranty claims caused by Buyer as described above, Buyer shall pay Form Energy’s costs within thirty (30) days of Form Energy’s invoice thereof.

19. Network Access; Remote Monitoring; Firmware Upgrades; etc.

- (a) As a condition to providing the Limited Warranty for the Battery Equipment, Buyer is responsible for establishing and maintaining a remote internet connection to the Battery Equipment. Form Energy may perform remote monitoring of the Battery Equipment as provided by the O&M Agreement and provide such firmware and software upgrades to the Battery Equipment as Form Energy reasonably deems appropriate; [REDACTED]
- (b) Any data or information obtained by Form Energy through remote monitoring of Battery Equipment shall be owned by Form Energy and may be used by Form Energy (i) to perform its obligations under the Limited Warranty for the relevant Battery Equipment; (ii) to improve Form Energy’s products and services generally (including by performing analyses on such information); and (iii) to perform its obligations under the O&M Agreement. [REDACTED]

[REDACTED] Form Energy hereby grants to Buyer and its subcontractors a limited, non-exclusive, non-sublicensable, non-transferable license to use such data and information solely in the operation, use, and performance of the Battery Equipment. Notwithstanding the foregoing, Form Energy agrees that Buyer may

PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C

transfer the foregoing license to any person or entity to whom Battery Equipment is sold or transferred pursuant to Section 38. Except for the foregoing, no license or other right to such data is granted or implied hereby.

20. Form Energy Remedies. In addition to any other remedies that may be provided under this Agreement, at law, or in equity, upon written notice to Buyer, Form Energy may suspend the Delivery of Battery Equipment, terminate this Agreement, and be entitled to payment from Buyer for any unpaid installments of the Battery Equipment Price then due, upon the occurrence of any of the following events (each, a “Buyer Event Of Default”): (a) Buyer fails to pay any undisputed amount when due and the failure is not cured within ten (10) days after Buyer’s receipt of written notice thereof from Form Energy; (b) Buyer has breached any material provision of this Agreement and the breach is not cured within thirty (30) days after Buyer’s receipt of written notice thereof from Form Energy; or (c) an Insolvency Event occurs with respect to Buyer.
21. Buyer Remedies. In addition to any other remedies that may be provided under this Agreement, at law, or in equity, Buyer may terminate this Agreement and be entitled to payment by Form Energy in the amount of the aggregate value of all payments of the Battery Equipment Price made by Buyer as of the date of termination in addition to any other amounts owed by Form Energy hereunder upon the occurrence of any of the following events (each, a “Form Energy Event of Default”): (a) if Form Energy has breached any material provision of this Agreement and such breach is not cured within thirty (30) days (or ten (10) days for any payment default) after Form Energy’s receipt of written notice thereof; or (b) if an Insolvency Event occurs with respect to Form Energy [REDACTED]
- [REDACTED]
- Buyer may terminate this Agreement: (x) if Form Energy fails to Deliver all Battery Equipment to the Project Site by the Outside Delivery Date; (y) if the EPC Agreement is terminated for a Form Event of Default (as defined in the EPC Agreement) under the EPC Agreement. [REDACTED]
- [REDACTED]

22. [REDACTED]

[REDACTED]

23. Confidentiality; Publicity.

- (a) Confidentiality. During the Term, each Party shall hold in strict confidence from any unaffiliated third-party (which, for the avoidance of doubt, shall not include any of such Party's Affiliates or representatives), the terms and conditions of this Agreement and all non-public, proprietary or confidential information furnished by or on behalf of the other Party in connection with this Agreement or the transactions contemplated hereby (collectively, "Confidential Information"). and shall cause its Affiliates and its and their respective representatives to hold the Confidential Information in strict confidence on terms no less restrictive than those set forth in this Section 23. Notwithstanding the foregoing, either Party may disclose Confidential Information to the extent that (i) such Party is required to disclose such Confidential Information by applicable laws; judicial, regulatory, or administrative process (including customary disclosures in connection with obtaining the necessary approvals of this Agreement and the transactions contemplated hereby); or rules of the stock exchange on which its shares, or the shares of its parent company, are listed; or (ii) such documents or other information are disclosed in an action brought by a Party hereto in pursuit of its rights or in the exercise of its remedies hereunder; *provided, however*, that the Party required to make any disclosure as set forth in (i) and (ii) shall reasonably cooperate with the other Party in limiting the scope of such required disclosure or implementing reasonable safeguards protecting such disclosure. "Confidential Information" shall not include any such documents or information to the extent that such documents or information can be shown to have been (A) previously known by the Party obligated to keep such confidence, (B) in the public domain (either prior to or after the furnishing of such documents or information hereunder) through no fault of the Party obligated to keep such confidence, (C) later acquired by the Party obligated to keep such confidence from another source if such Party is not aware that such source is under an obligation to another Party hereto to keep such documents and information confidential, or (D) developed or derived without the aid, application or use of such documents or information. The obligations contained in this Section 23 shall survive for two (2) years following the Term. The Parties agree that a Party seeking to enforce this Section 23 shall be entitled to seek specific performance and injunctive relief as remedies for any breach hereof. Notwithstanding the foregoing, the Parties hereby agree that Buyer shall be permitted to disclose the existence of this Agreement, the Project (and its current status), and other information and/or documentation related thereto in connection with regulatory requests, filing(s), including public filings, and/or approval(s) or communications with such regulators for the transactions contemplated herein and hereby, *provided, however*, that Buyer shall reasonably cooperate with Form Energy in limiting the scope of such required disclosure or implementing reasonable safeguards protecting such disclosure.
- (b) Publicity. Neither Party shall use the other Party's mark, name or logo in any marketing literature, web sites, articles, press releases (including interviews with representatives of media organizations of any form), or any other document or electronic communication, without the prior written consent of the other Party. Either Party, with the prior written consent of the other Party, shall be permitted to make a public announcement concerning the existence of this Agreement, within a reasonable time after the Effective Date; provided that the text of any such public announcement of either Party shall be subject to the prior written consent of the other Party. The Parties shall cooperate to issue a jointly-approved public announcement within a reasonable time after the Effective Date.

24. Intellectual Property Rights. As between the Parties, Form Energy shall remain the sole and exclusive owner of all rights arising under contract, statutes, civil law or common law, whether or not perfected, associated with (a) patents and patent applications; (b) trademarks, service marks,

layouts, designs, trade dress, decor and color schemes; (c) works of authorship, including, without limitation, copyrights, source codes, moral rights, and neighboring rights; (d) the protection of its trade and industrial secrets and confidential information; and (e) divisions, continuations, renewals, re-issuances, re-examinations, applications and registrations, and extensions of the foregoing (as applicable) now existing or hereafter filed, issued, or acquired ("Intellectual Property Rights") associated with any Battery Equipment or any parts or derivations thereof. If the Battery Equipment includes any software (i.e., firmware), Form Energy hereby grants to Buyer and its subcontractors a limited, non-exclusive, non-sublicensable, non-transferable license to use such software solely in the operation of the Battery Equipment at the Project Site. Notwithstanding the foregoing, Form Energy agrees that Buyer may transfer the foregoing license to any person or entity to whom any Battery Equipment is sold or transferred pursuant to Section 38. Except for the foregoing, no license or other right to Form Energy's Intellectual Property Rights is granted or implied hereby.

