April 12, 2024

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

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Xcel Energy 2023 Integrated Distribution Plan
Docket No. E002/M-23-452

Dear Mr. Seuffert:

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

In the Matter of Xcel Energy's 2023 Integrated Distribution Plan

Xcel Energy's 2023 Integrated Distribution Plan (IDP) were filed on November 1, 2023, by Amber Hedlund, Manager, Regulatory Project Management for Xcel Energy.

The Department recommends Commission approve Xcel's IDP, but that the Commission require specific modifications and is available to answer any questions the Minnesota Public Utilities Commission may have.

Sincerely,

/s/ Sydnie Lieb
Assistant Commissioner of Energy Regulatory Analysis

DT/ad
Attachment

Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce
Division of Energy Resources

Docket No. E002/M-23-452

I. INTRODUCTION

Through these reply comments, the Department responds to specific points raised by Xcel Energy (Xcel or the Company) in its own reply comments. The Department has not addressed all of the Company's arguments, nor does it respond to many of the points made by the other intervening parties. A lack of response to any position of the Company or another intervening party should not be taken to indicate agreement.

In formulating its final recommendations, the Department has carefully considered the arguments raised by the Company and the other intervening parties to this proceeding. The Department has generally maintained its recommendations from its initial comments, including only limited modifications and additions to its recommendations. Only new or modified recommendations are specifically presented in the main body of these comments, and they are presented in italicized and bolded text. As discussed below in detail, the Department recommends that the Commission approve Xcel's IDP, but that the Commission require specific modifications. The complete set of final recommendations, including recommended modifications, is presented in the final section of these comments. Also included in this final section are process recommendations for any requested modifications.

II. PROCEDURAL HISTORY

On November 1, 2023, Northern States Power Company d/b/a Xcel Energy (Xcel Energy or the Company) filed its 2023 IDP and Transportation Electrification Plan (TEP) in Docket No. E002/M-23-452.[1] This is the first time that Xcel Energy has filed its TEP as part of its IDP filing.

On November 17, 2023, the Commission issued a Notice of Comment period with two separate periods for comments.[2] The first Xcel comment period, addressed in prior comments, corresponds to Xcel's TEP and includes Notice Topics 1 through 13. The second comment period, addressed in these comments, corresponds to Xcel's IDP and includes Notice Topics 14 through 24. The comment period for Xcel's IDP includes the following topics open for comment:

> 14. Should the Commission accept or reject Xcel Energy's Integrated Distribution Plan (IDP)?

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[1] *2023 Integrated Distribution System Plan,* Northern States Power Company, d/b/a Xcel Energy, Docket No. E002/M-23-452, November 1, 2023, hereinafter "IDP."

[2] *Notice of Comment – In the Matter of Xcel Energy's 2023 Integrated Distribution Plan,* Docket No. E-002/M-23-452, November 17, 2023, hereinafter "2023 Notice of Comment."

15. Did Xcel Energy adequately address the Commission's IDP filing requirements and prior Orders, as outlined in Attachment A to this notice? Is additional information necessary for improved clarity?
16. Feedback, comments, and recommendations on the following areas of Xcel's IDP:
    a. Non-Wires Alternative Analysis
    b. Grid modernization plans, including but not limited to a Distributed Energy Resource Management System (DERMS), Virtual Power Plants (VPP), Integrated Volt-Var Optimization (IVVO), and Distributed Intelligence (DI)
    c. Forecasted distribution budget
    d. Initial LoadSEER forecasting results and methodology
    e. Planned Net Load (PNL) methodology and 15% Dependability Factor
17. What guidance should the Commission give on budgets and cost allocation for distribution system upgrades to accommodate distributed energy resources (DER), including but not limited to:
    a. Solar sited with customer load
    b. Solar sited in front of the meter
    c. Energy storage devices
    d. Electric Vehicles
    e. Space heating, water heating, and other electrification use cases
    f. Proactive grid upgrades in anticipation of future DER growth
18. What decisions should the Commission make in the IDP to provide Xcel guidance in aligning distribution spending with forthcoming rate cases?
19. Should the Commission require cost-benefit analysis for discretionary distribution system investments?
20. Should the Commission discontinue IDP Requirement 3.A.9 as requested by Xcel?
21. Should the Commission revise the IDP Filing Requirements for Xcel Energy to remove the requirement that financial information be reported in IDP-specific categories, as requested by Xcel?
22. What should the Commission consider or address related to enhancing the resilience of the distribution system within Xcel's IDP?
23. Has Xcel Energy appropriately discussed its plans to maximize the benefits of the Inflation Reduction Act (IRA) and the IRA's impact on the utility's planning assumptions pursuant to Order Point 1 of the Commission's September 12, 2023 Order in Docket No. E,G-999/CI-22-624?
24. Other areas of Xcel's IDP or TEP not listed above, along with any other issues or concerns related to this matter.

ZEF Energy filed its initial comments on February 22, 2024. On March 1, 2024, initial comments were filed by the following additional intervenors: Fresh Energy, The City of Minneapolis, Grid Equity Commenters (GEC), Clean Energy Groups (CEG), and the Department. On March 22, 2024, the Company filed its reply comments.

III. DEPARTMENT ANALYSIS

OVERVIEW OF COMMENTS

The Department has not addressed all notice topics in these comments, but rather responds to certain issues raised in the reply comments of Xcel. The order of the Department's reply comments is presented below:

- *A. Recommendations concerning acceptance of the IDP*
- *B. The purpose of the IDP*
- *C. Recommendations for enhanced informational requirements*
- *D. Response to the Company's Reply on Non-Wires Alternatives*
- *E. Response to the Company's Reply on Specific Grid Modernization Topics*
- *F. Response to the Company's Reply on Load Forecasting*
- *G. The Need for an Improved Stakeholder Process*
- *H. Summary of Recommendations*

Rather than addressing every argument raised in the Company's reply comments, the Department has focused on a few key themes. Through these reply comments, the Department aims to elucidate its view of the purpose of the IDP (Section B), and to clarify, reaffirm, and in limited cases, expand on its recommendations to enhance the informational quality of Xcel's IDP to help the IDP better fulfill its promise (Section C, Section E, Section F).

