

April 11, 2022

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

RE: **Reply Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E002/M-21-694

Dear Mr. Seuffert:

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

Xcel Energy's 2021 Integrated Distribution Plan and Request for Certification of Distributed Intelligence and the Resilient Minneapolis Project

As allowed by the comment opportunities set forth in the Minnesota Public Utilities Commission's (Commission) November 15, 2021 *Notice of Comment Period In the Matter of Xcel Energy's 2021 Integrated Distribution System Plan and Request for Certification of Distributed Intelligence and the Resilient Minneapolis Project*, the Department provides the attached reply to stakeholder initial comments, Xcel Energy Reply Comments, and further clarification and justification of the recommendations forwarded by the Department in our February 25, 2022 initial comments.

The Department recommends that the Commission accept Xcel Energy's 2021 Integration Distribution Plan and in accordance with the recommendations of Synapse Energy Economics, Inc., deny Xcel Energy's Request for Certification of Distributed Intelligence and the Resilient Minneapolis Project without prejudice. The Department is available for any questions the Commission may have.

Sincerely,

/s/ MATTHEW LANDI
Rates Analyst

/s/ CHRISTOPHER WATKINS
Rates Analyst

ML/CW/ar
Attachment



Before the Minnesota Public Utilities Commission

Reply Comments of the Minnesota Department of Commerce
Division of Energy Resources

Docket No. E002/M-21-694

I. INTRODUCTION

On November 1, 2021, Northern States Power Company d/b/a Xcel Energy (Xcel, or the Company) filed its 2021 Integrated Distribution Plan (2021 IDP)¹ as required by the Minnesota Public Utilities Commission's (Commission) in its July 23, 2020 Order in Docket No. E002/M-19-666 (the 2020 Order).² Xcel's 2021 IDP included the Company's certification request of its proposed Distributed Intelligence (DI) and Resilient Minneapolis Project (RMP) investments.

On November 15, 2021, the Commission issued a *Notice of Comment Period on Xcel Energy's 2021 Integrated Distribution Plan and Request for Certification of Distributed Intelligence and the Resilient Minneapolis Project* (Notice). The Commission's Notice seeks comments on two primary issues related to Xcel's 2021 IDP and its Requests for Certification, which are as follows:

1. Should the Commission accept or reject Xcel Energy's 2021 Integrated Distribution Plan (IDP)?
2. Should the Commission approve, modify, or deny certification of Distributed Intelligence and the Resilient Minneapolis Project?

The Commission's Notice also identifies twelve topics open for comment, which are as follows:

2021 Xcel Integrated Distribution Plan (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 outlined in the filing requirements as amended by the Commission's November 2, 2019 Order? [footnote omitted]

¹ Xcel Energy's 2021 Integrated Distribution Plan, 2022 – 2031 (Xcel's 2021 IDP). Docket No. E002/M-21-694. November 1, 2021. Accessed at (PUBLIC):

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={2018DC7C-0000-C41B-992F-7ED95D99A9EE}&documentTitle=202111-179347-01.>

² *In the Matter of Xcel Energy's Integrated Distribution Plan and Advanced Grid Intelligence and Security Certification Request*, Docket No. E002/M-19-666 (2019 IDP). ORDER ACCEPTING INTEGRATED DISTRIBUTION PLAN, MODIFYING REPORTING REQUIREMENTS AND CERTIFYING CERTAIN GRID MODERNIZATION PROJECTS. Order Point No. 2. 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.>

3. What IDP filing requirements provide the most value to the process, and why?
4. Are there filing requirements that are not information and/or should be deleted or modified, and why?
5. Are there other issues or concerns related to this matter?

Distributed Intelligence (DI) Certification Request

6. Should the Commission approve, modify, or deny certification of Distributed Intelligence (DI), including the following use cases? [footnote omitted]
 - a. Home Area Network (HAN)
 - b. Energy Analysis
 - c. Electric Vehicle Detection
 - d. Secondary Equipment Assurance
 - e. Meter Bypass Theft Detection
 - f. Connectivity
7. What, if anything, should the Commission set as conditions or clarify if granting certification of the DI and the six initial use cases?
8. What should the Commission consider or address related to realizing benefits of each of the investments in the Company's DI and the six initial use cases for ratepayers?
9. How should the Commission consider customer data privacy and value, including third party vendor access to data obtained through the customer facing DI applications?
10. Are there any other issues or concerns related to this matter?

Resilient Minneapolis Project Certification Request

11. Should the Commission approve, modify, or deny certification of the Resilient Minneapolis Project?
12. Are there any other issues or concerns related to this matter?

On or before February 28, 2022, the following parties – including the Minnesota Department of Commerce, Division of Energy Resources (Department) submitted Initial Comments in this proceeding:

- Sabathani Community Center;
- Minneapolis American Indian Center;
- University of St. Thomas;
- Renewable Energy Partners, Inc.
- The City of Minneapolis;
- The City of Northfield;
- Weave Grid, Inc.;
- Fresh Energy;
- Community Power, The Environmental Law & Policy Center (ELPC), and Vote Solar (collectively, CEV); and,
- Xcel Large Industrials (XLI).

II. DEPARTMENT ANALYSIS

A. RESPONSE TO XCEL REGARDING THE GUIDANCE DOCUMENT AND THE IDP

The Department reviewed Xcel's reply comments and appreciates the opportunity to offer clarity and a response to the Company's concerns regarding how the Guidance Document will be applied, what it means for Xcel's IDP, and what impact it will have on the instant certification request and future certification requests.

1. The Department is Not Proposing that Utility Integrated Distribution Plans be Subject to Prudency Review

The Department agrees with the Company that utility IDPs are largely informational filings. The Department supports this approach to distribution system planning at this time and for the reasonably foreseeable future.

The Department is not proposing a prudency assessment of utility IDPs. The Department has not contemplated a future for IDPs that involves prudency assessment of distribution planning, operations, and spending, and is unequivocally **not** proposing that here.

IDPs are intended to address the information asymmetry between utilities and stakeholders. IDPs are in nascent development and are iterative in nature as regulators and stakeholders learn more about how utilities approach distribution system planning, spending, and operation, as utility processes evolve in response to regulatory mandates and goals, and as new technologies and opportunities impact the distribution system.

Contrary to Xcel's claims, the Department is not proposing to evaluate IDPs using the Guidance Document. As explained below, the Guidance Document's relation to IDPs is limited only to the quality, type, and consistency of information made available by utilities in their IDPs in discussing grid modernization plans and investments as required by IDP Filing Requirement 3.D.

The Guidance Document's relation to certification requests (such as Xcel's DI project and RMP) and other utility grid modernization investment proposals relate to the type of information and quality of the economic analysis provided in such petitions consistent with Commission Orders. As explained in the Department's Letter, the Department's Initial Comments, and in further detail below, the Guidance Document is not proposed out of whole cloth: it is derived directly from and is a distillation of Commission Orders, based on information from multiple valuable stakeholder processes in regulatory proceedings dating back to 2015, and based on Synapse's expertise in economic evaluation of grid modernization investments in other jurisdictions around the U.S.

2. The Department Seeks the Orderly Development of Utility Grid Modernization Investments Using Elements of Established Regulatory Paradigms in Minnesota

The orderly development of utility grid modernization investments in distribution systems is required to protect the public interest. The certification request process by which Xcel has proposed technically complex, novel, and significant investments in grid modernization has the potential to lead to a regulatory paradigm where utility proposals are not sufficiently well understood, costs may be unreasonable, benefits may not materialize or there otherwise may be a lack of Company accountability for delivering promised benefits, and ratepayers are asked to shoulder a disproportionate and unjustifiable amount of risk. Without adequate guarantees that the future benefits resulting from these investments will be proportionally shared with customers or otherwise applied to reduce electricity rates, the risk to the public interest is considerable.

The experience with the certification request process has thus far resulted in Xcel pursuing an incremental, piecemeal approach to proposing grid modernization investments that further compounds these risks. The process of review is not well understood by parties, the Commission's standard of review for certifying these investments does not provide stakeholders with a comprehensive, clear understanding of how to evaluate Xcel's certification requests, and stakeholders have a very limited amount of time to review technically complex, significant, and novel investments. Utility grid modernization investments in Minnesota need not be borne out of such a morass. The public interest is at substantial risk given Xcel's existing approach to proposing grid modernization investments through the existing certification request process.

The Department's goal with the Guidance Document is the orderly development of utility grid modernization investments using elements of established regulatory paradigms in Minnesota that have resulted in outcomes that benefit the state of Minnesota, utility ratepayers, and utilities.

The Department's February 9, 2022 Letter and February 25, 2022 Comments in the instant proceeding discuss those regulatory paradigms: utility IRPs/MISO transmission planning processes and CN petitions.

The Department views utility IDPs and grid modernization as in many ways a parallel regulatory paradigm to utility IRPs/MISO transmission planning and CN petitions, in structure and in outcome. Articulating this parallel is not indicative of an intention or a goal to transform utility IDPs into utility IRPs. As Xcel explained in its Reply Comments, utility IRPs are indeed markedly different from IDPs, based in Minnesota Statutes and Rules and developed after decades of regulatory practice before the Commission.

The Department's invocation of the IRP-CN and MISO transmission planning-CN connection in the context of utility IDPs and grid modernization is instead intended to suggest that there are elements of those regulatory paradigms that have demonstrably led to an orderly development of energy resources in the state of Minnesota that have benefitted all parties. The Department's position is simple: in

principle, those elements, articulated in more detail below, can and should be transcribed to the IDP-grid modernization context.

As the Department's Letter explained:

The IRP process in Minnesota and the transmission planning processes that occur at Midcontinent Independent System Operator (MISO) are deliberate, complex, and thoroughly reviewed planning processes that can culminate in a utility proposal to address needs identified, whether the need is for a new generating resource or a new transmission line.

Once a general need is established in the IRP process or at MISO, utilities propose specific projects subject to clear, well-defined Minnesota Rules that establish a standard of review that require utilities to consider alternatives and demonstrate that the least-cost option has been selected, and often, a project is approved in part based upon a finding that it will result in net benefits to utility ratepayers and society.

Similarly, a utility IDP is a planning process that accounts for expected changes over a long-term period and leads to the identification of utility proposals to respond to distribution system needs.³ In the context of grid modernization, utilities are required to develop long-term plans that account for forecasts of distributed energy resource adoption, the distribution system's ability to facilitate DER adoption (hosting capacity analysis), and the alternatives to traditional investments that a utility can make to address the needs of its distribution system (non-wires alternatives analysis). These plans require utilities to discuss and consider investment options that respond to those needs and should culminate in the identification of specific investments that a utility plans to make in response to those needs.

The missing element of the IDP process is what is present in the IRP and MISO transmission planning process: a clear, well-defined next step to review and evaluate specific investment proposals that includes a clear, well-defined standard of review through which stakeholders can assess the merits of the investment and the Commission can use to approve or deny investments.

IRPs and MISO transmission planning processes lead to CN proceedings where a utility, independent power producer, or transmission line owner files a CN petition and proposes specific investments to respond to needs identified in the IRP or MISO transmission planning processes. They are subject to myriad Minnesota Statutes and Rules that have been applied for decades, which has resulted in a comprehensive standard of review of these investments over time. The CN process generally requires the petitioner to articulate the connection between the relevant planning process and to demonstrate that its specific investment proposal is a reasonable and prudent investment decision responsive to the needs identified in the planning process and in the public interest.

³ IDP Filing Requirement 3.D. Long-Term Distribution System Modernization and Infrastructure Investment Plan.

At a high level, the regulatory paradigm for CN petitions has three key principles that the Department has an interest in applying to grid modernization investment proposals in Minnesota:

1. Principle 1: Information Threshold. All parties, including utilities and energy resource developers, have a clear understanding of the quality and type of information a CN petition should contain to facilitate the evaluation of the proposed project's reasonableness;
2. Principle 2: Evaluation Methods. All parties have a clear understanding of how to evaluate CN petitions; and
3. Principle 3: Standard of Review. All parties have a clear understanding of the standard of review to apply to the CN petition and the decision criteria that the Commission will use in determining whether to grant a CN and approve the proposed project.

The Department is concerned that these three key principles are not sufficiently developed in the context of evaluating proposed utility grid modernization investments. The Department's goal is to facilitate the creation of a similar paradigm for IDPs and grid modernization in Minnesota informed by these regulatory best practices developed over the course of decades in CN proceedings so that the orderly development of utility grid modernization investments in response to emergent, novel technologies and customer preferences can proceed in a way that promotes the public interest.

3. *The Guidance Document Synthesizes Related Commission Orders and Creates a Framework for Economic Evaluation of Utility Grid Modernization Investments*

The Department offers the Guidance Document as a path forward in creating a similar regulatory paradigm, and notes that it addresses Principles 1 and 2 of the CN petition regulatory paradigm. The Guidance Document's Initial Filing Requirements applies to any utility grid modernization proposal and creates a clear expectation of the quality and type of information that utilities need to provide when grid modernization investments are proposed. The Guidance Document also provides a methodological framework for conducting economic evaluation of grid modernization investments, which offers clear methods for stakeholders to review such investments and requirements for a utility regarding the information required to support and justify the proposed grid modernization investment.

The Guidance Document incorporates the filing requirements and principles of benefit-cost analysis from the Commission's September 27, 2019 Order in Docket No. E002/M-17-797 and July 23, 2020 Order in Docket No. E002/M-19-666. Fundamentally, the Guidance Document is a synthesis of these Commission Orders and elucidates many of these filing requirements and principles to adhere to established best practices for conducting of economic analysis of grid modernization investments. Further, the Guidance Document's filing requirements across all utility pathways and proceedings where grid modernization investments are proposed is that it provides needed specificity on how to provide benefits and costs where the Commission has not articulated with precision what information is needed.

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 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 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) incorporate 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; and

- **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.

The Guidance Document is intended to create a framework for the economic evaluation of utility grid modernization investments in Minnesota so that review of such investments is uniform regardless of the utility proposing the investment or the regulatory venue in which the investment is proposed.

The Guidance Document provides a flexible and non-prescriptive framework that serves as a guardrail for utility grid modernization investments. It can assist the Department, the Commission, stakeholders, and utilities by providing clear expectations regarding the nature of the evidence that utilities need to provide to support and justify proposed grid modernization investments and the quality of economic analysis that utilities need to conduct to justify investments, as well as economic evaluation methods to use to the review of grid modernization investments.

In the context of the certification request process currently used by Xcel, this framework addresses principles one (information threshold) and two (evaluation methods) of the CN petition regulatory paradigm, but the third key principle of the CN petition regulatory paradigm – the standard of review – should be addressed by the Commission.

As explained below, Synapse recommended a standard of review for certification requests that can help stakeholders and the Commission review these requests and inform all parties about the decision criteria that will be used to determine whether to certify a proposed grid modernization certification request.

4. An Evidentiary Standard for Certification Would Assist Stakeholders in Reviewing Future Certification Requests and Assist Xcel in Providing More and Better Information to Support Future Certification Requests

Minn. Stat. §216B.2425, subd. 2(e) (the Grid Modernization Statute) requires utilities “operating a multiyear rate plan approved by the commission” to file biennial reports identifying “investments that [they consider] 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 facilitation 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.”⁴ Subdivision 3 requires the Commission to certify, certify as modified, or deny certification the investments a utility identifies under subdivision 2 of the Grid Modernization Statute.

⁴ Minn. Stat. §216B.2425, subd. 2(e). Accessed at:

To date, the Commission has made decisions regarding certification based on the statutory language on a case-by-case basis. The Commission's July 23, 2020 Order states:⁵

The Commission clarifies in this order that certification does not constitute a pre-judgment of whether the costs will be recovered through riders or base rates. Certification simply permits a utility to request rider recovery in the future, which the Commission may approve or deny based on the facts available at that time.

...

Regarding the potential adoption of additional criteria for certification, the Commission continues to hold the opinion it expressed in its 2016 order certifying ADMS[footnote omitted] – that it is most appropriate to apply the statute on a case-by-case basis and to develop more detailed criteria, if necessary, over time, as the Commission gains further experience with grid modernization.[footnote omitted] At this time, the Commission believes that it is appropriate to look to the language of the statute to guide its review.

The Department appreciates the Commission's consideration of certification requests on a case-by-case basis, as stakeholders and the Commission learn and obtain experience with this novel area of utility investment. The Department notes, too, that relying on the statutory language of the Grid Modernization Statute to guide the review of certification requests is appropriate and necessary.

However, the current standard of review creates uncertainty: evaluating certification requests on a case-by-case basis does not provide a standard analytical approach to evaluating grid modernization investments that provides stakeholders with clarity and process certainty regarding the level of analysis required to inform the Commission's decision.

A case-by-case approach to evaluating grid modernization investments is not an optimal approach in terms of allocation of limited analytical resources. Stakeholders may be unsure of when to leverage their time and expertise in analyzing certification requests, and continued uncertainty may preclude stakeholder involvement.

To help address this and to apply principle three (standard of review) of the regulatory paradigm for CN petitions to the certification request process, Synapse developed and recommended an evidentiary standard of review for certification requests in its February 25, 2022 Report in the instant proceeding (Attachment 1 of the Department's Initial Comments). The standard was articulated in Section 3.2 of Synapse's Report attached to the Department's February 25, 2022 comments in the instant proceeding. The Department provides the text here:

⁵ Commission's July 23, 2020 Order, at 12.

The Commission should further standardize the grid modernization review process by expanding its certification standards to include an evidentiary requirement: in addition to the Commission's existing requirements for certification—including the requirement that requests for certification be complete—a utility should have to demonstrate that its grid modernization investment proposal and BCA indicates that, by a preponderance of the evidence on the record, the proposed investment will be in the public interest.

Such a judgement should not be limited to a narrow consideration of cost effectiveness, as would be indicated by the results of BCA, though these BCA results should play an integral part in decisions about certification. The Commission should also consider how well a proposal has demonstrated the connection between the grid modernization investments that have been proposed and grid needs identified in the IDP, how thoroughly the utility has considered alternatives to the proposed grid modernization investments, and how effectively the utility has addressed risk, equity, and customer protection issues.

The decision to certify would therefore represent a Commission finding that, after consideration of these factors, a more reasonable and prudent alternative to the proposed grid modernization has not been demonstrated by a preponderance of the evidence on the record.

The preponderance of evidence standard articulated in the context of certification requests, coupled with the Commission's existing standards for evaluating certification requests and the additional criteria proposed by Synapse, has the potential to provide additional clarity to stakeholders in reviewing and assessing the merits of future certification requests. The Department notes that the preponderance of evidence standard exists as a standard for review in Minnesota Rules regarding Certificate of Need Petitions.⁶ To be clear: the Department is **not** recommending that the Commission adopt an evidentiary standard for certification requests directly comparable to the rules governing the decision criteria for Certificate of Need petitions.

The Department, with Synapse's assistance, is here attempting to imbue the certification request with a more meaningful, clearly articulated standard of review so that stakeholders, utilities, and the Commission have a clear understanding of what is being reviewed and the criteria upon which the Commission will make its decision to certify, certify as modified, or deny certification of future certification requests. The preponderance of evidence standard is familiar to the Department, to the Commission, to stakeholders, and to utilities in the context of Certificate of Need proceedings. Without a clearly articulated standard, it is difficult, more time consuming, and costlier for parties to participate in these certification request proceedings.

⁶ Minn. R. 7855.0120. Accessed at: <https://www.revisor.mn.gov/rules/7855.0120/>.