25. Limitations of Liability.

- (a) NEITHER FORM ENERGY NOR BUYER NOR ANY OF EITHER OF THEIR AFFILIATES, SUCCESSORS OR ASSIGNS, OR THE RESPECTIVE SHAREHOLDERS, PARTNERS, ASSIGNS, DIRECTORS, OFFICERS, AGENTS OR EMPLOYEES OR REPRESENTATIVES OF EITHER OF THEM, SHALL BE LIABLE TO THE OTHER UNDER THIS AGREEMENT FOR CONSEQUENTIAL, SPECIAL, EXEMPLARY, PUNITIVE, INDIRECT OR INCIDENTAL LOSSES OR DAMAGES, OR LOSS OF USE, COST OF CAPITAL, LOSS OF GOODWILL, LOST REVENUES OR LOSS OF PROFIT.
- (b) NEITHER PARTY'S AGGREGATE LIABILITY ARISING OUT OF OR RELATED TO THIS AGREEMENT, WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, SHALL EXCEED THE BATTERY EQUIPMENT PRICE UNDER THIS AGREEMENT. THE LIMITATIONS OF LIABILITY UNDER THIS SECTION 25(B) AND ANY SUCH LIMITATIONS CONTAINED IN THE LIMITED WARRANTY ARE CUMULATIVE. BUYER SHALL NOT BE ENTITLED TO MAKE A CLAIM ARISING OUT OF THE SAME DEFECT, EVENT OR CIRCUMSTANCES UNDER BOTH THIS AGREEMENT AND THE LIMITED WARRANTY.
- (c) THE LIMITATIONS OF LIABILITY SET OUT IN SECTIONS 25(A) AND (B) SHALL NOT APPLY TO: (A) BUYER'S OBLIGATION TO MAKE PAYMENTS FOR THE BATTERY EQUIPMENT UNDER THIS AGREEMENT; (B) FORM ENERGY'S COST OF PERFORMANCE UNDER THE AGREEMENT; (C) DAMAGES ATTRIBUTABLE TO EITHER PARTY'S BREACH OF ITS CONFIDENTIALITY OBLIGATIONS; (D) ANY VIOLATION OF A PARTY'S INTELLECTUAL PROPERTY RIGHTS; (E) THIRD-PARTY CLAIMS THAT ARE THE SUBJECT OF INDEMNIFICATION UNDER THIS AGREEMENT; (F) DAMAGES ATTRIBUTABLE TO A PARTY'S INTENTIONAL TORTS OR GROSS NEGLIGENCE; OR (G) ANY OTHER ACTS OR OMISSIONS FOR WHICH LIABILITY CANNOT BE DISCLAIMED OR LIMITED UNDER APPLICABLE LAW.
- (d) The Parties intend that the EPC Agreement shall include a limitation of liability of the Parties that includes the Battery Equipment Price and the EPC Agreement price, provided that neither Party shall be entitled to recover compensation with respect to any Losses incurred under this Agreement or another Project Agreement to the extent that such Party has already been compensated in respect of such Loss pursuant to this Agreement or another Project Agreement.

26. General Indemnity. Each Party shall defend, indemnify and hold harmless the other Party, its Affiliates, and their respective directors, officers, partners, members, shareholders, agents, employees, subcontractors, successors and assigns (collectively, “Representatives”) from and against any losses, damages and liabilities, including reasonable attorneys’ fees (collectively, “Losses”) arising from (a) any claim, action, suit, proceedings, demand, investigation or assessment made or brought by any third party (collectively, “Claims”) alleging injury or death of persons, or damage to or loss of property, to the extent caused by or arising from the negligent acts or omissions or acts of willful misconduct of the indemnifying Party or its Representatives in connection with any Battery Equipment, its use, or the performance of this Agreement; or (b) any failure by the indemnifying Party or its Representatives to comply with applicable laws (including, without limitation, the FCPA (as defined in Section 30) or any applicable export control laws).
27. IP Indemnity. Form Energy shall indemnify, defend and hold harmless Buyer and its Representatives from any Losses arising out of any Claim alleging that Battery Equipment infringes the Intellectual Property Rights of a third party. However, Form Energy shall have no obligation to indemnify Buyer or any of its Representatives to the extent the Claim arises out of: (a) directly connecting the Battery Equipment with any other products, materials or equipment not expressly authorized by Form Energy, which authorization shall not be unreasonably withheld, conditioned, or delayed; or (b) any modifications or changes made to the Battery Equipment other than by Form Energy or otherwise consented to by Form Energy in writing, which consent shall not be unreasonably withheld, conditioned, or delayed. If an injunction or similar Claim related to infringement or alleged infringement of any Intellectual Property Rights is made that prevents or limits Buyer’s continued operation and use of the Battery Equipment, Form Energy shall, at its own expense, either (i) modify any or all of the Intellectual Property Rights so as to avoid the infringement or the alleged infringement, provided that such modification does not adversely impact the performance, safety or expected lifetime of the Battery Equipment; (ii) provide replacement equipment for the Battery Equipment subject to the Claim of infringement or alleged infringement that has the same performance, safety and expected lifetime of the infringing or allegedly infringing Battery Equipment or (iii) procure for Buyer the right to continue using the infringing or alleged infringing Battery Equipment. Buyer shall indemnify, defend and hold harmless Form Energy for any Losses arising out of any Claim alleging that Buyer’s use of Intellectual Property Rights is in violation of the license granted to Buyer pursuant to Section 24.
28. Indemnification Procedures. The indemnified Party will give the indemnifying Party prompt written notice of any claim for which indemnification is sought under Section 26 or 27. Failure to give prompt notice will not diminish the indemnifying Party’s obligations under this Section 28 to the extent such failure does not materially prejudice the indemnifying Party’s ability to defend the claim. The indemnifying Party shall control the defense of the claim, and the indemnified Party may participate in the defense at its own expense with counsel of its choice. The indemnified Party shall make available information and assistance as the indemnifying Party may reasonably request, at the indemnifying Party’s expense. The indemnifying Party may not, without the prior written consent of the indemnified Party, (a) consent to any judgment or settlement that (a) provides for injunctive or other non-monetary relief affecting the indemnified Party or its Representatives or (b) does not provide for an unconditional and full release of the indemnified Party and its Representatives. If the indemnifying Party, within a reasonable time after receipt of a request for indemnification, fails to take reasonable steps to defend indemnified Party or its Representative against a claim, the indemnified Party may undertake the defense of such claim without waiving its rights and remedies under this Agreement.
29. General Compliance with Laws; Approvals. Each Party shall comply with all laws applicable to the performance of this Agreement, including those laws applicable to each Party’s use, sale and export of the goods and/or services purchased under this Agreement. Buyer shall obtain all approvals, certifications, licenses and permits required by any applicable law or governmental

authority (collectively, "Approvals") in connection with the purchase, installation and use of any Battery Equipment. Form Energy shall obtain all Approvals with respect to any Battery Equipment that are required by any state local governmental authority, including those with jurisdiction over the Project Site, and on a nationwide basis in the USA.

