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October 31, 2025

Sasha Bergman
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

**NOT PUBLIC DOCUMENT -
NOT FOR PUBLIC DISCLOSURE**

**RE: In the Matter of the Distribution System Planning for Otter Tail Power Company
Docket No. E017/M-25-141
Integrated Distribution Plan**

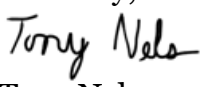
Dear Ms. Bergman,

Otter Tail Power Company (Otter Tail) respectfully submits its Integrated Distribution Plan (IDP), developed by using input from internal departments as well as external stakeholder review as outlined in the requirements of the above referenced docket. The IDP summarizes various related filings and represents a comprehensive review of Otter Tail's plans spanning Electric Vehicles to Advanced Metering Infrastructure. However, Otter Tail is not requesting certification of any project within this IDP. Recovery requests for the projects discussed are currently within other dockets. Otter Tail has many exciting initiatives within the IDP and look forward to the Commission's review.

Please note that Otter Tail has marked certain portions of Appendix A of this filing with the caption **NOT PUBLIC DOCUMENT – NOT FOR PUBLIC DISCLOSURE**, according to Minn. Stat. § 13.37, subd. 1(b). This statute protects certain "government data," as that term is defined at Minn. Stat. § 13.02, subd. 7, from being disclosed by an administrative agency to the public. The information being supplied in these schedules is considered to be a "compilation" of data that (1) was supplied by Otter Tail, (2) is the subject of reasonable efforts by Otter Tail to maintain its secrecy, and (3) derives independent economic value, actual or potential, from not being generally known to or accessible to the public. Specifically, the marked portions of Appendix A reflect load data that if not protected, could possibly be connected to specific customers. The nature of this data does not permit sufficient aggregation or anonymization. Otter Tail believes it is obligated to maintain this information as confidential in accordance with the Commission's January 19, 2017, Order in Docket No. E, G-999/CI-12-1244.

If you have any questions regarding this filing, please contact me at 218-739-8278 or at amnelson@otpco.com.

Sincerely,



Tony Nelson
Manager Asset Strategies and Engineering
System Infrastructure and Reliability

kde
Enclosures
By electronic filing
c: Service List

Integrated Distribution Plan

OTTER TAIL POWER COMPANY

Docket No. E017/M-25-141
Otter Tail Power Company

Contents

APPENDICES

1. PREFACE

Otter Tail Power Company (Otter Tail Power or Company) respectfully files this Integrated Distribution Plan with the Minnesota Public Utilities Commission (MPUC or Commission) in connection with Docket No. E017/M-25-141.

Within this report, Otter Tail Power expands upon the previous Integrated Distribution Plan (IDP) which was filed November 1, 2023 in Docket No. E017/M-23-380. This IDP was developed by using input from internal departments as well as external stakeholder review as outlined in the requirement of the June 3rd, 2025 notice of updated requirements approval. Building upon the past IDPs, Otter Tail Power outlines the ways in which this IDP meets the Commission objectives. This IDP also references other filings related to the distribution system and associated plans to provide a complete summary of Otter Tail Power's plans. These other filings include Electric Utility Infrastructure Costs (EUIC), Docket No. E017/M-24-186 and E017/M-25-199; Energy Conservation and Optimization (ECO) triennial, Docket No. E017/CIP-23-94; Electric Vehicle (EV) Pilot, Docket No. E017-M-20-181; Safety, Reliability and Service Quality (SRSQ), Docket No. E017/M-25-30; Integrated Resource Plan (IRP), Docket No. E017/RP-21-339; and Generic Standards for Interconnection, Docket No. E999/CI-16-521.

In this IDP submittal, Otter Tail Power is not requesting certification of any single project or program.

Since 1909 Otter Tail Power has impacted the lives of its customers by providing reliable electricity and energy services. And Otter Tail Power will continue to focus on its customers' energy needs through all planning processes—including the Integrated Distribution Plan—with a balanced approach to environmental, economic, and community stewardship. Over the past 100 years Otter Tail Power's distribution planning process has evolved to meet the Company's mission and the needs of its customers and the Company will continue to evolve to meet future needs.

Otter Tail Power's Mission

To produce and deliver electricity as reliably, economically, and environmentally responsibly as possible to the balanced benefit of customers, shareholders, and employees and to improve the quality of life in the areas in which we do business.

Otter Tail Power serves customers in three states: Minnesota, North Dakota, and South Dakota. From a demographic and economic standpoint, the small, rural towns served both east and west of the Red River are very similar. In Minnesota the Company provides electricity and energy services to 155 communities with an average population of approximately 630. Though distribution systems typically do not have multi-state impacts, the general planning and budget processes for the Company are applied on a system-wide basis, including allocation across the three jurisdictions. For example, rate making is completed based on system-wide spends and rate

base is allocated pro-rata to each state based on usage. Throughout this report, the Company provides state-specific information whenever possible. However, there are cases in the IDP where only system-wide total information is feasible. Whenever information is provided in the IDP, it is marked as either Minnesota-specific or system-wide.

2. BACKGROUND

Over the last several years, the Commission has investigated rate-regulated utilities modernization of the electric grid and distribution-system planning. As part of this effort, in 2019 the Commission directed Otter Tail Power to file biennial Integrated Distribution Plan. Otter Tail Power has submitted and received approvals for 2019, 2021, and 2023 IDP's.

On September 16th, 2024 the Minnesota Public Utilities Commission issued and order accepting Otter Tail Power's IDP. In its review of the IDP, the Commission delegated authority to the Executive Secretary to convene several working groups to modify IDP filing requirements ahead of the next IDP filings on November 1st, 2025.

On June 3rd, 2025 the Commission approved updated filing requirements for Otter Tail Power. This IDP is reflected of the requirements laid out in the order from June of 2025. Ongoing discussions remain related to further refinements to requirements.

3. INTEGRATED DISTRIBUTION PLANNING OBJECTIVES

As outlined in the 2025 order, Otter Tail Power must discuss in future filings how the IDP meets the Commission's planning objectives, including:

a. An analysis of how the information presented in the IDP relates to each planning objective;
b. The location in the IDP;
c. Analysis of efforts taken by the Company to improve upon the fulfillment of the planning objectives; and
d. Suggestions as to any refinements to the IDP filing requirements that would enhance Otter Tail Power's ability to meet the planning objectives.

The following section outlines the requirements above for each of the Commission's planning objectives.

Objective 1: Maintain and enhance the safety, security, reliability, and resilience of the electricity grid, at fair and reasonable costs, consistent with the state's energy policies.

The first planning objective is very similar to Otter Tail Power's mission statement; "To produce and deliver electricity as reliably, economically, and environmentally responsibly as possible." As such, every spend within the distribution plan has some positive impact on improving reliability, resiliency, and safety of the distribution system. For example, the replacement spends forecasted

remove aging assets from the field which are more prone to failures that can cause public safety concerns. Similarly, reliability and capacity related spends are used to improve reliability as well resiliency and are an integral part of our recently created Wildfire Mitigation Plan (WMP). These spends can be found in section 8. Our System Infrastructure and Reliability Improvement (SIRI) initiative also highlights these spends and shows how we are continually improving upon our ability to deliver safe, reliable, and cost-effective energy to our customers. A discussion about the SIRI initiative can be found in section 9.E.

Resilience of the distribution grid is also improved not only with asset health and age related type projects described in section 9.E, but also the through Grid Modernization projects within the same section. These types of projects allow Otter Tail Power to better assess the system pro-actively, and restore power more efficiently after interruptions do occur. An example is Otter Tail Power's new Outage Management System (OMS) which has improved reliability for the distribution system by allowing us to respond to interruptions more quickly and safely when they do occur. The OMS project is discussed in section 9.B and within the EUIC filing, Docket No. E017/M-21-382.

Fair and reasonable costs are also at the core of Otter Tail Power's mission statement described in the preface of the report. One specific way in which we maintain a safe, reliable, and cost-effective system is throughout the development and adherence to material and construction standards. This is discussed further in section 4.

Otter Tail Power's long standing Energy Conservation and Optimization (ECO) and Demand Response (DR) performance are a true testament to meeting the Commission's planning objective listed above. On June 30, 2023, in Docket No. E017/CIP-23-94, Otter Tail Power filed its 2024-2026 ECO plan, with the MPUC, further expanding and building upon goals set by state energy policies. Otter Tail Power leverages its conservation and optimization programs to avoid high-cost energy purchases, avoid and defer energy purchases and capacity investments, and to maintain local reliability, which all support keeping customers' costs low. These programs are highlighted in section 9.C.

In addition to our OMS and SIRI initiatives, our Advanced Metering Infrastructure (AMI) initiative is another way Otter Tail Power is further improving upon this Commission planning objective. Related to reliability and resilience, AMI provides engineers with more granular information related to system performance to better inform system planning activities. In addition, AMI meters provide the OMS with power-on and power-off notifications, further improving the performance of the system. Lastly, AMI has a positive business case which helps to maintain low rates for our customers as described further in Otter Tail Power's EUIC filing, Docket No. E017/M-25-131.

Section 9.C describes Otter Tail Power's Advanced Load Management (ALM) project which, in addition to being able to reduce demand as necessary to optimize capacity and maintain

reliability, also replaces unsupported vendor software that presents a data security risk and thus aligns well with this planning objective.

Lastly, not only are field operations and efficiency improved by our telecommunications long-term roadmap, replacing assets that have reached their of end-of-life will improve and provide additional cyber security to the Otter Tail Power system as described in section 9.D.

Objective 2: Enable greater customer engagement, empowerment, and options for energy services.

Within the IDP, there are a few specific projects that Otter Tail Power is pursuing which directly target improving customer engagement, empowerment, and options for energy services. Otter Tail Power's ECO programs provide continued options for customers to save money on their electricity bill. This comes in the form of varying rate options and energy savings and is further discussed in 9.C and in Otter Tail Power's ECO filing. Electric Vehicle (EV) rate options as well as a fast-charging station network being developed by Otter Tail Power, is another example of expanding options for our customers. These are highlighted in section 13.

Otter Tail Power is continuing to improve upon this objective through the OMS project as it provides customers the ability to sign up for near-real time status updates during interruptions including estimated time of restoration (ETOR). ETORs and other status updates during outages are automatically sent out from the OMS. Along with status updates, customers are able to specify the communication method they prefer to be informed by and also select at what times of the day. These are all critical to improving customer engagement and are highlighted in section 9.B

As described in Section 9.C (and filed in EUIC, Docket No. E017/M-23-131), Otter Tail Power is developing our next generation Advanced Load Management (ALM) system to replace the end-of-life system currently in place today. Otter Tail Power has selected vendors, with the expectations for the new system to maintain our existing offerings related to load control, and also expand new options for saving energy and shifting their usage.

The Advanced Metering Infrastructure (AMI) project, highlighted in section 9.A and Docket No. E017/M-23-131, now provides customers with new options to receive information about their energy usage including high use alerts. AMI has proven to be foundational in enabling Otter Tail Power the ability to develop new rates and offerings for customers in the future.

Objective 3: Move toward the creation of efficient, cost-effective, accessible grid platforms for new products, new services, and opportunities for adoption of new distributed technologies.

Within the load forecast section 7 we discuss Energy Conservation and Optimization (ECO), and Distributed Energy Resources (DERs). Each of these areas creates opportunities for the objectives laid out above. Otter Tail Power's EV charging rates and TEP will have a large impact on the opportunities for adoption of new EV related technologies. Further, ECO programming will continue to allow Otter Tail Power customer's the best in the industry offerings for ways to save energy and lower their bill.

Within the DER forecast section 7, we highlight our historical trends related to DER interconnection requests. To date, this has been somewhat minimal, and we have been able to be very responsive to the customers that are requesting DER interconnection. As discussed in section 7, we expect this trend to continue in the near future and as such, existing processes and offerings will work well for our customers. This will continue to be monitored as we move further into the future to ensure DERs can connect to the Otter Tail Power system.

Once again, OTP's recent AMI project will be a foundational project for Otter Tail Power to continue to expand on not only this objective, but most others as well. Though not all future customer offerings and new services are fully known or developed at this time, AMI provides key customer load data for the development of new rates, services, and offerings. This can be reviewed in further detail in section 9.A and in Docket No. E017/M-23-131.

Objective 4: Ensure optimized utilization of electricity grid assets and resources to minimize total system costs.

The use of standards to ensure a safe, reliable, and cost-effective grid have been a key part of our business practices since Otter Tail Power's beginning. For example, it may be more cost-effective to install an asset of higher amperage or rating than would be required at the present day but doing so may be a prudent and cost-effective approach over the long-term system need. Not only do customers receive the benefit of keeping costs low using standard purchasing, but the use of standards also sets our system up for growth should there be any expansion of loads in the area. Long-term, this also keeps customer rates low. Standards are discussed in section 4.

With the AMI project, a complete connectivity model is imported from our GIS. By doing so, engineers are now able to access load data for every single customer load, improving our ability to see their impact to the distribution system from a capacity standpoint. As new load grows, this will help highlight under and over utilized transformers across the distribution system, and areas with voltage issues. Prior to AMI meters, we were unable to precisely know valuable real-time total loading and relied on industry standard engineering assumptions. The same principle in terms of load can be applied to any section of the distribution system such as a feeder or sub-feeder section. The AMI project discussed in section 9.A and in Docket No. E017/M-23-131 has and will continue to improve upon how Otter Tail Power meets this Commission objective.

The planning processes described in section 4 review existing data such as substation metering to ensure assets are not over or greatly underutilized. This review also takes place when studies are conducted which is discussed in this same section.

Lastly, Otter Tail Power's internal approval process and alternative analysis helps ensure cost effective and reliable solutions are selected in our capital planning process.

Objective 5: Provide the Commission with the information necessary to understand Otter Tail Power Company's short-term and long-term distribution system plans, the costs and benefits of specific investments, and a comprehensive analysis of ratepayer cost and value.

Throughout the IDP report, we discuss our company and more specifically, the operation and planning of the distribution system. In general, the distribution system plans are represented by our financial forecasts. These can be found in section 8.

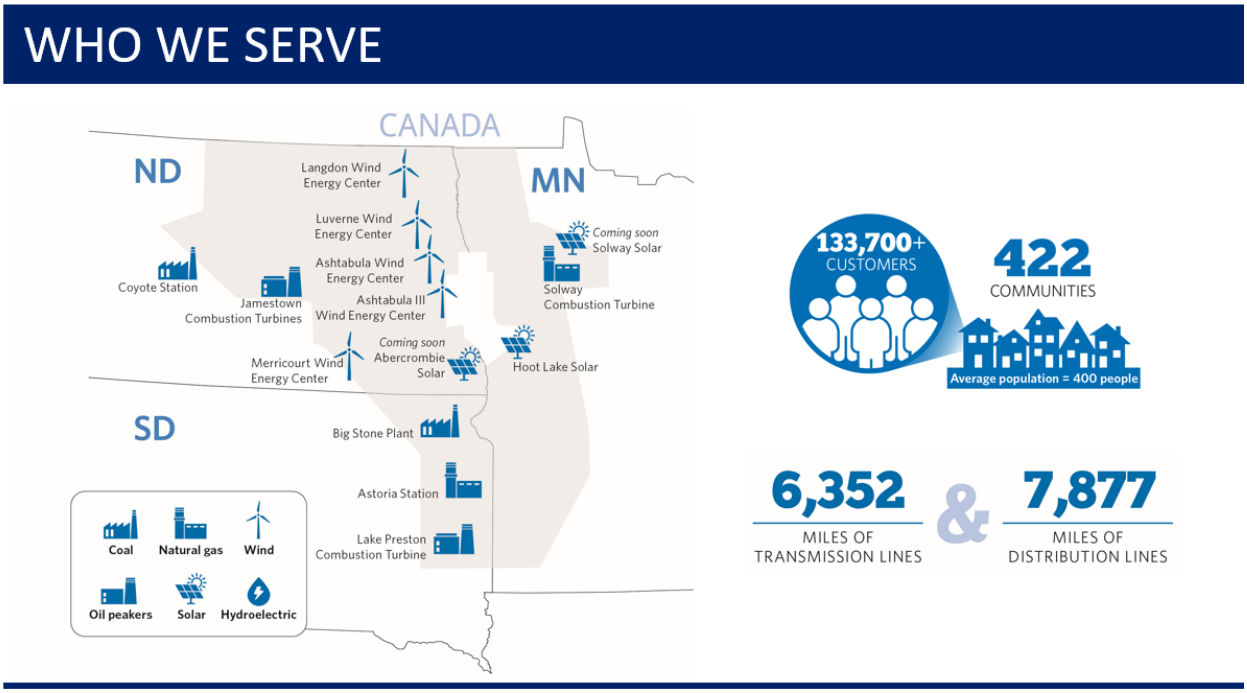
The majority of the forecasted spend comes from age and asset health initiatives (SIRI) along Grid Modernization projects such as ALM. Both initiatives are discussed in the Grid Modernization section 9 where we discuss the specific projects within the short- and long-term plans. Additional details about these plans, including ratepayer cost and value, can also be found in previous dockets as discussed within section 9.

In summary, Otter Tail Power is excited to share our distribution upgrade plans within this IDP. Throughout the company, there are many exciting initiatives related to meeting the commission objectives and upholding Otter Tail Power's mission statement; "…providing electricity as reliably, economically, and environmentally responsibly as possible to the balanced benefit of customers, shareholders, and employees and to improve the quality of life in the areas in which we do business."

4. DISTRIBUTION PLANNING OVERVIEW

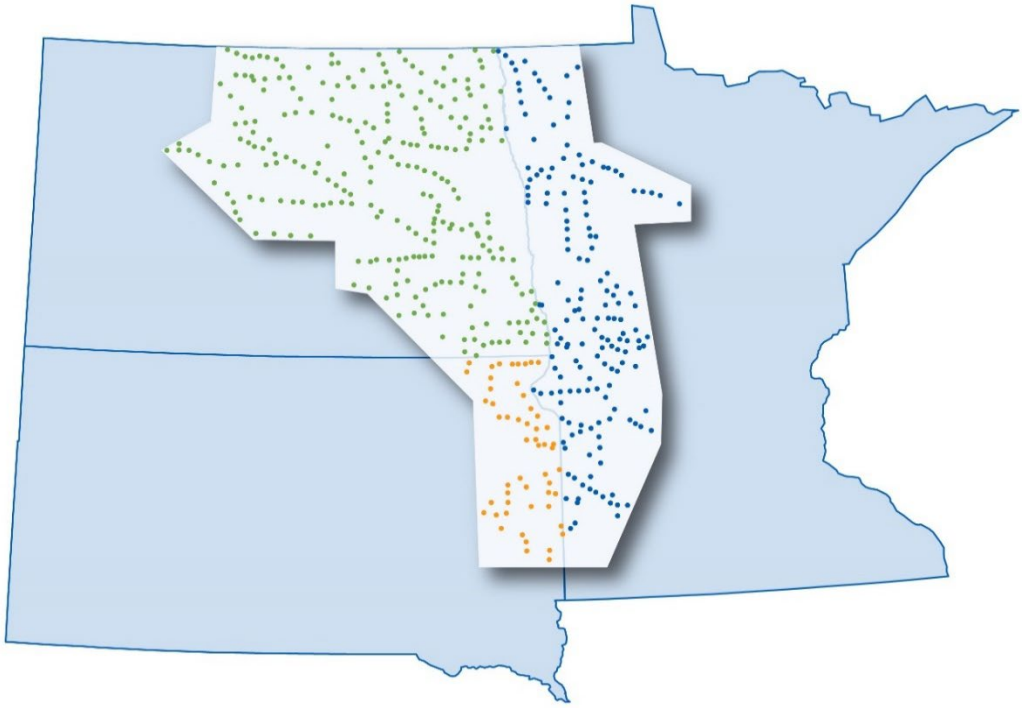
Otter Tail Power provides electricity to 422 communities across rural areas in western Minnesota, northeastern South Dakota, and the eastern two-thirds of North Dakota. The average population of the communities served is approximately 400, and over one-half of the communities served have populations of fewer than 200. Only three of Otter Tail Power's communities served have populations exceeding 10,000: Fergus Falls, Minnesota (pop. 13,138), Bemidji, Minnesota (pop. 13,431), and Jamestown, North Dakota (pop. 15,427). The Company operates nine(9) local Customer Service Centers (CSCs) throughout the service territory, of which four are within Minnesota. Otter Tail Power is committed to utilizing proactive efforts to communicate, investigate, and resolve reliability and power quality issues across approximately 70,000 square-miles of service territory. In total, the Company's service area is roughly the size of North Dakota. This information is also summarized in Figure A below. Considering Otter Tail Power's total load across the service territory and the number of distribution substations that exist, Otter Tail Power's average distribution substation demand is around 1700 kW. Consequently, Otter Tail Power's average distribution substation transformer size is around 3300 kVA.