Applying some aspects of that standard to certification requests, as Synapse recommends, can help guide stakeholder and Commission review of utility certification requests, and can inform Xcel of the nature of the evidence and quality of the economic analysis it needs to include with future certification requests to support and justify its proposal. Coupled with the Guidance Document's filing requirements, this standard of review can provide all parties with a clear path forward for reviewing certification requests of grid modernization and help lead to the orderly development of grid modernization investments in Minnesota.

The Department notes and appreciates the Commission's perspective that "it is most appropriate...to develop more detailed criteria, if necessary, over time, as the Commission gains further experience with grid modernization."⁷ It is important to recognize that these novel processes offer an opportunity to learn additional information and apply new understandings in each iteration.

However, it is also important to recognize that, without a clear standard of review, these certification request proceedings require more time for analysis, creating delays in addressing other dockets such as IRPs, and it creates a risk that these investments will not be sufficiently reviewed. This trade-off between flexibility but larger time requirements for proposal-specific customization versus less flexible, quicker analytical processes resulting from clear standards needs to be recognized. In view of the statutory deadline of June 1, there is already limited time to review these certification requests, and so creating a more meaningful, clearly articulated standard of review can lead to a more optimal, efficient use of limited analytical resources that comports with the limited statutory timeframe.

The Department is open to additional considerations from stakeholders and the Commission regarding a standard of review for certification requests, but agrees with Synapse that an evidentiary standard of review for certification requests will help provide additional process clarity for stakeholders, provide a clear understanding of how the Commission will make these decisions, speed up the overall Commission process, and can inform utilities regarding the level of evidence they need to include with future certification requests.

5. The Guidance Document is Responsive to the Commission's Request for Guidance Regarding Grid Modernization Investments

As the Department's Letter indicated, the Order Point No. 10 of the Commission's September 27, 2019 Order requested the following:

10. The Commission requests that the Commissioner of Commerce seek authority from the Commissioner of Minnesota Management and Budget to incur costs for specialized technical professional investigative services under Minn. Stat. § 216B.62, subd. 8, to investigate the potential costs and benefits of grid modernization investments proposed for recovery by Xcel in its next rate case or

⁷ Commission's July 23, 2020 Order, at 12.

TCR filing and to assist the Department in providing recommendations to the Commission regarding any such investments.

The Department selected Synapse to provide such services and recommendations. In view of the ongoing and significant investment proposals made by Xcel and other utilities, the Department sought to work with Synapse to review the landscape of grid modernization investments in Minnesota and develop a uniform, consistent approach to review all such investments.

While each utility has unique circumstances that should be accounted for, as a general matter, economic evaluation of utility grid modernization investments can and should be relatively uniform regardless of the utility proposing it or the regulatory venue in which the investment is proposed. Principles of benefit-cost analysis can be uniformly applied to utility grid modernization investments, as the Guidance Document demonstrates.

Synapse developed the Guidance Document to assist the Department in providing recommendations to the Commission regarding Xcel's grid modernization investments, and in so doing, proposed a framework for the economic evaluation of utility grid modernization investments. Fundamentally, the Guidance Document, Synapse's analysis, and the Department's recommendations regarding Xcel's grid modernization investments are responsive to the Commission's request.

6. The Guidance Document in the Context of Utility IDPs

Contrary to Xcel's claims, the Department does not intend to apply the Guidance Document to the entirety of utility distribution expenditures, budgets, and associated strategies for managing the distribution grid. Rather, the Department's goal is for utilities to provide benefit-cost analysis information of grid modernization investments as required by IDP Filing Requirement 3.D consistent with the Guidance Document. As the Department expressly stated in Initial Comments, the Department "is not recommending any modifications of IDP Filing Requirements related to the provision of BCA information but will monitor future IDPs to ensure that Xcel and utilities are providing BCA information consistent with the Guidance Document's prescriptions."⁸

The Department's invocation of the Guidance Document in the context of utility IDPs is limited to IDP Filing Requirement 3.D and relates to the quality, type, and consistency of information that utilities are required to provide.

The quality of information provided in utility IDPs regarding grid modernization plans and investments should be detailed enough to allow for stakeholders and the Commission to understand the utility's plans and proposed investments. Section 2 of the Guidance Document provides insight and information related to the quality of information required for economic evaluation of grid modernization investments.

⁸ Department's Initial Comments, at 25.

The type of information provided in utility IDPs regarding grid modernization plans and investments should be of the type and character of information that the Guidance Document argues is necessary to enable the economic review of a utility's grid modernization plans and investments. Sections 2 of the Guidance Document also provides insight and information related to the type of information required for economic evaluation of grid modernization investments.

The consistency of information provided in utility IDPs regarding grid modernization plans and investments relates to the connection between utility IDPs and specific grid modernization investment proposals: information provided in utility IDPs should be consistent with information provided in specific grid modernization investment proposals (with appropriate caveats, as explained further below).

The Department's goal in this connection is to tie utility IDPs directly to utility grid modernization proposals: a utility's proposal for a specific grid modernization investment should be discussed in a utility's IDP so that the grid modernization investment can be proactively understood and stakeholders have a meaningful opportunity to influence a utility's grid modernization plans.

This is in line with the planning function of IRPs and the impact of IRP proceedings on CN petitions: an opportunity to review information and plans in an IRP lends itself to a more efficient review process in a CN petition. The Company correctly points out that a Commission's Order in an IRP constitutes "prima facie evidence which may be rebutted by substantial evidence in all other proceedings."⁹ To be clear: the Department is not recommending that a similar structure be adopted for IDPs and specific grid modernization proposals since no such rule language exists for IDPs or grid modernization proposals.

Merely, and only, the Department suggests that IDPs serve a planning function for grid modernization plans and proposed investments as IRPs serve for energy resource development. The planning function of an IDP can and should lend itself to the review of a specific grid modernization proposal once a utility files a petition such as Xcel's certification requests included in its 2021 IDP, similar to the planning function of an IRP.

a. Quality and Type of Information

IDP Filing Requirement 3.D requires utilities to propose a long-term plan for its distribution system, including a 5-Year Action Plan that requires utilities to provide specific information regarding its near-term investments. This plan is required to consist of information that helps stakeholders and the Commission understand forthcoming, specific utility investment proposals. The information required should be objective, transparent, and include sufficient detail to assess whether the utility's forthcoming proposals have merit.

⁹ Minn. Stat. §216B.2422, subd. 2(b). Accessed at:
<https://www.revisor.mn.gov/statutes/cite/216B.2422#stat.216B.2422.2>.

The type and quality of information that a utility provides in response to this IDP Filing Requirement can be informed by the Guidance Document. The Guidance Document is organized in three main parts: Section 2: Grid Modernization Evaluation Framework; Section 3: Initial Filing Requirements; and Section 4: Ongoing Reporting Requirements.

Section 2 is most directly applicable to IDP Filing Requirement 3.D because it prescribes a framework for evaluating grid modernization proposals: its prescriptions include the type and quality of information necessary to evaluate a utility's grid modernization investments. For instance, IDP Filing Requirement 3.D(iii) requires utilities to provide its analysis of alternatives to its forthcoming investment proposal(s).¹⁰ Sections 2.4 and 2.5 of the Guidance Document have clear prescriptions of the quality and type of information needed in order to evaluate forthcoming investments and its alternatives.

To illustrate, information provided in response to IDP Filing Requirement 3.D(iii) should include the following: (1) a reference scenario and investment scenario(s) (Section 2.4); (2) supporting information a utility relied on to develop its plans and the alternatives that were considered (Section 2.4.1); (3) the costs and benefits of reference and investment scenario(s) should be reported in appropriate units, including the net benefits of each so they can be compared directly (Sections 2.4.2 and 2.5.2-2.5.4); and (4) the cost-effectiveness test/BCA test used by the utility to evaluate the reference and investment scenario(s) (Section 2.5.1).

Sections 3 and 4 of the Guidance Document more directly relate to a specific grid modernization investment proposal, such as when Xcel requests certification of a grid modernization project or when another utility (such as Otter Tail Power) files an Electric Utility Infrastructure Cost (EUIC) Rider. The content of that filing should include information consistent with those Sections, but the utility can and in some cases should provide information consistent with these Sections in its 5-Year Action Plan so that the information is consistent between the *plan* and the *proposal* to the extent practicable, as described more below.

b. Consistency of Information

Upon a utility filing a specific grid modernization investment proposal that was first articulated in the utility's IDP 5-Year Action Plan, the information provided in the investment proposal filing should be consistent with the information provided in the 5-Year Action Plan, with the understanding that a utility's grid modernization *proposal* may differ from a utility's grid modernization *plan* based on project-specific circumstances on a case-by-case basis and directly as a result of feedback and

¹⁰ The Department notes that the sub-requirements of IDP Filing Requirement 3.D are not enumerated and instead appear as a bulleted list. The Department enumerates these sub-requirements as lowercase Roman numerals so that they are more easily referred to in the analysis that follows. IDP Filing Requirement 3.D(iii) states:

Alternatives analysis of investment proposal: objectives intended with a project, general grid modernization investments considered, alternative cost and functionality analysis (both for the utility and the customer), implementation order options, and considerations made in pursuit of short-term investments. The analysis should be sufficient enough to justify and explain the investment.

stakeholder recommendations regarding its grid modernization plan. Consistent information between plans and proposals aids the proposal's review process and can help expedite review, similar to how certificate of need proceedings' review process is impacted when the proposed project is part of a utility's IRP.

c. Completeness Reviews of Utility Grid Modernization Proposals

The Guidance Document relates to the quality, type, and consistency of information utilities are required to provide in response to IDP Filing Requirement 3.D and in utility grid modernization investment proposals. The Guidance Document will greatly benefit the review process of these proposals by creating clear informational requirements that are understood by all parties.

A completeness review of utility filings in the context of Certificate of Need petitions is an interim step that allows parties to determine whether a CN petition has provided information necessary for parties to reach the merits of the petition. To be clear: the Department is **not** recommending the same completeness review process for certification requests at this time due to the statutory deadline for Commission action and the limited time for review.

Merely, the Department is suggesting that if information in IDPs and utility grid modernization investment proposals adhere to the Guidance Document in terms of the quality, type, and consistency of information, then the review process of the proposal overcomes an informational barrier and can largely avoid an interrogative process that can require significant analytical resources and further limit the already limited time available to review these certification requests and investment proposals.

The Department views this as a threshold issue in evaluating a grid modernization investment proposal: has the utility provided information necessary and sufficient to complete the public record? In other words, do parties have the *quality* and *type* of information that the Guidance Document identifies is required to evaluate the merits of a utility's grid modernization investment proposal? Information contained in the proposal should be *consistent* with the information contained in the IDP where that proposal is discussed.

7. The Department Supports and Expects Ongoing Evaluation of the Guidance Document Through Stakeholder Feedback and Engagement

Xcel expressed concerns regarding stakeholder input in the development of the Guidance Document and infringement upon due process rights of stakeholders. The Department notes that aside from addressing which cost-effectiveness test and discount rate to use in the economic evaluation of grid modernization investment proposals, the Company did not articulate specific concerns it had with the Guidance Document.

The Department notes and emphasizes that the Commission comment-and-reply comment process is fundamentally a stakeholder process that provides the public with an opportunity to participate,

affords every participant with due process rights, and creates a public record upon which Commission decisions are made.

To say the Guidance Document was developed without stakeholder input would be to ignore the value that decades of Commission practice provide to stakeholders and the extensive litany of regulatory proceedings related to utility distribution system planning and grid modernization.

The Guidance Document was developed by Synapse after careful, exhaustive review of several regulatory proceedings regarding utility distribution system planning and grid modernization investments, as described in the table below.

Table 1. Minnesota Utilities' Distribution System Planning and Grid Modernization Proceedings

Docket Number	Description	Docket Number	Description
E999/CI-15-556	Commission Investigation into Grid Modernization	E002/M-19-666	Xcel 2019 IDP and AGIS Certification Request
E002/M-15-962	Xcel 2015 Grid Modernization Report	E017/M-19-693	Otter Tail Power 2019 IDP
E002/M-17-776	Xcel 2017 Grid Modernization Report	E015/M-19-694	Minnesota Power 2019 IDP
E002/M-17-797	Xcel 2017-2018 TCR Rider Petition	E111/M-19-674	Dakota Electric Association 2019 IDP
E111/M-17-821	Dakota Electric Association Electric Utility Infrastructure Cost (EUIC) Rider (Advanced Grid Infrastructure (AGI) Rider) Petition	E017/M-21-382	Otter Tail Power EUIC Rider Petition
E002/CI-18-251	Distribution System Planning for Xcel Energy	E002/M-19-721	Xcel 2019-2020 TCR Rider Petition
E017/CI-18-253	Distribution System Planning for Otter Tail Power Company	E002/M-21-694	Xcel 2021 IDP and DI/RMP Certification Requests
E015/CI-18-254	Distribution System Planning for Minnesota Power	E002/M-21-814	Xcel 2021-2022 TCR Rider Petition
E111/CI-18-255	Distribution System Planning for Dakota Electric Association		

The Company recommended that the Commission “require the Department to work with stakeholders to modify its Guidance Document to make it consistent with the Commission’s objectives for IDP and practicable for utilities – then file it in a new and forward-looking all-utilities docket, subject to further

stakeholder efforts and formal regulatory procedure to build a comprehensive record for the Commission to consider.”¹¹

The Company’s Reply Comments also referred to ongoing stakeholder processes in other proceedings to suggest that the Department should approach the develop a framework to evaluate grid modernization proposals in similar fashion. Specifically, the Company references stakeholder processes in Docket No. G999/CI-21-556, Docket No. E002/CI-17-401, and Docket No. E999/CI-14-463.¹²

Xcel’s newfound support for a stakeholder process to evaluate grid modernization investments in Minnesota is belied by its longstanding opposition to additional processes that seek to evaluate its own grid modernization investments.

Despite the contradictory position of the Company, the Department appreciates the articulation of a desire regarding additional process that would lend itself to a uniform approach to economic evaluation of utility grid modernization investments. The Department welcomes stakeholder feedback regarding the Guidance Document and expects that the Guidance Document, much like IDPs themselves, will change over time to reflect new information and understandings.

The Department offers the Guidance Document and the recommended standard for certification to preserve the regulatory flexibility that the current review process provides the Commission. There is some value to preserving that regulatory flexibility as the Commission and stakeholders learn more, but the Department reiterates that without a standard approach to evaluating utility grid modernization investments (as proposed by the Guidance Document) and without a more meaningful, clearly articulated standard of review for Xcel’s certification requests, the public interest is at substantial risk.

The Department welcomes stakeholder feedback regarding the Guidance Document and expects that the Guidance Document, much like IDPs themselves, will change over time to reflect new information and understandings. The Department is not opposed to refinements of the Guidance Document and in fact, encourages stakeholders to offer suggestions regarding best practices for evaluation of grid modernization investment proposals. Including the instant proceeding, the Department submitted the Guidance Document in several related regulatory proceedings:

- **Docket No. E002/M-21-814:** Xcel’s 2021-2022 TCR Rider Proceeding
- **Docket No. E002/M-19-666:** Xcel’s 2019 IDP and AGIS Certification Request
- **Docket No. E999/DI-20-627:** Department Stakeholder Process Informing the Report on 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

¹¹ Xcel Reply Comments, at 4.

¹² Xcel Reply Comments, at 6-7.

- **Docket No. E002/M-20-680:** Xcel's Compliance Filing re: the Procedural Path for Review of AMI and FAN
- **Docket No. E017/M-21-612:** Otter Tail Power's 2021 IDP
- **Docket No. E015/M-21-390:** Minnesota Power's 2021 IDP
- **Docket No. E111/M-21-728:** Dakota Electric Association's 2021 IDP

The Department issued the Guidance Document in those proceedings for the express purpose of soliciting feedback from stakeholders and utilities, and to further the Department's goal regarding the orderly development of utility grid modernization investments in Minnesota. The Department is actively considering feedback from other stakeholders—including Xcel's in the instant proceeding—and commits to ongoing engagement with stakeholders and utilities and incorporation of feedback that is consistent with recommendations from Synapse.

However, the Department is concerned about the desire for additional stakeholder process before utility grid modernization investments are evaluated using the Guidance Document, given persistent resource constraints. However, should the Commission desire additional stakeholder process for the Guidance Document, the Department recommends that the Commission use the existing Department Investigation proceeding in Docket No. E999/DI-20-627. While the Guidance Document is in part borne out of that proceeding and relied on extensive stakeholder feedback provided there and in many other regulatory proceedings (as described above), that regulatory venue seems most appropriate to discuss the content of the Guidance Document.

B. ANALYSIS OF XCEL'S RESPONSE TO THE DEPARTMENT'S INITIAL COMMENTS

1. Goal of the Department's Requests for Additional Information

The Company generally responded that the Department's requests for additional information, if intended to assess the prudence of the Company's expenditures, are more appropriately discussed in its rate case, and IDPs are informational filings that provide summary level information about numerous distribution-related topics.

To reiterate, the Department is not proposing to turn utility IDPs into a prudency assessment of Xcel's—nor other utilities'—distribution system spending. The Department's requests for additional information from Xcel regarding its distribution system planning, operations, and spending is directed squarely at the longstanding informational asymmetry that exists between utilities and stakeholders.

The Department appreciates Xcel's efforts in reply comments to provide a deeper insight and explanation into its planning, operations, and overall distribution system spending. The Department is developing the capacity and building upon knowledge of distribution system planning with each iteration of IDPs. The Department appreciates Xcel's and other utilities' efforts to leverage their expertise and experience to yield new insights and understandings for stakeholders.

2. Xcel Response to Department Recommendation Related to IDP Planning Objective #2

The Department's initial comments under IDP Notice #2 and regarding IDP Planning Objective #2 recommended the following:

The Department recommends that in future filings the Commission require Xcel to provide the following information that will allow for an independent verification of the reasonableness of the proposed incurred costs related to customer-facing utility offerings and programs:

- **Xcel's internal benefit-cost analyses for reference and investment case scenarios, including reasonably known and analyzed alternatives;**
- **Assumptions and data supporting the projected customer participation rates;**
- **Sensitivity analysis for varying rates of adoption of proposed programs; and**
- **Discussion of how the proposed customer-facing utility offerings and programs may interact with existing or proposed Conservation Improvement Plan or Next Generation Energy Act programs.**

The Company responded that it does not object to providing this information on projects for which it is seeking certification and have identified specific planned customer products or services to accompany the investment, and that are included in a cost-benefit assessment. The Company also stated that "because the outcome of an IDP is not cost recovery or prudence determination, broad application of these recommended requirements would be misplaced."

The Department agrees that IDPs and certification requests are not cost recovery filings or prudence determinations. The Department clarifies that the recommendation is not intended to be broadly applicable. The Department's recommendation is applicable to the Company's grid modernization plans and proposed investments in response to IDP Filing Requirement 3.D, and separately to its certification requests proposed under Minn. Stat. §216B.2425, subd. 2(e). To the extent that a proposed grid modernization investment or planned investment under IDP Filing Requirement 3.D does not yet have identified specific planned customer products or services to accompany the investment plan or proposal, then the Department's recommendation would not apply.

The Department's goal, as explained in Section A above, is to better understand the Company's grid modernization plans under IDP Filing Requirement 3.D and to require additional information so that stakeholders have an opportunity to discuss the merits of the Company's plan. The Department's recommendation here is intended to obtain additional information to enable that stakeholder review.