30. Anti-Bribery Laws. Each Party shall comply with all national or international anti-bribery laws applicable to it, including without limitation the Foreign Corrupt Practices Act of 1977 (the "FCPA") and shall, at all times during the Term, remain in compliance and maintain appropriate policies and procedures, as necessary, to ensure ongoing compliance with all such laws. As of the Effective Date, (a) neither Party has any employees who are foreign officials as defined under the FCPA, and (b) no foreign official as defined under the FCPA has any legal or beneficial interest in a Party (or, if a Party or its direct or indirect parent company is a publicly listed company, a more than 5% legal or beneficial interest in such Party). Each Party shall promptly notify the other Party in writing in the event any of the foregoing representations would be untrue if made by Buyer at any time during the Term. Each Party acknowledges that any violation of this Section 30 constitutes just cause for immediate termination of this Agreement by the other Party.
31. Economic Sanctions Laws; Export Control Laws; End-User Statement. Buyer shall not (a) directly or indirectly export, re-export or otherwise transfer any Battery Equipment or any part thereof or (b) broker, finance or otherwise facilitate any transaction involving any Battery Equipment, in violation of any economic sanctions laws administered by the Office of Foreign Assets Control of the U.S. Treasury Department or any other governmental authority imposing economic sanctions and trade embargoes against designated countries, entities or persons. Buyer shall not, and shall not permit any third parties to, directly or indirectly, export, re-export or release any Battery Equipment, any part thereof, or any software, documentation or related technical data included with or contained in any Battery Equipment, in violation of applicable export control laws.
32. Governing Law; Dispute Resolution; Venue. This Agreement and all claims arising out of or relating to this Agreement and the transactions contemplated hereby shall be governed by the laws of the state of New York, without regard to the conflicts of law principles that would result in the application of any applicable law other than the applicable law of such state. The Parties hereby agree that United Nations Convention on Contracts for the International Sale of Goods will not apply to this Agreement. Any dispute arising from or relating to this Agreement shall first be promptly referred to the Parties' senior level management for resolution. In the event the Parties' senior level management are unable to resolve any such dispute within twenty (20) days after referral, then either Party may bring an action by legal proceeding subject to the terms of this Agreement in any state or federal court having subject matter jurisdiction over such proceeding. During the period a legal dispute filed in accordance with this Section 32 is pending before a court, all legal action or proceeding with respect to such legal dispute or any other legal dispute, including any counterclaim, cross-claim or interpleader, will be subject to the exclusive jurisdiction of such court. Each Party hereby waives, and will not assert as a defense in any legal dispute, that (i) such Party is not subject thereto, (ii) such legal action or proceeding may not be brought or is not maintainable in such court, (iii) such Party's property is exempt or immune from execution, (iv) such legal action or proceeding is brought in an inconvenient forum, or (v) the venue of such legal action or proceeding is improper. At the request of either Party, any dispute arising out of or relating to this Agreement may be joined or consolidated with any dispute arising out of or relating to any other Project Agreement. Any final judgment in any legal action or proceeding described in this Section 32, following the expiration of any period permitted for appeal and subject to any stay during appeal, will be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by applicable laws. Pending final resolution of any dispute hereunder, the Parties shall each continue to fulfill their respective obligations hereunder, irrespective of whether any dispute has been noticed, submitted, or is under negotiation or

consideration by either Party; provided that Buyer shall, subject to Section 15, continue to pay Form Energy (except for disputed amounts) in accordance with the terms of this Agreement.

33. EACH PARTY HEREBY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY PROCEEDING BASED ON, ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS AGREEMENT OR ANY COURSE OF CONDUCT, COURSE OF DEALING, VERBAL OR WRITTEN STATEMENT OR ACTION OF ANY PARTY HERETO IN CONNECTION WITH THE TRANSACTIONS CONTEMPLATED HEREBY. Each Party (i) certifies that no representative of the other Party has represented, expressly or otherwise, that such other Party would not, in the event of litigation, seek to enforce the foregoing waiver and (ii) acknowledges that it and the other Party has been induced to enter into this Agreement by, among other things, this mutual waiver.
34. Cumulative Remedies. All rights and remedies provided under this Agreement are cumulative and not exclusive, and the exercise by either Party of any right or remedy does not preclude the exercise of any other rights or remedies that may now or subsequently be available at law, in equity, by statute, in any other agreement between the Parties or otherwise. Notwithstanding the foregoing, the Parties understand and agree that Buyer's rights under the Limited Warranty for any Battery Equipment are Buyer's exclusive remedies for the events or circumstances specified therein.
35. Force Majeure. Following and during the continuation of a Force Majeure Event (as defined below), neither Party shall be liable to the other Party, nor be deemed to have breached this Agreement, for any failure or delay of such Party claiming the Force Majeure Event in performing any non-monetary obligation to the extent due to such Force Majeure Event. The Party claiming the Force Majeure Event shall (a) provide prompt notice to the other Party upon the occurrence of the Force Majeure Event, including reasonable detail regarding the cause and anticipated duration and (b) provide updates to the other Party regarding the status of, and any changes to the expected duration of, the Force Majeure Event, and (c) shall use commercially reasonable efforts (including the expenditure of commercially reasonable sums of money) to overcome the Force Majeure event with the least possible delay. "Force Majeure Event" means any act or circumstances occurring after the Effective Date that is (i) beyond a Party's reasonable control, (ii) not due to the fault or negligence of such Party (or such Party's Affiliates or subcontractors), (iii) not reasonably foreseeable and (iv) not capable of being prevented or mitigated by the exercise of reasonable precautionary measures, including (to the extent meeting the foregoing requirements): acts of God, flood, fire, earthquake, extreme weather, explosion, pandemics (excluding the COVID-19 coronavirus pandemic or any variant thereof, except to the extent the failure or delay is due to a shutdown, closure or similar order issued by a governmental authority after the Effective Date), war, terrorist threats or acts or other civil unrest, lock-outs, strikes or other labor disputes, but excluding (x) restraints or delays affecting carriers, unless caused by a separate independent Force Majeure Event, (y) the inability or delay in obtaining supplies of adequate or suitable materials, unless caused by a separate independent Force Majeure Event, or (z) changes in commodity prices. In no event will Form Energy be entitled to a change in the Battery Equipment Price as a result of a Force Majeure Event.
36. Entire Agreement; Severability. This Agreement will be deemed to have been written by the Parties, constitutes the entire agreement between the Parties regarding its subject matter and supersedes all prior agreements, representations and understandings, oral or written, between the Parties regarding its subject matter. If any provision of this Agreement is held by a court of competent jurisdiction to be illegal or unenforceable, such provision shall be interpreted so as to best accomplish the objectives of the original provision and the remaining provisions of this Agreement shall remain in full force and effect.

37. Amendment; Modification; Waiver. No amendment or modification of this Agreement is effective unless it is in writing and signed by each Party. No waiver by either Party of any provision of this Agreement is effective unless set forth in writing and signed by such Party. No failure to exercise, or delay in exercising, any right or remedy arising from this Agreement operates as a waiver thereof. No single or partial exercise of any right or remedy hereunder precludes any other or further exercise of that right or remedy or the exercise of any other right or remedy.
38. Assignment. Neither Party may, directly or indirectly, assign its right or obligations under this Agreement (and Buyer may not sell or transfer title to any Battery Equipment to any third party) without the prior written consent of the other Party, which consent shall not be unreasonably withheld, conditioned, or delayed; provided that (i) either Party may collaterally assign this Agreement as collateral in connection with its financing activities, (ii) Buyer may assign this Agreement or title to any Battery Equipment to any Affiliate of Buyer, and (iii) if Buyer desires to sell or transfer title to any Battery Equipment to any third party pursuant to this Section 38, Form Energy shall have the option to re-purchase such Battery Equipment from Buyer at the Repurchase Price. Any purported assignment, delegation, transfer, or sale in violation of this Section 38 is null and void. This Agreement shall be binding upon and inure to the benefit of and be enforceable by the respective successors and permitted assigns of the Parties.
39. No Third-Party Beneficiaries. This Agreement is for the sole benefit of the Parties and their respective successors and permitted assigns. Nothing herein is intended to or shall confer upon any other person or entity any legal or equitable right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.
40. Notices. All notices under this Agreement shall be in writing and shall be deemed given (a) if sent by courier, on the date when left at the address of the recipient if such date is a Business Day or on the next Business Day if such date is not a Business Day and (b) if sent by email, upon receipt by the sender of an email confirming receipt of the notice by the recipient (in which case the email will be deemed received on the date it was actually received if such date is a Business Day, or on the next Business Day if such date is not a Business Day). In each case, notices shall be sent to the notice address stated opposite each Party's name below, or such other address as either Party may notify the other Party in writing from time to time.

