

March 17, 2020

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

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E002/M-19-666

Dear Mr. Seuffert:

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

Xcel Energy's Integrated Distribution Plan (IDP) and Advanced Grid Intelligence and Security Certification Request.

As discussed in the attached comments, the Department provides its response to the Minnesota Public Utilities Commission's (Commission) December 31, 2019 *Notice of Comment Period In the Matter of Xcel Energy's Integrated Distribution Plan and Advanced Grid Intelligence and Security Certification Request*.

The Department recommends that the Commission accept Xcel Energy's IDP Report, recommends annual updates of a subset of IDP requirements and referral of Xcel Energy's Advanced Grid Intelligence System certification request to a contested case hearing. The Department takes no position on certification of the Advanced Distribution Planning Tool (APT) or other grid modernization investments at this time, due to the reasons contained herein, and will reevaluate upon further record development. The Department is available to respond to any questions the Commission may have on this matter.

Sincerely,

/s/ MATTHEW LANDI
Rates Analyst

/s/ TRICIA DEBLEECKERE
Planning Director

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Attachment



Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. E002/M-19-666

I. INTRODUCTION AND BACKGROUND

A. OVERVIEW

On November 1, 2019, Northern States Power Company, d/b/a Xcel Energy (Xcel, Xcel Energy, or the Company) filed its 2019 Integrated Distribution Plan (IDP) as required by the Minnesota Public Utility Commission's (Commission) July 16, 2019 Order in Docket No. E002/CI-18-251 (the Order).¹ 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).² The AGIS Initiative includes Advanced Metering Infrastructure (AMI), a Field Area Network (FAN), Fault Location and Isolation Service Restoration (FLISR), an Integrated Volt-Var Optimization (IVVO).

The Company anticipates incurring capital expenditures totaling \$582 million and operation & maintenance (O&M) costs totaling \$152 million for the overall AGIS Initiative (exclusive of Advanced Distribution Management System or ADMS) from 2020-2029.³ The APT is expected to cost \$9.3 million in total, with \$4 million attributed to Northern States Power-Minnesota (NSPM), and minimal ongoing costs for the annual software hosting fee and internal maintenance.⁴

On December 31, 2019, the Commission issued a *Notice of Comment Period* (Notice). The Notice reaffirmed the purpose of the Commission's IDP filing requirements:

- Maintain and enhance the safety, security, reliability, and resilience of the electric grid, at fair and reasonable costs, consistent with the state's energy policies;
- Enable greater customer engagement, empowerment, and options for energy services;
- Move toward the creation of efficient, cost-effective, accessible grid platforms for new products, new services, and opportunities for adoption of new distributed technologies;
- Ensure optimized utilization of electricity grid assets and resources to minimize total system costs; and

¹ [Order Accepting Report, and Amending Requirements](#), dated July 16, 2019, Docket No. E002/CI-18-251.

² [Xcel 2019 IDP](#), dated November 1, 2019, Docket No. E002/M-19-666.

³ IDP, at 153-154.

⁴ IDP Executive Summary, at 11-12.

- Provide the Commission with the information necessary to understand the utility's short-term and long-term distribution-system plans, the costs and benefits of the specific investments, and a comprehensive analysis of ratepayer cost and value.

The Commission's Notice included the following topics related to Xcel Energy's 2019 IDP:

1. Should the Commission accept or reject Xcel Energy's Integrated Distribution Plan (IDP)?
2. Does the IDP filed by Xcel Energy achieve the planning objectives in the filing requirements approved in the Commission's July 16, 2019 Order [footnote omitted]?
3. What IDP filing requirements provided the most value to the process and why?
4. Are there filing requirements that are not informative and/or should be deleted or modified, and why?
5. Should the Commission accept Xcel Energy's request to file the next IDP no later than November 1, 2021? Should the Commission move from an annual to biennial IDP filing for the Company going forward?
6. Are there other issues or concerns related to this matter?

The Commission's Notice also included the following topics related to Xcel Energy's certification requests:

7. Should the Commission approve, modify, or deny certification of the following investments which are components of Xcel Energy's Advanced Grid Intelligence and Security (AGIS) Initiative at this time:
 - a. Advanced Metering Infrastructure (AMI)
 - b. Field Area Network (FAN)
 - c. Fault Location, Isolation, and Service Restoration (FLISR)
 - d. Integrated Volt-Var Optimization (IVVO)
8. Should the Commission certify the Advanced Distribution Planning Tool (APT) at this time?
9. What, if anything, should the Commission set as conditions or clarify if granting certification of these distribution projects?
10. What should the Commission consider or address related to realizing benefits of each of the investments in the Company's AGIS Initiative for ratepayers?
11. At the stage of certification, what consideration should the Commission give to subsequent cost recovery, via either the Transmission Cost Recovery rider or general rate case, for each of the AGIS investments?
12. Are there any other issues or concerns related to this matter?

B. SUMMARY OF PETITION AND CERTIFICATION REQUEST

1. Xcel's 2019 IDP

Xcel's 2019 IDP covers a broad range of topics related to its internal distribution system planning processes, historical actual and budgeted capital expenditures, present and forecasted levels of distributed energy resources (DER), forecasting levels of demand, and non-wires alternatives (NWA) analysis. The 2019 IDP also addresses the requirements outlined by the Commission's Order.

The IDP is intended to build upon Commission, stakeholder, and customer understanding of the Company's planning in two key areas: (1) development of a framework for on-going distribution system planning and related analyses and (2) grid modernization implementation plans.

The Department below offers a brief review of the data and information contained in the IDP.

a.) Baseline Data

i. Baseline System Data

The 2019 IDP provided information on Xcel's distribution system as it exists today and includes the percentage of substations and feeders with monitoring and control capabilities, existing system visibility and measurement, total distribution substation capacity, total miles of overhead and underground distribution line, and total system DER.⁵

ii. Baseline Financial Data

The 2019 IDP provided information on historic distribution capital projects, among other information. Xcel discussed its baseline financial data on historic and current distribution spend,⁶ budgets,⁷ and the internal process used for developing budgets.⁸ The IDP outlined a five-year historical distribution system capital profile, and a five-year budgeted capital profile. Xcel explained that their capital projects fall into eight capital budgeting groups including (1) Asset Health and Reliability; (2) AGIS (3) New Business; (4) Capacity; (5) Mandates; (6) Tools and Equipment; and (7) Electric Vehicle Program; and (8) Solar Gardens, and that Xcel is able to report those figures according to the categorization required by IDP requirements, but is unable to do so for O&M costs.⁹ Xcel tracks distribution O&M expenditures in four categories: (1) internal labor, (2) contract labor, (3) fleet, and (4) materials.¹⁰ Xcel also stated that O&M information is portrayed at the NSPM operating company level and the capital costs are for the State of Minnesota, and are not fully comparable.¹¹

⁵ IDP, at 36-47.

⁶ IDP, Figure 6, at 16; Figure 8, at 20; and Table 8, at 20.

⁷ IDP, Figure 7, at 16; Table 7, at 17; Figure 9, at 21; and Table 9, at 22.

⁸ IDP, at 27-36.

⁹ IDP, at 14.

¹⁰ IDP, at 19

¹¹ IDP, at 19.

iii. Baseline DER Data

The 2019 IDP noted that Xcel's DER penetration is still low and is anticipated to remain relatively stable in the near-term.¹² Xcel provided information about its baseline DER data on pages 186 through 192 of the IDP.

b.) Hosting Capacity and Interconnection Data

Xcel is required to file a Hosting Capacity Analysis (HCA) report by statute, Minn. Stat. § 2168.2425, subd. 8. Xcel's Hosting capacity report was filed on November 1, 2019 in Docket No. E-002/M-19-685.

c.) DER Scenario Analysis

The IDP filing requirements asked that Xcel define and develop conceptual base-case, medium and high DER penetration scenarios on its system. The requirements asked that: 1) Xcel consider a mix of individual DER adoption and aggregated or bundled DER service types, that Xcel explain the methodologies and processes used to arrive at its forecasts, and assess future system needs to accommodate DER at the projected levels.

Xcel explained that its DER planning capabilities are being enhanced through foundational advanced grid capabilities and implementation of the APT:¹³

The APT will change and improve the way we incorporate DER into our load forecasts. Through forecast aggregation, the tool can apply forecasts for various DER adoption trends to the distribution load forecasting, allowing distribution planning [*sic*] understand the potential impact that DER adoption could have on the load forecast. These forecasts can also be disaggregated from the load forecast, to show how the native load on the distribution system is expected to change over time in the absence of DER.

The APT also provides the ability to conduct scenario analysis against the load forecast, where multiple forecasts can be developed that represent sensitivities in the forecast. For example, scenarios can be implemented in the forecast to account for different possible DER adoption trends – varying, as defined by the user, to represent higher rates of DER adoption, or lower rates of DER adoption over time.

The ability of the APT to aggregate DER forecasts into the load forecast, then run scenario analysis against those forecasts, will greatly expand distribution planning's understanding of the impact that DER has on the load forecast. Whereas today with our current tools we aren't able to factor DER impacts into our load forecast, the APT will enable us to analyze

¹² IDP Executive Summary, at 19; IDP, at 182.

¹³ IDP, at 182.

DER impacts in a probabilistic nature that will better inform our risk analysis and project development processes.

