

March 30, 2022

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

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E002/M-21-814 and E002/M-20-680

Dear Mr. Seuffert:

Attached are the comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

In the Matter of Northern States Power Company d/b/a Xcel Energy's Petition for Approval of the Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022, Tracker True-up and Revised Adjustment Factors

The Petition was filed on November 24, 2021 by:

Holly Hinman
Regulatory Manager
Xcel Energy
414 Nicollet Mall, 401 – 7th Floor
Minneapolis, MN 55401

The Department recommends that the Commission bifurcate the cost recovery decisions of Xcel Energy's Transmission Cost Recovery (TCR) Rider petition and refer certain aspects of Xcel's TCR Rider petition to the Office of Administrative Hearings for a contested case proceeding pursuant to Minn. R. 7829.1000. The Department is available to answer any questions the Minnesota Public Utilities Commission may have.

Sincerely,

/s/ Matthew Landi
Rates Analyst

/s/ Nancy Campbell
Financial Analyst, CPA

ML/NC/ja
Attachment



Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. E002/M-21-814

I. PROCEDURAL HISTORY AND BACKGROUND

On October 30, 2015, Northern States Power Company d/b/a Xcel Energy (Xcel, or the Company) filed its 2015 Biennial Distribution Grid-Modernization Report under Minn. Stat. §216B.2425 (the Grid Modernization Statute).¹ Under the Grid Modernization Statute, subdivision 2 requires that a utility operating under a multi-year rate plan² identify investments that it considers necessary to modernize its transmission and distribution grid by enhancing reliability, improving security against cyber and physical threats, and increasing opportunities for energy conservation. Subdivision 3 of the Grid Modernization Statute requires the Minnesota Public Utilities Commission (Commission) to certify, certify as modified, or deny certification of the investments identified by a utility under subdivision 2. As part of its 2015 Biennial Distribution Grid-Modernization Report, the Company proposed an Advanced Distribution Management System (ADMS) project and requested that the Commission certify the ADMS project. On June 28, 2016, the Commission certified the ADMS project.³

Minn. Stat. §216B.16, subd. 7b authorizes the Commission to approve the automatic adjustment of charges for the Minnesota jurisdictional costs associated with a utility's new transmission facilities through a utility's Transmission Cost Recovery (TCR) Rider, and subd. 7b(b)(5) specifically "allows the utility to recover costs associated with investments in distribution facilities to modernize the utility's grid that have been certified by the commission under Minn. Stat. §216B.2425" (the TCR Rider Statute).⁴

Xcel's two most recent TCR Rider petitions, in Docket Nos. E002/M-17-797 (Xcel's 2017-2018 TCR Rider Petition) and E002/M-19-721 (Xcel's 2019-2020 TCR Rider Petition), respectively, included the ADMS project as part of its cost recovery request. Subsequent Commission Orders in both proceedings have

¹ Minn. Stat. §216B.2425, accessed at: <https://www.revisor.mn.gov/statutes/cite/216B.2425>.

² Minn. Stat. §216B.16, subd. 19. Accessed at: <https://www.revisor.mn.gov/statutes/cite/216B.16#stat.216B.16.19>.

³ *In the Matter of Xcel Energy's 2015 Biennial Distribution-Grid-Modernization Report*, Docket No. E-002/M-15-962, ORDER CERTIFYING ADVANCED DISTRIBUTION-MANAGEMENT SYSTEM (ADMS) PROJECT UNDER MINN. STAT. § 216B.2425 AND REQUIRING DISTRIBUTION STUDY (June 28, 2016). Accessed at: <https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={6ACF016C-3E0E-4CA7-A52A-35FD0E28D7FB}&documentTitle=20166-122702-01>.

⁴ Minn. Stat. §216B.16, subd. 7b(b)(5), accessed at: <https://www.revisor.mn.gov/statutes/cite/216B.16#stat.216B.16.7b>.

allowed the Company to recover the Company's revenue requirements associated with the ADMS project through its TCR Rider.^{5,6}

On November 1, 2017, Xcel filed its Petition for approval of a Residential Time of Use (TOU) Rate Design Pilot Program (TOU Rider Pilot) in Docket No. E002/M-17-775, and did so in conjunction with the Company's Grid Modernization Report in Docket No. E002/M-17-776. Xcel requested certification of its TOU Rider Pilot pursuant to the Grid Modernization Statute. On August 7, 2018, the Commission certified the TOU Rider Pilot.⁷ Until the instant TCR Rider petition, Xcel has not requested cost recovery of any of the costs associated with implementing the TOU Rider Pilot.

On November 1, 2019, Xcel filed its 2019 Integrated Distribution Plan (2019 IDP) in Docket No. E002/M-19-666. The Company's 2019 IDP included the Company's certification request of its proposed Advanced Grid Intelligence and Security (AGIS) Initiative and an Advanced Distribution Planning Tool (APT, now known as the LoadSEER tool) pursuant to Minn. Stat. §216B.2425.⁸ The AGIS Initiative includes Advanced Metering Infrastructure (AMI), a Field Area Network (FAN), Fault Location and Isolation Service Restoration (FLISR), and an Integrated Volt-Var Optimization (IVVO) project.

On July 23, 2020, the Minnesota Public Utilities Commission (Commission) issued its Order Accepting Integrated Distribution Plan, Modifying Reporting Requirements, and Certifying Certain Grid Modernization Projects (Certification Order) in Xcel's 2019 IDP proceeding and certified the AMI, FAN, and APT/LoadSEER projects, and declined to certify the FLISR and IVVO projects.⁹

⁵ *In the Matter of the Petition of Northern States Power Company for Approval of the Transmission Cost Recovery Rider Revenue Requirements for 2017 and 2018, and Revised Adjustment Factor*, Docket No. E002/M-17-797, ORDER AUTHORIZING RIDER RECOVERY, SETTING RETURN ON EQUITY, AND SETTING FILING REQUIREMENTS (September 27, 2019) (2017-2018 TCR Rider Order). Accessed at:

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={90C2736D-0000-C01D-9089-5F9E7FB89DA6}&documentTitle=20199-156134-01>.

⁶ *In the Matter of Northern States Power Company d/b/a Xcel Energy's Petition for Approval of the Transmission Cost Recovery Rider Revenue Requirements for 2019 and 2020 and Revised Adjustment Factors*, Docket No. E002/M-19-721, ORDER AUTHORIZING RIDER RECOVERY, SETTING RETURN ON EQUITY, AND SETTING FILING REQUIREMENTS (December 10, 2021) (Xcel's 2019-2020 TCR Rider Order). Accessed at:

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={3092A57D-0000-CC11-9CCC-621D818F8CBB}&documentTitle=202112-180572-01>.

⁷ *In the Matter of Xcel's Residential Time of Use Rate Design Pilot Program*, Docket No. E002/M-17-775, and *In the Matter of Xcel's 2017 Biennial Distribution Grid Modernization Report*, Docket No. E002/M-17-776, ORDER APPROVING PILOT PROGRAM, SETTING REPORTING REQUIREMENTS, AND DENYING CERTIFICATION REQUEST (August 7, 2018). Accessed at:

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={103F1565-0000-C21D-B43D-24C097C567A3}&documentTitle=20188-145582-01>.

⁸ *In the Matter of Xcel Energy's Integrated Distribution Plan and Advanced Grid Intelligence and Security Certification Request*, Docket No. E002/M-19-666, Xcel Energy Integrated Distribution Plan (2020 – 2029), dated November 1, 2019. Accessed at (PUBLIC):

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={90E1276E-0000-C617-9E33-75094BC2422E}&documentTitle=201911-157133-01>.

⁹ *In the Matter of Xcel Energy's Integrated Distribution Plan and Advanced Grid Intelligence and Security Certification Request*, Docket No. E002/M-19-666, ORDER ACCEPTING INTEGRATED DISTRIBUTION PLAN, MODIFYING REPORTING

On August 20, 2020, the Department initiated a stakeholder process and investigative proceeding in Docket No. E999/DI-20-627 (Department Investigation)¹⁰ in response to the Commission's Certification Order, specifically Order Point No. 9, which requested the following:

9. The Commission Requests that the Department file a report by November 1, 2020, including recommendations on specific metrics, detailed methods for evaluating performance, and consumer protections or other conditions, including cost caps, that should be applied to the certified projects. The report should be informed by a stakeholder process and will be made part of the record for any future cost recovery proceedings. Xcel must participate in the stakeholder process, which must be open to all interested parties, and fully cooperate with the Department.

The Department's Notice of Solicitation of Stakeholder Input and Comments (Department Notice) requested comments on numerous topics under four broad areas: (1) the content of Xcel's cost recovery petition (filing requirements); (2) metrics accompanying Xcel's cost recovery request for the AMI and FAN projects; (3) methods for evaluation of performance of Xcel's AMI and FAN projects; and (4) consumer protections. Several parties filed comments in response to the Department's Notice between September 18, 2020 and October 16, 2020.

The Department convened a stakeholder workshop on Friday, October 23, 2020 regarding Xcel's AMI and FAN projects. Xcel also held a workshop on November 20, 2020 providing a detailed overview of its FAN and AMI projects. After receiving valuable stakeholder feedback and recommendations, the Department's Investigation culminated in a report filed on December 1, 2020 called *Methods for Performance Evaluations, Metrics, and Consumer Protections for AMI and FAN* (Department Report).

During the time the Department's Investigation was ongoing, another proceeding was initiated in Docket No. E002/M-20-680 on August 28, 2020 to consider the procedural paths for the processing and review of Xcel's expected TCR Rider petition. Xcel filed a compliance filing in which it discussed these procedural paths (Procedural Paths Proceeding)¹¹, and explained that it would file its TCR Rider

REQUIREMENTS, AND CERTIFYING CERTAIN GRID MODERNIZATION PROJECTS (Certification Order) (July 23, 2020). Accessed at:

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={F00E7D73-0000-CD15-B6E0-EA73F0AC037E}&documentTitle=20207-165209-01.>

¹⁰ *In the Matter of the Department Stakeholder Process Informing the Report on the Metrics, Performance Evaluation Methods, and Consumer Protection Conditions to be applied to Xcel Energy's Advanced Metering Infrastructure and Field Area Network Projects Certified in Docket No. E002/M-19-666, Docket No. E999/DI-20-627, Notice of Solicitation of Stakeholder Input and Comments, August 20, 2020.* Accessed at:

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={C0AC1174-0000-CF1E-937E-B1525931BB6F}&documentTitle=20208-166087-01.>

¹¹ *In the Matter of Northern States Power Company for Approval of the Transmission Cost Recovery Rider Revenue Requirements for 2021 and Revised Adjustment Factors, Docket No. E002/M-20-680, Compliance – Procedural Paths*

petition containing a cost recovery request for the then-recently certified AMI, FAN, and APT/LoadSEER projects on or about November 6, 2020.¹² Xcel's Procedural Paths Proceeding Compliance Filing was required by Order Point No. 13 of the Commission's Certification Order, which states:¹³

13. 60 days prior to a petition to seek rider recovery for AGIS costs, Xcel Energy shall file preferred procedural paths forward with one option being a contested case. The Commission will make a procedural and scoping decision prior to the consideration of a rider recovery determination. The Executive Secretary is authorized to establish a comment and reply schedule prior to the procedural and scoping hearing.

On September 23, 2020, the Commission issued a Notice for Comment on Xcel's Procedural Paths Compliance Filing (Procedural Paths Proceeding Notice). On October 16, 2020, the following parties submitted Comments in response to the Commission's Procedural Paths Proceeding Notice:

- The Department;
- The Office of Attorney General – Residential Utilities Division (OAG-RUD);
- The Citizens Utility Board of Minnesota (CUB); and
- Xcel Large Industrials (XLI).

This matter is still pending before the Commission. Again, at the time, Xcel was expected to file its TCR Rider petition on or about November 6, 2020, but declined to do so. To ascertain the timing of Xcel's TCR Rider petition, the Department was in periodic dialogue with the Company throughout 2021. The Company's plans to file its TCR Rider petition shifted throughout the year, and ultimately, Xcel did not file its TCR Rider petition until November 24, 2021 in the instant proceeding (Docket No. E002/M-21-814) in which the Company seeks approval of its 2021-2022 TCR Rider revenue requirements and resulting rate classes' adjustment factors (Xcel's 2021-2022 TCR Rider petition).

Xcel's instant TCR Rider petition proposed a 2022 TCR Rider revenue requirement of approximately \$104.5 million, an increase of approximately \$22.6 million over 2020 revenue requirements of approximately \$81.9 million.¹⁴ Xcel's proposed revenue requirements and the resulting adjustment

Forward: Integrated Distribution Plan and AGIS Certification Request & Transmission Cost Recovery Rider (Procedural Paths Proceeding, Xcel's Compliance Filing), August 28, 2020. Accessed at:

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={D0F33674-0000-CA1C-BF4E-78D8FD2371B2}&documentTitle=20208-166259-01>.

¹² Procedural Paths Proceeding, Xcel's Compliance Filing, at 2.

¹³ Certification Order, Order Point No. 13, at 17.

¹⁴ *In the Matter of the Petition of Northern States Power Company for Approval of the Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022, Tracker True-up, and Revised Adjustment Factors*, Xcel's Transmission Cost Recovery Rider Petition (Xcel's 2021-2022 TCR Rider Petition), Docket No. E002/M-21-814, November 24, 2021. Accessed at (PUBLIC):

factors were calculated with an assumed implementation date of June 1, 2022, and the Company is proposing to recalculate the adjustment factors for implementation in compliance based on the timing of a Commission decision.

Through Xcel's 2021-2022 TCR Rider, the Company is proposing to recover the following:¹⁵

- Costs associated with distribution-grid modernization projects previously certified by the Commission and eligible for TCR cost recovery, as follows:
 - o The ADMS Project;
 - o The AMI Project;
 - o The FAN Project;
 - o The TOU Rider Pilot; and
 - o The APT/LoadSEER project.
- Costs associated with transmission projects previously approved for TCR Rider recovery, including:¹⁶
 - o CapX2020 Fargo – Twin Cities;
 - o CapX2020 La Crosse;
 - o CapX2020 Brookings – Twin Cities;
 - o La Crosse – Madison (also referred to as Badger – Coulee);
 - o Big Stone-Brookings 345 kV Line; and
 - o Huntley-Wilmarth 345 kV Transmission Line.

On February 7, 2022, the Commission issued a Notice of Comment Period for Xcel's 2021-2022 TCR Rider Petition (TCR Rider Notice) and the related Procedural Paths Proceeding.

On February 9, 2022, the Department submitted a letter in the instant proceeding (Department's Letter), as well as several other related distribution system planning and grid modernization proceedings.¹⁷ The Department's Letter explains that the Department retained Synapse Energy Economics, Inc. (Synapse) in response to the Commission's September 27, 2019 Order in Docket No. E002/M-17-797 requesting that the Department secure specialized technical professional investigative services to investigate the potential costs and benefits of grid modernization investments proposed by Xcel in its next rate case or Transmission Cost Recovery filing and to assist the Department in providing recommendations to the Commission regarding any such investments.¹⁸

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={D031537D-0000-C911-9323-7302B00603AD}&documentTitle=202111-180141-01>.

¹⁵ Xcel's 2021-2022 TCR Rider Petition, at 1-2.

¹⁶ Xcel's 2021-2022 TCR Rider Petition, Attachment 1.

¹⁷ Department's Letter. February 9, 2022. Accessed at:

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={D09BE07E-0000-C153-AEF1-6251101796D1}&documentTitle=20222-182633-03>.

¹⁸ 2017-2018 TCR Rider Order, Order Point No. 10.

Through this engagement and in service of the Commission's request, Synapse developed a document, attached to the Department's Letter, titled *review and Assessment of Grid Modernization Plans: Guidance for Regulators, Utilities, and Other Stakeholders* (Guidance Document). The Guidance Document was developed to support the analysis of grid modernization investments in Minnesota.

The Commission's February 7, 2022 TCR Rider Notice contains two separate comment periods, one for the AGIS Related Scoping & Procedures, and the other for the Transmission Cost Recovery (TCR) Petition. The original comment period for the AGIS Related Scoping & Procedures closed March 9, 2022. However, due to the Department's extension requests, comments are due March 30, 2022 and reply comments are due April 11, 2022. The Department's instant comments are in response to the Commission's AGIS Related Scoping & Procedures March 30, 2022 comment period.

On March 24, 2022, the Department requested that the Commission suspend the Transmission Cost Recovery (TCR) Comment periods of April 5 and 15 until after the Commission receives comments and reply comments in response to the AGIS Related Scoping & Procedures comment period and determines the procedural path for the review of the AGIS-related costs of Xcel's 2021-2022 TCR Rider petition. At the time of submission of these instant comments, the Commission has not taken action in response to the Department's request.

The following topics are open for comment under the AGIS Related Scoping & Procedures comment period:

- 1) Does Xcel Energy's AGIS-related cost recovery request in the instant TCR Petition comply with:
 - a) the Commission's July 23, 2020 Order in Docket No. E002/M-19-666; and
 - b) the Commission's September 27, 2019 [Order] in Docket No. E002/M-17-797?
- 2) In the instant TCR petition, should cost recovery decisions related to AGIS and Non-AGIS costs be bifurcated? If not, please describe how to proceed in light of the Commission's July 23, 2020 Order which stated "the Commission will make a procedural and scoping decision (on AGIS cost recovery) prior to the consideration of a rider recovery determination"[footnote omitted]?
- 3) Do parties have any *updated* or *new* information to comment on the procedural path forward for the Commission to decide on cost recovery for AGIS-related expenses separate from comments in Dockets No. E-002/M-20-680 and/or E-002/M-20-627?

The Department's comments respond to the Commission's AGIS Related Scoping & Procedures topics.

II. DEPARTMENT ANALYSIS

A. AGIS RELATED SCOPING & PROCEDURES TOPIC #1

The first topic under the AGIS Related Scoping & Procedures comment period is as follows:

- 1) Does Xcel Energy's AGIS-related cost recovery request in the instant TCR Petition comply with:
 - a) the Commission's July 23, 2020 Order in Docket No. E002/M-19-666; and
 - b) the Commission's September 27, 2019 [Order] in Docket No. E002/M-17-797?

As mentioned above and discussed in greater detail in the Department's Letter, the Department retained Synapse to review and evaluate Xcel's proposal for cost recovery of grid modernization investments, namely Xcel's AMI and FAN projects but also the APT/LoadSEER and the TOU Rider Pilot. The Department's engagement with Synapse began in early 2021 and was initially expected to consist of the review of Xcel's TCR Rider petition, which, again, was originally anticipated to be filed on November 6, 2020.