If delivered to Buyer:

Northern States Power Company
c/o Xcel Energy Services, Inc.
414 Nicollet Mall, 401-04
Minneapolis, MN 55401-1927
Attention: Justin Tomljanovic, Vice President, Corporate Development
Telephone: (612) 215-4627
Email: justin.m.tomljanovic@xcelenergy.com

with a copy to:

Northern States Power Company
c/o Xcel Energy Services, Inc.
414 Nicollet Mall, 401-08
Minneapolis, MN 55401-1927
Attention: Hanna L. Coleman, Managing Attorney
Telephone: (612) 215-4583
Email: hanna.l.coleman@xcelenergy.com

PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C

If delivered to Form Energy:

Form Energy, Inc.
2850 7th Street
Berkeley, CA 94710

- [REDACTED]
41. Survival. Provisions of this Agreement which by their nature contemplate or govern performance or observance subsequent to the termination or expiration of this Agreement shall survive such termination or expiration; provided, that all warranties and licenses granted by Form Energy to Buyer pursuant to this Agreement shall terminate upon Form Energy's termination for a Buyer Event Of Default based on Buyer's failure to pay Form Energy in accordance with this Agreement.
42. Counterparts. This Agreement may be signed in duplicate originals, or in separate counterparts, which are effective as if the Parties signed a single original. A .pdf of an original signature or electronically signed version transmitted to the other Party is effective as if the original was sent to the other Party.
43. Representations. Each Party represents and warrants to the other Party that (a) it is a legal entity, duly organized and in good standing under the laws of jurisdiction of incorporation; (b) this Agreement constitutes a legal, valid and binding obligation of such Party enforceable in accordance with its terms; and (c) the execution, delivery and performance of this Agreement (i) is within its powers, (ii) has been duly authorized by all requisite action and (iii) will not violate any agreement, commitment, certificate or other document to which it is a party or by which any of its assets may be bound or affected. [REDACTED]
44. Affiliate; Business Day. For purposes of this Agreement, (a) "Affiliate" means, with respect to a Party, an entity that controls, is controlled by or is under common control with such Party; (b) "control" means possessing, directly or indirectly, the power to direct or cause the direction of the management, policies or operations of an entity, whether through ownership of voting securities, by contract or otherwise; and (c) "Business Day" means any day other than weekends and days when banks are not generally open for business in the state where the Project is located.

45. Relationship of the Parties. The relationship between the Parties is that of independent contractors. Nothing contained in this Agreement shall be construed as creating any agency, partnership, joint venture or other form of joint enterprise, employment or fiduciary relationship between the Parties, and neither Party shall have authority to contract for or bind the other Party in any manner whatsoever.
46. Further Assurances. Each Party agrees to execute and deliver all further instruments and documents, and take all further action, as may be reasonably necessary to complete performance by the Parties hereunder and to effectuate the purposes and intent of this Agreement.
47. Construction. This Agreement is to be construed so as to effectuate the normal and reasonable expectations of a sophisticated seller and buyer of the Battery Equipment covered by this Agreement and shall not be construed either for or against either Party. No provision of this Agreement shall be construed or interpreted for or against either Party because such Party drafted or caused its legal representative to draft the provision.
48. Conflicting Provisions. In the event of any conflict between the provisions of this Agreement and those of any Exhibits hereto, the provisions of this Agreement shall prevail.

[Remainder of Page Intentionally Left Blank]

PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C

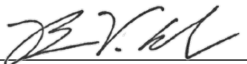
IN WITNESS WHEREOF, the Parties have caused this Agreement to be signed by their respective duly authorized officers as of the Execution Date.

BUYER

NORTHERN STATES POWER COMPANY,
a Minnesota corporation

FORM ENERGY

FORM ENERGY, INC.,
a Delaware corporation

By: 
Name: Brian Van Abel
Title: EVP, CFO

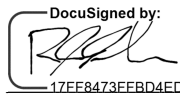


By: 
Name: 
Title: 

Exhibit A
Battery Equipment



Exhibit B
Battery Equipment Specifications
[See attached]

PROTECTED DATA SHADED

Form Battery Equipment Specification

Confidentiality	1
Form Pioneering Iron-Air Multi-Day Storage Technology	2
ENABLING A 100% RENEWABLE GRID	2
RECHARGEABLE, LOW-COST IRON-AIR	2
INHERENTLY SAFE	2
SIMPLE, MODULAR, SCALABLE SYSTEM	2
Battery Equipment Scope (Form's Scope of Supply)	3
Project Scope (Outside Form's Scope of Supply)	4
System Overview	5
Lifetime Performance	5
Footprint / Logistics	6
Operations	6
Regulatory	6
Energy Capacity Retention	6
Energy Capacity De-Rating	6
Water Consumption	7
Response Times	7

Confidentiality

The following document summarizes Form's iron-air product specification.

All information shared within this document is strictly confidential and shall not be shared with any third party without the prior written consent of Form Energy.

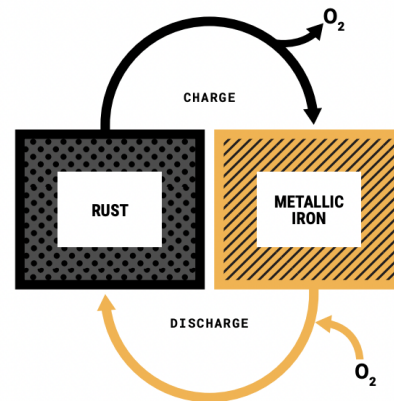
Form reserves the right to adjust battery specifications or add additional specifications related to product performance or operating conditions.

Form Pioneering Iron-Air Multi-Day Storage Technology

Our first commercial product is a rechargeable iron-air battery capable of continuously dispatching electricity for 100 hours with a low all-in cost. Made from iron, one of the most abundant materials on Earth, this front-of-the-meter battery will enable a cost-effective renewable energy grid year-round.

ENABLING A 100% RENEWABLE GRID

To run the grid reliably and affordably, we need new cost-effective technologies capable of storing electricity for multiple days during renewable energy lulls. We conducted a broad review of available technologies and have reinvented and optimized the iron-air battery for the electric grid. Iron-air batteries are the best solution to balance the multi-day variability of renewable energy due to their extremely low cost, safety, durability, and global scalability.



RECHARGEABLE, LOW-COST IRON-AIR

The active components of our battery are some of the safest, cheapest, and most abundant materials on the planet — low-cost iron, water, and air. The principle of operation is reversible rusting: while discharging, the battery breathes in oxygen from the air and converts iron metal to rust; while charging, the application of an electrical current converts the rust back to iron and the battery breathes out oxygen.

INHERENTLY SAFE

The cells consist of non-toxic electrodes and iron anodes submerged in a water-based, non-flammable alkaline electrolyte (similar to what you find in AA batteries). There are no heavy metals. There is no pathway for thermal runaway or dendrite formation in iron-air chemistry.

SIMPLE, MODULAR, SCALABLE SYSTEM

The core building block of the system is a kW-scale battery module (right). The hardware system is a turnkey AC Power Block, which includes thousands of modules protected in an enclosure, integrated with off-the-shelf auxiliary systems (air, water, thermal management), electrical systems, and a utility-grade bi-directional inverter. Tens to hundreds of these power blocks combine to deliver grid-scale, 500MW+ / 50 GWh+ energy storage systems.