Figure A – Who We Serve



The following Figure B shows each of the communities served across the Company's three-state service area. Minnesota communities served are shown as blue dots.

Figure B – Otter Tail Power Communities



In prior IDPs, we highlighted the generally stagnant system load growth. This statement remains true for the 2025 IDP as well. While Otter Tail Power has recorded some growth with transmission connected loads, we are still showing a very flat growth profile on the distribution system. This little to no growth assumption is also the baseline scenario in Otter Tail Power's latest Integrated Resource Plan (IRP).

The distribution system can see growth (or decline) from one area of the system to the next. Thus, distribution planning needs to be very granular which is the biggest difference in comparison to both transmission and resource planning. Most of the substations in the territory are not growing and operate well within their maximum capacity system limits. Load centers may shift(s) from one area of a distribution feeder to another in the form of spot loads over time. These load changes may also warrant closer attention from engineers even though the overall substation loading may not have changed.

In summary, Otter Tail Power's distribution system the past five to seven years has shown minimal load growth, annually. However, new load growth is only one factor for distribution planning. Otter Tail Power also considers system reliability, performance, and age assessment of assets alongside any outside forces, such as road moves during distribution system planning.

Otter Tail Power has one primary distribution studies engineer but there are others within the organization who can perform similar tasks as needed. This role is primarily responsible for reviewing and analyzing areas of the system that are seeing demand growth or other operational constraints that require an electrical study to identify potential mitigations. The various Minnesota communities studied since the last IDP are shown in Table 1 below.

Table 1 – List of Minnesota Studies Completed Since November 1, 2023

#	Town	Date Completed
1	Northcote	11/29/2023
2	Forada	12/8/2023
3	Appleton-Holloway-Milan	1/3/2024
4	Oklee	1/12/2024
5	Beardsley	2/15/2024
6	Morris	4/12/2024
7	Bemidji	4/23/2024
8	Wilton	6/13/2024
9	Twin Valley Rural	6/14/2024
10	Crookston	7/10/2024
11	Fisher-Ross-Fanny	10/25/2024
12	Eldred-Climax 24 kV	10/25/2024
13	Gary	12/11/2024
14	Cass Lake	12/11/2024
15	Bellingham	1/8/2025
16	Winger	3/21/2025
17	Milroy	6/12/2025
18	Brandon	9/10/2025
19	Mahnomen	9/12/2025

In addition, Otter Tail Power has six Area Engineers (AEs) who report to an engineering manager. These roles have accountability for designated geographical areas throughout the Company's service territory to ensure adequate review of distribution assets in the field. AEs are responsible for identifying and cost justifying high value projects in their respective areas that meet the goals of cost-effectively improving reliability, resiliency, system efficiency and minimizing operational risks. Reducing risk includes proactively addressing capacity concerns, compliance, performance, and safety.

AEs roles reside within the asset management department and work very closely with Otter Tail Power's customer service department (field employees, including linemen and customer relations personnel) to identify high-value projects. This close working relationship keeps the engineering and asset management group in synch with the needs of the distribution system. The customer service department is also aware of new and/or growing customer load, aging and poor performing assets, and provide suggestions for overall system operational and safety improvement. In addition to the information coming from the field, AEs review system data such as distribution studies, AMI metering overload reports, GIS information, inspection results, and reliability reports to scope, estimate, and design projects to grow and maintain a reliable distribution system. Otter Tail Power's SIRI initiative has placed a renewed emphasis on reliability driven data analytics within the planning process. This initiative is discussed more in section 9.

Beyond the specific projects identified each year, Otter Tail Power also maintains budgets for ongoing programs to maintain the Company's electrical system's asset health. These programs include tree trimming, transformer and regulator change outs, pole replacements, recloser change outs, overhead to underground line conversions, and underground cable replacements which are also further discussed in section 9.

Another key aspect to maintaining a cost-efficient, safe, and reliable system is the use of Construction Standard Designs and Material Standards. Construction Standard Designs are designs that are developed, maintained, and updated considering multiple inputs. The Construction Standard Designs enable and act to ensure efficient, consistent, readily trainable construction of the electric delivery system assets. These designs are developed and updated considering input from engineering, operations, safety, maintenance, as well as material sourcing and logistics. Inputs include, but are not limited to, overall cost, efficiency, ease of construction and maintenance, historical performance data, operational and public safety, reliable long-term performance, resiliency, industry standards, etc.

Material Standards is the process whereby specific material items are evaluated for installation and consumption within construction standard designs. This process includes similar inputs as construction standards, costs, safety, previous experience, reliable performance and industry standards, and industry evolution. Both Material and Construction Design Standards ensure Otter Tail Power's distribution system is cost-efficient, safe, and reliable which squarely meets the Commission's objectives for the IDP. Material Standards review has been very active recently with supply chain challenges which has driven the need to explore alternative vendors. Thus far, Otter Tail Power has been able to navigate supply chain challenges well through approved alternative vendors as well as good long-term planning.

It should be noted that design standards create system capacity "step changes." For example, underground feeder design standards are rated at either 200 or 600 ampacity, or substation transformer sizing which is standardized to future purchases of 1 MVA or 2.5 MVA. This helps maintain efficient installation, and stock inventory of replacement asset materials. In doing so,

building of the distribution system can appear "overbuilt" in terms of capacity. However, the system was not overbuilt at all but rather efficiently planned, designed and constructed to handle future growth.

4.A System Tools

Various tools are used to aid in planning the distribution system. Synergi Electric (v7.1.0) by DNV is the modeling software used to perform load flow and system performance analysis. Today, most studies look at near-term challenges associated with a new customer or an existing customer expansion. However, the distribution study area is striving to be continually more proactive in identifying longer-term challenges in applicable areas. One crucial piece for moving from a reactive to proactive study approach will be finishing the company-wide AMI Rollout. This will provide Otter Tail Power more granular data for studies and will help to identify problematic areas of the distribution system(s) before they fail. As we move forward with more proactive studies, we also want to be prudent with resources. To manage this balance, Otter Tail Power plans to study communities with both historical load increase and limited substation capacity.

To date, Otter Tail Power's distribution systems have experienced almost exclusively unidirectional or one-way power flows and historically standard demand profile shapes which peak in either the middle of the summer or winter months. This has meant that to capture worst case scenarios during studies, Otter Tail Power has only needed to focus on those singular peak or minimum demand days with a steady-state power flow analysis. However, as penetration levels of distributed generation increase, Otter Tail Power anticipates increased instances of bi-directional power flows, voltage regulation challenges, and unique looking demand profile curves (aka, "The Duck Curve") with sporadic peaks which are increasingly intermittent in nature. With Otter Tail Power's aforementioned rollout of AMI smart meter technology, distribution engineering anticipates performing more time-based and dynamic power flow analyses (e.g., 576 or 8760 Analyses, Time-Series, Flicker, Stability, etc.) to ensure a reliable system into the future.

Another critical tool leveraged for system planning is Otter Tail Power's Geographic Information System (GIS), which is also used internally for many operational applications discussed elsewhere in this report. Environmental System Research Institute's (ESRI) GIS houses both transmission and distribution assets. The GIS department creates the latest distribution models for use in Synergi Electric. The process starts with a review and quality analysis/quality control of the system data within GIS. Assets, attributes, and system connectivity are necessary to create a model. Once the proper information is collected, processed, and memorialized in GIS, a file transfer takes place to an interface program called MiddleLink. MiddleLink aligns the data sets between GIS and Synergi Electric, allowing the creation of an electrical system model for analysis.

The electric system model contains all the known connectivity and detail about the electrical system's equipment, conductors, and facility attributes. The attributes include voltage and current ratings, size, length, height, class, material type, phasing, and a geospatial location for the asset. The model gives an accurate geographical map view of the electrical system.

One of the last steps in modeling is to leverage actual system metering data. Otter Tail Power captures this via load/meter historian systems (i.e., eDNA and Power Profiler) which is then loaded into the electrical model. Finally, system source strength is added to the electrical model from the system protection department's software called Aspen One-liner. Engineering review takes place at every step along the way to ensure the data is accurate and of sufficient quality. Capturing loading information will be much improved following the completion of our AMI project.

Updating and maintaining our GIS data has become a large area of focus within the company and, will directly lead to faster model production and quicker turnaround times on study reports and recommendations, resulting in additional time to perform proactive engineering studies.

Once projects and needs are identified, they are designed within a distribution design tool called StakeOut which is provided by GeoDigital. The StakeOut system was installed in late 2019 to replace an old legacy mainframe system. This system is also referred to as "Staking" and provides field employees the necessary information including material and location to construct each distribution project.

4.B IEEE 1547-2018 Impacts and Historical DER Trends

IEEE 1547-2018 and its amendment, IEEE 1547a-2020, are the newest updates to the IEEE 1547 base standard which was first approved on June 12, 2003. These updated standards replace the previous IEEE 1547 base standard and its IEEE 1547a-2014 amendment. The main differences when comparing this new interconnection standard with the older versions are the wider "cease to energize" dead-bands for voltage and frequency ride-through under abnormal system conditions. These updates are due to the nationwide growth in DER adoption levels since those old standards were created and are an attempt to better support the Bulk Electric System during abnormal system conditions or events. One of the other main differences would be the required use of UL 1741 SB certified advanced inverters and their autonomous volt-var and volt-watt control functionalities. Otter Tail Power does not anticipate these new requirements causing any major adverse or negative effects within our service territory as the DER penetration levels are still relatively low. To the contrary, the new default advanced autonomous inverter control settings will in fact benefit Otter Tail Power from a voltage support standpoint due to the autonomous reactive power control (e.g., volt-var, volt-watt) capabilities compared to our prior requirement which consisted of a fixed 98 percent absorbing power factor for all previous installations.

To date, there are no known circuits on Otter Tail Power's distribution system(s) where existing or forecasted abnormal voltage or frequency issues have been identified due to existing DERs, or otherwise, that could be mitigated through the utilization of these automated advanced inverter functions mentioned above. However, Otter Tail Power is confident that these advanced functionalities will be beneficial to the overall power quality and reliability metrics as we move towards a future with increased levels of inverter-based DERs.

Otter Tail Power has averaged 14 DER installations with roughly 344 kW of DER installed per year over the past five years (2020 – 2024). Table 2 below summarizes the total MN DER that have been interconnected to the Otter Tail Power distribution systems as of September 1, 2025.

Table 2 – Total Minnesota DER Interconnections as of September 1, 2025

Total #	Size (kW)	Fuel Type
128	3441.15	Solar
6	66.95	Solar + Storage
1	27	Storage
16	3884	Wind
5	1110	Other*

**Includes Diesel / Natural Gas / Biofuel / Etc.*

Table 3 represents the total queued DER systems in 2025 as of September 1, 2025, to the Minnesota distribution system.

Table 3 – Queued Interconnection Requests as of September 1, 2025

Total #	Size (kW)	Fuel Type
13	12898.46	Solar
3	47.50	Solar + Storage

Over the past year or two, Otter Tail Power has noticed a relatively significant increase in photovoltaic DER installations compared to the years prior to 2023. This is likely due to a number of factors including the popularity of solar, the increasing desire for battery home backup systems, and the various federal and statewide incentives received for installing these DER systems. Table 4 below outlines the total nameplate kW and number of DER generation systems installed in the previous year (2024), along with a breakdown by fuel type.

Table 4 – DER Systems Installed in Prior Year (2024)

Total #	Size (kW)	Fuel Type
38	1584.1	Solar
1	9.98	Solar + Storage

Otter Tail Power does not keep detailed records to track the cost to review and install a DER. However, Otter Tail Power estimates that it spends about $1,700 per application by the time the application is processed, the necessary agreements are in place, the meter is installed, testing is

performed, and the new DER has been fully incorporated into the system. Of course, this OTP-internal cost estimate will be higher if the proposed DER fails the initial screens and gets pushed into either a Supplemental Screen, a full System Impact Study, and/or a Facility Study. Table 5 below shows an estimated breakdown of the internal Otter Tail Power costs associated with an average interconnection request.

Table 5 – Otter Tail Power Interconnection Process Costs

Application Phase	**Hours**
Interconnection Coordinator	3
Administrative Assistant	3
Distribution Engineering	3
Transmission Engineering	1
Installation Phase	
Interconnection Coordinator	1
Contract close-out administration	2
Other administration	2
GIS updates	1
Meter tech – start-up test, travel, install	3
Customer Service notification	1
Total Hours	20
Cost at $85/hr	**$1,700**

Table 6 below shows a breakdown of total customer charges incurred for DER generation installations over the prior year (2024).

Table 6 – Interconnection Customer Charges for DER Installations (2024)

Charge Type / Category	**Total Customer Charge ($)**
Application Fees*	$6,811.47
Additional Study Fees (Supplemental Screens or System Impact Study)	$15,287.28
System Upgrades	$0

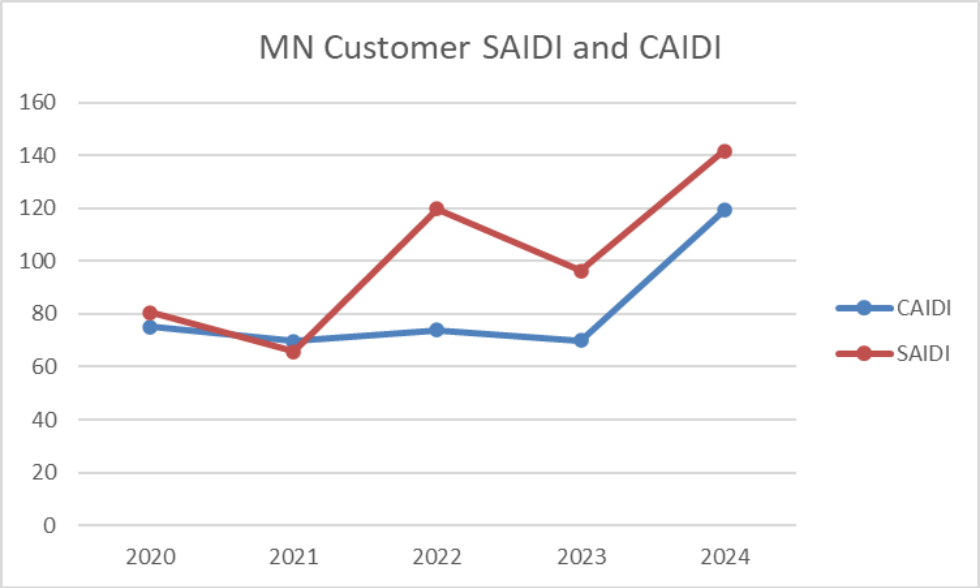
**Includes Ombudsperson Fees*

Due to the relatively low levels of DER penetration across the Otter Tail Power footprint, it is still quite rare that an Interconnection Customer would be required to pay for a costly system upgrade to safely and reliably interconnect their distributed generation system. The majority of our distribution systems continue to maintain ample hosting capacity, allowing for the integration of additional distributed generation without concern.

5. SYSTEM RELIABILITY SUMMARY

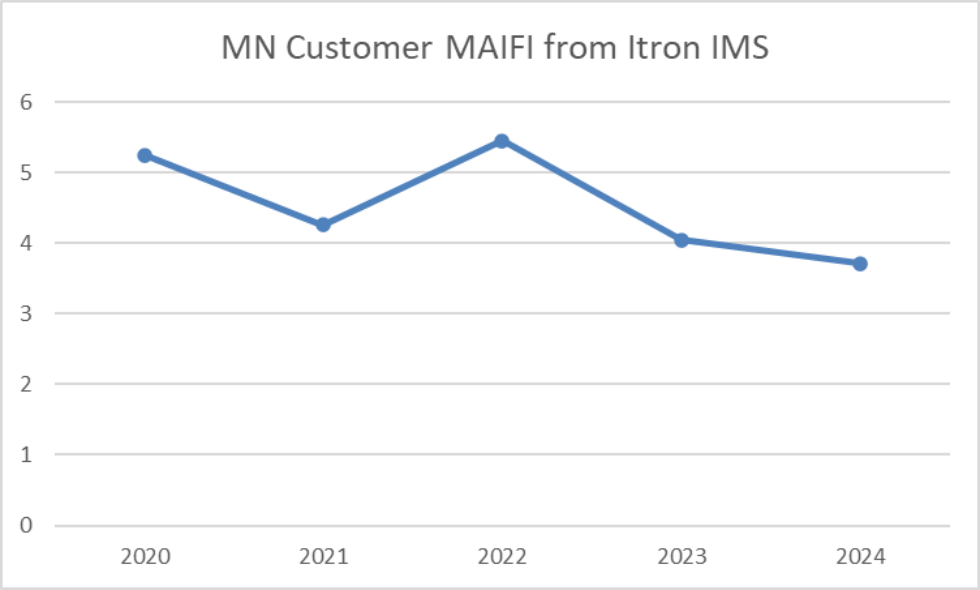
Otter Tail Power's reliability performance is well-described within the Minnesota Safety, Reliability, and Service Quality (SRSQ) report found within Docket No. E017/M-25-30. In summary, Figure E below shows the past five years of Customer Average Interruption Duration Index (CAIDI) and System Average Interruption Duration Index (SAIDI) performance. It should also be noted that Otter Tail Power moved from an Interruption Monitoring System(IMS), monitoring at the feeder level; to a new Outage Management System(OMS) in 2023 which records outage data at the customer level, hence recording more events. Overall, Otter Tail Power saw an increase in 2024 SAIDI and CAIDI results when compared to previous years, largely due to our move to monitor the system more granular and provide much more data for analysis on system performance via our new OMS.

Figure E – Historic Minnesota SAIDI and CAIDI



In addition, a summary of the Momentary Average Interruption Frequency Index (MAIFI) over the past five years is provided in Figure F. MAIFI is an indication of the average number of momentary interruptions the average customer received over the course of a year for a particular region. Otter Tail Power views MAIFI as a leading indicator for future sustained outage events that contribute to SAIDI, and tracks and analyzes line sections with excessive momentary interruptions for future capital improvements or possible vegetation management needs. Otter Tail Power's OMS system does not have the capability to monitor MAIFI. The results shown are from the IMS measured at the feeder level. Results for 2024 continue a downward trend.

Figure F – Minnesota Historic MAIFI



6. SYSTEM DETAILS

Otter Tail Power has limited visibility of distribution facilities throughout its system on a real-time basis. Otter Tail Power has 525 distribution substations, with 15 of those substations having control and monitoring within Otter Tail Power's System Operations Energy Management System(EMS) utilized by the power system operators. Otter Tail Power's EMS is primarily used to monitor and control the transmission system (transmission system – 41.6 kV and higher). However, distribution facilities located within a transmission substation are included when possible. Table 5 below shows a summary of the Otter Tail Power distribution substation and feeder statistics.

