

May 24, 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**
Dakota Electric Association's 2023 Integrated Distribution Plan
Docket No. E111/M-23-420

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 Distribution System Planning for Dakota Electric Association

Dakota Electric Association's Integrated Distribution Plan (IDP) was filed on November 1, 2023, by Adam Heinen, Vice President of Regulatory Services, and Craig Turner, Sr. Principal & Regulatory Engineer.

The Department recommends that the **Commission approve Dakota Electric Association's IDP**. The Department is available to answer any questions the Minnesota Public Utilities Commission may have.

Sincerely,

/s/ Dr. Sydnie Lieb
Assistant Commissioner of Regulatory Affairs

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Attachment



Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. E111/M-23-420

I. INTRODUCTION

The Department appreciates the opportunity to further comment on Dakota Electric Association's (DEA or the Cooperative) Integrated Distribution Plan (IDP) and the notice topics put forth by the Commission. The Department provides its comments in response to select topics addressed by Dakota Electric in its reply comments. As warranted, the Department also addresses certain new topics not covered in the Department's initial comments in the interest of aligning the Department's recommendations across the various IDP proceedings currently ongoing.

II. PROCEDURAL HISTORY

On September 9, 2022, the Minnesota Public Utilities Commission (Commission) issued its Order in Docket No. E111/M-21-728 (September 9, 2022, Order).¹ The September 9, 2022, Order accepted DEA's 2021 IDP² and required DEA to file its 2023 IDP no later than November 1, 2023.

On November 1, 2023, Dakota Electric Association filed its IDP in Docket No. E111/M-23-420.³ DEA is not required to file a Transportation Electrification Plan (TEP), as required for the investor-owned utility, and therefore a TEP was not included in this filing.

On November 15, 2023, the Commission issued a Notice of Comment Period.⁴ The Commission then issued a Notice of Extended Comment Period on January 19, 2024, and subsequently, it issued an Amended Notice of Extended Comment Period on January 22, 2024.⁵

The Notice of Comment Period included the following topics open for comment:

1. Should the Commission accept or reject Dakota Electric Association's IDP?

¹ Order, In the Matter of Distribution System Planning for Dakota Electric Association, Docket No. E111/M-21-728 (September 9, 2022). (eDocket No. [20229-188947-01](#)). Hereinafter "September 9, 2022 Order."

² 2021 Integrated Distribution Plan Report, In the Matter of Distribution System Planning for Dakota Electric Association, Docket No. E111/M-21-728 (November 1, 2021). (eDocket No. [202111-179361-01](#)). Hereinafter "2021 IDP."

³ 2023 Integrated Distribution Plan Report, In the Matter of Distribution System Planning for Dakota Electric Association, Docket No. E111/M-23-420 (November 1, 2023). (eDocket No. [202311-200124-01](#)). Hereinafter "IDP."

⁴ The comment period was extended on January 19, 2024. Notice of Extended Comment Period – In the Matter of Distribution System Planning for Dakota Electric Association, Docket No. E111/M-23-420 (January 19, 2024). (eDocket No. [20241-202360-01](#)).

⁵ Amended Notice of Extended Comment Period – In the Matter of Distribution System Planning for Dakota Electric Association, Docket No. E111/M-23-420 (January 22, 2024). (eDocket No. [20241-202420-01](#))

2. Did Dakota Electric 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?
3. Feedback, comments, and recommendations on the following areas of Dakota Electric's IDP:
 - a. Non-wires alternatives analysis and potential pilot project
 - b. Planned grid modernization initiatives
 - c. Forecasted distribution budget
 - d. Distributed Energy Resource (DER) scenarios and forecasts, including electric vehicle forecasts
4. Has Dakota Electric 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?
5. What should the Commission consider or address related to enhancing the resilience of the distribution system within Dakota Electric's IDP?
6. Other areas of Dakota Electric's IDP not listed above, along with any other issues or concerns related to this matter.

Initial comments in response to the Notice of Comment Period were submitted by the Minnesota Department of Commerce (Department) on April 19, 2024.⁶ On April 23, 2024, the Commission issued a Second Notice of Extended Reply Comment Period.⁷ Dakota Electric submitted reply comments on May 3, 2024.⁸

III. DEPARTMENT ANALYSIS

The Department begins by acknowledging the work that DEA has put into the preparation of its IDP. The Cooperative has generally provided well-developed and specific responses to each of the Commission's filing requirements. These responses mostly include sufficient detail, which has made the job of the Department and others reviewing the integrated plan far easier. In particular, the Department wishes to commend DEA for providing a budget narrative for its larger budget items, which has helped the Department to understand the driving factors behind DEA's overall budget.