However, because of the Company's shifting timeline and plans to file its TCR Rider petition were delayed several times in 2021, the Department and Synapse endeavored to review grid modernization in Minnesota more generally and provide recommendations to the Commission to assist in the processing and evaluation of utility grid modernization proposals. These grid modernization evaluation practices would apply regardless of the pathway a utility would take to obtain approval. The Department notes that Synapse's engagement has since further expanded to include review of Xcel's certification requests for the Distributed Intelligence (DI) project and Resilient Minneapolis Project (RMP) in Xcel's 2021 IDP proceeding in Docket No. E002/M-21-694, as well as review of Xcel's Fault Location, Isolation, and Service Restoration (FLISR) project in Xcel's Multi-Year Rate Plan proceeding in Docket No. E002/GR-21-630.

The effort to review grid modernization in Minnesota was conducted throughout 2021 and culminated in the creation of the Guidance Document. The Department's Letter characterized the purpose of the Guidance Document as follows:

The Guidance Document's purpose is three-fold: first, it is intended to distill related Commission Orders into recommended filing requirements for utility grid modernization proposals to ensure that core elements of economic evaluation are satisfied by the utility and that necessary information is available to the Commission to establish whether investments are in the public interest; second, it is intended to describe best practices for conducting economic evaluations of grid modernization investments; and third, it is also intended to complement and incorporate the Department's December 2020 Report called Methods for Performance Evaluations, Metrics, and Consumer Protections for AMI and FAN, filed in Docket No. E999/DI-20-627.5. The Guidance Document is intended to be generally applicable to any utility grid modernization proposal regardless of which regulatory pathway a utility takes.

Synapse applied the Guidance Document to its initial review of Xcel's 2021-2022 TCR Rider petition. Specifically, Synapse conducted analysis regarding whether the Company, first and foremost, provided information in its Petition required by related Commission Orders, including the Commission's September 27, 2019 Order in Docket No. E002/M-17-797 and the Commission's July 23, 2020 Order in Docket No. E002/M-19-666. Attached to the instant comments is Synapse's assessment of Xcel's 2021-2022 TCR Rider petition and conclusions as to whether Xcel has complied with these Commission Orders and otherwise provided information consistent with the Guidance Document's recommended filing requirements.

It is important to note that, as further explained in the Department's response to AGIS Related Scoping & Procedures Topic #3 below, while the Company did not have the opportunity to review Guidance Document in advance of filing its 2021-2022 TCR Rider petition, the Company was nevertheless required to provide information consistent with all applicable Commission Orders. Synapse highlights the information that was required by the Commission Orders in the attached assessment of Xcel's 2021-2022 TCR Rider petition. The Department emphasizes that regardless of the availability of the Guidance Document, its application to Xcel's 2021-2022 TCR Rider petition was done in a remedial manner: that is, the Department and Synapse took great effort in the months since Xcel filed its 2021-2022 TCR Rider petition to request information that was missing or incomplete in the Company's filing.

At this time, the Department and Synapse conclude that Xcel is not in compliance with the Commission's September 27, 2019 Order in Docket No. E002/M-17-797 and the Commission's July 23, 2020 Order in Docket No. E002/M-19-666. Synapse's assessment of Xcel's 2021-2022 TCR Rider petition attached to the instant comments explains this conclusion in greater detail and specificity.

B. AGIS RELATED SCOPING & PROCEDURES TOPIC #2

The second topic under the AGIS Related Scoping & Procedures comment period is as follows:

- 2) In the instant TCR petition, should cost recovery decisions related to AGIS and Non-AGIS costs be bifurcated? If not, please describe how to proceed in light of the Commission's July 23, 2020 Order which stated "the Commission will make a procedural and scoping decision (on AGIS cost recovery) prior to the consideration of a rider recovery determination"[footnote omitted]?

As previously mentioned, Order Point No. 13 required Xcel to file its Compliance Filing in the Procedural Paths Proceeding. Order Point No. 13 indicated that "[t]he Commission will make a procedural and scoping decision *prior to the consideration of rider recovery determination*" (emphasis added). The Department interprets that language as requiring the Commission to determine the procedural path of Xcel's TCR Rider petition before the consideration of whether the costs included in Xcel's TCR Rider petition can be recovered through the TCR Rider.

The Department defines AGIS-related costs broadly to include Xcel's distribution-grid modernization projects: the ADMS, AMI, FAN, and APT/LoadSEER projects, as well as the TOU Rider pilot. The Department defines non-AGIS related costs to include costs associated with transmission projects previously approved for TCR Rider recovery (refer to the list on page 5 above regarding cost recovery components of Xcel's 2021-2022 TCR Rider petition).

The Department views the traditional, non-AGIS related costs in Xcel's 2021-2022 TCR Rider petition as comparatively straight-forward and more easily resolved. Those costs represent ongoing costs of transmission projects that have been previously approved for cost recovery through Xcel's TCR Rider, including the Huntley-Wilmarth 345 kV Transmission Line Project (Huntley-Wilmarth Project). At the time of Xcel's TCR Rider petition filing, the Commission was considering Xcel's most recent TCR Rider petition (Xcel's 2019-2022 TCR Rider petition in Docket No. E002/M-19-721).

As part of that petition, Xcel requested cost recovery of the Huntley-Wilmarth Project through the TCR Rider and sought a Commission determination of the Huntley-Wilmarth Project as eligible for cost recovery through the TCR Rider. The Commission's December 10, 2021 Order determined that the Huntley-Wilmarth Project is eligible for cost recovery under the TCR Rider.¹⁹

As suggested above, Xcel's 2021-2022 TCR Rider Petition points out, and the Department concurs, that the other transmission projects included in the petition have been previously deemed eligible for TCR Rider recovery.²⁰ The Department expects that the Commission's comment and reply comment process will be able to sufficiently resolve the cost recovery issues of these traditional, non-AGIS related costs.

As the Department explains below in response to the AGIS Related Scoping & Procedures Topic #3 and as Synapse explains in the attached assessment of Xcel's 2021-2022 TCR Rider petition, there are significant issues with Xcel's AGIS-related investments that need to be resolved prior to determining cost recovery of the investments through Xcel's TCR Rider. The issues involving AGIS-related costs are diverse and voluminous, and will require additional process and time to resolve compared to the traditional, non-AGIS related costs.

The Department's overall recommendation is a bifurcation of the cost recovery decisions in this proceeding between Xcel's distribution-grid modernization projects and the costs associated with transmission projects previously approved for TCR Rider recovery, and further recommends that the distribution-grid modernization projects are referred to the Office of Administrative Hearings for a contested case proceeding pursuant to Minn. R. 7829.1000 (as explained in the Department's response to Topic #3 below) and the costs associated with transmission projects previously approved for TCR Rider recovery are addressed through the Commission's comment and reply comment process.

¹⁹ Xcel's 2019-2020 TCR Rider Order, Order Point No. 1.A.

²⁰ Xcel's 2021-2022 TCR Rider Petition, at 7-8.

However, the Department has spoken with Xcel regarding an issue of cost recovery for the 2020 and 2021 revenue requirements associated with Xcel's expenditures on the AMI and FAN projects. The Department understands that Xcel's cost recovery of this narrow portion of Xcel's overall revenue requirements for the AMI and FAN projects is at risk if there is not a Commission decision before December 31, 2022. The Department supports consideration of this narrow cost recovery issue in the Commission's comment and reply comment process alongside the costs associated with transmission projects previously approved for TCR Rider recovery, which the Department expects could be resolved before December 31, 2022. The table below illustrates the Department's proposed bifurcation of cost recovery decisions of Xcel's 2021-2022 TCR Rider petition.

**Table 1. Proposed Procedural Pathways of Cost Recovery Decisions
in Xcel's 2021 and 2022 TCR Rider Petition**

<i>OAH Referral for a Contested Case Proceeding</i>	<i>Comment and Reply Comment Process</i>
FAN Project	CapX2020 Fargo – Twin Cities
AMI Project	CapX2020 La Crosse
ADMS Project	CapX2020 Brookings – Twin Cities
APT/LoadSEER Project	La Crosse – Madison (aka Badger – Coulee)
TOU Rider Pilot	Big Stone-Brookings 345 kV Line
	Huntley-Wilmarth 345 kV Transmission Line
	2020 and 2021 AMI and FAN Revenue Requirements

Any Commission approval of cost recovery of the 2020 and 2021 revenue requirements of the AMI and FAN projects would be after the Commission considers issues under the 'Comment and Reply Comment Process' category described in the table above. Further, Commission approval of Xcel's 2020 and 2021 AMI and FAN revenue requirements would be provisional and subject to a refund depending on the final Commission decision on the overall AMI and FAN projects at the conclusion of the contested case proceeding.

The Department notes that provisional approval of the Company's TCR Rider revenue requirements was last granted by the Commission in the Company's 2019-2020 TCR Rider petition in Docket No. E002/M-19-721.²¹ The Department supports this approach for Xcel's 2020 and 2021 revenue requirements of the AMI and FAN projects at the conclusion of the comment and reply comment process.

The Department recommends that the Commission bifurcate the cost recovery decisions of Xcel's 2021-2022 TCR Rider petition between (1) the costs associated with Xcel's distribution-grid modernization projects and (2) the costs associated with Xcel's transmission projects previously approved for TCR Rider recovery and the 2020 and 2021 revenue requirements of the AMI and FAN projects.

The Department recommends that the Commission address the costs associated with Xcel's transmission projects previously approved for TCR Rider recovery and the 2020 and 2021 revenue requirements of the AMI and FAN projects using the Commission's comment and reply comment process.

The Department discusses the recommendation to refer the costs associated with Xcel's distribution-grid modernization projects to the OAH for a contested case proceeding pursuant to Minn. R. 7829.1000 in response to Topic #3 below.

C. AGIS RELATED SCOPING & PROCEDURES TOPIC #3

The third topic under the AGIS Related Scoping & Procedures comment period is as follows:

- 3) Do parties have any *updated* or *new* information to comment on the procedural path forward for the Commission to decide on cost recovery for AGIS-related expenses separate from comments in Dockets No. E-002/M-20-680 and/or E-002/M-20-627?

1. *The Department's Approach to Reviewing Xcel's TCR Rider Petition*

The Department takes an impartial view toward utility grid modernization. As the Department's Letter indicates, the Department recognizes the opportunities and challenges of grid modernization in Minnesota. While utilities have historically been in the business of investing in technologies that "modernize" distribution systems, the capabilities and potential of more recent grid modernization technologies, as well as distributed energy resources, have the potential to shift the current paradigm in which the distribution system is largely an intermedial electricity-delivery system from the broader

²¹ *In the Matter of Northern States Power Company, doing business as Xcel Energy's Transmission Cost Recovery Rider*, Commission Order (February 21, 2020). Accessed at: <https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={70666970-0000-C111-A7D6-975F23681188}&documentTitle=20202-160606-01>.

MISO market to a utility's customers to a electricity services platform with a diversity of participants, potentially offering services to one another, to the utility, and to the broader MISO market. This area of utility investment is expected to have significant consequences and novel implications for the provision of reliable, affordable electricity service in Minnesota, utility customers, the state of Minnesota's public policy goals, and generally, society's ability to respond to the collective environmental and economic challenges embedded within our energy systems.

The Department's goal in navigating this evolving landscape is to provide objective, reliable, and thoroughly vetted recommendations to the Commission regarding whether utility investments in grid modernization are in the public interest and to help the Commission promote and protect the public interest as utilities such as Xcel invest hundreds of millions of ratepayer dollars in these grid modernization projects. The Department interprets Order Point No. 10 of the Commission's September 27, 2019 Order in Docket No. E002/M-17-797 as a request to furnish such recommendations.

In service of that goal, the Department retained Synapse to assist the Department, the Commission, utilities, and stakeholders in navigating the immensity and technical complexity of utility grid modernization proposals. Synapse and the Department's year-long process that culminated in the Guidance Document was conducted to further that goal, as well as to prepare us with the ability to objectively review and analyze Xcel's TCR Rider petition. Upon the filing of Xcel's TCR Rider petition in November, the Department and Synapse began a review of its petition and initiated an interrogative process to obtain additional information from Xcel.

As mentioned above in the Department's response to the AGIS Related Scoping & Procedures Topic #1, the interrogative process conducted by the Department and Synapse was intended, first and foremost, to bring Xcel's TCR Rider petition into compliance with Commission Orders. Secondly, it was intended to elicit additional information consistent with the Guidance Document's prescriptions regarding best practices of economic evaluation of utility grid modernization proposals. Last, it was intended to demonstrate that the Department and Synapse made and continue to make a good faith effort to obtain necessary and sufficient information from the Company so that a thorough review and evaluation of Xcel's grid modernization investments can occur, which is all in service of the Department's fundamental goal of ensuring that the Commission and stakeholders have a complete record, upon which the Department can confidently provide a recommendation regarding whether Xcel's grid modernization investments are prudent and whether cost recovery of these investments should occur through the Company's TCR Rider.

The Department views the effort to obtain more information from the utility as a threshold issue: has Xcel provided information necessary and sufficient to complete the public record? This public record is vitally important, as upon it a Commission decision will be made to determine the prudence of Xcel's investments and whether the extraordinary cost recovery mechanism of the TCR Rider should be the mechanism by which Xcel recovers the costs of these investments.

2. *Additional Information and Process is Required to Review Xcel's TCR Rider Petition*

At this time, based on the review of Xcel's TCR Rider petition and responses to the interrogative process, the Department and Synapse conclude that the answer to this threshold question is no.

As Synapse's explained in the attached assessment of Xcel's 2021-2022 TCR Rider petition, the Company has not provided information necessary and sufficient to complete the public record. Additional information is needed by the Department and Synapse to evaluate Xcel's grid modernization investments and whether the TCR Rider is the appropriate cost recovery mechanism through which the costs of these investments should be recovered.

The Department and Synapse note that the question of procedural paths is integrally connected to the other topics, and in particular, the issue of whether the evidence put forward by the Company in its TCR petition fulfills the Commission's filing requirements in Docket No. E002/M-19-666 and Docket No. E002/M-17-797. After an exhaustive, iterative review of Xcel's 2021-2022 TCR Rider petition, which, again, included issuing information requests with the express aim of bringing the Company into compliance with the Commission's filing requirements, the Department and Synapse conclude that there remain serious deficiencies in the record. To be plain, these deficiencies are largely the result of Xcel not complying with the Commission's Orders in Docket No. E002/M-19-666 and Docket No. E002/M-17-797.

The Department and Synapse's interrogative process has not elicited the information that is required in order to conduct a complete evaluation of Xcel's 2021-2022 TCR Rider petition. There remains significant issues with the Company's 2021-2022 TCR Rider petition and the public record such that a comment process is unlikely to elicit an efficient resolution of these issues, described in greater detail below.

The issues with Xcel's proposal are both many and diverse, and it is clear that they will not be easy to resolve. The Company omitted key details from its filing. Its economic evaluations (i.e., benefit-cost analyses or BCA) also suffer from key structural and methodological issues. Further challenge arises from Xcel's overall piecemeal approach to proposing grid modernization investments, and the many unaccounted for interdependencies between investments in the instant proposal and those at various stages of approval in other proceedings.

It is critical to take the broader view of grid investments in assessing the appropriate procedural pathway. In its Notice of Comment on September 23, 2020 in Docket No. E002/M-20-680 and Docket No. E002/M-19-666, the Commission asked parties to identify "other issues or concerns" associated with the Company's proposed AGIS investments.²² Notwithstanding the other considerations raised

²² Procedural Paths Proceeding, Commission Notice of Comment Period, September 23, 2020. Accessed at: <https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={10AFBB74-0000-CA1A-8452-A2B382C884B8}&documentTitle=20209-166786-01>.

above, the Department and Synapse are generally concerned about the implications of a hastened regulatory process, given the novelty and magnitude of the proposed investments.

Accordingly, the Department and Synapse conclude that the preferred approach for this proceeding is to refer the costs associated with Xcel's distribution-grid modernization projects to Office of Administrative Hearings for a contested case proceeding pursuant to Minn. R. 7829.1000.²³

For its part, the Company previously articulated its interest in a quicker proceeding. In Xcel's Procedural Paths Proceeding Compliance Filing, the Company did not support a referral to OAH, but stated that it believed that the schedule for a contested proceeding, should one be held, "could likely be expedited."²⁴ The Department and Synapse maintain that a more measured proceeding will best serve the public interest. Expediting the review, whichever the venue, would not be appropriate. Additionally, Xcel's interest in a quicker proceeding and preference for the comment and reply comment process is substantially undermined by its own year-long delay to its 2021-2022 TCR Rider petition filing.

3. *A Referral to the OAH is Consistent with Commission Rule and Practice*

The standards governing referral for a contested case proceeding are found in Minn. R. 7829.1000. Accordingly, a proceeding may be referred to OAH for a contested case if it involves "contested material facts," and/or if the Commission finds that there are "significant issues" associated with the proceeding that have not been satisfactorily resolved.²⁵

In its Procedural Paths Proceeding Notice, the Commission asked parties to address whether there were either "contested material facts" or "significant issues that remain to be resolved." The Commission also asked about information *not* provided in Xcel's 2019 certification request needed to "evaluate the prudence and reasonableness" of Xcel's proposed AMI, FAN, and APT cost recovery through the TCR rider.²⁶ Here, the Commission pointed toward the connection between evidentiary gaps and the choice of a procedural pathway. In other words, "significant issues" arising from gaps in the record could merit referral to OAH.

The key feature of Xcel's 2021-2022 TCR Rider petition is its incompleteness. The absence of evidence within the application deprives the parties of the opportunity to contest material facts. This evidentiary deficiency is a "significant issue," warranting referral to OAH for a contested case proceeding. Based upon the Department's extensive experience with both contested cases and less formal processes, the Department strongly believes that disputes over material facts will arise if the OAH proceeding succeeds in addressing these key record deficiencies. The Department notes that the

²³ Minn. R. 7849.1200. Accessed at: <https://www.revisor.mn.gov/rules/7829.1000/>.

²⁴ Procedural Paths Proceeding, Xcel Compliance Filing, at 8.

²⁵ Minn. R. 7829.1000.

²⁶ Procedural Paths Proceeding, Commission Notice of Comment Period.

Commission's practice is to refer dockets to the OAH if it believes contested material facts will emerge later in the proceeding. For instance, rate cases and other certain types of dockets are automatically referred to OAH without a finding that contested material facts exist, due to the volume of the record and the complexity of the issues. Again, given the magnitude of the proposed investments and complexity of the overall evaluation process of Xcel's distribution-grid modernization projects, the Department and Synapse maintain that the OAH will be best suited to help resolve these future contested material facts.

4. *Significant Issues in Xcel's 2021-2022 TCR Rider Petition: Gaps in the Record*

The deficient record in this case means that it is not possible to assess the prudence of Xcel's proposed investments or make decisions about future cost recovery. The following sections catalog the issues that should be addressed through the forthcoming regulatory process.

