



November 1, 2023

Will Seuffert, Executive Secretary  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
Saint Paul, MN 55101-2147

**Subject: *Dakota Electric Association Proposal***

***In the Matter of Updating Generic Standards for Utility Tariffs for  
Interconnection and Operation of Distributed Generation Facilities Under  
Minn. Stat. §216B.1611***

***Docket No. E-999/CI-16-521***

Dear Mr. Seuffert:

On September 1, 2023, the Minnesota Public Utilities Commission (Commission) issued a Notice of Comment Period (Notice) in the above-referenced docket. This Notice stated that the issue to be addressed is:

What changes to the Minnesota Distributed Energy Resources Interconnection Process (MN DIP) should the Commission make to achieve the purpose of Minnesota Law 2023, Ch. 60, Art. 12, Sec. 75 (HF 2310)?

Specifically, the Commission requested that proposals address the following topics:

1. Interconnection procedures that allow customer-sited distributed generation projects up to 40 kilowatts alternating current in capacity to be processed according to schedules specified in the MNDIP, giving such projects priority over larger projects that may enjoy superior positions in the processing queue.
2. Whether the prioritization of these projects include areas where the distribution system is capacity constrained as well as in areas that are not similarly constrained.
3. Whether there are changes to the MN DIP that would be de minimis in nature regarding policy but would update the document to accurately reflect recent changes and references.
4. Are there other issues or concerns related to this matter?

### **Introduction and Background**

As mentioned in the Commission’s Notice, the Minnesota Legislature passed, on May 24, 2023, House File 2310. Article 12, Section 75 (HF2310) which tasked the Commission with the following:

No later than September 1, 2023, the commission shall open a proceeding to establish interconnection procedures that allow customer-sited distributed generation projects up to 40 kilowatts alternating current in capacity to be processed according to schedules specified in the Minnesota Distributed Energy Resources Interconnection Process, giving such projects priority over larger projects that may enjoy superior positions in the processing queue.

The Notice correctly referenced that the Commission has previously addressed the issue of different interconnection processes in this docket when it ordered Xcel Energy to expand its parallel processing of all fast-track projects in areas where there are no known capacity constraints.<sup>1</sup>

Dakota Electric Association® (Dakota Electric or Cooperative) submits this proposal in response to the Commission’s September 1, 2023 Notice in the above-referenced docket. Dakota Electric’s focus in this proposal will be on the identified

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<sup>1</sup> March 31, 2022 Order.

issues to be addressed and the topics open for comment. Dakota Electric has been an active participant in the Distributed Generation Working Group (DGWG) since its formation and is appreciative of the collaborative efforts by most parties as they relate to various distributed generation issues. Dakota Electric appreciates the opportunity to provide this proposal and is optimistic that DGWG participants and other commenters will provide thoughtful analysis and discussion that is able to address the specific legislative directives in HF2310.

### **Dakota Electric Comments**

Although not explicit in the wording of HF2310, the required proceeding suggests an implicit legislative finding that distributed generation or distributed energy resources (DER) under 40 kW AC are preferred from an energy policy perspective. As a member-owned distribution electric cooperative, Dakota Electric is organized under cooperative principles which envision equal treatment of all members; as such, the Cooperative does not have a position whether smaller, under 40kW, DER facilities are better policy compared to over 40 kW facilities. Dakota Electric has addressed the issue of smaller interconnection and potential solutions in earlier comments in this proceeding.<sup>2</sup> The proposal laid out below responds to the Commission Notice, and the Legislative directive, and focuses on the current realities of the Dakota Electric system. Dakota Electric remains in the “free phase” of DER interconnection, and we have not, as yet, experienced significant interconnection problems or cost concerns for our members. Furthermore, in terms of conflict, or issues, between over 40kW (large) and under 40kW (small) DER in the review process, Dakota Electric has not experienced issues, and we do not currently have a significant number of large DER applications.

In addition to our proposal, Dakota Electric also provides, for the purpose of discussion, a more global approach to known issues in the interconnection process that we believe may be worthwhile for parties to discuss. This discussion topic represents a longer-term option that balances energy policy with the overall costs and benefits to our

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<sup>2</sup> August 25, 2021 Comments and October 1, 2021 Reply Comments.

membership. We are hopeful that this topic can be used as a discussion point to further DER policy in Minnesota or future discussions in the DGWG. Dakota Electric responds separately to each topic in the Commission's Notice below.

- 1. Interconnection procedures that allow customer-sited distributed generation projects up to 40 kilowatts alternating current in capacity to be processed according to schedules specified in the MNDIP, giving such projects priority over larger projects that may enjoy superior positions in the processing queue.*

As noted in the introduction of these comments, Dakota Electric remains in the "free phase" of DER development and has not, to date, experienced interconnection issues or significant interconnection costs for its members. The proposal we lay out deals with the current state of our system and does not necessarily represent a longer-term option. In our estimation, a longer-term solution is outside of the specific requirements of the Legislative directive and will require additional overarching policy discussion. Dakota Electric introduces what it believes may be a starting point towards a longer-term option or solution later in these comments.

Returning to the immediate Legislative request, Dakota Electric proposes a relatively straightforward interconnection review process that it believes provides sufficient preference to smaller DER system based on the current realities of our distribution system. The Cooperatives notes that the timelines we discuss below are illustrative, and we are open to potential modifications. The overarching issue that the Legislature looks to address is the potential of larger DER to unreasonably take resources away from processing smaller DER, which may have a negative impact on small DER. There are significant differences among the utilities within Minnesota with the types and sizes of DER which are proposed for interconnection. Dakota Electric currently is not experiencing significant numbers of DER interconnection applications for systems larger than 40kW of capacity. As such, we process all proposed DER interconnections in the order they are received.