⁶ Initial comments, Minnesota Department of Commerce, In the Matter of Distribution System Planning for Dakota Electric Association, Docket No. E111/M-23-420 (April 19, 2024). (eDocket No. [20244-205723-01](#)). Hereinafter "Department initial comments."

⁷ Notice of Extended Comment Period – In the Matter of Distribution System Planning for Dakota Electric Association, Docket No. E111/M-23-420 (April 23, 2024). (eDocket No. [20244-205835-01](#))

⁸ Reply comments, Dakota Electric Association, In the Matter of Distribution System Planning for Dakota Electric Association, Docket No. E015/M-23-420 (May 3, 2024). (eDocket No. [20245-306371-01](#)). Hereinafter "DEA reply comments."

While DEA's IDP filing is well formed, the Department still identifies certain areas that could be improved. Each of the recommendations provided in these comments by the Department (in bold, italicized text) seek to enhance the quality of the Cooperative's IDP and the underlying planning processes, so that these biennial plans and their review can be maximally valuable to the Cooperative and its members.

In its reply comments, DEA raised concerns about the scope of the Department's review of its IDP. The Cooperative emphasized its unique status among the IDP-filing utilities as "a not-for profit, member-owned distribution cooperative,"⁹ and articulated that it has a "strong incentive to only pursue distribution planning and potential grid modernization projects that provide tangible benefits to our member-owners and, most importantly, do so in a cost-effective manner."¹⁰

The Department wishes to clarify its view of the importance of a thorough, rigorous, and transparent IDP process for the Cooperative. The Department maintains that a participatory, integrated planning process provides value to DEA and its member-owners by helping to ensure that the Cooperative's distribution planning processes and specific investment plans are optimized. The Department understands the interests of the Cooperative and its member-owners to be fully aligned. Nonetheless, the Department notes that the Commission has promulgated substantially similar IDP filing requirements for the Cooperative as for the other subject utilities, and so the Department has aimed to adopt largely consistent positions in its review and replies to DEA's IDP as it did in its review and response to the other utilities' IDPs.

OVERVIEW OF COMMENTS

In these reply comments, the Department focuses on specific issues raised through the Notice of Comment Period and the filed comments in this proceeding. The Department does not devote equal attention to all topics but rather prioritizes discussion of certain matters—namely, the purpose of the IDP and need for enhanced transparency and informational quality, and issues concerning beneficial electrification.

The order of these reply comments is as follows:

- A. *Recommendation concerning acceptance of the IDP*
- B. *Requests for additional information from Dakota Electric Association*
- C. *The Purpose of the IDP*
- D. *Recommendations for enhanced informational requirements*
- E. *Beneficial electrification and related issues*

⁹ DEA reply comments at 4.

¹⁰ *Id.*, at 4.

A. RECOMMENDATION CONCERNING ACCEPTANCE OF THE IDP

After careful review, the Department concludes that the Cooperative has addressed each of the IDP Filing Requirements and relevant requirements from past Commission Orders.

The Department recommends that the Commission accept Dakota Electric Association's 2023 IDP.

B. REQUESTS FOR ADDITIONAL INFORMATION FROM DAKOTA ELECTRIC

In its initial comments, the Department requested that DEA provide additional information to supplement its IDP. DEA's responses to these requests are summarized in Tables 1 and 2. Table 1 outlines DEA responses to requests for information within the current IDP proceeding, and Table 2 outlines DEA responses to information to be supplied after the current IDP proceeding.

Table 1. IDP Requests for Additional Information to be Provided in Reply Comments

Topic	Request for Discussion/Data Relating to:	Reply from DEA
NWA	"...discuss in reply comments whether the Cedar Substation and Feeders Project, Lakeville Substation and Feeders Project, and the Fisher Substation Rebuild Project are suitable for current or future NWA analysis"	DEA finds the Cedar and Lakeville projects to be unsuitable for NWA analysis because of concerns about load size and reliability, as well as constraints around land cost, location, and NWA size requirements. DEA finds the Fisher project unsuitable for an NWA because the project arose due to age-related concerns. DEA indicates that it would consider NWAs for future projects. ¹¹
	"...discuss in reply comments which benefits are studied as part of its NWA process and which main assumptions are used to calculate benefits"	DEA provides its list of benefit assumptions used to assess NWAs. DEA finds that installing an Energy Storage System would not provide additional revenue compared to a traditional system upgrade from an energy sales perspective, hence DEA did not calculate the benefits for a traditional system upgrade. ¹²
	"...include calculated benefits for all Minnesota Test Cases, and to the extent practicable, present the results in reply comments"	DEA states that it did not consider additional benefits (beyond economic benefits) for NWAs because the Minnesota Tests were not requested by the Commission and additional costs of potential NWAs were "such that we did not believe that further review was necessary." DEA indicates that it is not opposed to considering Minnesota Test Cases in its review of NWAs in future IDP reports. ¹³

¹¹ *Id.*, at 4.