Xcel provided its DER forecast on pages 194 through 208, and included forecasts of distributed solar PV, distributed wind generation, distributed energy storage, energy efficiency, demand response, and electric vehicles.

d.) Non-Wires (Non-Traditional) Alternatives Analysis

Xcel stated that non-wires alternatives (NWA) are a relatively new concept, but there has been a rise in the number of projects implemented nationwide, and states with high DER penetrations and/or aggressive regulatory reform (such as New York, California, Oregon, and Arizona) are leading the way.¹⁴

Xcel stated that NWA implementation and deployment solutions currently require a disparate set of systems, making an NWA a custom, one-off solution requiring extensive oversight and management.¹⁵

Xcel considered mandated, asset health, and capacity projects as NWAs, but rejected NWAs for mandated and asset health types of projects at the present time, as keeping customers connected to the grid is a major concern.¹⁶ Additionally, mandated projects are often in response to municipal and state funding availability, and the project timelines preclude NWA analysis.¹⁷

Xcel provided an overview of why capacity projects best lend themselves to non-wire solutions, noting that project lead time to conduct a non-wire review is currently about three years.¹⁸ Xcel also described the screening criteria the Company used to consider NWAs. Xcel indicated that capacity risks are likely best suited for NWAs. Capacity risk categories include N-0, which are normal overloads that occur under system intact conditions,¹⁹ and N-1, which are overloads that occur when, for loss of a feeder, feeder load is transferred away to adjacent feeders.²⁰ Xcel indicated that N-1 risks are not considered viable for NWAs due to present cost-competitive issues with comparable traditional solutions.²¹

Xcel provided details about its NWA screen process on pages 96 through 98. Xcel identified nine capacity projects exceeding \$2 million within the three-year timeline currently needed to consider NWAs. None of the projects were cost-competitive with traditional solutions, some did not fully solve all of the risks that the traditional solution solved, and some solutions solved risks up to 100 percent of

¹⁴ IDP, at 90.

¹⁵ IDP, at 90.

¹⁶ IDP, at 91.

¹⁷ IDP, at 91-92.

¹⁸ IDP, at 95-96.

¹⁹ IDP, at 93.

²⁰ IDP, at 94.

²¹ IDP, at 95.

the capacity rating, meaning that any new load growth would create the need for an expanded or new NWA solution.²²

Xcel indicated that the proposed APT will be able to help better assess NWAs, and that it was working with EPRI and others in the industry to build a tool capable of evaluating different alternatives in a model-based format but that such a tool may be years away.²³

e.) Incremental System Investment (ISI) Initiative

Xcel also provided information on its Incremental System Investment (ISI) Initiative (previously referred to as its Incremental Customer Investment Initiative) as required by the Commission's Order. Xcel stated that the ISI is driven by the need to improve reliability of the elements of the system that are closest to the customer and to provide infrastructure to support increased DER integration.²⁴ More specifically, the ISI initiative is expected to expand both existing asset health programs and create new programs to address areas of the system that have not traditionally received much focus, but are increasingly important or likely to be important to enhance the safety, reliability, and resiliency of the system while also enabling customer choice and the adoption of DERs.²⁵

The ISI Initiative is divided into four main programs: substation, underground, overhead tap, and overhead mainline.²⁶ The capital costs of the ISI are expected to be approximately \$81 million in 2021, and \$88 million each year from 2022 through 2024; O&M costs are expected to be approximately \$1.5 million per year for each year from 2021 through 2024.²⁷

2. Certification Request

Xcel requested certification of its proposed AGIS Initiative and APT pursuant to Minn. Stat. §216B.2425 subd. 2 (e), which states:

...a utility operating under a multiyear rate plan approved by the commission under section 216B.16, subdivision 19, shall identify in its report investments that it considers necessary to modernize the transmission and distribution system by enhancing reliability, improving security against cyber and physical threats, and by increasing energy conservation opportunities by facilitating communication between the utility and its customers through the use of two-way meters, control technologies, energy storage and microgrids, technologies to enable demand response, and other innovative technologies.

²² IDP, at 99-100.

²³ IDP, at 98.

²⁴ IDP, at 107.

²⁵ IDP, at 108.

²⁶ IDP, at 108.

²⁷ IDP, Table 25, at 108; IDP, Table 26, at 109.

Minn. Stat. §216B.2425, subd. 3 further states that, by June 1, the Commission shall certify, certify as modified or deny certification of distribution projects proposed under subdivision 2(e). Minn. Stat. §216B.16, Subd. 7b (a)(1) states that the Commission may approve a tariff mechanism for the automatic annual adjustment of charges for the Minnesota jurisdictional costs net of associated revenues of new “distribution facilities that are certified as a priority project...under section 216B.2425.”

Further, Minn. Stat §216B.16, subd.7b (b) allows the Commission to approve, reject, or modify after notice and comment, a tariff that:

- (1) Allows the utility to recover on a timely basis the costs net of revenues...certified or deemed to be certified under section 216B.2425...;
- (4) Allows the utility to recover costs associated with distribution planning required under section 216B.2425;
- (5) 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 section 216B.2425.

Tables 1 and 2 below summarize the capital and O&M costs of the AGIS Initiative from 2020-2029.

Table 1. Total AGIS Capital Expenditures, 2020-2029 (millions)

AGIS Initiative	Rate Case Period			5-Year Period	10-Year Period	TOTAL
	2020	2021	2022	2023-2024	2025-2029	
AMI	\$14.00	\$28.90	\$144.00	\$185.20	\$15.00	\$387.10
FAN	\$14.70	\$37.30	\$36.80	\$3.80	\$-	\$92.60
FLISR	\$3.50	\$8.60	\$6.60	\$18.80	\$29.70	\$67.20
IVVO	\$0.10	\$6.50	\$9.80	\$18.60	\$-	\$35.00
TOTAL	\$32.30	\$81.30	\$197.20	\$226.40	\$44.70	\$581.90

Table 2. Total AGIS O&M Expenditures, 2020-2029 (millions)

AGIS Initiative	Rate Case Period			5-Year Period	10-Year Period	TOTAL
	2020	2021	2022	2023-2024	2025-2029	
AMI	\$6.60	\$16.40	\$14.10	\$25.20	\$67.20	\$129.50
FAN	\$0.10	\$2.30	\$1.50	\$0.50	\$8.60	\$13.00
FLISR	\$0.20	\$0.40	\$0.30	\$3.30	\$2.50	\$6.70
IVVO	\$-	\$0.40	\$0.80	\$0.60	\$0.80	\$2.60
TOTAL	\$6.90	\$19.50	\$16.70	\$29.60	\$79.10	\$151.80

The Company proposed the AGIS Initiative to modernize its distribution system through making investments in foundational and core systems that will expand its technical capabilities and transform the customer experience through the creation of new customer platforms and the provision of new customer services. The AGIS Initiative is comprised of four foundational advanced grid capabilities, and are described by Xcel as follows:²⁸

- *Field Area Network (FAN)*. A private, secure two-way communication network that provides wireless communications across Xcel Energy's service area – to, from, and among, field devices and our information systems.
- *Advanced Metering Infrastructure (AMI)*. AMI is an integrated system of advanced meters, communication networks, and data processing and management systems that is capable of secure two-way communication between Xcel Energy's business and operational data systems and customer meters.
- *Fault Location, Isolation, and Service Restoration (FLISR)*. A form of distribution automation that involves the deployment of automated switching devices that work to detect issues on our system, isolate them, and restore power, thereby decreasing the duration of and number of customers affected an outage.
- *Integrated Volt Var Optimization (IVVO)*. An application that uses selected field devices to decrease system losses and optimize voltage as power travels from substations to customers.

Xcel stated that these foundational advanced grid capabilities are expected to produce three outcomes: (1) a transformed customer experience, (2) improved core operations, and (3) facilitation of future capabilities.²⁹ Xcel explained that drivers of the AGIS Initiative include the following:³⁰

- The Company's strategic priorities to lead the clean energy transition, enhance the customer experience, and keep bills affordable;
- The Company's desire to meet the growing needs and expectations of our customers;
- Current distribution system needs; and
- Commission policy and direction, and stakeholder input relative to customer offerings, performance, and technological capabilities of the grid.

²⁸ IDP Executive Summary, at 5.

²⁹ IDP Executive Summary, at 5-8.

³⁰ IDP, at 147-148.

Xcel provided specific information related to the AGIS Initiative in Attachments M1 through M5 in the Direct Testimony of Company witnesses Mr. Duggirala, Mr. Gersack, Ms. Bloch, Mr. Cardenas, and Mr. Harkness.³¹ This direct testimony is from Xcel's now withdrawn 2019 rate case filed in Docket No. E002/GR-19-564. These attachments also detail Xcel's cost-benefit analysis (CBA) of the AGIS Initiative as a whole, including individual components.

Overall, Xcel represented that the benefit-cost (BC) ratio of the AGIS Initiative has a baseline of 0.87 and ranges from 0.86 (low benefit/contingency) to 1.03 (high benefit/no contingency).³² Xcel did not conduct a CBA on the FAN component of the AGIS Initiative, explaining that the FAN component "in and of itself, does not provide direct benefits to customers or the Company."³³

Xcel witness Ravikrishna Duggirala provided the following BC ratio summary of the AGIS Initiative:³⁴

Table 3. Range of AGIS Benefit-to-Cost Ratios (Includes allocated components of FAN)

	Low Sensitivity <i>IVVO 1.0% Energy Savings, w/ Contingency</i>	Baseline <i>IVVO 1.25% Energy Savings, w/ Contingency</i>	High Sensitivity <i>IVVO 1.5% Energy Savings, No Contingency</i>
AMI	0.83	0.83	0.99
FLISR	1.31	1.31	1.53
IVVO	0.46	0.57	0.72
Overall AGIS	0.86	0.87	1.03

In addition to the AGIS Initiative, Xcel requested certification of its Advanced Distribution Planning Tool (APT). Xcel explained that its proposed APT will enable the Company to meet its planning and regulatory requirements, resulting in incremental benefits for customers.³⁵ Specifically, Xcel expects that the APT will enable more granular and robust load and DER scenario analysis and NWA analysis.³⁶ Xcel stated that it expects the total NSPM-specific costs to amount to approximately \$4.0 million in 2020, and that most of the costs would be capital expenses, though there would be minimal O&M-related costs that recur each year including the cost of the hosting server and internal Company support, but that the maintenance costs for the APT are expected to be lower than those for the current tool.³⁷

³¹ IDP, at 166-167.