The Department modifies the recommendation as follows to provide greater clarity, and notes that the text of the recommendation below supersedes the initial recommendation that the Department offered in Initial Comments:

- **The Department recommends that in future filings the Commission require Xcel to provide the following information related to its grid modernization plans and proposed**

investments in response to IDP Filing Requirement 3.D and in future certification requests under Minn. Stat. §216B.2425, subd. 2(e) to facilitate stakeholder review and input of the costs the Company proposes to incur related to customer-facing utility offerings and programs:

- **Xcel's internal benefit-cost analyses for reference and investment case scenarios, including reasonably known and analyzed alternatives;**
- **Assumptions and data supporting the projected customer participation rates;**
- **Sensitivity analysis for varying rates of adoption of proposed programs; and**
- **Discussion of how the proposed customer-facing utility offerings and programs may interact with existing or proposed Conversation Improvement Plan or Next Generation Energy Act programs.**

3. Xcel Response to Department Request for Additional Information Regarding Non-Capacity Projects

The Department's initial comments under IDP Notice Topic #2 and regarding IDP Planning Objective #4 requested that Xcel provide additional information and/or discussion regarding how projects in non-capacity project categories are evaluated and funded in Utility Reply comments.

Xcel responded in depth on pages 8 through 13 in Attachment A to its reply comments and generally provided helpful explanations regarding Xcel's budgeting process generally and for non-capacity projects specifically.

Xcel provided an overview of its overall budget development process in Section II and II.A of Attachment A of its Reply Comments and explained that its annual process to create a five-year financial forecast continually reevaluates budgets in the subsequent two to five years of that forecast in response to emergent needs from customers and exogenous forces such as local government mandates and the weather. The Company also explained that the capital planning process involves a bottom-up analysis of needs and priorities of different business areas and seeks to achieve a balance of funding key strategic priorities, maintaining base operations, and minimizing impacts on customer rates. Further, financial guidance is provided to business areas to set expectations and looks at myriad factors ranging from new legislation and regulatory requirements to projects that are necessary to maintain or improve reliability and safety, among others. This is done to determine how to best balance its overall budgets and manage costs for customers.

Xcel further explained that approximately 80% of its distribution system budget is reactive and dedicated to the immediacy of customer reliability impacts and includes building and maintaining feeders, substations, transformers, service lines, and other equipment based on customer needs and reacting to exogenous forces.

Xcel provided an overview of the proactive and reactive elements of its distribution system in Table 1: IDP Budget Categories – Proactive/Reactive Summary. The Company also indicated that this

illustration and other parts of its Reply Comments demonstrates that the Department's suggestion of a cost-benefit analysis of traditional distribution infrastructure investments is misplaced.

The Department's Initial Comments indicated that the Department was considering a recommendation for future IDPs to include some illustrative examples of detailed and complete BCAs for proposed projects within each of the IDP Budget Categories, a description of the methodology employed to prevent double counting of benefits or costs across programs or enabling technologies, a clear conceptual line of sight between the project selected and the Commission's Planning Objectives, and the metrics to evaluate the project's performance with respect to the benefits identified and in relation to the Commission's Planning Objectives.

In view of the Company's Reply Comments, its IDP, and the development of the Department's knowledge of distribution system planning, the Department declines to make any such recommendation at this time and appreciates the Company's insight regarding traditional distribution infrastructure investments.

The Department, however, maintains that it is appropriate for the Company to respond meaningfully to the Department's suggested approach to developing a greater understanding of traditional distribution infrastructure investments, which the Department referred to as "right-size analysis," discussed more below.

4. Xcel Response to Department Request for Narrative Explanation of Changes in Spending for Each IDP Budget Category Compared to Previous Filings

The Department's initial comments under IDP Notice Topic #2 and regarding IDP Planning Objective #4 requested that Xcel provide a narrative explanation for the changes in spending for each IDP Budget Category compared to previous filing (including the 2019 IDP and the Compliance Filing) in Utility Reply Comments.

The Company provided helpful information in Section II.C of Attachment A of its Reply Comments regarding the drivers and process to derive distribution system budgets, and generally explained that increases in investments are necessary to maintain the safety, reliability, and resiliency of the distribution system and to meet the requirements of a modern grid. Further, the Company provided a helpful Budget Vintage Comparison in Section II.D in response to the Department's request above.

The Company described how its historical levels of investment are no longer sufficient to maintain its system and the Company is now reaching the point where many of its assets are at or past their anticipated useful life. Accordingly, as the Company discussed in its 2019 IDP, it proposed the ISI Initiative (incremental system investment) to maintain reliable service and harden its system to be more resilient to extreme weather events. The Company directly compared its distribution system spending in 2019 to 2020, and 2020 to 2021, and provided a narrative summary explanation of changes for each comparison in Tables 5 and 6.

These more granular narrative explanations are helpful and the Department appreciates this deeper insight. The Department notes, too, that the IDP itself provides similar insight in Appendix D.

Still, the Department is interested in learning more about the precise nature of the Company's spending so that stakeholders have a better understanding of what projects are needed, when, and how much needs to be spent. The Department's suggested approach – right-size analysis – may have the potential to lead to such understanding. The Company did not respond to the Department's invitation and request to indicate whether this approach was appropriate. The Department asks the general question, again: is Xcel's spending on specific components of the distribution system appropriate given the issue that Xcel is trying to address or prevent?

The Department is not intending to second-guess the Company's expertise or experience in posing this question and analytical approach. As stated in Initial Comments, the Department is appreciative of the hard work and dedication shown by Xcel in maintaining and improving the reliability, resiliency, and safety of its distribution grid in Minnesota and the potential this provides for implementing further grid modernization initiatives. The Department observed that asking for additional information is a recognition of the increased complexity and interoperability of components in the modern distribution system, and that this recognition requires a coincident increase and scrutiny and detail of analysis to ensure efficient resource allocation and ratepayer protection.

Toward that end, Department is seeking more information and insight, and asks that the Company take efforts in future IDPs to provide it. As the stakeholder community becomes more aware of and involved in the Company's distribution system planning and spending, it is important that there is a common understanding. The Department's goal in posing the general question above and the "right-size analysis" analytical approach is to facilitate such a common understanding but is open to and eagerly invites other suggestions from the Company or stakeholders in how best to facilitate such a common understanding.

C. IDP NOTICE TOPIC #1: SHOULD THE COMMISSION ACCEPT OR REJECT XCEL ENERGY'S INTEGRATED DISTRIBUTION PLAN (IDP)?

The Department's requests for additional information and insight into the Company's planning and spending notwithstanding, the Department maintains its conclusion that the Company sufficiently addressed each of the IDP Filing Requirements and Commission Orders.

In review of stakeholder input and the Company's Reply Comments, the Department recommends that the Commission accept Xcel's 2021 IDP with the understanding that acceptance of the IDP has no bearing on prudence or certification of specific proposed investments.

D. ANALYSIS OF STAKEHOLDER RECOMMENDATIONS REGARDING XCEL'S IDP

The Department appreciates the thorough review and thoughtful consideration from multiple stakeholders in this proceeding. Many of the recommendations and comments from stakeholders involve modifications or additions to the requirements for future IDP reports. The Department addresses the merits of these proposed changes in the broader context of distribution system planning and grid modernization efforts in Minnesota as well as concurrent IDP processes at other regulated utilities.

As noted in its Initial Comments in the Company's 2019 IDP filing, the Department continues to provide recommendations in this and other IDP dockets with the understanding that integrated distribution planning is a relatively nascent process in the state of Minnesota, and the Department's recommendations for any refinement of the process are made 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."¹³

Input from stakeholders and the communities served by the Company are critical to ensuring that the future distribution system of Minnesota is planned and operated in a manner that both guarantees reliability and resiliency cost-effectively while remaining responsive to the needs and expectations of its customers. The Department is encouraged by the participation and contributions of parties in the instant docket and the recent relevant Decision Options approved by the Commission in Xcel's IRP proceeding (Docket No. E002/RP-19-368). The evolution of these dockets will serve to ensure that Xcel will further integrate its resource and distribution planning efforts, more directly address the climate and energy goals of local communities in its service territory, and integrate grid equity assessments and concerns into its distribution system design.

The inclusion of these new value inputs taken directly from the communities that Xcel is required to serve will require the refinement of the processes by which the Department analyzes the investments of regulated utilities in Minnesota. The Department is cognizant of this change, as well as the requirement of crafting a regulatory framework in response that will effectively meet the planning objectives of the Commission without unduly burdening the Company or implementing process changes that are outside the delegated authority of the Commission.

In this section the Department's analysis of other stakeholder recommendations related to Xcel's IDP requirements considers the larger picture of distribution system planning in Minnesota. The Department considers whether recommendations: (1) are reasonably likely to result in a benefit for ratepayers and the public interest; and (2) can be reasonably incorporated into other utilities' IDP requirements.

¹³ Department Initial Comments, at 12. Docket No. E002/M-21-694. February 25, 2022. Accessed at: <https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={B098417F-0000-CF13-8919-F262402B0C2D}&documentTitle=20222-183229-01>.

1. Sabathani Community Center, Minneapolis American Indian Center, University of St. Thomas, and Renewable Energy Partners, Inc. Recommendations

The parties listed here are all either sites selected for the Resilient Minneapolis Project or affiliates with the initiative. They did not provide recommendations for the Commission regarding whether Xcel's IDP should be accepted but wrote letters of support to the Commission for the RMP and encouraged the Commission to certify the project.

2. The City of Minneapolis Recommendations

The City of Minneapolis recommended that the Commission should accept Xcel Energy's 2021 IDP with proposed modifications. The City of Minneapolis' comments and recommendations regarding Xcel's IDP generally addressed centering equity in the IDP, improving the NWA process, and refining processes for integrating distributed energy resource (DER) scenario analysis into distribution system planning.

a) Centering Equity in the Distribution Planning Process

The City of Minneapolis emphasized the criticality of stakeholder engagement and inclusion in distribution system planning to address "historical over- and under-investment in certain communities [which] directly contributes to the magnitude and patterns of their energy consumption."¹⁴ The City of Minneapolis provided the following recommendations to improve the stakeholder and customer engagement in distribution system planning process for Xcel specifically by asking the Commission to require Xcel to:

- Conduct community engagement in advance of the next IDP that both gives community representatives an opportunity to learn and respond to Xcel's approach to distribution management, and clearly communicates how the utility incorporates this input;
- Hold at least two workshops in advance of the next IDP filing with sufficient time to consider and incorporate feedback;
- Document how stakeholder input was used and incorporated in the next IDP filing;
- Map equity indicators at the feeder level through the existing hosting capacity mapping effort;
- Undertake a Minnesota-specific analysis or draw from other jurisdictions to develop equity impact metrics to be applied to NWA cost-benefit analysis in future IDP cycles;

¹⁴ City of Minneapolis Initial Comments, at 5. Docket No. E002/M-21-694. February 25, 2022. Accessed at <https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=eDocketsResult&userType=public#{701B337F-0000-C414-8CCB-729270C15CB2}>.

- In the short run, include an adder for NWA approaches that reduce energy burden or have other positive impact associated with distributed energy resources in the host community.

The City of Minneapolis explained that the current requirement from the Commission's 2018 Order requiring the Company to hold at least one stakeholder meeting prior to each IDP filing has not provided time for Xcel to incorporate feedback from participants and community representatives. The City of Minneapolis noted that the stakeholder workshop was scheduled for September 17, 2021, just 45 days before the November 1, 2021 filing deadline for the IDP. The Department generally supports initiatives to encourage community participation and Company transparency in distribution system planning efforts, while recognizing alongside the City of Minneapolis that "distribution system planning is both a relatively new public process and a complicated subject to communicate"¹⁵ and will require more time to educate - and meaningfully collaborate with - new stakeholder groups who previously have not participated in these proceedings to ensure equitable and just outcomes.

As the City does not proffer specific additions to the Commission's Planning Objectives or Filing Requirements with regards to changing the frequency or timing of IDP stakeholder workshops the Department does not respond specifically to this suggestion but shares the City of Minneapolis' general concerns and believes that Xcel should strive to provide ample opportunity for and consideration of stakeholder input to their IDP process.

Regarding the City of Minneapolis' suggestion of including equity indicators at the feeder level into host capacity maps, the Department does not agree that IDP proceedings are the proper venue for these considerations and recommends that this discussion take place within Xcel's Hosting Capacity Analysis (HCA) proceeding (Docket No. E002/M-21-767) and future HCA proceedings. The Department appreciates the City of Minneapolis' emphasis on incorporating inclusivity and equity into utility system planning and operations but agrees with Xcel that the integration of these principles are best discussed in the forthcoming equity-focused docket to be created from the Commission's verbal approval of Decision Option E15 during the February 8, 2022 deliberations of Xcel's IRP in Docket No. E002/RP-19-368. The Department looks forward to participating in these discussions to assist stakeholders in identifying and consistently applying an equitable and environmentally just framework for utility system planning, operation, analysis, and reporting across multiple dockets.

b) Recommended Changes to Non-Wires Alternatives Analysis Requirements

The City of Minneapolis suggested the following changes to how Xcel conducts its Non-Wires Alternatives analysis within its distribution system planning efforts:

- Include energy efficiency and demand flexibility measures in its NWA analysis;
- Consider NWA for a wider range of grid constraints including reliability, voltage-var optimization, and resilience;

¹⁵ *Id.*, at 6.

- Consider NWAs with a timeline of fewer than ten years;
- Requests for Xcel
 - Clarify why the weighted average cost of capital (WACC) was used for NWA in Table 7 of Appendix F
 - Use the Minnesota Department of Commerce recommended discount rate of 2.55% for any customer funded program that comprises an NWA
- The City further requests that the Commission implement the following process changes to NWA within the context of Integrated Distribution Planning proceedings generally:
 - Set a new approach for determining the threshold for viable NWA analysis;
 - Clarify how NWA projects would be funded, so that Xcel Energy can use the appropriate discount rate to analyze NWA projects;

Xcel responded to the City of Minneapolis' recommendation to incorporate energy efficiency and demand flexibility measures in NWA analysis by explaining that the system impacts of these programs are already incorporated into the analysis as net load reductions in the load forecast used to conduct the risk analysis, and the NWA solicitation process is technology agnostic such that should efficiency or demand flexibility measures be cost-effective solutions to mitigate risks to the system they would be considered against alternatives and judged according to those merits.

Xcel also stated that the assumed 10-year timeline for NWA projects is not a strict requirement for consideration but rather an anticipated standard contract term for the load relief services provided as longer-term solutions are generally more cost-effective to finance, more closely match the expected life of the equipment used and are more efficient to analyze within the cadence established by engineering and regulatory processes.¹⁶

The Department notes that in its 2021 IDP Xcel proposed a new methodology for use beginning with their 2022 NWA analysis incorporating a 10-year deferral period, new third-party contracting and ownership options, additional stacked values for potential solutions, prorated values for load reductions, and a new treatment for the peak output of the duration of the risk the NWA solution is proposed to mitigate.¹⁷ These refinements to NWA analysis procedures will provide the Company with new opportunities and options for contracting and financing NWA projects, the results of which have yet to be seen and assessed for their potential to result in better outcomes for ratepayers.

The Department anticipates that the Commission's extant filing requirements for NWA in the IDP, combined with the Company's new evaluation methodology and advances in applicable technologies, are sufficient to require Xcel to identify the most cost-effective NWA solution for ratepayers without the imposition of additional requirements determining the specific technologies or contract lengths to be used to address grid hazards or conditions. The Department does not support these

¹⁶ Xcel Reply Comments, Attachment A, at 32. Docket No. E002/M-21-694. March 22, 2022. Accessed at <https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={201CB37F-0000-C01B-BE48-5A0ADB2A1569}&documentTitle=20223-184060-01>.

¹⁷ Xcel's 2021 IDP, Appendix F, at 15.

recommendations from the City of Minneapolis at this time but remains open to revisit them in future IDP proceedings as Xcel's new NWA methodology is implemented.

The City of Minneapolis requested that the Company clarify its use of the WACC in their NWA benefit-cost analysis (BCA) and recommended that Xcel instead use the societal discount rate currently approved by the Department of Commerce for use in discounting the future value of Conservation Improvement Program (CIP) energy savings and other benefits. In reply comments Xcel contends that the WACC, as an opportunity cost to the company in making NWA investments, is the appropriate rate to evaluate the cost-effectiveness of proposed investments against traditional distribution system expenditures.

The Department notes that the discussion of discount rates in BCAs conducted for proposed grid modernization investments is a topic that is addressed by the Guidance Document (Section 2.8 Determining Discount Rates). The Guidance Document concludes that the WACC should not be used for cost-effectiveness of grid modernization investments, or any investments in Minnesota, as the WACC represents the time preference of utility investors.

In view of both the City of Minneapolis' and Xcel's positions, the Department recommends that the Commission require Xcel to use both the WACC and societal discount rate in its NWA analysis and discuss the results of the two approaches in a future IDP stakeholder meeting.

As stated above, the Department will revisit the City of Minneapolis' recommendations, particularly regarding the appropriate discount rate to use, in future IDP proceedings as Xcel's new NWA methodology is implemented.

The Department does not support the recommendations that the Commission should set a new approach for determining the threshold of viable projects for NWA analysis by lowering the cost threshold below \$2 million or specify how NWA projects should be funded by utilities. It is unclear how lowering the cost threshold below \$2 million would result in additional viable projects as none of the evaluated NWAs in the 2021 IDP were cost-effective, and there is no indication that forcing Xcel to spend more time and company resources on what could prove to be redundant analysis of smaller projects that are also not cost-effective at this time due to scaling or technology maturity issues is in the best interest of ratepayers. The Department also does not recommend that the Commission dictate the contracting terms, ownership structures, or financing options to be used by the Company to acquire and implement NWAs as this could have the effect of forcing the Company to forego taking advantage of creative solutions to integrate technologies into their distribution system, especially at a time when they are changing their NWA evaluation methodologies to consider alternative ownership agreements for equipment and facilities.

c) Regarding Distributed Energy Resources Scenario Analysis and Integration into Distribution Planning

The City of Minneapolis recommended that the Commission require Xcel to do the following regarding their DER scenario analysis and integration into the IDP:

- Update its list of Minnesota local government climate and energy goals, and provide scenario analysis for distribution systems needs of each of these goals are achieved;
- Include beneficial building electrification in the load growth forecast and increased grid flexibility with a more sophisticated modeling software;
- Consider resilience at the community level in the distribution plan; and
- Use existing AMI infrastructure and data, forecasting capabilities, and proposed areas of new spending including new distribution equipment and distributed intelligence, to reduce interconnection costs and time constraints.

Regarding the first three of these recommendations from the City of Minneapolis, Xcel noted in its reply comments – and the Department agrees with its assertion – that the verbally-approved Decision Options from the Company’s most recent IRP adequately address these topics and further Commission action within this docket is unnecessary at this time. The specific Decision Options referenced by the Company are provided below for stakeholder reference:

Decision Option 6. Require Xcel to account for local clean energy goals, in aggregate, in forecasting and modeling for the IRP. In particular, distributed generation in the plan should include consideration of local community generation goals.

Decision Option 11. Require Xcel to account for anticipated effects of advanced rate design, demand response, and any other efforts to shift customer demand in its next IRP.

Decision Option 13. Require Xcel to develop and/or improve base case adoption forecasts of the following technologies to include in its overall demand forecast for its next IRP filing, either through its Integrated Distribution System Plan proceedings, or through another stakeholder process.