While the IDP is intended to be an informational document, the Department points to the promise of integrated planning to help optimize the grid in the face of transformation, to minimize costs and maximize savings and benefits. In the Department's view, one of the key ingredients to optimizing the IDP process is a robust and ongoing stakeholder process, which is discussed in a new section at the end of these comments (Section G).

A. RECOMMENDATIONS CONCERNING ACCEPTANCE OF THE IDP

The Department recommends that the Commission approve Xcel's 2023 IDP, subject to certain modifications. The recommended modifications are presented together in the final section of these comments.

B. THE PURPOSE OF THE IDP

A key question attending the review of Xcel's 2023 IDP concerns the purpose of the IDP process in Minnesota. Notice Topic 18 specifically addresses the role for the IDP in asking about decisions required from the Commission in the IDP to provide Xcel guidance in aligning distribution spending with forthcoming rate cases.

Xcel expresses a general opposition to modifying the IDP status quo to better integrate the IDP with rate cases. The Company states its belief that, "while there will always be improvements and adjustments in the planning process based on new technologies, new information, and evolving industry best practices, our IDP process is well developed and is reflective of many years of learning, refining, and stakeholder input.[3] Xcel allows that there might be "small process adjustments" that could ameliorate "certain challenges inherent in the fact that rate cases and IDPs are two separate proceedings with separate scopes and purposes."[4] However, the Company offers that it does not believe that the disallowance of certain distribution system investments in its last rate case "is necessarily indicative of a foundational issue with either the rate case process or the IDP process."[5]

In Xcel's reply comments, the Company notes that the IDP is meant to be an "informational" filing, designed to provide the Commission and stakeholders with the "information necessary to understand [Xcel's] short- and long-term plans for our distribution system, the costs and benefits of specific investments, and a comprehensive analysis of ratepayer cost and value."[6] The Department is wholly in agreement with the Company concerning the informational nature of the IDP, but submits that the purpose of the IDP is also to *inform* decisions made in other proceedings, including cost recovery proceedings. The recommendations that we have provided in our initial comments and in these reply comments are aimed at enhancing the value of the IDP as an informational document and its usefulness as a resource to inform other proceedings.

In light of the foregoing discussion, the Department presents a new recommendation:

The Department recommends that the Commission aim to clarify the role of the IDP. Clarifying the role of the IDP is critical to establishing clear standards of review for these filings and for determining the extent to which the assumptions, projections, and proposals included in IDPs should be considered in other proceedings – including cost recovery proceedings and Integrated Resource Plan (IRP) proceedings.

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[3] *Reply comments,* Northern States Power Company, d/b/a Xcel Energy, Docket No. E002/M-23-452, March 22, 2024, *hereinafter* "Xcel reply comments" at page 2.
[4] 2023 IDP at page 25.
[5] 2023 IDP at page 25.
[6] Xcel reply comments at pages 1-2.

i. Distributed Intelligence Demonstrates the Need for Tighter Integration between IDP and Cost Recovery

While the Company claims that disallowances in its recent general rate case are not necessarily indicative of a need for process change, the Department submits that the case of Distributed Intelligence (DI) lends clear support to the Department's arguments for inclusion of detailed information on the costs and benefits of grid modernization investments, consistent with IDP filing requirements, and for an overall tighter integration between the IDP and rate case processes.

A bit of history on DI is warranted: while the Company initially included a request for certification of DI in its 2021 IDP filing, it subsequently withdrew this request and stated its intention to seek cost recovery for DI in its next rate case. As such, the expected benefits and costs for DI were not evaluated as a part of the 2021 IDP proceeding. However, when the Company's proposal for DI was reviewed in its 2022 rate case, the Commission found that Xcel had not demonstrated that this investment was cost effective and cited this, among other concerns, as the cause for not granting cost recovery.[7] In the Department's view, Commission and intervenor review of the Company's DI proposal in the context of the last IDP could have helped the Company to refine its plans and better demonstrate the cost effectiveness of its proposed DI investments.

In the 2022 rate case, the Department also raised other concerns about the siloed, non-integrated evaluation of DI and AMI, given that DI is entirely dependent on AMI.[8] The recommendations on grid modernization filing requirements that were provided in the Department's initial comments in this proceeding, and which are restated in this document, aim to avoid these sorts of siloed, diffuse, and non-integrated reviews of investments that are by nature highly interdependent with other parts of the grid.

C. RECOMMENDATIONS FOR ENHANCED INFORMATIONAL REQUIREMENTS

As discussed above, the Department has provided recommendations for enhancing the informational quality of the IDPs so that these filings can more meaningfully inform other related proceedings. The Department addresses Xcel's responses to these recommendations and provides additional clarification and expansion where warranted in the sections that follow. First, the recommendations for improvements to IDP distribution budgeting are addressed. Next, CBA for grid modernization is discussed. Finally, the Department's recommendations for metrics are reaffirmed, clarified, and expanded.

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[7] *Findings of Fact, Conclusions, and Order*, Docket No. E-002/GR-21-630, July 17, 2023, hereinafter ("Rate case Order," at page 59.

[8] *Direct Testimony and Attachments of Ben Havumaki*, Docket No. E-002/GR-21-630, October 3, 2022, at page 15.

i. Improvements to IDP Distribution Budgeting

To help enhance the relevance of the IDP for investment and cost recovery decision-making, the Department in its initial comments put forward several recommendations related to the distribution budget information provided in the IDP. The Department recommended that the Commission direct Xcel to:

1. Provide increased detail about distribution grid projects in addition to the more aggregated budgets provided in the IDP;
2. Quantify the benefits associated with investments in capacity expansion (metrics) and other distribution program budgets;
3. Eliminate its use of IDP-specific budget categories in favor of Xcel's rate case budget categories.