As significant numbers of larger DER interconnection requests are received, they have the potential to create bottleneck in the interconnection process. The time frame required to study and resolve upgrade payment issues, especially if transmission injection is expected, is lengthy and more likely with larger systems. During the time that studies occur, or upgrade payment issues are reviewed, an impacted portion of the distribution system is closed to other DER interconnection proposals.

To address this concern, Dakota Electric proposes a process where utilities maintain at least two queues for DER interconnections. One for systems which are smaller than 40kW, and one for systems larger than 40kW. The utility continues to process less than 40kW DER applications as they come in for all portions of their system which are not already limited. When a larger than 40kW system is proposed, any required studies are completed with a base of existing and proposed level of DER. The base of existing DER is then increased to a level that reflects the expected amount of less than 40kW DER interconnection requests over the next 6 to 12 months. The proposed larger than 40 kW DER is then studied with that updated base of interconnected DER. No other larger than 40kW DER can proceed in that area (substation) until that first DER has completed the process and is cleared for interconnection or withdraws their request.

Dakota Electric presents the following hypothetical example to illustrate how this system could work. Let us assume that there is a feeder with 150kW of available capacity on September 27 and there are five applications that come in, one is a large DER at 125kW and the other four are small DER each at 10kW. Dakota Electric would begin the review in parallel between the smaller and larger DER. A base of existing plus proposed DER would be established for the larger DER study which would reduce the available capacity on the feeder to a lower amount of, for example, 90 or 100kW, to account for expected smaller DER interconnections. We would process the four 10kW facilities in parallel with the studies for the larger DER. By the middle of October, the 4 smaller DER systems would be approved for interconnection and the remaining available capacity on the system would be 110kW. The parallel study of the larger 125kW DER will identify the larger DER as capacity limited and responsible for distribution system upgrades. By

November or December these costs should be provided to the applicant. Under the existing interconnection process, if the large DER application was received first on September 27, it would have absorbed all but 25kW of available capacity on the feeder, preventing two small DER from interconnecting immediately and making one small DER responsible for all distribution system upgrade costs. In this hypothetical example, the interconnection process for small DER was streamlined and four facilities were interconnected instead of two; they also avoided being assessed distribution upgrade costs.

Dakota Electric notes that, although this proposal responds to the Legislative directive, it is not without drawbacks. First, as alluded to above, our proposed methodology has the potential to shift interconnection and distribution upgrade costs to over 40kW facilities. Since the Legislative directive seeks ways to give priority to smaller DER, this is likely not a significant issue, but Dakota Electric believes it is important to note this possibility. Second, this proposal does not address or resolve the circumstance where a large DER, perhaps interconnected years prior, has taken all the available capacity on a feeder. Third, this process creates multiple queues which, if there are multiple larger DER requests for interconnection on multiple substations, means the management of many different queues may be an issue. This is especially true for smaller utilities with limited staff.

Dakota Electric's proposal is a straightforward approach that addresses the concerns of the Legislature and recognizes the current reality of our distribution system. We believe that this approach provides sufficient priority to small DER facilities and will help ensure a better interconnection experience for under 40 kW facilities. Dakota Electric looks forward to reviewing proposals from other parties and how they may fit with our system or improve the proposal we discussed above.

- 2. Whether the prioritization of these projects include areas where the distribution system is capacity constrained as well as in areas that are not similarly constrained.*

Dakota Electric’s proposal does not specifically prioritize these areas more, but it may be possible to extend the time periods for dedicated review of small DER in capacity constrained areas if that is advantageous or possible for an internal staffing and resource perspective. Dakota Electric has a relatively small number of internal staff members available to review, process, and complete DER interconnection; as such, any further complication to the review process, especially in terms of more micro-divisions (either geographic or otherwise) of the interconnection queue increases workload and may negatively impact review times. Dakota Electric notes that this process does not help in a situation where a large DER has “taken up” available capacity (perhaps years in the past) and no capacity is available or in a situation where a feeder or substation is at capacity and requires significant system upgrades. Even if only small DER are applying for interconnection, they are still faced with the same constraint, irrespective of whether they are processed before large DER.

3. *Whether there are changes to the MN DIP that would be de minimis in nature regarding policy but would update the document to accurately reflect recent changes and references.*

Dakota Electric has submitted several ideas for improving the MN DIP document in various written comments in this docket. The following are the ideas which, in the view of Dakota Electric, do not reflect a change in policy and are *de minimis*.

Section 1.5.2- Recommend the addition of a table showing the time frames for each of the application paths. We have found this information to be very helpful for the reader to understand the difference between the application paths. Some applicants have selected the Fast Track path as they thought this was faster than simplified path.

<u>Application Path</u>	<u>Notification of Application Receipt</u>	<u>Notification of Application Completeness</u>	<u>Notification of Interconnection Approval</u>
<u>Simplified</u>	<u>3 days from filing</u>	<u>10 days from filing</u>	<u>20 days from receipt of complete application</u>
<u>Fast Track</u>	<u>3 days from filing</u>	<u>10 days from filing</u>	<u>25 days from receipt of complete application</u>
<u>Study Process</u>	<u>3 days from filing</u>	<u>10 days from filing to initiate scheduling of scoping meeting</u>	<u>Per study process time-lines</u>

Note: Days are Business Days.

Section 3.4.5.2: Minor change in how the 20-business day response period is worded in the paragraph, so the expectations for Dakota Electric are clear to the reader.