- a. Significant Issues Related to Proposed Investments in AMI, FAN, TOU, And APT To Be Addressed Through a Referral to the Office of Administrative Hearings
 - A. Are the proposed investments in AMI, FAN, TOU, and APT prudent, and if so, should the costs of AMI, FAN, TOU, and APT be recovered from ratepayers?
 - i. Has Xcel addressed the equity impacts and rate effects of its proposed investments in AMI, FAN, TOU, and APT?
 - ii. For each of AMI, FAN, TOU and APT, has Xcel demonstrated adequate consideration of alternative investments or solutions?
 - iii. How do the proposed investments in AMI, FAN, TOU, and APT relate to Xcel's long-term planning processes and associated goals?
 - iv. What are the specific, concrete, and measurable goals that AMI, FAN, TOU, and APT are expected to deliver?
 - v. Has Xcel considered alternative deployment scenarios, which are investment plans differing from the proposed scenario by the mix of components, the installation timelines, or other variables. If so, to what extent do each of these alternative deployment scenarios achieve the goals targeted by the proposed investments?
 - B. Has Xcel demonstrated that its investments in AMI, FAN, TOU, and APT are cost-effective?
 - i. What is the reference case (or business-as-usual case) against which the proposed investment case is being compared?
 - ii. In conducting its benefit-cost analysis of AMI, FAN, TOU, and APT, has Xcel addressed its future grid modernization plans, accounting for interactions with future intended investments, and also explaining why any such intended future investments have not been included in the instant proposal?
 - iii. Has Xcel identified, quantified, and monetized benefits respectively associated with each of the proposed investments, AMI, FAN, TOU, and APT?

- iv. Has Xcel identified, quantified, and monetized benefits arising through interactions between the proposed investments, AMI, FAN, TOU, and APT, and interactions between AMI, FAN, TOU, or APT and other grid components, including both grid modernization components such as ADMS and FLISR, and traditional components?
 - v. Has Xcel adequately identified all applicable qualitative benefits of each of the proposed investments, AMI, FAN, TOU, and APT, and justified why they cannot be quantified?
 - vi. To the extent that there are qualitative benefits identified, has Xcel used any specific methods to capture anticipated qualitative impacts, and if so, has it justified these methods?
 - vii. Has Xcel clearly presented results for its evaluation of each of the alternative deployment scenarios and for its evaluation of its investment proposal – providing a benefit-cost ratio and any other complementary results?
 - viii. Has Xcel provided adequate justification for its proposal, accounting for benefit-cost analysis results, equity and rate impacts, and risks?
- C. If cost recovery is granted, what steps can be taken to minimize costs and maximize benefits?
- i. Should there be disallowance for recovery of any of the costs associated with AMI, FAN, TOU, or APT?
 - ii. Should cost caps and/or any other consumer protections be implemented as a condition of cost recovery?
 - iii. Should cost recovery be contingent on achievement of benefits, and if so, which metrics should be used to track these benefits?
- b. Significant Issues Related to ADMS to be Addressed Through a Referral to the Office of Administrative Hearings
- A. Does Xcel meet the cost recovery filing requirements for ADMS investments in accordance with the Commission's 2019 Order in Docket No. E-002/M-17-797²⁷?
- i. Does Xcel adequately demonstrate why qualitative benefits cannot be quantified?
 - ii. Does the lack of quantification of benefits prevent or inhibit the Commission's ability to ensure customer protection?
 - iii. Has Xcel demonstrated a commitment to quantifying and tracking purported benefits of ADMS deployment over time?
 - iv. Has Xcel adequately addressed the requirement for a long-term bill impact analysis as required by Order Point 9.B.2.b of the 2019 Order?
 - v. How does the investment in ADMS relate to Xcel's long-term planning processes and associated goals?
 - vi. Does Xcel provide specific, concrete, and measurable goals that ADMS will deliver and meet on schedule?

²⁷ 2017-2018 TCR Rider Order.

- vii. In conducting its evaluation of ADMS, has Xcel addressed its future grid modernization plans, accounting for interactions with future intended investments?

c. Issues Related to Xcel's Overall Approach to Grid Modernization

As noted above, the Department and Synapse also have concerns about Xcel's overall approach to pursuing grid modernization investments. As explained above in Section I of these comments, starting with Xcel's first grid modernization proposals included in its 2015 Biennial Transmission Plan, the Company has pursued regulatory approval in increments for its grid modernization initiatives, which include its AGIS Initiative.²⁸

This piecemeal approach is unlikely to comport with the public interest and is inconsistent with the intent of the Commission's Order in Docket No. E002/CI-18-251 on August 30, 2018 (IDP Filing Requirements Order) which sought to *integrate* grid modernization planning into wider distribution system planning.²⁹

In its proposals in the instant proceeding, the Company has not provided a sufficiently comprehensive view of its total grid modernization plans. The Company also fails to account for the potential interactions between the investments for which cost recovery is requested in this proceeding, and other grid modernization investments in other dockets in various stages of development (e.g., FLISR, Distributed Intelligence).

Through the course of a contested case proceeding, the Department and Synapse anticipate that the parties, with oversight from OAH, will develop a more complete record addressing the following issues related to Xcel's overall approach to grid modernization:

- A. Should there be a requirement for utilities to provide an overarching view of total grid modernization plans, accounting for all investments not included in the instant proceeding but either contemporaneously under review in another docket or intended for proposal at a future date?

²⁸ Xcel's ADMS investment was certified on June 28, 2016 in Docket No. E002/M-15-962 and the Company was later granted cost recovery for ADMS through the TCR rider in Docket No. E002/M-17-797 on September 27, 2019. Xcel later proposed additional grid modernization investments in AMI, FAN, and several other technologies, which were certified in Docket No. E002/M-19-666 on July 23, 2020 and are pending a Commission decision on cost recovery through the TCR rider in Docket No., E002/M-21-814. Meanwhile, the Company was denied certification for its Fault Location, Isolation, and Service Restoration (FLISR) proposal and is currently seeking cost recovery through its ongoing rate case proceeding in Docket No. E002/GR-21-630.

²⁹ *In the Matter of Distribution System Planning for Xcel Energy*, Docket No. E002/CI-18-251, ORDER APPROVING INTEGRATED DISTRIBUTION PLANNING FILING REQUIREMENTS FOR XCEL ENERGY (August 30, 2018). Accessed at:

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={F05A8C65-0000-CA19-880C-C130791904B2}&documentTitle=20188-146119-01>.

- B. Should there be a requirement that utilities not pursue piecemeal proposal of grid modernization investments in the absence of a compelling justification for such an approach?
- C. How should regulators address interdependencies between proposed investments in a given proceeding and those investments contemporaneously under review in a separate proceeding?

III. DEPARTMENT RECOMMENDATIONS

The Department appreciates the opportunity to comment on the AGIS Related Scoping & Procedures comment period. The Department makes the following, initial recommendations:

- **The Department recommends that the Commission bifurcate the cost recovery decisions of Xcel's 2021-2022 TCR Rider petition between (1) the costs associated with Xcel's distribution-grid modernization projects and (2) the costs associated with Xcel's transmission projects previously approved for TCR Rider recovery and the 2020 and 2021 revenue requirements of the AMI and FAN projects.**
- **The Department recommends that the Commission address the costs associated with Xcel's transmission projects previously approved for TCR Rider recovery and the 2020 and 2021 revenue requirements of the AMI and FAN projects using the Commission's comment and reply comment process.**

The Department's recommendation regarding a referral of the costs associated with Xcel's distribution-grid modernization projects to the Office of Administrative Hearings for a contested case proceeding is intended to be final. However, the Department will review and consider stakeholder's initial comments and seek to incorporate stakeholder recommendations into the final text of a recommendation as appropriate.

The Department and Synapse are available for any questions that the Commission may have.

Comments on AGIS Related Scoping & Procedures

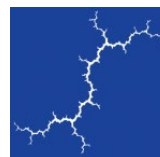
In Response to the Notice of Comment in
Docket No. E-002/M-21-814

Prepared for Minnesota Department of Commerce

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AUTHORS

Ben Havumaki
Courtney Lane
Divita Bhandari



Synapse
Energy Economics, Inc.

485 Massachusetts Avenue, Suite 3
Cambridge, Massachusetts 02139

617.661.3248 | www.synapse-energy.com

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1. OVERVIEW

Synapse submits these comments in response to the Minnesota Public Utilities Commission's (Commission) Notice of Comment Period (Notice), issued in Docket No. E-002/M-21-814 on February 7, 2022. In the Notice, the Commission provided for an initial comment period to address topics related to scoping and procedures for the review of the Xcel Energy's (Xcel or the Company) 2021-2022 Transmission Cost Recovery (TCR) Rider petition for its AGIS-related costs. In this document, Synapse responds to the first topic:

- 1) Does Xcel Energy's AGIS-related cost recovery request in the instant TCR Petition comply with:
 - a. the Commission's July 23, 2020 Order in Docket No. E-002/M-19-666; and
 - b. the Commission's September 27, 2019 [Order] in Docket No. E-002/M-17-797?¹

In addition to this first topic that is referenced above, the Notice addressed two other questions to the respondents – one concerning bifurcation of cost recovery decisions, and the other requesting any additional information from respondents on the procedural path forward for determining AGIS-related cost recovery. Synapse notes that the Department is commenting directly on the latter two topics of the Notice, and Synapse's review is focused on the first topic. Synapse also notes that the Department has defined AGIS-related costs broadly to include Xcel's distribution-grid modernization projects: the Advanced Distribution Management System (ADMS), Advanced Metering Infrastructure (AMI), Field Area Network (FAN), and Advanced Distribution Planning Tool (APT)/LoadSEER projects, as well as the Time of Use Rate Design Pilot Program (the TOU Rider Pilot).

Overall, we find that Xcel's application for AGIS-related cost recovery through the TCR rider is not complete. There were many shortcomings in this filing, including the lack of adequate explanation of the functional relationships and interdependencies between components, lack of sufficient quantification or monetization of benefits, and a lack of overall justification for why the Company's chosen set of solutions is the most cost-effective one among all potential alternatives. This total picture of costs and benefits is needed to ensure that customer-funded investments are truly in the customer interest. Indeed, Synapse views both Commission Orders as requiring this information.

Therefore, as will be explained in greater detail below, Synapse concludes that Xcel Energy's AGIS-related cost recovery request in the instant TCR Petition does not comply with the Commission's September 27, 2019 Order in Docket No. E002/M-17-797 and the Commission's July 23, 2020 Order in Docket No. E-002/M-19-666.

¹ Notice of Comment Period. Docket No. E-002/M-21-814, February 7, 2022.

2. APPROACH TO COMPLETENESS REVIEW

In Topic 1 of the Notice, the Commission asks about whether Xcel's petition complies with two past Commission Orders: the September 27, 2019 Order in Docket No. E-002/M-17-797,² and the July 23, 2020 Order in Docket No. E-002/M-19-666.³ These Orders established filing requirements that are critical to sound regulatory decision-making. The requirements also serve as a standard for assessing the overall *completeness* of the Company's petition. Synapse appreciates this opportunity to comment on the completeness of Xcel's TCR Rider petition for recovery of AGIS-related costs.

The Commission's filing requirements may be especially necessary for grid modernization, in light of the novelty and complexity of grid modernization, and the magnitude of the grid modernization investments that have been proposed by Xcel. Ensuring that the Commission and other stakeholders have access to basic details about the Company's investment proposals is essential in any case; it is critical in light of the fact that Xcel aims to take advantage of a special cost recovery mechanism (TCR rider) that may not necessarily include the same incentives to cost control and financial discipline as are provided for by traditional cost recovery routes, such as a general utility rate case.

2.1. The Commission's Orders and Development of Guidance Document's Filing Requirements

In its Guidance Document, a report titled *Review and Assessment of Grid Modernization Plans: Guidance for Regulators, Utilities, and Other Stakeholders*, filed as an attachment to the Department's February 9, 2022 Letter in Docket No. E002/M-21-814 and cross-filed in multiple related utility distribution system planning and grid modernization proceedings (Department's Letter),⁴ Synapse synthesized the past Commission directives into a consolidated set of filing requirements. This consolidation was undertaken to help facilitate consistent and rigorous review of utility grid modernization proposals. This latter set of requirements includes all Commission filing requirements. By applying the requirements from the Guidance Document, Synapse has assessed the compliance of Xcel's petition with the cited Commission Orders.

Below, we provide a brief overview of the two pertinent Commission Orders. In the following section, we detail how the Guidance Document's filing requirements connect directly to these Orders.

² Minnesota Public Utilities Commission. Docket No. E-002/M-17-797. Order Authorizing Rider Recovery, Setting Return on Equity, and Setting Filing Requirements, September 27, 2019.

³ Minnesota Public Utilities Commission. Docket No. E-002/M-19-666. Order Accepting Integrated Distribution Plan, Modifying Reporting Requirements, and Certifying Certain Grid Modernization Projects, July 23, 2020.

⁴ Department's Letter, Docket No. E002/M-21-814, February 9, 2022.

September 27, 2019 Order in Docket No. E-002/M-17-797

This Order put forward an extensive set of filing requirements covering the core components of grid modernization benefit-cost analyses. Including among the directives are requirements for utilities to address investment scope (Order Point 9.A.1), alternatives (Order Point 9.A.2), costs (Order Point 9.A.3) and benefits (Order Point 9.B), and rate impacts (Order Point 9.B.2.b). The Order also established key principles that are applicable to all benefit-cost analyses (e.g., Order Points 9.A.4, 9.B.1, 9.B.2.a, 9.B.2.c, and 9.B.2.d).

July 23, 2020 Order in Docket No. E-002/M-19-666

This Order built on the foundation of the earlier 2019 Order with a few key additions, namely that:

- Future cost recovery of AGIS investments would be contingent upon achievement of Commission-approved metrics and performance evaluations (Order Point 8).
- Future cost recovery proposals would include “a discussion of mechanisms that will be employed to maximize cost reductions and minimum cost increases,” and thorough evaluation of alternatives, addressing feasibility and costs and benefits (Order Point 10)
- Cost recovery for AGIS investments could be limited with a cost cap, which would be subject to revision only if “clear and convincing evidence” were to be brought forward justifying the cost overrun (Order Point 14).

Corresponding Sections in the Guidance Document

The Guidance Document incorporates the filing requirements and principles of benefit-cost analysis from the Commission’s September 27, 2019 and July 23, 2020 Orders. Fundamentally, the Guidance Document is a synthesis of these Commission Orders and expands on many of these filing requirements and principles to adhere to established best practices for conducting of economic analysis of grid modernization investments.

As the Department’s Letter explains, the Guidance Document is also intended to complement and incorporate the Department’s December 2020 Report incorporate the Department’s December 1, 2020 Report titled called Methods for Performance Evaluations, Metrics, and Consumer Protections for AMI and FAN, filed in Docket No. E999/DI-20-627 (Department’s December 2020 Report).⁵

Below, Synapse provides a high-level overview of these connections.

Structurally, Section 2 of the Guidance Document synthesizes the Commission’s evaluation principles from the Commission’s September 27, 2019 and July 23, 2020 Orders, and builds on these principles by incorporating important information regarding best practices of benefit-cost analysis and economic

⁵ 5 Department of Commerce Report to the Public Utilities Commission, Methods for Performance Evaluations, Metrics, and Consumer Protections for AMI and FAN, Docket No. E999/DI-20-627, December 1, 2020.

evaluation of utility grid modernization investments (unless otherwise noted, all referenced Order Points are from the Commission’s September 27, 2019 Order):

- **Section 2.1 Principles for Grid Modernization Evaluation:** incorporates the eleven principles from Order Point 9.B.4.d;
- **Section 2.2 Articulating the Goals of Grid Modernization:** incorporates Order Point 9.A.1.c;
- **Section 2.3 Choosing an Evaluation Methodology:** incorporates Order Point 9.A.4;
- **Section 2.4 Defining the Reference Scenario and the Investment Scenario:** incorporates Order Point 9.A.2 and Order Point 9.B.2.c;
- **Section 2.5 Accounting for Costs and Benefits:** incorporates Order Point 9.A.1, 3, and 4, and Order Point 9.B.2.a, and Order Point 10.a of the July 23, 2020 Order;
- **Section 2.6 Establishing Metrics:** incorporates Order Point 9.B.2, Order Point 8 and the “Clear and Convincing Evidence Standard” of the July 23, 2020 Order, as well as the Department’s December 2020 Report;
- **Section 2.8 Determining Discount Rates:** incorporates Order Point 9.B.1; and
- **Section 2.9 Considering Customer Equity:** incorporates Order Point 9.B.2.d.ix.

To a greater extent, Section 3 of the Guidance Document (Initial Filing Requirements) incorporates and expand upon the Commission’s September 27, 2019 and July 23, 2020 Orders. Additionally, the Initial Filing Requirements incorporate the Commission’s Integrated Distribution Plans (IDP) Planning Objectives and Filing Requirements in relevant places, adopted in the Commission’s August 30, 2018 Order in Docket No. E-002/CI-18-251 (IDP Order) (and as modified by the Commission’s July 23, 2020 Order).

Section 3’s Initial Filing Requirements are derived from Commission Orders as follows (unless otherwise noted, all referenced Order Points are from the Commission’s September 27, 2019 Order):

- **Section 3.1 Plans Should Be Based on Long-Term Planning:** incorporates the Commission’s IDP Order;
- **Section 3.2 Proposals Should Identify the Roles and Relationships of the Components:** incorporates Order Point 9.A.1.a-d, 9.A.2, and 9.B.2.c;
- **Section 3.3 Proposals Should Justify the Evaluation Scope:** incorporates Order Point 9.A.4;
- **Section 3.4 Evaluation Methods Should Be Thoroughly Detailed in the Proposal:** incorporates Order Point 9.A and 9.B in numerous parts;
- **Section 3.5 Proposals Should Specify Metrics and Targets:** incorporates Order Point 9.B.2, Order Point 8 of the July 23, 2020 Order and the Department’s December 2020 Report;
- **Section 3.6 Proposals Should Clearly Present All Results:** incorporates Order Point 9.B.2.b and 9.B.2.d, and Order Point 10.b of the July 23, 2020 Order.

Last, Section 4 of the Guidance Document (Ongoing Reporting Requirements) incorporates the Department's 2020 Report.

As explained in the following section in greater detail, Synapse carefully connects the Guidance Document's sections to corresponding Order Points.

2.2 The Application of the Guidance Document to Xcel's TCR Rider Petition

In its comments, the Department explains how it worked with Synapse to apply the Guidance Document to remedy deficiencies in Xcel's 2021-2022 TCR Rider petition. The Department, working in conjunction with Synapse, issued information requests aimed at filling in gaps in the evidentiary record, which were identified through application of the Guidance Document's Initial Filing Requirements. While Xcel did not have the opportunity to review the Guidance Document in advance of filing the petition, the Company did have access to the Commission's Orders. As noted previously, the Guidance Document in general, and through its Initial Filing Requirements in particular, synthesizes these Commission Orders but expands on them to adhere to best practices of economic evaluation of utility grid modernization investments. The Department expects, and the Commission required, Xcel to comply with Commission Orders. However, as will be shown in greater detail, the Department's and Synapse's interrogative process did not elicit the information from the Company needed to fully satisfy the Commission's Orders.