In its reply comments, the Company responds to several of the recommendations of the Department on distribution budgeting. Unfortunately, the Company's reply comments largely did not address the concerns raised by the Department regarding the challenges of evaluating the IDP budget and the IDP's overall satisfaction of the Commission's Planning Objectives.

The Department's recommendations regarding the Company's forecasted distribution budget were primarily driven by the aim of providing greater transparency to stakeholders and the Commission. The investments outlined in the IDP implicate other dockets, including cost recovery proceedings, so additional clarity in the IDP regarding the rationale, costs, and value derived from these investments should ultimately help the IDP to inform these other proceedings. The Department maintains these recommendations as key to enhancing the usefulness of the IDP to inform other proceedings, including cost recovery proceedings.

In Section C.iii, the Department provides additional clarification about the second recommendation above. Through this recommendation, the Department is seeking greater quantification of the expected system impacts from all distribution grid spending.

ii. Cost-Benefit Analysis for Grid Modernization

In its initial comments in this proceeding, the Department noted the absence of detailed information on benefits and costs in the Company's discussion of various grid modernization initiatives in its required 5-year Action Plan.[9] The Department concluded that Xcel had not met its obligation to provide detailed information about near-term grid modernization investments through the 5-Year Action Plan, as required by the IDP filing requirements. The Department noted that while "Xcel appears to anticipate moving forward with DI, DERMS, and potentially, a successor ADMS system

[9] *Initial comments,* Minnesota Department of Commerce, Docket No. E002/M-23-452, March 1, 2024, hereinafter "Department initial comments" at page 35.

within the five-year window of the Action Plan, the Company has not provided a sufficiently detailed evaluation of these investments, and it has neglected to provide cost-benefit analyses."[10]

The IDP filing requirements are clear in establishing the obligation to provide this detailed information on the costs and benefits of grid modernization investments in the 5-Year Action Plan. As discussed in the initial comments, for each grid modernization project in the 5-Year Action Plan, the IDP filing requirements specifically direct Xcel to provide for "a cost-benefit analysis based on the best information that [Xcel] has at the time." The requirements clarify that this CBA should "include a discussion of non-quantifiable benefits," and that Xcel "should provide all information used to support its analysis."[11]

In its reply comments, the Company offers its own interpretation of the IDP filing requirements. The Company indicates that its approach is to only provide cost-benefit analyses when a grid modernization project "has been fully developed" and cost recovery has been requested.[12] In support of this approach, Xcel explains that "[t]he scope and details of a project must be developed to a certain level, based on the planning stage and the nature of the investment, before it makes sense to conduct a CBA. Therefore, the Company is in the best position to determine whether a CBA would provide meaningful information for an investment."[13]

In the Department's view, the Company's position on CBA for grid modernization evinces a fundamental misreading of the IDP filing requirements, *irrespective of whether the Company has provided CBAs for past Action Plan grid modernization investments or not.* As the Company notes in the opening pages of its reply comments, the Commission's IDP planning objectives clearly state that the purpose of the IDP is to provide and understanding of the costs and benefits of specific investments, and "a comprehensive analysis of ratepayer cost and value."[14] This vision for the IDP is best met through maximizing transparency, with Xcel sharing the "best information" that it has available concerning the costs and benefits of contemplated grid modernization investments. The IDP filing requirements clearly do not intend for Xcel to make judgement calls about whether to share cost and benefit information about investments contemplated for deployment in the next five years based on its own assessment of whether a CBA "would provide meaningful information."

In its reply comments, Xcel expresses concern about the analytical limitations of cost-benefit analysis:

> Although we agree that CBAs may provide helpful evaluation of a planned investment, their fundamental implication is that a project is only valuable if it saves more money than it costs, and for that reason, a CBA is not always the best or only tool to assess investments. Reliance on CBAs for grid modernization projects that are in the early stages of potential

[10] Department initial comments at page 35.
[11] 2023 Notice of Comment at page 8 (Filing Requirement D.2.k).
[12] Xcel reply comments at page 15.
[13] Xcel reply comments at page 15.
[14] Xcel reply comments at pages 1-2.

> investment could encourage overlooking other valid considerations, such as customer preferences, customer satisfaction, and customer convenience/inconvenience.[15]

This portrayal of cost-benefit analysis is needlessly myopic and out of step with the filing requirements, which specifically note that qualitative impacts should be included in CBA. Moreover, the Department notes that it has consistently advocated for a flexible and nuanced approach to CBA. It is simply not the case that including a CBA in project evaluation necessarily means that monetized benefits must exceed costs – as was evinced by the Commission's granting of certification to the Resilient Minneapolis Project (RMP) in conjunction with the review of the 2021 IDP, in spite of the RMP's lack of positive net benefits.[16]

Within the decision-making framework provided by a CBA, provided that all pertinent impacts for the given project have been accounted for quantitatively *or qualitatively*, the key question is whether the benefits justify the costs. In the Department's view, CBA provides an indispensable decision-making framework that facilitates comprehensive accounting of benefits and costs, comparison against alternatives, and future performance tracking and appropriate utility accountability for these investments.

iii. Metrics

In its initial comments, the Department addressed metrics in relation to a few topic areas. First, on the topic of Xcel's distribution budget and related issues, the Department invited feedback from Xcel and other parties on incorporating metrics to evaluate the cost-effectiveness of capacity projects.[17] Second, the Department noted that Xcel had not complied with its obligation to report on FLISR circuit reliability performance.[18] Third, the Department recommended that Xcel develop a suite of metrics to track resiliency.[19] In this section, the Department clarifies, reaffirms, and expands on these recommendations.