Section 5.4.5.2: If the proposed interconnection requires construction of any facilities, the Area EPS Operator shall notify the Interconnection Customer of such requirement when it provides the supplemental review results and either: 1) provide a good faith cost estimate; or 2) require a facilities study pursuant to 4.4.1. Within five (5) Business Days, the Interconnection Customer shall inform the Area EPS Operator if the Interconnection Customer elects to proceed with the proposed interconnection. If the Interconnection Customer makes such an election, **within twenty (20) business days**, the Area EPS Operator shall either provide: i) an Interconnection Agreement, along with a non-binding good faith cost estimate and construction schedule for such upgrades, ~~within twenty (20) Business Days after the Area EPS Operator receives such an election~~ or ii) a facilities study agreement pursuant to section 4.4.

Glossary of Terms: Clarification of *MN Technical Requirements* that the terms Technical Requirements, Minnesota Technical Requirements, and Minnesota Interconnection Technical Requirements, which are used in the MN DIP, all reference the same set of requirements. Also removed a document reference that has been replaced by the approved Technical Interconnection and Interoperability Requirements (TIIR) and Technical Service Manual (TSM) documents.

**MN Technical Requirements** – The term including all of the DER technical interconnection requirement documents for the state of Minnesota; including: the Minnesota DER Technical Interconnection and Interoperability Requirements (TIIR) and the Dakota Electric Technical Standards Manual (TSM). The terms Technical Requirements, Minnesota Interconnection Technical Requirements and Minnesota Technical Requirements are all considered referencing this set of technical requirements for the interconnection of DER. ~~↳ Attachment 2 Distributed Generation~~



~~Interconnection Requirements established in the Commission's September 28, 2004 Order in E-999/CI-01-1023) until superseded and upon Commission approval of updated Minnesota DER Technical Interconnection and Interoperability Requirements in E-999/CI-16-521 (anticipated in late 2019.)~~

Attachment 2, Simplified Application Form: Replaced existing Simplified Interconnection Application with version approved by the DGWG in 2021. May 7, 2021 Notice Docket Nos. E999/CI-01-1023 and E999/CI-16-521.

Attachment 2, Exhibit B: This exhibit is removed. Energy Storage information is now contained in both updated applications.

Attachment 3: Replaced Interconnection Application with version approved by the DGWG in 2021. May 7, 2021 Notice Docket Nos. E999/CI-01-1023 and E999/CI-16-521.

Attachment 4: Need to update the technical references to align with the updated TIIR document. This would include updating or possibly removing the footnote #14

In addition to prior suggestions for minor MN DIP updates. The reference on page 1 of the MN-DIP of MN DTIIR should be updated to MN TIIR.

4. *Are there other issues or concerns related to this matter?*

Dakota Electric identifies two areas of concern related to DER interconnection that it wishes to address in these comments. The first relates to energy storage in the DER interconnection process, and the second is the discussion topic referenced in the introduction of these comments.

First, on the topic of energy storage, the current MN DIP and interconnection standards treat energy storage and DER capacity on a combined basis. For example, if a consumer installs a 25kW solar facility and 20kW of battery energy storage, this is treated as a 45kW DER for purposes of interconnection study. In the case of Dakota Electric and other distribution cooperatives, this will impact eligibility for retail net metering. This topic has been discussed at length in the DGWG and was considered during the creation of the current MN DIP and interconnection standard. The Commission may wish to address the issue of storage further as it relates to the

Legislature's request and how energy storage may impact the Legislature's intent regarding interconnection of DER under 40kW in capacity.

Second, as we turn to the topic of a potential longer-term option or solution for interconnection issues, Dakota Electric notes that the issues of interconnection costs and smaller DER facilities have been discussed several times, and at length, in this docket and in other utility-specific dockets. Given Dakota Electric's current level of DER interconnections, large upgrade costs for small DER interconnection, or conflict between smaller and larger DER facilities, have not yet occurred for Dakota Electric regarding available hosting capacity. However, as penetration levels increase, Dakota Electric can envision circumstances in the future where these, or similar, issues may occur, especially when we exit the "free capacity" stage of DER development. Given this potential, Dakota Electric believes it is important to provide additional discussion on the topic of DER interconnection costs in this filing.

Under the current interconnection framework, once a feeder or substation has limited or no hosting capacity, the next DER applicant, regardless of size, is responsible for the full incremental upgrade costs to support that proposed interconnection. Even at a more micro-level, if a DER interconnection requires any system upgrade, the applicant is fully responsible for these costs. These costs focus solely on the DER customer in question and the process does not allow consideration of system optimal, but more expensive, solutions that may provide greater long term overall benefit. The review and finalization through studies of that applicant's cost contribution, and the subsequent commitment of that applicant to pay for the identified upgrades, is needed before the next applicant in the queue can be fully studied. In this instance, the first applicant must agree to pay for upgrades, or withdrawal their application, before any other applications can be reviewed. In many cases, the cost causation method for recovery of upgrade expenses is the driver for the need to maintain the current, strict, queue management because there could be a shift in upgrade costs between consumers.

Many of the significant customer complaints seen in Minnesota involve higher interconnection upgrade costs for smaller DER facilities, which may have spurred the

Legislative directive at question in the Commission’s Notice. If the overarching policy goals or objectives are to shield smaller DER installations from high, and unexpected, interconnection upgrade costs, and avoid lengthy queue delays, then Dakota Electric believes discussion and analysis of longer-terms solutions may be beneficial. In particular, Dakota Electric believes additional analysis and discussion of a process built around “make ready” for distribution upgrades associated with under 40kW facilities may be worthwhile. The concept of “make ready” can have different definitions or interpretations, so it is important that we provide some clarity to how we see “make ready.” In terms of “make ready,” Dakota Electric would (except in limited, unique circumstances) consider making necessary distribution upgrades with no upfront payment requirement for facilities under 40kW, but it would assess a monthly charge to each DER system to account for some allocation of DER related distribution upgrade costs.