3. COMPLETENESS REVIEW

This section documents the results of Synapse's completeness review of Xcel's 2021-2022 TCR Rider petition. Through this review, Synapse carefully assessed whether the information provided by the Company satisfied the Initial Filing Requirements contained in Section 3 of the Guidance Document.

The subsections that follow are derived directly from the Section 3 of the Guidance Document, with the results of Synapse's completeness review presented primarily through a series of tables. Through its evaluation, Synapse carefully details: (1) the connections made between the Guidance Document's Initial Filing Requirements and relevant Commission Orders; (2) areas of Xcel's 2021-2022 TCR Rider petition which discuss or provide information consistent with the Guidance Document's Initial Filing Requirements and in the alternative, inconsistent with the Guidance Document; and (3) relevant information requests of the Department and Synapse's interrogative process that attempt to elicit information from the Company to satisfy the Commission's September 27, 2019 Order in Docket No. E-002/M-17-797 and the July 23, 2020 Order in Docket No. E-002/M-19-666, and the Guidance Document's Initial Filing Requirements.

The tables presented in the following subsections include the text of each Initial Filing Requirement and its enumeration. Then, Synapse's overall conclusion regarding whether Xcel provided the requisite

information for each distribution-grid modernization project (ADMS, TOU, AMI, FAN, and APT) is provided, indicated by the following convention:

- **YES:** Xcel satisfied this Initial Filing Requirement.
- **PARTIAL:** Xcel provided some limited information regarding this filing requirement, but the information is incomplete.
- **NO:** Xcel did not satisfy this Initial Filing Requirement.

These tables also provide citations of where the information (if present) can be found in Xcel’s 2021-2022 TCR Rider petition.

1. Proposals Should Be Based on Long-Term Planning

This section of the Initial Filing Requirements establishes standards related to the need for grid modernization proposals to be integrated with long-term planning and policy goals.

Derivation of Initial Filing Requirement 1 and sub-requirements

The Commission has expressed that grid modernization should be consistent with long-term planning. The most notable example of this indication is from the Commission’s Orders establishing IDP filing requirements, which dictate how grid modernization planning should be integrated with other (integrated) distribution planning.⁶ On this basis, additional requirements for consistency with other integrated planning processes have been included here.

Other relevant Order Points addressing the need to connect grid modernization investment proposals to goals and policy include:

- Order Point 9.B.2.d.ii in the 2019 Order, which indicates that proposals should “clearly account[] for state regulatory and policy goals.”⁷
- Order Point 9.A.1.b.iii from the 2019 Order, which requires for each component in a proposal, a description of “known and potential value streams and how each component *fits with state policy, statutes, rules, and Commission Orders*” (emphasis added).

The specific requirements for clarity, concreteness, and measurability in specification of goals are included in support of the Commission’s requirement from the 2020 Order that cost recovery be

⁶ Minnesota Public Utilities Commission. Docket No. E-002/CI-18-251. Order Approving Integrated Distribution Planning Filing Requirements for Xcel Energy, August 30, 2018. Docket No. E-017/CI-18-253. Docket No. E-017/CI-18-254. Docket No. E-017/CI-18-255. Order Adopting Integrated-Distribution-Plan Filing Requirements, February 20, 2019.

⁷ Minnesota Public Utilities Commission. Docket No. E-002/M-17-797. Order Authorizing Rider Recovery, Setting Return on Equity, and Setting Filing Requirements, September 27, 2019.

conditioned on achievement of metrics and performance evaluations.⁸ If the goals of grid modernization investment are not provided in a clear, concrete, and measurable fashion, then it will not be possible to condition cost recovery on performance.

Evaluation of Completeness

As indicated below in Table 1-1, Xcel's proposal does not satisfy these filing requirements.

Table 1-1. Required information connecting grid modernization plan to other long-term planning

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
Plans should be consistent with long-term distribution system planning, as required by the Commission in its Orders imposing IDP filing requirements ⁹ and any subsequent modifying Orders.	1(a)	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
Plans should be consistent with all other distribution, transmission, and resource planning processes.	1(b)	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
The goals of each plan should be clearly indicated, and proposals should explain how each of the indicated goals relates to the outcomes of the planning processes referenced in (a) and (b).	1(c)	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
The identified goals for the plan should be expressed as concrete and measurable outcomes, to the extent possible.	1(d)	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
Proposals should clearly explain how the goals of the plan relate to state policy, statutes, rules, and Commission Orders, including the objectives for grid modernization provided in the Grid Modernization statute ¹⁰ and the Commission's distribution planning goals. ¹¹	1(e)	NO	NO	NO	NO	NO

⁸ Ibid.

⁹ Minnesota Public Utilities Commission. Docket No. E-002/CI-18-251. Order Approving Integrated Distribution Planning Filing Requirements for Xcel Energy. August 30, 2018. Docket No. E-017/CI-18-253. Docket No. E-017/CI-18-254. Docket No. E-017/CI-18-255. Order Adopting Integrated-Distribution-Plan Filing Requirements. February 20, 2019.

¹⁰ Minn. Stat. §216B.2425, Subd. 2(e) and Subd. 8.

¹¹ Minnesota Public Utilities Commission. Docket No. E-002/CI-18-251. Order Approving Integrated Distribution Planning Filing Requirements for Xcel Energy. August 30, 2018, p. 6.

Citations		-	-	-	-	-
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In demonstrating that its grid modernization proposal is consistent with long-term planning, Xcel should specifically explain how its planning for grid modernization investments is consistent with the Commission’s planning objectives and principles.¹² Xcel does address these objectives and principles more explicitly within its 2019 IDP.¹³ In addition, Xcel must more clearly connect its investment proposal to policy goals. To the extent that the petition does identify goals, it is often unclear from where these goals were derived (i.e., whether they reflect government policy, statute, or regulatory dictate, or the private aspirations of Xcel). Xcel claims that AMI, FAN, APT and ADMS are “foundational” investments.¹⁴ However, Xcel does not reference any policy or regulatory standards or goals that necessitate the proposed investments.

2. Proposals Should Identify the Roles and Relationships of the Components

This section of the Initial Filing Requirements establishes standards related to the need to provide functional and technical detail about proposed components. The aim is to provide maximum transparency into all potential options—including both grid modernization and traditional investments—to support selection of the most cost-effective option.

Derivation of Initial Filing Requirement 2 and sub-requirements

These filing requirements largely reflect Order Point 9 in the 2019 Order – particularly Order Point 9.A.1, which describes the functional and technical information for proposed components that is required.

This section of the Initial Filing Requirements also draws from the 2019 Order’s requirements related to consideration of alternatives, including Order Point 9.A.2, which describes required information on requests for proposal (RFP), and Order Point 9.B.2.d.x, which indicates that analyses should “assess[] bundles and portfolio where reasonable.” The 2019 Order further requires that utility proposals for investments be “compared with traditional resources or technologies” (Order Point 9.B.2.d.i).

While the Commission expanded on the need to consider alternatives in its 2020 Order by calling for “a demonstration that the utility has thoroughly considered the feasibility, cost, and benefits of

¹² Minnesota Public Utilities Commission. Docket No. E-002/CI-18-251. Order Approving Integrated Distribution Planning Filing Requirements for Xcel Energy, August 30, 2018.

¹³ Xcel Energy. 2019 Integrated Distribution Plan. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-19-666, Correlation of IDP Content to Commission’s IDP Planning Objectives, Attachment B.

¹⁴ Xcel Energy. Petition for Approval of Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-21- 814, Attachment 2, p. 1 (ADMS), Attachment 4, p. 2 (AMI and FAN) and Attachment 5, p. 17 (APT).

alternatives, and that the proposed approach is preferable to alternatives (Order Point 10.b),” the Initial Filing Requirements of the Guidance Document further develop this requirement.

The Guidance Document’s Initial Filing Requirements expand on Commission expectations related to alternatives through incorporation of a set of standards formalizing how “alternative deployment scenarios” should be assessed and presented. The Guidance Document defines these scenarios as differing from the proposed investment plan, “on the basis of the components that are included, the installation sequence, or the timeline for installation.”¹⁵ Through the requirements in Section 2 of the Initial Filing Requirements (specifically Initial Filing Requirements 2.C, 2.F, and 2.G), the Guidance Document makes explicit the need for a clear, comprehensive, and balanced accounting of alternatives, both at component and plan levels.

Evaluation of Completeness

As Table 2-1 below indicates, Xcel’s TCR filing provides some of the required technical and functional information about the proposed investments. However, detail on how the plan components promote overall grid modernization plan goals is lacking. For example, Xcel indicates, “[w]ithout AMI and FAN, the Company will soon be behind in managing customer expectations, supporting DERs, employing future technologies, maintaining reliability goals, capturing demand side opportunities.”¹⁶ However, Xcel does not explicitly state the level of DER integration it is hoping to achieve or the timeframes within which it hopes to achieve this integration. Nor does Xcel formalize its goals for managing customer expectations, employing future technologies, maintaining reliability, or capturing demand side opportunities in any sort of concrete and measurable fashion. Rather, Xcel broadly lists the quantitative and qualitative benefits that are to be achieved by its proposed investments. In certain cases, Xcel references “multiple corporate objectives.”¹⁷ However, Xcel does not identify these objectives.¹⁸

Xcel does not adequately address relationships between plan components. Xcel acknowledges that many of the components of its AGIS plan are “highly interrelated” but fails to provide a comprehensive accounting of the interrelated and interdependent nature of these components.¹⁹ Xcel indicates that certain investments enable other components and/or will operate interactively but does not clearly establish which components are inseparable from each other and which components can work as

¹⁵ Attachment to Department’s Letter (the Guidance Document). Docket No. E-002/M-21-814, February 9, 2022, p. 28.

¹⁶ Xcel Energy. Petition for Approval of Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-21- 814, Attachment 4, p. 67

¹⁷ Id., Attachment 2, p. 5

¹⁸ Concerning DER integration, the Company could have cited public policies with bearing on this goal. Regarding reliability, there are well accepted reliability metrics (e.g., SAIDI, SAIFI and CAIDI) and jurisdictional standards for reliability performance that are germane to this goal. Unfortunately, Xcel does not link intended reliability performance to current system wide reliability performance or to any extant performance standards.

¹⁹ Id., Attachment 4, p. 37.

standalone systems. Furthermore, Xcel provides no formal detail on potential use cases for the proposed components in isolation or in bundles.

The description of component relationships in Xcel’s evaluation is limited to investments that are included within the 2021-2022 TCR Rider petition. Xcel does not sufficiently address the relationships between the grid modernization components included in its proposal and the grid modernization investments proposed in other proceedings. Xcel should also more thoroughly document how grid modernization components will interact with the wider grid.

One example of a grid modernization component that is not included in this proposal but will interact with proposed investments is FLISR. It is clear that installing FLISR is part of Xcel’s overall grid modernization plan, and in its TCR application, Xcel indicates that ADMS-based FLISR has increased benefits relative to a stand-alone FLISR system.²⁰ However, Xcel does not sufficiently detail the incremental functional benefits achieved through installing ADMS and FLISR together. If Xcel has concluded that ADMS must be implemented with FLISR, providing only an isolated view of ADMS without FLISR will not suffice. Similarly, Xcel does not sufficiently detail relationships between ADMS and IVVO in this application, nor does it adequately explain how AMI and FAN will interact with other grid modernization components not included in this application (e.g., those Distributed Intelligence (DI) investments proposed in the 2021 IDP proceeding).²¹

Table 2-1. Required basic functional and technical information about each plan component

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
Include a description of the functional role of each component	2(a)i	YES	YES	YES	YES	YES
Citations		Att. 2, pgs. 1-2	Att. 3, pgs. 1-2	Att. 4, pg. 11-17	Att. 4, pg. 26-30	Att. 5, pgs. 1-2
Include the expected useful life of each component	2(a)ii	YES	-	YES	YES	NO
Citations		Att. 2, pgs. 18-19	-	Att. 4, pgs. 17-18	Att. 4, pgs. 17-18	-
Include an explanation of how each component promotes the goals of the plan	2(a)iii	PARTIAL	PARTIAL	PARTIAL	PARTIAL	PARTIAL
Citations		Att. 2, pgs. 3-7	Att. 3, pgs. 6-7	Att. 4, pgs. 2-4, 6-8	Att. 4, pgs. 2-4, 6-8	Att. 5, pgs. 1-2, 8-12

²⁰ Xcel Energy. Petition for Approval of Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-21- 814, Attachment 2, p. 5

²¹ Id., Attachment 4, p. 14-15

Indicate the relationship between each component, other components in the plan, and the rest of the grid – including grid modernization components not included in this plan but either already implemented or intended for future implementation.	2(a)iv	PARTIAL	PARTIAL	PARTIAL	PARTIAL	PARTIAL
Citations		Att. 2, pgs. 11-12	Att. 3, pg. 5	Att. 4, pgs. 2-4, 6-10, 79	Att. 4, pgs. 2-4, 84-85	Att. 5, pg. 18-20
Indicate all known and potential future use cases for each component	2(a)v	NO	NO	NO	NO	YES
Citations		-	-	-	-	Att. 5, pgs. 19-20

As noted in Table 2-2 and Table 2-3 below, Xcel also does not adequately consider alternatives to the proposed investments, and it does not establish any coherent criteria for choosing its portfolio of components.

While Xcel broadly outlines some of the alternatives that were considered, there is no systematic consideration of these alternatives.²² This is not surprising, since the evaluation lacks a fully fleshed out reference case or adequate detail on alternatives. In a sense, there is no “choosing” occurring in this application – the selection of portfolio components precedes the evaluation of their costs and benefits.

To the extent that Xcel includes any comparison of its proposed portfolio with alternatives, these analyses tend to be ad hoc. For example, in addressing alternatives to the FAN, Xcel raises the possibility of deploying cellular modems in every meter – which, it claims, would result in substantial monthly and annual expenses.²³ However, it does not provide enough information to support a complete comparative analysis. In the case of the TOU pilot and APT, alternatives were not addressed to any degree. In the case of AMI, Xcel presents a reference case scenario only for the bill analysis, but the evaluation of alternatives to AMI is not comprehensive.

²² In the ideal case, the set of alternatives would include a spectrum of possible approaches beyond the proposed one, encompassing alternative technologies and alternative vendors, different levels of deployment, and even a status quo do-nothing scenario.

²³ Id., Attachment 4, p. 34

Table 2-2. Required information related to consideration of alternatives to individual plan components

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
Include details about any solicitation for alternative selection processes, including information about bids received, selection criteria, and rationale for ultimate selection.	2(b)	PARTIAL	-	PARTIAL	PARTIAL	NO
Citations		Att. 2, pgs. 7-8	-	Att. 4, pgs. 18-23. Xcel response to Dept. #18	Att. 4, pg. 34-35	-
Include description of all alternatives to the component that were considered, addressing the extent to which the alternative achieves the identified goals that justify the grid modernization plan.	2(c)	NO	-	NO	NO	NO
Citations		-	-	-	-	-
For every component that is included in the plan and is claimed to be necessary to comply with policy or statutory mandates, the proposal should include a clear explanation of why this component is required to comply with any such mandates.	2(d)	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
For every component that is included in the plan and is claimed to be necessary to enable other grid modernization capabilities, functionalities, or technologies, the proposal should include a clear explanation of why this component is required to enable these other grid modernization capabilities, functionalities, or technologies.	2(e)	YES	-	YES	YES	-
Citations		Att. 2, pgs. 1-7	-	Att. 4, pgs. 11-18	-	-

Table 2-3. Required information on the development of alternative deployment scenarios in plans with multiple components

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
Include a narrative that addresses the following: <ul style="list-style-type: none"> • Which components are inseparable • Any alternative sequences for installation of components or alternative timelines for installation of components • The effects of substituting selected components for alternatives that were considered in the plan but not ultimately selected. The alternative components that are considered here should be the same as those discussed in response to requirement 2(c) • The effects of including grid modernization components that are expected to be proposed in other dockets but have not been included in the current plan 	2(f)	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
Include a description of all reasonable alternative deployment scenarios, ²⁴ based on the narrative information provided in response to requirement 2(f): <ul style="list-style-type: none"> • Alternative deployment scenarios should include all necessary detail, including identification of all investments included in each alternative deployment scenario and a timeline for these investments. • Alternative deployment scenarios should differ from the plan on the basis of the components that are included, the installation sequence, or the timeline for installation. 	2(g)	NO	NO	NO	NO	NO
Citations		-	-	-	-	-

²⁴ The term “alternative deployment scenarios” is used rather than “bundles” to refer to an investment plan other than the plan that has been proposed by the utility. The Commission has used the term “bundles” in, for example, its Order Authorizing Rider Recovery, Setting Return on Equity, and Setting Filing Requirements in Docket No. E-002/M-17-797. Note that there may be a distinction drawn between bundles and portfolios in this context which is not maintained in these filing requirements. See: Minnesota Public Utilities Commission. Docket No. E-002/M-17-797. Order Authorizing Rider Recovery, Setting Return on Equity, and Setting Filing Requirements. September 27, 2019.

3. Proposals Should Justify the Evaluation Scope

This section of the Initial Filing Requirements establishes the need for justification of the cost-effectiveness test presented in the filing.

Derivation of Initial Filing Requirement 3

This requirement is consistent with Order Point 9.A.4 from the 2019 Order, which calls for proposals to identify the type of cost effectiveness analysis that has been used. This requirement is also supportive of the Commission’s requirement that analyses should be “transparent.”

Evaluation of Completeness

While Xcel indicates in its TCR petition that it conducted a BCA from “a customer point of reference,” there is no justification for the chosen scope as compared to traditional cost-effectiveness tests such as the Utility Cost Test (UCT), Total Resource Cost (TRC) test, or Societal Cost Test (SCT).²⁵ Further it is not clear that the BCA is actually from the customer’s perspective. While the BCA expresses costs in terms of revenue requirements, and purports to limit benefits to those that “the customer realizes,”²⁶ it also includes carbon dioxide associated benefits – an externality impact more commonly accounted for in a broader SCT. Similarly, Xcel’s 2019 IDP purported to take a customer perspective while still including “Commission-approved measures of societal benefits.”²⁷

In any case, Xcel does not explicitly justify the perspective that is taken, nor is there any discussion about alternative perspectives or any statutory or regulatory standards brought to bear that might apply to the question of perspective in this BCA.

4. Evaluation Methods Should be Thoroughly Detailed in the Proposal

This section of the Initial Filing Requirements establishes standards for conducting a comprehensive benefit-cost analysis.

Derivation of Initial Filing Requirement 4 and sub-requirements

These filing requirements largely reflect Order Point 9 in the 2019 Order, with a couple modifications. First, these filing requirements concern just the economic details of the proposed grid investments. The technical and functional dimensions of the proposed components are to be addressed through compliance with Section 2 of the Initial Filing Requirements. As noted above, Section 2 of the Initial

²⁵ Xcel Energy. Petition for Approval of Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-21- 814, Attachment 4, p. 59.