³² IDP, at 156.

³³ IDP, Att. M3, Harkness Direct (from Docket No. E002/M-19-564), at 89 of 143. The FAN is "the primary communication network for many of the AGIS component to communicate with each other..." (*Id.*, at 87 of 143).

³⁴ IDP, Att. M5, Duggirala Direct (from Docket No. E002/GR-19-564), at 6 of 161.

³⁵ IDP Executive Summary, at 11.

³⁶ IDP Executive Summary, at 11.

³⁷ IDP, at 87-88.

II. DEPARTMENT ANALYSIS

The analysis of the Minnesota Department of Commerce, Division of Energy Resources (Department) that follows is framed in response to the Commission's Notice.

A. ANALYSIS OF XCEL'S 2019 IDP

1. Commission Acceptance of Xcel Energy's IDP

At present, the Department interprets the question of whether to accept a utility's IDP as a question of whether the utility's IDP contains the information and data required by the IDP Requirements and in light of the Commission's previous order(s). The Department's analysis of whether to accept an IDP therefore looks to whether Xcel addressed each of its IDP Requirements as modified by the Commission's July 16, 2019 Order and whether Xcel provided additional information related to the Order.

Xcel provided a Compliance Matrix in Attachment A2 of its 2019 IDP. This Compliance Matrix includes a description of each of the IDP Requirements, the requirements imposed on Xcel's 2019 IDP by the Order, and where in Xcel's IDP information related to those requirements can be found. The Department reviewed Xcel's Compliance Matrix and the relevant portions of its 2019 IDP. The Department concludes that Xcel provided information relevant to the IDP Requirements and the Order.

The Department appreciates the Company's considerable efforts in compiling this report and complying with the IDP Requirements and the Commission's Order. **The Department recommends that the Commission accept Xcel Energy's 2019 IDP compliance with reporting requirements. (Recommendation 1)**

2. Xcel Energy's IDP and the Planning Objectives of the Commission's Order

Order Point #5 of the Commission's July 16, 2019 Order requires Xcel to do the following:

Xcel shall discuss in future filings how the IDP meets the Commission's Planning Objectives, including:

- A. An analysis of how information presented in the IDP related to each Planning Objective;
- B. The location in the IDP;
- C. Analysis of efforts taken by the Company to improve upon the fulfillment of the Planning Objectives; and
- D. Suggestions as to any refinements to the IDP filing requirements that would enhance Xcel's ability to meet the Planning Objectives.

Xcel provided a detailed response to Order Point #5 in Attachment B of its 2019 IDP. Attachment B includes a detailed explanation of how the information presented in its IDP related to each of the Commission's Planning Objective, where in the IDP that information can be found, efforts taken by the Company to provide the Commission and stakeholders with additional information related to the Planning Objectives, and a suggestion to move to a biennial filing cadence as a means to enhance its ability to meet the Planning Objectives.

The Department's review of Attachment B found that each of the Planning Objectives were addressed: Xcel analyzed how information presented in the IDP relates to each Planning Objective. In Table 1 of Attachment B, Xcel provided the location of the topics of the first Planning Objective to the location in the IDP. Xcel discussed how the second Planning Objective (to enable greater customer engagement, empowerment, and options for energy services) is extensively discussed in its IDP, especially as it relates to its AGIS Initiative and to its Grid Modernization and Customer Strategy discussed in Sections IX and X, respectively. Xcel then pointed out how interrelated the second and third Planning Objectives are: "our description of our AGIS initiative...provides information and discussion relevant to the third planning objective."³⁸ The Department's review of Sections IX and X of Xcel's IDP support Xcel's position that those sections also discuss the third Planning Objective. Section XIII, entitled Existing and Potential New Grid Modernization Pilots, also discusses the third Planning Objective, as those pilots could lead to new platforms for new products, services, and opportunities for adoption of new distributed technologies.

The fourth Planning Objective is designed to ensure optimized utilization of electricity grid assets and resources to minimize total system costs. The Department is not positioned to evaluate whether Xcel's IDP is optimally utilizing its assets to minimize costs at this time. The Department expects that the fourth Planning Objective would become actualized over time through the expansion of Xcel's ability to analyze non-wires alternatives (NWA) and through the Company's ability to provide more detailed information related to alternatives to Xcel's stated plans for distribution system upgrades and investments and grid modernization plans, and through its cost-benefit analyses that more explicitly consider these alternatives. At this time, the Department notes that Xcel's NWA analysis and its planning efforts related to distributed energy resources (DERs) are conceivable paths to optimized utilization of existing assets, as NWAs and DERs have the potential to defray capital investments and lead to more cost-effective solutions. Toward that end, the Company's discussion of the Advanced Planning Tool (APT) includes a description of how the APT can help Xcel conduct load and DER scenario analyses and NWA analyses.³⁹ While the APT represents an investment of \$4.0 million, if the tool leads to ratepayer benefit by helping the Company defray capital investments through cost-effective NWA analysis and implementation, the fourth Planning Objective can be actualized in future IDPs and subsequent Company efforts.

³⁸ IDP, Att. B, at 5.

³⁹ IDP, at 11, 98.

Additionally, investments and efforts related to the distribution system that prolong the serviceable life of distribution system equipment and enhance the efficient deliverability of energy can also fulfill the purpose of the fourth Planning Objective. Xcel's FLISR proposal, for instance, is intended to automate restoration of service outages or otherwise help facilitate a more timely and efficient restoration of service.⁴⁰ While the Department is not in a position to evaluate the specific costs and benefits of this proposal at this time, such a proposal, in theory, can help fulfill the intent of the fourth Planning Objective.

The fifth Planning Objective relates to whether the IDP provides the Commission with the information necessary to understand Xcel's short-term and long-term distribution system plans, the costs and benefits of specific alternatives, and a comprehensive analysis of ratepayer cost and value. Xcel indicated that it provided a significant amount of information related to the fifth Planning Objective. The Department confirms that this information was provided in the IDP, though the Department defers to the Commission as to whether the information provided was sufficiently comprehensive.

The Department concludes that the information contained in the IDP Report is relevant to the Commission's planning objectives and contains a sufficient amount of information to assess whether outcomes that the planning objectives articulate can materialize over time.

3. Filing Requirements Providing the Most Value

In general, the Department's position regarding distribution system planning has focused on three overarching themes: (1) distribution system planning should itself be cost-effective and lead to outcomes that are also cost-effective; (2) distribution system planning reporting should correct a historic, long-term information asymmetry between regulators and utilities; and (3) IDP requirements between utilities should be consistent to the greatest extent practicable.

IDP requirements that are responsive to these three themes are ones that the Department supports in principle. In practice, however, there exists the possibility that specific IDP requirements may be ineffective, superfluous, or worse, contravene the intent of distribution system planning and create opportunities for utilities to justify unnecessary expenditures of ratepayer funds.

Xcel has now filed its second IDP. At this stage, it may be possible to make a preliminary determination of which IDP Requirements provide the most value. The Department affirms, however, that it is important to ensure that IDP requirements and investments are reasonable and expected to lead to greater technical or economic efficiencies that are demonstrably beneficial to ratepayers and in the public interest.

⁴⁰ IDP Executive Summary, at 5; IDP, at 44, 147-148, Att. M2, Direct Testimony of Ms. Kelly Bloch, Section V(F), Att. M3, Direct Testimony of Mr. David Harkness, Section V(E)(5).

Toward that end, sections of Xcel's IDP related to cost-benefit analyses of distribution system investments, historical and projected budgeting processes, NWA analysis, and Xcel's approach to system planning seem to be valuable. They help stakeholders understand how Xcel plans for its system and correct the historic information asymmetry between utilities and the regulatory stakeholder community, what various costs and benefits are, and help provide insight into whether and how Xcel can defray capital investments that are costly to ratepayers.

The Department maintains that an important focus for Xcel and other stakeholders should be on the "low-hanging fruit" of the distribution system: improvements that are likely to be beneficial to ratepayers regardless of the speed or scale of the technological change affecting the distribution system. These "no regrets" policies are demonstrably positive for ratepayers and utilities, and could result in better technical and economic efficiencies, and would not preclude even more beneficial outcomes (i.e. any action or investment avoids any lock-in effects). The Department expects to be able to assess which IDP Requirements are most beneficial and lead to a focus on the "low-hanging fruit" as the IDP process evolves and future iterations are made.

4. Filing Requirements that Require Modification or Deletion

The fourth topic of the Commission's Notice asks whether there are any filing requirements that are not informative and/or should be deleted or modified, and asks stakeholders to explain why.

At this time, the Department does not have any recommendations related to the modification, addition, or deletion of IDP filing requirements.

5. IDP Filing Cadence

The fifth topic of the Commission's Notice asks whether the Commission should accept Xcel Energy's request to file the next IDP no later than November 1, 2021, and move from an annual to biennial IDP filing for the Company going forward.

Xcel stated the following in support of its request:⁴¹

We believe a biennial filing would better allow time to fully engage with stakeholders on the Commission's planning objectives between IDP filings, as well as to address important issues such as distributed energy resources (DER) planning, a comprehensive approach to non-wire alternatives (NWA), and our advanced grid plans. The present annual filing schedule also does not allow the Company to make significant, meaningful progress on its objectives between these extensive filings.

The Department notes that Xcel also stated that a biennial filing cadence is consistent with other Minnesota utilities and the grid modernization statute filing requirements.⁴²

⁴¹ IDP Cover Letter, at 3-4.

⁴² IDP Executive Summary, at 22.