Table 5 – Substation and Feeder Statistics

Distribution Substation	Minnesota	North Dakota	South Dakota	Total
Substation Count	190	262	72	525
Control/Monitoring	6	6	3	15
Metering	137	185	45	367
Substation/Transformer Capacity (MVA)	745	768	279	1792

Distribution Feeder	Minnesota	North Dakota	South Dakota	Total
Feeder Count	278	340	94	712
Control/Monitoring	27	11	5	43

As can be seen from Table 5, Otter Tail Power currently only meters 367 of 525 distribution substations. However, this metering measures more than 90 percent of Otter Tail Power's delivered energy at the substation. It is estimated that the cost of adding metering capabilities to substations, where metering is not currently installed, to be approximately $15,000 per sub, depending on the substation design and location. To date, metering at the remaining substations has not been cost justifiable to serve the needs of customers and will continue to be evaluated on a case-by-case basis as needs evolve. Otter Tail Power's newly installed AMI system may provide an affordable solution. It should also be pointed out the metering referenced in this section relates to distribution substation metering. Otter Tail Power does meter all customer accounts though our AMI system.

Table 6 below provides more insight, derived from GIS, regarding asset counts for the distribution system at Otter Tail Power. Primary distribution lines are the main lines from substations to the high side of service transformers. Secondary distribution lines are the lines from the low side of service transformers to individual customer service lines and streetlights owned by Otter Tail Power. Distribution poles are used to attach the primary and secondary distribution lines for overhead circuits and service transformers are used to transform the voltage from primary to secondary levels.

Table 6 – Distribution System Asset Statistics

Primary Distribution Line (miles)	**Minnesota**	**North Dakota**	**South Dakota**	**Total**
Overhead	1,926	1,802	455	4,183
Underground	830	731	154	1,715
Total	2,756	2,533	609	**5,898**

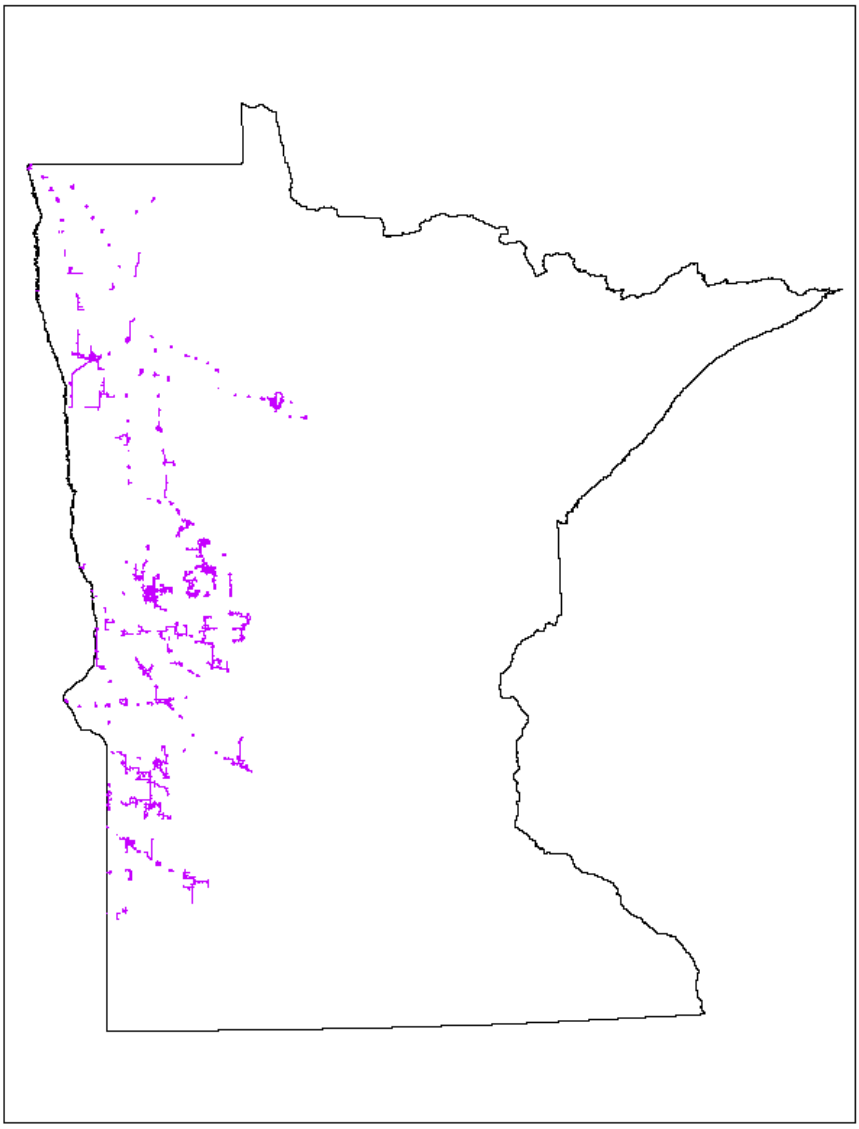
Secondary Distribution Line (miles)	**Minnesota**	**North Dakota**	**South Dakota**	**Total**
Overhead	700	729	175	1,604
Underground	244	229	44	517
Total	944	958	219	**2,121**

Distribution Poles	**Minnesota**	**North Dakota**	**South Dakota**	**Total**
Total	74,962	79,768	16,579	**171,309**

Service Transformers	**Minnesota**	**North Dakota**	**South Dakota**	**Total**
Overhead	12,142	10,528	2,636	25,306
Pad-mount	6,358	5,135	968	12,461
Total	18,500	15,663	3,604	**37,767**

To help visualize the Otter Tail Power assets within a map, Figure G below was exported from Otter Tail Power's GIS. It is easy to see the rural areas throughout the west and north central regions of the state where we provide service.

Figure G – Map of Otter Tail Power's Minnesota Distribution System from GIS



Lastly, nearly all of Otter Tail Power's billing meters are now read remotely today via AMI. In Minnesota, AMI meters are used to bill just over 62,000 Otter Tail Power customers.

Along with the deployment of the AMI network, Otter Tail Power is deploying a new meter endpoint platform, Landis & Gyr's Revelo meter. The Revelo meters provide improved accuracy and advanced functionality for all our customers. The meter has advanced metrology to support agile rate design, i.e. time-of-use, remote disconnecting capabilities, and advanced power quality metrics.

Additionally, the Revelo meter provides edge computing capabilities and an ability to sample, process, store, and provide data for real-time energy management and operational control. The advanced sensing capabilities and edge computing sets the stage for Otter Tail Power to benefit from a near real-time view of the grid as well as capabilities for customers to monitor appliance health and power consumption. Beyond these apps, Otter Tail Power has access to Revelo's open application architecture to securely utilize third-party software apps or develop our own apps for a specific business need. Additional details regarding Otter Tail Power's AMI project can be found in section 9.A.

6.A Wildfire Risk Assessment

To proactively address the growing threat of wildfires across its service territory, Otter Tail Power commissioned a comprehensive wildfire risk mapping initiative. This effort was led in collaboration with wildfire risk experts at EDM International, Inc., who developed a geospatial wildfire risk map tailored to our unique operational footprint.

The map integrates multiple national datasets—including LANDFIRE fuel models, USGS topography, National Weather Service fire weather data, and U.S. Census population density—to assess and classify wildfire risk using adjective class ratings ranging from Very Low to Very High. These ratings reflect the potential for wildfire ignition and spread and are designed to support both strategic planning and real-time operational decision-making.

Delivered in GIS format, the wildfire risk map serves as the foundation for identifying OTP's Hazardous Fire Areas (HFAs). HFAs are defined zones within Otter Tail Power's system where elevated wildfire risk intersects with utility infrastructure. These areas are prioritized for enhanced inspection, maintenance, and mitigation activities. The HFAs also inform asset health programs, grid hardening initiatives, and vegetation management practices, ensuring that resources are directed to the most vulnerable parts of the system.

This mapping effort is a cornerstone of broader Wildfire Mitigation Plan (WMP) strategy, which includes operational protocols, infrastructure upgrades, and stakeholder engagement. All aimed at improving public safety, reducing wildfire risk, and enhancing system resilience.

Additional details related to the effort and how the WMP informs operations and planning can be found in Otter Tail Power's WMP. The first WMP version was implemented in August of 2025 and will continually be improved and adjusted as Otter Tail Power works to continuously improve the WMP. Otter Tail Power has included WMP specific spend in two different categories within the IDP; Age Related Replacement and Asset Renewal and Grid Modernization and Pilot Projects. These spends are summarized in Section 8.B with details of the spends themselves found in the Grid Modernization and Infrastructure Section 9.F.

Figure H - OTP Risk Areas and Lines
(Minnesota Detail)

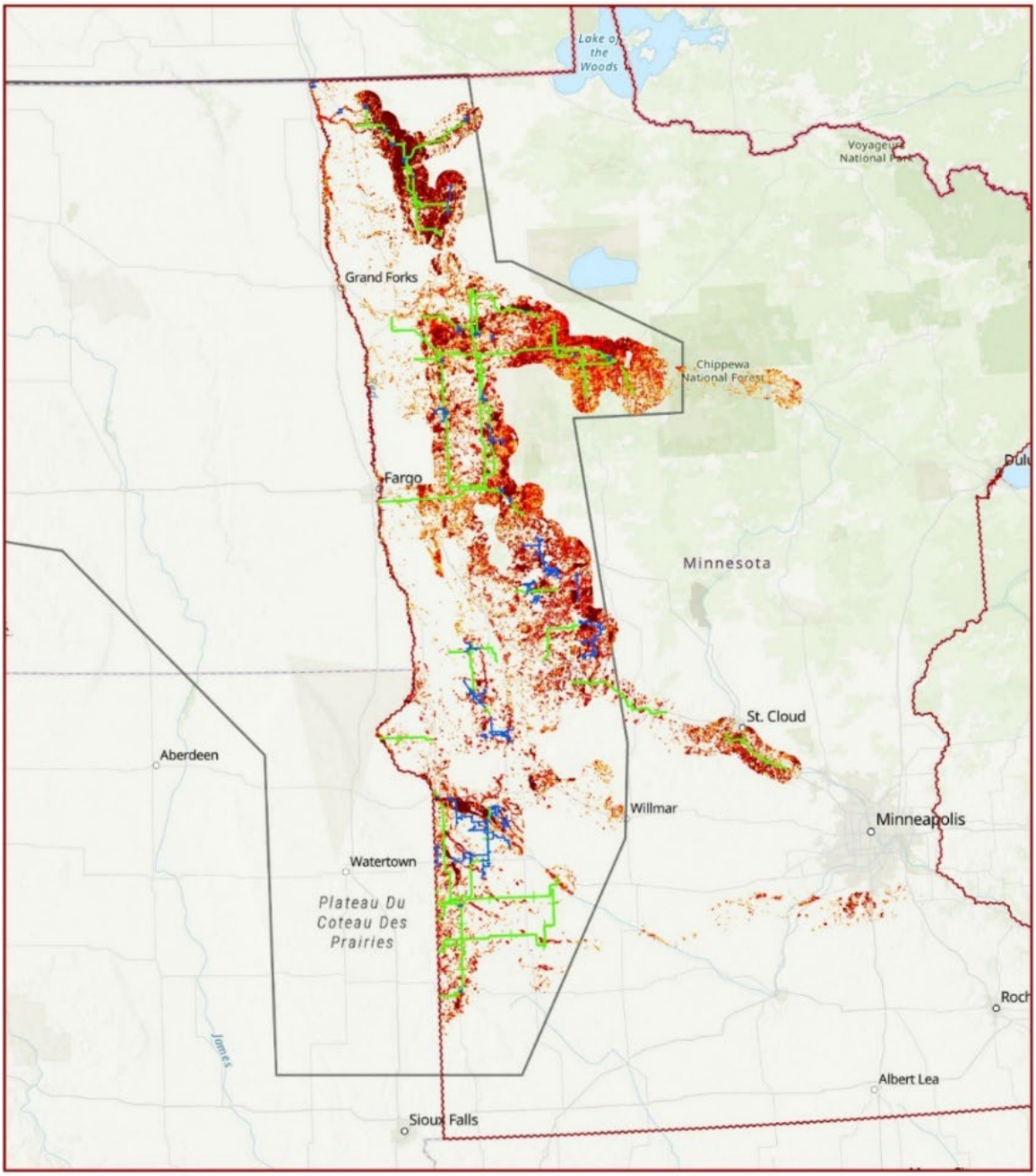
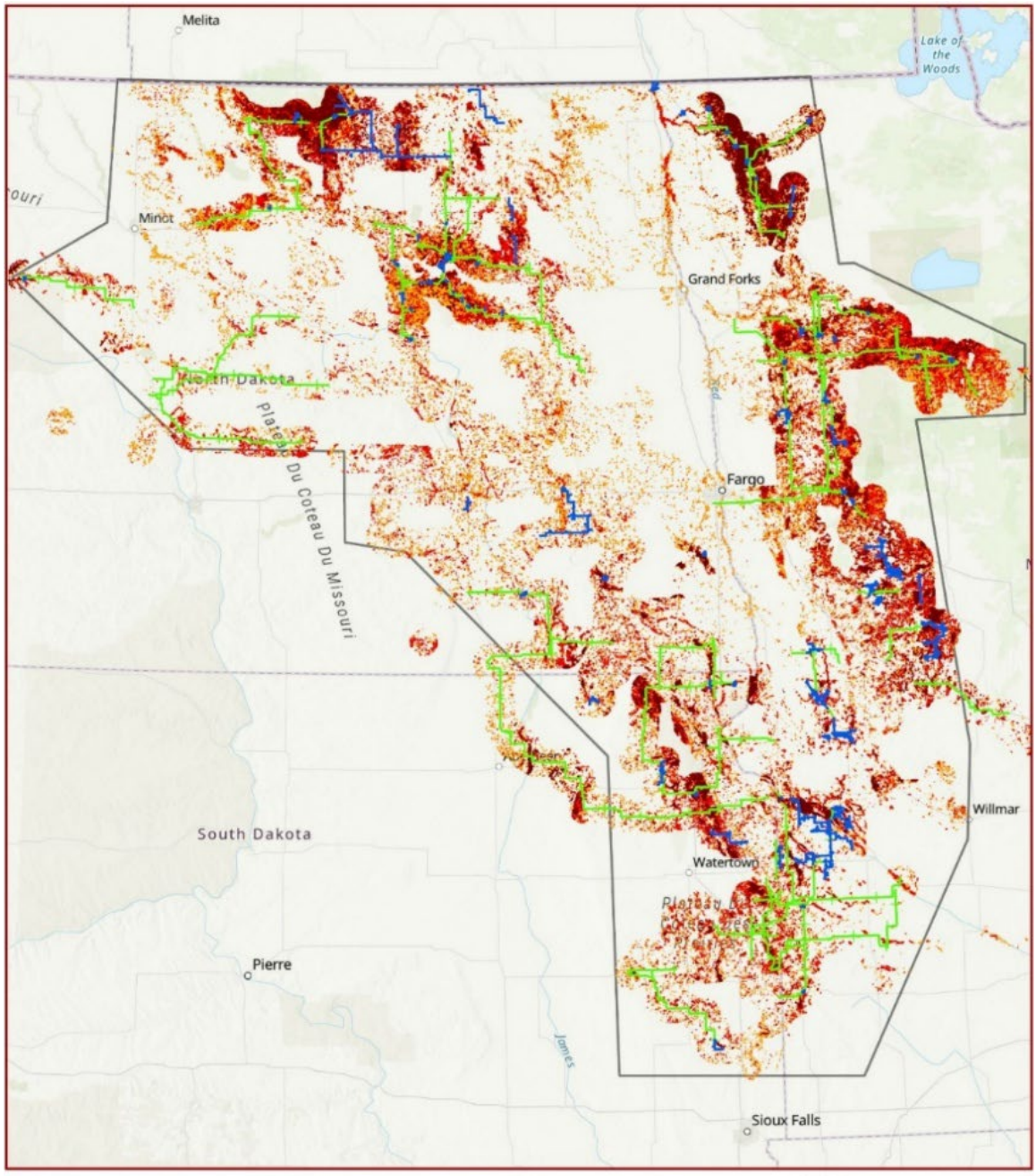


Figure I - OTP Risk Areas and Lines
(Total System)



As can be seen in the map above, Otter Tail Power has outlined its highest risk transmission lines and distribution lines. We performed the following steps to identify the high-risk transmission lines (70) and distribution feeders (101) within the system:

- Risk Area Classification - Lines and feeders are mapped to wildfire risk areas using hexagon-based risk ranks (e.g., very high, high, moderate, etc.) as described above.

- Quantification of Coverage - The total square miles of area covered, or transversed, by each Line or Feeder in each risk rank are calculated determining Area Miles.

- Line/Feeder Identification - Lists of lines and feeders intersecting very high, high, and moderate risk areas are compiled using weighted calculations to give greater emphasis for higher risk areas.

- Selection and Ranking - Lines and feeders are prioritized based on their overlap with very high, high and moderate risk areas, using weighted metrics and magnitude of Area Miles to prioritize in high risk category.

The number of lines selected provided 100 percent coverage of the very high risk HFA interface with the transmission lines or distribution feeders. The lines selected also provide 98% coverage of all medium, high, and very high HFA interface with transmission lines and 95% coverage for the same areas pertaining to distribution feeders. Again, these classifications are used for both operational adjustments during high risk periods, as well as inform long term age and asset replacement strategies.

7. LOAD FORECASTING

The distribution system must be designed to withstand system peaks and possible scenarios which may arise on the system in emergency conditions. Because of this, the system must be planned to peak demand levels. As discussed earlier in section 4, the distribution system must be planned in a very granular approach in comparison to transmission or generation planning. As such, these forecasts are used for discussion purposes and aid in macro level trends for planning and understanding the distribution system. However, localized studies are still required for any significant demand-based growth.

7.A Methodology in the current IRP

In Otter Tail Power's last IRP, Docket No. E017/RP-21-339, the base case demand scenario included minimal to no demand growth after applying ECO and load management forecasts which aligns with the trends shown in section 4 of the IDP. Preliminary analysis for the Company's 2026 IRP are showing similar results with minimal to no demand growth after netting impacts of ECO and load management activities. As such, studies of the distribution system are performed ad-hoc as described in section 4 as well. This is due to the granular nature of the distribution

system as well as a system wide trend of minimal to no demand growth. That said, growth must be accounted for in the distribution plan in areas of the system that see demand growth. In general, the following areas of Otter Tail Power's Minnesota system have experienced the most demand and growth activity over the past few years listed in alphabetical order:

- Bemidji
- Fergus Falls
- Morris
- Pelican Rapids
- Perham

These areas are monitored more closely for capacity constraints and more detailed studies are performed as necessary. The overall limited demand growth is reflected within the financial forecasts showing limited spends for capacity needs as shown in section 8.

DER Methodology in Forecasting

The baseline forecast for both the IDP and IRP include, or "net," the effects of DER trends on the system. As demand growth is monitored and reported, the effects of the request are "netted" into the load from a system perspective. This is due to the behind the meter configuration of these sites. Given the size and the overall number of requests, this approach suits our customers well in comparison to an approach which would exclude these generators from the demand trends and analyze them independently. Otter Tail Power also nets impacts from historical conservation energy savings, and load management activities to its system growth forecast. This is also described within Otter Tail Power's last IRP, Docket No. E017/RP-21-339. ECO programs are discussed in more detail in Section 9.C.