(a) Measuring the Impact of Distribution Grid Investments

Responding to the Department's discussion of metrics to assess the cost effectiveness of capacity investments, the Company replies that additional metrics are not required since "[c]apacity projects must be done to maintain the reliability of our system, and the project risk score is the measure we should prioritize."[20] While the Department does not dispute the need for many of the Company's distribution capital projects, the Department stresses that it is still important to understand, to the

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[15] Xcel reply comments at pages 15-16.
[16] *Order Accepting 2021 Integrated Distribution System Plan and Certifying Resilient Minneapolis Project*, Docket No. E-002/M-21-694, July 26, 2022, at pages 9-10.
[17] Department initial comments at page 20.
[18] Department initial comments at page 37.
[19] Department initial comments at pages 47-48.
[20] Xcel reply comments at page 39.

extent possible, the benefits to the system and other pertinent impacts that are expected from the proposed spending. This imperative to report on benefits and other impacts applies not only to capacity projects, but to other distribution grid investments. For a given system need, there may be reasonable alternative approaches; the Department is seeking additional quantification of expected impacts at the most granular level that is practicable, in addition to the increased granularity at the project level discussed in initial comments, in order to better understand and evaluate Xcel's spending plans. To this end, and to the extent relevant and measurable, the Company should be attempting to quantify the following impacts for its investments, irrespective of whether investments are required or discretionary:

- Capacity – marginal expected increase in MW capacity (at the level of system/substation/feeder)
- Reliability – marginal expected increase in reliability, as per SAIDI/SAIFI or other metrics
- Ratepayer impacts – marginal increase/decrease in rates and average bills
- Equity impacts – impacts on reliability, rates/bills, or other metrics by income group, race, environmental justice community, and potentially other dimensions.

In light of the above discussion and clarification of its initial recommendations, the Department provides the following new recommendation:

The Department recommends that the Commission direct Xcel to provide a proposal for measuring the capacity, reliability, ratepayer, and equity impacts of its distribution grid investments in its next IDP. This proposal should specifically address the level of granularity at which Xcel will evaluate these impacts for each budget category, indicating for each category whether Xcel plans to measure these impacts at the level of the budget category, program, project, or at some other level of resolution, or not at all, and specifically accounting for the impact of any expected changes to IDP budget categories.

(b) Specific Reporting Needs for Elective Distribution Grid Investments

The Department stresses that the Company should provide even more detail about the expected benefits of elective distribution grid investments in its IDP. Through its initial comments, the Department focused mainly on grid modernization investments as one type of elective investment. As the Department explained in those comments, the need for CBA and general enhanced transparency for grid modernization arises in part from the optionality of these investments. Since many grid modernization investments are not strictly necessary in the fashion that traditional asset replacements or other risk-driven investments may be, the onus falls to the Company to demonstrate that grid modernization investments are in the interest of its customers.

While the Department did not provide a specific response in its initial comments to Notice Topic 19, concerning the requirement for CBA for discretionary distribution system investments, choosing instead to focus on the Company's obligation to provide CBAs for its planned grid modernization projects, the Department clarifies its view that the Company should generally be providing detailed cost and benefit information about its elective distribution investments irrespective of whether they are "modernization" projects or not. In the Department's view, the Company should be providing as much information as possible about discretionary investments.

To help advance the conversation about reporting on impacts for elective distribution grid investments, the Department offers a non-exhaustive set of metrics in Table 1 on the following page that covers many of the pertinent impacts of these investments. The Department suggests that the Company estimate impacts for as many of these metrics as possible for each of its elective investments. To this end, the Department provides the following recommendation:

The Department recommends that the Commission direct Xcel to provide a proposal for reporting on the expected benefits and costs of elective distribution grid investments in its next IDP. This proposal should specifically address the following:

- ***i. What is the definition of an elective distribution grid investment?***
- ***ii. What cost threshold, if any, should apply to reporting on the expected benefits and costs of elective distribution grid investments in the IDP?***
- ***iii. For which metrics will Xcel report expected results for its elective distribution grid investments?***
- ***iv. For which metrics does Xcel propose that it be required to report results on an ongoing basis for its elective distribution grid investments?***

The Department again emphasizes that for grid modernization investments, complete cost-benefit analyses are required. However, the metrics that are provided in Table 1 cover many of the pertinent benefits that should be accounted for in a CBA of a grid modernization investment.

Table 1. Recommended Metrics for Elective Distribution Grid Investments

Performance Category	Metric
Reliability and Resiliency	• SAIDI (at system and subsystem levels – with and without major event days) • SAIFI (at system and subsystem levels – with and without major event days)
Safety	• OSHA safety metrics (e.g., recordable incident rate, DART rate)
DER	• Incremental DER hosting capacity • Incremental capacity of DER providing grid services • MW savings from demand response • Reduction in curtailment of DER
GHG Reduction	• Incremental integration of renewables • Increased timeliness of interconnection of renewables • Incremental emissions reductions from renewables • Incremental emissions reductions from peak reduction/load shifting • Incremental emissions reduction from electrification
Grid Investment and Operational Efficiency	• Avoided generation capacity costs • Avoided energy costs • Avoided O&M costs • Reduction in line losses (T&D) • Reduced ancillary services costs • Reduced environmental compliance costs • Cost savings from NWAs
Customer Engagement	• Incremental customer participation in utility programs and rates • Increased customer satisfaction
• Other	• Number of new jobs created • Improvements in air quality and health • Changes in rates and bills

(c) Resiliency Metrics

In replying to the Department's recommendations concerning resiliency metrics, Xcel states that it already reports SAIDI, SAIFI, CEMI, CELI, CAIDI, and MAIFI with normalized and non-normalized values in its Annual Service Quality docket. Xcel rejects the idea of discussing reliability in the IDP as needlessly duplicative of its existing reporting.[21]

[21] Xcel reply comments at page 2.