Battery Equipment Scope (Form's Scope of Supply)

The equipment delivered and commissioned by Form Energy in accordance with this specification is listed below:

Battery Enclosures and Auxiliary Enclosures

Weatherized, factory-assembled product, which includes both the battery modules and main auxiliary systems (note that the battery enclosure is non-enterable and reach-in only):

- **Modules:** modules connected in series, consisting of cells connected in series.
- **Secondary containment:** the structural floor, steel coated with electrolyte-compatible epoxy or rubber serves as containment for electrolyte spill, with >10% of electrolyte volume retention capacity
- **Reaction Air System:** air intake and filtration for battery discharge reaction air, including scrubbing of CO₂ to avoid spoiling the electrolyte.
- **Hydrogen Exhaust System:** active venting of off-gas, a hydrogen and oxygen mix, to the outside air.
- **Cooling:** a forced convection cooling system that pulls in outside air to cool the battery modules.
- **Electrical:** depending on the final electrical configuration, either all or some enclosures will have a DC power converter to step-up battery voltages to the inverter's DC bus voltage.
- **Local BMS:** switch between the charge and discharge air cathodes within each cell and connection to the BMS. Monitoring of cell voltage, temperature, and current for safety and operational optimization. Control of enclosure's auxiliary systems. Alarming and reporting.

Power Conversion Equipment

- Utility-grade, IEEE 1547, UL 1741 listed inverter(s) able to (collectively) deliver project rated power under environmental conditions which may occur on the project site with >=600Vac output. Indicative inverter specifications are attached in Appendix A. Note that these specifications are subject to change.

Electrolyte

- Electrolyte is delivered by Form separately from the battery enclosures and must be filled onsite.

Power Block Controller

- **Power block controller and BMS Software:** controls interface for a group of enclosures connected to a single inverter. Balances DC power between enclosures and reports available charge and discharge power of the entire power block to the EMS. Reporting of battery state of health, state of energy/charge and power availability metrics, diagnostics, and faults to EMS. Shutdown commands.

- **EMS:** Controls interface responsible for integrating the DC block(s) (based on data from the power block controller) and inverter(s) within the power block(s), communicating with the power block controller and the inverter, balancing charge and discharge across multiple power blocks, and interfacing with the customer dispatch equipment as required. The EMS also hosts a web-based HMI for the system.

Project Scope (Outside Form's Scope of Supply)

Items not in Form Energy's scope of supply are required for the installation and function of the product. In order for the Form Energy BESS system to function, this equipment must be procured by the EPC contractor based on requirements and product design details to be provided by Form Energy and the project owner and must be installed in accordance with manufacturer instructions. This list is intended to cover major items but may not be exhaustive.

The system must also be installed in accordance with all applicable codes and standards.

Equipment

- **Power Block Electrical:**
 - 1300V DC conductors to connect auxiliary enclosures to inverters.
 - 480V three-phase auxiliary power conductors to connect the auxiliary enclosure (described in detail in the following pages) to aux power source
- **Plant Electrical:**
 - Appropriately sized inverter step-up transformer(s) and any other AC equipment required to tie the inverter(s) into the grid at the point of interconnection.
 - Aux transformer(s) or other appropriate means of deriving AC power for auxiliary equipment, and appropriate conductors/switchgear for its distribution. This system shall include switches and a tie-in point for an alternative power source in the case of an extended grid outage at the project site.
 - Emergency power supply for plant-level controls equipment
- **Other Balance of Plant:**
 - Mechanical connections (air, water) from auxiliary enclosures to battery enclosures
 - Connection to a water source or tank
 - Water demineralization system if needed based on local water access and quality
 - Piping to connect the water source/tank/demineralization system to the auxiliary enclosures
 - Foundations for enclosures appropriate to local soil and seismic conditions
 - Communications networking equipment to connect enclosures, inverters, site control center
 - Other site works (security fencing, access roads, etc)

PROTECTED DATA SHADED



PROTECTED DATA SHADED



PROTECTED DATA SHADED



PROTECTED DATA SHADED



Exhibit C
Limited Warranty

[See attached]

PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C

Exhibit E
Estimated Delivery Dates

Delivery
First Battery Equipment Delivered to Project Site
Last Battery Equipment Delivered to Project Site



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C

Battery Equipment Limited Warranty



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



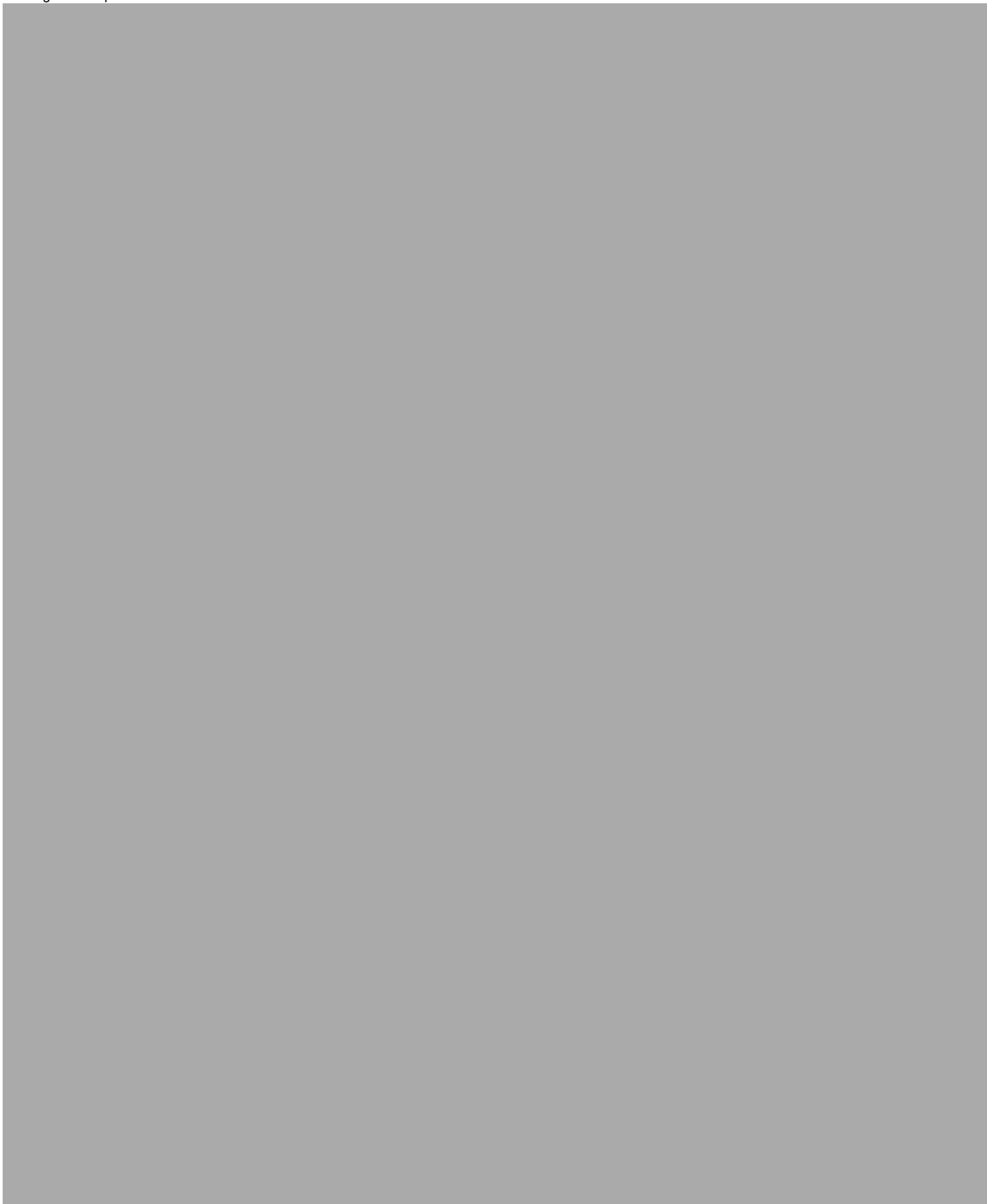
PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



By: _____

Name:

Title:

PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



By: _____³

Name: _____

Title: _____



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



[Xcel Energy]