The Department supports Xcel's request, but requests that Xcel provide, in reply comments, an explanation as to whether an annual update regarding the following aspects of the IDP are feasible:

- Baseline Financial Data, IDP Requirements 3.A.26-30;
- Non-Wires (Non-Traditional) Alternatives Analysis, IDP Requirements E.1-2.

Additionally, the Department requests that Xcel provide, in reply comments, whether it is reasonable to provide a narrative explanation of the differences between the new IDP filing and the previous IDP filing to help focus stakeholder review.

For instance, the Department notes that some elements of the 2019 IDP are identical to the 2018 IDP (e.g., substantial portions of the Executive Summary were carried over from the 2018 IDP into the 2019 IDP). The Department did not perform a careful textual analysis comparing all elements of the 2018 and 2019 IDPs, but expresses concern that some elements of the IDP may become superfluous over time if such practices continue. While this concern may be mitigated if a biennial cadence is adopted, the Department concludes that it would nevertheless be helpful for stakeholders and the Commission if Xcel provided an overview and explanation of what changes were made to the IDP between filings, if any. This explanation could be filed in the annual update, or included as a separate introductory section in subsequent IDP filings.

As a preliminary manner, the Department makes the following recommendation, subject to Xcel's response:

The Department recommends that the Commission require Xcel to file its next IDP no later than November 1, 2021 and move from an annual to biennial IDP filing going forward, but to file an annual update of the following IDP requirements and provide the following information:

- **Baseline Financial Data, IDP Requirements 3.A.26-30; and**
- **Non-Wires (Non-Traditional) Alternatives Analysis, IDP Requirements E.1-2. (Recommendation 2)**

The Department views a biennial filing cadence with annual updates of financial and NWA analysis information as a potentially optimal path forward, as the Department views the IDP requirements related to financial data and NWA analysis as helpful in understanding how ratepayer funds are spent on the distribution system and due to the potential to defer utility investments in capital assets.

6. Other Issues

The sixth topic of the Commission's Notice asks whether there are other issues or concerns related to this matter.

The Department does not have any other issues or concerns related to this matter at this time.

B. AGIS AND APT CERTIFICATION ANALYSIS

1. Background on Certification

As discussed above, certification, under the distribution grid modernization provision (under the Biennial Transmission Projects Statute) requires Xcel on a biennial basis to identify grid modernization projects that are necessary to modernization the distribution system.⁴³

The statute requires that the Commission certify, certify as modified, or deny certification of the transmission and distribution projects proposed under subdivision 2 by June 1 the following year. The statute provides three findings that that the Commission must make when certifying a transmission project, however, that statute does not provide (any) findings the Commission should consider when certifying a distribution system project.⁴⁴ Therefore, there is no statutory guidance on what certification means in the context of a distribution system modernization project nor what the Commission should consider in certification. No rules on this statute have been promulgated.⁴⁵

In 2015, at the same time the Legislature amended Minn. Stat. §216B.2425 to add distribution-planning provisions, it amended Minn. Stat. §216B.16, subdivision 7b to allow for rider recovery of the above-mentioned distribution costs following notice, comment, and Commission approval.⁴⁶ Costs could still be recovered through a general rate case in lieu of the rider, providing Xcel optionality. As amended, subdivision 7b allows for transmission rider recovery of jurisdictional costs net of associated revenues of (partial list):

- projects approved by the Commission under Minn. Stat. 216B.243 (certificate of need) or transmission or distribution facilities that are certified as a priority projects under section 216B.2425;⁴⁷
- costs associated with distribution planning required under section 216B.2425; and
- costs associated with investments in distribution facilities to modernize the utility's grid that have been certified by the Commission under section 216B.2425.⁴⁸

⁴³ Minn. Stat. §216B.2425 Subd. 2 (e) and Subd. 3.

⁴⁴ Minn. Stat. §216B.2425, Subd. 2(e) and Subd. 3.: 1) that [the transmission project] is necessary to maintain reliability, 2) it is needed pursuant to certificate of need statutes, and 3) is generally in the public interest.

⁴⁵ Several parties (Department, Office of the Attorney General) advocated for the Commission to initiate a rulemaking on this topic in Docket No. E002/M-15-962 when the certification question was first before the Commission.

⁴⁶ Minn. Stat. §216B.16, Subd. 7b.

⁴⁷ The term "priority" is not used in Minn. Stat. §216B.2425 other than to refer to transmission projects.

⁴⁸ Minn. Stat. §216B.16, Subd. 7b(b)(5).

To date, Xcel has made three certification requests, including six projects:

- 2015: Advanced Data Management System (ADMS) and the Belle Plaine Battery Project⁴⁹
- 2017: Time of Use (TOU) Pilot and FLISR⁵⁰
- 2019: Advanced Grid Intelligence System (AGIS) and an Advanced Planning Tool (APT)⁵¹

Of the six projects, only the ADMS and the TOU Pilot were certified by the Commission.^{52,53}

In the original 2015 ADMS Certification Petition, Xcel explained the scope of the ADMS Project:⁵⁴

As we work to implement ADMS, we currently plan to deploy the short-term applications at each of our operating companies Our initial roll out will encompass the following installations, analysis, and training:

- *Unbalanced State Estimation ...*
- *Fault Location Prediction ...*
- *Fault Location, Isolation and Service Restoration ...*
- *Integrated Voltage & VAr Optimization ...*
- *Distributed Energy Resource Monitoring ...*
- *Study Mode & Engineering Analysis ...*
- *Operator Training Simulator*

Xcel Energy noted in the 2015 ADMS Certification Petition its cost estimate (at the time of the October 30, 2015 filing) was:⁵⁵

[Nine] million per year in 2016, 2017, and 2018 to implement the initial roll out of ADMS with additional funding necessary for added functionality after these years. These initial cost estimates are based on preliminary vendor cost estimates and industry partner experience. We will submit more thorough documentation along with our cost recovery request next fall upon certification of this project.

⁴⁹ Docket No. E002/M-15-962.

⁵⁰ Docket No. E002/M-17-775 and M-17-776.

⁵¹ Docket No. E002/M-19-666 (Instant Petition).

⁵² [Order Certifying Advanced Distribution-Management System \(ADMS\) Project Under Minn. Stat. §216B.2425 and Requiring Distribution Study](#) (2015 ADMS Certification Petition), dated June 28, 2016, Docket E002/M-15-962; and [Order Approving Pilot Program, Setting Reporting Requirements, and Denying Certification Request](#), dated August 7, 2018, Docket Nos. E002/M-17-775 and E002/M-17-776.

⁵³ The TOU Pilot was certified with the understanding that Xcel would seek TOU Pilot cost recovery in the next TCR. However, in the latest IDP, Xcel noted that the TOU costs are expected to be recovered in the next rate case. (See *IDP*, at 162).

⁵⁴ Xcel Energy [2015 ADMS Certification Petition](#), dated October 30, 2015, Docket E002/M-15-962, at 13-14. The implementation dates noted in Xcel's 2015 IDP have been modified and are currently set for 2020 per the 2019 IDP, see below.

⁵⁵ 2015 ADMS Certification Petition, at 14-15.

During the comment period on the 2015 ADMS Certification Petition, parties argued in depth over what certification may mean and what level of information should be provided (either at the certification stage or at the cost recovery petition).⁵⁶ Xcel argued in response to these comments that the Commission should not delay a decision on whether to certify the ADMS, and it should look to how it certifies transmission projects for rider inclusion, in that the Commission determines whether the project meets the statutory requirements and whether the project would be eligible for cost recovery. Xcel noted that its preliminary cost estimates of the ADMS should not prevent the project from being certified since the Commission would retain oversight of the project costs through the annual Transmission Cost Recovery (TCR) Rider process.⁵⁷ Additionally, in response to several parties' concerns that its proposal did not contain enough information about incremental costs, Xcel Energy indicated that such levels of detail were more appropriate for its [2017 TCR Rider] cost recovery filing.⁵⁸

Ultimately, the Commission provided in its 2015 ADMS Certification Order some information on what it deemed certification to mean:⁵⁹

The Commission clarifies that its decision to certify the ADMS project does not imply any decision regarding recovery of the project's costs. The Commission's decision represents only a finding that the project is consistent with the requirements of section 216B.2425. Any rider recovery of costs associated with the project will be determined in response to a petition for rider recovery of those costs under Minn. Stat. § 216B.16, subd. 7b. At that time, Xcel Energy will have the burden of establishing the prudence of the costs it requests to recover through the TCR Rider.

Following in November 2017, Xcel petitioned for cost recovery of \$69.1 million in ADMS Project costs via the 2017 TCR Rider, noting that the \$27 million of certified costs (included in the 2015 ADMS Certification Petition) was the initial cost estimate. Xcel argued that original cost estimate included an additional amount of unquantified funding beyond those years (versus "additional expenses for added functionality").⁶⁰ Additionally, during the evaluation of the 2017 TCR Rider, the Commission raised questions regarding the ADMS project scope and what applications were purchased and which were in use. In light of these questions, the Commission required annual ADMS compliance filings in order to gain additional information on the project, status updates on implementation, and additional detail on ADMS spending (information which was not provided in the 2017 TCR Rider Petition). Ultimately, at the end of the 2017 TCR Rider proceeding, Xcel revised the amount requested to only its 2018

⁵⁶ See initial comments in Docket E002/M-15-962, generally.

⁵⁷ Xcel Energy [Reply Comments](#), dated February 22, 2016, Docket E002/M-15-962, at 4, 17, and 20.

⁵⁸ *Id.*, at 17-18.

⁵⁹ Order Certifying ADMS, Docket E002/M-15-962.