The Department emphasizes that tracking reliability is not the same as tracking resiliency. In Xcel's own words, resiliency is "the system's ability to withstand, endure, and recover from significant events that can create widespread outages and result in long-duration restoration times."[22] Even though Xcel reports non-normalized values (inclusive of Major Event Days) for SAIDI, SAIFI, etc., this data fails to isolate system performance during Major Event Days specifically. Without separately tracking performance during Major Event Days, Xcel cannot measure the system's ability to 'withstand, endure, and recover' from outage events. The Department also restates its position that Xcel should seek to develop other, complementary metrics for resiliency.

Further, the Department reasserts the need for discussion on reliability and resiliency metrics in the IDP. While Xcel argues that discussion of metrics should be limited to other dockets to avoid repetition, the Department maintains its recommendation that metric performance be reported in the IDP in addition to the aforementioned filings in order to guide decisions around future distribution planning and investment.

Finally, the Department notes that it has removed its recommendation relating to metrics for microgrid resiliency as it anticipates that this issue will be addressed in the ongoing proceeding evaluating Xcel's renewable Resilient Minneapolis Project (RMP) proposal.

D. RESPONSE TO THE COMPANY'S REPLY ON NON-WIRES ALTERNATIVES

In initial comments, the Department recommended that Xcel be required to consider NWA for all non-asset-based distribution system projects and pointed to examples of NWA uses in other states for reliability, load relief, distribution needs, and more.[23] Xcel requests the Commission to reject this recommendation and explains why it believes capacity projects are the best fit for NWA projects.[24] While the Department agrees with Xcel that capacity projects are well-suited for NWAs, Xcel does not provide any explanation for its rejection of non-asset-based distribution system projects, nor does it respond to the Department's examples of alternative NWA projects from other states.

In initial comments, the Department recommended that Xcel modify its initial NWA analysis to account for the potential of incremental energy efficiency and demand response. Xcel claims that it does not have adequate data to account for EE and DR in their analysis, and acquiring the necessary data would be too difficult of an undertaking.[25] The Department finds Xcel's opposition to this recommendation based on its difficulty to be not compelling. Xcel fails to acknowledge the examples the Department provides of other utilities who have done this analysis and fails to explain why it could not adopt a similar approach. The Department further reiterates the importance of considering energy efficiency and demand response in determining NWA cost effectiveness.

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[22] Xcel Energy. *Response to Information Request No. 26, Topic: Resiliency*, February 5, 2024.
[23] Department initial comments at page 42.
[24] Xcel reply comments at page 35.
[25] Xcel reply comments at page 33.

In its initial comments, the Department requested that Xcel provide analysis and discussion on how NWAs compare to planned projects with total costs of greater than two million dollars. Xcel claims that it provided an explanation for why NWAs were deemed infeasible for some large projects, and that it would be 'a waste of resources' to provide further analysis.[26] The Department disagrees that Xcel explained "why and how" it determined projects to be not feasible for NWAs.[27] As noted in the Department's initial comments, the Department determined that the only information provided on infeasible projects was the total cost of the traditional project in Table F-3.[28] Given the fact Xcel has clearly completed some level of analysis for projects that were determined to be not feasible, it is reasonable to request that the Company include such information in its IDP.

E. RESPONSE TO THE COMPANY'S REPLY ON SPECIFIC GRID MODERNIZATION TOPICS

i. Distributed Intelligence

The Company cites three arguments for rejecting the Department's recommendations regarding DI. The Company states that a CBA for DI has already been provided, and further, that a CBA only needs to be provided when requesting cost recovery; the Company indicates that there is too much uncertainty in values of costs and benefits to conduct a meaningful BCA; and, finally, the Company states that providing estimated cost information before contracting with third parties could harm the Company.[29]

Earlier in these comments, the Department addressed the need for CBAs for grid modernization investments. However, the imperative for a CBA for Xcel's Distributed Intelligence (DI) proposal is unique in that the Commission ordered for the Distributed Intelligence program be refiled in the this IDP.

In the final Order in Xcel's last rate case, the Commission ordered that the Company be given an opportunity to "support its [DI] proposal with a more fully developed record that addresses the concerns discussed herein."[30] Those concerns regard the "assumptions and methodology underlying Xcel's cost-benefit analysis" that the Company had not "satisfactorily resolved."[31] Thus, even if cost-benefit analyses are reserved for instances of cost recovery, which is not the Department's position, the Commission specifically ordered that in the IDP, the Company develop the record and respond to concerns regarding the previous CBA for DI conducted by the Company. Xcel failed to comply with this requirement in its initial filing. Thus, the Department reiterates that the previously provided CBA has known issues that have not been addressed and should have been refiled in the IDP.

Concerning Xcel's objections to providing a CBA for DI, the Department does acknowledge concerns about uncertainty. In the Department's view, however, the IDP filing requirements acknowledge these concerns, too, in requiring only that Xcel provided the "best information" available. Further, Xcel can

[26] Xcel reply comments at page 34.
[27] Xcel reply comments at page 34.
[28] Department reply comments at page 41.
[29] Xcel reply comments at page 22.
[30] Rate case Order at page 59.
[31] Rate case Order at page 59.

include sensitivities in its CBA to account for potential uncertainty, as it did in the CBA that it provided in its last rate case.

The Department also acknowledges the Company's concern that providing cost information could impact solicitation. But the Department submits that this may be a theoretical harm more than it is a material, demonstrable one. In cases where the Company expects certain information could harm the Company if provided publicly, the Department notes that those components could be provided confidentially.