- a. Light, medium, and heavy-duty electric vehicle adoption
- b. Electric space heating adoption
- c. Electric water heating adoption
- d. Electrification of other end uses
- e. Increased potential for demand response and load flexibility from an increase in electrification of the technologies in a – d

- f. Distributed solar adoption, including customer sited, community solar gardens, and non-customer sited/non-CSG distributed solar

Decision Option E3. Require Xcel to take the following steps to better align distribution and resource planning, including:

- a. Set DER forecasts consistently in the IRP and IDP.
- b. Conduct advanced forecasting to better project the levels of DER deployment at a feeder level, using Xcel's advanced planning tool.
- c. Proactively plan investments in hosting capacity and other necessary system capacity to allow distributed generation and EV additions consistent with the DER forecast.
- d. Improve non-wires alternatives analysis, including market solicitations for deferral opportunities to make sure Xcel can take advantage of DERs to address discrete distribution system costs.
- e. Plan for aggregated DERs to provide system value including energy/capacity during peak hours.

The Department supports the use of increasingly detailed and granular data provided by AMI infrastructure and other related distribution system planning tools, such as LoadSEER, in forecasting, system design, and interconnection processes. However, the Department recommends that these issues should be addressed within the context of the Distributed Generation Workgroup (DGWG) and the docket for Updating the Generic Standards for the Interconnection and Operation of Distributed Generation Facilities Established under Minn. Stat. § 216B.1611 (Docket No. E-999/CI-16-521). The Department has no cause to believe that Xcel will not use these additional capabilities in the monitoring, operation, and design of its distribution system nor in the development of its future DER Scenario Analysis. The Department does not recommend a new filing requirement ordering the use of such information at this time.

3. The City of Northfield Recommendations

The City of Northfield provided comments in the instant docket in support of the Commission's principles and planning objectives for integrated distribution planning generally, and recognized Xcel's efforts in providing products and services to meet those objectives. The City of Northfield specifically voiced their support for Distributed Intelligence but did not make any recommendations related to whether the Commission should accept Xcel's IDP or certify RMP, and encouraged the Company to take the following actions:

- Take into account the Climate Action Goals of Northfield and other Minnesota cities in assessing and planning future distribution system upgrades and investments;

- Extend the Solar*Rewards program through 2024, and extend or replace with a comparable program to provide access to renewable energy systems to low income customers;
- Install more NWA facilities in or around Northfield to increase the local grid's ability to incorporate further DER generation and support the City's transition to a more renewable-based grid; and
- Accelerate the deployment of AMI in Northfield to alleviate barriers to DER interconnection from fees and long interconnection queue times.

The Department appreciates and welcomes the input of communities within Xcel's service territory and encourages the Company to continue to work with these communities to integrate local climate and energy policies and priorities into their distribution system planning efforts.

The Department finds that the Commission's verbally-approved Decision Option 6 from Xcel's most recent IRP – discussed above in the response to the City of Minneapolis' comments – addresses the first of the City of Northfield's concerns and should also have implications for the Company's approach to NWA analysis in and around Northfield. The Department notes that the discussions around the implications for AMI in interconnection and hosting capacity processes should be specifically addressed in Docket Nos. E999/CI-16-521 and E002/M-21-767, respectively. The Department encourages the City of Northfield to participate in these discussions and finds that Xcel should strive to make these processes more transparent and accessible to the communities they serve.

4. Weave Grid, Inc. Recommendations

Weave Grid, Inc. recommended the Commission accept Xcel's 2021 IDP with no suggested modifications or recommendations for changes to IDP processes or filing requirements and provided general comments on the potential for EV charging optimization to help reduce the costs of integrating future EV load on Xcel's distribution system.

5. Fresh Energy Recommendations

Fresh Energy made the following recommendations regarding Xcel's 2021 IDP:

- The Commission should direct Xcel to prioritize the use of "net load" in its system-wide, substation, and feeder-level load forecasts, beginning with those developed for the next-filed IDP. Xcel shall include in the filing a detailed explanation of Xcel's proposed methodology for incorporating the load-reducing impact of distributed generation into its load forecasts and system planning processes.
- The Commission should direct Xcel to integrate or modify its systems and processes as needed to successfully incorporate the load-modifying impacts of demand-side management (DSM) in system-wide, substation, and feeder-level load forecasts, beginning with those developed for the next-filed IDP.

- The Commission should direct Xcel to incorporate building, transportation, and industrial electrification scenarios into system-wide, substation, and feeder-level load forecasts, beginning with those developed for the next-filed IDP. It may be reasonable to present multiple load forecast scenarios resulting from different electrification assumptions.
- The Commission should direct Xcel to hold at least two stakeholder workgroup meetings by December 1, 2022 to identify appropriate electrification scenarios for inclusion in load forecasts for the next-filed IDP.
- The Commission should direct Xcel to provide in its next-filed IDP a discussion of:
 - Current rules, tariffs, and practices governing cost allocation of distribution (and, where relevant, transmission) upgrades caused by the integration of distributed generation, adoption of electric transportation or building equipment, and other DER types.
 - How Xcel will proactively plan for grid investments that facilitate DER integration, including how Xcel proposes to allocate the costs for such upgrades.
 - Alternative methods of cost allocation being used in other states and/or offered by stakeholders.

In recommending that the Commission direct Xcel to prioritize “net load” in its forecasts, Fresh Energy is expressing its concern that Xcel’s current use of “native load” (load profiles which exclude the load-reducing impact of distributed generation on a feeder or in aggregate) overstates peak demand and incentivizes the Company to over-invest in capacity upgrades.¹⁸ Fresh Energy also noted that Xcel uses net load in its NWA analyses, accounting for load reducing contributions of distributed generation in this context and thus have the capabilities to use a similar calculation in system load forecasting and planning. Xcel responded that they are in the early stages of implementation of a new advanced planning tool, LoadSEER, and incorporating incremental variables such as net load, beneficial electrification, and DSM into these models will be an iterative process as employees gain familiarity with the tool and its capabilities.¹⁹ The Company is working on updating this business and operational practices for planning and risk analysis to be compatible with the capabilities and functionality of LoadSEER. The Department supports the recommendation that Xcel should provide a detailed explanation of the Company’s proposed methodology for incorporating net load into its load forecasts and system planning processes in their 2023 IDP.

Regarding Fresh Energy’s recommendation that the Commission require Xcel to integrate or modify its systems and processes to incorporate DSM in system-wide, substation, and feeder-level forecasts, the Department feels that this is premature given the Xcel’s limited experience with incorporating DSM impacts in LoadSEER. Additionally, Xcel is still in the process of rolling out AMI infrastructure across their service territory and expects these meters will provide them with the requisite data to identify the locational impacts and values of DSM and integrate participating customers into feeder-level and system-wide forecasts.²⁰ The Department recommends that the Commission direct Xcel to provide a

¹⁸ Fresh Energy Initial Comments, at 3. Docket No. E002/M-21-694. February 25, 2022. Accessed at <https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={00FA327F-0000-CC13-B9EC-8C1641BDBC43}&documentTitle=20222-183206-01>.

¹⁹ Xcel Reply Comments, Attachment A, at 27.

²⁰ *Id.*, Attachment A, at 29.

detailed explanation of its proposed methodology for incorporating DSM in load forecasts and planning processes in their 2023 IDP, or provide an update towards this objective if not yet achieved.

As noted above, the Department believes that the verbally approved Decision Options E3, 6, 11, and 13 from Xcel's IRP adequately address Fresh Energy's recommendation that the Commission should direct Xcel to incorporate building, transportation, and industrial electrification scenarios into system-wide, substation, and feeder-level load forecasts. Xcel did not object to Fresh Energy's recommendation that the Company be directed to hold at least two stakeholder workgroup meetings by December 1, 2022 in its reply comments, and the Department supports any such initiative to increase customer and stakeholder engagement and Company transparency in how electrification impacts are to be treated in Xcel's next and following IDPs.

Regarding Fresh Energy's request for the Commission to require Xcel to provide a discussion in their next IDP regarding their rules, tariffs, and practices governing cost allocation for interconnection of distributed resources or distribution system upgrades required to support transportation or building electrification, the Department is unsure of what additional specific information Fresh Energy desires from Xcel that will not be provided pursuant to the Commission's March 31, 2022 in Docket No. E999/CI-16-521.²¹ In this Order, the Commission approved a cost-sharing proposal for Xcel customers connecting DER with a nameplate capacity of less than 40 kW, required Xcel to provide a detailed report of the costs incurred and technical rationale for each upgrade should Xcel seek cost recovery for distribution upgrades, and convene a working group with the assistance of Commission staff to discuss key topics related to DG and DER interconnection issues. The Department believes that if additional information is requested of the Company by Fresh Energy at this time, the proper venue to make that request and provide feedback on Xcel's practices would be within the framework of the working group created in Docket No. E999/CI-16-521.

6. Community Power, the Environmental Law & Policy Center, and Vote Solar Recommendations

CEV recommended that the Commission accept Xcel's 2021 IDP contingent upon the adoption of CEV's recommended changes to IDP Planning Objectives and Filing Requirements discussed below. The Department provides a summary of the recommendations from CEV, but does not respond to each specifically as they are similar in nature to suggestions from the City of Minneapolis and Fresh Energy that are listed and discussed above.

²¹ *In the Matter of Updating the Generic Standards for the Interconnection and Operation of Distributed Generation Facilities Established Under Minn. Stat. § 216B.1611, ORDER MODIFYING PRACTICES AND REQUIRING SETTING REQUIREMENTS* (March 30, 2022). Docket No. E999/CI-16-521. Accessed at: <https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={4084E17F-0000-CD19-93F4-3731AC9F8288}&documentTitle=20223-184288-01>.

a) Recommended Amendments and Additions to Commission IDP Planning Objectives

CEV defines grid equity as “the fair distribution of the benefits and burdens of energy production and consumption,”²² stressed that an equitable grid must be both planned *and* enforced, and reminded the Commission that the mandate to ensure equity in public utility rates is embedded into Minnesota law and the Commission’s enabling statute to regulate public utilities in the state.²³ CEV’s comments were provided with a “focus primarily on ensuring that equity is fully incorporated into all of the Company’s planning and investment decisions, including the distribution system.”²⁴ The Department here voices its support for the incorporation of equity considerations in distribution system planning and notes that the Company also agreed in principle in its reply comments and noted its intent to comply with the Commission’s verbally-approved Decision Option E15 from Xcel’s IRP proceeding (Docket No. E002/RP-19-368) to convene a stakeholder working group to address how Minnesota can create equitable and environmentally just framework for utility system planning, operation, analysis, and reporting across multiple dockets.

CEV provided the following redlined edits to the Commission’s IDP Planning Objectives to address the grid equity and access concerns similar to those raised by the City of Minneapolis in their initial comments:

Planning Objectives: The Commission is facilitating comprehensive, coordinated, transparent, integrated distribution plans to:

- Maintain and enhance the safety, security, reliability, equity, affordability, and resilience of the electricity grid, at just, fair, and reasonable costs, consistent with both the state’s energy policies and responsive to community-specific energy plans;

- Ensure that investment and planning process decisions meaningfully involve disadvantaged communities in the process in a way that results in equitable service quality and culturally appropriate options for participation. Local jurisdictions’ energy plans, community-based organizations, and trusted community conveners can and should be resourced as tools for stakeholder engagement that is culturally and linguistically relevant and respectful of time constraints and information needs;

²² Community Power, Environmental Law & Policy Center, and Vote Solar (CEV) Initial Comments. (CEV Initial Comments), at 4. Docket No. E002/M-21-694. February 25, 2022. Accessed at

<https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={80DF327F-0000-C11D-AB35-DE220450932F}&documentTitle=20222-183200-01>. “Grid equity” definition taken from Farley, Chandra et al. *Advancing Equity in Utility Regulation*. Lawrence Berkely National Laboratory and U.S. Dep’t of Energy Grid Modernization Laboratory Consortium. Nov. 2021. Accessed at <https://emp.lbl.gov/publications/advancing-equity-utility-regulation>.

²³ Minn. Stat. § 216B.03. Accessed at: <https://www.revisor.mn.gov/statutes/cite/216B.03>.

²⁴ CEV Initial Comments, at 1 and 11.

- Enable greater customer participation, engagement, empowerment, and options for energy services, access to efficiency and conservation programs, and production;
- Move toward the creation of efficient, cost-effective, accessible grid platforms for new products, new services, and opportunities for adoption of new distributed technologies; and,
- Ensure optimized utilization of electricity grid assets including DER, Demand Response, and Efficiency and resources to minimize total system costs and need for new infrastructure.
- Provide the Commission with the information necessary to understand Xcel's short-term and long-term distribution system plans, the costs and benefits of specific investments, and a comprehensive analysis of ratepayer cost and value.

The Department supports the intent behind CEVs' proposed modifications to Xcel's IDP Planning Objectives, and encourages CEV to participate in other utilities' IDP proceedings (Docket Nos. E017/M-21-612 (Otter Tail Power's 2021 IDP), E015/M-21-390 (Minnesota Power's 2021 IDP), E111/M-21-728 (Dakota Electric Association's 2021 IDP), to offer its views regarding whether those utilities' IDP Planning Objectives should also be modified accordingly. However, the Department does not support the modification of IDP Planning Objective language at this time, but instead recommends that any modifications to regulatory requirements for planning processes such as IDP and IRP are borne out of the stakeholder working group to ensure consistency across different dockets and utilities.

b) Recommended Amendments and Additions to Commission IDP Filing Requirements:

CEV provided redlined language to suggest additions and modifications to IDP Filing Requirement 3.D to incorporate reliability and grid equity analysis in integrated distribution system planning. The Department summarizes these recommendations here for stakeholder and Commission review.

a. Filing Requirement 3.D:

Xcel shall provide a 5-year Action Plan as part of a 10-year long-term plan for distribution system developments and investments in grid modernization based on internal business plans and considering the insights gained from the DER futures analysis, hosting capacity analysis, and non-wires alternatives analysis, and locational reliability/equity analysis. The 5-year Action Plan should include a detailed discussion of the underlying assumptions (including load growth assumptions) and the costs of distribution system investments planned for the next 5 years (expanding on topics and categories listed above). Xcel should

include specifics of the 5-year Action Plan investments. Topics that should be discussed, as appropriate, include at a minimum:

- i. CEV recommended the addition of the following two topics for inclusion in Filing Requirement 3.D:
 1. Locational reliability/equity analysis: An analysis of the extent to which planned investments will advance the goals of ensuring affordable, equitable service quality, reliability and capacity in disadvantaged communities.
 2. An overview of steps taken to promote grid equity based on input from community stakeholders, and the extent to which planned investments are responsive to stakeholder feedback and community-specific energy-specific plans.

The Department declines to comment on the recommendations regarding locational reliability/equity analysis in IDP Filing Requirement 3.D as these issues will be more efficiently addressed in a holistic manner in the equity working group discussions to take place at a later date in accordance with Commission's forthcoming IRP Order in Docket No. E002/RP-19-368. The Department encourages CEV to offer future recommendations regarding these topics as consensus emerges from the equity working group discussions.

- b. CEV recommended the Commission add a new Rate Impact / Affordability Analysis at 3.F as follows:

F. Rate Impact / Affordability Analysis

1. Xcel shall provide a detailed analysis of projected bill impacts and affordability of its planned distribution system investments over time. This analysis should provide actionable and transparent information to those who do not have energy and regulatory expertise.

The Company responded that customer bill impacts are determined by the Company's revenue requirements, not its capital expenditures, and such revenue requirement development is done in a rate case or other cost recovery proceeding. The Company also responded that conducting individual analyses on different project costs would be overly burdensome and provide limited value, and further commented that any rate or bill impact analysis would provide little actionable and transparent information to those who do not have energy and regulatory expertise.

While the Department largely agrees with the Company regarding the recommendation of a bill impact analysis, the topic of affordability, and a further topic or goal of minimizing costs of ratepayers and maximizing benefits of distribution system expenditures could be important for utilities to address in future IDPs. At this time, the Department declines to support the proposed additional requirement

offered by CEV but encourages refinements that would require utilities to discuss the topics and goals of affordability, cost minimization, and benefit maximization in future IDPs.

- c. CEV recommended the addition of the following filing requirements within existing Sections:

- i. Add new filing requirement 3.B.3 in “Hosting Capacity and Interconnection Requirements:”

3. Provide a narrative description of programs and policies that will be implemented to mitigate barriers to DER integration. The Plan should describe how these programs and policies are tailored to promote opportunities for enhanced system benefits associated with wider deployment of DER technologies, including behind the meter energy efficiency measures.

- ii. Add new filing requirement 3.C.5 in “Distributed Energy Resource Scenario Analysis:”

5. Provide a discussion of how the Company is pursuing opportunities to capture system-wide benefits through broad adoption of DER, including the use of DER to manage local capacity constraints.

It is unclear whether the Company supports or opposes these recommendations, as the Company explained that while these programs or policies would be developed in a separate proceeding, it would be happy to report on the status of that proceeding in its next IDP.

If the Company commits to providing this information in its next IDP, then the Department makes no recommendation regarding whether these filing requirements should be adopted.

- iii. CEV believes Decision Option 3 from Xcel’s most recent IRP (Docket No. E002/RP-19-368) requiring Xcel to align distribution and resource planning provides a sound basis for advancing a more integrated planning paradigm, and recommend the Commission appends the same language to the end of filing requirement 3.A.5.

The Company responded that it currently discusses transmission planning in the context of distribution system impacts on the transmission system and how it is coordinating its planning at all levels of the system – bulk system resource level, the transmission system, and the distribution system as required by existing IDP requirement 3.A.5 and concludes that no further requirements are necessary at this time.

The Department agrees with CEV's recommendation here: the Decision Option adopted in Xcel's IRP proceeding is a sound basis for appending the same language to the end of IDP Filing Requirement 3.A.5.

c) Recommendations for Aligning IDP and IRP Planning Efforts:

CEV made the following recommendations for the Commission to take efforts to ensure the planning assumptions and scenarios used in Xcel's resource and distribution system planning proceedings are consistent and responsive to one another:

- The Commission should look for opportunities to align distribution planning with resource planning. Although Minnesota does not have a transmission planning process in the same way that it does for resource and distribution system planning, the Commission should encourage Xcel to consider and discuss transmission planning within the context of the IRP and IDP process.
- The Commission should require Xcel to identify and plan for opportunities to meet customer needs using DERs in the IDP just as the Commission directed the Company to consider DER as a resource in the IRP. In doing so, the Commission should ensure that Xcel is using consistent DER modeling, forecasting, and program planning functions in its IRP and IDP cases. For example, the Company's plan (discussed in Appendix A1 pp. 38-40) to use the LoadSEER tool to conduct feeder level forecasts to create aggregated DER adoption forecasts should inform both the distribution planning and resource planning proceedings and should improve the quality and accuracy of forecasts in both contexts.

In response to these suggestions Xcel referenced the same Commission-approved Decision Options 13 and E3 from their IRP proceeding that they believe address this recommendation. Xcel noted that at this time the Company believes "it is not necessary to repeat the[se] requirements for the IDP. That said, if the Commission determines it is necessary to also memorialize these requirements in the IDP, we request that they be stated identical to the IRP to ensure clarity for the Company and parties."²⁵ The Department supports CEV's recommendation that IRP and IDP processes are aligned to encourage transparency and efficiency in evaluation of proposed scenarios and business cases, and similarly agrees with the Company that these requirements should be replicated in an identical matter in the IDP should the Commission choose to memorialize its intent in the instant docket as well.

7. Xcel Large Industrials Recommendations

Xcel Large Industrials did not express an initial opinion of Xcel's IDP in comments, but reserved the right to file substantive party reply comments pursuant to the Commission's Notice.

²⁵ Xcel Reply Comments, Attachment A, at 26.

E. ANALYSIS OF STAKEHOLDER'S RECOMMENDATIONS REGARDING XCEL'S CERTIFICATION REQUEST OF DI AND RMP

In this section the Department provides an overview of stakeholder recommendations regarding Xcel's request for certification of Distributed Intelligence and the Resilient Minneapolis Projects. The Department contracted with Synapse to provide analysis and response to these suggestions, and has incorporated its positions regarding these certification requests into the report from Synapse that is attached to these comments.