⁶⁰ 2015 ADMS Certification Petition, at 14; 2017 TCR Rider Petition, Attachment 1A, at 1-2.

spending of \$10.2 million, which the Commission approved. The Commission also required Xcel to provide additional information in future cost recovery requests.⁶¹

In the pending 2019 TCR Rider Petition, Xcel has requested recovery of additional costs for the ADMS totaling \$27.2 million in 2019-2020 forecasted ADMS capital costs. Xcel also noted that the estimated \$69.1 million remains Xcel's forecasted overall capital spend for the project.⁶²

In this instant docket, the AGIS and APT requests are proposed for certification. Due to the filing of the AGIS and APT certification request on the same day as the (now withdrawn) 2019 rate case petition, the information contained in the AGIS certification request is much more detailed than in previous certification filings because of the cost recovery request through the rate case. In the withdrawn rate case, Xcel had included AGIS costs through 2022. Xcel noted that if the rate case deferral proposal was granted (and it was), Xcel would preserve the option to request recovery of AGIS costs either in the TCR Rider or in the next rate case.⁶³

The Department highlights this history to note its concerns with 1) the continued unclear meaning of certification (both as written and as experienced in practice), 2) the experience of escalating project costs, and 3) the lack of sufficiently delineated certifications (lack of clarity regarding whether certification applies to the cost and technology certified or the cost, technology, and resulting capabilities (and all else claimed)).

While some clarity has been gained on what certification means from the Commission's 2015 ADMS Certification Order (cited above), on-going developments since that order was issued (ADMS implementation and cost changes), causes the Department to have reservations in using this process to certify projects like AGIS. The AGIS scale, significance of the costs, lack of tangible ratepayer benefits, questionable cost-benefit ratio, as well as the Commission's and stakeholders' relative lack of familiarity with the nature of the project (grid and service transforming technologies) requires additional thorough analysis and review. This is discussed in more detail below.

2. The AGIS Initiative

a.) Overview of Costs and Implementation Timeline

As noted above, Xcel is seeking certification of the AGIS proposal, which includes AMI, FAN, FLISR and IVVO and is estimated to cost \$582 million dollars in capital costs and \$152 in on-going operations and maintenance costs (through 2029).

⁶¹ [Order Authorizing Rider Recovery, Setting Return on Equity, and Filing Requirements](#), dated September 27, 2019, Docket No. E002/M-17-797.

⁶² [Xcel Transmission Cost Recovery Rider Petition](#), dated November 15, 2019, and [Compliance Filing](#), dated February 26, 2020, Docket No. E002/M-19-721.

⁶³ IDP, at 3-5. The next TCR Rider petition is expected in November 2021 and the next rate case is anticipated in November 2020.

Xcel explains that, “In addition to transforming the customer experience, these foundational and core investments will allow us to advance our technical capabilities to deliver reliable, safe, and resilient energy that customers value.”⁶⁴ Xcel indicates that timing of these investments is due in part to Xcel’s existing Automated Meter Reading (AMR) service, no longer being supported by Landis+Gyr (Cellnet). Product parts for the existing meters will no longer be available post-2022 and Xcel’s contract for meter reading services expires at the end of 2025.⁶⁵

The AGIS implementation timeline is as follows:

Table 4: AGIS Initiative Implementation Timeline⁶⁶

Program	Implementation Timeline
ADMS	In-service 2020
AMI	Meter roll-out 2021-2024
FAN	Deployment 2021-2024 (preceding AMI deployment by approx. six months)
FLISR	Limited testing 2020; Implementation 2020-2028
IVVO	Limited testing 2021; Implementation 2021-2024

Xcel notes that long-range plans include potential future AGIS investments, which are not yet planned nor ready for presentation to the Commission.⁶⁷ The Department concludes that the wording of any certification approval be carefully considered so as not to implicitly approve all investments that Xcel refers to as AGIS-related, to ensure that it is understood that certification does not extend to future AGIS activities that are not yet known.

b.) Process Considerations to Ensure that the Scope of AGIS Certification is Clear, Refined, Assesses Ratepayer Value, and Receives Sufficient Ratepayer Input

In the 2015 ADMS certification proceeding, Xcel argued that certification means eligibility for rider recovery, as would be allowed for a transmission-certified project.⁶⁸ However, as required by statute, transmission-certified projects have findings and established (certificate of need) criteria that are rigorously analyzed (often in a contested case proceeding) prior to the transmission project being certified. Through the process to make a determination of eligibility (either through a certificate of need or eligibility for TCR Rider recovery), it is known exactly at what cost, scope, and functionality those investments are to perform. Regarding certification of projects proposed through the IDP process, there is no threshold or criteria other than Xcel’s assertion that the project is necessary to modernize the electrical system.

⁶⁴IDP Executive Summary, at 5.

⁶⁵ IDP, at 150.

⁶⁶ IDP, at 153.

⁶⁷ IDP, at 153.

⁶⁸ 2015 ADMS Certification Petition Order, at 8.

The Department concludes that, as shown through the record development surrounding the 2015 ADMS Certification Petition, the 2017 TCR Rider Petition, and the 2019 TCR Rider Petition, using the existing certification process (without refinement) is not in the public interest.

The Department concludes that projects or investments should not be certified until there is greater rigor and clarity around either the definition of certification, or more record development, as discussed below. Further, the Department is concerned that once certified, the burden will be shifted to stakeholders to argue why costs (or exceedances) are imprudent, given that the Commission has certified a project that the utility has deemed necessary to modernize the electrical system. As the statute stands currently, certification imbues a favorable decision on the project costs' necessity, prudence, and reasonableness—all determinations that the Commission would be required to otherwise make with a more complete record and rigorous process.

Given the high cost estimates provided by Xcel in this proceeding, in excess of \$600M, the Department concludes that it is prudent to refine the certification process as used for projects certified through the IDP process, given that certification allows rider recovery. Rider treatment is typically used as an incentive to encourage utilities to make certain decisions. Here, in both the case of AGIS and APT, Xcel is actively and continually pursuing these investments in tandem with record development, not waiting for rider recovery approval. While the Department believes it is important to continue evaluation of AGIS and APT certification, given Xcel's request, the need for rider treatment does not appear to be a driving factor in these initiatives. Therefore, the Department questions whether rider treatment is necessary and appropriate (at a minimum for the AGIS investment) and for any future investments of this scale.

Given the material issues involved with this proposal, including significant costs, data privacy matters, and operation of Xcel's system (to name a few), a contested case is the most appropriate course of action in order to ensure that the Commission has a reasonably developed record for its decisions. The Department concludes that it would be appropriate to refer review of Xcel's AGIS Initiative to the Office of Administrative Hearings (OAH) for a contested case proceeding.

The Department notes that the Commission has used a contested case proceeding on a sub-issue of a rate case proceeding in the past. See the Commission's April 15, 2016 *Order Asking Commissioner of Commerce to Seek Funding for Specialized Technical Professional Investigative Service under Minn. Stat. §216B.62, subd. 8* in Docket No. E002/GR-15-826. The companion docket is Docket No. E002/ CI-13-754.

The Department recommends that the Commission refer the AGIS Initiative certification request to the OAH for a contested case hearing for further record development on the scope of the AGIS investments (AMI, FAN, FLISR, IVVO) to provide clarity on, at a minimum:

- **available system services and functions and when available;**
 - **clearly identified costs;**
 - **clearly identified benefits (including third party services in which revenues should included to offset costs or reduce rates);**
 - **plans for when customer and system value will be established as well as what those plans should consider;**
 - **pricing of system services and function (to allow for known and upfront ratepayer options for all levels of service) and impact on non-participant ratepayers;**
 - **plans for system roll-out (e.g., businesses classes first, then residential).**
- (Recommendation 3)**

While the Department argues that the Commission should refer this matter to a contested case hearing, in the event that the Commission decides to certify any of the AGIS Initiative, the Department offers the following, conditional recommendation in order to protect ratepayers and hold Xcel accountable to the costs and benefits it represents in its certification request.

If the Commission certifies all or a portion of the AGIS Initiative, inclusive of the costs as represented by Xcel in its certification request, the Department recommends strong cost caps and clear descriptions of what is certified to protect ratepayers from cost exceedances, changing project descriptions, and in the event that the capabilities, functionalities, and benefits that Xcel represented in the certification request do not materialize. The Department also recommends that any certification should be conditioned on a presumption that all revenues from the AGIS Initiative belong to ratepayers unless otherwise approved by the Commission. (Recommendation 4)

c.) Assuring Ratepayer Value from the AGIS Initiative Investments Depends on Functionality and Use and Further Framework Development is Needed Prior to Certification or Cost Recovery

Much of the value of the investments, and most of the future customer-facing value, depends on how the technology and resulting data is used. Therefore, while the estimated costs appear to be known, at least in the near term, the customer-facing CBA results of less than 1.25 (including benefits for new third-party services that could reduce costs to ratepayers) highlights the need for further evaluation and scrutiny.

Xcel provided support for its belief that the entirety of the AGIS and APT proposals are reasonable and needed, including a quantitative and non-quantifiable cost benefit analysis, however, much of the qualitative AGIS project value lies in how the system components will be used in the future. Those future potential benefits need further development and support to ensure that the asserted benefits used in support of the projects materialize.