The idea of different DER projects having a unique cost recovery mechanism is not new in this docket. The Interstate Renewable Energy Council (IREC) and Fresh Energy raised the prospect of different cost allocations depending on the type of project proposing interconnection including assessing an upfront interconnection fee, based on historic upgrade costs, to each new DER interconnection.<sup>3</sup> The Cooperative also provided detailed discussion on the matter of interconnection cost recovery and responded to this proposal.<sup>4</sup> Dakota Electric acknowledged the potential benefits of this approach but noted that an unintended consequence is that a DER interconnection with high upgrade costs could shift costs to future DER consumers. When Dakota Electric analyzed this topic in 2021, it did not advocate changes to cost allocation, but it provided its analysis to illustrate the issues that exist regarding DER interconnection and are likely to exist in the future. Dakota Electric continues to believe this is an important policy discussion, and we believe that a more in-depth review and consideration of DER interconnection costs is appropriate to include in these comments.

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<sup>3</sup> IREC August 25, 2021 Comments and Fresh Energy August 25, 2021 Comments.

<sup>4</sup> Dakota Electric August 25, 2021 Comments and October 1, 2021 Reply Comments.

As noted above, the current method, which assigns all upgrade costs to the DER customer in the queue that triggers an upgrade, creates certain cost shift and inequity concerns that will only continue to expand overtime. On the other hand, requiring the utility (through its captive ratepayers) to fully fund system upgrades, primarily for the benefit of a group of consumers who use less energy contribute less in terms of revenue recovery toward overall system costs, shifts costs to consumers who are unable to consider DER, especially lower income consumers and renters. The appropriate allocation of upgrade costs between DER consumers and the entire distribution system is a potentially complex policy issue that will ultimately be decided by the Commission, if they decide to address this issue. The method by which these costs are allocated is also a decision that would be made by the Commission and is not limited to one specific concept. The additional discussion that Dakota Electric provides below represents one possible approach to combining “make ready” with changes to cost allocation for DER interconnection.

The “make ready” approach essentially gives smaller projects preferential queue treatment because the utility does not need to create an upfront itemized cost estimate to the interconnection customer, and the project can proceed in almost all cases (there are certain cases that we describe in greater detail below) with minimal review. Another utility benefit of this approach is that it allows the utility to move away from the current piecemeal approach to distribution upgrades and instead focus on holistic system upgrades that provide greater benefit for the entire distribution system and optimize operational and cost efficiencies. The utility tracks upgrade costs to determine the appropriate and reasonable amount to recover from small DER consumers for interconnection. From a DER installer and consumer perspective, the “make ready” approach improves the process because it guarantees project costs (in all but rare cases) and eliminates potential confusion for the consumer.

For illustrative purposes, this process begins with the creation or specification of the amount of costs allocated specifically to under 40kW DER. This amount is then

dispersed as a monthly charge to each small DER which uses the distribution system.<sup>5</sup> This charge would be assessed to newly interconnected systems going forward and existing systems would be grandfathered for a period of time, perhaps 5 or 10 years.<sup>6</sup> Under this proposal, some portion of the distribution system upgrade costs resulting from the need to increase capacity for interconnecting small DER could be allocated to all the small DER systems which use the distribution system. In the simplest sense, all prospective small DER customers, and DER installers, will know the specific cost of interconnection, except in certain instances which we discuss below. This will also remove the current cost shift and free rider issues inherent in the current cost allocation model.

It is important to note that attempting to price “make ready” is difficult because most utilities, including Dakota Electric, are still in the “free capacity” phase of DER interconnection and not making significant system upgrades to support small DER interconnections. However, this changeover can occur rapidly, which means the recovery rates can lag investment and cost components can increase at an unsustainable rate. These concerns are why we included this discussion topic in these comments.

Earlier in this section, Dakota Electric mentioned limited circumstances where the “make ready” process does not apply. There may be other circumstances, but there are two specifically that the Cooperative discusses. First, in the event that a small facility were to trigger significant transmission system upgrades, then “make ready” will not necessarily apply and additional analysis will occur. This additional analysis is required because transmission upgrades are significantly more costly than distribution upgrades

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<sup>5</sup> Dakota Electric notes that there are other possible charge options that could be considered, but we focus our discussion on this particular concept. We are open to discussing other options. Some of these other options are:

- one time per charge either by system or per kW size of system. Potential drawback is that it does offer chance to cover maintenance and is not able to be increased as costs increase. It can also shift high costs to other future DER consumers.
- Charge based upon peak kW backfeed/export of unit. This would encourage matching system to load and/or installation of energy storage.

<sup>6</sup> These existing systems were installed based on the current costs allocation methodology, so Dakota Electric does not believe it is appropriate to assign this monthly charge to these consumers during what is essentially the “pay back” period of their installation. The timeframe noted above is not a specific recommendation.

and require coordination between multiple parties. In addition, it is possible that cost sharing can still occur with transmission upgrades because the eventual outcome may result in net positives for the overall distribution system and DER development. However, given the complex nature of transmission studies and the transmission network, the Cooperatives only envisions guaranteeing “make ready” for distribution system upgrades. Second, in an effort to minimize cost shifts, Dakota Electric believes that a cap on distribution upgrades, similar to what Xcel Energy employs in its pilot study, is appropriate. This cap mimics what is used on the load side where prospective customers who require system investments beyond a cost justified level are required to pay for the incremental investment. This approach minimizes cost shifts to other ratepayers and requires prospective loads to plan prudently. Dakota Electric believes that a “make ready” cap of \$15,000 for a specific project is an appropriate starting point for the sake of discussion. The Cooperative has not, to date, assessed an upgrade cost above this level, and it believes that most future upgrade costs will be below this level.