By: _____⁷

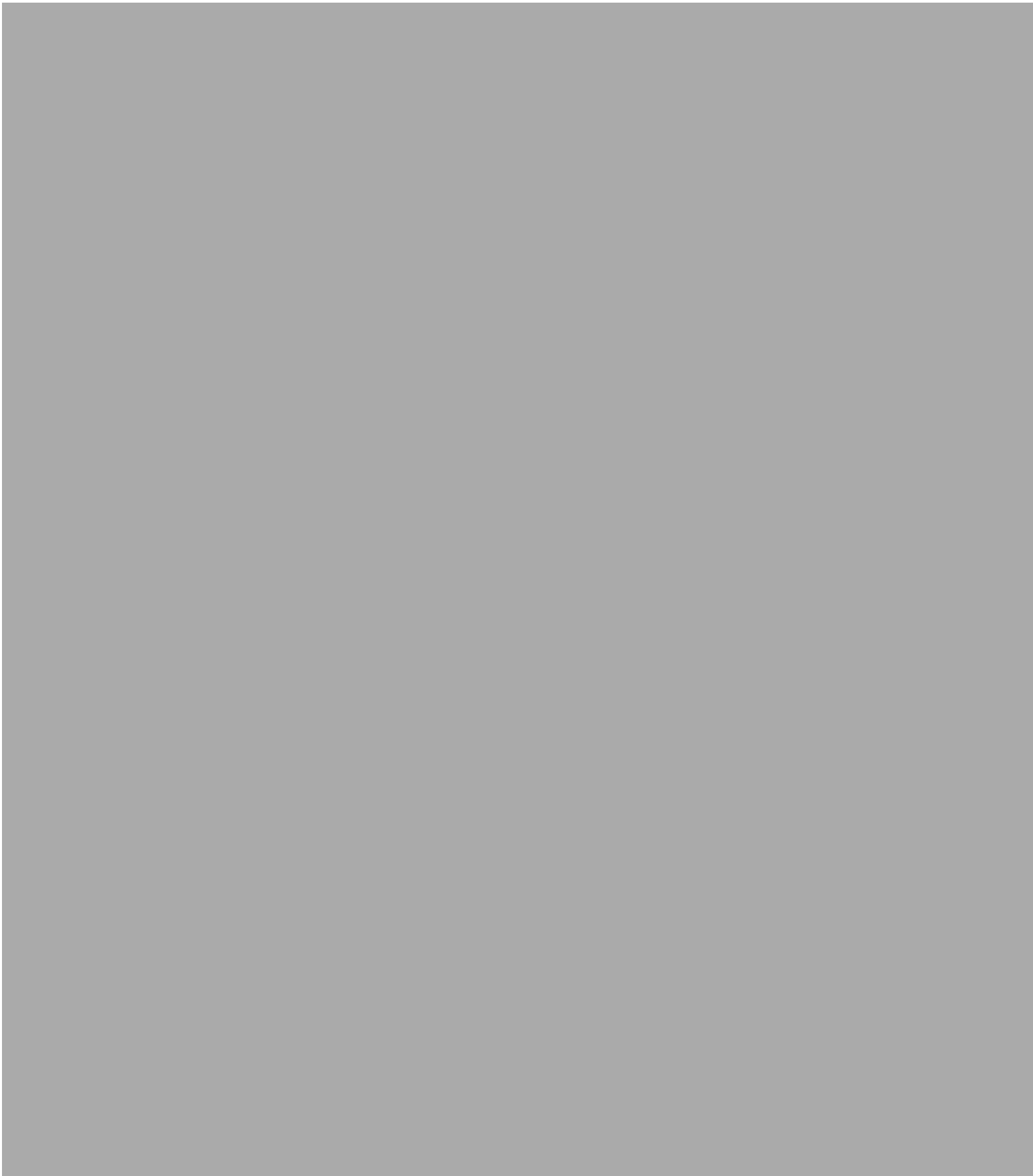
Name: _____

Title: _____



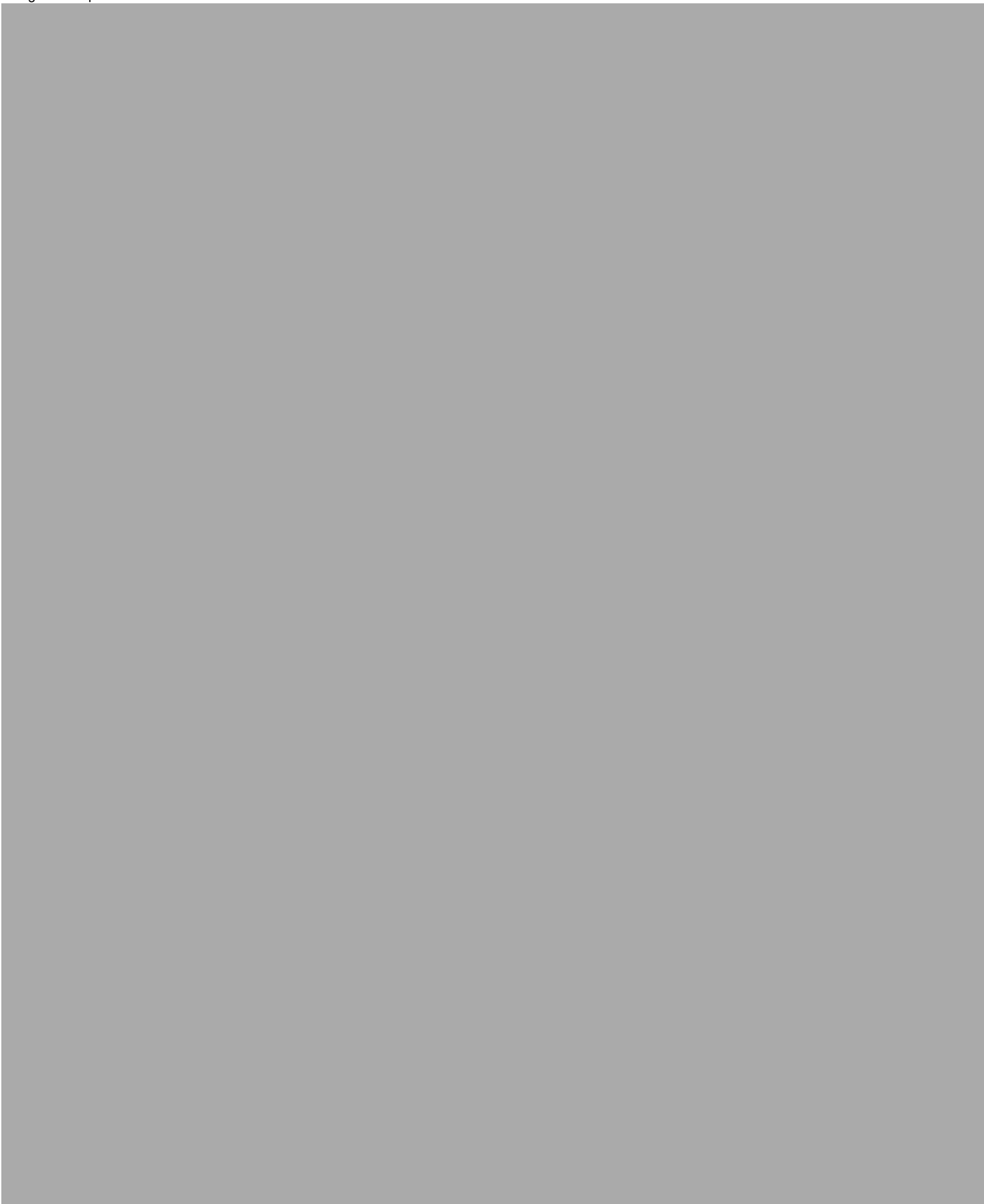
PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



PROTECTED DATA SHADED

DocuSign Envelope ID: 1D4CC832-E141-4654-9574-1F6FE29C9F2C



CERTIFICATE OF SERVICE

I, Christine Schwartz, hereby certify that I have this day served copies of the foregoing document on the attached list of persons.