7.B DER Deployment – For Planning Purposes

For purposes useful for planning the distribution system, Otter Tail Power's DER deployment in most of our Minnesota service territory is not sufficiently high enough to warrant consideration in analyses. In these cases, any existing DERs will be netted within the historical meter data and, for all intents and purposes, can be ignored in electrical distribution studies. The one city / location in Otter Tail Power's Minnesota service territory where the DER deployment is actively modeled and directly analyzed in OTP planning studies is the Morris, MN distribution system. As of the end of 2024, Morris, MN has roughly 3.8 MW's of aggregate DER deployment, most of which is interconnected to the University of Minnesota - Morris campus. About 186.67 kW of solar is connected throughout the rest of the town with the remaining 216 kW of solar being interconnected to the U of M – Morris campus. Table 8 below lists the existing DER deployed in Morris, MN as of Dec. 31st, 2024.

Table 8 – Morris, MN DER Deployment as of Dec. 31st, 2024

Type of DER	Nameplate Size (kW)	Town
Solar	402.67	Morris
Wind	3300	Morris
Other*	60	Morris

**Includes Diesel / Natural Gas / Biofuel / Etc.*

Otter Tail Power considers Morris, MN to be the only town currently within our service territory that has an existing "high" level of DER deployment. Due to the rural nature of Otter Tail Power's service territory compared to our neighboring utilities, we define a "high" level of DER deployment as any distribution system where the aggregate interconnected DER exceeds that systems minimum or daytime minimum loading, depending on the type(s) of generator(s). This equates to bi-directional power flows and net excess energy being pushed back through the substation transformer coils and onto the local transmission system. This can lead to further transmission analyses being required, depending on the level of backflow, and can ultimately result in more costly distribution and/or transmission system upgrades to allow for these new or increased bi-directional power flows.

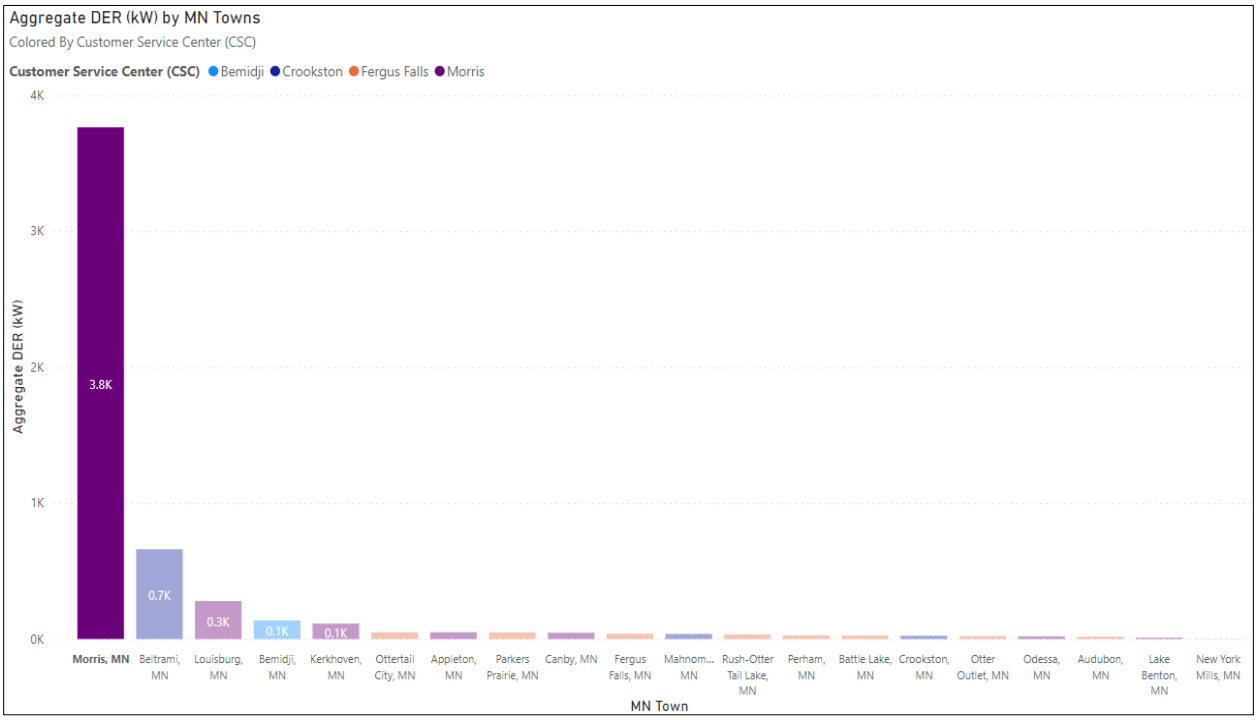
7.C Morris, MN – DER and EV Adoption Study Update

In Otter Tail Power's last IDP filing in 2023, Otter Tail Power performed a Distributed Energy Resource (DER) and EV impact study on Morris. The Company selected Morris in an effort to better understand the future impacts of faster than anticipated residential-scale DER interconnections and EV charger installations. The Company also selected Morris's distribution system for this study because it is Otter Tail Power's single largest adopter of distributed generation to date boasting nearly four megawatts of aggregate nameplate generation throughout the town, as of Dec. 31st, 2024.

The clear discrepancy between the adoption levels of distributed generators in Morris, MN compared to the rest of our Minnesota distribution systems is shown in the Figure I graph below. This figure visually highlights the reason that Morris, MN was selected as the distribution system studied in the Adoption Impact Study found in the 2023 MN IDP filing.

At this time, Otter Tail Power is not refreshing this Morris, MN study in the 2025 IDP filing due to the lack of additional DER or EV charger interconnections in Morris as compared to the towns penetration levels that existed back in 2023. Otter Tail Power strongly believes that the key takeaways and process improvements that were identified following the 2023 IDP Impact Study still apply for us today and that a refreshed study would not afford us any new, actionable takeaways or process improvements that we could implement in the short term.

Figure J – Aggregate DER by Minnesota Town



Accommodating Future Adoption of DER and EV Chargers (Tools and Processes)

Based on the results of the 2023 study, Otter Tail Power has determined that due consideration and future implementation of the following tools and process improvements may be necessary to accommodate increasing penetration levels of both DER and electric vehicle charging infrastructure to interconnect within the company's service territory.

As mentioned previously, this study focused exclusively on the town of Morris, MN, a very unique town within Otter Tail Power's footprint, as it is on the leading edge of DER and EV penetration to date boasting the most aggregate DER within our Minnesota footprint at nearly four (4) MW, as of December 31st, 2024. Although only a single distribution system was studied, the goal was to be able to shed light on some of the more obvious or clearcut types of system concerns that Otter Tail Power could face in the near future with increasing levels of penetration. The main system issues identified due to increasing levels of DER were overvoltage violations near areas of higher generation density, particularly in light loading cases. These cases that were analyzed with lighter system demands presented an increased risk of reverse power flow at the distribution substation level, which could lead to system protection and safety concerns as well as potential impacts to the local transmission system. Based on the 2023 IDP study results, Otter Tail Power identified the following key takeaways and will consider incorporating some of the following improvements to existing tools and processes in an effort to allow continued future adoption of DER throughout our service territory:

A. **Concerns began to arise as DER adoption levels approach either 50 percent of Peak System Loading OR 100 percent of Daytime Minimum Loading (DML):**

- **Voltage Impacts:** Consider and analyze the system(s) voltage regulation more intently.
  - Voltage regulator coordination issues
  - Excessive switching operations (switch capacitor banks, voltage regulators, etc.)
- **Reverse Power Flow:** Ensure new or upgraded distribution equipment is built to handle bi-directional power flow.

B. **Types of Studies:** Utilize more time-based power flow and dynamic transient analyses rather than only steady-state analyses as data becomes more granular and abundant with the rollout of our AMI technology, due to the intermittent nature of many DER types.
   - 8760 analysis (Hourly Profiles – Every Hour of the Year)
   - 576 analysis (Hourly Profiles – Worst Week Day & Worst Weekend Day for Each Month of the Year)
   - Voltage Flicker analysis
   - Harmonic analysis
   - Stability analysis

C. **Continue to review Otter Tail Power's Internal Standards:** Ensure Otter Tail Power's internal design and interconnection standards regarding DER interconnections remain up to date and current with the ever-evolving DER technologies landscape.

In terms of EV adoption, the main issues identified were localized thermal overloads and some low voltage violations on both the primary and secondary electric services. Another concern that Otter Tail Power has yet to face, but is aware of due to information previously gained by other utilities with higher existing levels of EV charger adoption, is the shifting of daily peaks and demand profile curves due to the customer(s) differing daily charging habits and utility rate plans regarding Time of Use (TOU) rates or otherwise. Otter Tail Power will be able to glean more details and additional risk information regarding higher levels of community EV charger adoption as penetration levels continue to increase for both Otter Tail Power and our larger neighboring utilities.

Based on the 2023 results, Otter Tail Power will consider incorporating some of the following updates to existing tools and/or processes in an effort to allow the continued future adoption of EV charging infrastructure throughout our distribution footprint:

A. **Default Design Criteria:** Evaluate OTP's smallest default conductor and service transformer design sizes to ensure a single EV addition does not lead to immediate costly system upgrades.
   - Note: Otter Tail Power does keep a stock of 10 kVA overhead transformers today for sites such as field pumps, road lighting, etc. However, Otter Tail Power has already made an adjustment to not place 10 kVA units, but rather 25 kVA units, at residential locations.

B. **Location Specific Thermal Loading Impacts:** Anticipate and design the local distribution system to be capable of handling multiple EV's and charging infrastructure at subdivisions, apartment buildings, town houses, etc.
    - Time-based, hourly power flow analyses will also greatly benefit system planning studies for electric vehicle chargers because these models can incorporate common non-incentivized EV charging schedules as well as the Utilities Time of Use (TOU) rates where certain charging times are incentivized.
C. **Voltage Impacts:** Voltage support considerations near more densely populated electric vehicle charging locations
    - Voltage Regulators
    - Fixed Capacitor Banks
    - Conductor Uprates
    - Dynamic reactive device (e.g., SCBs, STATCOMs, etc.)
D. **Continue to review Otter Tail Power's Internal Standards:** Ensure Otter Tail Power's internal standards and rates involving electric vehicle charging incentives remain current and up to date when compared to similarly sized utility companies.

Conclusion and Final Takeaways

As mentioned above, one main takeaway identified through the results of the 2023 IDP study were the localized system impacts that can come from areas with more densely populated distributed generators or EV chargers. These increasingly location-specific issues and concerns can range widely from overvoltage and reverse power flow impacts to undervoltage and thermal equipment overloads on the primary and/or secondary services with either a medium or high level of DER or electric vehicle charger adoption.

Otter Tail Power has been and will continue to monitor and evaluate both statewide and national standards as well as EV and DER growth rates in Minnesota and across the nation with the goal of using the data to help anticipate and hopefully proactively mitigate system violations that could arise in the near future due to the increasing levels of adoption. EV charging infrastructure specific to Otter Tail Power is lagging compared to metro area Utilities. Due to our current lack of customer level data and detailed secondary modeling capabilities, this 2023 study was only meant to be an initial, high level analysis to help Otter Tail Power begin identifying the most likely "low hanging fruit" types of issues that could impact the electric power system's health and reliability as well as hinder the Company's ability to add additional distributed generation and increase the number of EVs and public EV charging stations throughout Otter Tail Power's service territory into the future. The key takeaways Otter Tail Power gained from the 2023 study effort uncovered actionable tools and process improvements for the short term that we could implement immediately to continue ensuring a safe and reliable distribution system while working towards achieving the various statewide goals Minnesota has from a renewable generation and EV adoption standpoint.

Lastly, with the company's nearly completed rollout of AMI and as data becomes more abundant, readily available, and accurate at the customer level, Otter Tail Power will have the ability to study the system more accurately down to the secondary level. This will also allow the company to incorporate time-differentiated charging schedules and more accurately model the system loading shapes and DER profiles into our models.

7.D Feeder Minimum Loading Levels

One approximation used for determining available interconnection capacity is to review minimum feeder loading levels. Of course, this is certainly an approximation and true interconnection impacts can only be determined through actual planning studies. In addition, when Otter Tail reviewed the minimum feeder or substation loading reports, many reported a loading of 0 kWs. This can be due to outages and normal maintenance switching where the substation or feeder monitoring device may have been out of service. Because of this, the table in Appendix A shows the minimum “non-zero” loading level between daytime hours.

Appendix A shows column headers of month, day, and substation name. The months are numbered 1 through 12, and the days of the month are numbered 1 through 31 for the 2024 calendar year. The units used throughout the Appendix are kilowatts (kW).

7.E System Loss Analysis

Otter Tail Power completed its most recent loss analysis in 2024 using 2023 data. From this analysis, energy losses on Otter Tail Power’s distribution system are estimated to be 4 percent. This comes from losses analyzed starting from the distribution substation transformer to the primary distribution system to the secondary distribution transformer and finally to the secondary distribution system.

Substation metering data for the Otter Tail Power system from 2023 was aggregated to determine the energy delivered to the distribution system. Likewise, the retail metering data at customer locations was also collected for the same timeframe to determine the amount of energy delivered to customers. The difference between the customer metering and the distribution substation metering represents the total losses on the distribution system.

8. FINANCIALS

The following financial information is based on Otter Tail Power’s capital budget forecasted (approved for years 2025–2029) as well as actual spends through December of 2024.

8.A Historical

Within Otter Tail Power IDP requirements, historical distribution spending is to be broken down into the following categories:

a. Age-Related Replacements and Asset Renewal
b. System Expansion or Upgrades for Capacity
c. System Expansion or Upgrades for Reliability and Power Quality
d. New Customer Projects and New Revenue
e. Grid Modernization and Pilot Projects
f. Projects Related to Local (or Other) Government Requirements
g. Metering
h. Other

Each year, Otter Tail Power executes construction projects categorized within the funding classifications shown above. The process for the identification of projects was described earlier, in Section 4. For clarity, the types of projects included in each of the categories are described below.

Age-Related Replacements and Asset Renewal
This budget is used for planned or proactive work to replace aged and failing infrastructure field crews, engineers or other stakeholders have identified. This work is evaluated by engineering staff to assess risk and priority. This includes the program spending briefly discussed in Section 3 (i.e., underground replace, pole replace, etc.). As shown by the numbers in the tables below, this category makes up the largest portion of the distribution budget.

System Expansion or Upgrades for Capacity
This budget category represents any expansion to the distribution system. The types of projects include substation upgrades due to capacity drivers, voltage capacity upgrades, line upgrades due to voltage or amperage needs, upgrades to 3-phase from 1- or 2-phase substations, as well as conversions of distribution systems from 5 kV to 12.5 kV. This budget category generally has a low spend by comparison to others due to overall low demand growth.

System Expansion or Upgrades for Reliability and Power Quality
This budget includes projects that were generated primarily from reliability and power quality concerns and can include overhead (OH) to underground (UG) conversion projects as well as adding alternate feeds to the distribution system. In addition, this category also includes capital projects that were generated due to storms.

New Customer Projects and New Revenue
The work performed within the new load category includes projects such as building or installing new facilities to connect new customers and upgrading existing facilities to serve expanding customers. This is the second largest budget annually for distribution spend behind Age-Related and Asset Renewal spend.

Projects Related to Local (or Other) Government Requirements
Relocation projects occur every year in cooperation with local and state government improvement projects. Many times, these projects require the construction of new facilities and

the removal of old facilities to accommodate roads and infrastructure replacement and improvement. This budget is generally minimal but can swing widely based on requests.

Metering

Metering replacements and additions include residential, commercial, and industrial metering related material such as the meters themselves but also potential transformers (PTs), current transformers (CTs), and support hardware. Some of this budget is also used to maintain the manual meter information systems as well as purchase replacement assets for the load management system.

Grid Modernization

According to the Commission's definition "a modernized grid assures continued safe, reliable, and resilient utility network operations, and enables Minnesota to meet its energy policy goals, including the integration of variable renewable electricity sources and distributed energy resources. An integrated, modern grid provides for greater system efficiency and greater utilization of grid assets, enables the development of new products and services, provides customers with necessary information and tools to enable their energy choices, and supports a standards-based and interoperable utility network." With this definition, different projects could span the other definitions listed above and be considered as multi-value projects.

For example, an age related and asset renewal replacement project may also include a reconductor of a line, which makes the system more efficient in terms of reducing system energy losses and reducing voltage drop. Another example may be Otter Tail Power's new AMI system. AMI not only provides more accurate revenue metering, but it also provides the OMS with outage data and Engineering with near real time system values for operations and planning.

Some of the projects Otter Tail Power has included within the past IDP's are as follows: LED street lighting upgrades, EV charging station infrastructure, AMI, OMS project, and the Advanced Load Management (ALM) project upgrade. All of these are intended to maintain and enhance the safety, security, reliability, and resilience of the electricity grid for Otter Tail Power customers.

Other

The last category is somewhat of a catch-all and includes the following: billable projects, tools, etc.

Table 10 shows Otter Tail Power's historical spend in Minnesota for the categories described above.

Table 10 – Historical Distribution Spends for Minnesota

Category[1]	2020	2021	2022	2023	2024
Age Related/Asset Renewal	4,960,670	7,626,421	8,354,640	8,755,959	10,746,522
Capacity Upgrades	408,238	344,710	107,012	33,450	25,056
PQ & Reliability Upgrades	886,530	2,093,766	6,207,152	6,672,603	8,670,094
New Customer Projects	5,429,448	6,427,394	6,321,997	7,548,749	9,075,042
Grid Mod & Pilot Projects	1,831,678	2,563,237	5,576,858	15,814,929	27,493,479
Projects Related to Local Gov Req.	493,196	481,003	437,306	807,641	1,014,420
Metering	498,749	417,895	223,003	227,918	449,366
Other	261,717	(109,192)	244,993	(119,590)	191,002
Grand Total	**$14,770,225**	**$19,845,235**	**$27,472,961**	**$39,741,658**	**$57,664,980**

8.B Forecasted

Each year, Otter Tail Power engages in the exercise of planning and documenting a five-year budget. Area Engineers, as well as the delivery maintenance department, predominantly create the distribution area budget. These roles were described in section 4, as well as some of the background to the planning process. The forecasted dollar figures are provided in the categories as required by the Commission in Table 11 below. It should be noted that the projects outside of those in 2025 which make up the spend(s) below are just forecasts, not approved budget spend. Future years spend are approved in December of the prior year.