Dakota Electric provides the following, illustrative, cost derivation below to show the potential impacts of our interconnection upgrade cost charge on DER installations. The Cooperative reiterates that we are still in the “free capacity” phase of DER interconnection, so these costs are likely low compared to future upgrade costs. This is a fact that will need to be considered overtime.<sup>7</sup> Dakota Electric begins its rate calculation by looking at historical upgrade costs charged to members. The Cooperative tracks these costs and notes that 2019 was the first time that we billed members for distribution system upgrades. The table below summarizes costs assessed for DER interconnections on an annual basis since we began experiencing upgrade costs. It is important to note that the figures in the table below do not include internal labor costs or filing fees and may not be comparable to cost figures provided in other regulatory filings.

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<sup>7</sup> Dakota Electric notes that its calculation does not include an export component. The Cooperative believes that an export rate is theoretically sound and protects ratepayers who are unable to install DER from unnecessary costs shifts, but this mechanism should be recovered from all DER, not just new DER. This is another DER related topic the Commission or DGWG may wish to address in the future.

Year	Number of Interconnections	Number of Upgrades	Member Cost	Dakota Electric Cost	Total Cost
2019	98	1	\$871.94	\$851.24	\$1,723.18
2020	138	1	\$869.82	\$1,201.44	\$2,071.26
2021	371	8	\$7,417.44	\$18,150.67	\$25,868.11
2022	322	15	\$15,347.56	\$28,167.71	\$43,515.27

Dakota Electric brings two observations to the forefront from these data. First, we have experienced significant increases in upgrade costs over just a short period. This reinforces the need to investigate this issue and the difficulty associated with trying to calculate this sort of charge. Second, the Cooperative notes that we already cover a significant portion of interconnection upgrade costs; in other words, it is our current practice not to bill our member the full upgrade cost. If we use the average of 2021 and 2022 charges to DER applicants, the most recent full calendar years available, to create a representative year, similar to a test year, there would be an average monthly charge to new DER installations of between \$2.73 per month<sup>8</sup> and \$8.33 per month.<sup>9</sup>

Dakota Electric notes that these are illustrative numbers that are not without caveats or concerns. First, as noted several times in these comments, Dakota Electric is in the “free capacity” phase of DER developments, so these embedded interconnection costs will have a significant risk of under collection (cost shift to non-DER members) if DER interconnections increase at a rapid rate. Second, these rate estimates are based on the current piecemeal approach to upgrades and not a holistic, system optimizing approach to upgrades. Depending on how costs are allocated in a “make ready” environment, this could result in additional costs initially being assigned to the DER member responsibility, but overall providing a lower monthly cost. Third, these values do not include the initial local transmission study costs which are typically \$10,000 and the MISO transmission study costs which have been quoted as being \$60,000 per substation studied. Since transmission constraints are a significant concern as DER penetration increases, it is

<sup>8</sup>  $((\$7,417.44 + \$15,347.56) / 2) / ((371 + 322) / 2) = \$32.80 / 12 = \$2.73.$

<sup>9</sup>  $((\$25,868.11 + \$43,515.27) / 2) / ((371 + 322) / 2) = \$99.97 / 12 = \$8.33.$

reasonable to consider a representative amount of transmission study costs in the rate calculation. Again, depending on how costs are allocated, this may not be fully allocated to DER consumers because the greater system may also benefit from the transmission study. Fourth, if these rates are updated periodically as part of a rate case, there is also a risk of under-recovery if the utility system is in the growth phase of DER development. On the other hand, if rates are updated annually, and there is a year of high-cost upgrades, there can be significant rate increases for all DERs impacted by this rate. As noted above, if the Commission wishes to consider this type of monthly charge, the Cooperative believes it should be assessed to prospective interconnections at this time and then potentially expanded to all DER after a phase in period. If this rate is assessed to all under 40kW installations, regardless of installation date, it will result in a lower overall monthly rate which could lessen the impact of future high-cost DER interconnections.

### **Conclusion**

Dakota Electric appreciates the opportunity to provide its proposal and comments in response to the Commission's Notice. Dakota Electric believes that its proposal is a reasonable path forward that recognizes the current operations of our system as they related to DER interconnection and provides sufficient preference to under 40kW facilities, as requested by the Legislature. The Cooperative also hopes that parties will consider its discussion regarding the overall topic of interconnection costs and cost recovery. If you or your staff have any questions about these comments, please contact me at 651-463-6258 or [aheinen@dakotaelectric.com](mailto:aheinen@dakotaelectric.com).

Sincerely,

*/s/ Adam J. Heinen*

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Adam J. Heinen  
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**Certificate of Service**

I, Melissa Cherney, hereby certify that I have this day served copies of the attached document to those on the following service list by e-filing, personal service, or by causing to be placed in the U.S. mail at Farmington, Minnesota.