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

xx electronic filing

DOCKET No. E002/M-23-_____

19-368

Miscellaneous Electric Service List

Dated this 6th day of March 2023

/s/

Christine Schwartz

Regulatory Administrator

[illegible]

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Jessica	Beyer	jbeyer@greatermankato.com	Greater Mankato Growth	1961 Premier Dr Ste 100 Mankato, MN 56001	Electronic Service	No	OFF_SL_19-368_19-368_Official
James	Canaday	james.canaday@ag.state.mn.us	Office of the Attorney General-RUD	Suite 1400 445 Minnesota St. St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_19-368_19-368_Official
Thomas	Carlson	thomas.carlson@edf-re.com	EDF Renewable Energy	10 2nd St NE Ste. 400 Minneapolis, Minnesota 55413	Electronic Service	No	OFF_SL_19-368_19-368_Official
John	Coffman	john@johncoffman.net	AARP	871 Tuxedo Blvd. St, Louis, MO 63119-2044	Electronic Service	No	OFF_SL_19-368_19-368_Official
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_19-368_19-368_Official
Jean	Comstock	jean.comstock.dbcc@gmail.com	St. Paul 350	729 6th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_19-368_19-368_Official
Riley	Conlin	riley.conlin@stoel.com	Stoel Rives LLP	33 S. 6th Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-368_19-368_Official
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174 Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_19-368_19-368_Official
James	Denniston	james.r.denniston@xcenergy.com	Xcel Energy Services, Inc.	414 Nicollet Mall, 401-8 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-368_19-368_Official
J.	Drake Hamilton	hamilton@fresh-energy.org	Fresh Energy	408 St Peter St Ste 350 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_19-368_19-368_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Adam	Duininck	aduininck@ncsrcc.org	North Central States Regional Council of Carpenters	700 Olive Street St. Paul, MN 55130	Electronic Service	No	OFF_SL_19-368_19- 368_Official
Scott F	Dunbar	sdunbar@keyesfox.com	Keyes & Fox LLP	1580 Lincoln St Ste 880 Denver, CO 80203	Electronic Service	No	OFF_SL_19-368_19- 368_Official
Brian	Edstrom	briane@cubminnesota.org	Citizens Utility Board of Minnesota	332 Minnesota St Ste W1360 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_19-368_19- 368_Official
Catherine	Fair	catherine@energycents.org	Energy CENTS Coalition	823 E 7th St St Paul, MN 55106	Electronic Service	No	OFF_SL_19-368_19- 368_Official
John	Farrell	jfarrell@ilsr.org	Institute for Local Self- Reliance	2720 E. 22nd St Institute for Local Self- Reliance Minneapolis, MN 55406	Electronic Service	No	OFF_SL_19-368_19- 368_Official
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_19-368_19- 368_Official
Mike	Fiterman	mikefiterman@libertydiversified.com	Liberty Diversified International	5600 N Highway 169 Minneapolis, MN 55428-3096	Electronic Service	No	OFF_SL_19-368_19- 368_Official
Jolene	Foss	jolenef@wrightpartnership.org	Wright County Economic Development Partnership	1405 3rd Ave NE Buffalo, MN 55313	Electronic Service	No	OFF_SL_19-368_19- 368_Official
Lucas	Franco	lfranco@liunagroc.com	LIUNA	81 Little Canada Rd E Little Canada, MN 55117	Electronic Service	No	OFF_SL_19-368_19- 368_Official
Amy	Fredregill	afredregill@environmental-initiative.org	Environmental Initiative, MN Sustainable Growth Coalition	211 First St N Ste 250 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-368_19- 368_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Edward	Garvey	edward.garvey@AESLconsulting.com	AESL Consulting	32 Lawton St Saint Paul, MN 55102-2617	Electronic Service	No	OFF_SL_19-368_19-368_Official
Janet	Gonzalez	Janet.gonzalez@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-368_19-368_Official
Todd J.	Guerrero	todd.guerrero@kutakrock.com	Kutak Rock LLP	Suite 1750 220 South Sixth Street Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_19-368_19-368_Official
Kim	Havey	kim.havey@minneapolismn.gov	City of Minneapolis	350 South 5th Street, Suite 315M Minneapolis, MN 55415	Electronic Service	No	OFF_SL_19-368_19-368_Official
Philip	Hayet	phayet@jkenn.com	J. Kennedy and Associates, Inc.	570 Colonial Park Drive Suite 305 Roswell, GA 30075-3770	Electronic Service	No	OFF_SL_19-368_19-368_Official
Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_19-368_19-368_Official
Annete	Henkel	mui@mnuutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-368_19-368_Official
Kristin	Henry	kristin.henry@sierraclub.org	Sierra Club	2101 Webster St Ste 1300 Oakland, CA 94612	Electronic Service	No	OFF_SL_19-368_19-368_Official
Michael	Hoppe	lu23@ibew23.org	Local Union 23, I.B.E.W.	445 Etna Street Ste. 61 St. Paul, MN 55106	Electronic Service	No	OFF_SL_19-368_19-368_Official
Alan	Jenkins	aj@jenkinsattlaw.com	Jenkins at Law	2950 Yellowtail Ave. Marathon, FL 33050	Electronic Service	No	OFF_SL_19-368_19-368_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-368_19-368_Official
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-368_19-368_Official
William D	Kenworthy	will@votesolar.org	Vote Solar	332 S Michigan Ave FL 9 Chicago, IL 60604	Electronic Service	No	OFF_SL_19-368_19-368_Official
Samuel B.	Ketchum	sketchum@kennedy-graven.com	Kennedy & Graven, Chartered	150 S 5th St Ste 700 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-368_19-368_Official
Frank	Kohlasch	frank.kohlasch@state.mn.us	MN Pollution Control Agency	520 Lafayette Rd N. St. Paul, MN 55155	Electronic Service	No	OFF_SL_19-368_19-368_Official
Brian	Kolbinger	brian@beckertownship.org	Becker Township Board	PO Box 248 12165 Hancock St Becker, MN 55308	Electronic Service	No	OFF_SL_19-368_19-368_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_19-368_19-368_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_19-368_19-368_Official
Carmel	Laney	carmel.laney@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-368_19-368_Official
Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.	8300 Norman Center Drive Suite 1000 Bloomington, MN 55437	Electronic Service	No	OFF_SL_19-368_19-368_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Rachel	Leonard	rachel.leonard@ci.monticello.mn.us	City of Monticello	505 Walnut St Ste 1 Monticello, MN 55362	Electronic Service	No	OFF_SL_19-368_19-368_Official
Annie	Levenson Falk	annief@ci.mn.us	Citizens Utility Board of Minnesota	332 Minnesota Street, Suite W1360 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-368_19-368_Official
Alice	Madden	alice@communitypowermn.org	Community Power	2720 E 22nd St Minneapolis, MN 55406	Electronic Service	No	OFF_SL_19-368_19-368_Official
Kavita	Maini	kmairi@wi.rr.com	KM Energy Consulting, LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Paper Service	No	OFF_SL_19-368_19-368_Official
Emily	Marshall	emarshall@mojlaw.com	Miller O'Brien Jensen, PA	120 S. 6th Street Suite 2400 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_19-368_19-368_Official
Mary	Martinka	mary.a.martinka@xcelenergy.com	Xcel Energy Inc	414 Nicollet Mall 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-368_19-368_Official
Gregg	Mast	gmast@cleanenergyeconomy.mn.org	Clean Energy Economy Minnesota	4808 10th Avenue S Minneapolis, MN 55417	Electronic Service	No	OFF_SL_19-368_19-368_Official
Daryl	Maxwell	dmaxwell@hydro.mb.ca	Manitoba Hydro	360 Portage Ave FL 16 PO Box 815, Station Main Winnipeg, Manitoba R3C 2P4 Canada	Electronic Service	No	OFF_SL_19-368_19-368_Official
Taylor	McNair	taylor@gridlab.org		668 Capp Street San Francisco, CA 94110	Electronic Service	No	OFF_SL_19-368_19-368_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Melanie	Mesko Lee	Melanie.Lee@burnsvillemn.gov	City of Burnsville	100 Civic Center Parkway Burnsville, MN 55337-3867	Electronic Service	No	OFF_SL_19-368_19-368_Official
Joseph	Meyer	joseph.meyer@ag.state.mn.us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St Paul, MN 55101-2131	Electronic Service	No	OFF_SL_19-368_19-368_Official
Stacy	Miller	stacy.miller@minneapolisn.gov	City of Minneapolis	350 S. 5th Street Room M 301 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_19-368_19-368_Official
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_19-368_19-368_Official
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-368_19-368_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_19-368_19-368_Official
Alan	Muller	alan@greendel.org	Energy & Environmental Consulting	1110 West Avenue Red Wing, MN 55066	Electronic Service	No	OFF_SL_19-368_19-368_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_19-368_19-368_Official
J	Newberger	Jnewberger1@yahoo.com	State Rep	14225 Balsam Blvd Becker, MN 55308	Electronic Service	No	OFF_SL_19-368_19-368_Official
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_19-368_19-368_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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_19-368_19-368_Official
Ric	O'Connell	ric@gridlab.org	GridLab	2120 University Ave Berkeley, CA 94704	Electronic Service	No	OFF_SL_19-368_19-368_Official
Carol A.	Overland	overland@legalelectric.org	Legalelectric - Overland Law Office	1110 West Avenue Red Wing, MN 55066	Electronic Service	No	OFF_SL_19-368_19-368_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_19-368_19-368_Official
J. Gregory	Porter	greg.porter@nngco.com	Northern Natural Gas Company	1111 South 103rd St Omaha, NE 68124	Electronic Service	No	OFF_SL_19-368_19-368_Official
Greg	Prusinske	gprusinske@ci.becker.mn.us	City of Becker	PO Box 250 12060 Sherburne Ave Becker, MN 55308	Electronic Service	No	OFF_SL_19-368_19-368_Official
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_19-368_19-368_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_19-368_19-368_Official
Nathaniel	Runke	nrunke@local49.org		611 28th St. NW Rochester, MN 55901	Electronic Service	No	OFF_SL_19-368_19-368_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_19-368_19-368_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-368_19-368_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_19-368_19-368_Official
Mark	Schoennauer	markwsch@hotmail.com		607 19th St NW Apt 17 Rochester, MN 55901	Electronic Service	No	OFF_SL_19-368_19-368_Official
Christine	Schwartz	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_19-368_19-368_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_19-368_19-368_Official
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_19-368_19-368_Official
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN 55423	Electronic Service	Yes	OFF_SL_19-368_19-368_Official
Andrew R.	Shedlock	Andrew.Shedlock@KutakRock.com	Kutak Rock LLP	60 South Sixth St Ste 3400 Minneapolis, MN 55402-4018	Electronic Service	No	OFF_SL_19-368_19-368_Official
Edyta	Sitko	esitko@ucsusa.org	Union of Concerned Scientists	1 N Lasalle Ave CHICAGO, IL 60602	Electronic Service	No	OFF_SL_19-368_19-368_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.	76 W Kellogg Blvd St. Paul, MN 55102	Electronic Service	No	OFF_SL_19-368_19-368_Official
Joshua	Smith	joshua.smith@sierraclub.org		85 Second St FL 2 San Francisco, California 94105	Electronic Service	No	OFF_SL_19-368_19-368_Official
Beth H.	Soholt	bsoholt@windonthewires.org	Wind on the Wires	570 Asbury Street Suite 201 St. Paul, MN 55104	Electronic Service	No	OFF_SL_19-368_19-368_Official
Anna	Sommer	ASommer@energyfuturesgroup.com	Energy Futures Group	PO Box 692 Canton, NY 13617	Electronic Service	No	OFF_SL_19-368_19-368_Official
Mark	Spurr	mspurr@fvbenergy.com	International District Energy Association	222 South Ninth St., Suite 825 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_19-368_19-368_Official
Byron E.	Starns	byron.starns@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-368_19-368_Official
Scott	Strand	SStrand@elpc.org	Environmental Law & Policy Center	60 S 6th Street Suite 2800 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-368_19-368_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_19-368_19-368_Official
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_19-368_19-368_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Julie	Voeck	julie.voeck@nee.com	NextEra Energy Resources, LLC	700 Universe Blvd Juno Beach, FL 33408	Electronic Service	No	OFF_SL_19-368_19-368_Official
Samantha	Williams	swilliams@nrdc.org	Natural Resources Defense Council	20 N. Wacker Drive Ste 1600 Chicago, IL 60606	Electronic Service	No	OFF_SL_19-368_19-368_Official
Laurie	Williams	laurie.williams@sierraclub.org	Sierra Club	Environmental Law Program 1536 Wynkoop St Ste 200 Denver, CO 80202	Electronic Service	No	OFF_SL_19-368_19-368_Official
Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine	225 South Sixth Street, Suite 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-368_19-368_Official
Tim	Wulling	t.wulling@earthlink.net		1495 Raymond Ave. Saint Paul, MN 55108	Electronic Service	No	OFF_SL_19-368_19-368_Official
Kurt	Zimmerman	kwz@ibew160.org	Local Union #160, IBEW	2909 Anthony Ln St Anthony Village, MN 55418-3238	Electronic Service	No	OFF_SL_19-368_19-368_Official
Emily	Ziring	eziring@stlouispark.org	City of St. Louis Park	5005 Minnetonka Blvd St. Louis Park, MN 55416	Electronic Service	No	OFF_SL_19-368_19-368_Official
Patrick	Zomer	Pat.Zomer@lawmoss.com	Moss & Barnett PA	150 S 5th St #1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-368_19-368_Official