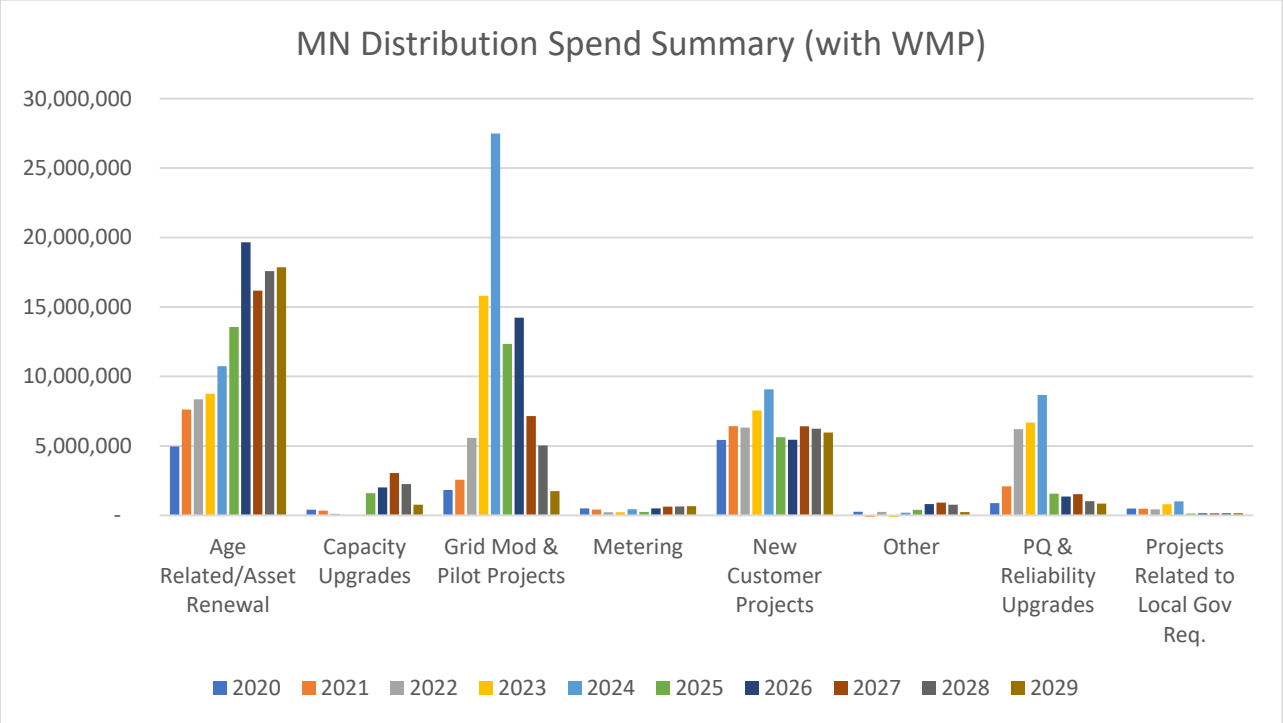
[1] All costs specific to Minnesota. When system wide costs were not broken down by state or a part of larger programs (i.e. metering) a 50 percent allocator was applied to represent Minnesota only costs. Fifty percent is used because approximately half of company energy and demand use resides within Minnesota.

Table 11 – Forecasted 5-year Distribution Spend for Minnesota (with WMP)

Category	2025	2026	2027	2028	2029
Age Related Replacements and Asset Renewal	$13,566,296	$19,652,727	$16,184,098	$17,578,333	$17,862,500
System Expansion or Upgrades for Capacity	$1,600,000	$2,015,000	$3,050,000	$2,250,000	$770,000
System Expansion or Upgrades for Reliability and PQ	$1,557,548	$1,350,924	$1,530,000	$1,017,500	$845,000
New Customer Projects and New Revenue	$5,632,000	$5,450,000	$6,415,000	$6,235,000	$5,960,000
Grid Modernization and Pilot Projects	$12,341,857	$14,232,929	$7,149,068	$5,025,092	$1,744,167
Projects Related to local(or other) Government Requirements	$137,500	$142,500	$147,500	$152,500	$157,500
Metering	$250,000	$500,000	$625,000	$643,750	$663,063
Other	$401,750	$812,500	$912,500	$762,500	$237,500
Electric Vehicle Programs (See TEP-Table 14)					
Grand Total	**$35,486,951**	**$44,156,581**	**$36,013,167**	**$33,664,676**	**$28,239,730**

Figure K below provides a graphical representation of both Historical and Forecasted Spend categories since 2020.

Figure K- Historical Spends & Forecasted Spends



To see the full list of projects in the upcoming five years, please refer to Appendix B. It should be noted that Otter Tail Power budgets on a 5-year cycle and for the purposes of a 10-year plan within the IDP, planned projects from 2030 and beyond do not have any specific costs associated with them.

8.C Rate Impacts

Although Otter Tail Power has not completed a cost-of-service study for the forecasted spend within the IDP, the following can be noted. Historically, Otter Tail Power's routine budget makes up approximately 78-80% of the spend within the 5-year forecast. These spends are supported by existing rates and do not drive a need for additional rate request. There are only a few programs within the 5-year forecast that do drive a need for additional recovery. Those programs and amounts are included below in Table 12.

Table 12 - Spending Plans Beyond Existing Rates (2025-2029)

PROGRAM NAME	AMOUNT (COMPANY TOTAL)	RECOVERY	IDP SPEND CATEGORY
AMI	$6.84M	EUIC Docket No. E017/M-21-382	Grid Modernization
Advanced Load Management	$18.33M	EUIC Docket No. E017/M-21-382	Grid Modernization
Wildfire Mitigation Program (WMP)	$33.92M	Future Rate Request	Grid Modernization & Age/Asset Renewal
Appleton – Benson Distribution Upgrades	$7.15M	Transmission Rider	Capacity

Additionally, when projects are presented internally for approval, each follows a rigorous selection and approval process facilitated by our Capital Budget Committee. Annually in January, project sponsors submit projects for funding in the 5-year capital budget forecast. This forecast must meet the objectives of the company for both business operations and financial planning.

The second step prior to project execution is related to internal approvals. Once a project is approved in the budget, it still needs authorization from the appropriate representative prior to execution. Any project above $500,000 as an example requires approval from the Company President. During any approval review, project alternatives are analyzed to ensure the best solution for customers is chosen based not only on cost but also expected performance. Through smart investments and efficient day-to-day operations, Otter Tail Power continues to deliver safe and reliable energy, and according to the U.S. Energy Information Administration, we deliver energy at rates among the lowest in Minnesota and across the nation. These low rates are not accidental—they're the result of thoughtful planning, streamlined business processes, and a commitment to operational excellence.

8.D Non-Company Spends in the Distribution System – Billable

The capital spend listed below are what Otter Tail Power has classified as billable projects. These projects may have been a result of, for example, a tractor or vehicle hitting a pole, or a ditch fire that got out of control and damaged Otter Tail Power facilities. These would also include any costs where a relocation requires moving Otter Tail Power facilities in which Otter Tail Power has superior land rights and thus can bill the relocation costs back to the causer. Lastly, Otter Tail Power would also bill costs to customers that are requesting a change to facilities for their own benefit, which would not have been done through Otter Tail Power's normal course of business. For example, a customer request to have their overhead service line re-installed as an underground line. In addition, this category would include payments by third-party's seeking to interconnect DER to the system.

Table 13 – Billable Distribution Costs in Minnesota

Category[3]	2020	2021	2022	2023	2024
Billable	$221,167	($135,733)	$224,462	($139,931)	$177,360

9. GRID MODERNIZATION AND INFRASTRUCTURE ACTION PLAN

Otter Tail Power has spent the past several years evaluating and planning its approach to grid modernization as part of the Company's I2030 initiative.

I2030 has three main objectives:
1) Improve reliability and safety of the Otter Tail Power system;
2) Improve customer engagement;
3) Improve business processes.

Each of the projects and programs within the initiative contribute to at least one of the objectives. As part of the initiative, each project has been further evaluated and analyzed for its value to Otter Tail Power customers. Past and future projects and/or programs Otter Tail Power has included within the I2030 initiative are as follows:

- Outage Management System (OMS) & Geographical Information System (GIS) data collection.
- Advanced Metering Infrastructure (AMI)
- Transmission and Distribution replacement programs as well as grid technologies. Summarized as System Infrastructure and Reliability Initiative (SIRI)
- Advanced Load Management Replacement(ALM) Project also called Demand Response Management System (DRMS)
- Telecommunications backbone infrastructure
- Future – Work and Asset Management System (WAMS)

Otter Tail Power provides an update to the projects below as part of the MN IDP Grid Modernization plans. Note that the I2030 initiative has formally been retired as an company initiative, but the overarching philosophy remains as well as a few of the original projects as they work through the final execution phase.

9.A Advanced Metering Infrastructure

Advanced Metering Infrastructure (AMI) is a foundational part of the Otter Tail Power's technology future. The original implementation plan for the AMI project anticipated business process development, system integration, and initial deployment to occur in late 2021 through the fourth quarter of 2022, with full deployment from late 2022 to the third quarter 2024. The deployment schedule was delayed due to the integration requirements of the software systems and the associated testing challenges as discussed in the 2023 annual update filing.

An AMI pilot project of approximately 500 meters occurred in December 2023. Full meter deployment started in mid-February 2024 and continued throughout the year. While most AMI meters were installed by the end of 2024, there are some AMI meter installations that will occur throughout 2025. Allegiant Utility Services, Otter Tail Power's meter installation contractor, completed the contracted portion of the installations in 2024, which represents approximately 88 percent of the total meter installations.

The meters associated with complex rates, complex metering configurations, and heightened impact to customer processes are currently being installed by Otter Tail Power employees. Allowing Otter Tail Power staff to manage these meter exchanges reduced delays in the work previously done by Allegiant Utility Services and provided a more coordinated exchange process for this customer group, which includes larger commercial and industrial loads.

Otter Tail Power's actual cost through 2024 for the AMI project is $45.7 million. The projected total cost of the project is $55.6 million, which is under the $55.9 million approved amount.

Otter Tail Power began to realize O&M savings due to partial AMI implementation in May 2024. The Company estimates that approximately 75 percent of total expected annual savings will be realized in 2025 and nearly 100 percent expected savings will begin in 2026. The entire AMI project has been further described in our EUIC filing, Docket No. E017/M-23-131.

9.B Outage Management System and GIS

Otter Tail Power went live with a new Outage Management System on December 18, 2022. This marked a big milestone in the way outages are managed and communicated with customers. As noted in prior reports and filings, Otter Tail Power did not have a formal Outage Management System prior to this go-live date. As part of go-live, an Interactive Voice Response (IVR) system was also deployed. The IVR allows customers to call in their outage and quickly relay that information into the OMS without the delays of a operator call handle. Thus far, call capture rates have been in excess of 80 percent which frees up phone lines during times of outages to ensure customers are able to communicate timely and effectively with OMS staff.

Though the system went live in December 2022, there are still numerous continuous improvement efforts that are ongoing to improve business processes and ultimately customer experience during times of outages. When the system went live, not all of the GIS collection effort was complete, so many network modeling assumptions were made. These network assumptions are better than no system at all but do lead to some inaccuracies. These inaccuracies highlight the value of the GIS collection project which has now since been completed. With that project completion, the OMS electrical distribution system connectivity model is fully updated and largely free of errors.

On June 9, 2025, Otter Tail Power successfully completed the integration of our Outage Management System (OMS) with AMI, enabling meters to communicate power outages directly to us. Since the integration, the OMS team has been diligently learning how to effectively utilize the information provided by the meters. This advancement has allowed us to restore power outages without the need for customer reports and to relay more comprehensive information to field personnel, thereby enhancing their situational awareness. We are committed to continuously improving our processes to maximize the benefits of this integration.

Otter Tail Power deployed our Customer Experience Portal (CEP) in August 2023. The CEP interfaces to our CIS, MDMS, and OMS systems, to provide customers the ability to easily report outages, both inside and outside of a logged in experience, as well as set their communication preferences for varying types of outage situations, including updates to restoration times. Customers can also sign up for billing and load control notifications, and view and pay their bill in a simplified manner. In Q4 of 2025, Otter Tail Power will provide 15-minute interval data to our customers which will allow them more understanding and control over their energy usage. Feedback from customers indicates that we are doing a much better job of notifying them of outage related incidents and are providing them with more information. At the same time, we also plan to continue to refine our OMS and our notifications in order to provide the best customer experience possible.

9.C Advanced Load Management (ALM) System & Demand Response Management System (DRMS)

The current Otter Tail Power Load Management System (LMS) is a workstation-based master control system running on a virtualized Windows OS, using software from Comverge, Inc. It interfaces with the customer information system (CIS) to manage controlled customer enrollment and supports our legacy load control strategies. However, the system is outdated and no longer vendor-supported, limiting its ability to adopt new control strategies. The LMS also controls approximately 40,000 field-based receivers via an Otter Tail Power-owned radio system. These receivers are grouped by load type to enable efficient control despite radio system latency. Notably, the LMS operates as a one-way system—sending control requests without receiving confirmation from receivers.

As Otter Tail Power modernizes the grid, both advancements in metering and load management will be essential. As described above, there is an inherent urgency to complete the installation of

a new ALM system (both hardware and software) as the existing system is no longer supported and will not be able to offer the new rates and services that new systems can provide.

Otter Tail Power has taken several actions to move the replacement project, now referred to as ALM, forward over the last several years. Otter Tail Power's Request for Proposals was released in the Fall of 2022, receiving six vendor responses. Otter Tail Power selected Landis+Gyr (L+G) and Open Access Technology International (OATI) to provide the hardware devices and software system for the project.

Otter Tail Power signed contracts with L+G and OATI in the first quarter of 2025. System requirements and design workshops have been ongoing throughout 2025. The ALM project will involve software integrations alongside hardware upgrades for consumers participating in load control rates. Field deployment is scheduled to begin in 2026, with project completion anticipated in mid-2028. The projected total cost of the project is $19.6 million, which is under the soft cap of $21.5 million. The entire ALM/Demand Response project has been further described in our EUIC filing, Docket No. E017/M-24-186.

Energy Conservation and Optimization(ECO)

In the spring of 2025, Otter Tail Power contracted with Brattle to perform a Demand Response (DR) Potential Study for Otter Tail Power's system. To perform the study, Brattle uses its Flex model to determine cost-effective incremental DR potential. The focus on the study is looking at the potential to increase Otter Tail Power's existing DR portfolio along with adding new DR products to its portfolio. Brattle evaluated each DR measure dispatched against an hourly forecast of marginal costs to determine value.

In their initial findings, Brattle found Otter Tail Power to have a large existing demand response portfolio which is actively utilized. Brattle states, "OTP's existing portfolio is in the top 5% of U.S. IOUs in terms of peak reduction capability." Based on 2023 EIA-861 data Brattle found Otter Tail Power to be ranked at the 95th percentile in Peak Reduction Capability, 93rd percentile in Residential Customer Enrolled in a DR program, and 96th percentile in Non-Residential Customers enrolled in a DR program.

The initial findings of the Brattle study identified few programs with the potential for cost-effective growth. Managed EV charging was identified as having a potential for growth towards the end of the study horizon in 2041. Minimal potential for growth was identified in the short term due to modest levels of EV adoption. The Company understands its existing and robust DR portfolio is important to system planning and providing low-cost energy and capacity to its customers. Otter Tail Power continues to actively market its DR programs to its customers to recruit new customers, and to also maintain the existing customers' controllable loads. Table 14 below includes a summary of existing demand response rates and Minnesota participant numbers as of June 2025 for customers with electric heating or water heating loads.

Table 14 – Demand Response Rate and Participants

Program (Tariff Section)	Minnesota Participants
Large Dual Fuel (14.04)	179
Small Dual Fuel (14.04)	6,424
Water Heating (14.01)	8,167
Deferred Load (14.06)	787
Residential Demand Control (9.02)	2,155
Fixed Time of Service (14.07)	571

Otter Tail Power is excited about the future possibilities of DR. The Company's multi-year AMI project combined with its ALM replacement project will prepare the Company for the future when it will be better equipped to strategically control DR loads and thoroughly evaluate and offer additional dynamic pricing plans.

Conservation

On May 25, 2021, the ECO Act of 2021 was signed into law. This legislation modernized Minnesota conservation policy by adding new opportunities and setting higher conservation goals. The ECO Act increased the annual energy savings goal for public electric utilities, from 1.5 percent of retail sales, to 1.75 percent of retail sales, based on a rolling three-year average of weather normalized sales. The Company's proposed 2024-2026 ECO plan complies with all regulatory requirements, and includes an annual energy savings goals at or above 3.0 percent each year. Actual 2024 energy savings results were 3.11 percent[2], in line with the Company's approved goal. Otter Tail Power's last Minnesota IRP[3] includes an average annual energy savings of 1.86 percent, which exceeds the ECO Act's 1.75 percent goal.

The number of fuel-switching rebates granted through Otter Tail Power's ECO plan in 2024 have been included in the annual ECO status report filing in Docket No. E017/CIP-23-94, filed April 1, 2025. A summary of these rebates granted in 2024 is included below in Table 15.

Table 15 - Rebates

Technology	Rebates
Residential Heat Pump	74
Commercial Heat Pump	40
Electric Vehicle	27
Electric Lawn Equipment	276
Commercial Electric Equipment	6

2 Docket No. E017/M-25-49.
3 Docket No. E017/RP-21-339.

On August 1, 2023, Otter Tail Power filed its 2024-2026 Energy Efficiency Partnership Triennial Plan (EEP) with the South Dakota Public Utilities Commission. The EEP set forth several conservation goals including over 7.9 million annual kWh savings and over 1.4 MW of annual coincident demand savings. As previously noted, conservation programs benefit customers in all three states served by Otter Tail Power by reducing our energy and capacity needs and reducing the costs of providing service to our customers.

9.D Electronic Reclosers and Distribution SCADA

Otter Tail Power currently has around 750 Oil Circuit Reclosers(OCRs) located across the entire distribution system. These are generally installed in the distribution substation with another handful of downline OCRs as well. OCRs are oil insulated mechanical devices requiring more maintenance than newer vacuum bottle technology devices. In addition, these devices are very limited in terms of their overcurrent protection settings.

Over the past few years, electric utilities have started to shift from installing hydraulic OCRs to vacuum reclosers equipped with programmable electronic controls. Otter Tail Power engineers have evaluated Next Gen electronic reclosers and will be upgrading to these as the new standard. This is also driven by the manufacturer of Otter Tail Power's traditional OCRs announcing the end of production life for most hydraulic OCR models and replacement parts. These Next Gen electronic reclosers are an upgrade both from a maintenance improvement standpoint as well as improved protection options, and provide engineers with advanced overcurrent coordination flexibility, access to system data such as fault distances, load levels, voltage magnitudes, harmonic content, etc. These are all used to better plan and assess the health of the system to ensure optimal reliability for customers.

Otter Tail Power will also be prioritizing deployment of electronic reclosers on substation distribution feeders located in our Hazardous Fire Areas (HFAs) presenting the most wildfire risk. Otter Tail Power has 101 distribution feeders that are located in HFAs, that will be converted proactively to electronic reclosers over the course of the next 6 years.

In addition to the electronic recloser deployment, Otter Tail Power will also begin the development and deployment of a distribution SCADA (dSCADA) system. It is expected that this deployment will take 2-3 years with development starting in 2026. The dSCADA system will enable Otter Tail Power to monitor and control key Intelligent Electronics Devices (IEDs) across the distribution network. Together, these efforts will significantly improve our ability to proactively identify and mitigate wildfire risk(s) to improve the safety and resiliency of our aging electric distribution system.

9.E Telecommunication Architecture Plans

Telecommunications is a key part of enabling future Grid Modernization applications and as such, Otter Tail Power has developed a telecommunication backbone strategic plan. This section of the IDP focuses on Otter Tail Power's backbone communication plans.

The current telecommunications backbone architecture is comprised of a combination of nonredundant microwave systems and approximately 60 to 70 percent leased circuits from local and regional telephone companies. The current microwave systems are linear non-redundant segments, at capacity, and the hardware platforms have reached end of life causing availability, reliability, and security concerns. Neighboring utilities leverage the Otter Tail Power aged microwave system to provide various services, reducing critical infrastructure dependency on public services to operate the bulk electric system. Otter Tail Power currently relies on leased circuits to provide business, industrial network, and interpersonal communication services throughout most of its service territory.

The existing microwave backbone is broken into five (5) main segments including the West Central MN, Northern MN, Southern MN/SD, Northern ND, and Central ND systems. These microwave segments are heavily integrated with and dependent on neighboring utilities to provide SCADA, protection relaying, and voice/data grade services for field operations. As mentioned, the current system is at end of life and end of support as well as becoming increasingly congested due to bandwidth limitations. For example, the radio hardware support 45Mbps near Fergus Falls, MN and decreases significantly as the systems extend beyond the corporate headquarters whereas business needs have increased beyond this capacity (i.e., 100 Mbps). From a security standpoint, the remote management is at end of support leaving security concerns with no additional security patches being developed for known vulnerabilities.