**Docket Nos. E-999/CI-16-521**

Dated this 1st day of November 2023

*/s/ Melissa Cherney*

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Melissa Cherney

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Kenneth	Bradley	kbradley1965@gmail.com		2837 Emerson Ave S Apt CW112  Minneapolis, MN 55408	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Jon	Brekke	jbrekke@grenergy.com	Great River Energy	12300 Elm Creek Boulevard  Maple Grove, MN 553694718	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Kathleen M.	Brennan	kmb@mcgrannshea.com	McGrann Shea Carnival, Straughn & Lamb, Chartered	800 Nicollet Mall Ste 2600  Minneapolis, MN 554027035	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Christopher	Browning	christopher.browning@nexteraenergy.com		N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Christina	Brusven	cbrusven@fredlaw.com	Fredrikson Byron	60 S 6th St Ste 1500  Minneapolis, MN 55402-4400	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Jessica	Burdette	jessica.burdette@state.mn.us	Department of Commerce	85 7th Place East Suite 500 St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Jerry	Byer	jbyer@itasca-mantrap.com	Itasca-Mantrap Coop. Electric Assn.	PO Box 192  Park Rapids, MN 56470	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Daniel T	Carlisle	todd-wad@toddwadena.coop	Todd-Wadena Electric Cooperative	550 Ash Ave NE PO Box 431 Wadena, MN 56482	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Douglas M.	Carnival	dmc@mcgrannshea.com	McGrann Shea Carnival Straughn & Lamb	N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Pat	Carruth	pat@mnvalleyrec.com	Minnesota Valley Coop. Light & Power Assn.	501 S 1st St. PO Box 248 Montevideo, MN 56265	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Kenneth A.	Colburn	kcolburn@symbioticstrategies.com	Symbiotic Strategies, LLC	26 Winton Road  Meredith, NH 32535413	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Generic Notice	Commerce Attorneys	commerce.attorneys@agate.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400  St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_16-521_Official Service List PUC
Kevin	Cray	kevin@communitysolaraccess.org	CCSA	1644 Platte St  Denver, CO 80202	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
George	Crocker	gwillc@nawo.org	North American Water Office	5093 Keats Avenue  Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Stacy	Dahl	sdahl@minnkota.com	Minnkota Power Cooperative, Inc.	5301 32nd Ave S  Grand Forks, ND 58201	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
David	Dahlberg	davedahlberg@nweco.com	Northwestern Wisconsin Electric Company	P.O. Box 9 104 South Pine Street Grantsburg, WI 548400009	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Lisa	Daniels	lisadaniels@windustry.org	Windustry	201 Ridgewood Ave  Minneapolis, MN 55403	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
James	Darabi	james.darabi@solarfarm.com	Solar Farm, LLC	2355 Fairview Ave #101  St. Paul, MN 55113	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Danielle	DeMarre	danielle.demarre@allenergysolar.com	All Energy Solar	1264 Energy Lane  St Paul, MN 55108	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
James	Denniston	james.r.denniston@xcenergy.com	Xcel Energy Services, Inc.	414 Nicollet Mall, 401-8  Minneapolis, MN 55401	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Curt	Dieren	curt.dieren@dgr.com	L&O Power Cooperative	1302 S Union St  Rock Rapids, IA 51246	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Cheryl	Dietrich	cheryl.dietrich@nexteraenergy.com	NextEra Energy Resources, LLC	700 Universe Blvd E1W/JB  Juno Beach, FL 33408	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Kristin	Dolan	kdolan@meeker.coop	Meeker Cooperative Light & Power Assn	1725 US Hwy 12 E. Ste 100  Litchfield, MN 55355	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Steve	Downer	sdowner@mmua.org	MMUA	3025 Harbor Ln N Ste 400  Plymouth, MN 554475142	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Renee	Doyle		Doyle Electric Inc.	PO Box 295  Amboy, MN 56010	Paper Service	No	OFF_SL_16-521_Official Service List PUC
John R.	Dunlop, P.E.	JDunlop@RESMinn.com	Renewable Energy Services	Suite 300 448 Morgan Ave. S. Minneapolis, MN 554052030	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Kristen	Eide Tollefson	healingsystems69@gmail.com	R-CURE	28477 N Lake Ave  Frontenac, MN 55026-1044	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Betsy	Engelking	betsy@nationalgridrenewables.com	Geronimo Energy, LLC	8400 Normandale Lake Blvd Ste 1200 Bloomington, MN 55437	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Oncu	Er	oncu.er@avantenergy.com	Avant Energy, Agent for MMPA	220 S. Sixth St. Ste. 1300  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
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_16-521_Official Service List PUC
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_16-521_Official Service List PUC
Christine	Fox	cfox@itasca-mantrap.com	Itasca-Mantrap Coop. Electric Assn.	PO Box 192  Park Rapids, MN 56470	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Kornbaum	Frank	fkornbaum@mnpower.com		N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Nathan	Franzen	nathan@nationalgridrenewables.com	Geronimo Energy, LLC	8400 Normandale Lake Blvd Ste 1200 Bloomington, MN 55437	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Katelyn	Frye	kfrye@mnpower.com	Minnesota Power	30 W Superior St  Duluth, MN 558022093	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Hal	Galvin	halgalvin@comcast.net	Provectus Energy Development llc	1936 Kenwood Parkway  Minneapolis, MN 55405	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Edward	Garvey	garveyed@aol.com	Residence	32 Lawton St  Saint Paul, MN 55102	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Allen	Gleckner	gleckner@fresh-energy.org	Fresh Energy	408 St. Peter Street Ste 350 Saint Paul, MN 55102	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Jenny	Glumack	jenny@mrea.org	Minnesota Rural Electric Association	11640 73rd Ave N  Maple Grove, MN 55369	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Nitzan	Goldberger	n.goldberger@energystorage.org	Energy Storage Association	1800 M Street NW Suite 400S Washington, DC 20036	Paper Service	No	OFF_SL_16-521_Official Service List PUC
Sarah	Groebner	sgroebner@redwoodelectric.com	Redwood Electric Cooperative	60 Pine St  Clements, MN 56224	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
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Donald	Hanson	dfhanson@ieee.org	Solar Photovoltaic Systems	P. O. Box 44579  Eden Prairie, MN 55344	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
John	Harlander	john.c.harlander@xcelenergy.com	Xcel Energy	N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association	4300 220th St W  Farmington, MN 55024	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Jared	Hendricks	jared.hendricks@owatonnautilities.com	Owatonna Municipal Public Utilities	PO Box 800 208 S Walnut Ave Owatonna, MN 55060-2940	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Annete	Henkel	mui@mutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Joe	Hoffman	ja.hoffman@smmpa.org	SMMPA	500 First Ave SW  Rochester, MN 55902-3303	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Ronald	Horman	rhorman@redwoodelectric.com	Redwood Electric Cooperative	60 Pine Street  Clements, MN 56224	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
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Dean	Hunter	Dean.Hunter@state.mn.us	Minnesota Department of Labor & Industry	443 Lafayette Rd N  St. Paul, MN 55155-4341	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Ralph	Jacobson	ralphj@ips-solar.com		2126 Roblyn Avenue  Saint Paul, MN 55104	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Casey	Jacobson	cjacobson@becp.com	Basin Electric Power Cooperative	1717 East Interstate Avenue  Bismarck, ND 58501	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