[illegible]

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Edward	Garvey	edward.garvey@AESLconsulting.com	AESL Consulting	32 Lawton St Saint Paul, MN 55102-2617	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Michael	Hoppe	lu23@ibew23.org	Local Union 23, I.B.E.W.	445 Etna Street Ste. 61 St. Paul, MN 55106	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2950 Yellowtail Ave. Marathon, FL 33050	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.	8300 Norman Center Drive Suite 1000 Bloomington, MN 55437	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Kavita	Maini	kmairi@wi.rr.com	KM Energy Consulting, LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Paper Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Stacy	Miller	stacy.miller@minneapolismn.gov	City of Minneapolis	350 S. 5th Street Room M 301 Minneapolis, MN 55415	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
David	Moeller	dmoeller@allte.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Carol A.	Overland	overland@legalelectric.org	Legalelectric - Overland Law Office	1110 West Avenue Red Wing, MN 55066	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Christine	Schwartz	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350 Saint Paul, MN 55101	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.	76 W Kellogg Blvd St. Paul, MN 55102	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Byron E.	Starns	byron.starns@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
James M	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	150 S 5th St Ste 700 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine	225 South Sixth Street, Suite 3500 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Kurt	Zimmerman	kwz@ibew160.org	Local Union #160, IBEW	2909 Anthony Ln St Anthony Village, MN 55418-3238	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric
Patrick	Zomer	Pat.Zomer@lawmoss.com	Moss & Barnett PA	150 S 5th St #1200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Northern States Power Company dba Xcel Energy-Elec_Xcel Misc Electric