To mitigate the issues identified with the existing microwave system, Otter Tail Power's telecommunication strategy is to establish a backbone fiber communications infrastructure to meet the future connectivity requirements of the business as well as security needs now and into the future. Strategies to execute this vision at as low of a cost as possible for customers include partnering with planned Otter Tail Power transmission projects to include optical ground wire (OPGW vs traditional static wire) as well as outreach to neighboring utilities and telecommunication companies for strategic partnerships. The backbone infrastructure will include a series of connected sites, grouped to form loops, for the use of all business applications. These loops will provide redundant, reliable, and scalable communications.

Though not all details of the vision have been fully defined, early projects have been developed and forecasted in the 5-year plan. The long-term plan investment is estimated at between $30M-$50M (system wide) over the course of the next 15 years. This is subject to continued evaluation of feasibility as more research is completed. These projects have been well defined and are critical to the replacement of the Microwave system as well as leverage existing fiber/OPGW investments that have already been completed from CapX 2020 projects and other transmission rebuild projects.

The telecommunication backbone strategy transport network will have a direct impact on reliability with the following enhancements.

- Looped infrastructure
- Response time to repair
- Coordinated maintenance window activity
- Prioritization of critical services
- Low latency – No congestion
- Deterministic services – Ex. relay protection circuits
- Vendor supported hardware/software

The system will be constructed and operated with network cyber security in the forefront with the ability to scale to future security needs. Security best practices will include reoccurring patch management, remote management, encryption, and asset monitoring. The asset configurations will be commissioned in alignment with internal cyber security processes and measures to ensure baseline security policy enforcement and allow for future NERC regulation changes.

In summary, the near-term telecommunication plans are critical to the retirement of the existing Microwave system, high third-party costs, and enabling existing fiber installations. Otter Tail Power will continue to develop and refine the long-term telecommunication backbone strategy related to the distribution system and will include updates in future reports.

The AMI FAN communications network will also play a big role in the future distribution system telecommunication backbone implementation. The FAN is designed to handle communications to future distribution Intelligent Electronic Devices(IED), beyond just AMI meters. This could include communications to capacitor banks, electronic reclosers, voltage regulators, Fault Circuit Indicators(FCI), Wildfire Monitors, etc.

9.F Asset Health & Age Related/Renewal

In Otter Tail Power's 2019 filing, we introduced our System Infrastructure and Reliability Improvement Initiative (SIRI). SIRI focuses on the transmission and distribution system throughout the entire Otter Tail Power system and defines aging infrastructure plans, as well as preparing for future system needs and technology. At the core of the initiative is leveraging data to drive business decisions related to spending plans. Today's data sources include GIS data, breaker operation reports, reliability metrics, load data, and inspection reports. These are continuously reviewed and inform the programs below. In addition, these data sets and future data sets (i.e., AMI, GIS, OMS) will continue to improve and better inform system planning business decisions.

Asset Health Programs

Previous IDP reports discussed the need for additional spending within both overhead distribution systems, as well as Otter Tail Power's underground distribution system. The report walked through historical installations and replacement trends, average expected life, and estimated future spending needs. As shown in section 8, Financials, the 5-year forecast includes added spending related to age-related replacement programs and is the primary area of spend within the IDP. In this year's report, we again highlight the main replacement programs that comprise the age-related spend within the forecast.

For each of the spending programs listed below, the attribute information captured during the GIS data collection effort described in section 9.B will help refine spending decisions.

General Distribution Replace

This budget is developed and funded annually to address very near-term and urgent failing components. Replacement spending is used for any immediate risk to safety and reliability. The following items are examples of projects that are included within the Replace budget:

- Failed or tipped insulators
- Distribution transformer replacements
- Decayed/Damaged poles
- Frayed conductor
- Failed or weeping transformers
- Failed substation components

Projects funded under this budget are generally not identified years in advance. Instead, the budget is used for one-off replacement items that are identified throughout the year from visual inspections from field personnel.

Underground (UG) Asset Replacement

Otter Tail Power has a large influx of 1970s vintage underground cable which is past its useful life and was highlighted in previous IDPs. In addition, un-jacketed, #2 Aluminum, Ridge-Lock, and flat strap cable designs have shown a history of failures and are in need of replacement. To pro-actively replace this cable and other failing underground cables, the annual UG replacement budget has been created. This budget is specifically for replacement of existing UG assets; largely UG cable. However, there are times when other UG equipment replacements may be warranted and included in the budget as well. Otter Tail Power's goal is to replace the at-risk cable identified for this program by the end of 2035.

To prioritize the replacement spending, Area Engineers at Otter Tail Power utilize the following criteria:

- Customers impacted
- Prior record of cable failures
- Historical reliability performance
- Cable vintage
- Cable type(s)
- Soil conditions
- Looped line vs radial line
- Constructability and/or access concerns

Distribution Substation Replacement

This budget is designed for overall condition failures of substations and associated equipment. As stated in section 6, Otter Tail Power has 177 distribution substations in Minnesota system

which are the start of the distribution delivery system and a key component of ensuring reliable service. Ensuring these substations are safe and reliable is a core part of the age-replacement spending plans.

Projects within the budget include the examples below:

- New rock or new fence to ensure access to substation is secure
- New foundations
- Substation access work
- Complete substation rebuilds

In addition to the same prioritization items noted as part of the UG program, the substation program also has additional weight placed on removal of Carte single phase substation transformers. These transformers have been failing prematurely and lead to long extended outages for customers and are a priority to replace. Carte transformers are very light-weight and mounted on wood pole platform substations, whereas new replacement transformers are heavier and require a concrete mounting pad within the substation design. The permanent replacement generally requires a full substation re-build and often time re-location.

Distribution Overhead (OH) Replacement

The last large program within the distribution age-related spend category is overhead (OH) asset replacements. Each year Otter Tail Power engineers assess the health and reliability of overhead distribution lines falling into the following SIRI categories:

Strategic OH to UG projects

The SIRI Overhead to Underground (OH to UG) Line Conversion Program is intended to improve reliability, resiliency, and system performance by proactively replacing poor performing and/or hard to access overhead line sections, with new UG cable infrastructure. Otter Tail Power has several OH lines serving mature neighborhoods prone to frequent outages and have little or no access for restoration without damaging customer property.

To prioritize the OH to UG spending, Area Engineers at Otter Tail Power utilize the following criteria:

- Safety concerns
- Number of Customers impacted, priority on higher # of customers impacted
- Historical Outage History
- Limited access for outage restoration
- Limited access for routine vegetation management and maintenance
- Feasibility to remove OH line from back lot lines, and install new UG infrastructure on front lot lines, or along roads.

Porcelain Cut-out Replacement Program

The SIRI Porcelain Cut-Out Replacement Program is intended to improve safety, reliability, and system performance by changing out distribution class porcelain cutouts to polymer cutouts. This

program includes also installing wildlife protection materials on poles and distribution equipment, along with inspecting/tightening electrical equipment connections on selected distribution feeders. Legacy porcelain cut-outs have a history of failure in the field that cause safety and reliability concerns. Otter Tail Power has a goal to replace all porcelain cut-outs by year-end 2033.

Distribution Pole Replacement Program

The SIRI Distribution Replacement Program is intended to improve safety, reliability, and system performance by first Ground Line (GL) testing poles and then replacing identified reject distribution poles that do not meet strength tests. New pole replacements also include cross arm replacement, insulator replacement, upgrading porcelain cutouts to polymer cutouts, installing wildlife protection cover-up on poles and associated distribution equipment, and replacing electrical equipment wire and connections along selected distribution feeders. Otter Tail Power has a goal to inspect 7 to 10 percent of the distribution wood pole fleet annually as part of this program.

Wildfire Mitigation Plan(WMP) Asset Health Programs

Otter Tail Power plans to complete the following program projects, and have included the additional WMP focused asset health spend within the 2025-2029 financial forecasts provided in the IDP:

1. Replace all distribution porcelain cut outs on WMP high risk feeders over the course of 3 years
2. Ground line inspection of all distribution poles on WMP high risk feeders and mitigate any reject poles over the course of the next 4-5 years.
3. Bury all steel and copper distribution wire that transverses moderate, high, and very high risk WMP areas over the course of approximately 5 years.
4. Replace all expulsion fuses with non-expulsion/vacuum fuses in 2026 in high wildfire risk areas

WMP based programs also provide tremendous reliability benefits in addition to reducing wildfire risk. Outside of the expulsion fuse program, the other three asset health based WMP's already exist within Otter Tail Power's SIRI philosophy. These additional spends are simply aimed at proactively reducing wildfire event risk on the system.

10. NON-WIRES ALTERNATIVES DISCUSSION

Otter Tail Power does not have any distribution load increase driven capacity upgrade projects within the 5-year forecast which are above the $2M threshold requiring a non-wire alternative analysis. As shown in Table 12 above and also in Appendix B, Otter Tail Power does have a distribution project named Appleton–Benson Distribution Upgrades which totals $7.15M. This multi-year distribution improvement project is being driven by a joint regional utility 115 kV transmission line upgrade project in the Appleton, MN area. The project will require Otter Tail

Power to re-locate and/or upgrade distribution substations from 41.6 to 115 kV transmission, located along the new T-line route.

Otter Tail Power does have a longstanding history of utilizing non-wire alternatives through our demand response and ECO programs as discussed earlier. For example, when Power System Operators observe transmission constraints on the system, they have the authority to use controllable load to bring the system within loading tolerances.

In addition to demand response and energy efficiency activities, Otter Tail Power is partnering with the University of Minnesota Morris(UMM) to develop a utility-scale electrical Battery Energy Storage system (BESS), placed on the distribution system within UMM. The project is being jointly developed between the UMM, Otter Tail Power, and Open Access Systems International (OATI). The UMM has received two grants from the Legislative-Citizen Commission on Minnesota Resources (LCCMR) totaling over $2.65 million to start the project. Otter Tail Power did apply for federal funding dollars through the Infrastructure and Investment Jobs Act to pay for Otter Tail Power's portion of the project, but the federal Department of Energy stated our application was "not invited" to proceed further.

On August 21, 2025, Otter Tail Power filed a proposal to the MPUC[4] to approve recovery of the battery project's costs which is estimated at approximately $4.8 million. While not all technical and operational details of the project are not known at this time, the goals for the project will be to understand how a utility scale battery can better utilize locally produced renewable energy, how the battery can provide additional benefits to the rest of the system throughout the greater Morris area, and for Otter Tail Power to gain a better overall understanding of utility-scale battery storage technology.

The BESS, primarily fueled by the UMM's two 1.65 MW wind turbines, over 500kW of solar, and other various energy projects will be an excellent demonstration site for storing "locally produced renewable energy", and using it later when renewable energy isn't available to the local community.

The battery will be 1MW(AC), in the range of 4 to 6 MWh(AC), and will be designed to operate at -40 degrees Fahrenheit with minimal capacity degradation. This temperature was a requirement by project partners since the winter temperature in the Morris area will approach -40 degrees Fahrenheit annually. The battery is also designed to perform up to at least 120 degrees Fahrenheit. UMM has agreed to host the BESS site in an existing field on the north side of the campus. This location is also near campus parking and a walking path allowing the University to provide on-campus tours to students and visitors, showcasing the battery and how it integrates into its campus and its many other energy projects. Otter Tail Power will be responsible for maintenance within a fenced area, which will surround the battery, for the safety of the public.

4 Docket No. E017/M-25-325.

Once the BESS selection and negotiations are complete, the BESS is scheduled to be ordered in the fourth quarter of 2025. Procurement of the BESS, depending on the vendor, is estimated to take nine months to one year. Commissioning will be scheduled to occur in the late third quarter to fourth quarter of 2026 with operations go-live likely in the first quarter of 2027.

The battery will be interconnected to the Otter Tail Power distribution system at the UMM metering point. This placement allows the battery to directly capture UMM's excess renewable energy generation while being owned and operated by Otter Tail Power to rapidly respond to grid needs. Part of the capital spend for this project will include Otter Tail Power extending its distribution system south feed to campus around the east side of campus and then west to the existing metering location. Extending the south feeder and making it the primary feed to campus will allow extra capacity for the University, which will allow for even more renewable energy projects in the future.

Otter Tail Power and UMM have both shared and independent goals for the battery pilot project. Since this is the first substantial battery project for both partners, we look forward to researching, discovering, and gaining knowledge as we embark into this new technology. It is likely many new items, which are unknown now, will be learned as the project commences. Through the research stage, project partners have learned a significant amount about non-lithium battery chemistry and the benefits and risks of each. Fortunately, for this project, given the BESS selection criteria, we are not concerned with risks associated with other battery chemistries, like thermal runaway, fires, environmental hazards, freezing equipment, or decommissioning complications, but our project team has learned a great deal in these areas. As the BESS is constructed the Otter Tail Power will learn more about the required engineering work, battery grounding, and the battery's interconnection, testing, and commissioning in preparation for BESS as a potential NWA.

11. STAKEHOLDER INPUT

Otter Tail Power hosted a hybrid stakeholder meeting on September 12, 2025, for any stakeholder who wanted to participate in our 2025 Integrated Distribution Planning process. An invitation to the in-person meeting was sent out within Docket No. E017/M-25-141 on August 20, that included a remote attendance option. There were not any external in-person attendees, but there were a handful who attended remotely online. The entire presentation has been posted to the docket.

12. OTHER REQUIREMENTS AND INFORMATION

FERC Order 841 impacts

"FERC order 841 states that Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs) must ensure that markets rules must allow the provision of services by energy storage resources. The order requires that storage resources are allowed to de-rate their capacity to meet minimum run-time thresholds.

The order states that "existing RTO/ISO market rules are unjust and unreasonable in light of barriers that they present to the participation of electric storage resources." These barriers, FERC said. "reduce competition and market efficiency…. Where such conditions exist, resources that are technically capable of providing services are precluded from competing with resources that are already participating in the RTO/ISO markets."

ISOs and RTOs will be required to propose participation models for FERC approval. Once they receive approval, they will have one year to implement them."

Otter Tail Power does not see any near-term impact due to this FERC Order. However, as noted in earlier sections, Otter Tail Power does have a long history of providing thermal storage through various rate options. That said, thermal storage is not included within FERC Order 841. Otter Tail Power will continue to monitor the order and any subsequent impact it may have on the system.

Checklist of Requirements

Filing Requirement	Description	Report Section
Planning Objectives	How does OTP's IDP meeting the Commissions planning objectives?	3
3.A.1	Modeling software	4
3.A.2	Percentage of substations and feeders with monitor & control	6
3.A.3	Summary of M&V and planned improvements	6
3.A.4	Number of customers with AMI/Smart Meters	6
3.A.5	Discussion of IRP and IDP relationship	7
3.A.6	Discuss how DERs and electrification is considered in load forecasting	7
3.A.7	IEEE 1547-2018 impacts	4.B
3.A.8	Distribution system loss percentages	7.D
3.A.9	Coincident load at distribution interface	Appendix A
3.A.10	Substation capacity	6
3.A.11	See 3.10 – same answer	6
3.A.12	Total Miles OH	6
3.A.13	Total miles of UG	6
3.A.14	Total number of distribution customers	6
3.A.15	Costs spent on DER gen installations	4.B
3.A.16	Total charges to customers for DER	4.B
3.A.17	DER nameplate gen installations	4.B
3.A.18	DER count installations	4.B
3.A.19	Existing DER	4.B
3.A.20	Queued DER	4.B
3.A.21	EVs in Minnesota	13
3.A.22	Number and capacity of EV chargers	13
3.A.23	Units of battery storage	10 & 12
3.A.24	Savings and demand savings from EE	9.C
3.A.25	Amount of Controllable Demand	9.C

Financial Information		
3.A.26	Historical spends in new categories	8/13
3.A.27	Historical spends in OTP categories	8/13
3.A.28	Investments on the system not by OTP	8
3.A.29	Projected spends 5-year into the future	8/13/Appendix B
3.A.30	Non-Wires alternatives ben/cost	10
3.A.31	Current DER deployment and geographical dispersion	4.B
3.A.32	Areas of high DER penetration	4.B
3.A.33	Information where advanced inverters are needed	4.B
3.A.35	Fuel Rebates	9.C
3.A.36	Electric Space/WH in TOU or DR program	9.C
Prelim Hosting Capacity Data		
3.B.1	Excel spreadsheet of minimum load by feeder	Appendix A
DER and Electrification Scenario Analysis		
3.C.1	DER scenario recommendations	7
3.C.2	Methodology of DER scenario creation	7
3.C.3	Tools needed for higher DERs	7
3.C.4	Impacts of FERC order 841	12
Long-Term Distribution System Modernization and Infrastructure Investment Plan		
3.D.1	Distribution grid evolution	4, 7, 8, 9
3.D.2	Vision 10 Yr Long Term Plan	4, 7, 8, 9
Non-Wire Alternatives		
3.E.1	Non-wire alternative screening	10
3.E.2	Project Type Non-Traditional	10

CERTIFICATE OF SERVICE

RE: In the Matter of the Distribution System Planning for Otter Tail Power Company
Docket No. E017/M-25-141

I, Khris Ekstrom, hereby certify that I have this day served a copy of the following, or a summary thereof, on Sasha Bergman and Sharon Ferguson by e-filing, and to all other persons on the attached service list by electronic service or by First Class Mail.

Otter Tail Power Company
Integrated Distribution Plan

Dated this **31st** day of **October, 2025**.