The Department maintains its recommendation that the Commission order Xcel to refile its cost-benefit analysis for its Distributed Intelligence proposal.

ii. DERMS

Through these reply comments, the Department adopts a portion of the recommendations of the Grid Equity Commenters on DERMS. The Department recommends that the Commission direct Xcel to provide a roadmap for DERMS deployment that addresses the questions raised by GEC in initial comments. The Department finds that the request for additional information on DERMS in GEC's recommendation is consistent with and complementary to the Department's recommendation that Xcel provide a CBA for DERMS.[32] The Department does not take a position on GEC's recommendation for additional outreach to inform stakeholders on DERMS.[33] However, the Department is supportive of an ongoing stakeholder participatory process to assess alternative options for interconnection DERs aside from DERMS, including approaches using flexible interconnection and dynamic hosting capacity. The Department does not take a position on whether such a stakeholder process would be most appropriately facilitated within the Distributed Generation Working Group (DGWG) or within some other venue.

iii. IVVO

Through these reply comments, the Department adopts the recommendation of First Energy concerning IVVO.[34] The Department recommends that the Commission direct Xcel Energy to identify feeders for which IVVO is cost-effective, using the new Minnesota Test and updated assumptions informed by the experience Colorado affiliate (Public Service Company) with IVVO and the Company's forecasts for EV adoption, building electrification, and distributed generation adoption.

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[32] *Initial comments,* Grid Equity Commenters (GEC), Docket No. E002/M-23-452, March 1, 2024, hereinafter "GEC initial comments" at pages 28-30.
[33] GEC initial comments at page 28.
[34] *Initial comments,* Fresh Energy, Docket No. E002/M-23-452, March 1, 2024, hereinafter "Fresh Energy initial comments" at pages 6-7.

F. RESPONSE TO THE COMPANY'S REPLY ON LOAD FORECASTING

On the subject of forecasting, the Department's comments noted the lack of base forecast data, explanation of changes to the input data, variables that were considered, the forecast outputs, and statistical measures of the forecast's accuracy, explaining that without this information it was not possible to provide technical comments on Xcel's forecasting results and methodology. To address this issue the Department recommended that Xcel provide in the next IDP, for one LoadSEER forecast, information regarding the forecast data, method used, and so forth.

In response, Xcel's reply pushed back on the Department's recommendations, stating that that much of the requested information, including the formulae for the forecast model, is the intellectual property of LoadSEER. Further, the Company suggested that much of the requested information had already been provided in the 2023 IDP. Specifically, the Company noted that assumptions were detailed Appendix A1. The Company stated that providing additional detail would be either unnecessarily burdensome to the Company, or impossible.

The Department notes that Xcel has the burden of proof in this and other proceedings regarding actions that might be taken based upon the outputs of LoadSEER. Xcel's response states that the Company cannot provide some of the requested information; that information will be necessary for Xcel to demonstrate that the Company's actions based on LoadSEER forecasts are reasonable.

In summary, the Department offers the following new recommendation:

The Department recommends that the Commission order Xcel to adopt a forecast method that is reviewable by the Department and other parties for the Company's next IDP.

G. THE NEED FOR AN IMPROVED STAKEHOLDER PROCESS

The Department recognizes the need for greater stakeholder engagement on a range of topics under the umbrella of grid modernization. ***The Department recommends that the Commission either: (1) expand the scope of the Distributed Generated Working Group (DGWG) or (2) create a new working group to address grid modernization issues.*** The Department and stakeholders see value in having working group meetings managed by PUC staff or other neutral facilitator, separate from working groups convened by utility companies. A dedicated working group reduces burdens on stakeholders and staff by having regular meetings and transparent recommendations in a single venue, rather than addressing similar issues across multiple dockets. Such a stakeholder or working group would allow for consistency and coherence as the rate-regulated utilities evaluate and adopt grid modernization technologies.

Grid modernization and distributed generation technologies are advancing rapidly and their adoption are not uniform across utilities and service territories. A working group dedicated to these discussions could also provide a forum for consensus among parties and opportunities to address concerns while IDPs and other utility plans are being developed.

IV. RECOMMENDATIONS

In this section, the Department presents its complete set of recommendations to the Commission on Xcel's 2023 IDP. Most of the recommendations provided below were included in the Department's initial comments. Any new recommendations are identified as such. For each recommendation in which a specific modification is required of Xcel, a separate recommendation concerning the process for modification is also provided. Three different modification processes are included: (i) modification in the next IDP; (ii) modification through a supplemental filing, to be provided within 90 days of the Commission's final Order in this proceeding; (iii) modification through the Company's annual IDP compliance filing.

Topic Area	Recommendation	Modification Process
Overall	1. The Department recommends that the Commission approve Xcel's IDP, but that the Commission require specific modifications.	n/a
	2. The Department recommends that the Commission aim to clarify the role of the IDP. **[New recommendation]**	n/a
Xcel's Distribution Budget and Related Issues	3. The Department recommends Xcel be required to separate the total "program" and "project" budgets into discrete programs and projects for all Budget Categories in Attachment H, Capital Project List by IDP Category, to the fullest extent possible.	In the next IDP
	4. The Department generally agrees that Xcel's proposed modifications to the IDP Filing Requirements to remove the IDP-specific categories for financial information are beneficial and provide consistency of budget categories across Xcel dockets. This proposal would also align with the Commission's directive in its July 17, 2023, Order. The Department supports the improved alignment of the IDP process with other dockets, including cost recovery proceedings. Furthermore, to facilitate a comparison of IDP filing requirements and budgets across all IDP filings, the Commission should implement these (or similar) revisions in upcoming procedures with other utilities.	In the next IDP