John S.	Jaffray	jjaffray@jirpower.com	JJR Power	350 Highway 7 Suite 236  Excelsior, MN 55331	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Chris	Jarosch	chris@carrcreekelectricservice.com	Carr Creek Electric Service, LLC	209 Sommers Street North Hudson, WI 54016	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Brian	Jeremiason	bjeremiason@llec.coop	Lyon-Lincoln Electric Cooperative, Inc.	205 W. Hwy. 14 Tyler, MN 56178	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Nate	Jones	njones@hcpd.com	Heartland Consumers Power	PO Box 248 Madison, SD 57042	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Kevin	Joyce	kjoyce@tesla.com		N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Cliff	Kaehler	cliff.kaehler@novelenergy.biz	Novel Energy Solutions LLC	4710 Blaylock Way Inver Grove Heights, MN 55076	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Ralph	Kaehler	Ralph.Kaehler@gmail.com		13700 Co. Rd. 9 Eyota, MN 55934	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Michael	Kampmeyer	mkampmeyer@a-e-group.com	AEG Group, LLC	260 Salem Church Road Sunfish Lake, MN 55118	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Jack	Kegel	jkegel@mmua.org	MMUA	3025 Harbor Lane N Suite 400 Plymouth, MN 55447-5142	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Jack	Kluempke	Jack.Kluempke@state.mn.us	Department of Commerce	85 7th Place East Suite 600 St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Steve	Kosbab	skosbab@meeker.coop	Meeker Cooperative Light and Power	1725 US Hwy 12 E  Litchfield, MN 55355	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Michael	Krause	michaelkrause61@yahoo.com	Kandiyo Consulting, LLC	433 S 7th Street Suite 2025 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Michael	Krikava	mkrikava@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Corrina	Kumpe	ckumpe@mysunshare.com		N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Mark	Larson	mlarson@meeker.coop	Meeker Coop Light & Power Assn	1725 Highway 12 E Ste 100  Litchfield, MN 55355	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Burnell	Lauer	blauer.sundial@gmail.com	Sundial Solar	3209 W. 76th St #305  Edina, MN 55435	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Dean	Leischow	dean@sunrisenrg.com	Sunrise Energy Ventures	315 Manitoba Ave Ste 200  Wayzata, MN 55391	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Nick	Lenssen	lenssen.nick@gmail.com		1195 Albion Way  Boulder, CO 80305	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Annie	Levenson Falk	annief@cubminnesota.org	Citizens Utility Board of Minnesota	332 Minnesota Street, Suite W1360  St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Amy	Liberkowski	amy.a.liberkowski@xcenergy.com	Xcel Energy	414 Nicollet Mall 7th Floor Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Carl	Linville	clinville@raponline.org	Regulatory Assistance Project	50 State Street Suite #3  Montpelier, VT 05602	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Phillip	Lipetsky	greenenergyproductsllc@gmail.com	Green Energy Products	PO Box 108  Springfield, MN 56087	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Jody	Londo	jody.l.londo@xcenergy.com	Xcel Energy	414 Nicollet Mall 7th Floor Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
William	Lovelace	wlovelace@minnkota.com	Minnkota Power Cooperative	5301 32nd Ave S  Grand Forks, ND 58201	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Brian	Lydic	brian@irecusa.org	Interstate Renewable Energy Council, Inc.	PO Box 1156  Latham, NY 12110-1156	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Richard	Macke	macker@powersystem.org	Power System Engineering, Inc.	10710 Town Square Dr NE Ste 201  Minneapolis, MN 55449	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 E 7th St  St Paul, MN 55106	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Sara G	McGrane	smcgrane@felhaber.com	Felhaber Larson	220 S 6th St Ste 2200  Minneapolis, MN 55420	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Natalie	McIntire	natalie.mcintire@gmail.com	Wind on the Wires	570 Asbury St Ste 201  Saint Paul, MN 55104-1850	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Matthew	Melewski	matthew@nokomisenergy.com	Nokomis Energy LLC & Ole Solar LLC	2639 Nicollet Ave Ste 200  Minneapolis, MN 55408	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Thomas	Melone	Thomas.Melone@AllcoUS.com	Minnesota Go Solar LLC	222 South 9th Street Suite 1600 Minneapolis, MN 55120	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Tim	Mergen	tmergen@meecker.coop	Meecker Cooperative Light And Power	1725 US Hwy 12 E. Suite 100  PO Box 68 Litchfield, MN 55355	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Pontius	Mike	mpontius@mnpower.com		N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Stacy	Miller	stacy.miller@minneapolismn.gov	City of Minneapolis	350 S. 5th Street Room M 301 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Luther	Miller	Luther.C.Miller@xcelenergy.com	Xcel Energy	N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Darrick	Moe	darrick@mrea.org	Minnesota Rural Electric Association	11640 73rd Ave N  Maple Grove, MN 55369	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St  Duluth, MN 558022093	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Sergio	Navas	snavas@sundialsolarenergy.com	Sundial Energy, LLC	3363 Republic Ave Saint Louis Park, MN 55426	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Ben	Nelson	benn@cmpasgroup.org	CMMPA	459 South Grove Street Blue Earth, MN 56013	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Michael	Noble	noble@fresh-energy.org	Fresh Energy	408 Saint Peter St Ste 350 Saint Paul, MN 55102	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Rolf	Nordstrom	rnordstrom@gpisd.net	Great Plains Institute	2801 21ST AVE S STE 220 Minneapolis, MN 55407-1229	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company	200 1st Street SE PO Box 351 Cedar Rapids, IA 524060351	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Logan	O'Grady	logrady@mNSEIA.org	Minnesota Solar Energy Industries Association	2288 University Ave W St. Paul, MN 55114	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Jeff	O'Neill	jeff.oneill@ci.monticello.mn.us	City of Monticello	505 Walnut Street Suite 1 Monticello, MN 55362	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Wendi	Olson	wolson@otpc.com	Otter Tail Power Company	215 South Cascade  Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Russell	Olson	rolson@hcpd.com	Heartland Consumers Power District	PO Box 248  Madison, SD 570420248	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Bethany	Owen	bowen@mnpower.com	Minnesota Power	30 West Superior Street  Duluth, MN 55802	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Cezar	Panait	Cezar.Panait@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Dan	Patry	dpatry@sunedison.com	SunEdison	600 Clipper Drive  Belmont, CA 94002	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Jeffrey C	Paulson	jeff.jcplaw@comcast.net	Paulson Law Office, Ltd.	4445 W 77th Street Suite 224 Edina, MN 55435	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Dean	Pawlowski	dpawlowski@otpc.com	Otter Tail Power Company	PO Box 496 215 S. Cascade St. Fergus Falls, MN 565370496	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Susan	Peirce	Susan.Peirce@state.mn.us	Department of Commerce	85 Seventh Place East  St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Donna	Pickard	dpickardgsss@gmail.com	Genie Solar Support Services	1215 Lilac Lane Excelsior, MN 55331	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Crystal	Pomerleau	crystal.r.pomerleau@xcelenergy.com	Xcel	N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
David G.	Prazak	dprazak@otpc.com	Otter Tail Power Company	P.O. Box 496 215 South Cascade Street Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Elizabeth	Psihos	elizabeth.psihos@idealenergies.com		N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Mark	Rathbun	mrathbun@greenergy.com	Great River Energy	12300 Elm Creek Blvd  Maple Grove, MN 55369	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Michael	Reinertson	michael.reinertson@avantenergy.com	Avant Energy	220 S. Sixth St. Ste 1300  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
John C.	Reinhardt	N/A	Laura A. Reinhardt	3552 26th Ave S  Minneapolis, MN 55406	Paper Service	No	OFF_SL_16-521_Official Service List PUC
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_16-521_Official Service List PUC
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_16-521_Official Service List PUC
Isabel	Ricker	ricker@fresh-energy.org	Fresh Energy	408 Saint Peter Street Suite 220 Saint Paul, MN 55102	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Michael	Ruiz	michael.ruiz@xcelenergy.com	Xcel Energy	N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Darla	Ruschen	d.ruschen@bcrea.coop	Brown County Rural Electric Assn.	PO Box 529 24386 State Highway 4 Sleepy Eye, MN 56085	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Robert K.	Sahr	bsahr@eastriver.coop	East River Electric Power Cooperative	P.O. Box 227 Madison, SD 57042	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Kenric	Scheevel	Kenric.scheevel@dairylandpower.com	Dairyland Power Cooperative	3200 East Ave S PO Box 817 La Crosse, WI 54602	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Dean	Schiro	dean.e.schiro@xcelenergy.com	Xcel Energy	N/A	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Kay	Schraeder	kschraeder@minnkota.com	Minnkota Power	5301 32nd Ave S Grand Forks, ND 58201	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
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Christine	Schwartz	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_16-521_Official Service List PUC