/s/ KHRIS EKSTROM
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Regulatory Filing Coordinator
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100	Donald	Hanson	dfhanson@ieee.org			P. O. Box 44579 Eden Prairie MN, 55344 United States	Electronic Service		No	M-25-141
101	John	Harlander	john.c.harlander@xcelenergy.com	Xcel Energy		null null, null United States	Electronic Service		No	M-25-141
102	Kim	Havey	kim.havey@minneapolismn.gov	City of Minneapolis		350 South 5th Street, Suite 315M Minneapolis MN, 55415 United States	Electronic Service		No	M-25-141
103	Todd	Headlee	theadlee@dvigridsolutions.com	Dominion Voltage, Inc.		701 E. Cary Street Richmond VA, 23219 United States	Electronic Service		No	M-25-141
104	Amber	Hedlund	amber.r.hedlund@xcelenergy.com	Northern States Power Company dba Xcel Energy-Elec		414 Nicollet Mall, 401-7 Minneapolis MN, 55401 United States	Electronic Service		No	M-25-141
105	Tiana	Heger	theger@mnpower.com	Minnesota Power		30 W. Superior Street Duluth MN, 55802 United States	Electronic Service		No	M-25-141
106	Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association		4300 220th St W Farmington MN, 55024 United States	Electronic Service		No	M-25-141
107	Annete	Henkel	mui@mnutilityinvestors.org	Minnesota Utility Investors		413 Wacouta Street #230 St.Paul MN, 55101 United States	Electronic Service		No	M-25-141
108	Jessy	Hennesy	jessy.hennesy@avantenergy.com	Avant Energy		220 S. Sixth St. Ste 1300 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
109	Mari	Hernandez	mari@irecusa.org	IREC		null null, null United States	Electronic Service		No	M-25-141
110	Katherine	Hinderlie	katherine.hinderlie@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	445 Minnesota St Suite 1400 St. Paul MN, 55101-2134 United States	Electronic Service		No	M-25-141
111	Joe	Hoffman	ja.hoffman@smmpa.org	SMMPA		500 First Ave SW Rochester MN, 55902-3303 United States	Electronic Service		No	M-25-141
112	Michael	Hoppe	lu23@ibew23.org	Local Union 23, I.B.E.W.		445 Etna Street Ste. 61 St. Paul MN, 55106 United States	Electronic Service		No	M-25-141
113	Casey	Horan	choran@edf.org	Environmental Defense Fund		123 Mission St San Francisco CA, 94105 United States	Electronic Service		No	M-25-141
114	Ronald	Horman	rhorman@redwoodelectric.com	Redwood Electric Cooperative		60 Pine Street Clements MN, 56224 United States	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
115	Samantha	Houston	shouston@ucsusa.org	Union of Concerned Scientists		1825 K St. NW Ste 800 Washington DC, 20006 United States	Electronic Service		No	M-25-141
116	Lori	Hoyum	lhoyum@mnpower.com	Minnesota Power		30 West Superior Street Duluth MN, 55802 United States	Electronic Service		No	M-25-141
117	Jan	Hubbard	jan.hubbard@comcast.net			7730 Mississippi Lane Brooklyn Park MN, 55444 United States	Electronic Service		No	M-25-141
118	Dean	Hunter	dean.hunter@state.mn.us		Minnesota Department of Labor & Industry	443 Lafayette Rd N St. Paul MN, 55155-4341 United States	Electronic Service		No	M-25-141
119	Reuben	Hunter	bhunter@madisonei.com	Madison Energy Investments		8100 Boone Blvd Suite 430 Vienna VA, 22182 United States	Electronic Service		No	M-25-141
120	Casey	Jacobson	cjacobson@bepc.com	Basin Electric Power Cooperative		1717 East Interstate Avenue Bismarck ND, 58501 United States	Electronic Service		No	M-25-141
121	John S.	Jaffray	jjaffray@jjrpower.com	JJR Power		350 Highway 7 Suite 236 Excelsior MN, 55331 United States	Electronic Service		No	M-25-141
122	Robert	Jagusch	rjagusch@mmua.org	MMUA		3025 Harbor Lane N Minneapolis MN, 55447 United States	Electronic Service		No	M-25-141
123	Chris	Jarosch	chris@carrcreekelectricservice.com	Carr Creek Electric Service, LLC		209 Sommers Street North Hudson WI, 54016 United States	Electronic Service		No	M-25-141
124	Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law		2950 Yellowtail Ave. Marathon FL, 33050 United States	Electronic Service		No	M-25-141
125	Richard	Johnson	rick.johnson@lawmoss.com	Moss & Barnett		150 S. 5th Street Suite 1200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
126	Sarah	Johnson Phillips	sjphillips@stoel.com	Stoel Rives LLP		33 South Sixth Street Suite 4200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
127	Nate	Jones	njones@hcpd.com	Heartland Consumers Power		PO Box 248 Madison SD, 57042 United States	Electronic Service		No	M-25-141
128	Philip	Jones	phil@evtransportationalliance.org			1402 Third Ave Ste 1315 Seattle WA, 98101 United States	Electronic Service		No	M-25-141
129	Julie	Jorgensen	julie@greenmark.us.com	Greenmark Solar		4630 Quebec Ave N New Hope	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						MN, 55428-4973 United States				
130	Kevin	Joyce	kjoyce@tesla.com			null null, null United States	Electronic Service		No	M-25-141
131	Mahmoud	Kabalan	mahmoud.kabalan@stthomas.edu	University of St Thomas		2115 Summit Ave. Mail OSS100 School of Engineering Saint Paul MN, 55105 United States	Electronic Service		No	M-25-141
132	Camille	Kadoch	ckadoch@raponline.org	Regulatory Assistance Project		50 State Street Suite 3 Montpelier VT, 05602 United States	Electronic Service		No	M-25-141
133	Cliff	Kaehler	cliff.kaehler@novelenergy.biz	Novel Energy Solutions LLC		4710 Blaylock Way Inver Grove Heights MN, 55076 United States	Electronic Service		No	M-25-141
134	Ralph	Kaehler	ralph.kaehler@gmail.com			13700 Co. Rd. 9 Eyota MN, 55934 United States	Electronic Service		No	M-25-141
135	Michael	Kampmeyer	mkampmeyer@a-e-group.com	AEG Group, LLC		260 Salem Church Road Sunfish Lake MN, 55118 United States	Electronic Service		No	M-25-141
136	Nick	Kaneski	nick.kaneski@enbridge.com	Enbridge Energy Company, Inc.		11 East Superior St Ste 125 Duluth MN, 55802 United States	Electronic Service		No	M-25-141
137	Jack	Kegel	jkegel@mmua.org	MMUA		3025 Harbor Lane N Suite 400 Plymouth MN, 55447-5142 United States	Electronic Service		No	M-25-141
138	William	Kenworthy	will@votesolar.org			1 South Dearborn St Ste 2000 Chicago IL, 60603 United States	Electronic Service		No	M-25-141
139	Samuel B.	Ketchum	sketchum@kennedy-graven.com	Kennedy & Graven, Chartered		150 S 5th St Ste 700 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
140	Tom	Key	tkey@epri.com	EPRI		942 Corridor Park Blvd Knoxville TN, 37932 United States	Electronic Service		No	M-25-141
141	Bobby	King	bking@solarunitedneighbors.org	Solar United Neighbors		3140 43rd Ave S Minneapolis MN, 55406 United States	Electronic Service		No	M-25-141
142	Jack	Kluempke	jack.kluempke@state.mn.us		Department of Commerce	85 7th Place East Suite 600 St. Paul MN, 55101 United States	Electronic Service		No	M-25-141
143	Aaron	Knoll	aknoll@greeneespel.com	Greene Espel PLLP		222 South Ninth Street Suite 2200 Minneapolis	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						MN, 55402 United States				
144	Steve	Kosbab	skosbab@meeker.coop	Meeker Cooperative Light and Power		1725 US Hwy 12 E Litchfield MN, 55355 United States	Electronic Service		No	M-25-141
145	Nathan	Kostiuk	nathan.c.kostiuk@xcelenergy.com	Xcel Energy		414 Nicollet Mall, 401-07 Minneapolis MN, 55401 United States	Electronic Service		No	M-25-141
146	Brian	Krambeer	bkrambeer@mienergy.coop	MiEnergy Cooperative		PO Box 626 31110 Cooperative Way Rushford MN, 55971 United States	Electronic Service		No	M-25-141
147	Michael	Krause	michaelkrause61@yahoo.com			1200 Plymouth Avenue Minneapolis MN, 55411 United States	Electronic Service		No	M-25-141
148	Michael	Krikava	mkrikava@taftlaw.com	Taft Stettinius & Hollister LLP		2200 IDS Center 80 S 8th St Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
149	Corrina	Kumpe	ckumpe@mysunshare.com			null null, null United States	Electronic Service		No	M-25-141
150	Matthew	Lacey	mlacey@grenergy.com	Great River Energy		12300 Elm Creek Boulevard Maple Grove MN, 55369-4718 United States	Electronic Service		No	M-25-141
151	James D.	Larson	james.larson@avantenergy.com	Avant Energy Services		220 S 6th St Ste 1300 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
152	Mark	Larson	mlarson@meeker.coop	Meeker Coop Light & Power Assn		1725 Highway 12 E Ste 100 Litchfield MN, 55355 United States	Electronic Service		No	M-25-141
153	Burnell	Lauer	blauer.sundial@gmail.com	Sundial Solar		3209 W. 76th St #305 Edina MN, 55435 United States	Electronic Service		No	M-25-141
154	Dean	Leischow	dean@sunrisenrg.com	Sunrise Energy Ventures		315 Manitoba Ave Ste 200 Wayzata MN, 55391 United States	Electronic Service		No	M-25-141
155	Annie	Levenson Falk	annielf@cubminnesota.org	Citizens Utility Board of Minnesota		332 Minnesota Street, Suite W1360 St. Paul MN, 55101 United States	Electronic Service		No	M-25-141
156	Benjamin	Levine	blevine@mnpower.com	Minnesota Power		30 West Superior Street Duluth MN, 55802 United States	Electronic Service		No	M-25-141
157	Becky	Li	bli@rmi.org			17 State St 25th floor unit 2500 New York NY,	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						10004 United States				
158	Amy	Liberkowski	amy.a.liberkowski@xcelenergy.com	Xcel Energy		414 Nicollet Mall 7th Floor Minneapolis MN, 55401-1993 United States	Electronic Service		No	M-25-141
159	Carl	Linvill	clinvill@raponline.org			50 State Street Suite #3 Montpelier VT, 05602 United States	Electronic Service		No	M-25-141
160	Phillip	Lipetsky	greenenergyproductsllc@gmail.com	Green Energy Products		PO Box 108 Springfield MN, 56087 United States	Electronic Service		No	M-25-141
161	Jody	Londo	jody.l.londo@xcelenergy.com	Xcel Energy		414 Nicillet Mall 7th Floor Minneapolis MN, 55401-1993 United States	Electronic Service		No	M-25-141
162	Susan	Ludwig	sludwig@mnpower.com	Minnesota Power		30 West Superior Street Duluth MN, 55802 United States	Electronic Service		No	M-25-141
163	Brian	Lydic	brian@irecusa.org	Interstate Renewable Energy Council, Inc.		PO Box 1156 Latham NY, 12110-1156 United States	Electronic Service		No	M-25-141
164	Madeline	Lydon	madeline.k.lydon@xcelenergy.com	Xcel Energy		401 NICOLLET MALL Floor 7 Minneapolis MN, 55401 United States	Electronic Service		No	M-25-141
165	Richard	Macke	macker@powersystem.org	Power System Engineering, Inc.		10710 Town Square Dr NE Ste 201 Minneapolis MN, 55449 United States	Electronic Service		No	M-25-141
166	Alice	Madden	alice@communitypowermn.org	Community Power		2720 E 22nd St Minneapolis MN, 55406 United States	Electronic Service		No	M-25-141
167	Alex	Magerko	amagerko@epri.com	EPRI		942 Corridor Park Blvd Knoxville TN, 37932 United States	Electronic Service		No	M-25-141
168	Kavita	Maini	kmaini@wi.rr.com	KM Energy Consulting, LLC		961 N Lost Woods Rd Oconomowoc WI, 53066 United States	Electronic Service		No	M-25-141
169	Tom	Mammen	thomas.j.mammen@xcelenergy.com	Xcel Energy		null null, null United States	Electronic Service		No	M-25-141
170	Discovery	Manager	discoverymanager@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802 United States	Electronic Service		No	M-25-141
171	Christine	Marquis	regulatory.records@xcelenergy.com	Xcel Energy		414 Nicollet Mall MN1180-07-MCA Minneapolis	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						MN, 55401 United States				
172	Gregg	Mast	gmast@cleanenergyeconomymn.org	Clean Energy Economy Minnesota		4808 10th Avenue S Minneapolis MN, 55417 United States	Electronic Service		No	M-25-141
173	Jason	Maur	jason.maur@renesolapower.com	Renesola Power Holdings, LLC		850 Canal Street 3rd Floor Stamford CT, 06902 United States	Electronic Service		No	M-25-141
174	Erica	McConnell	emcconnell@elpc.org	Environmental Law & Policy Center		35 E. Wacker Drive, Suite 1600 Chicago IL, 60601 United States	Electronic Service		No	M-25-141
175	Jess	McCullough	jmccullough@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802 United States	Electronic Service		No	M-25-141
176	Sara G	McGrane	smcgrane@felhaber.com	Felhaber Larson		220 S 6th St Ste 2200 Minneapolis MN, 55420 United States	Electronic Service		No	M-25-141
177	Natalie	McIntire	natalie.mcintire@gmail.com	Wind on the Wires		570 Asbury St Ste 201 Saint Paul MN, 55104-1850 United States	Electronic Service		No	M-25-141
178	Matthew	Melewski	matthew@theboutiquefirm.com	Nokomis Energy LLC & Ole Solar LLC		2639 Nicollet Ave Ste 200 Minneapolis MN, 55408 United States	Electronic Service		No	M-25-141
179	Thomas	Melone	thomas.melone@allcous.com	Minnesota Go Solar LLC		222 South 9th Street Suite 1600 Minneapolis MN, 55120 United States	Electronic Service		No	M-25-141
180	Michael	Menzel	mike.m@sagiliti.com	Sagiliti		23505 Smithtown Rd. Suite 280 Excelsior MN, 55331 United States	Electronic Service		No	M-25-141
181	Tim	Mergen	tmergen@meeker.coop	Meeker Cooperative Light And Power		1725 US Hwy 12 E. Suite 100 PO Box 68 Litchfield MN, 55355 United States	Electronic Service		No	M-25-141
182	Pontius	Mike	mpontius@mnpower.com			null null, null United States	Electronic Service		No	M-25-141
183	Brian	Millberg	fwengineering@comcast.net			695 Grand AVe #222 Saint Paul MN, 55105 United States	Electronic Service		No	M-25-141
184	Luther	Miller	luther.c.miller@xcelenergy.com	Xcel Energy		null null, null United States	Electronic Service		No	M-25-141
185	Marc	Miller	mmiller@soltage.com	Soltage, LLC		66 York Street, 5th Floor Jersey City NJ, 07302 United States	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
186	Stacy	Miller	stacy.miller@minneapolismn.gov	City of Minneapolis		350 S. 5th Street Room M 301 Minneapolis MN, 55415 United States	Electronic Service		No	M-25-141
187	Marcus	Mills	marcus@communitypowermn.org	Community Power		2720 E 22nd St Minneapolis MN, 55406 United States	Electronic Service		No	M-25-141
188	Darrick	Moe	darrick@mrea.org	Minnesota Rural Electric Association		11640 73rd Ave N Maple Grove MN, 55369 United States	Electronic Service		No	M-25-141
189	David	Moeller	dmoeller@allete.com	Minnesota Power			Electronic Service		No	M-25-141
190	Dalene	Monsebroten	dalene.monsebroten@nmpagency.com	Northern Municipal Power Agency		123 2nd St W Thief River Falls MN, 56701 United States	Electronic Service		No	M-25-141
191	Brian	Monson	brian.t.monson@xcelenergy.com	Xcel Energy		null null, null United States	Electronic Service		No	M-25-141
192	Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP		33 South Sixth St Ste 4200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
193	Susan	Mudd	smudd@elpc.org	Environmental Law and Policy Center		35 E. Wacker Drive, Suite 1600 Chicago IL, 60601 United States	Electronic Service		No	M-25-141
194	Pouya	Najmaie	najm0001@gmail.com	Cooperative Energy Futures		3416 16th Ave S Minneapolis MN, 55407 United States	Electronic Service		No	M-25-141
195	Alex	Nelson	anelson@dakotaelectric.com	Dakota Electric Association		4300 220nd St Farmington MN, 55024 United States	Electronic Service		No	M-25-141
196	Anthony	Nelson	amnelson@otpco.com	Ottertail Power		53233 Sunrise Ln Park Rapids MN, 56470 United States	Electronic Service		No	M-25-141
197	Ben	Nelson	benn@cmpasgroup.org	CMMPA		459 South Grove Street Blue Earth MN, 56013 United States	Electronic Service		No	M-25-141
198	Carl	Nelson	cnelson@mncee.org	Center for Energy and Environment		212 3rd Ave N Ste 560 Minneapolis MN, 55401 United States	Electronic Service		No	M-25-141
199	Darin	Nelson	dnelson@minnetonkamn.gov	City of Minnetonka		14600 Minnetonka Blvd Minnetonka MN, 55345 United States	Electronic Service		No	M-25-141
200	David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency		220 South Sixth Street Suite 1300 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
201	Sephra	Ninow	sephra.ninow@energycenter.org	Center for Sustainable		426 17th Street, Suite	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
				Energy		700 Oakland CA, 94612 United States				
202	Michael	Noble	noble@fresh-energy.org	Fresh Energy		408 Saint Peter St Ste 350 Saint Paul MN, 55102 United States	Electronic Service		No	M-25-141
203	Rolf	Nordstrom	rnordstrom@gpisd.net	Great Plains Institute		2801 21ST AVE S STE 220 Minneapolis MN, 55407-1229 United States	Electronic Service		No	M-25-141
204	Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company		200 1st Street SE PO Box 351 Cedar Rapids IA, 52406-0351 United States	Electronic Service		No	M-25-141
205	David	O'Brien	david.obrien@navigant.com	Navigant Consulting		77 South Bedford St Ste 400 Burlington MA, 01803 United States	Electronic Service		No	M-25-141
206	Logan	O'Grady	logrady@mnseia.org	Minnesota Solar Energy Industries Association		2288 University Ave W St. Paul MN, 55114 United States	Electronic Service		No	M-25-141
207	Patty	O'Keefe	patty.okeefe@sierraclub.org			2525 Emerson Ave S Apt 2 Minneapolis MN, 55405 United States	Electronic Service		No	M-25-141
208	Timothy	O'Leary	toleary@llec.coop	Lyon-Lincoln Electric Cooperative, Inc		P.O. Box 639 Tyler MN, 56178-0639 United States	Electronic Service		No	M-25-141
209	Jeff	O'Neill	jeff.oneill@ci.monticello.mn.us	City of Monticello		505 Walnut Street Suite 1 Monticelllo MN, 55362 United States	Electronic Service		No	M-25-141
210	Matthew	Olsen	molsen@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	M-25-141
211	Russell	Olson	rolson@hcpd.com	Heartland Consumers Power District		PO Box 248 Madison SD, 57042-0248 United States	Electronic Service		No	M-25-141
212	Wendi	Olson	wolson@otpco.com	Otter Tail Power Company		215 South Cascade Fergus Falls MN, 56537 United States	Electronic Service		No	M-25-141
213	Carol A.	Overland	overland@legalectric.org	Legalectric - Overland Law Office		1110 West Avenue Red Wing MN, 55066 United States	Electronic Service		No	M-25-141
214	Bethany	Owen	bowen@mnpower.com	Minnesota Power		30 West Superior Street Duluth MN, 55802 United States	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
215	Cezar	Panait	cezar.panait@state.mn.us		Public Utilities Commission	121 7th Place East Suite 350 St. Paul MN, 55101 United States	Electronic Service		No	M-25-141
216	Dan	Patry	dpatry@sunedison.com	SunEdison		600 Clipper Drive Belmont CA, 94002 United States	Electronic Service		No	M-25-141
217	Jeffrey C	Paulson	jeff.jcplaw@comcast.net	Paulson Law Office, Ltd.		4445 W 77th Street Suite 224 Edina MN, 55435 United States	Electronic Service		No	M-25-141
218	Dean	Pawlowski	dpawlowski@otpco.com	Otter Tail Power Company		PO Box 496 215 S. Cascade St. Fergus Falls MN, 56537-0496 United States	Electronic Service		No	M-25-141
219	Susan	Peirce	susan.peirce@state.mn.us		Department of Commerce	85 Seventh Place East St. Paul MN, 55101 United States	Electronic Service		No	M-25-141
220	Mary Beth	Peranteau	mperanteau@fredlaw.com	Fredrikson & Byron, P.A.		44 East Mifflin Street Suite 1000 Madison WI, 53703 United States	Electronic Service		No	M-25-141
221	Jennifer	Peterson	jjpeterson@mnpower.com	Minnesota Power		30 West Superior Street Duluth MN, 55802 United States	Electronic Service		No	M-25-141
222	Wess	Pfaff	wes.pfaff@mrenergy.com			null null, null United States	Electronic Service		No	M-25-141
223	Ryan	Pierce	ryan.m.pierce@xcelenergy.com	Xcel Energy		null null, null United States	Electronic Service		No	M-25-141
224	Morgan	Pitz	morgan.pitz@us-solar.com	US Solar		100 N 6th St #410B Minneapolis MN, 55403 United States	Electronic Service		No	M-25-141
225	Hannah	Polikov	hpolikov@aee.net	Advanced Energy Economy Institute		1000 Vermont Ave, Third Floor Washington DC, 20005 United States	Electronic Service		No	M-25-141
226	Crystal	Pomerleau	crystal.r.pomerleau@xcelenergy.com	Xcel		null null, null United States	Electronic Service		No	M-25-141
227	Kristel	Porter	kristel@mnrenewablenow.org	MN Renewable Now		null null, null United States	Electronic Service		No	M-25-141
228	Paula	Prahl	paula.prahl@dominiuminc.com	Dominium		2905 Northwest Blvd Ste 150 Plymouth MN, 55441 United States	Electronic Service		No	M-25-141
229	Kevin	Pranis	kpranis@liunagroc.com	Laborers' District Council of MN and ND		81 E Little Canada Road St. Paul MN, 55117 United States	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
230	David G.	Prazak	dprazak@otpco.com	Otter Tail Power Company		P.O. Box 496 215 South Cascade Street Fergus Falls MN, 56538-0496 United States	Electronic Service		No	M-25-141
231	Matt	Privratsky	matt@nokomisenergy.com	Nokomis Energy		2639 Nicollet Ave Suite 200 Minneapolis MN, 55408 United States	Electronic Service		No	M-25-141
232	Elizabeth	Psihos	elizabeth.psihos@idealenergies.com			null null, null United States	Electronic Service		No	M-25-141
233	Bridget	Rathsack	bridget.rathsack@burnsvillemn.gov	City of Burnsville, MN		100 Civic Center Parkway Burnsville MN, 55337 United States	Electronic Service		No	M-25-141
234	Peter	Reese	preese@sundialsolarenergy.com	Sundial Energy, LLC		3363 Republic Ave Saint Louis Park MN, 55426 United States	Electronic Service		No	M-25-141
235	Generic Notice	Regulatory	regulatory_filing_coordinators@otpco.com	Otter Tail Power Company		215 S. Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	M-25-141
236	John C.	Reinhardt		Laura A. Reinhardt		3552 26th Ave S Minneapolis MN, 55406 United States	Paper Service		No	M-25-141
237	Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	1400 BRM Tower 445 Minnesota St St. Paul MN, 55101-2131 United States	Electronic Service		Yes	M-25-141
238	Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy		26 E Exchange St, Ste 206 St. Paul MN, 55101-1667 United States	Electronic Service		No	M-25-141
239	Micah	Revell	micah.revell@stinson.com	Stinson LLP		50 South Sixth St Ste 2600 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
240	Michael	Riewer	mriewer@otpco.com	Otter Tail Power Company		PO Box 4496 Fergus Falls MN, 56538-0496 United States	Electronic Service		No	M-25-141
241	Jonathan	Roberts	jroberts@soltage.com	Soltage		66 York St 5th Floor Jersey City NJ, 07302 United States	Electronic Service		No	M-25-141
242	Noah	Roberts	nroberts@cleanpower.org	Energy Storage Association		1155 15th St NW, Ste 500 Washington DC, 20005 United States	Electronic Service		No	M-25-141
243	Kristi	Robinson	krobinson@star-energy.com	STAR Energy Services, LLC		1401 South Broadway Pelican Rapids MN,	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						56572 United States				
244	Daniel	Rogers	dan@nokomispartners.com			2639 Nicollet Ave Ste 200 Minneapolis MN, 55408 United States	Electronic Service		No	M-25-141
245	Michael	Ruiz	michael.ruiz@xcelenergy.com	Xcel Energy		null null, null United States	Electronic Service		No	M-25-141
246	Nathaniel	Runke	nrunke@local49.org			611 28th St. NW Rochester MN, 55901 United States	Electronic Service		No	M-25-141
247	Darla	Ruschen	d.ruschen@bcrea.coop	Brown County Rural Electrical Association		PO Box 529 24386 State Highway 4 Sleepy Eye MN, 56085 United States	Electronic Service		No	M-25-141
248	Delaney	Russell	delaney@mnipl.org	Just Solar Coalition		4407 E Lake Street Minneapolis MN, 55407 United States	Electronic Service		No	M-25-141
249	Kwadwo	Safo	ksafo@dakotaelectric.com	Dakota Electric Association		null null, null United States	Electronic Service		No	M-25-141
250	Robert K.	Sahr	bsahr@eastriver.coop	East River Electric Power Cooperative		P.O. Box 227 Madison SD, 57042 United States	Electronic Service		No	M-25-141
251	Ian	SantosMeeker	ians@ips-solar.com	IPS Solar		null null, null United States	Electronic Service		No	M-25-141
252	Joseph L	Sathe	jsathe@kennedy-graven.com	Kennedy & Graven, Chartered		150 S 5th St Ste 700 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
253	Elena	Saxonhouse	elena.saxonhouse@sierraclub.org	Sierra Club Environmental Law Program		2101 Webster St Ste 1300 Oakland CA, 94612 United States	Electronic Service		No	M-25-141
254	Kenric	Scheevel	kjs@dairynet.com	Dairyland Power Cooperative		3200 East Ave S PO Box 817 La Crosse WI, 54602 United States	Electronic Service		No	M-25-141
255	Dean	Schiro	dean.e.schiro@xcelenergy.com	Xcel Energy		null null, null United States	Electronic Service		No	M-25-141
256	Jacob J.	Schlesinger	jschlesinger@keyesfox.com	Keyes & Fox LLP		1580 Lincoln St Ste 880 Denver CO, 80203 United States	Electronic Service		No	M-25-141
257	Jeff	Schoenecker	jschoenecker@dakotaelectric.com	Dakota Electric Association		4300 220th Street W Farmington MN, 55024 United States	Electronic Service		No	M-25-141
258	Peter	Scholtz	peter.scholtz@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	Suite 1400 445 Minnesota Street St. Paul MN, 55101-2131 United States	Electronic Service		No	M-25-141
259	Kay	Schraeder	kschraeder@minnkota.com	Minnkota Power		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
260	Matthew	Schuerger	matthew.schuerger@state.mn.us		Public Utilities Commission	121 7th Place East Suite 350 St. Paul MN, 55101 United States	Electronic Service		No	M-25-141
261	Ronald J.	Schwartau	rschwartau@noblesce.com	Nobles Electric Cooperative		22636 U.S. Hwy. 59 Worthington MN, 56187 United States	Electronic Service		No	M-25-141
262	Rob	Scott Hovland	rob.scott-hovland@mrenergy.com	Missouri River Energy Services		3724 W Avera Dr PO Box 88920 Sioux Falls SD, 57109-8920 United States	Electronic Service		No	M-25-141
263	Emma	Searson	esearson@solarunitedneighbors.org	Solar United Neighbors		646 S Barrington Ave Apt 101 Los Angeles CA, 90049 United States	Electronic Service		No	M-25-141
264	Dean	Sedgwick	sedgwick@itascapower.com	Itasca Power Company		PO Box 455 Spring Lake MN, 56680 United States	Electronic Service		No	M-25-141
265	Maria	Seidler	maria.seidler@dom.com	Dominion Energy Technology		120 Tredegar Street Richmond VA, 23219 United States	Electronic Service		No	M-25-141
266	David	Shaffer	david.shaffer@novelenergy.biz	Novel Energy Solutions		2303 Wycliff St Ste 300 St. Paul MN, 55114 United States	Electronic Service		No	M-25-141
267	Patricia	Sharkey	psharkey@environmentallawcounsel.com	Midwest Cogeneration Association.		180 N LaSalle St Ste 3700 Chicago IL, 60601 United States	Electronic Service		No	M-25-141
268	Christopher L.	Sherman	csherman@sherman-associates.com	Solar Holdings LLC		233 Park Ave S Ste 201 Minneapolis MN, 55415 United States	Electronic Service		No	M-25-141
269	Doug	Shoemaker	dougs@charter.net	Minnesota Renewable Energy		2928 5th Ave S Minneapolis MN, 55408 United States	Electronic Service		No	M-25-141
270	Felicia	Skaggs	fskaggs@meeker.coop	Meeker Cooperative Light & Power		1725 US Highway 12 E Suite 100 Litchfield MN, 55355 United States	Electronic Service		No	M-25-141
271	Glen	Skarbakka	glen@s-pllc.com	Skarbakka PLLC		5411 Bartlett Blvd Mound MN, 55364 United States	Electronic Service		No	M-25-141
272	Anne	Smart	anne.smart@chargepoint.com	ChargePoint, Inc.		254 E Hacienda Ave Campbell CA, 95008 United States	Electronic Service		No	M-25-141
273	Joshua	Smith	joshua.smith@sierraclub.org			85 Second St FL 2 San Francisco CA, 94105 United States	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
274	Ken	Smith	ken.smith@ever-greenenergy.com	Ever Green Energy		305 Saint Peter St Saint Paul MN, 55102 United States	Electronic Service		No	M-25-141
275	Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.		76 W Kellogg Blvd St. Paul MN, 55102 United States	Electronic Service		No	M-25-141
276	Trevor	Smith	trevor.smith@avantenergy.com	Avant Energy, Inc.		220 South Sixth Street Suite 1300 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
277	Rafi	Sohail	rafi.sohail@centerpointenergy.com	CenterPoint Energy		800 LaSalle Avenue P.O. Box 59038 Minneapolis MN, 55459-0038 United States	Electronic Service		No	M-25-141
278	Beth	Soholt	bsoholt@cleangridalliance.org	Clean Grid Alliance		570 Asbury Street Suite 201 St. Paul MN, 55104 United States	Electronic Service		No	M-25-141
279	Marcia	Solie	m.solie@bcrea.coop	Brown County Rural Electrical Association		24386 State Hwy. 4, PO Box 529 Sleepy Eye MN, 56085 United States	Electronic Service		No	M-25-141
280	Braden	Solum	braden.solum@idealenergies.com	iDEAL Energies		5810 Nicollet Ave Minneapolis MN, 55419 United States	Electronic Service		No	M-25-141
281	Karl	Sonneman	karl17@hbci.com	Law Office of Karl W. Sonneman		111 Riverfront Suite 202 Winona MN, 55987 United States	Electronic Service		No	M-25-141
282	Brandon	Stamp	brandon.j.stamp@xcelenergy.com	Xcel Energy		401 Nicollet Mall Minneapolis MN, 55401 United States	Electronic Service		No	M-25-141
283	Sky	Stanfield	stanfield@smwlaw.com	Shute, Mihaly & Weinberger		396 Hayes Street San Francisco CA, 94102 United States	Electronic Service		No	M-25-141
284	Russ	Stark	russ.stark@ci.stpaul.mn.us	City of St. Paul		Mayor's Office 15 W. Kellogg Blvd., Suite 390 Saint Paul MN, 55102 United States	Electronic Service		No	M-25-141
285	Byron E.	Starns	byron.starns@stinson.com	STINSON LLP		50 S 6th St Ste 2600 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
286	Kristin	Stastny	kstastny@taftlaw.com	Taft Stettinius & Hollister LLP		2200 IDS Center 80 South 8th Street Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
287	Lindsey	Stegall	lindsey.stegall@evgo.com	EVgo Services, LLC		11835 W Olympic Blvd Ste 900E Los Angeles	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						CA, 90064 United States				
288	Cary	Stephenson	cstephenson@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	M-25-141
289	Chad	Stevenson	chad.stevenson@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	445 Minnesota St. Suite 1400 St. Paul MN, 55101 United States	Electronic Service		No	M-25-141
290	Tammy	Sundbom	tsundbom@mnpower.com	Minnesota Power		null null, null United States	Electronic Service		No	M-25-141
291	Sherry	Swanson	sswanson@noblesce.com	Nobles Cooperative Electric		22636 US Highway 59 PO Box 788 Worthington MN, 56187 United States	Electronic Service		No	M-25-141
292	Boratha	Tan	btan@votesolar.org	Vote Solar		null null, null United States	Electronic Service		No	M-25-141
293	Bryant	Tauer	btauer@whe.org	Wright-Hennepin		6800 Electric Dr Rockford MN, 55373 United States	Electronic Service		No	M-25-141
294	Dean	Taylor	dtaylor@pluginamerica.org	Plug In America		6380 Wilshire Blvd, Suite 1000 Los Angeles CA, 90048 United States	Electronic Service		No	M-25-141
295	Whitney	Terrill	whitney@mnipl.org	Minnesota Interfaith Power & Light		null null, null United States	Electronic Service		No	M-25-141
296	Daniel	Tikk	daniel.tikk@state.mn.us		Department of Commerce	85 7th Place East Suite 280 Saint Paul MN, 55101 United States	Electronic Service		No	M-25-141
297	Kate	Tohme	ktohme@newleafenergy.com	New Leaf Energy		null null, null United States	Electronic Service		No	M-25-141
298	Stuart	Tommerdahl	stommerdahl@otpco.com	Otter Tail Power Company		215 S Cascade St PO Box 496 Fergus Falls MN, 56537 United States	Electronic Service		No	M-25-141
299	Taige	Tople	taige.d.tople@xcelenergy.com	Northern States Power Company dba Xcel Energy-Elec		414 Nicollet Mall 401 7th Floor Minneapolis MN, 55401 United States	Electronic Service		No	M-25-141
300	Jason	Topp	jason.topp@lumen.com	Qwest Communications Company, LLC.		200 S 5th St Ste 2200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
301	Emma Marshall	Torres	emarshall-torres@convergentep.com			null null, null United States	Electronic Service		No	M-25-141
302	Zack	Townsend	zachary.townsend@brookfieldrenewable.com	Brookfield Renewable		200 Liberty St FL 14 New York NY, 10281 United States	Electronic Service		No	M-25-141
303	Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD		4445 W 77th Street Suite 224	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						Edina MN, 55435 United States				
304	Jeff	Triplett	triplettj@powersystem.org	MREA		10710 Town Square Dr NW St 201 Minneapolis MN, 55449 United States	Electronic Service		No	M-25-141
305	Adam	Tromblay	atromblay@noblesce.com	Nobles Cooperative Electric		22636 US Hwy. 59 P.O. Box 788 Worthington MN, 56187-0788 United States	Electronic Service		No	M-25-141
306	Lise	Trudeau	lise.trudeau@state.mn.us		Department of Commerce	85 7th Place East Suite 500 Saint Paul MN, 55101 United States	Electronic Service		No	M-25-141
307	Alan	Urban	alan.m.urban@xcelenergy.com	Xcel Energy		null null, null United States	Electronic Service		No	M-25-141
308	Matt	Van Arkel	mvanarkel@newleafenergy.com			55 Technology Drive Suite 102 Lowell MA, 01851 United States	Electronic Service		No	M-25-141
309	Gary	Van Winkle	gvanwinkle@mylegalaid.org	Mid-Minnesota Legal Aid		111 N Fifth St Ste 100 Minneapolis MN, 55403 United States	Electronic Service		No	M-25-141
310	John	Vaughn	nik@rreal.org	Rural Renewable Energy Alliance		3963 8th Street SW Backus MN, 55435 United States	Electronic Service		No	M-25-141
311	Ellen	Veazey	lveazey@solarunitedneighbors.org	Solar United Neighbors		1350 Connecticut Ave NW Ste 412 Washington DC, 20036 United States	Electronic Service		No	M-25-141
312	Sam	Villella	sdvillella@gmail.com			10534 Alamo Street NE Blaine MN, 55449 United States	Electronic Service		No	M-25-141
313	Curt	Volkmann	curt@newenergy-advisors.com	Fresh Energy		408 St Peter St Saint Paul MN, 55102 United States	Electronic Service		No	M-25-141
314	Wendy	Vorasane	wendy.vorasane@idealenergies.com			null null, null United States	Electronic Service		No	M-25-141
315	Robert J.V.	Vose	rvose@kennedy-graven.com	Kennedy & Graven, Chartered		150 S 5th St Ste 700 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-141
316	Stacy	Wahlund	swahlund@otpco.com	Otter Tail Power Company		215 S. Cascade St Fergus Falls MN, 56537 United States	Electronic Service		No	M-25-141
317	Sarah	Walinga	swalinga@solarcity.com	Energy Freedom Coalition		3055 Clearview Way San Mateo MN, 94402 United States	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
318	Kevin	Walker	kwalker@beaconinterfaith.org	Beacon Interfaith Housing Collaborative		null null, null United States	Electronic Service		No	M-25-141
319	Roger	Warehime	roger.warehime@owatonnautilities.com	Owatonna Municipal Public Utilities - Gas		208 S Walnut Ave PO BOX 800 Owatonna MN, 55060 United States	Electronic Service		No	M-25-141
320	Jenna	Warmuth	jwarmuth@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802-2093 United States	Electronic Service		No	M-25-141
321	Samantha	Weaver	samantha@communitysolaraccess.org	Coalition for Community Solar Access		1380 Monroe St. Washington DC DC, 20010 United States	Electronic Service		No	M-25-141
322	Elizabeth	Wefel	eawefel@flaherty-hood.com	Missouri River Energy Services		525 Park St Ste 470 Saint Paul MN, 55103 United States	Electronic Service		No	M-25-141
323	Sarah	Whebbe	swhebbe@mnseia.org	MnSEIA		445 Minnesota Street Suite 730 St. Paul MN, 55101 United States	Electronic Service		No	M-25-141
324	Joshua	Williams	joshua@highlandfleets.com	Highland Electric Fleets		200 Cummings Center Suite 273-D Beverly MA, 01915 United States	Electronic Service		No	M-25-141
325	Laurie	Williams	laurie.williams@sierraclub.org	Sierra Club		Environmental Law Program 1536 Wynkoop St Ste 200 Denver CO, 80202 United States	Electronic Service		No	M-25-141
326	John	Williamson	john.williamson@state.mn.us	Minnesota Department of Labor and Industry		443 Lafayette Rd N St. Paul MN, 55155-4341 United States	Electronic Service		No	M-25-141
327	Anthony	Willingham	anthony.willingham@electrifyamerica.com	Electrify America		1950 Opportunity Way Suite 1500 Reston VA, 20190 United States	Electronic Service		No	M-25-141
328	Danielle	Winner	danielle.winner@state.mn.us		Department of Commerce	85 7th Place East Suite 500 Saint Paul MN, 55101 United States	Electronic Service		No	M-25-141
329	Heidi	Winter	hwinter@co.murray.mn.us	Murray County		2500 28th Street PO Box 57 Slayton MN, 56172 United States	Electronic Service		No	M-25-141
330	Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company		200 First St SE Cedar Rapids IA, 52401 United States	Electronic Service		No	M-25-141