Table 5: AGIS Initiative Combined Cost-Benefit Ratio⁶⁹

AGIS Initiative Combined Cost-Benefit Ratio	
<u>NSPM -AMI, FLISR, IVVO-NPV</u>	Total (\$MM)
Benefits:	571
O&M Benefits	53
Other Benefits	222
Customer Benefits	103
Capital Benefits	193
Costs:	(656)
O&M Expense	(186)
Change in Revenue Requirement	(470)
<u>Baseline Benefit-Cost Ratio</u> (IVVO CVR 1.25% energy, 0.7% capacity, with contingencies)	<u>0.87</u>
<u>High Benefit/No Contingency Sensitivity</u> (IVVO CVR 1.5% energy/0.8% capacity, no contingency)	1.03
<u>Lower Benefit/With Contingency Sensitivity</u> (IVVO CVR 1.0% energy/0.6% capacity, with contingencies)	0.86

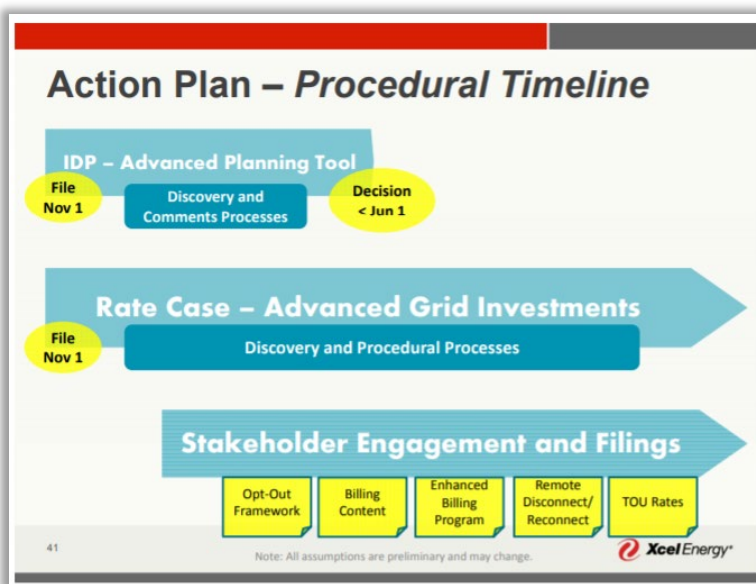
Xcel's IDP outlines its plans and timelines for further development of some customer-facing benefits, but a more comprehensive list of ratepayer and customer needs (and system interaction options or boundaries) needs to be developed in order to ensure AGIS and APT investments are, or will be, justified. The Department understands that all future benefits may not be foreseeable at this time. However, now that Xcel's general customer strategy and its vision for its future is known through this filing, it is reasonable to require that some baseline of agreement - if not a detailed agreement - of the reasonableness of future products, services, requirements, boundaries, and parameters is established prior to certification or cost recovery.

⁶⁹ IDP, Att. M1, Gersack Direct, at 168.

Xcel proposed that some plans and additional filings will be created and filed, and has an initial framework developed; however, the Company is not seeking approval of specific provisions at this time.⁷⁰ Xcel noted that it intends to submit the following filings during the 5-year action plan period, and anticipates requesting necessary Commission approvals and eliciting stakeholder input:

- Opt-out provisions – requesting approval of the processes, cost structure, and tariffs necessary to allow customers to opt out of AMI meter installation (2020);
- AMI billing – requesting approval of a rule variance and any tariff changes necessary to enable AMI interval billing (2020);
- Proposal to enable remote connect/disconnect capabilities;
- Proposal to request approval of a pre-pay option for customers; and
- Future service quality reporting under Minnesota Rules (beginning April 1, 2022) and the Company's Quality of Service Plan (QSP) (beginning May 1, 2022) to address any impacts to service quality metrics as a result of AGIS implementation.

Figure 1: Xcel's 2019 IDP Stakeholder Presentation⁷¹



Xcel alludes to many future products and services in which the details and other terms will need development, see Appendix A.⁷² However, given the low CBA results, certification should not be granted unless and until those future costs and benefits can be sufficiently quantified, or terms and conditions surrounding future products and services are established, to assure the certified projects are in the public interest. At a minimum, Xcel should establish:

⁷⁰ IDP, Att. M1, Gersack Direct, at 148.

⁷¹ Xcel's September 2019 Stakeholder Presentation, slide 41, Docket No. E002/CI-18-251.

⁷² IDP, at 163.

1. a comprehensive list of products or customer services necessary to achieve the benefits assumed;
2. the timing of products or customer services development and implementation;
3. the plans or frameworks that will be used to guide expectations for future service offerings, and
4. the level of Commission guidance or approval each product or service would require prior to implementation.

In order for a public interest determination in a certification or cost-recovery proposal to be based on facts and to ensure that the Commission is able to hold the utility accountable for the asserted costs and benefits of the proposal, plans or frameworks surrounding (at least) the following items need to be developed and established prior to certification and cost-recovery authorizations (this list is a draft of what would be required under No. 3, above):

- opt-out provisions;
- AMI, FLISR and IVVO geographic and customer type roll-out plan;
- enhanced customer privacy provisions and reporting tool or requirements for instances of inadvertent data release;
- customer data access terms;
- third-party data access and privacy and security;
- potential DER interconnection agreement updates;
- potential interconnection agreement process modifications;
- future product and services revenue tracking and reporting (used as offset to customer costs);
- operational changes, including costs and savings;
- Midcontinent Independent System Operator (MISO), NERC, or other entity product integration or current market or reliability restrictions;
- third-party interoperability terms (AMI and FAN);
- rate design implementation plan;

Xcel has already entered into contracts with Itron for AMI and system application development, therefore it is prudent to establish ratepayer value (through conditions and requirements on the meters and future applications) now, at the initial cost evaluation stage and while the system applications are under development.⁷³ Should the ratepayer value fail to materialize after the meter infrastructure is certified or approved for cost recovery, it will be difficult for the Commission and stakeholders to determine a course to rectify the situation. Thus, additional process is reasonable and reasonable now, prior to any certification or cost recovery decisions.

⁷³ See: <https://www.smart-energy.com/industry-sectors/smart-meters/itron-and-xcel-to-build-an-advanced-electrical-grid-of-the-future/>, accessed February 29, 2020.

In light of the future system envisioned by Xcel, future plans or frameworks need to be established prior to the certification of any investments or projects.

In addition to the need to more definitively identify the future costs and benefits of the AGIS Initiative, a comprehensive and thorough review and assessment of the prudence of AGIS investment is needed due to the fact that the scope of the AGIS investments and the potential resulting system transformation is significantly different from traditional utility service as it exists today.

Xcel noted in its filing that it has conducted general surveys and gained information from third-party survey data (i.e. Smart Energy Consumer Collaborative and GTM Research, etc.) and gained stakeholder input through input on numerous Commission dockets.⁷⁴ Additionally, Xcel has established plans for buy-in from multiple AGIS stakeholders at several stages (pre-deployment and deployment) including engagement from customers, community leaders, customer care agents, and employees).⁷⁵ Xcel noted that additional public outreach was likely warranted through the AGIS evaluation process, and may not be possible within a six-month certification proceeding:⁷⁶

The normal procedural schedule for certification under Minn. Stat. § 216B.2425 would require a determination by June 1, 2020, and under normal circumstances, we believe the process leading to certification should resemble a resource acquisition proceeding under the Commission's normal notice and comment procedures that could, in the Commission's discretion and depending on the scope of the investment, include one or more public hearings. We recognize, however, that the schedule in the General Rate Case does not align with that timing. In addition, the AGIS initiative includes large investments and is supported by a sizeable filing that may require analysis beyond the six-month certification timeframe, even if the General Rate Case is withdrawn. Thus, we offer to work with the Commission and stakeholders to set an appropriate deadline and procedural schedule for consideration of these investments.

Due to the scope of technology change, investment, and changing public interface, the Department concludes that additional public outreach is necessary and reasonable *prior* to certification of these investments to obtain input from members of the public that will be directly impacted by these changes. The Department believes that a contested case hearing process that involves public input is necessary. The scope of the investment (several hundred million dollars) and the capabilities (e.g., the ability to communicate with home devices) needs input from the public. While some customers likely want additional services to manage and control their home energy use, questions surround what level of input customers should have on those services, to what extent customers who do not want

⁷⁴ IDP, Att. M1, Gersack Direct, at 291.

⁷⁵ IDP, Att. M1, Gersack Direct, at 283-285, 286-287.

⁷⁶ IDP, at 3, 21, 155-156, 259.

additional services should be responsible for the costs of the enabling technologies, what protections are in place for privacy, who should own and facilitate the use of customer data that has not previously been collected or considered necessary for the provision of service, and who will reap the potential revenue from the use of that information and access to that information.⁷⁷

d.) Conclusion

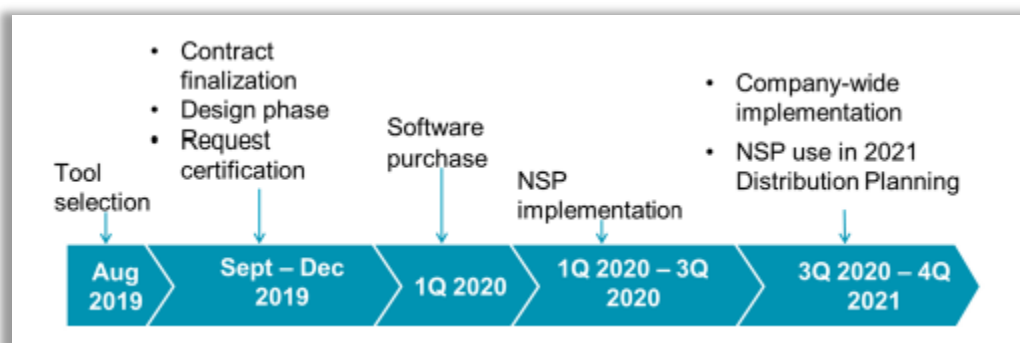
For all of the above reasons, the Department supports referring this matter for a contested case hearing. It is prudent to allow for additional record development, to establish future requirements, and to solicit public input. Referral of the matter in the near term would allow the projects and investments to align in parallel with either Xcel's likely 2020 rate case (expected November 2020) or to inform future TCR Rider Petitions. Referral (and a comprehensive evaluation) would also avoid potential redundancy or duplication of efforts, either through an additional evaluation in the 2020 rate case or through a second in-depth analysis in the next TCR Rider Petition. Continuation of this record and any record development to date by parties should provide a foundation for a referral.

Referral of this matter should include information and review of Xcel's Incremental System Investment Initiative and the Company's plans for increased distribution system spending as it relates to the overall initiative of Xcel to improve its customer experience.