²⁶ Xcel Energy. Petition for Approval of Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-21- 814, Attachment 4, p. 59.

²⁷ Xcel Energy. Direct Testimony and Schedules. Ravikrishna Duggirala. Filed in Minnesota Public Utilities Commission. Docket No. E002/GR-19-564. November 1, 2019, p. 8.

Filing Requirements provides more explicit direction on how alternatives at the component and portfolio levels are to be considered. The principle here is that alternatives *identified* in compliance with Initial Filing Requirement 2 will be *evaluated* on a benefit-cost basis in compliance with Initial Filing Requirement 4.

The other distinction relative to the Commission’s filing requirements is the inclusion here of two new provisions related to investment costs – Initial Filing Requirements 4.F.iii and 4.G. The former calls for the utility to identify stranded cost implications. The latter requires that the utility clarify how costs associated with future grid modernization investments not included in the given proposal will be recovered. The provision for stranded cost accounting is provided as a complement to the various requirements in the 2019 Order related to cost classification and is also consistent with the Commission’s requirement from the 2020 Order in Order Point 10.a that requires proposals include “a discussion of the mechanisms that will be employed to maximize cost reductions and minimize cost increases.”

Evaluation of Completeness

Completeness in the relation to Section 4 of the Initial Filing Requirements is presented in four tables. Table 4-1 addresses completeness with respect to documenting core methodological elements of the BCA. Table 4-2 covers completeness in treatment of benefits. Table 4-3 addresses completeness relating to treatment of costs. Table 4-4 covers completeness in addressing cost recovery.

Table 4-1. Required fundamental BCA elements

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
Include a reference case that uses only traditional solutions and does not include any new grid modernization investments	4(a)	NO	-	YES	YES	NO
Citations		-	-	Att. 4, pgs. 57-58. Xcel response to Dept. #35.	Att. 4, pgs. 57-58. Xcel response to Dept. #35.	-
Identify and provide justification for all inputs and assumptions.	4(b)	PARTIAL	YES	YES	YES	YES
Citations		Att. 2, pgs. 3-7, 14-19	Att. 3, pgs. 2-7	Att. 4, pgs. 46-50, 54-56, 60-67	Att. 4, pgs. 46-50, 54-56, 60-67	Att. 5, pgs. 13-19
Identify the discount rate used and justify its use.	4(c)	NO	YES	YES	YES	YES
Citations		-	Att. 4A – AMI MN Electric CBA	Att. 4A – AMI MN Electric CBA	Att. 4A – AMI MN Electric CBA	Xcel response to Dept. #33

As indicated in Table 4-1, Xcel's BCA generally does include sufficient detail on baselines, inputs and assumptions, and it has provided justification for its chosen discount rate.

Xcel should have included a fully fleshed out status quo alternative to grid modernization using traditional solutions. The application considers alternatives in a diffuse, component-by-component fashion that leaves much unclear about the state of its systems should the preferred investments not be approved. In practice, this reference case ideal would have been challenged by Xcel's approach to proposing grid modernization investments, piecemeal and spread out across multiple proceedings. With ADMS already in the process of implementation, there is no longer a status quo for Xcel that entirely excludes grid modernization. As such, Xcel should offer for its reference case an alternative that includes existing grid modernization commitments and capital work already under way, but no new grid modernization investments.^{28,29}

On a related note, Xcel's application is deficient in its exploration of alternatives to the proposed investments. In addition to providing a reference case in which no new grid modernization investments are undertaken, and a complete grid modernization scenario in which all of its intended investments are made (including those investments not proposed in the present proceeding but are proposed or reasonably anticipated to be proposed in other proceedings), Xcel must also explore alternative deployment scenarios. These issues are further explored below.

As Table 4-2 shows, the BCA does not suitably consider the contributions of each component to overall benefits in isolation, nor does the BCA account systematically for interactive effects. Instead, Xcel essentially just evaluates a single bundle (AMI and FAN), without clarifying the contributions of these components in isolation, and the synergistic benefits that arise from their interaction with each other, with ADMS, and with other future components to be installed.

Table 4-2. Required information on benefits for both the plan and each reasonable alternative deployment scenario

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
Indicate all monetized and unmonetized benefits for each component individually	4(d)i	PARTIAL	PARTIAL	PARTIAL	PARTIAL	PARTIAL
Citations		Att. 2, pgs. 3-7	Att. 4A – AMI MN Electric CBA	Att. 4A – AMI MN Electric CBA	Att. 4A – AMI MN Electric CBA	Xcel response to Dept. #33

²⁸ While the reference case may no longer be free of grid modernization investments, at an earlier stage in the grid modernization decision-making process, the Company should have put forth a BCA that included a reference case without grid modernization.

²⁹ As noted previously, the converse expectation is that the Company also include in its BCA a scenario that encompasses all grid modernization components envisioned. In the current case, this scenario would likely include ADMS, AMI, FAN, FLISR, the TOU pilot, APT, and IVVO.

Indicate all monetized and unmonetized benefits for all components together	4(d)ii	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
Indicate all monetized and unmonetized benefits that arise distinctly through the interactions between components, reporting these incremental benefits separately for each relevant interaction between components	4(d)iii	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
For every benefit identified above in 4(d)i-4(d)iii, indicate how this benefit will be distributed across its beneficiaries, to the extent possible	4(d)iv	PARTIAL	PARTIAL	PARTIAL	PARTIAL	PARTIAL
Citations		Att. 2, pgs. 3-7	Att. 3, pgs. 6-7	Att. 4, pgs. 58-71	Att. 4, pgs. 58-71	Att. 5, pgs. 17-19
For every unmonetized benefit identified above in 4(d)i-4(d)iii, explain why this benefit cannot be monetized, and justify all alternative methodologies used to gauge non-monetized impacts	4(d)v	NO	NO	NO	NO	NO
Citations		-	-	-	-	-

Overall, Xcel is deficient in its exploration of the benefits expected from investment alternatives. This is not surprising, since Xcel has not adequately sketched out the range of potential alternatives to its proposed investments.

In some cases, the BCA is explicit about alternatives. For ADMS, for example, Xcel notes three alternatives – targeted improvements, autonomous systems, and status quo. However, these are alternatives that are considered in an ad hoc way, without being fully fleshed out, and ADMS is never comprehensively compared with a base case or next-best alternative.

The alternatives to some of the Xcel’s other proposed investments are less clear. While the AMI portion of the petition includes a section titled “Meter Selection and Alternatives Considered,” it is never actually made plain what the *best* alternative to investing in the chosen AMI and FAN technologies would be. This is unsurprising since it does not appear that Xcel has even answered this question. Instead, Xcel seems to have arrived at a preliminary determination that AMI and FAN are most appropriate *before* commencing benefit-cost analysis. This conclusion in turn seems to be driven by the need to replace the existing AMR meters that will soon reach the end of their useful lives. Nonetheless,

even if *some* new technological solution is required, this does not dispense with the need to consider a range of potential alternatives.

When evaluating alternatives to AMI, Xcel should put forward at least one alternative case in which the proposed AMI solution is not installed. In specifying this alternative case, Xcel should clearly specify its assumptions about the state of the grid and any other grid modernization that will be undertaken (e.g., in the no-AMI case, has ADMS been installed?). In other words, “bundles” are to be comprehensively constituted, to facilitate reliable comparative analysis of costs and benefits between different cases.

Table 4-3 documents the deficiencies in completeness in providing a detailed accounting of costs. As the table shows, Xcel needs to provide substantial additional cost information.

Table 4-3. Required information on costs for both the plan and each reasonable alternative deployment scenario

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
Indicate all costs for each component individually	4(e)i	YES	YES	YES	YES	YES
Citations		Att. 2, pgs. 13-17	Att. 4A – AMI MN Electric CBA. Att. 3, pgs. 2-6	Att. 4A – AMI MN Electric CBA. Att. 4, pgs. 46-56	Att. 4A – AMI MN Electric CBA. Att. 4, pgs. 46-56	Xcel response to Dept. #33. Att. 5, pgs. 14-17
Indicate all costs for all components together	4(e)ii	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
For every cost identified above in 4(e)i-4(e)ii, provide a breakdown of this cost by the following categories: direct costs (product, service, customer, project, or activity); indirect costs; tangible costs; intangible costs; and real costs	4(e)iii	PARTIAL	PARTIAL	PARTIAL	PARTIAL	PARTIAL
Citations		Att. 2, pgs. 13-17	Att. 4A – AMI MN Electric CBA. Att. 3, pgs. 2-6	Att. 4A – AMI MN Electric CBA. Att. 4, pgs. 46-56	Att. 4A – AMI MN Electric CBA. Att. 4, pgs. 46-56	Xcel response to Dept. #33. Att. 5, pgs. 14-17
For each of the cost categories listed reported for 4(e)iii, provide the utility’s definition of each of the cost categories	4(e)iv	PARTIAL	PARTIAL	PARTIAL	PARTIAL	PARTIAL
Citations		Att. 2, pgs. 13-17	Att. 4A – AMI MN Electric CBA. Att. 3, pgs. 2-6	Att. 4A – AMI MN Electric CBA. Att. 4, pgs. 46-56	Att. 4A – AMI MN Electric CBA. Att. 4, pgs. 46-56	Xcel response to Dept. #33. Att. 5, pgs. 14-17

For each of the cost categories reported for 4(e)iii, indicate whether internal or external labor costs are included in the category, and, if there is overlap between internal and external labor costs, or costs that are included in both categories, outline the overlapping costs and explain	4(e)v	NO	NO	NO	NO	NO
Citations		-	-	-	-	-

Table 4-4 documents the deficiencies in completeness in providing necessary information about cost recovery.

Table 4-4. Required information on costs recovery for each plan component

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
For each component, indicate where and when cost recovery will be sought. If recovery for any costs is sought outside of a rate case (i.e., through a rider), provide detailed justification of the eligibility for recovery of any such costs outside of a rate case	4(f)i	PARTIAL	PARTIAL	PARTIAL	PARTIAL	PARTIAL
Citations		Filing pg. 11	Filing pg. 9	Filing pg. 9	Filing pg. 9	Filing pg. 10
For each component, indicate whether this cost has been partially approved already or has been included in previous or ongoing docket riders, rate cases, or other cost recovery mechanisms	4(f)ii	PARTIAL	YES	YES	-	-
Citations		Att. 2, pgs. 2-3	Att. 4, pg. 1	Att. 4, pg. 1	-	-
For each component, indicate whether it might lead to stranded costs and how such stranded costs were treated in the analysis.	4(f)iii	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
For every grid modernization component not included in the plan but that is expected to be	4(g)	NO	NO	NO	NO	NO

proposed in a future proceeding, detail where and when cost recovery will be sought						
Citations		Xcel response to Dept. 47	Xcel response to Dept. 47	Xcel response to Dept. 47	Xcel response to Dept. 47	Xcel response to Dept. 47

5. Proposals Should Specify Metrics and Targets

This Section of the Initial Filing Requirements provides direction on how grid modernization investment performance should be tracked using metrics and targets.

Derivation of Initial Filing Requirement 5 and sub-requirements

These filing requirements aim to make more explicit what the Commission has already directed through its Orders, related to performance reporting and utility accountability. In the 2019 Order, in Order Point 9.b.2, the Commission indicated that proposals would be required to “Identify cost categories and benefit categories used (explain metrics), including an explanation of how benefits can be monitored over time and proposal for reporting to Commission.”

In the 2020 Order, in Order Point 8, the Commission articulated more detailed reporting requirements, stating that “....all future cost recovery will be based upon the Company accomplishing Commission-approved metrics and performance evaluations for the certified projects.” The Commission put the onus on Xcel to propose “specific metrics and evaluation methods.” Subsequently, in Order Point 9 of the 2020 Order, the Commission requested that the Department file a report addressing metrics, performance evaluation, and consumer protections, and indicated that this report would become part of the record in future cost recovery proceedings. The Department’s 2020 Report is responsive to the Commission’s request.

Evaluation of Completeness

While Xcel’s filings provide metrics with discrete outcomes for several AGIS technologies, Xcel does not include performance targets or timelines related to those metrics.

Table 5-1. Required Metrics and Targets

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
Metrics should track the costs, benefits, and other goals identified in the grid modernization evaluation	5(a)	NO	Partial	YES	YES	NO
Citations		-	Att. 4, pgs. 89-97	Att. 4, pgs. 89-97	Att. 4, pgs. 89-97	-

Metrics should reflect discrete outcomes	5(b)	NO	Partial	YES	YES	NO
Citations		-	Att. 4, pgs. 89-97	Att. 4, pgs. 89-97	Att. 4, pgs. 89-97	-
Targets should correspond to the level of performance assumed in the grid modernization evaluation	5(c)	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
Metrics and targets should reflect the same time periods specified in the grid modernization evaluation	5(d)	NO	NO	NO	NO	NO
Citations		-	-	-	-	-

Metrics and Targets for ADMS

As noted in above in relation to the fourth principle, Xcel does not quantify the expected benefits of ADMS. This likely limits the extent to which Xcel might establish quantitative targets for these benefits – but does not create any barriers to setting metrics to measure benefits. Nonetheless, Xcel does not put forth any metrics to track achievement of ADMS benefits.

Because of the interconnected relationship between ADMS and other grid components, the task of tracking its benefits is not simple. This challenge may be compounded by limitations in Xcel’s accounting for these functional interactions in its BCA (through, for example, elucidating the different feasible component bundles, as addressed in relation to the second principle, and delineating the extent to which benefits that arise from such bundles should be credited to individual components vs. the interactive effects of multiple components, as addressed in relation to the fourth principle). To address this quantification challenge, Xcel may utilize metrics that have already been proposed for AMI or other components to capture the performance of ADMS, to the extent that the benefits of ADMS are realized only through interaction with AMI or other components. Tracking ADMS performance through other components’ metrics may also help to obviate double-counting issues.

Example of metrics proposed for AMI gauging improvements in reliability from AMI that might also be used to capture ADMS benefits include:

- a. “Capital – storm related restoration costs”.³⁰ Even if this is reported in the IDP, this should be tracked in a manner to show changes in costs after full ADMS and AMI deployment.
- b. “Customer-minutes of outage (CMO) – major events”, “CMO – single customer events”, and “CMO – tap level events”.³¹

³⁰ Xcel Energy. Petition for Approval of Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-21- 814, Attachment 4, Table 18.

³¹ Id., Attachment 4, Table 19.

Furthermore, Xcel indicates that ADMS will support customer satisfaction and engagement, particularly in relation to improved estimates of restoration times.³² Xcel includes metrics related to “Survey of customer satisfaction with outage related communications” that could capture this benefit.³³

Metrics and Targets for AMI, FAN, and TOU

Xcel includes metrics related to the benefits it claims for AMI and FAN within Tables 12-19 of Attachment 4 of the 2021-2022 TCR Rider petition. However, there are no goals associated with these metrics, nor are timelines specified by when goals should be achieved

Within Tables 12-19, there are metrics related to time varying rate programs; however, Xcel indicates these should be potential future metrics. Xcel does not identify metrics, performance goals, or timeframes related to the TOU pilot.

Metrics and Targets for APT – LoadSEER

Xcel states a key benefit of LoadSEER is its ability to forecast the needs of the system more accurately through the incorporation of DER, energy efficiency, and corporate growth forecasts that may help defer capital investments.³⁴ However, Xcel does not propose any metrics to track this benefit. Yet, many of the Department’s proposed metrics (from the Department’s December 2020 Report) are included in Table 17 of Attachment 4 and could be used to track deferral of capital projects through DERs and energy efficiency. These include metrics related to MWh of DER generation, installed storage capacity, and Non-Wires Alternatives.

6. Proposals Should Clearly Present All Results

This section of the Initial Filing Requirements addresses the need to provide detailed results for all supporting analyses, and to make a compelling case for the proposed investments.

Derivation of Filing Requirement 6 and sub-requirements

These requirements are consistent with the Commission’s 2019 Order. The standards related to detailed reporting of results are consistent with the Commission’s requirement for transparency in analyses (Order Point 9.B.2.d.vii). The Commission specifically required a “long-term bill impact analysis” (Order Point 9.B.2.b) and indicated that proposals should “discuss customer equity issues, as needed.” (Order Point 9.B.2.d.ix). The requirement that proposals justify selection of each BCA component is consistent with the 2019 Order’s call for detail on selection process (Order Point 9.A.2) and with the 2020 Order’s

³² Xcel Energy. Petition for Approval of Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-21- 814, Attachment 2, p. 6.

³³ Id., Attachment 4, Table 15.

³⁴ Id., Attachment 5, p. 18.

requirement for a demonstration “that the proposed approach is preferable to alternatives” (Order Point 10.b).

The only salient distinction between the above requirements and those contained in the Commission Orders is in the indication that results should be provided for all alternative scenarios. But this is consistent with the Commission’s requirement in its 2020 Order for “a demonstration that the utility has thoroughly considered the feasibility, costs, and benefits of alternatives” (Order Point 10.b).

Evaluation of Completeness

Table 6-1 addresses completeness with respect to the need to clearly present benefit and cost results for each component. Table 6-2 addresses completeness with respect to assessment of equity impacts from the proposed grid modernization investments. Table 6-3 addresses completeness with respect to justification for the selection of the specific components in the grid modernization proposal.

As shown in Table 6-1, below, Xcel does not provided sufficiently detailed BCA results. Xcel has not conducted a BCA for ADMS. As such, it is not possible to assess the presentation of BCA results for ADMS – except to note its absence. While Xcel does provide detailed BCA results for AMI, FAN, and TOU, these are not sufficiently detailed. As noted earlier, Xcel does not provide individual results for each component, but rather offers just aggregated results for the investments operating together. For APT LoadSEER, Xcel provides adequate detail on constituent benefits and costs, and it furnishes the required benefit-cost ratio.

Table 6-1. Reporting of benefits and costs

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
The proposal should clearly present all the results of all evaluations used to justify the grid modernization plan.	6(a)	NO	YES	YES	YES	YES
Citations		-	Att. 4A – AMI MN Electric CBA. Att. 3, pgs. 2-6	Att. 4A – AMI MN Electric CBA. Att. 4, pgs. 46-56	Att. 4A – AMI MN Electric CBA. Att. 4, pgs. 46-56	Xcel response to Dept. #33. Att. 5, pgs. 14-18
The proposal should present the present value of costs, present value of benefits, present value of net benefits, and the benefit-cost ratio for each plan component individually, and jointly for all components included in the plan.	6(b)	NO	NO	NO	NO	NO
Citations		-	-	-	-	-
For each alternative deployment scenario considered, the proposal should present the present value of	6(c)	NO	NO	NO	NO	NO

costs, present value of benefits, present value of net benefits, and the benefit-cost ratio for each component individually, and jointly for all components.						
Citations		-	-	-	-	-

As shown below in Table 6-2, Xcel does not address equity impacts related to ADMS or APT, and only partially addresses equity impacts for AMI, FAN, and TOU.