First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350  Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_16-521_Official Service List PUC
Doug	Shoemaker	dougs@charter.net	Minnesota Renewable Energy	2928 5th Ave S  Minneapolis, MN 55408	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
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Trevor	Smith	trevor.smith@avantenergy.com	Avant Energy, Inc.	220 South Sixth Street Suite 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
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Marcia	Solie	m.solie@bcrea.coop	Brown County Rural Electrical Assn.	24386 State Hwy. 4, PO Box 529  Sleepy Eye, MN 56085	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

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Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD	4445 W 77th Street Suite 224 Edina, MN 55435	Electronic Service	No	OFF_SL_16-521_Official Service List PUC
Jeff	Triplet	triplettj@powersystem.org	MREA	10710 Town Square Dr NW St 201 Minneapolis, MN 55449	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

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John	Williamson	John.Williamson@state.mn.us	Minnesota Department of Labor and Industry	443 Lafayette Rd N  St. Paul, MN 55155-4341	Electronic Service	No	OFF_SL_16-521_Official Service List PUC

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Brian	Zavesky	brianz@mrenergy.com	Missouri River Energy Services	3724 West Avera Drive P.O. Box 88920 Sioux Falls, SD 57108-8920	Electronic Service	No	OFF_SL_16-521_Official Service List PUC