1. Sabathani Community Center, Minneapolis American Indian Center, University of St. Thomas, and Renewable Energy Partners, Inc. Recommendations

These organizations, as project partners or sites selected for the RMP, all provided letters of support for the initiative and encouraged the Commission to certify the project.

2. The City of Minneapolis Recommendations

The City of Minneapolis made the following recommendations for Commission action:

- (1) The City recommended that the Commission approve Xcel's certification request for Distributed Intelligence with the following modifications:
 - a. If treating AMI and DI deployments as separate projects the Commission should deny certification of incremental costs from DI;
 - b. As a condition of certification the DI enhancements must be fully function in terms of customer-facing benefits;
 - c. Annual reporting related to data sharing should disclose:
 - i. All third parties with access to the data,
 - ii. What data is being shared,
 - iii. The purpose of data sharing,
 - iv. Perceived future value to the customer,
 - v. Data value to Xcel Energy and third parties, and
 - vi. Communication being used with customers showing how data is being used and measured to protect customer privacy.
 - d. Xcel should offer an opt out option for data sharing;
 - e. If Xcel receives income from sharing data, bill credits should be provided to customers who share their data;
 - f. Cost savings from AMI should be passed on to customers.
- (2) The City recommended that the Commission approve the Resilient Minneapolis Projects.

3. *Fresh Energy Recommendations*

Fresh Energy made the following recommendations for Commission action regarding Xcel's Distributed Intelligence certification request:

- (1) The Commission should approve certification of two of the initial use cases in Xcel's Distributed Intelligence (DI) request, and deny certification of the other four use cases, as follows:
 - a. Home Area Network (HAN) Connectivity - **Approve**
 - b. Energy Analysis - **Approve**
 - c. Electric Vehicle Detection – **Included with the Energy Analysis use case**
 - d. Secondary Equipment Assurance – **Deny**
 - e. Meter Bypass Theft Detection – **Deny**
 - f. Connectivity – **Deny**
- (2) The Commission should clarify that certification of the DI Energy Analysis and HAN Connectivity use cases is limited to the spending amounts proposed in this docket (and therefore, that any initial TCR recovery request should be limited to these amounts): \$9.5 million in capital expenditure and \$12.2 million in operations and maintenance.
- (3) The Commission should establish performance metrics for the Energy Analysis use case to track customer participation and energy savings per participant. Initial targets, consistent with the assumptions in Xcel's DI cost-benefit analysis, are:
 - g. 9.75% of customers with an AMI meter will enroll in the energy analysis program, and
 - h. Customers enrolled in the energy analysis program save, on average, 5% of their annual energy consumption.

Xcel shall report on performance relative to these targets in all compliance filings and annual reports related to DI deployment.

Fresh Energy made the following recommendations for Commission action regarding Xcel's Resilient Minneapolis Project certification request:

- (1) The Commission should direct Xcel to consider including preferences for local union labor in the RMP procurement and bid evaluation processes.
- (2) The Commission should direct Xcel to include three additional categories of information in annual reports on the Resilient Minneapolis Projects:
 - a. Optional feedback from site hosts and community partners, using a form Xcel distributes on an annual (or more frequent) basis, which invites partners to discuss their experience participating in the project, its impact on the organization or community, or other information partners wish to share with the Commission.
 - b. Updates on the status of HVAC upgrades, building envelope upgrades, energy efficiency measures, and/or demand response programs undertaken at any of the RMP sites, to be provided in consultation with site hosts.

- c. A discussion of the RMP program in comparison to battery and microgrid programs/projects in Xcel's other service territories, and how Xcel is identifying and applying lessons learned across territories.

4. Community Power, the Environmental Law & Policy Center, and Vote Solar Recommendations

CEV recommended that the Commission approve certification of the Resilient Minneapolis Project and did not take a position on the Distributed Intelligence certification request, but "would not dispute that the functionality of the energy analysis and home area network use cases will likely enable greater customer visibility into their energy use."

5. Xcel Large Industrials Recommendations

XLI did not take a substantive view of the proposals set forth for certification in initial comments.

III. DEPARTMENT RECOMMENDATIONS

The Department appreciates the opportunity to further comment on Xcel Energy's 2021 IDP and the extensive stakeholder involvement in this proceeding to further the goals of distribution system planning for Xcel and in Minnesota generally.

The Department makes the final recommendations:

- **The Department recommends that the Commission accept Xcel's 2021 Integrated Distribution Plan with the understanding that acceptance of the IDP has no bearing on prudence or certification of specific proposed investments.**
- **The Department recommends that the Commission require utility grid modernization proposals to adhere to the filing requirements, methods of evaluation, and ratepayer protections detailed in the Guidance Document.**
- **The Department recommends that in future filings the Commission require Xcel to provide the following information related to its grid modernization plans and proposed investments in response to IDP Filing Requirement 3.D and in future certification requests under Minn. Stat. §216B.2425, subd. 2(e) to facilitate stakeholder review and input of the costs the Company proposes to incur related to customer-facing utility offerings and programs:**
 - **Xcel's internal benefit-cost analyses for reference and investment case scenarios, including reasonably known and analyzed alternatives;**
 - **Assumptions and data supporting the projected customer participation rates;**
 - **Sensitivity analysis for varying rates of adoption of proposed programs; and**

- **Discussion of how the proposed customer-facing utility offerings and programs may interact with existing or proposed Conversation Improvement Plan or Next Generation Energy Act programs.**
- **The Department recommends that the Commission further clarify its intent in Filing Requirement 3.A.28 which requires the utility to provide “[p]rojected distribution system spending for 5-years into the future for the categories listed above, itemizing any *non-traditional* distribution projects (emphasis added).”**
- **The Department recommends that the Commission include Xcel’s IDP Filing Requirements in its Order in this and future IDP proceedings, including a red-line version if modifications are made to Xcel’s IDP Filing Requirements.**
- **The Department agrees with the recommendations from Synapse to deny certification of the DI and RMP certification requests without prejudice.**
- **The Department agrees with the recommendation from Synapse to adopt the proposed Standard for Certification for future certification requests.**

/ar

Reply Comments on the Grid Modernization Proposals in Xcel's 2021 IDP

Analysis of the proposals for Distributed
Intelligence and the Resilient Minneapolis Program
and recommendations on certification

Prepared for Minnesota Department of Commerce

April 11, 2022

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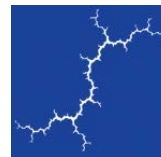
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1. INTRODUCTION

On November 1, 2021, Northern States Power Company, d/b/a Xcel Energy (Xcel Energy or Company) filed its Integrated Distribution Plan (IDP) in Docket No. E-002/M-21-694. Included in this plan were proposals for two grid modernization initiatives: Distributed Intelligence (DI) and the Resilient Minneapolis Project (RMP). For its DI program, Xcel proposes to deploy six use cases designed to utilize the DI capabilities of the DI-enabled advanced metering infrastructure (AMI) meters; three of the use-cases are classified as “customer-facing” and the others are “grid-facing.” The total cost estimate inclusive of capital costs and O&M is approximately \$43 million. For the RMP, Xcel proposes to invest in Company-owned and -operated battery energy storage systems (BESS) and islanding switch, microgrid controller, and interconnection hardware. Xcel intends to pair this equipment with participant-owned solar generation at three sites in Minneapolis. The total cost for the RMP as proposed is approximately \$9 million.

The Department of Commerce (Department) retained Synapse Energy Economics (Synapse) to review these proposals with an ultimate objective of providing recommendations to the Commission concerning the Company’s requests for certification.

Synapse filed comments in this docket on February 25, 2022 with preliminary findings based on the information then available. Following filing of the initial comments, Synapse received Information Request responses from Xcel on March 21, 2022 and Synapse also reviewed the initial comments of the parties to this proceeding along with Xcel’s reply comments. This report provides Synapse’s final findings and recommendations.

1.1 Effect of Certification Decision

In approaching the question of certification, Synapse considered past Commission decisions and associated precedents but still finds that there is a need to for additional clarification from the Commission on this matter.

The Commission has made clear that certification functions as just a gatekeeper to *seeking* cost recovery through the TCR process. Certification alone does not amount to a prudence finding, but merely opens the door to requesting TCR cost recovery. Conversely, the failure to secure certification does not preclude a utility from seeking cost recovery for the same investment through a rate case.

There are several related issues that still require clarification. First, the Commission should address the distinctions between a denial of certification generally and a denial of certification without prejudice. In this case, Synapse has construed denial of certification without prejudice to mean that, while an investment will not be certified in the instant proceeding, the Commission would not bar or otherwise view unfavorably future requests for certification for the same investment.

Second, Synapse suggests that there is a need for more clarity about the evidentiary standard that is meant to be applied at the certification stage. If the decision about whether to certify turns on the quality of the evidence (as it surely must, given the filing requirements attending IDPs and associated requests for certification) then there remains an open question about *what* this evidence must show, and *how* compelling such a demonstration should be.

As Synapse did in its initial comments in this proceeding, it recommends that the Commission further standardize the grid modernization review process by expanding its certification standards to include an *evidentiary* requirement: in addition to the Commission’s existing requirements for certification—including the requirement that requests for certification be complete—a utility should have to demonstrate that its grid modernization investment proposal and BCA indicate that, by a preponderance of the evidence on the record, the proposed investment will be in the public interest.

Thus far, the Commission has not established formal criteria for certification of grid modernization investments, indicating instead that it would consider certification requests on a “case-by-case” basis¹ and hewing to the language of the Grid Modernization Statute in recent decisions. In granting certification to ADMS and to AMI and FAN, for example, the Commission noted that these were necessary investments for modernizing the distribution system, and it correlated expected benefits to the language of the Grid Modernization

The decision to certify would therefore represent a Commission finding that, after consideration of these factors, a more reasonable and prudent alternative to the proposed grid modernization has not been demonstrated by a preponderance of the evidence on the record.

1.2 Findings

Distributed Intelligence

Synapse identified numerous shortcomings with the DI proposal, which are summarized below:

- The Company has not identified the functional and technical capabilities it seeks to achieve through these DI investments, and it has not provided any formal assessment of alternatives.
- Xcel has not evaluated the costs and benefits of alternative scenarios, which should include an evaluation of non-DI AMI meters and an evaluation of DI that is agnostic of meter technology (i.e., consideration of alternative ways of achieving the same goals that the proposed DI achieves).

¹ 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, p. 12.

- Xcel has not articulated the relationship between the investments and its broader goals and plans.
- Xcel has not provided any targets or performance metrics for its proposed investments.
- As far as the BCA is concerned, numerous claimed benefits remain unquantifiable, and the overall BCA does not support cost-effectiveness.

In addition to these key concerns, Synapse has other concerns related to interoperability of meters, access to meter data, and treatment of risk.

Xcel has indicated that the some of the provisions of a Settlement agreement that is currently being pursued in Colorado by its affiliate (Public Service Company of Colorado - PSCo) will be implemented in Minnesota. The Company suggests that the implementation in Minnesota will be “generally consistent” the practices in Colorado, pending the outcome of the Settlement agreement.² Synapse has reviewed this Settlement agreement and we believe it addresses some key concerns regarding the access of meter data by customers and third parties that we have raised in Minnesota. However, further clarification is required as to the specific provisions that will be implemented in Minnesota.

Resilient Minneapolis Project

Based on the current record of evidence, we find that the application is incomplete. The following information is missing and should be provided to close gaps in the proposal.

- Xcel should set goals with reference to specific problems, either existing ones or ones predicted to arise in the future. Also, Xcel should establish concrete and measurable goals—including ones related to equity--and demonstrate how it expects to achieve these through the RMP.
- Xcel should evaluate the costs and benefits of alternative technologies. Further, Xcel should consider, or provide justification for not considering, alternative geographies, timelines, and ownership structures.
- Xcel should articulate its perspective regarding the BCA.
- Xcel should attempt to quantify all benefits wherever possible, as opposed to addressing the benefits qualitatively.
- Xcel should provide a clear set of metrics and performance targets for RMP.

We find that a full assessment cannot be made on cost-effectiveness or whether the RMP is in the public interest until the application is complete.

² Xcel Reply Comments, Attachment A, page 35

1.3 Recommendations

Distributed Intelligence

Based on the findings, Synapse recommends that the Commission deny certification of DI without prejudice on the basis that the application is incomplete and that a final determination cannot be made about whether the proposed investments are in the public interest until the application is complete. In addition, the benefits anticipated by Xcel are contingent on installation of DI-enabled meters that have yet to be installed and approved by the Commission. Certification of DI should not precede approval of the AMI meters.

Resilient Minneapolis Project

Synapse recommends that the Commission deny certification of the RMP without prejudice.

However, if the Commission decides to certify RMP, additional conditions should be met.

First, Xcel should be required to clearly define and quantify the emergency service capabilities and capacity in more detail and in more concrete terms than Xcel has hitherto provided in its proposal and via discovery responses.

Second, in addition to the other items Xcel proposes to report, Xcel should report on the status of the emergency service capacity. It should be Xcel's responsibility to ensure that the benefits are or can be realized, and to develop a process and a plan for demonstrating that the benefits can be realized.

Third, before any decisions about cost recovery are made, there must be a process for identifying and addressing the potential situation in which either or both of the following conditions arise:

- the project fails to deliver all or a large portion of Xcel's claimed quantified benefits
- the claimed unquantified benefits cannot or are unlikely to materialize

In cases where remedial actions are appropriate, the process should also establish how decisions about the disposition of the assets, including the BESS, will be made.

2. RESPONSE TO XCEL'S REPLY COMMENTS

2.1 Xcel's Comments on the Guidance Document

In its Reply Comments, Xcel offers a critical view of the Guidance Document and its application by the Department and Synapse. The Company asserts that the Guidance Document has been developed “unilaterally,” that it is unduly prescriptive, that it contravenes standing regulatory practices and frameworks, and that it would be unjust and against “due process” to “retroactively” apply it to the Company’s certification requests in the instant proceeding.

In this section, Synapse addresses the main concerns that the Company has put forward. Consistent with the Department’s view, Synapse continues to maintain that the Guidance Document represents an incremental contribution to a still-evolving field of regulatory practice in Minnesota, and that its development is entirely consistent with the Commission’s past directives and requirements for grid modernization. The Guidance Document should not be viewed as a “unilateral” attempt to alter existing regulatory course, but rather as tool that to help effectuate the Commission’s existing requirements for grid modernization—especially as established through its Orders in Docket No. E-002/17-797 and Docket No. E-002/19-666.

The Guidance Document is also an outcome of a Commission initiative. In Order Point 10 of the Commission’s September 27, 2019 Order in Docket No. E-002/M-17-797, the Commission requested that the Department incur costs for specialized technical professional investigative services to investigate the potential benefits and costs of grid modernization investments. The Guidance Document was developed through Synapse’s consulting engagement with the Department.

To the extent that the Guidance Document has been used prescriptively in this case, Synapse submits that this usage is consistent with the Commission’s aims for the proceeding. The Guidance Document summarizes previous Commission directives, and it provides incremental direction where there is currently a lack of institutionalized practice. In Synapse’s view, the main concern at hand is the deficiencies in the Company’s application, not the prescriptiveness of the standards that have been applied. A complete record is a threshold condition for assessing certification, and without necessary evidence, the risk of informational asymmetry may unduly impair intervenors from full participation in this process. The *prescription* provided to the Company was for it to furnish the necessary, basic information that was missing—a prescription that Synapse and the Department attempted to facilitate through issuing information requests.

2.1.1 The Company mischaracterizes the purpose of the Guidance Document

In Section II of the Company’s Reply Comments, the Company provides an overview of its concerns with the Guidance Document, stating:

The criteria used to evaluate our current IDP and certification requests should not be based on the retroactive application of a document filed in the midst of the proceeding.

Moreover, adoption of the Department's Guidance Document's impractical standards would create a significant new regulatory burden with wide-ranging impacts.³

To clarify, the Guidance Document was not designed for broad application to the entire IDP. While the Department seeks information on the benefits and costs of other proposed non-grid modernization investments, the Guidance Document is not fundamentally geared toward transforming the IDP process, as the Company suggests. The Department agrees with the Company that the IDP proceeding is fundamentally an informational one and a careful reading of the Department's February 25, 2022 Comments reveal that the Department does not propose to subject the entire IDP process to the strictures of the Guidance Document.

With the broad brush approach taken by the Company, it is often difficult to determine whether the Company is critiquing the application of the Guidance Document to the IDP, which has not been proposed, or if it is rather critiquing the Guidance Document as applied to the grid modernization proposals and associated requests for certification. Since the Guidance Document has been designed specifically for evaluation of grid modernization plans, Synapse will reply to the Company's critique using that frame of reference alone.

With respect to grid modernization, Synapse disagrees that the Guidance Document includes "impractical standards" that would impose "new regulatory burdens." On the contrary, the Guidance Document's Initial Filing Requirements, which have been used somewhat prescriptively by Synapse in its review of the grid modernization proposals, are grounded in the aforementioned Commission Orders. The close connection between these filing requirements and the Commission Orders is summarized in the appendix.

2.1.2 The Company repeatedly mischaracterizes the Guidance Document

The Company's Reply Comments frequently mischaracterize the Guidance Document. In several instances, the Company provides an extreme and unnuanced representation of the positions and principles in the Guidance Document. Several examples are provided below, and each is followed by a correction.

The Guidance Document's approach to evaluation methodology

The Company suggests that the Guidance Document aims to establish a single required methodology for establishing cost-effectiveness:

If the Commission decides to initiate a proceeding to consider a standardized, prescriptive framework for grid modernization cost-effectiveness, the appropriate outcome may not be the adoption of a single required methodology....Moreover, as we discuss in Attachment A, there is not a single universally accepted methodology for assessing the cost-effectiveness of proposed grid modernization investments. In that

³ Xcel Reply Comments, page 4.

respect (and others), the Department's Guidance Document is overly broad and overly prescriptive.⁴

Synapse agrees with the Company – there is no “single universally accepted methodology” for assessing grid modernization cost-effectiveness. Fortunately, the Guidance Document does not attempt to implement such a methodology. Instead, through the Evaluation Framework and Initial Filing Requirements, the Guidance Document attempts to ensure that a baseline of information is provided to facilitate fulsome review. The specific prescriptions included in the filing requirements would generally be expected in any economic evaluation, regardless of methodological particulars.

Prescriptions for a cost-effectiveness framework

The Company's unclear use of the term “framework” may add further confusion. The Company suggests that the Guidance Document's prescriptions would contradict the existing framework,⁵ and then later outlines a process for developing a framework for Minnesota.⁶ It is unclear what precisely the Company means by “framework,” though it would appear that in the Company's view, one already exists in Minnesota. Synapse recognizes that the Commission has established an IDP framework, which includes specific requirements for grid modernization planning, and also has separately implemented grid modernization filing requirements. As noted above, the Guidance Document is both consistent with existing standards, and geared toward providing incremental direction, consistent with best practices, where gaps or ambiguities in the existing standards could enable utilities to skirt the responsibility of providing the needed information on proposal costs and benefits.

At certain points, the term “framework” appears to be used to refer to a cost-effectiveness test. Later, in the Attachment to the Reply Comments, the Company provides further discussion of cost test development:

We also provide additional information regarding the variety of methods that could potentially be used to measure the effectiveness of proposed grid modernization investments. We provide this information to reinforce the point that the Commission should carefully consider whether to adopt any specific required test or tests and, if so, what types of projects should be tested and how. As we discuss elsewhere in this Reply, this would require some type of formal process, including opportunities for record development and stakeholder input, which has not occurred for the Department's Guidance Document or potential alternative approaches.⁷

⁴ Xcel Reply Comments, page 7.