Table 6-2. Reporting of equity impacts

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
<p>The proposal should include a customer equity analysis, which includes a long-term bill analysis that reflects the impacts on customer bills of the grid modernization plan relative to the reference case:</p> <ul style="list-style-type: none"> The bill analysis should include bills for each customer class and should show annual bill impacts as well as long-term averages The bill analysis should indicate the likely impacts on low-income, moderate-income, vulnerable, and disadvantaged customers, to the extent possible 	6(d)i–6(d)ii	NO	PARTIAL	PARTIAL	PARTIAL	NO
Citations		-	Xcel Response to Dept. 68	Att. 4, pgs. 56-58	Att. 4, pgs. 56-58	-

A key part of assessing equity impacts is the long-term rate impact analysis. Xcel did performance such an analysis as part of its 2019 request for certification of AMI and FAN, but it has not updated this analysis as part of its instant TCR Rider filing because the overall projects costs reportedly have not significantly changed.³⁵

Synapse reviewed this rate impact analysis and finds it does not fully meet the requirements of a customer equity analysis for the following reasons.

1. **Does not analyze all sectors.** Xcel only analyzes rate and bill impacts for the residential sector. Rate impacts can be different across different customer types due to usage and

³⁵ Xcel Energy. Petition for Approval of Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-21- 814, p. 56.

consumption patterns. Only examining one customer segment does not provide useful information regarding equity, cost allocation, and distribution of benefits. It also excludes an examination of how AGIS will impact low-income and disadvantages customers.

2. **Lack of granularity.** The analysis as included in Attachment 4G does not provide transparency regarding the breakout by AGIS technology. Attachments 8A and 8B provide details of the ADMS project costs included in base rates but do not provide information regarding impacts to customers.
3. **Does not account for downward pressure on rates and bills.** A rate impact analysis should account for the anticipated upward and downward pressure on rates created by Xcel's investment and utilization of its AGIS.

While Xcel calculates the incremental revenue requirement of AGIS implementation, it does not account for AGIS outcomes that could have the impact of reducing rates. For example, Xcel cites several benefits of AMI, FAN, and the TOU pilot that would have an effect of lowering utility system costs, creating downward pressure on rates. These include the quantified AMI capital and operation and maintenance (O&M) benefits as listed in Table 7 and Table 8 of Attachment 4. Likewise, the benefits of reduced line losses, energy savings, peak demand reduction can result in avoided generation capacity costs, avoided environmental compliance costs, avoided renewable energy standard compliance costs, avoided transmission and distribution costs. Xcel should seek to quantify and monetize these values, so that the resulting downward pressure on rates is accounted for over the life of the AGIS assets and related programs.

Further Xcel does not account for potential bill savings to customers from its AGIS investments. For example, Xcel indicates that AMI with FAN will conserve energy and keep customer bills low.³⁶ Xcel specifically indicates it will file on-page "dashboard" monthly reports that will show customer bill impacts.³⁷ These impacts should be quantified and monetized for each customer segment within the bill impacts analysis.

4. **Does not provide a long-term view.** The rate and bill impact analyses are only for a six-year period (2019-2024). It does not consider the impacts over the life of the AGIS assets. Rate impacts should be estimated over the long term, to capture the full time-period over which the AGIS impacts will occur. It is not clear why a short-term view is taken when Xcel's BCA model accounts for benefits and costs from 2018 to 2041.

Finally, Table 6-3 documents that Xcel does not adequately justify its proposed portfolio of components.

³⁶ Xcel Energy. Petition for Approval of Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-21- 814, Attachment 4, p. 8.

³⁷ Id., Attachment 3, p. 2.

Table 6-3. Articulation of rational for component selection

Initial Filing Requirement	Req. #	ADMS	TOU	AMI	FAN	APT
The proposal should include a clear articulation of why each grid modernization component was selected for the grid modernization plan, based on the results of the BCA and the customer equity analysis.	6(e)	NO	PARTIAL	PARTIAL	PARTIAL	PARTIAL
Citations		-	Att. 4A – AMI MN Electric CBA. Att. 3, pgs. 2-6	Att. 4A – AMI MN Electric CBA. Att. 4, pgs. 46-56	Att. 4A – AMI MN Electric CBA. Att. 4, pgs. 46-56	Xcel response to Dept. #33. Att. 5, pgs. 14-18

Xcel provides a combined benefit-cost ratio and estimated customer rate impact for AMI and FAN as part of its justification for cost-recovery. As noted above, there are methodological issues related to the rate and bill impact assessment that should be addressed in order to fully demonstrate the impact of these technologies. For these reasons, we have categorized the presentation of rationale for AMI and FAN proposals as incomplete (i.e., “partial”). Concerning ADMS, Xcel does not provide a BCA. It states that the key objectives of ADMS are to “provide integrated grid preparedness, improve reliability, and to increase efficiency on the grid.”³⁸ However, Xcel only provides a list of qualitative benefits as justification for selecting ADMS. It is therefore not possible to determine what the benefit-cost ratio is for this investment. Further, it does not appear that ADMS was included in the rate impact analysis.

Based on our review, the primary driver of Xcel’s investment in AMI appears to be the need to replace the existing AMR meters that will soon reach the end of their useful lives,³⁹ followed by Xcel wanting to “create better interfaces with customers, provide them with better information and more choices, and thus improve their overall experience.”⁴⁰ Xcel provides justification for replacing AMR with AMI meters; however, it does not provide sufficient information regarding how it will “transform the customer experience through new programs and service offerings, engaging digital experiences, enhanced billing and rate options”.⁴¹ Other than the TOU Rider Pilot, Xcel does not provide a description of future offerings, timeline for implementation, or how they will be coordinated with existing and planned Conservation Improvement Programs. The Company should tie its proposed AGIS investments to its Draft Rate Design Roadmap as filed in Docket No. E002/M-19-666.⁴² Xcel provides a combined benefit-

³⁸ Xcel Energy. Petition for Approval of Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-21- 814, Attachment 2, p. 3.

³⁹ Id., Attachment 4, p. 2.

⁴⁰ Id., Attachment 4, pp. 3-4.

⁴¹ Id., Attachment 4, p. 8.

⁴² Xcel Energy. Compliance Filing Draft Rate Design Roadmap. Docket No. E002/M-19-666.

cost ratio and estimated customer rate impact for AMI and FAN as part of its justification for cost-recovery. However, Xcel states that FAN does not have direct benefits to customer.⁴³

The primary justification for FAN is to support AMI and field automation. Xcel states FAN will “securely and reliably address the need for communications capacity that arises from our implementation of new advanced grid devices, including AMI.”⁴⁴ Xcel further states that “new meters without the FAN would be considerably more expensive to install and operate because Xcel would need to find other ways read data from the meters, such as driving by or physically reading them – both of which would require truck rolls and added labor costs.”⁴⁵

Xcel includes the TOU pilot within the combined AMI/FAN BCA and accounts for the cost of the pilot in its rate and bill impact assessment. As noted above, there are methodological issues related to the rate and bill impact assessment that should be revised to fully demonstrate the impact of the TOU pilot. For this reason, we categorize TOU as incomplete.

Xcel did not conduct a rate and bill impacts analysis for the LoadSEER planning tool. Xcel did conduct a BCA as part of its 2019 certification request and found that LoadSEER is not cost-effective with a benefit cost ratio of 0.35.⁴⁶ The main justification for LoadSEER is that Xcel’s current tool and hosting server are out of date and the vendor will soon no longer provide support. Xcel also indicates that “the investment in an advanced planning tool is essential to performing the more sophisticated analyses our evolving grid requires going forward.”⁴⁷

4. CONCLUSION

Based on Synapse’s review of Xcel’s 2021-2022 TCR Rider petition, Synapse has determined that Xcel’s petition is incomplete. Synapse concludes that Xcel’s 2021-2022 TCR Rider petition is not in compliance with the Commission’s September 27, 2019 Order in Docket No. E-002/M-17-797 and the July 23, 2020 Order in E-002/M-19-666.

⁴³ Id., Attachment 4, p. 62.

⁴⁴ Xcel Energy. Petition for Approval of Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022. Filed in Minnesota Public Utilities Commission. Docket No. E002/M-21- 814, Attachment 4, p. 25.

⁴⁵ Id., Attachment 4, p. 62.

⁴⁶ Id., Attachment 5, p. 17.

⁴⁷ Ibid.

CERTIFICATE OF SERVICE

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

Minnesota Department of Commerce
Comments

Docket No. E002/M-21-814

Dated this **30th** day of **March 2022**

/s/Sharon Ferguson

[illegible]

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
James J.	Bertrand	james.bertrand@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Derek	Bertsch	derek.bertsch@mrenergy.com	Missouri River Energy Services	3724 West Avera Drive PO Box 88920 Sioux Falls, SD 57109-8920	Electronic Service	No	OFF_SL_21-814_M-21-814
William	Black	bblack@mmua.org	MMUA	Suite 200 3131 Fernbrook Lane North Plymouth, MN 55447	Electronic Service	No	OFF_SL_21-814_M-21-814
Kenneth	Bradley	kbradley1965@gmail.com		2837 Emerson Ave S Apt CW112 Minneapolis, MN 55408	Electronic Service	No	OFF_SL_21-814_M-21-814
Elizabeth	Brama	ebrama@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Jon	Brekke	jbrekke@grenergy.com	Great River Energy	12300 Elm Creek Boulevard Maple Grove, MN 553694718	Electronic Service	No	OFF_SL_21-814_M-21-814
Sydney R.	Briggs	sbriggs@swce.coop	Steele-Waseca Cooperative Electric	2411 W. Bridge St PO Box 485 Owatonna, MN 55060-0485	Electronic Service	No	OFF_SL_21-814_M-21-814
Mark B.	Bring	mbring@otpc.com	Otter Tail Power Company	215 South Cascade Street PO Box 496 Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_21-814_M-21-814
Christina	Brusven	cbrusven@fredlaw.com	Fredrikson Byron	200 S 6th St Ste 4000 Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Jason	Burwen	jburwen@cleanpower.org	Energy Storage Association	1155 15th St NW, Ste 500 Washington, DC 20005	Electronic Service	No	OFF_SL_21-814_M-21-814
LORI	CLOBES	lclobes@mienergy.coop	MiEnergy Cooperative	31110 COOPERATIVE WAY PO BOX 626 RUSHFORD, MN 55971	Electronic Service	No	OFF_SL_21-814_M-21-814
James	Canaday	james.canaday@ag.state.mn.us	Office of the Attorney General-RUD	Suite 1400 445 Minnesota St. St. Paul, MN 55101	Electronic Service	No	OFF_SL_21-814_M-21-814
Douglas M.	Carnival	dmc@mcgrannshea.com	McGrann Shea Carnival Straughn & Lamb	N/A	Electronic Service	No	OFF_SL_21-814_M-21-814
Ray	Choquette	rchoquette@agp.com	Ag Processing Inc.	12700 West Dodge Road PO Box 2047 Omaha, NE 68103-2047	Electronic Service	No	OFF_SL_21-814_M-21-814
John	Coffman	john@johncoffman.net	AARP	871 Tuxedo Blvd. St. Louis, MO 63119-2044	Electronic Service	No	OFF_SL_21-814_M-21-814
Kenneth A.	Colburn	kcolburn@symbioticstrategies.com	Symbiotic Strategies, LLC	26 Winton Road Meredith, NH 32535413	Electronic Service	No	OFF_SL_21-814_M-21-814
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_21-814_M-21-814
Riley	Conlin	riley.conlin@stoel.com	Stoel Rives LLP	33 S. 6th Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Brooke	Cooper	bcooper@allte.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174 Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_21-814_M-21-814
David	Dahlberg	davedahlberg@nweco.com	Northwestern Wisconsin Electric Company	P.O. Box 9 104 South Pine Street Grantsburg, WI 548400009	Electronic Service	No	OFF_SL_21-814_M-21-814
James	Denniston	james.r.denniston@xcenergy.com	Xcel Energy Services, Inc.	414 Nicollet Mall, 401-8 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_21-814_M-21-814
Curt	Dieren	curt.dieren@dgr.com	L&O Power Cooperative	1302 S Union St Rock Rapids, IA 51246	Electronic Service	No	OFF_SL_21-814_M-21-814
Carlton	Doyle Fontaine	carlton.doyle.fontaine@senate.mn	MN Senate	75 Rev Dr Martin Luther King Jr Blvd Room G-17 St Paul, MN 55155	Electronic Service	No	OFF_SL_21-814_M-21-814
Brian	Draxten	bhdraxten@otpc.com	Otter Tail Power Company	P.O. Box 496 215 South Cascade Street Fergus Falls, MN 565380498	Electronic Service	No	OFF_SL_21-814_M-21-814
Brian	Edstrom	briane@cubminnesota.org	Citizens Utility Board of Minnesota	332 Minnesota St Ste W1360 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_21-814_M-21-814
Kristen	Eide Tollefson	healingsystems69@gmail.com	R-CURE	28477 N Lake Ave Frontenac, MN 55026-1044	Electronic Service	No	OFF_SL_21-814_M-21-814
Rebecca	Eilers	rebecca.d.eilers@xcenergy.com	Xcel Energy	414 Nicollet Mall - 401 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Bob	Eleff	bob.eleff@house.mn	Regulated Industries Cmte	100 Rev Dr Martin Luther King Jr Blvd Room 600 St. Paul, MN 55155	Electronic Service	No	OFF_SL_21-814_M-21-814
Betsy	Engelking	betsy@nationalgridrenewables.com	Geronimo Energy, LLC	8400 Normandale Lake Blvd Ste 1200 Bloomington, MN 55437	Electronic Service	No	OFF_SL_21-814_M-21-814
Oncu	Er	oncu.er@avantenergy.com	Avant Energy, Agent for MMPA	220 S. Sixth St. Ste. 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
James C.	Erickson	jericksonkbc@gmail.com	Kelly Bay Consulting	17 Quechee St Superior, WI 54880-4421	Electronic Service	No	OFF_SL_21-814_M-21-814
John	Farrell	jfarrell@ilsr.org	Institute for Local Self- Reliance	2720 E. 22nd St Institute for Local Self- Reliance Minneapolis, MN 55406	Electronic Service	No	OFF_SL_21-814_M-21-814
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_21-814_M-21-814
Lucas	Franco	lfranco@liunagroc.com	LIUNA	81 Little Canada Rd E Little Canada, MN 55117	Electronic Service	No	OFF_SL_21-814_M-21-814
Nathan	Franzen	nathan@nationalgridrenewables.com	Geronimo Energy, LLC	8400 Normandale Lake Blvd Ste 1200 Bloomington, MN 55437	Electronic Service	No	OFF_SL_21-814_M-21-814
Hal	Galvin	halgalvin@comcast.net	Provectus Energy Development llc	1936 Kenwood Parkway Minneapolis, MN 55405	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Edward	Garvey	garveyed@aol.com	Residence	32 Lawton St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_21-814_M-21-814
Edward	Garvey	edward.garvey@AESLconsulting.com	AESL Consulting	32 Lawton St Saint Paul, MN 55102-2617	Electronic Service	No	OFF_SL_21-814_M-21-814
Bruce	Gerhardson	bgerhardson@otpc.com	Otter Tail Power Company	PO Box 496 215 S Cascade St Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_21-814_M-21-814
Allen	Gleckner	gleckner@fresh-energy.org	Fresh Energy	408 St. Peter Street Ste 350 Saint Paul, Minnesota 55102	Electronic Service	No	OFF_SL_21-814_M-21-814
Jenny	Glumack	jenny@mrea.org	Minnesota Rural Electric Association	11640 73rd Ave N Maple Grove, MN 55369	Electronic Service	No	OFF_SL_21-814_M-21-814
Timothy	Gulden	timothy.gulden@yahoo.com	Winona Renewable Energy, LLC	1449 Ridgewood Dr Winona, MN 55987	Electronic Service	No	OFF_SL_21-814_M-21-814
Tony	Hainault	anthony.hainault@co.hennepin.mn.us	Hennepin County DES	701 4th Ave S Ste 700 Minneapolis, MN 55415-1842	Electronic Service	No	OFF_SL_21-814_M-21-814
Shubha	Harris	Shubha.M.Harris@xcelenergy.com	Xcel Energy	414 Nicollet Mall, 401 - FL 8 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_21-814_M-21-814
Kim	Havey	kim.havey@minneapolismn.gov	City of Minneapolis	350 South 5th Street, Suite 315M Minneapolis, MN 55415	Electronic Service	No	OFF_SL_21-814_M-21-814
Todd	Headlee	theadlee@dvigridsolutions.com	Dominion Voltage, Inc.	701 E. Cary Street Richmond, VA 23219	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Amber	Hedlund	amber.r.hedlund@xcelenergy.com	Northern States Power Company dba Xcel Energy-Elec	414 Nicollet Mall, 401-7 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_21-814_M-21-814
Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_21-814_M-21-814
Jared	Hendricks	jared.hendricks@owatonnautilities.com	Owatonna Municipal Public Utilities	PO Box 800 208 S Walnut Ave Owatonna, MN 55060-2940	Electronic Service	No	OFF_SL_21-814_M-21-814
Annete	Henkel	mui@mutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St. Paul, MN 55101	Electronic Service	No	OFF_SL_21-814_M-21-814
Lynn	Hinkle	lynnh@ips-solar.com	IPS Solar	2670 Patton Rd Roseville, MN 55113	Electronic Service	No	OFF_SL_21-814_M-21-814
Joe	Hoffman	ja.hoffman@smmpa.org	SMMPA	500 First Ave SW Rochester, MN 55902-3303	Electronic Service	No	OFF_SL_21-814_M-21-814
Michael	Hoppe	lu23@ibew23.org	Local Union 23, I.B.E.W.	445 Etna Street Ste. 61 St. Paul, MN 55106	Electronic Service	No	OFF_SL_21-814_M-21-814
Jan	Hubbard	jan.hubbard@comcast.net		7730 Mississippi Lane Brooklyn Park, MN 55444	Electronic Service	No	OFF_SL_21-814_M-21-814
Geoffrey	Inge	ginge@regintl.com	Regulatory Intelligence LLC	PO Box 270636 Superior, CO 80027-9998	Electronic Service	No	OFF_SL_21-814_M-21-814
Casey	Jacobson	cjacobson@bepc.com	Basin Electric Power Cooperative	1717 East Interstate Avenue Bismarck, ND 58501	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Ralph	Jacobson	ralphj@ips-solar.com		2126 Roblyn Avenue Saint Paul, Minnesota 55104	Electronic Service	No	OFF_SL_21-814_M-21-814
John S.	Jaffray	jjaffray@jirpower.com	JJR Power	350 Highway 7 Suite 236 Excelsior, MN 55331	Electronic Service	No	OFF_SL_21-814_M-21-814
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2950 Yellowtail Ave. Marathon, FL 33050	Electronic Service	No	OFF_SL_21-814_M-21-814
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Nate	Jones	njones@hcpd.com	Heartland Consumers Power	PO Box 248 Madison, SD 57042	Electronic Service	No	OFF_SL_21-814_M-21-814
Michael	Kampmeyer	mkampmeyer@a-e-group.com	AEG Group, LLC	260 Salem Church Road Sunfish Lake, Minnesota 55118	Electronic Service	No	OFF_SL_21-814_M-21-814
Nick	Kaneski	nick.kaneski@enbridge.com	Enbridge Energy Company, Inc.	11 East Superior St Ste 125 Duluth, MN 55802	Electronic Service	No	OFF_SL_21-814_M-21-814
Brad	Klein	bklein@elpc.org	Environmental Law & Policy Center	35 E. Wacker Drive, Suite 1600 Suite 1600 Chicago, IL 60601	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Thomas	Koehler	TGK@IBEW160.org	Local Union #160, IBEW	2909 Anthony Ln St Anthony Village, MN 55418-3238	Electronic Service	No	OFF_SL_21-814_M-21-814
Chris	Kopel	chrisk@CMPASgroup.org	Central Minnesota Municipal Power Agency	459 S Grove St Blue Earth, MN 56013-2629	Electronic Service	No	OFF_SL_21-814_M-21-814
Brian	Krambeer	bkrambeer@mienergy.coop	MiEnergy Cooperative	PO Box 626 31110 Cooperative Way Rushford, MN 55971	Electronic Service	No	OFF_SL_21-814_M-21-814
Michael	Krause	michaelkrause61@yahoo.com	Kandiyo Consulting, LLC	433 S 7th Street Suite 2025 Minneapolis, Minnesota 55415	Electronic Service	No	OFF_SL_21-814_M-21-814
Michael	Krikava	mkrikava@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Matthew	Lacey	mlacey@greenergy.com	Great River Energy	12300 Elm Creek Boulevard Maple Grove, MN 553694718	Electronic Service	No	OFF_SL_21-814_M-21-814
Carmel	Laney	carmel.laney@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
James D.	Larson	james.larson@avantenergy.com	Avant Energy Services	220 S 6th St Ste 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.	8300 Norman Center Drive Suite 1000 Bloomington, MN 55437	Electronic Service	No	OFF_SL_21-814_M-21-814
Dean	Leischow	dean@sunrisenrg.com	Sunrise Energy Ventures	315 Manitoba Ave Ste 200 Wayzata, MN 55391	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Annie	Levenson Falk	annief@cupminnesota.org	Citizens Utility Board of Minnesota	332 Minnesota Street, Suite W1360 St. Paul, MN 55101	Electronic Service	No	OFF_SL_21-814_M-21-814
Ryan	Long	ryan.j.long@xcelenergy.com	Xcel Energy	414 Nicollet Mall 401 8th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_21-814_M-21-814
Susan	Ludwig	sludwig@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_21-814_M-21-814
Kavita	Maini	kmairi@wi.rr.com	KM Energy Consulting, LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_21-814_M-21-814
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_21-814_M-21-814
Mary	Martinka	mary.a.martinka@xcelenergy.com	Xcel Energy Inc	414 Nicollet Mall 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_21-814_M-21-814
Samuel	Mason	smason@beltramelectric.com	Beltrami Electric Cooperative, Inc.	4111 Technology Dr. NW PO Box 488 Bemidji, MN 56619-0488	Electronic Service	No	OFF_SL_21-814_M-21-814
Gregg	Mast	gmast@cleanenergyeconomy.mn.org	Clean Energy Economy Minnesota	4808 10th Avenue S Minneapolis, MN 55417	Electronic Service	No	OFF_SL_21-814_M-21-814
Dave	McNary	David.McNary@hennepin.us	Hennepin County DES	701 Fourth Ave S Ste 700 Minneapolis, MN 55415-1842	Electronic Service	No	OFF_SL_21-814_M-21-814
Thomas	Melone	Thomas.Melone@AllcoUS.com	Minnesota Go Solar LLC	222 South 9th Street Suite 1600 Minneapolis, Minnesota 55120	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Brian	Meloy	brian.meloy@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Joseph	Meyer	joseph.meyer@ag.state.mn.us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St Paul, MN 55101-2131	Electronic Service	No	OFF_SL_21-814_M-21-814
Stacy	Miller	stacy.miller@minneapolismn.gov	City of Minneapolis	350 S. 5th Street Room M 301 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_21-814_M-21-814
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_21-814_M-21-814
Dalene	Monsebroten	dalene.monsebroten@nmpagency.com	Northern Municipal Power Agency	123 2nd St W Thief River Falls, MN 56701	Electronic Service	No	OFF_SL_21-814_M-21-814
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Carl	Nelson	cnelson@mncee.org	Center for Energy and Environment	212 3rd Ave N Ste 560 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_21-814_M-21-814
Ben	Nelson	benn@cmpasgroup.org	CMMPA	459 South Grove Street Blue Earth, MN 56013	Electronic Service	No	OFF_SL_21-814_M-21-814
Dale	Niezwaag	dniezwaag@bepc.com	Basin Electric Power Cooperative	1717 East Interstate Avenue Bismarck, ND 58503	Electronic Service	No	OFF_SL_21-814_M-21-814
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Sephra	Ninow	sephra.ninow@energycenter.org	Center for Sustainable Energy	426 17th Street, Suite 700 Oakland, CA 94612	Electronic Service	No	OFF_SL_21-814_M-21-814
Rolf	Nordstrom	rnordstrom@gpisd.net	Great Plains Institute	2801 21ST AVE S STE 220 Minneapolis, MN 55407-1229	Electronic Service	No	OFF_SL_21-814_M-21-814
Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company	200 1st Street SE PO Box 351 Cedar Rapids, IA 524060351	Electronic Service	No	OFF_SL_21-814_M-21-814
David	O'Brien	david.obrien@navigant.com	Navigant Consulting	77 South Bedford St Ste 400 Burlington, MA 01803	Electronic Service	No	OFF_SL_21-814_M-21-814
Jeff	O'Neill	jeff.oneill@ci.monticello.mn.us	City of Monticello	505 Walnut Street Suite 1 Monticello, Minnesota 55362	Electronic Service	No	OFF_SL_21-814_M-21-814
Russell	Olson	rolson@hcpd.com	Heartland Consumers Power District	PO Box 248 Madison, SD 570420248	Electronic Service	No	OFF_SL_21-814_M-21-814
Carol A.	Overland	overland@legalelectric.org	Legalelectric - Overland Law Office	1110 West Avenue Red Wing, MN 55066	Electronic Service	No	OFF_SL_21-814_M-21-814
Dan	Patry	dpatry@sunedison.com	SunEdison	600 Clipper Drive Belmont, CA 94002	Electronic Service	No	OFF_SL_21-814_M-21-814
Jeffrey C	Paulson	jeff.jcplaw@comcast.net	Paulson Law Office, Ltd.	4445 W 77th Street Suite 224 Edina, MN 55435	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Jennifer	Peterson	jjpeterson@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_21-814_M-21-814
Hannah	Polikov	hpolikov@aee.net	Advanced Energy Economy Institute	1000 Vermont Ave, Third Floor Washington, DC 20005	Electronic Service	No	OFF_SL_21-814_M-21-814
David G.	Prazak	dprazak@otpc.com	Otter Tail Power Company	P.O. Box 496 215 South Cascade Street Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_21-814_M-21-814
Mark	Rathbun	mrathbun@greenergy.com	Great River Energy	12300 Elm Creek Blvd Maple Grove, MN 55369	Electronic Service	No	OFF_SL_21-814_M-21-814
Michael	Reinertson	michael.reinertson@avanteenergy.com	Avant Energy	220 S. Sixth St. Ste 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
John C.	Reinhardt	N/A	Laura A. Reinhardt	3552 26th Ave S Minneapolis, MN 55406	Paper Service	No	OFF_SL_21-814_M-21-814
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_21-814_M-21-814
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	OFF_SL_21-814_M-21-814
Isabel	Ricker	ricker@fresh-energy.org	Fresh Energy	408 Saint Peter Street Suite 220 Saint Paul, MN 55102	Electronic Service	No	OFF_SL_21-814_M-21-814
Amanda	Rome	amanda.rome@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 5 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Robert K.	Sahr	bsahr@eastriver.coop	East River Electric Power Cooperative	P.O. Box 227 Madison, SD 57042	Electronic Service	No	OFF_SL_21-814_M-21-814
Joseph L	Sathe	jsathe@kennedy-graven.com	Kennedy & Graven, Chartered	150 S 5th St Ste 700 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	OFF_SL_21-814_M-21-814
Thomas	Scharff	thomas.scharff@versoco.com	Verso Corp	600 High Street Wisconsin Rapids, WI 54495	Electronic Service	No	OFF_SL_21-814_M-21-814
Kay	Schraeder	kschraeder@minnkota.com	Minnkota Power	5301 32nd Ave S Grand Forks, ND 58201	Electronic Service	No	OFF_SL_21-814_M-21-814
Dean	Sedgwick	Sedgwick@Itascapower.com	Itasca Power Company	PO Box 455 Spring Lake, MN 56680	Electronic Service	No	OFF_SL_21-814_M-21-814
Maria	Seidler	maria.seidler@dom.com	Dominion Energy Technology	120 Tredegar Street Richmond, Virginia 23219	Electronic Service	No	OFF_SL_21-814_M-21-814
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_21-814_M-21-814
Patricia F	Sharkey	psharkey@environmentallawcounsel.com	Midwest Cogeneration Association.	180 N LaSalle St Ste 3700 Chicago, IL 60601	Electronic Service	No	OFF_SL_21-814_M-21-814
Bria	Shea	bria.e.shea@xcelenergy.com	Xcel Energy	414 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	OFF_SL_21-814_M-21-814