Topic Area	Recommendation	Modification Process
Budgets and Cost Allocation for Distribution System Upgrades to Accommodate Distributed Energy Resources (DER)	5. The Department recommends Xcel provide options, if any, to help distribute costs to interconnect a small residential facility on a saturated feeder including whether a flat interconnection fee, similar to the small solar array fee, has been considered for larger facilities.	Through the annual compliance filing
	6. The Department recommends the Commission adopt a new filing requirement to specifically address how beneficial electrification is anticipated to affect the distribution grid and cost allocation issues thereof.	n/a
	7. The Department recommends that the Commission direct Xcel to provide a proposal for measuring the capacity, reliability, ratepayer, and equity impacts of its distribution grid investments in its next IDP. This proposal should specifically address the level of granularity at which Xcel will evaluate these impacts for each budget category, indicating for each category whether Xcel plans to measure these impacts at the level of the budget category, program, project, or at some other level of resolution, or not at all, and specifically accounting for the impact of any expected changes to IDP budget categories. **[New recommendation]**	Through the annual compliance filing
	8. The Department recommends that the Commission direct Xcel to provide a proposal for reporting on the expected benefits and costs of elective distribution grid investments in its next IDP. This proposal should specifically address the following: a. What is the definition of an elective distribution grid investment? b. What cost threshold, if any, should apply to reporting on the expected benefits and costs of elective distribution grid investments in the IDP? c. For which metrics will Xcel report expected results for its elective distribution grid investments? d. For which metrics does Xcel propose that it be required to report results on an ongoing basis for its	Through the annual compliance filing

Topic Area	Recommendation	Modification Process
	elective distribution grid investments? **[New recommendation]**	
Grid Modernization: Required Information and Cost-Benefit Analysis	9. The Department recommends the Commission direct Xcel to refile Appendix C of its IDP to include all required information on grid modernization, including cost-benefit analyses of near-term projects. Xcel should further be required to make any other necessary modifications to its IDP to reflect the necessary changes to Appendix C.	Through a supplemental filing
	10. The Department recommends the Commission clarify its requirement that Xcel comply with additional grid modernization filing requirements established by the Commission in Xcel's last rate case by providing a roadmap of planned and contemplated future grid modernization investments and a complete accounting of all historical grid modernization costs and all anticipated future grid modernization costs with its IDP.	Through a supplemental filing
	11. The Department recommends that the Commission articulate the requirement that Xcel include a report of reliability performance for circuits equipped with FLISR, consistent with the Department's recommendations in the last general rate case.	n/a
	12. The Department recommends that Xcel refile its proposal for DI with a complete cost-benefit analysis demonstrating that DI is cost-effective. If the Xcel cannot demonstrate cost-effectiveness on narrow quantitative grounds, then it must provide justification for why it believes that the costs of DI should be allowed for recovery.	Through a supplemental filing
	13. The Department recommends that the Commission direct Xcel to provide a roadmap for DERMS deployment that addresses the questions raised by GEC in initial comments. **[New recommendation]**	Through the annual compliance filing

Topic Area	Recommendation	Modification Process
	14. The Department recommends that the Commission direct Xcel Energy to identify feeders for which IVVO is cost-effective, using the new Minnesota Test and updated assumptions informed by the experience Colorado affiliate (Public Service Company) with IVVO and the Company's forecasts for EV adoption, building electrification, and distributed generation adoption. **[New recommendation]**	Through the annual compliance filing
	15. The Department recommends that the Commission either: (1) expand the scope of the Distributed Generated Working Group (DGWG) or (2) create a new working group to address grid modernization issues. **[New recommendation]**	n/a
Non-Wires Alternatives Analysis	16. The Department recommends that Xcel provide consideration of NWAs for all non-asset-based distribution system projects.	In the next IDP
	17. The Department requests that Xcel reexamine the deferral period and payment structure as it develops NWA solicitations in future IDPs.	In the next IDP
	18. The Department recommends that Xcel modify its initial NWA analysis to account for the potential of incremental energy efficiency and demand response.	In the next IDP
	19. The Department recommends Xcel account for the potential long lead time NWA providers may face in developing the NWA solutions and not delay solicitation for bids from the marketplace.	In the next IDP
Resiliency Performance Tracking	20. The Department recommends that the Commission direct Xcel develop a suite of metrics to track resiliency, including SAIDI and SAIFI including MEDs, and other metrics to the extent warranted.	Through the annual compliance filing
Initial LoadSEER Forecasting	21. The Department recommends that, Xcel provide in the next IDP for one of the LoadSEER forecasts:	In the next IDP

Topic Area	Recommendation	Modification Process
Results and Methodology	• a complete list of the data sets used in making the LoadSEER forecast, including: ▪ a brief description of each data set and ▪ an explanation of how each was obtained, (e.g., monthly observations, billing data, consumer survey, etc.) or a citation to the source (e.g., population projection from the state demographer); • a clear identification of any adjustments made to raw data to adapt them for use in the LoadSEER forecast, including: ▪ the nature of the adjustment, ▪ the reason for the adjustment, and ▪ the magnitude of the adjustment; • a discussion of each essential assumption made in preparing the LoadSEER forecast, including: ▪ the need for the assumption, ▪ the nature of the assumption, and ▪ the sensitivity of forecast results to variations in the essential assumptions; • an equation showing the LoadSEER forecast model: ▪ for example, Peak = a + b1 * Economic Variable + b2 * CDD/day … • information documenting the LoadSEER forecast's confidence levels, statistical accuracy of the individual variables and overall model, and so forth; and • the outputs from the LoadSEER forecast.	
	22. In addition, the Department recommends that Xcel provide a comparison of the forecast provided in the IDP to actuals.	In the next IDP
	23. The Department recommends that the Commission order Xcel to adopt a forecast method that is reviewable by the Department and other parties for the Company's next IDP. **[New recommendation]**	In the next IDP

Topic Area	Recommendation	Modification Process
Planned Net Load (PNL) Methodology and 15% Dependability Factor	24. The Department recommends Xcel not implement the 15 percent DF_{PV} in the next planning cycle for N-0 risk analysis in the next IDP.	In the next IDP