⁵ Xcel Reply Comments, page 1.

⁶ Xcel Reply Comments, page 2.

⁷ Xcel Reply Comments, Attachment A, page 1.

This discussion of cost tests, while apparently sound, would seem to mischaracterize the purpose and prescriptions of the Guidance Document. To be clear, the Guidance Document is not advocating for establishment of a specific cost test. To the extent that the Guidance Document does discuss cost tests, it calls for transparency in identification of *which* cost test has been used. There is no indication that a specific test should be used, nor is the Guidance Document prescriptive about the development of a cost test.

Recommended certification standards

The Company suggests that the Guidance Document aims to transform the certification process for grid modernization investments into an evaluation of prudence:

To date, the Commission has been clear that neither grid modernization investments nor distribution expenditures more generally are evaluated for prudence through the IDP process. Rather, prudence for the vast majority of our distribution spending is determined in rate case proceedings.

Once again, the Company appears to use a broad brush in discussing both grid modernization and the wider IDP process together without respect for any material differences. The glaring difference that is elided in the cited statement is that the Company is seeking certification of its grid modernization proposals precisely because this will provide a cost recovery alternative to the traditional rate case route.

In any case, it is simply not true that the Guidance Document aims to transform certification into prudence. The Guidance Document is clear in its position that certification does not imply cost recovery:

Certification of grid modernization plans does not provide for their reasonableness or imply that cost recovery should be granted – a point that has been acknowledged by the Commission.⁸

As noted above, Synapse recommends that the Commission grant certification for a grid modernization investment only when the proposal and BCA indicates that, by a preponderance of the evidence on the record, the proposed investment will be in the public interest and there is no more reasonable and prudent alternative to the proposed grid modernization investment.

Recommendations regarding qualitative benefits

On a somewhat related note, the Company also claims incorrectly that the Guidance Document recommends *only* benefit-cost analysis and an inflexible approach to consider qualitative impacts. Concerning benefit-cost analysis, the Company asserts that:

⁸ Guidance Document, page 6.

Basing a certification decision on a singular economic criterion, such as a benefit-cost result, to the exclusion of other important, but qualitative benefits that these projects will provide, would be inconsistent with the public interest and the Commission's approach-to-date.⁹

The Company also suggests that the Guidance Document takes a myopic, uncompromising view of qualitative benefits with its purported requirement that all qualitative benefits be quantified:

Similarly, while the Department's Guidance Document recommends quantifying and reducing all qualitative benefits to a monetary value, there are no existing, well established methodologies for doing this.¹⁰

This is an inaccurate representation of the Guidance Document. At no place in the Guidance Document is the assertion made that all qualitative benefits should be quantified and/or monetized, nor does the Guidance Document ever assert that *only* benefit-cost analysis should be conducted. Instead, the Guidance Document portrays benefit-cost analysis as a necessary component of a grid modernization proposal. Concerning the evaluation of costs and benefits, the Guidance Document approach is fundamentally flexible:

If monetized benefits alone do not justify the proposed investments, the utility may make the case with qualitative benefits.¹¹

The Guidance Document further provides specific recommendations about potential methods for accounting for impacts that can only be qualified.¹² These recommendations are not provided exclusively, and they are not provided with any indication that all qualitative impacts require quantification or monetization.

2.2 Xcel's Comments on Distributed Intelligence (DI)

Based on the IDP petition, Synapse identified numerous shortcomings with DI proposal. The Company has not identified the functional and technical capabilities it seeks to achieve through these DI investments, and it has not provided any formal assessment of alternatives. Relatedly, there is no clear distinction between the functional and technical capabilities that can be achieved with DI-enabled meters and those that can be achieved with non-DI meters. The Company has assumed by default that DI-enabled meters will be installed. DI-enabled meters have not been approved for cost recovery or installed, and the alternatives that should be presented should include a comparison with non-DI enabled meters.

⁹ Xcel Reply Comments, page 16.

¹⁰ Xcel Reply Comments, page 7.

¹¹ Xcel Reply Comments, page 7.

¹² Guidance Document, page 10.

In addition, the Company is silent on the risks associated with the investments, and also on any issues associated with interoperability, access to meter data, and capabilities by customers and third parties.

The BCA analysis has shortcomings which include the absence of a clearly articulated BCA perspective and a lack of quantified benefits. Xcel has not established any metrics or performance targets against which to evaluate the performance of DI and has not proposed to provide specific updates on DI project outcomes through any dedicated reporting. More generally, there do not appear to be any concrete and measurable goals for DI that align with Xcel's long-term planning process. This suggests a lack of long-term perspective on the grid modernization initiative. While the Department issued IRs in relation to all of the above-mentioned gaps, there remains a lack of clarity on these key issues.

Based on our review of the reply comments, all our initial concerns are still unresolved. The only new information that we have obtained as part of these reply comments that sheds some additional light on the proposed DI investments is related to a question raised by Fresh Energy on Xcel's intention to implement the customer and third-party customer data access provisions of a settlement agreement that were entered into by Xcel Energy affiliate operating company, Public Service Company of Colorado (PSCo).¹³ Xcel has indicated that these provisions will be implemented in Minnesota "generally consistent" with how they will be addressed in PSCo, pending the outcome of the Settlement agreement.¹⁴ Synapse has reviewed this Settlement agreement and we believe it addresses some key concerns regarding the access of meter data by customers and third parties that we have raised in Minnesota. However, it is still unclear what Xcel means by "generally consistent." The Company has noted though that the settlement is not binding on the Company in Minnesota and many of the provisions it contains, such as those addressing cost recovery in Colorado, a Colorado pilot program regarding electric vehicles, or reporting to the Colorado Commission, are simply not relevant to the deployment of DI in Minnesota.¹⁵

2.2.1 Responses to specific claims about DI by Xcel in its reply comments

Below, we summarize Xcel's responses to the initial comments and then provide our replies.

Company Statement

Xcel indicated that it referenced DI in its previous IDP but that it chose not to seek certification at that time for DI alongside certification for the AMI meters.¹⁶ Xcel explained that the procurement of the new AMI meters was driven by the age and obsolescence of the existing AMR meters, for which there would no longer be replacement parts after 2022. Furthermore, according to Xcel, the contract with the

¹³ Fresh Energy Comments, pages 12-13

¹⁴ Xcel Reply Comments, Attachment A, page 35

¹⁵ Xcel Reply Comments, Attachment A, page 35.

¹⁶ Xcel Reply Comments, page 12.

existing meter provide, Cellnet, will expire in 2025, effectively ending support and meter reading services.

The Company issued RFPs to select a new AMI meter vendor, but none of the responding vendors proposed DI-enabled meters. Later, the Company was made aware by manufacturers about these new DI-enabled meters, and the final decision to go with Itron was the result of “negotiated favorable pricing.”¹⁷ Xcel procured the DI-enabled meters for a price “within the range” of those that had been proposed for non-DI AMI meters.¹⁸

In response to the Department’s request to submit a combined BCA for AMI and DI, the Company stated the following: “...it was simply not possible for us to submit such an application for DI, given the novelty of DI technology both in the industry and to the Company. We needed some time to study DI and better understand the capabilities it offers our customers and the grid, including the costs to develop those capabilities, so that our stakeholders and the Commission could evaluate the investments.”¹⁹

Synapse Response

We have several concerns. First, the Company has not been forthcoming about the negotiation with Itron and the terms and conditions under which this agreement was made. This is evident in the responses to discovery that indicate the limited access to meter data by customers and third parties that were not made clear in the initial request for certification. Of particular concern is that Xcel has indicated that the terms and conditions between Xcel Energy and Itron do not specifically address equal access and non-discrimination to third-party applications or equipment.²⁰ This lack of clarity and transparency does little to ensure that the decision was made entirely in public interest. The Company has also not provided a clear comparison or other evidence to support its assertion that the cost of the DI meters was in fact a favorable compared with the cost of non-DI meters. It is still not clear what the incremental cost of implementing DI-enabled meters is compared with non-DI meters and whether the cost of DI meters is in fact “within the range” of DI meters when considering implementation across the entire service territory, especially if this figure were to include the investments associated with utilizing the DI capabilities of the meters.

The second concern is that the Company has not proposed any long-term, concrete, and measurable goals for DI. The Company’s reply comments suggest that the current and the future proposed DI investments are not being considered holistically but are rather being proposed in a piecemeal fashion with no specific targets and/or metrics to measure success. This concern is aggravated by the fact that DI is an unproven technology with no demonstrated benefits across other utility service territories.

¹⁷ Xcel Reply Comments, page 13.

¹⁸ Xcel Reply Comments, page 13.

¹⁹ Xcel Reply Comments, page 13.

²⁰ Response to DOC IR 86.

Company Statement

Xcel addressed the concerns regarding the lack of quantification of the benefits. Xcel indicated that if it were to wait to deploy DI capabilities until other utilities had gained experience, then it might be able to quantify more of the benefits. However, in so doing, it “would not be utilizing the meters’ full capabilities and would be losing the opportunity to gain experience with DI now, which would result in years of lost benefits, including substantial customer energy savings and delay in the development of capabilities and experience that will facilitate future DI use cases.”²¹

Synapse Response

It is concerning that the Company is requesting certification for future cost recovery of DI investments that do not have any proven benefits. Despite the fact that there may be alternative approaches to achieving the benefits claims for the customer-facing use cases, the Company has chosen a potentially capital-intensive option without an evaluation of these alternatives.²² In addition, the grid-facing use cases have no quantifiable benefits. The Company has not provided a demonstrated need for these investments or provided any goals for these investments that align with long-term planning or companywide targets. Fresh Energy appears to share the concern that the grid-facing use cases address issues that only infrequently occur.²³

2.3 Xcel’s Comments on Resilient Minneapolis Project

2.3.1 Overview of comments and outstanding questions prior to filing of Xcel’s reply comments

In the initial comments, we noted that demonstrating how the proposal furthers the objectives of long-term planning requires explicitly identifying goals (i.e., the benefits that will be produced) and connecting them to key planning processes. However, we found that Xcel’s proposal lacks both clearly identified goals that are grounded in specific needs and a connection to the Company’s long-term planning process.

As we indicated in previous comments, equity is a reasonable goal, even though equity in the sense contemplated by Xcel in proposing the RMP is not directly addressed by current IDP planning objectives. Yet even if equity will be incorporated as a goal of the IDP process, Xcel has not provided a means of comparing its projected benefits to the benefits from any other use of the funds.

²¹ Xcel Reply Comments, page 14.

²² Response to Fresh Energy IR 9 and 10.

²³ Fresh Energy Initial Comments, page 11.

Our initial comments highlighted Xcel's failure to demonstrate the benefits of the proposed program in a clear and measurable way. While the low benefit-cost ratio of the RMP is a concern, we maintain that there is a larger issue here. We recognize that some benefits may be difficult to monetize and that a bright-line threshold may not always serve the public interest. However, Xcel has repeatedly refused to provide data that would allow any comparisons of RMP benefits, on the basis of dollars or of any other objectively quantifiable measure. The lack of metrics for the claimed difficult-to-quantify benefits and the complete lack of consideration of alternatives²⁴ means that it is impossible to objectively determine if the RMP is reasonably likely to be in the public interest.

As discussed in our initial comments, Xcel has not provided sufficient information regarding the ability of the RMP to provide the unquantified benefits, much of which appear to relate to the provision of emergency services in the event of an extended outage. However, there is a lack of detail and specificity regarding the emergency services that the partners would provide. Without more detail, it is difficult to ascertain the value of those services. Given that those services are a critical aspect of the value of these projects, we are very troubled by the lack of clarity provided by Xcel on these points.

In our initial comments, we stated that "Xcel did not clearly indicate how each component (BESS and switching and/or microgrid controllers) contribute to the goals of the project." The Company has since provided some additional information on its proposal in response to discovery. For example, the response to DOC-090 indicates that Xcel views the components of the RMP as inseparable. In response to DOC-091, Xcel stated that it designed an integrated system for each RMP site to support the community resilience and other grid services objectives. These responses help with understanding how the technology components fit together. However, nothing has been provided to allay any of the concerns about the overall benefits of the projects.

2.3.2 Responses to specific claims on the RMP by Xcel in its reply comments

Xcel's reply comments largely reiterated previously stated positions and statements. Xcel notes that a number of parties, including the RMP partners, support certification of the RMP. However, the Company did not use the opportunity to meaningfully address the concerns raised in our initial comments. As a result, with the possible exception of our concern about the lack of description of how each component contribute to the goals of the project, the points we raised in our initial comments largely still stand.

Below, we list statements made by the Company in reply comments, as well as our response.

²⁴ Xcel indicated that it did not consider locations outside of Minneapolis for the RMP (Response to DOC-097). Likewise, per the response to DOC-098, it did not consider alternative timelines. Pushing out the timeline could provide insight into whether a distribution system need will arise, thus providing a need for an NWA. Xcel also did not consider alternative technologies, as discussed in section 3.1.1.2.

Company statement

“[O]ur DI and RMP certification requests meet the Commission’s informational requirements and provide a robust record for the Commission to make a certification decision.” (p. 2)

Synapse response

The Company mischaracterizes the record when it claims that it is robust with respect to the RMP proposal. Particularly lacking are baselines, measures, and targets for progress toward the RMP’s stated goals of improving energy affordability and reducing energy burden for community residents and businesses. Also lacking are metrics and targets for improving reliability, a critical element of resilience.²⁵

Company statement

“RMP is a relatively low-cost project that will promote grid equity and resilience in the specific communities it serves, while also providing valuable experience integrating battery energy storage into the distribution system and managing it to deliver multiple benefits.” (p. 2)

Synapse response

Xcel characterizes the RMP as relatively low-cost. While the RMP is not a very large expenditure, as we noted above, there may be other programs or investments that could help a greater number of people or make more progress toward the stated goals of the RMP.

With respect to “promoting grid equity and resilience,” some of the goals that Xcel has identified for the RMP—resilience and equity—are not clear. Further, as discussed in our initial comments, Xcel has failed to show that there are or will likely be problems along the elements of resilience that might be influenced by Xcel’s proposed RMP investment, that is reliability and adaptation. Equity goals, and information on how equity will be promoted, are likewise unclear. We discuss addressing equity objectives across different planning processes in section 4.1, below.

Experience with “integrating battery energy storage into the distribution system and managing it to deliver multiple benefits” may prove valuable. However, as we previously noted, it is unlikely that such services would be expanded to reach a substantial share of customers given the poor cost-effectiveness.²⁶

²⁵ Xcel has not provided baselines, measures, and targets for other aspects of its definition of resilience (e.g., stressors such as epidemic drug use, poverty, aging infrastructure and unemployment), however these aspects are less relevant to the RMP.

²⁶ Synapse Initial Comments, page. 25.

Company statement

“The Resilient Minneapolis Project (RMP) meets the Commission’s criteria for certification...” (p. 15)

Synapse response

The Guidance Document embodies the Commission’s criteria for certification. As we have documented in detail in our initial comments, the RMP fails to meet these criteria.

Company statement

“Basing a certification decision on a singular economic criterion, such as a cost-benefit result, to the exclusion of other important, but qualitative benefits that these projects will provide, would be inconsistent with the public interest and the Commission’s approach to-date.” (p. 16)

Synapse response

There have been, and continue to be, critical deficiencies in the benefit-cost analyses and other arguments put forward by the Company for the RMP. These deficiencies demonstrate the need for more explicit guidance (i.e., the Guidance Document).

Based on the information provided by Xcel, there is no objective way to determine that the RMP is the best, or even a good, use of ratepayer dollars relative to the universe of other potential opportunities for pursuing the same equity goals.

3. RESPONSE TO OTHER STAKEHOLDER COMMENTS

3.1 Stakeholder Comments on Distributed Intelligence

Two parties responded to Xcel’s request for certification of distributed intelligence – Fresh Energy and City of Minneapolis.

Fresh Energy Comments

Fresh Energy’s initial comments indicated that it believes two of the customer-facing use cases, Energy Analysis and HAN connectivity, can provide customers with actionable information to reduce electricity consumption and that only these use cases should be certified since they will result in significantly lower costs and thereby a better benefit-cost ratio.²⁷ Fresh Energy has also suggested that in conjunction with this approval of the Energy Analysis use case and HAN connectivity, Xcel be required to establish performance metrics to track customer participation and energy savings per participant with targets

²⁷ Fresh Energy Initial Comments, page 11.

consistent with the energy savings benefits and enrollment targets outlined in the BCA. Fresh Energy indicated that grid-facing use cases address issues that occur only infrequently and have no quantified benefits and should therefore be denied certification. Finally, Fresh Energy indicated that Xcel's planned solution for the Energy Analysis use case is also capable of Electric Vehicle (EV) detection and therefore the third customer-facing use case of EV detection should be denied certification.²⁸

Xcel Response

Xcel responded to Fresh Energy by suggesting that its request to deny certification of grid-facing capabilities ignored that DI provides sub-second analytics capabilities at the final portion of the distribution grid which is currently not monitored.²⁹ According to Xcel, this visibility is necessary due to increasing penetration of EVs and DERs. In addition, the initial grid-facing uses will provide a foundation for how Xcel integrates DI into its planning and operations which will support future uses and enhance services provided to customers. Xcel also suggested that even though the benefits of these specific use cases may be limited, these proposed investments are foundational and they will set of stage for future facilitation of more complex grid use cases.

Xcel did not respond to Fresh Energy's concerns that EV detection is already included within the Energy Analysis use case.

Synapse Response to Fresh Energy and Xcel

Synapse agrees with the Fresh Energy concerns related to lack of quantification of benefits associated with the DI use cases (particularly grid-facing use cases) and concerns related to the benefit-cost ratio being less than 1.0. Synapse also agrees with Fresh Energy in that all DI investments should also be accompanied with some performance metrics and targets. These performance metrics and targets should align with the goals of the proposed investments.

In relation to Fresh Energy's proposal to not certify grid-facing use cases, the key concerns raised are in relation to the infrequent occurrence of the grid issues identified. While we agree with this rationale, the primary concern with these use cases (that also relates to the customer-facing use cases) is the lack of demonstrated need and lack of concrete and measurable goals—and what the Company hopes to achieve through these use cases in the context of its long-term planning goals and companywide targets. The Company has not demonstrated any need for sub-second analytics and the incremental cost and benefits that sub-second analytics will provide compared with more traditional AMI solutions.

²⁸ Fresh Energy Initial Comments, page 11.

²⁹ Xcel Reply Comments, page 14.

City of Minneapolis Comments

In response to DI, the City of Minneapolis recommended certification with certain modifications. For the HAN connectivity use case, City of Minneapolis recommended designing this use case so that it is compatible with a wide range of devices to ensure equitable access. For the energy analysis use case, if there is a fee to access this tool, City of Minneapolis recommend offering to scale the cost of participation based on income or make it free for low-income and disadvantaged customers.

The City of Minneapolis indicated concerns around the fact that AMI and DI requests are being made separately and this suggests that planning is not occurring from the outset. The City recommends that Xcel develop a single RFP with performance milestones which would allow for a more cost-effective coordination between the different stakeholders (i.e., equipment manufacturers, software providers, and contractors). Any additional cost for pursuing these separately as opposed to as one coordinated investment should be denied. In addition, City of Minneapolis provided some recommendations on annual reporting on data sharing (i.e., how customer data is sold and used).

Some other suggestions made by the City include that there should be a provision to opt out of data sharing, and that if there is revenue from data sharing then this should be offered as a bill credit to customers who share their data. Finally, the City indicated that there was lack of clarity on whether utility cost savings have been factored into the certification request.