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Doug	Shoemaker	dougs@charter.net	Minnesota Renewable Energy	2928 5th Ave S Minneapolis, MN 55408	Electronic Service	No	OFF_SL_21-814_M-21-814
Anne	Smart	anne.smart@chargepoint.com	ChargePoint, Inc.	254 E Hacienda Ave Campbell, CA 95008	Electronic Service	No	OFF_SL_21-814_M-21-814
Ken	Smith	ken.smith@ever-greenenergy.com	Ever Green Energy	305 Saint Peter St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_21-814_M-21-814
Joshua	Smith	joshua.smith@sierraclub.org		85 Second St FL 2 San Francisco, California 94105	Electronic Service	No	OFF_SL_21-814_M-21-814
Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.	76 W Kellogg Blvd St. Paul, MN 55102	Electronic Service	No	OFF_SL_21-814_M-21-814
Trevor	Smith	trevor.smith@avantenergy.com	Avant Energy, Inc.	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Beth H.	Soholt	bsoholt@windonthewires.org	Wind on the Wires	570 Asbury Street Suite 201 St. Paul, MN 55104	Electronic Service	No	OFF_SL_21-814_M-21-814
Sky	Stanfield	stanfield@smwlaw.com	Shute, Mihaly & Weinberger	396 Hayes Street San Francisco, CA 94102	Electronic Service	No	OFF_SL_21-814_M-21-814
Tom	Stanton	tstanton@nrri.org	NRRI	1080 Carmack Road Columbus, OH 43210	Electronic Service	No	OFF_SL_21-814_M-21-814
Byron E.	Starns	byron.starns@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
James M	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	150 S 5th St Ste 700 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_21-814_M-21-814
Lynnette	Sweet	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	Yes	OFF_SL_21-814_M-21-814
Peter	Teigland	pteigland@mnseia.org	Minnesota Solar Energy Industries Association	2288 University Ave W Saint Paul, MN 55114	Electronic Service	No	OFF_SL_21-814_M-21-814
Stuart	Tommerdahl	stommerdahl@otpc.com	Otter Tail Power Company	215 S Cascade St PO Box 496 Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_21-814_M-21-814
Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD	4445 W 77th Street Suite 224 Edina, MN 55435	Electronic Service	No	OFF_SL_21-814_M-21-814
Lise	Trudeau	lise.trudeau@state.mn.us	Department of Commerce	85 7th Place East Suite 500 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_21-814_M-21-814
Karen	Turnboom	karen.turnboom@versocom	Verso Corporation	100 Central Avenue Duluth, MN 55807	Electronic Service	No	OFF_SL_21-814_M-21-814
Thomas	Tynes	jjazynka@energyfreedomcoalition.com	Energy Freedom Coalition of America	101 Constitution Ave NW Ste 525 East Washington, DC 20001	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Lisa	Veith	lisa.veith@ci.stpaul.mn.us	City of St. Paul	400 City Hall and Courthouse 15 West Kellogg Blvd. St. Paul, MN 55102	Electronic Service	No	OFF_SL_21-814_M-21-814
Curt	Volkman	curt@newenergy- advisors.com	Fresh Energy	408 St Peter St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_21-814_M-21-814
Roger	Warehime	roger.warehime@owatonna utilities.com	Owatonna Municipal Public Utilities	208 S Walnut Ave PO BOX 800 Owatonna, MN 55060	Electronic Service	No	OFF_SL_21-814_M-21-814
Jenna	Warmuth	jwarmuth@mnpower.com	Minnesota Power	30 W Superior St Duluth, MN 55802-2093	Electronic Service	No	OFF_SL_21-814_M-21-814
Samantha	Williams	swilliams@nrdc.org	Natural Resources Defense Council	20 N. Wacker Drive Ste 1600 Chicago, IL 60606	Electronic Service	No	OFF_SL_21-814_M-21-814
Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine	225 South Sixth Street, Suite 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814
Robyn	Woeste	robynwoeste@alliantenerg y.com	Interstate Power and Light Company	200 First St SE Cedar Rapids, IA 52401	Electronic Service	No	OFF_SL_21-814_M-21-814
Yochi	Zakai	yzakai@smwlaw.com	SHUTE, MIHALY & WEINBERGER LLP	396 Hayes Street San Francisco, CA 94102	Electronic Service	No	OFF_SL_21-814_M-21-814
Christopher	Zibart	czibart@atcllc.com	American Transmission Company LLC	W234 N2000 Ridgeview Pkwy Court Waukesha, WI 53188-1022	Electronic Service	No	OFF_SL_21-814_M-21-814

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Patrick	Zomer	Pat.Zomer@lawmoss.com	Moss & Barnett PA	150 S 5th St #1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_21-814_M-21-814

[illegible]

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
James J.	Bertrand	james.bertrand@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
Derek	Bertsch	derek.bertsch@mrenergy.com	Missouri River Energy Services	3724 West Avera Drive PO Box 88920 Sioux Falls, SD 57109-8920	Electronic Service	No	OFF_SL_20-680_Official
William	Black	bblack@mmua.org	MMUA	Suite 200 3131 Fernbrook Lane North Plymouth, MN 55447	Electronic Service	No	OFF_SL_20-680_Official
Kenneth	Bradley	kbradley1965@gmail.com		2837 Emerson Ave S Apt CW112 Minneapolis, MN 55408	Electronic Service	No	OFF_SL_20-680_Official
Elizabeth	Brama	ebrama@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
Jon	Brekke	jbrekke@grenergy.com	Great River Energy	12300 Elm Creek Boulevard Maple Grove, MN 553694718	Electronic Service	No	OFF_SL_20-680_Official
Sydney R.	Briggs	sbriggs@swce.coop	Steele-Waseca Cooperative Electric	2411 W. Bridge St PO Box 485 Owatonna, MN 55060-0485	Electronic Service	No	OFF_SL_20-680_Official
Mark B.	Bring	mbring@otpc.com	Otter Tail Power Company	215 South Cascade Street PO Box 496 Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_20-680_Official
Christina	Brusven	cbrusven@fredlaw.com	Fredrikson Byron	200 S 6th St Ste 4000 Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Jason	Burwen	jburwen@cleanpower.org	Energy Storage Association	1155 15th St NW, Ste 500 Washington, DC 20005	Electronic Service	No	OFF_SL_20-680_Official
LORI	CLOBES	lclobes@mienergy.coop	MiEnergy Cooperative	31110 COOPERATIVE WAY PO BOX 626 RUSHFORD, MN 55971	Electronic Service	No	OFF_SL_20-680_Official
Douglas M.	Carnival	dmc@mcgrannshea.com	McGrann Shea Carnival Straughn & Lamb	N/A	Electronic Service	No	OFF_SL_20-680_Official
Ray	Choquette	rchoquette@agp.com	Ag Processing Inc.	12700 West Dodge Road PO Box 2047 Omaha, NE 68103-2047	Electronic Service	No	OFF_SL_20-680_Official
John	Coffman	john@johncoffman.net	AARP	871 Tuxedo Blvd. St, Louis, MO 63119-2044	Electronic Service	No	OFF_SL_20-680_Official
Kenneth A.	Colburn	kcolburn@symbioticstrategies.com	Symbiotic Strategies, LLC	26 Winton Road Meredith, NH 32535413	Electronic Service	No	OFF_SL_20-680_Official
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_20-680_Official
Riley	Conlin	riley.conlin@stoel.com	Stoel Rives LLP	33 S. 6th Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
Brooke	Cooper	bcooper@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	No	OFF_SL_20-680_Official
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174 Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_20-680_Official