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
331	Terry	Wolf	terry.wolf@mrenergy.com	Missouri River Energy Services		3724 W Avera Dr PO Box Sioux Falls SD, 57109-8920 United States	Electronic Service		No	M-25-141
332	Curtis	Zaun	curtis@cpzlaw.com			3254 Rice Street Little Canada MN, 55126 United States	Electronic Service		No	M-25-141
333	Brian	Zavesky	brianz@mrenergy.com	Missouri River Energy Services		3724 West Avera Drive P.O. Box 88920 Sioux Falls SD, 57108-8920 United States	Electronic Service		No	M-25-141
334	Christopher	Zibart	czibart@atcllc.com	American Transmission Company LLC		W234 N2000 Ridgeview Pkwy Court Waukesha WI, 53188-1022 United States	Electronic Service		No	M-25-141
335	Kurt	Zimmerman	kwz@ibew160.org	Local Union #160, IBEW		2909 Anthony Ln St Anthony Village MN, 55418-3238 United States	Electronic Service		No	M-25-141
336	Emily	Ziring	eziring@stlouispark.org	City of St. Louis Park		5005 Minnetonka Blvd St. Louis Park MN, 55416 United States	Electronic Service		No	M-25-141
337	Ari	Zwick	ari.zwick@state.mn.us		Department of Commerce	85 7th Place East Suite 280 Saint Paul MN, 55101 United States	Electronic Service		No	M-25-141