3. Advanced Planning Tool

Xcel is also seeking certification of an Advanced Planning Tool estimated to cost \$4 million dollars for the NSPM jurisdiction.⁷⁸ The proposed implementation is already underway and is proposed to be included for use in the 2021 planning cycle:

Figure 2: Xcel's Planned APT Implementation Timeline⁷⁹



⁷⁷ Some of these issues are still under appeal at the Minnesota Court of Appeals.

⁷⁸ IDP, at 12, 17.

⁷⁹ IDP, at 252.

The Department takes no position on whether to certify the APT at this initial comment stage. While the APT seems like a useful tool and has the potential to advance several of the State's policies and Commission's requirements, and will likely significantly improve Xcel's planning abilities, the tool currently described is conceptual and not a discrete project or investment (as of the time of the filing the vendor and ultimate tool provider was not yet under contract). The conceptual nature of the tool, the Department's concerns generally with certification (scope ambiguity, cost increases), and general lack of ratepayer protections, combined with the lack of need to incent Xcel to proceed with the APT, makes certification appear unnecessary.

If the Commission chooses to certify the APT, the Department recommends that the Commission limit cost recovery to a hard cost cap of \$4 million and the Commission detail in its order the specific scope and functionality expected from the APT (potentially, as detailed in Xcel's filing). (Recommendation 5)

III. DEPARTMENT RECOMMENDATIONS

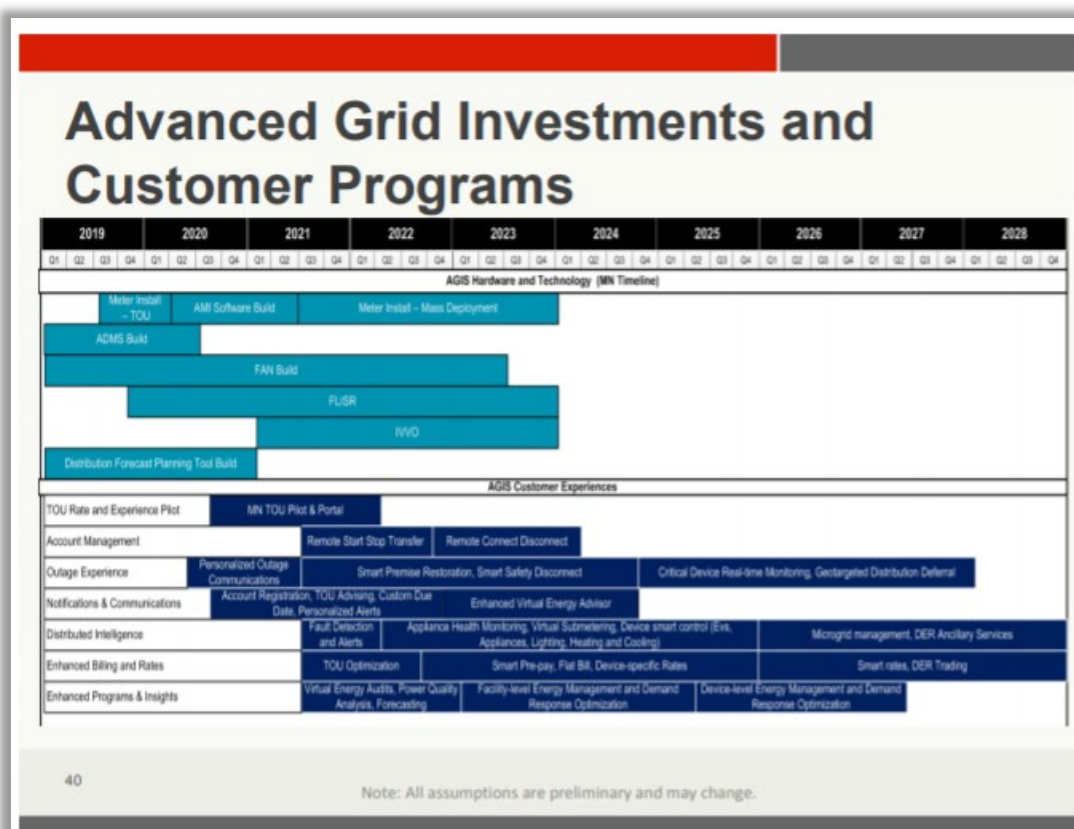
The Department appreciates the opportunity to comment on Xcel Energy's 2019 IDP and certification request and looks forward to the review of other stakeholder comments. The Department makes the following, initial recommendations:

- The Department recommends that the Commission accept Xcel Energy's 2019 IDP compliance with reporting requirements. (Recommendation 1)
- The Department recommends that the Commission require Xcel to file its next IDP no later than November 1, 2021 and move from an annual to biennial IDP filing going forward, but to file an annual update of the following IDP requirements and provide the following information:
 - Baseline Financial Data, IDP Requirements 3.A.26-30; and
 - Non-Wires (Non-Traditional) Alternatives Analysis, IDP Requirements E.1-2. (Recommendation 2)
- The Department recommends that the Commission refer the AGIS Initiative certification request to the OAH for a contested case hearing for further record development on the scope of the AGIS investments (AMI, FAN, FLISR, IVVO) to provide clarity on, at a minimum:
 - available system services and functions and when available;
 - clearly identified costs;
 - clearly identified benefits (including third party services in which revenues should be included to offset costs or reduce rates);
 - plans for when customer and system value will be established as well as what those plans should consider;
 - pricing of system services and function (to allow for known and upfront ratepayer options for all levels of service) and impact on non-participant ratepayers;
 - plans for system roll-out (e.g., businesses classes first, then residential). (Recommendation 3)

- If the Commission certifies all or a portion of the AGIS Initiative, inclusive of the costs as represented by Xcel in its certification request, the Department recommends strong cost caps and clear descriptions of what is certified to protect ratepayers from cost exceedances, changing project descriptions, and in the event that the capabilities, functionalities, and benefits that Xcel represented in the certification request do not materialize. The Department also recommends that any certification should be conditioned on a presumption that all revenues from the AGIS Initiative belong to ratepayers unless otherwise approved by the Commission. (Recommendation 4)
- If the Commission chooses to certify the APT, the Department recommends that the Commission limit cost recovery to a hard cost cap of \$4 million and the Commission detail in its order the specific scope and functionality expected from the APT (potentially, as detailed in Xcel's filing). (Recommendation 5)

/ar

Attachment A: Evolving AGIS Initiatives
2019 IDP Stakeholder Presentation



2019 IDP

Figure 70: Advanced Grid Initiatives – Present to 2030 View

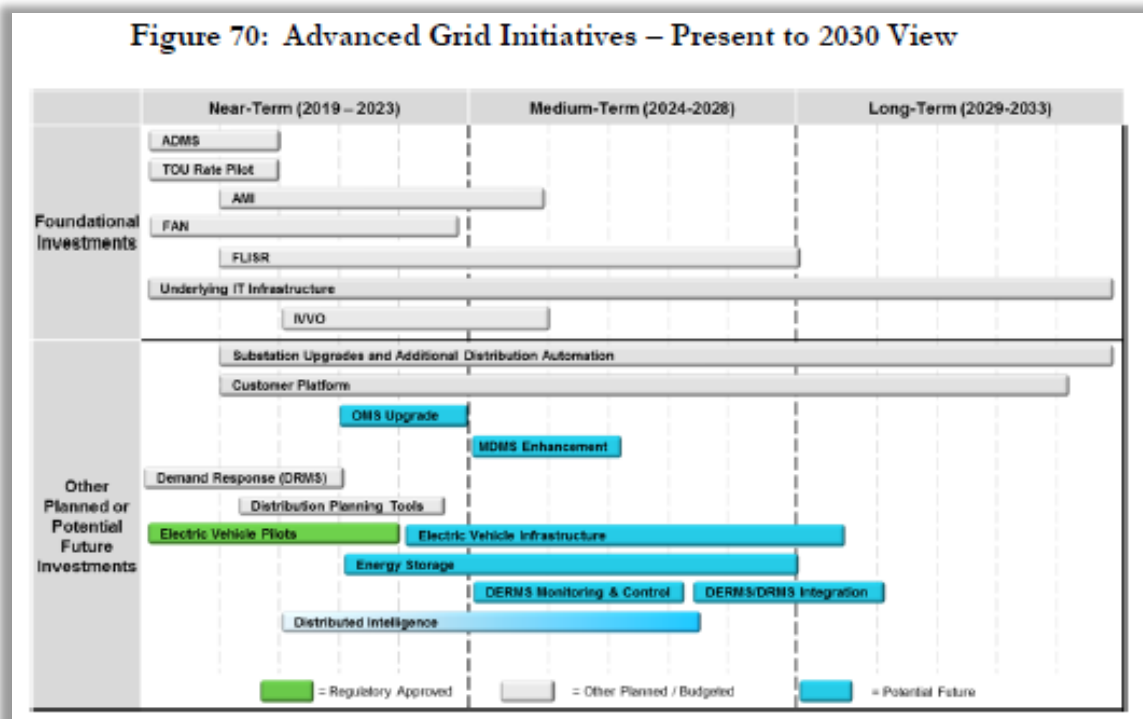
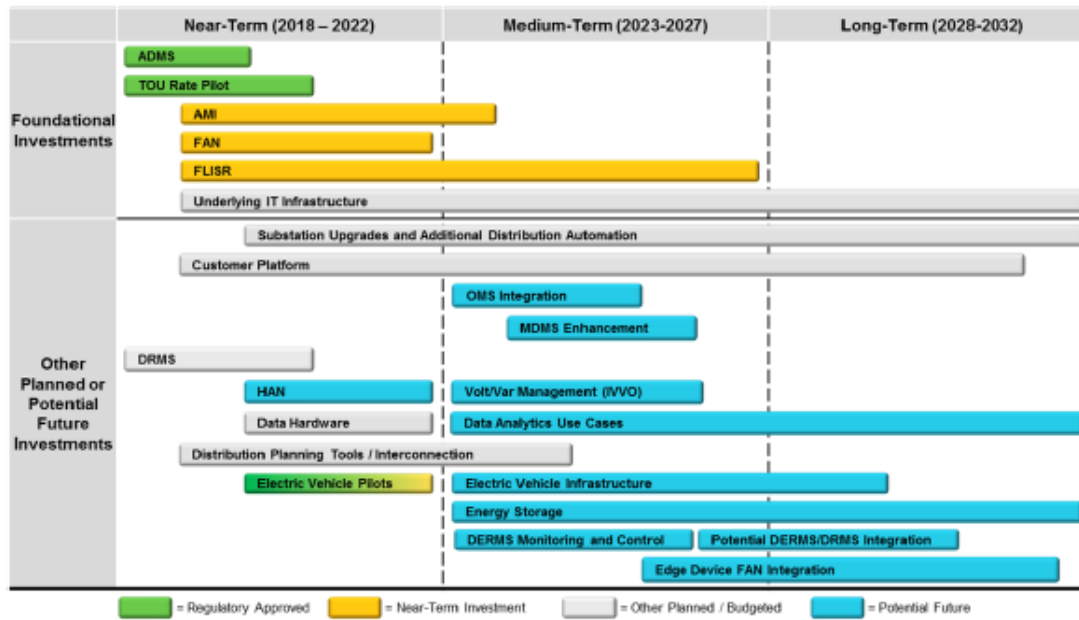