CERTIFICATE OF SERVICE

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

Minnesota Department of Commerce
Comments

Docket No. E002/M-23-452

Dated this **12th** day of **April 2024**

/s/Sharon Ferguson

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Anjali	Bains	bains@fresh-energy.org	Fresh Energy	408 Saint Peter Ste 220 Saint Paul, MN 55102	Electronic Service	No	OFF_SL_23-452_Official
Jared	Ballew	jared.ballew@ev.energy	EV.ENERGY CORP	726 18th St. Des Moines, IA 50314	Electronic Service	No	OFF_SL_23-452_Official
Mathias	Bell	mathias@weavegrid.com	WeaveGrid	375 Alabama Street, Suite 325 San Francisco, CA 94110	Electronic Service	No	OFF_SL_23-452_Official
Joshua	Cohen	josh.cohen@swtchenergy.com	SWTCH Energy, Inc.	Greentown Labs 444 Somerville Avenue Somerville, MA 02143	Electronic Service	No	OFF_SL_23-452_Official
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_23-452_Official
Timothy	DenHerder Thomas	timothy@cooperativeenergyfutures.com	Cooperative Energy Futures	3500 Bloomington Ave. S Minneapolis, MN 55407	Electronic Service	No	OFF_SL_23-452_Official
William	Ehrlich	wehrlich@tesla.com	Tesla, Inc.	3500 Deer Creek Rd Palo Alto, CA 94304	Electronic Service	No	OFF_SL_23-452_Official
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_23-452_Official
Tim	Gross	tgross@fuelingmn.com	Fueling Minnesota	3244 Rice Street St. Paul, MN 55126	Electronic Service	No	OFF_SL_23-452_Official
Joe	Halso	joe.halso@sierraclub.org	Sierra Club	1536 Wynkoop St Ste 200 Denver, CO 80202	Electronic Service	No	OFF_SL_23-452_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Kim	Havey	kim.havey@minneapolismn.gov	City of Minneapolis	350 South 5th Street, Suite 315M Minneapolis, MN 55415	Electronic Service	No	OFF_SL_23-452_Official
Amber	Hedlund	amber.r.hedlund@xcelenergy.com	Northern States Power Company dba Xcel Energy-Elec	414 Nicollet Mall, 401-7 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_23-452_Official
Samantha	Houston	shouston@ucsusa.org	Union of Concerned Scientists	1825 K St. NW Ste 800 Washington, DC 20006	Electronic Service	No	OFF_SL_23-452_Official
Megan	Hoye	megan.hoye@zefenergy.com	ZEF Energy	323 North Washington Avenue Minneapolis, MN 55401	Electronic Service	No	OFF_SL_23-452_Official
Philip	Jones	phil@evtransportationalliance.org		1402 Third Ave Ste 1315 Seattle, WA 98101	Electronic Service	No	OFF_SL_23-452_Official
William D	Kenworthy	will@votesolar.org	Vote Solar	332 S Michigan Ave FL 9 Chicago, IL 60604	Electronic Service	No	OFF_SL_23-452_Official
Erica	McConnell	emcconnell@elpc.org	Environmental Law & Policy Center	35 E. Wacker Drive, Suite 1600 Chicago, IL 60601	Electronic Service	No	OFF_SL_23-452_Official
Susan	Mudd	smudd@elpc.org	Environmental Law and Policy Center	35 E. Wacker Drive, Suite 1600 Chicago, IL 60601	Electronic Service	No	OFF_SL_23-452_Official
Melissa	Partin	mpartin@mncenter.org	Minnesota Center for Environmental Advocacy	1943 Princeton Ave St Paul, MN 55105	Electronic Service	No	OFF_SL_23-452_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_23-452_Official
Isabel	Ricker	ricker@fresh-energy.org	Fresh Energy	408 Saint Peter Street Suite 220 Saint Paul, MN 55102	Electronic Service	No	OFF_SL_23-452_Official
Paul	Schroeder	pauls@hourcar.org	HOURCAR	755 Prior Ave. N Suite 301D Saint Paul, MN 55104	Electronic Service	No	OFF_SL_23-452_Official
Christine	Schwartz	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_23-452_Official
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_23-452_Official
Lindsey	Stegall	lindsey.stegall@evgo.com	EVgo Services, LLC	11835 W Olympic Blvd Ste 900E Los Angeles, CA 90064	Electronic Service	No	OFF_SL_23-452_Official
Dean	Taylor	dtaylor@pluginamerica.org	Plug In America	6380 Wilshire Blvd, Suite 1000 Los Angeles, CA 90048	Electronic Service	No	OFF_SL_23-452_Official
Taige	Tople	Taige.D.Tople@xcelenergy.com	Northern States Power Company dba Xcel Energy-Elec	414 Nicollet Mall 401 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_23-452_Official
Curt	Volkmann	curt@newenergy-advisors.com	Fresh Energy	408 St Peter St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_23-452_Official
Rachel	Wiedewitsch	wiedewitsch@fresh-energy.org	Fresh Energy	408 St Peter St #350 St. Paul, MN 55102	Electronic Service	No	OFF_SL_23-452_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Laurie	Williams	laurie.williams@sierraclub.org	Sierra Club	Environmental Law Program 1536 Wynkoop St Ste 200 Denver, CO 80202	Electronic Service	No	OFF_SL_23-452_Official
Joshua	Williams	joshua@highlandfleets.com	Highland Electric Fleets	200 Cummings Center Suite 273-D Beverly, MA 01915	Electronic Service	No	OFF_SL_23-452_Official
Anthony	Willingham	Anthony.Willingham@electrifyamerica.com	Electrify America	1950 Opportunity Way Suite 1500 Reston, VA 20190	Electronic Service	No	OFF_SL_23-452_Official