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David	Dahlberg	davedahlberg@nweco.com	Northwestern Wisconsin Electric Company	P.O. Box 9 104 South Pine Street Grantsburg, WI 548400009	Electronic Service	No	OFF_SL_20-680_Official
James	Denniston	james.r.denniston@xcenergy.com	Xcel Energy Services, Inc.	414 Nicollet Mall, 401-8 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_20-680_Official
Curt	Dieren	curt.dieren@dgr.com	L&O Power Cooperative	1302 S Union St Rock Rapids, IA 51246	Electronic Service	No	OFF_SL_20-680_Official
Carlton	Doyle Fontaine	carlton.doyle.fontaine@senate.mn	MN Senate	75 Rev Dr Martin Luther King Jr Blvd Room G-17 St Paul, MN 55155	Electronic Service	No	OFF_SL_20-680_Official
Brian	Draxten	bhdraxten@otpc.com	Otter Tail Power Company	P.O. Box 496 215 South Cascade Street Fergus Falls, MN 565380498	Electronic Service	No	OFF_SL_20-680_Official
Brian	Edstrom	briane@cubminnesota.org	Citizens Utility Board of Minnesota	332 Minnesota St Ste W1360 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_20-680_Official
Kristen	Eide Tollefson	healingsystems69@gmail.com	R-CURE	28477 N Lake Ave Frontenac, MN 55026-1044	Electronic Service	No	OFF_SL_20-680_Official
Rebecca	Eilers	rebecca.d.eilers@xcelenergy.com	Xcel Energy	414 Nicollet Mall - 401 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_20-680_Official
Bob	Eleff	bob.eleff@house.mn	Regulated Industries Cmte	100 Rev Dr Martin Luther King Jr Blvd Room 600 St. Paul, MN 55155	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Betsy	Engelking	betsy@nationalgridrenewables.com	Geronimo Energy, LLC	8400 Normandale Lake Blvd Ste 1200 Bloomington, MN 55437	Electronic Service	No	OFF_SL_20-680_Official
Oncu	Er	oncu.er@avantenergy.com	Avant Energy, Agent for MMPA	220 S. Sixth St. Ste. 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
James C.	Erickson	jericksonkbc@gmail.com	Kelly Bay Consulting	17 Quechee St Superior, WI 54880-4421	Electronic Service	No	OFF_SL_20-680_Official
John	Farrell	jfarrell@ilsr.org	Institute for Local Self-Reliance	2720 E. 22nd St Institute for Local Self-Reliance Minneapolis, MN 55406	Electronic Service	No	OFF_SL_20-680_Official
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_20-680_Official
Lucas	Franco	lfranco@liunagroc.com	LIUNA	81 Little Canada Rd E Little Canada, MN 55117	Electronic Service	No	OFF_SL_20-680_Official
Nathan	Franzen	nathan@nationalgridrenewables.com	Geronimo Energy, LLC	8400 Normandale Lake Blvd Ste 1200 Bloomington, MN 55437	Electronic Service	No	OFF_SL_20-680_Official
Hal	Galvin	halgalvin@comcast.net	Provectus Energy Development llc	1936 Kenwood Parkway Minneapolis, MN 55405	Electronic Service	No	OFF_SL_20-680_Official
Edward	Garvey	garveyed@aol.com	Residence	32 Lawton St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Edward	Garvey	edward.garvey@AESLconsulting.com	AESL Consulting	32 Lawton St Saint Paul, MN 55102-2617	Electronic Service	No	OFF_SL_20-680_Official
Bruce	Gerhardson	bgerhardson@otpc.com	Otter Tail Power Company	PO Box 496 215 S Cascade St Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_20-680_Official
Allen	Gleckner	gleckner@fresh-energy.org	Fresh Energy	408 St. Peter Street Ste 350 Saint Paul, Minnesota 55102	Electronic Service	No	OFF_SL_20-680_Official
Jenny	Glumack	jenny@mrea.org	Minnesota Rural Electric Association	11640 73rd Ave N Maple Grove, MN 55369	Electronic Service	No	OFF_SL_20-680_Official
Timothy	Gulden	timothy.gulden@yahoo.com	Winona Renewable Energy, LLC	1449 Ridgewood Dr Winona, MN 55987	Electronic Service	No	OFF_SL_20-680_Official
Tony	Hainault	anthony.hainault@co.hennepin.mn.us	Hennepin County DES	701 4th Ave S Ste 700 Minneapolis, MN 55415-1842	Electronic Service	No	OFF_SL_20-680_Official
Kim	Havey	kim.havey@minneapolismn.gov	City of Minneapolis	350 South 5th Street, Suite 315M Minneapolis, MN 55415	Electronic Service	No	OFF_SL_20-680_Official
Todd	Headlee	theadlee@dvigridsolutions.com	Dominion Voltage, Inc.	701 E. Cary Street Richmond, VA 23219	Electronic Service	No	OFF_SL_20-680_Official
Amber	Hedlund	amber.r.hedlund@xcelenergy.com	Northern States Power Company dba Xcel Energy-Elec	414 Nicollet Mall, 401-7 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_20-680_Official
Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Jared	Hendricks	jared.hendricks@owatonnautilities.com	Owatonna Municipal Public Utilities	PO Box 800 208 S Walnut Ave Owatonna, MN 55060-2940	Electronic Service	No	OFF_SL_20-680_Official
Annete	Henkel	mui@mutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St. Paul, MN 55101	Electronic Service	No	OFF_SL_20-680_Official
Lynn	Hinkle	lynnh@ips-solar.com	IPS Solar	2670 Patton Rd Roseville, MN 55113	Electronic Service	No	OFF_SL_20-680_Official
Joe	Hoffman	ja.hoffman@smmpa.org	SMMPA	500 First Ave SW Rochester, MN 55902-3303	Electronic Service	No	OFF_SL_20-680_Official
Michael	Hoppe	lu23@ibew23.org	Local Union 23, I.B.E.W.	445 Etna Street Ste. 61 St. Paul, MN 55106	Electronic Service	No	OFF_SL_20-680_Official
Jan	Hubbard	jan.hubbard@comcast.net		7730 Mississippi Lane Brooklyn Park, MN 55444	Electronic Service	No	OFF_SL_20-680_Official
Geoffrey	Inge	ginge@regintl.com	Regulatory Intelligence LLC	PO Box 270636 Superior, CO 80027-9998	Electronic Service	No	OFF_SL_20-680_Official
Ralph	Jacobson	ralphj@ips-solar.com		2126 Roblyn Avenue Saint Paul, Minnesota 55104	Electronic Service	No	OFF_SL_20-680_Official
Casey	Jacobson	cjacobson@bepc.com	Basin Electric Power Cooperative	1717 East Interstate Avenue Bismarck, ND 58501	Electronic Service	No	OFF_SL_20-680_Official
John S.	Jaffray	jjaffray@jjrpower.com	JJR Power	350 Highway 7 Suite 236 Excelsior, MN 55331	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2950 Yellowtail Ave. Marathon, FL 33050	Electronic Service	No	OFF_SL_20-680_Official
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
Nate	Jones	njones@hcpd.com	Heartland Consumers Power	PO Box 248 Madison, SD 57042	Electronic Service	No	OFF_SL_20-680_Official
Michael	Kampmeyer	mkampmeyer@a-e-group.com	AEG Group, LLC	260 Salem Church Road Sunfish Lake, Minnesota 55118	Electronic Service	No	OFF_SL_20-680_Official
Nick	Kaneski	nick.kaneski@enbridge.com	Enbridge Energy Company, Inc.	11 East Superior St Ste 125 Duluth, MN 55802	Electronic Service	No	OFF_SL_20-680_Official
Brad	Klein	bklein@elpc.org	Environmental Law & Policy Center	35 E. Wacker Drive, Suite 1600 Suite 1600 Chicago, IL 60601	Electronic Service	No	OFF_SL_20-680_Official
Thomas	Koehler	TGK@IBEW160.org	Local Union #160, IBEW	2909 Anthony Ln St Anthony Village, MN 55418-3238	Electronic Service	No	OFF_SL_20-680_Official
Chris	Kopel	chrisk@CMPASgroup.org	Central Minnesota Municipal Power Agency	459 S Grove St Blue Earth, MN 56013-2629	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Brian	Krambeer	bkrambeer@mienergy.coop	MiEnergy Cooperative	PO Box 626 31110 Cooperative Way Rushford, MN 55971	Electronic Service	No	OFF_SL_20-680_Official
Michael	Krause	michaelkrause61@yahoo.com	Kandiyo Consulting, LLC	433 S 7th Street Suite 2025 Minneapolis, Minnesota 55415	Electronic Service	No	OFF_SL_20-680_Official
Michael	Krikava	mkrikava@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
Matthew	Lacey	mlacey@grenergy.com	Great River Energy	12300 Elm Creek Boulevard Maple Grove, MN 553694718	Electronic Service	No	OFF_SL_20-680_Official
Carmel	Laney	carmel.laney@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
James D.	Larson	james.larson@avantenergy.com	Avant Energy Services	220 S 6th St Ste 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.	8300 Norman Center Drive Suite 1000 Bloomington, MN 55437	Electronic Service	No	OFF_SL_20-680_Official
Dean	Leischow	dean@sunrisenrg.com	Sunrise Energy Ventures	315 Manitoba Ave Ste 200 Wayzata, MN 55391	Electronic Service	No	OFF_SL_20-680_Official
Annie	Levenson Falk	annielf@cubminnesota.org	Citizens Utility Board of Minnesota	332 Minnesota Street, Suite W1360 St. Paul, MN 55101	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Ryan	Long	ryan.j.long@xcelenergy.com	Xcel Energy	414 Nicollet Mall 401 8th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_20-680_Official
Susan	Ludwig	sludwig@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_20-680_Official
Kavita	Maini	kmairi@wi.rr.com	KM Energy Consulting, LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_20-680_Official
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_20-680_Official
Mary	Martinka	mary.a.martinka@xcelenergy.com	Xcel Energy Inc	414 Nicollet Mall 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_20-680_Official
Samuel	Mason	smason@beltramelectric.com	Beltrami Electric Cooperative, Inc.	4111 Technology Dr. NW PO Box 488 Bemidji, MN 56619-0488	Electronic Service	No	OFF_SL_20-680_Official
Gregg	Mast	gmast@cleanenergyeconomy.mn.org	Clean Energy Economy Minnesota	4808 10th Avenue S Minneapolis, MN 55417	Electronic Service	No	OFF_SL_20-680_Official
Dave	McNary	David.McNary@hennepin.us	Hennepin County DES	701 Fourth Ave S Ste 700 Minneapolis, MN 55415-1842	Electronic Service	No	OFF_SL_20-680_Official
Thomas	Melone	Thomas.Melone@AllcoUS.com	Minnesota Go Solar LLC	222 South 9th Street Suite 1600 Minneapolis, Minnesota 55120	Electronic Service	No	OFF_SL_20-680_Official
Brian	Meloy	brian.meloy@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Joseph	Meyer	joseph.meyer@ag.state.mn.us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St Paul, MN 55101-2131	Electronic Service	No	OFF_SL_20-680_Official
Stacy	Miller	stacy.miller@minneapolismn.gov	City of Minneapolis	350 S. 5th Street Room M 301 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_20-680_Official
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_20-680_Official
Dalene	Monsebroten	dalene.monsebroten@nmpagency.com	Northern Municipal Power Agency	123 2nd St W Thief River Falls, MN 56701	Electronic Service	No	OFF_SL_20-680_Official
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
Carl	Nelson	cnelson@mncee.org	Center for Energy and Environment	212 3rd Ave N Ste 560 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_20-680_Official
Ben	Nelson	benn@cmpasgroup.org	CMPA	459 South Grove Street Blue Earth, MN 56013	Electronic Service	No	OFF_SL_20-680_Official
Dale	Niezwaag	dniezwaag@bepc.com	Basin Electric Power Cooperative	1717 East Interstate Avenue Bismarck, ND 58503	Electronic Service	No	OFF_SL_20-680_Official
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_20-680_Official
Sephra	Ninow	sephra.ninow@energycenter.org	Center for Sustainable Energy	426 17th Street, Suite 700 Oakland, CA 94612	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Rolf	Nordstrom	rnordstrom@gpisd.net	Great Plains Institute	2801 21ST AVE S STE 220 Minneapolis, MN 55407-1229	Electronic Service	No	OFF_SL_20-680_Official
Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company	200 1st Street SE PO Box 351 Cedar Rapids, IA 524060351	Electronic Service	No	OFF_SL_20-680_Official
David	O'Brien	david.obrien@navigant.com	Navigant Consulting	77 South Bedford St Ste 400 Burlington, MA 01803	Electronic Service	No	OFF_SL_20-680_Official
Jeff	O'Neill	jeff.oneill@ci.monticello.mn.us	City of Monticello	505 Walnut Street Suite 1 Monticello, Minnesota 55362	Electronic Service	No	OFF_SL_20-680_Official
Russell	Olson	rolson@hcpd.com	Heartland Consumers Power District	PO Box 248 Madison, SD 570420248	Electronic Service	No	OFF_SL_20-680_Official
Carol A.	Overland	overland@legalelectric.org	Legalelectric - Overland Law Office	1110 West Avenue Red Wing, MN 55066	Electronic Service	No	OFF_SL_20-680_Official
Dan	Patry	dpatry@sunedison.com	SunEdison	600 Clipper Drive Belmont, CA 94002	Electronic Service	No	OFF_SL_20-680_Official
Jeffrey C	Paulson	jeff.jcplaw@comcast.net	Paulson Law Office, Ltd.	4445 W 77th Street Suite 224 Edina, MN 55435	Electronic Service	No	OFF_SL_20-680_Official
Jennifer	Peterson	jjpeterson@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Hannah	Polikov	hpolikov@aee.net	Advanced Energy Economy Institute	1000 Vermont Ave, Third Floor Washington, DC 20005	Electronic Service	No	OFF_SL_20-680_Official
David G.	Prazak	dprazak@otpc.com	Otter Tail Power Company	P.O. Box 496 215 South Cascade Street Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_20-680_Official
Mark	Rathbun	mrathbun@greenergy.com	Great River Energy	12300 Elm Creek Blvd Maple Grove, MN 55369	Electronic Service	No	OFF_SL_20-680_Official
Michael	Reinertson	michael.reinertson@avanteenergy.com	Avant Energy	220 S. Sixth St. Ste 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_20-680_Official
John C.	Reinhardt	N/A	Laura A. Reinhardt	3552 26th Ave S Minneapolis, MN 55406	Paper Service	No	OFF_SL_20-680_Official
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_20-680_Official
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	OFF_SL_20-680_Official
Isabel	Ricker	ricker@fresh-energy.org	Fresh Energy	408 Saint Peter Street Suite 220 Saint Paul, MN 55102	Electronic Service	No	OFF_SL_20-680_Official
Amanda	Rome	amanda.rome@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 5 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_20-680_Official
Robert K.	Sahr	bsahr@eastriver.coop	East River Electric Power Cooperative	P.O. Box 227 Madison, SD 57042	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	OFF_SL_20-680_Official
Thomas	Scharff	thomas.scharff@versoco.com	Verso Corp	600 High Street Wisconsin Rapids, WI 54495	Electronic Service	No	OFF_SL_20-680_Official
Kay	Schraeder	kschraeder@minnkota.com	Minnkota Power	5301 32nd Ave S Grand Forks, ND 58201	Electronic Service	No	OFF_SL_20-680_Official
Dean	Sedgwick	Sedgwick@Itascapower.com	Itasca Power Company	PO Box 455 Spring Lake, MN 56680	Electronic Service	No	OFF_SL_20-680_Official
Maria	Seidler	maria.seidler@dom.com	Dominion Energy Technology	120 Tredegar Street Richmond, Virginia 23219	Electronic Service	No	OFF_SL_20-680_Official
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_20-680_Official
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN 55423	Electronic Service	Yes	OFF_SL_20-680_Official
Patricia F	Sharkey	psharkey@environmentallawcounsel.com	Midwest Cogeneration Association.	180 N LaSalle St Ste 3700 Chicago, IL 60601	Electronic Service	No	OFF_SL_20-680_Official
Bria	Shea	bria.e.shea@xcelenergy.com	Xcel Energy	414 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Doug	Shoemaker	dougs@charter.net	Minnesota Renewable Energy	2928 5th Ave S Minneapolis, MN 55408	Electronic Service	No	OFF_SL_20-680_Official
Anne	Smart	anne.smart@chargepoint.com	ChargePoint, Inc.	254 E Hacienda Ave Campbell, CA 95008	Electronic Service	No	OFF_SL_20-680_Official
Ken	Smith	ken.smith@ever-greenenergy.com	Ever Green Energy	305 Saint Peter St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_20-680_Official
Joshua	Smith	joshua.smith@sierraclub.org		85 Second St FL 2 San Francisco, California 94105	Electronic Service	No	OFF_SL_20-680_Official
Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.	76 W Kellogg Blvd St. Paul, MN 55102	Electronic Service	No	OFF_SL_20-680_Official
Trevor	Smith	trevor.smith@avantenergy.com	Avant Energy, Inc.	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_20-680_Official
Beth H.	Soholt	bsoholt@windonthewires.org	Wind on the Wires	570 Asbury Street Suite 201 St. Paul, MN 55104	Electronic Service	No	OFF_SL_20-680_Official
Sky	Stanfield	stanfield@smwlaw.com	Shute, Mihaly & Weinberger	396 Hayes Street San Francisco, CA 94102	Electronic Service	No	OFF_SL_20-680_Official
Tom	Stanton	tstanton@nrri.org	NRRI	1080 Carmack Road Columbus, OH 43210	Electronic Service	No	OFF_SL_20-680_Official
Byron E.	Starns	byron.starns@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
James M	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	150 S 5th St Ste 700 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_20-680_Official
Lynnette	Sweet	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	Yes	OFF_SL_20-680_Official
Peter	Teigland	pteigland@mnseia.org	Minnesota Solar Energy Industries Association	2288 University Ave W Saint Paul, MN 55114	Electronic Service	No	OFF_SL_20-680_Official
Stuart	Tommerdahl	stommerdahl@otpc.com	Otter Tail Power Company	215 S Cascade St PO Box 496 Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_20-680_Official
Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD	4445 W 77th Street Suite 224 Edina, MN 55435	Electronic Service	No	OFF_SL_20-680_Official
Lise	Trudeau	lise.trudeau@state.mn.us	Department of Commerce	85 7th Place East Suite 500 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_20-680_Official
Karen	Turnboom	karen.turnboom@versocom.com	Verso Corporation	100 Central Avenue Duluth, MN 55807	Electronic Service	No	OFF_SL_20-680_Official
Thomas	Tynes	jjazynka@energyfreedomcoalition.com	Energy Freedom Coalition of America	101 Constitution Ave NW Ste 525 East Washington, DC 20001	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Lisa	Veith	lisa.veith@ci.stpaul.mn.us	City of St. Paul	400 City Hall and Courthouse 15 West Kellogg Blvd. St. Paul, MN 55102	Electronic Service	No	OFF_SL_20-680_Official
Curt	Volkman	curt@newenergy- advisors.com	Fresh Energy	408 St Peter St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_20-680_Official
Roger	Warehime	roger.warehime@owatonna utilities.com	Owatonna Municipal Public Utilities	208 S Walnut Ave PO BOX 800 Owatonna, MN 55060	Electronic Service	No	OFF_SL_20-680_Official
Jenna	Warmuth	jwarmuth@mnpower.com	Minnesota Power	30 W Superior St Duluth, MN 55802-2093	Electronic Service	No	OFF_SL_20-680_Official
Samantha	Williams	swilliams@nrdc.org	Natural Resources Defense Council	20 N. Wacker Drive Ste 1600 Chicago, IL 60606	Electronic Service	No	OFF_SL_20-680_Official
Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine	225 South Sixth Street, Suite 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official
Robyn	Woeste	robynwoeste@alliantenerg y.com	Interstate Power and Light Company	200 First St SE Cedar Rapids, IA 52401	Electronic Service	No	OFF_SL_20-680_Official
Yochi	Zakai	yzakai@smwlaw.com	SHUTE, MIHALY & WEINBERGER LLP	396 Hayes Street San Francisco, CA 94102	Electronic Service	No	OFF_SL_20-680_Official
Christopher	Zibart	czibart@atcllc.com	American Transmission Company LLC	W234 N2000 Ridgeview Pkwy Court Waukesha, WI 53188-1022	Electronic Service	No	OFF_SL_20-680_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Patrick	Zomer	Pat.Zomer@lawmoss.com	Moss & Barnett PA	150 S 5th St #1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-680_Official