Xcel Response

In response to recommendations associated with annual reporting regarding data sharing, the Company suggested that these be addressed in a separate docket associated with customer privacy, data release, and reporting regarding utility customer data practices. In reference to concerns around opting out of data sharing, Xcel noted that it does not plan on generating income by selling customer data and that customers will have to affirmatively consent to share their data with third parties. Customers will also have the option of opting out of having an AMI meter installed at their premises. The Company has not addressed concerns around issuance of a single RFP with performance milestones and the cost-efficiencies that may arise from this coordination.

Synapse Response to Fresh Energy and Xcel

Similar to the City of Minneapolis, we agree with concerns associated with the lack of planning for these investments at the outset. As Synapse has indicated in the initial comments, the lack of any performance metrics and targets and the lack of holistic planning around their distributed investment proposal are significant concerns that relate to this specific issue raised by the City of Minneapolis. Given this lack of holistic planning, there are certainly concerns that there are incremental costs that could be avoided if these were planned together from the outset. Given that cost recovery for AMI meters has not been approved, Xcel should, working in conjunction with the different stakeholders (equipment providers, software providers and contractors), identify the specific incremental costs that could be avoided through such a coordinated investment. The certification request and any future request for cost recovery for either AMI meters or DI should be considered incomplete until this has been addressed.

In order to address concerns around incremental costs raised by the City of Minneapolis as well as some of the broader concerns that we have regarding the Company's application, we agree that the Company should identify key targets and milestones and should issue a technology agnostic Request for Information (RFI) based on achieving the specific targets. This would differ from the current approach of identifying the investments and technologies first and then finding justification and rationale for these investments. This is to ensure that stakeholders and regulators have sufficient information to make an informed decision around costs and benefits of the proposed solution.

3.2 Stakeholder Comments on Resilient Minneapolis Project

Several stakeholders have expressed support for explicitly incorporating equity into the IDP. Community Power, the Environmental Law & Policy Center, and Vote Solar (CEV) voiced an "overall need to ensure that equity is fully incorporated systematically into all investment and planning decisions."³⁰ The City of Minneapolis emphasized the need to center equity in the development and analysis underlying the IDP.³¹ Fresh Energy highlighted equity goals as important considerations for a project's public interest benefits.³² Fresh Energy and other parties also took note of the Commission's recent Integrated Resource Plan (IRP) decision, which finds that "there is increasing importance for utilities to utilize equity and environmental justice centered planning as they design future projects and investments."³³ Specifically, the Commission Decision Option in the IRP proceeding, Docket No. E002/RP-19-368 included the following language:

The Company shall do community outreach and establish a stakeholder group to:

- a. Design for the equitable delivery of electricity services and programs for energy burdened customers in the next IRP.
- b. Create new options to improve customer access to energy efficiency and renewable energy.
- c. A plan to be submitted in the next IRP to bring its workforce's racial and gender diversity in line with the utility's stated goals.
- d. Design DG Resource incentive programs that ensure distributed generation programs provide equitable access to low income and Black, indigenous, and communities of color that have disproportionately borne costs of unjust and inequitable energy decisions.
- e. Adopt practices in furtherance of procedural justice, including deeper engagement with renters, affordable rental property owners, BIPOC communities, and under-resourced individuals, providing resources for engagement and participation, and

³⁰ CEV comments, page 8.

³¹ City of Minneapolis comments, pages 5-11.

³² Fresh Energy Comments, page 14.

³³ Fresh Energy Comments, page 16.

providing financial support for impacted individuals to participate in dockets and decision-making processes.

f. Form an environmental justice accountability board, which would develop environmental justice-focused initiatives to be incorporated throughout the utility.³⁴

Company comment

Xcel expresses support for incorporating equity broadly into energy planning and decision-making with the next IDP, and it anticipates a separate equity docket as a more holistic but central process and forum to engage stakeholders and attempt to reach consensus on how equity can be incorporated across different planning processes.³⁵ In addition, Xcel maintains that CEV's or the City of Minneapolis' proposed additions to the IDP planning objectives and filing requirements are necessary at this time.

Synapse response

The Commission stated its support for incorporating equity principles going forward, providing further support that equity goals are broadly consistent with Commission objectives. We concur with the other parties that it is important to integrate equity into resource decision-making. Further, we agree with Xcel that questions regarding how equity should be addressed across the utility planning processes should be discussed in a single docket, to ensure consistency where possible and desirable. However, we note that a Commission decision to address equity principles in a separate proceeding does not absolve Xcel of its responsibility to make a clear demonstration that the proposed RMP investment is in the public interest if it wishes to obtain certification for the investment.

3.2.1.1 Community Power, the Environmental Law & Policy Center, and Vote Solar

CEV submitted additional, thoughtful comments on how to consider equity in relevant proceedings. CEV provides an overview of important considerations:

- **Reliability:** How reliable is the grid on a granular, community-by-community basis ("CBC")? Is the grid resilient following an extreme weather event CBC? Do outage times vary based on race, wealth, customer type (residential v. commercial/industrial), and/or property ownership status?
- **Affordability:** What is the utility's proposed investment designed to maximize - profits, rate reductions, energy user bill savings, pollution mitigation, water conservation, small business activity, utility job creation, longevity of infrastructure, external job creation, minimizing the need for new infrastructure, local energy production, etc.? If spending will raise rates, what alternative(s) has the utility considered to avoid or minimize those increases? What data can be provided on the issue of what segments of customers

³⁴ Xcel Reply comments, pages 10-11.

³⁵ Xcel Reply Comments, page 11.

contribute most to the need for more spending (e.g. C&I customers v. residential customers; wealthier residents v. lower-income residents), and how does that match with who pays which rates? What metrics and justifications are being used to evaluate what financial level of returns/incentives for utility shareholders are just and reasonable?

- **Access to the grid:** How much hosting capacity for new, community-level solar projects does the grid have CBC? How expensive is it to site a new solar project CBC and why? Do average interconnection costs vary based on race, income, property ownership, or customer class? How do these variations impact reliability, resilience, and affordability of the local grid?
- **Community Grid Benefits:** How will the utility's grid investments benefit communities directly in terms of participation in jobs, small business opportunity, capacity for local generation, or insulation from outages? How diverse /resilient or homogenous /reliant is the local energy economy (e.g. are local energy opportunities housed in a large variety of small and medium sized employers or are they primarily employed by, owned by, or otherwise controlled by 1-2 large companies and/or the utility itself)?
- **Safety:** Is the grid infrastructure safe CBC for pedestrians, local commuters, small businesses, and visitors?
- **Other Implementation Equity:** How are grid projects increasing workforce, local small business opportunities, and supporting education, decision-making power in Minnesota communities? What % of the ratepayer-funded infrastructure is going towards private infrastructure versus publicly beneficial infrastructure (e.g. private vehicles v. public infrastructure for buses and otherwise public vehicle fleets; new private meter hook-ups v. energy efficiency; staffing for public relations v. staffing to process community solar applications)?³⁶

Synapse response

The framework that CEV suggests is a valuable contribution. Consistent with our discussion above, CEV's proposed framework should be brought into the equity proceeding contemplated by the Commission.

CEV comment

CEV generally advocates for a data- and equity-driven approach to the IDP. CEV provides recommendations about revising the IDP Planning Objectives and Filing Requirements to include elements related to equity. CEV does not suggest deleting the current requirements; notably, CEV suggests retaining current requirements, including the requirement to provide the Commission with the information necessary to understand Xcel's short-term and long-term distribution system plans, the

³⁶ CEV comments, pages 10-11.

costs and benefits of specific investments, and a comprehensive analysis of ratepayer cost and value.³⁷ Ultimately, CEV recommends approval of the RMP.³⁸

Synapse response

We appreciate CEV's thorough suggestions for changes to the filing requirements. However, we suggest that consideration of these proposed changes should be handled in the equity proceeding to ensure consistency with other planning processes. Also, we respectfully submit that the RMP does not meet the criteria set forth in the original filing requirements, as we have detailed here and in our initial comments. Because CEV does not propose removing the existing requirements, the RMP does not meet CEV's recommended set of criteria, either.

3.2.1.2 City of Minneapolis

City of Minneapolis comment

"Resilient Minneapolis Projects are a great example of an opportunity for the utility to develop projects that are responsive to the community through focused stakeholder engagement, include equity considerations as a part of the criteria/selection process, and consider the full range of DERs that could comprise a true NWA." (p. 24)

Synapse response

We appreciate the City's comments regarding stakeholder engagement, with respect to the RMP and to the IDP more broadly. As stated above, equity considerations should be integrated into energy decision-making. However, the lack of clear goals, baselines, and metrics for the RMP raises serious concerns.

The City recommends that Xcel consider the full range of DERs, including energy efficiency, in the context of NWAs. However, in the case of the RMP, Xcel did not actually consider the contribution that a full range of DERs could make. Xcel stated, "we believe our proposed RMP has benefits for the Company and its customers more broadly, in addition to the specific benefits for the RMP partner organizations. Existing or enhanced CIP-based energy efficiency programs would not be sufficient to address the resiliency objectives of the RMP, *since these programs do not support investments in solar, batteries and microgrids*" (emphasis added).³⁹ In its Request for Applications, the Company provided to applicants the following guidance, indicating a preference or requirement for islandable renewable energy and energy storage:

³⁷ CEV comments, pages 13-14.

³⁸ CEV comments, page 27.

³⁹ Response to DOC IR 52.

A microgrid is an electrical system containing multiple generation sources and loads that can either be connected to the grid or temporarily separated from the grid (“islanded”). Community resiliency microgrids provide back-up power to a resiliency center by incorporating onsite traditional back-up generators, renewable generation such as rooftop PV, and energy storage systems such as batteries. When not being used in emergency situations, the microgrid assets can be leveraged to provide services to the electrical grid.

For purposes of the Resilient Minneapolis Project, Xcel Energy is focusing on strategic locations where single or multiple buildings located in close proximity can be supported by Xcel Energy-owned renewable energy and energy storage systems.⁴⁰

A variety of facilities may be considered crucial to community resiliency. Critical infrastructure could include hospitals or clinics, transportation hubs, communications or traffic control infrastructure, community centers, schools, food shelves, or other evacuation areas. Defining critical infrastructure is an individual decision for each community; Xcel Energy relies on applicants to identify the most appropriate community locations.⁴¹

3.2.1.3 Fresh Energy

Fresh Energy comment

Fresh Energy believes the proposed RMP does meet the statutory requirements listed in Minn. Stat. §216B.2425 Subd 2(e) for certification of investments that modernize the distribution system. The RMP will enhance resilience at specific sites on Xcel’s system while providing Xcel and customers an opportunity to gain experience with energy storage and microgrid systems for both resiliency and system efficiency applications.

Synapse response

Consistent with our initial comments, we find that Xcel has not demonstrated that the RMP is needed to maintain and enhance reliability and resilience, the most relevant aspects of §216B.2425 for evaluating the immediate proposal. Thus, it is not clear that the RMP is needed to maintain or enhance the safety, security, reliability, and resilience of the electricity grid.⁴²

Fresh Energy comment

“[W]e recommend the Company include a section in their annual reports to directly compare and apply lessons learned across the three programs in Minnesota, Wisconsin, and Colorado.” (p. 20)

⁴⁰ In response to DOC-094, Xcel indicated that, subsequent to the Request for Applications, the Company decided ownership of the solar arrays by the RMP hosts would be preferable. These reasons are described in response to DOC-096.

⁴¹ Response to DOC IR 94.

⁴² Synapse Initial Comments, page 24.

Synapse response

We agree that the Colorado and Wisconsin programs may provide valuable lessons for Minnesota. However, we note that there are critical differences between Minnesota and Colorado, and likely between Minnesota and Wisconsin, which may limit the transferability of the models. For example, the Colorado PUC approved some microgrid projects, collectively called the Community Resiliency Initiative (CRI), in Xcel's service area. While the Colorado projects appear to be similar to the projects in proposed in Minnesota, Colorado's Energy Storage Procurement Act (House Bill (HB) 18-1270) provides a specific and clear rationale for focusing on one type of technology: storage. This is not the case in Minnesota.

4. RECOMMENDATIONS

4.1 Distributed Intelligence

Synapse recommends that the Commission deny certification of DI without prejudice on the basis that the application is incomplete and that a full assessment cannot be made on cost-effectiveness or whether it is in public interest until the application is complete.

As per our initial comments, to provide a complete application, Xcel should do the following

- Xcel should establish concrete and measurable goals and demonstrate how it expects to achieve these through DI.
- Xcel should evaluate the costs and benefits of alternative scenarios, which should include an evaluation of (1) the costs and benefits of non-DI AMI meters (in this and other relevant proceedings), and (2) the costs and benefits of DI that is agnostic of meter technology (i.e., consideration of alternative ways of achieving the same goals that the proposed DI achieves).
- Xcel should address concerns around the incremental costs that could be avoided through coordinating investments in both DI-enabled meters and DI.
- Xcel should demonstrate the need for the proposed use cases and present a prioritization of these cases exploring different combinations of scenarios.
- Xcel should articulate its perspective regarding the BCA.
- Xcel should attempt to quantify all benefits as opposed to addressing the benefits qualitatively.
- Xcel should provide a clear set of metrics and performance targets for DI at the time a request for certification is made.
- Xcel should conduct bill impact analysis for all grid modernization investments including DI so customers and stakeholders can make an informed assessment regarding these investments.
- Xcel should address the different risks that may arise during implementation, indicate how these are monetized, and discuss the overall associated cost and benefit implications.

In addition, the benefits anticipated by Xcel are contingent on installation of DI-enabled meters that have yet to be installed and approved by the Commission. Certification of DI should not precede approval of the AMI meters. Additionally, Xcel has not indicated how these technologies are foundational. As Xcel itself indicates, this technology is new to the market and has limited proven benefits. Finally, the BCA indicates that the application for DI is not cost-effective. However, we continue to believe that it is premature to draw any conclusions about cost-effectiveness since the application for certification is incomplete and that evaluation of the investment should be based on both cost-effectiveness and other considerations. Based on the above, we recommend that the certification be denied.

4.2 Resilient Minneapolis Project

Based on the current record of evidence, we find that the application is incomplete. The following information is missing and should be provided to close gaps in the proposal.

- Xcel should set goals with reference to specific problems, either existing ones or ones predicted to arise in the future. Also, Xcel should establish concrete and measurable goals—including ones related to equity--and demonstrate how it expects to achieve these through the RMP.
- Xcel should evaluate the costs and benefits of alternative technologies. Further, Xcel should consider, or provide justification for not considering, alternative geographies, timelines, and ownership structures.
- Xcel should articulate its perspective regarding the BCA.
- Xcel should attempt to quantify all benefits wherever possible, as opposed to addressing the benefits qualitatively.
- Xcel should provide a clear set of metrics and performance targets for RMP.

All of these data should have been provided at the time that the request for certification was made.

We find that a full assessment cannot be made on cost-effectiveness or whether the RMP is in the public interest until the application is complete.

Based on these findings, Synapse recommends that the Commission deny certification of the RMP without prejudice.

However, if the Commission decides to certify RMP, additional conditions should be met.

First, Xcel should be required to clearly define and quantify the emergency service capabilities and capacity in more detail and in more concrete terms than Xcel has hitherto provided in its proposal and via discovery responses. For example, during an outage the partner will have the capacity to shelter x number of people and provide x number of meals per day at the facility. This is critical, since a large part of the non-quantified benefits are contingent on the provision of services to the community in the event of an extended outage.

Second, in addition to the other items Xcel proposes to report, Xcel should report on the status of the emergency service capacity. It should be Xcel's responsibility to ensure that the benefits are or can be realized, and to develop a process and a plan for demonstrating that the benefits can be realized. For example, Xcel could design its contracts with the partners to provide such assurances. As another example, in its periodic reporting, Xcel can communicate to the Commission and to stakeholders about the condition of emergency capacity and supporting processes, such as the existence of a clear, up to date readiness plan for the facility.

Third, before any decisions about cost recovery are made, there must be a process for addressing the potential situation in which either or both of the following conditions arise:

- the project fails to deliver all or a large portion of Xcel's claimed quantified benefits
- the claimed unquantified benefits cannot or are unlikely to materialize

The process should contemplate the criteria for determining that, for example, the emergency service capacity is inadequately built or maintained, and what remedial actions should be taken if such a determination is made. In cases where remedial actions are appropriate, the process should also establish how decisions about the disposition of the assets, including the BESS, will be made.

APPENDIX A.

A.1. Derivation of the Guidance Document's Filing Requirements from Commission Orders

The Guidance Document encapsulates the Commission's specific requirements for grid modernization included in key past Orders, which are summarized below. Following, we detail how the Guidance Document's filing requirements connect directly to these Orders.

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

Below, Synapse provides a high-level overview of the connections between the key Commission Orders and the Guidance Document's filing requirements. 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).

Requirement 1: Plans Should Be Based on Long-Term Planning

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.⁴³ 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.”⁴⁴
- 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 conditioned on achievement of metrics and performance evaluations.⁴⁵ 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.

Requirement 2: Proposals Should Identify the Roles and Relationships of the Components

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 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.

⁴³ 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.

⁴⁴ 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.

⁴⁵ Ibid.

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.”⁴⁶ 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.

Requirement 3: Proposals Should Justify the Evaluation Scope

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.”

Requirement 4: Evaluation Methods Should Be Thoroughly Detailed in the Proposal

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 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.”

Requirement 5: Proposals Should Specify Metrics and Targets

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

⁴⁶ Attachment to Department’s Letter (the Guidance Document). Docket No. E-002/M-21-814, February 9, 2022, p. 28.

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 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.”

Requirement 6: Proposals Should Clearly Present All Results

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 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).

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☐ Public Document – Not Public Data Has Been Excised
☒ Public Document

Xcel Energy Information Request No. 89
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

Please describe in detail the function of each proposed component (BESS, switching and microgrid controllers).

Response:

The battery energy storage system (BESS) will store energy from the grid that can be discharged at a later time to address the use cases discussed in Appendix H of our IDP filing including:

- *Back-up power/resilience* – the storage system will have the capability to “black start” or restore power to the facility in the event of a grid outage.
- *System peak reduction* – the storage system can be called upon to dispatch energy during times of high system peak to help meet the system’s peak demand.
- *Local feeder peak reduction* – the storage system could be called upon to discharge energy when the local feeder is approaching a peak condition, thereby reducing the possibility the feeder could be overloaded.
- *Energy arbitrage* – the battery can be charged during off-peak periods when marginal energy costs are low and discharged when marginal energy costs are higher, thus reducing the amount of higher priced energy that must be purchased on the electric grid.

Switching refers to the isolation or an “islanding” switch. This device acts to isolate the facility, any onsite generation resources (ex. solar PV), and the BESS from the rest of the electrical grid during an outage.

Microgrid controllers provide the intelligence to the microgrid, coordinating generation assets, BESS, and loads to meet the desired use cases.

Preparer: André Gouin
Title: Business Technology Consultant
Department: Strategic Partnerships
Telephone: (303) 294-2975
Date: March 21, 2022

- ☐ Not Public Document – Not For Public Disclosure
☐ Public Document – Not Public Data Has Been Excised
☒ Public Document

Xcel Energy Information Request No. 90
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

Please provide a narrative that addresses the following:

- a. Which components are inseparable
- b. Any alternative sequences for installation of components or alternative timelines for installation of components
- c. The effects of substituting selected components for alternatives that were considered in the plan but not ultimately selected

Response:

As noted in our response to DOC-89, the major components of the Resilient Minneapolis Project are the Battery Energy Storage System (BESS), Microgrid controller, and islanding switch. These components work together as a system to meet the objectives described in Appendix H to our IDP filing and are inseparable. No alternative sequences or timelines or substitutions were considered, based on the assumption that the system operates as a whole. .