Figure 68: Advanced Grid Initiatives 15-Year View



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-19-666

Dated this **17th** day of **March 2020**

/s/Sharon Ferguson

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Mary Beth	Peranteau	mperanteau@wheelerlaw.com	Wheeler Van Sickle & Anderson SC	44 E. Mifflin Street, 10th Floor Madison, WI 53703	Electronic Service	No	OFF_SL_19-666_M-19-666
Jennifer	Peterson	jjpeterson@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_19-666_M-19-666
Hannah	Polikov	hpolikov@aee.net	Advanced Energy Economy Institute	1000 Vermont Ave, Third Floor Washington, DC 20005	Electronic Service	No	OFF_SL_19-666_M-19-666
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_19-666_M-19-666
Gregory	Randa	granda@lakecountrypower.com	Lake Country Power	26039 Bear Ridge Drive Cohasset, MN 55721	Electronic Service	No	OFF_SL_19-666_M-19-666
Mark	Rathbun	mrathbun@greenergy.com	Great River Energy	12300 Elm Creek Blvd Maple Grove, MN 55369	Electronic Service	No	OFF_SL_19-666_M-19-666
Michael	Reinertson	michael.reinertson@avanteenergy.com	Avant Energy	220 S. Sixth St. Ste 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_19-666_M-19-666
John C.	Reinhardt	N/A	Laura A. Reinhardt	3552 26th Ave S Minneapolis, MN 55406	Paper Service	No	OFF_SL_19-666_M-19-666

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Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_19-666_M-19-666
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	OFF_SL_19-666_M-19-666
Amanda	Rome	amanda.rome@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 5 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-666_M-19-666
Robert K.	Sahr	bsahr@eastriver.coop	East River Electric Power Cooperative	P.O. Box 227 Madison, SD 57042	Electronic Service	No	OFF_SL_19-666_M-19-666
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-666_M-19-666
Thomas	Scharff	thomas.scharff@versoco.com	Verso Corp	600 High Street Wisconsin Rapids, WI 54495	Electronic Service	No	OFF_SL_19-666_M-19-666
Larry L.	Schedin	Larry@LLSResources.com	LLS Resources, LLC	332 Minnesota St, Ste W1390 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-666_M-19-666
Christopher	Schoenherr	cp.schoenherr@smmpa.org	SMMPA	500 First Ave SW Rochester, MN 55902-3303	Electronic Service	No	OFF_SL_19-666_M-19-666
Kay	Schraeder	kschraeder@minnkota.com	Minnkota Power	5301 32nd Ave S Grand Forks, ND 58201	Electronic Service	No	OFF_SL_19-666_M-19-666

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Dean	Sedgwick	Sedgwick@Itascapower.com	Itasca Power Company	PO Box 455 Spring Lake, MN 56680	Electronic Service	No	OFF_SL_19-666_M-19-666
Maria	Seidler	maria.seidler@dom.com	Dominion Energy Technology	120 Tredegar Street Richmond, Virginia 23219	Electronic Service	No	OFF_SL_19-666_M-19-666
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_19-666_M-19-666
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN 55423	Electronic Service	Yes	OFF_SL_19-666_M-19-666
David	Shaffer	shaff081@gmail.com	Minnesota Solar Energy Industries Project	1005 Fairmount Ave Saint Paul, MN 55105	Electronic Service	No	OFF_SL_19-666_M-19-666
Patricia	Sharkey	psharkey@environmentallawcounsel.com	Midwest Cogeneration Association.	180 N. LaSalle Street Suite 3700 Chicago, Illinois 60601	Electronic Service	No	OFF_SL_19-666_M-19-666
Bria	Shea	bria.e.shea@xcelenergy.com	Xcel Energy	414 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-666_M-19-666
Doug	Shoemaker	dougs@charter.net	Minnesota Renewable Energy	2928 5th Ave S Minneapolis, MN 55408	Electronic Service	No	OFF_SL_19-666_M-19-666
Audra	Skalet	askalet@mienergy.coop	MiEnergy Cooperative	31110 Cooperative Way PO Box 626 Rushford, MN 55971	Electronic Service	No	OFF_SL_19-666_M-19-666
Anne	Smart	anne.smart@chargepoint.com	ChargePoint, Inc.	254 E Hacienda Ave Campbell, CA 95008	Electronic Service	No	OFF_SL_19-666_M-19-666

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Joshua	Smith	joshua.smith@sierraclub.org		85 Second St FL 2 San Francisco, California 94105	Electronic Service	No	OFF_SL_19-666_M-19-666
Ken	Smith	ken.smith@ever-greenenergy.com	Ever Green Energy	305 Saint Peter St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_19-666_M-19-666
Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.	76 W Kellogg Blvd St. Paul, MN 55102	Electronic Service	No	OFF_SL_19-666_M-19-666
Trevor	Smith	trevor.smith@avantenergy.com	Avant Energy, Inc.	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_19-666_M-19-666
Beth H.	Soholt	bsoholt@windonthewires.org	Wind on the Wires	570 Asbury Street Suite 201 St. Paul, MN 55104	Electronic Service	No	OFF_SL_19-666_M-19-666
Sky	Stanfield	stanfield@smwlaw.com	Shute, Mihaly & Weinberger	396 Hayes Street San Francisco, CA 94102	Electronic Service	No	OFF_SL_19-666_M-19-666
Tom	Stanton	tstanton@nrri.org	NRRI	1080 Carmack Road Columbus, OH 43210	Electronic Service	No	OFF_SL_19-666_M-19-666
Byron E.	Starns	byron.starns@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-666_M-19-666
James M	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	200 S 6th St Ste 470 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-666_M-19-666
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_19-666_M-19-666

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Lynnette	Sweet	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_19-666_M-19-666
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_19-666_M-19-666
Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD	4445 W 77th Street Suite 224 Edina, MN 55435	Electronic Service	No	OFF_SL_19-666_M-19-666
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_19-666_M-19-666
Karen	Turnboom	karen.turnboom@versocom.com	Verso Corporation	100 Central Avenue Duluth, MN 55807	Electronic Service	No	OFF_SL_19-666_M-19-666
Andrew	Twite	twite@fresh-energy.org	Fresh Energy	408 St. Peter Street, Ste. 220 St. Paul, MN 55102	Electronic Service	No	OFF_SL_19-666_M-19-666
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_19-666_M-19-666
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_19-666_M-19-666

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Jonathan	Wallach	Jwallach@resourceinsight.com	Resource Insight, Inc.	5 Water St. Arlington, MA 02476	Electronic Service	No	OFF_SL_19-666_M-19-666
Roger	Warehime	roger.warehime@owatonnautilities.com	Owatonna Public Utilities	208 South WalnutPO Box 800 Owatonna, MN 55060	Electronic Service	No	OFF_SL_19-666_M-19-666
Jenna	Warmuth	jwarmuth@mnpower.com	Minnesota Power	30 W Superior St Duluth, MN 55802-2093	Electronic Service	No	OFF_SL_19-666_M-19-666
Scott M.	Wilensky	scott.wilensky@xcelenergy.com	Xcel Energy	7th Floor 414 Nicollet Mall Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_19-666_M-19-666
Samantha	Williams	swilliams@nrdc.org	Natural Resources Defense Council	20 N. Wacker Drive Ste 1600 Chicago, IL 60606	Electronic Service	No	OFF_SL_19-666_M-19-666
Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine	225 South Sixth Street, Suite 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-666_M-19-666
Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company	200 First St SE Cedar Rapids, IA 52401	Electronic Service	No	OFF_SL_19-666_M-19-666
Thomas J.	Zaremba	TZaremba@wheelerlaw.com	WHEELER, VAN SICKLE & ANDERSON	44 E. Mifflin Street, 10th Floor Madison, WI 53703	Electronic Service	No	OFF_SL_19-666_M-19-666
Christopher	Zibart	czibart@atcllc.com	American Transmission Company LLC	W234 N2000 Ridgeview Pkwy Court Waukesha, WI 53188-1022	Electronic Service	No	OFF_SL_19-666_M-19-666

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Patrick	Zomer	Patrick.Zomer@lawmoss.com	Moss & Barnett a Professional Association	150 S. 5th Street, #1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-666_M-19-666