Preparer:	André Gouin	Beth Chacon
Title:	Business Technology Consultant	Director Grid Strategy and Emerging Technologies
Department:	Strategic Partnerships	Distribution Electric Engineering
Telephone:	(303) 294-2975	303-571-3542
Date:	March 21, 2022	March 21, 2022

- ☐ Not Public Document – Not For Public Disclosure
☐ Public Document – Not Public Data Has Been Excised
☒ Public Document

Xcel Energy Information Request No. 91
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

For each component (BESS, switching and microgrid controllers), please provide a clear articulation of why the component was selected for the grid modernization plan, based on the results of the BCA and the customer equity analysis.

Response:

We selected these components because they are the components required to make the desired system operate as intended. The Company did not conduct a separate CBA for each sub-component of the overall system; we designed an integrated system for each RMP site that we believe is necessary to support the community resilience and other grid services objectives as described in Appendix H of our IDP filing.

Preparer: Nicholas Martin
Title: Policy & Outreach Manager
Department: Community Service
Telephone: 612-330-6255
Date: March 21, 2022

- b. We have not yet determined a detailed division of labor, as that would be done as part of preparing our preliminary and final design for each site, both of which would occur after the Commission makes its certification determination.

Preparer:	Andre Gouin	Jody Londo
Title:	Business Technology Consultant	Specialist, Regulatory Policy
Department:	Strategic Partnerships	Regulatory Affairs
Telephone:	303-294-2975	612-327-0493
Date:	March 21, 2022	March 21, 2022

Xcel Energy	Information Request No.	93
Docket No.:	E002/M-21-694	
Response To:	Minnesota Department of Commerce	
Requestor:	Matthew Landi, Alice Napoleon	
Date Received:	March 9, 2022	

Topic:	Resilient Minneapolis Project
Reference(s):	Xcel Energy's 2021 Integrated Distribution Plan

Please break out benefits for each component (BESS, switching and microgrid controllers). When responding to this question, please include the incremental benefits that would not be achieved without the specific component. Also, please do not include benefits that accrue as a result of the solar installation on its own.

Please see our response to DOC-90. The project we have proposed is an integrated solution to meet the project objectives.

Preparer: Nicholas Martin
Title: Policy & Outreach Manager
Department: Community Relations
Telephone: 612-330-6255
Date: March 21, 2022

- ☐ Not Public Document – Not For Public Disclosure
☐ Public Document – Not Public Data Has Been Excised
☒ Public Document

Xcel Energy Information Request No. 94
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

Referring to Appendix H, p. 8, did the request for applications specify the technologies and configurations that Xcel would consider? If so, please describe any such guidance to bidders.

Response:

The March 2021 Request for Applications provided the following guidance:

A microgrid is an electrical system containing multiple generation sources and loads that can either be connected to the grid or temporarily separated from the grid ("islanded"). Community resiliency microgrids provide back-up power to a resiliency center by incorporating onsite traditional back-up generators, renewable generation such as rooftop PV, and energy storage systems such as batteries. When not being used in emergency situations, the microgrid assets can be leveraged to provide services to the electrical grid.

For purposes of the Resilient Minneapolis Project, Xcel Energy is focusing on strategic locations where single or multiple buildings located in close proximity can be supported by Xcel Energy-owned renewable energy and energy storage systems. (Note that subsequent to the Request for Applications, the Company decided ownership of the solar arrays by the RMP hosts would be preferable, for the reasons described in our response to DOC-096.)

A variety of facilities may be considered crucial to community resiliency. Critical infrastructure could include hospitals or clinics, transportation hubs, communications or traffic control infrastructure, community centers, schools, food shelves, or other evacuation areas. Defining critical infrastructure is an individual decision for each community; Xcel Energy relies on applicants to identify the most appropriate community locations.

Preparer: Nicholas Martin
Title: Manager, Policy & Outreach
Department: Community Relations
Telephone: (612) 330-6255
Date: March 21, 2022

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Xcel Energy Information Request No. 95
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

Please describe in detail how Xcel envisions using the learnings from the RMP.

- a. How would the Company know if the RMP is successful?
- b. Does Xcel believe it is likely that the learnings from the RMP would enable it to offer similar services to other customers cost effectively in the future? If so, what additional benefits or cost efficiencies are likely to arise?
- c. What criteria would Xcel use to determine if the RMP is successful? For each criterion, please provide any threshold value(s) for defining success.
- d. If the RMP pilot is deemed successful, would Xcel seek to roll out the RMP model to a broader set of customers?
- e. Has Xcel considered how it would roll out the RMP model to a broader set of customers? If so, please describe. If not, why not?
- f. Please provide a high level estimate of the number of customers that could be served by this model. When responding to this question, please include assumptions and the timeline for deployment.

Response:

Xcel Energy could use the learnings from RMP in three distinct ways:

1. Gain experience in the use and control of battery energy storage technology. Using battery energy storage technology for distribution grid support is still relatively new to Xcel Energy and utilities in general. By integrating these systems into our distribution controls, we will gain experience on how these systems operate, and how we can manage them effectively. These learnings would help us reduce deployment costs and optimize the use of future systems.
2. Provide performance data on how energy storage technology could be used in “non-wires alternative” applications. Deployment of these systems will generate

data regarding their availability and reliability. This information could be used when evaluating grid infrastructure investments and whether battery energy storage systems can effectively address certain grid constraints.

3. Inform the feasibility of offering this hybrid microgrid model to additional customers. Customer interest in resilience has been increasing. Should these projects prove successful they could provide a model as to how utility and customer assets can be paired to improve resilience in specific situations.

Regarding the specific subparts:

- a. The Company would consider the RMP project successful if the systems deployed can perform the identified grid facing use cases, are able to reduce the number and severity of outages at the host sites, are delivered within the estimated budget, and are considered useful by the RMP hosts in supporting resiliency at their locations. In addition, the development and implementation of the RMP projects will allow us to partner with three deeply embedded community organizations, and the Company will consider these projects successful if they will allow us to deepen our relationships with our community partners and the broader communities they serve.
- b. Yes, the learnings from the RMP should enable the Company to offer similar services to other customers cost effectively in the future. The experience gained through implementing these projects is expected to enable us to deploy similar systems more efficiently. The cost of battery storage and balance of plant are expected to decrease as these systems become more widely adopted. Cost effective deployment will also depend on identifying locations where alternative solutions are more costly.
- c. See response to Part a above.
- d. If the RMP pilot is deemed successful, and the Commission is supportive, the Company would be open to discussion about partnering with additional communities to support resiliency and related objectives. As noted in Appendix H pages 6-7 and in the response to DOC-97, the RMP emerged from a particular set of conditions: the desire to identify non-wires alternatives in Minneapolis, the Commission's call for utility investments to help in COVID-19 economic recovery, and the desire to address racial, economic and social disparities faced by BIPOC communities in Minneapolis that were brought into sharp focus by the murder of George Floyd and subsequent civil unrest in 2020. We thus released a Request for Applications soliciting resiliency ideas that was open to any Minneapolis electric retail customer, but particularly encouraged BIPOC-led organizations to apply. We then designed the RMP to support resiliency and

enhance equity in the selected applicants' communities. We also designed the RMP to generate lessons learned on dispatching battery systems for a variety of grid services or "use cases," as discussed in Appendix H pages 32-33 and in our response to DOC-89 – learnings that will benefit all of our customers as DER becomes more prevalent on our distribution system. In summary, both the desire to enhance equity for customers, and distribution system learnings for all customers, formed the basis of the Company's rationale for proposing recovery of RMP costs from all customers.

As such, we believe any future replication of the RMP model specifically – i.e., resiliency solutions with costs recovered from all customers – should meet similar equity and learning objectives, and be targeted toward communities experiencing racial, economic and social disparities and/or greater vulnerability to climate change. That said, the Company believes resiliency solutions should be available to all. We will seek to meet all customers' interest in resiliency solutions, but likely using options that recover costs from the participating customer (for example, the resiliency-as-a-service model recently introduced in Wisconsin and soon to be filed in Minnesota).

- e. See response to Part d above.
- f. The Company provided in Appendix H estimates of the number of beneficiaries at each RMP site. However, as for future replication of the project, we have not performed any research to provide a high-level estimate of the number of customers that could be served by this model.

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Title:	Business Technology Consultant	Policy & Outreach Manager
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Date:	March 21, 2022	March 21, 2022

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Xcel Energy Information Request No. 96
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

Please describe why Xcel is proposing the ownership structure of the RMP (with participants owning the solar and Xcel owning the BESS and switching). Did Xcel consider other ownership structures? If so, why isn't Xcel proposing these alternative ownership structures?

Response:

As described in Appendix H, the RMP is structured such that the Company will own the equipment that is interconnected directly to the distribution system on the utility side of each customer's meter. This structure was developed so that the Company can own and operate the BESS and associated equipment to provide critical grid modernization benefits consistent with Minn. Stat. §216B.2425. These grid benefits are described in Section IV.B of Appendix H.

We considered other potential ownership models for the solar arrays, including the Company owning solar. We ultimately decided on the proposed structure – solar arrays connected behind-the-meter and owned by the RMP hosts – for two reasons: 1) to keep the overall budget to roughly the amount originally proposed in Docket No. E,G999/CI-20-492, and 2) to allow the RMP hosts to financially benefit from owning the solar arrays via net metering bill credits. Company ownership of the solar arrays would increase the overall budget for which we would need to request certification, and would not allow the hosts to receive financial benefits of solar ownership.

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Xcel Energy Information Request No. 97
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

Please describe why Xcel is only proposing projects in Minneapolis. Did Xcel consider other locations? If so, why isn't Xcel proposing projects in these alternative locations?

Response:

The history of the RMP is described in Section VIII.D of the IDP and Section I.E of Appendix H. The RMP originated as discussions around a Non-Wires Alternative (NWA) Pilot with the City of Minneapolis, and then evolved into an NWA in the Commission's COVID-19 economic recovery docket. That evolution occurred in part as those residing in the City of Minneapolis struggled with the murder of George Floyd and the resulting increased focus on the racial and economic disparities faced by members of BIPOC communities. Both the Company and the City of Minneapolis desire to increase our commitments to BIPOC communities, and this project is one prong of that commitment. In addition, resiliency hubs are particularly useful in communities suffering from economic disparities because, if an extreme event were to occur and there is an extended outage, individuals living in these communities are especially vulnerable as they may lack the necessary resources to temporarily relocate. Given the work to develop the NWA pilot that had already been completed, the Company and City ultimately concluded that the RMP could address community resiliency and racial and economic disparities.

Since the RMP evolved from the early NWA discussions, the Company did not consider locations outside of Minneapolis for the RMP. As we noted in response to DOC-64(a) and DOC-95, however, if the RMP delivers significant benefits and learnings in

Minneapolis, the Company may consider replicating it with similar communities elsewhere in our service territories. Please see our response to DOC-95, subpart d.

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Xcel Energy Information Request No. 98
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

Please describe why Xcel is proposing the specific timeline for the RMP projects. Did Xcel consider other timelines? If so, why isn't Xcel proposing projects in these alternative timelines?

Response:

The history of the RMP is described in Section VIII.D of the IDP and Section I.E of Appendix H. The RMP originated as discussions around a Non-Wires Alternative (NWA) Pilot with the City of Minneapolis, and then evolved into an NWA in the Commission's COVID-19 economic recovery docket. As discussed in Appendix H and in response to DOC-IR 97, the Company believes that continuing to address issues of racial and economic disparity are necessary and should begin now and we did not, therefore, consider or propose alternative timelines for implementing these projects.

If the Department is instead referring to the specific implementation timeline depicted in Table 6 of Appendix H, as noted in Section V of Appendix H, the Company's timeline assumes the completion of necessary implementation steps as quickly as feasible, including a 4-6 month lead time for BESS delivery after placing an order. This timeline has the added benefit of aligning with the planned renovation and expansion of MAIC, one of the RMP host sites. Because the Company wants to place the RMP grid improvements into service as soon as possible and the proposed timeline reflects this plan, no alternative timelines were considered.

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Date: March 21, 2022

Xcel Energy	Information Request No.	99
Docket No.:	E002/M-21-694	
Response To:	Minnesota Department of Commerce	
Requestor:	Matthew Landi, Alice Napoleon	
Date Received:	March 9, 2022	

Topic:	Resilient Minneapolis Project
Reference(s):	Xcel Energy's 2021 Integrated Distribution Plan

Response:

As explained in response to DOC-IR 98, delaying implementation of the RMP delays the Company's ability to deliver the full benefits offered by the projects. These benefits are discussed throughout Appendix H and in numerous responses to DOC-IRs to date. Delays in implementation jeopardize a key purpose of the project, specifically, the desire, shared by many stakeholders, including the Commission, to advance initiatives designed to address racial and economic disparities.

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Xcel Energy Information Request No. 100
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

Please describe any risks of higher costs of the RMP projects than projected, and how Xcel seeks to mitigate such risks.

Response:

Managing the risk of higher costs is always a priority when managing projects of this type. Supply chain issues, impacts from the global pandemic, labor shortages or cost increases, and inflationary pressures could result in higher project costs. Once detailed design work begins additional, unforeseen issues could also arise that could impact costs. These items could range from unforeseen site work required to accommodate the installations, to changes in fire-safety guidelines for battery storage devices. The Company strives to mitigate these risks through several methods:

- Prepare a detailed site layout – once the project is approved, , the Company would create a preliminary design for each site, including detailed site conditions. This information would form the specifications of a request-for-proposal (RFP).
- Competitive Pricing– the Company would issue an RFP for the microgrid system and would work with vetted engineering, procurement, and construction (EPC) firms who have experience with these types of systems. Working with trusted suppliers will help ensure a quality project is provided and limit potential cost overruns from change orders.
- Leverage learnings – as the Company deploys advanced systems throughout the Xcel Energy footprint, we apply those lessons to new programs. This helps us optimize solutions, reduce the learning curve, and identify cost effective system components.

- Standardization – as much as possible the Company will rely on standardized, readily available components for the project. This will help reduce costs compared to reliance on customized, one-off equipment designs.

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Xcel Energy Information Request No. 101
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

Please describe any risks of lower benefits of the RMP projects than projected, and how Xcel seeks to mitigate such risks.

Response:

The risks of lower benefits would stem from the battery energy storage system not being available to provide the grid facing or customer facing resilience benefits proposed. To mitigate these risks the Company would:

- Work with proven vendors and suppliers who have a track record of providing reliable equipment and will stand behind their products.
- Train key personnel in the efficient use and management of the storage assets.
- Automate battery system dispatch functions where applicable to ensure the system optimally responds to grid conditions without reliance on human intervention.
- Implement operations and maintenance procedures to maximize equipment up time.

In addition, the project could have lower benefits to the project hosts if it were not designed in close collaboration with them. The Company has worked closely with the hosts since mid-2021, prior to and subsequent to filing our IDP, and we plan to mitigate the risk of any misalignment of Company and host priorities by continuing to engage with them through the design, sourcing, construction, and operational phases of the RMP. Our goal is to continue developing a long-term relationship with these deeply embedded community organizations and through them, with the large number of Xcel Energy customers they serve.

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Title: Business Technology Consultant
Department: Strategic Partnerships
Telephone: (303) 294-2975
Date: March 21, 2022

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Xcel Energy Information Request No. 102
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

Are the RMP plans consistent with all other distribution, transmission, and resource planning processes? Please list each other planning process applicable to Xcel's operations in Minnesota, and indicate how the RMP fits with it. If not, why not?

Response:

As an integrated utility, Xcel Energy engages in many planning processes, including ongoing distribution, transmission, and integrated resource planning processes in Minnesota, as necessary as a grid owner and operator and as contemplated or necessitated by various statutes, rules and Commission orders. The Commission has stated a desire over time to more closely align distribution planning, transmission planning, and resource planning, and included decision options to this effect in its February 8, 2022 deliberations in Docket No. E999/RP-19-368 (see in particular decision options D6, D13, and E3). We will be working to address these requirements for future IRPs and IDPs. As of now, these planning processes are quite different and, while they may be able to share similar inputs or assumptions, they are largely distinct analyses and processes.

The RMP is a specific proposal for the distribution system and is directly relevant to, and serves the objectives of, integrated distribution planning under Minn. Stat. §216B.2425, subd. 2(e). See Appendix H, section VII. As we have described in our proposal in our responses to other Department Information Requests, we expect to gain valuable learnings from the project.

Preparer: Nicholas Martin
Title: Manager, Policy & Outreach
Department: Community Relations
Telephone: (612) 330-6255
Date: March 21, 2022

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Xcel Energy Information Request No. 103
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

Please provide the discount rate used for the projection of costs and benefits.

Response:

The costs of the projects were estimated to be in a single year execution. This means, no discount rate was applied to the estimates because no cost projection was needed, since the current year represents the present value for all the costs of the projects. In contrast, the benefits incorporate a conservative 10-year period after project execution that includes the Weighted Average Cost of Capital (WACC) as the discount rate utilized. This value is described in trade secret document provided in the filing "Workpapers – CBA RMP MN Elect TRADE SECRET IN ENTIRETY" in tab "Resiliency Back-up Value" on cell B-15 of the spreadsheet. The discount rate used in the cost benefit analysis (CBA) for this grid modernization proposal is consistent with what we use in all of our grid modernization CBAs, to reflect the cost of the project to our customers. The after-tax WACC percentage utilized is the value allowed by the Commission pursuant to our most recently concluded electric rate case in Docket No. E002/GR-15-826.

Preparer: Pablo Martinez
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Department: Risk Management
Telephone: 303-571-7639
Date: March 21, 2022

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Xcel Energy Information Request No. 104
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

For each component, have any costs been previously approved, in whole or in part, or included in previous or ongoing docket riders, rate cases, or other cost recovery mechanisms? If so, please describe the costs and explain the context for such approval or inclusion in riders, rate cases, or other cost recovery mechanisms.

Response:

No RMP costs have been previously approved, in whole or in part, or included in previous or ongoing docket riders, rate cases, or other cost recovery mechanisms.

Preparer: Nicholas Martin
Title: Manager, Policy & Outreach
Department: Community Relations
Telephone: (612) 330-6255
Date: March 21, 2022

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Xcel Energy Information Request No. 105
Docket No.: E002/M-21-694
Response To: Minnesota Department of Commerce
Requestor: Matthew Landi, Alice Napoleon
Date Received: March 9, 2022

Question:

Topic: Resilient Minneapolis Project
Reference(s): Xcel Energy's 2021 Integrated Distribution Plan

For each component, indicate whether it might lead to stranded costs and how such stranded costs were treated in the analysis.

Response:

As the RMP project is a pilot, the idea of stranded costs was not directly considered and was not analyzed. The battery storage system is expected to have a ten-year life at which time it could be repowered or removed depending on the needs at that time. Components such as switch gear and transformers have an expected 20–30-year life. This equipment could be repurposed elsewhere on the distribution system should the project be decommissioned early. Other components such as conductor and conduit which are sized and installed specifically for each site could not be re-used should the site be decommissioned early and therefore might be considered a stranded asset.

Preparer: André Gouin
Title: Business Technology Consultant
Department: Strategic Partnerships
Telephone: (303) 294-2975
Date: March 21, 2022

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
Reply Comments

Docket No. E002/M-21-694

Dated this 11th day of **April 2022**

/s/Sharon Ferguson

[illegible]

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