¹² *Id.*, at 5.

¹³ *Id.*, at 6.

Topic	Request for Discussion/Data Relating to:	Reply from DEA
Grid Modernization	"...discuss in reply comments the costs and benefits of its AMI and AGI Programs"	DEA provides a discussion of the costs and benefits of the AGI project. DEA notes that the metering costs have come in "under-budget." Since project implementation, DEA has already realized benefits including decreased reconnection time, lower reconnection and service transfer fees, and the ability to implement EV off-peak charging rates. ¹⁴
	"...discuss in reply comments the costs and benefits of its Load Control Receiver Program"	DEA indicates that the LCR Program was assessed as a component of the larger AGI Program. DEA indicates that it considered replacement costs and economic benefits of load control and demand response. DEA states that the was deemed necessary and appropriate given end-of-life concerns for existing load control receivers and expected wholesale power savings. ¹⁵
	"...present in reply comments the purpose of its Miscellaneous Grid Modernization budget allocation and provide additional information, as available, which includes a discussion of the investment plan, a discussion of the cost recovery mechanism, an analysis of alternative investments, a discussion of customer anticipated benefits, a discussion to manage bill impacts, a presentation of the impact to the net present value of system costs, and a cost-benefit analysis, if available. If DEA is not able to provide the requested information, it should indicate when it expects to be able to provide the information."	DEA states that about 10% of the "600 Series Misc Dist" budget was included under the Grid Modernization category to upgrade distribution equipment to modern technology standards but that "[t]here are no specific grid modernization projects associated with this figure." DEA points to pages 123-124 of its IDP, where it discusses the difficulties of allocating costs to IDP-specific budget categories. ¹⁶

¹⁴ *Id.*, at 6-8.¹⁵ *Id.*, at 8-9.¹⁶ *Id.*, at 9-10.

Topic	Request for Discussion/Data Relating to:	Reply from DEA
	“...present in reply comments a discussion of its grid modernization projects submitted in grant applications, which includes a discussion of the investment plan, a discussion of the cost recovery mechanism, an analysis of alternative investments, a discussion of customer anticipated benefits, a discussion to manage bill impacts, a presentation of the impact to the net present value of system costs, and a cost- benefit analysis, if available.”	DEA points to IR No. 11 where it discusses the three projects for which it is seeking grant funding, including cost estimates and timelines for two of the projects. DEA indicates it will determine project cost recovery after it receives notice of grant funding. ¹⁷
IRA Incentives	“...discuss in reply comments how it anticipates IRA incentives to impact electric vehicle adoption.”	DEA states that it includes various EV adoption forecasts in its IDP because of uncertainty around IRA impacts, interest rates, and vehicle pricing. DEA references its comments in Docket No. E,G999/CI-22-264 where it discusses the positive impact on EV adoption anticipated from the IRA EV tax credit for new, used, and commercial vehicles; DEA also notes how it will benefit from the direct pay provision in the IRA enabling not-for-profits to take advantage of tax incentives for EVs. ¹⁸
	“...include in reply comments a description of how its distribution system planning will evolve with the incorporation of additional impacts from the IRA.”	DEA indicates that it has not experienced significant impacts from things like heat pumps and panel upgrades, despite their increased prevalence on its grid. DEA states that it will monitor developments and perform upgrades when required. ¹⁹

¹⁷ *Id.*, at 10-11.¹⁸ *Id.*, at 11-12.¹⁹ *Id.*, at 12-13.

Topic	Request for Discussion/Data Relating to:	Reply from DEA
Load Management	"...discuss in reply comments the extent to which the Company [Cooperative] has conducted surveying and/or targeted outreach to increase participation in its Load Management Program."	DEA states that 45% of its members participate in at least one load management program, noting the high participation rate within the industry. DEA states that it has not engaged with targeted outreach to avoid accusations of discrimination and because of signals from the Commission in Docket No. E111/M-21-314. DEA indicates that it will consider marketing the program if the Commission believes it necessary. ²⁰
Resiliency	"...provide a discussion of how its AMI and AGi programs could be used to track and understand system resilience."	DEA points to pages 93-106 in the IDP where it discusses resiliency benefits from AMI and AGi projects. DEA indicates that the AGi project enables it to identify outages quickly and more accurately. DEA states that, given specific goals or metrics, DEA could configure its systems to track resiliency data. ²¹
IDP Budget Categories	"The Department requests feedback from DEA and stakeholders regarding the potential revision of IDP filing requirements to remove the requirement that financial information be presented in IDP-specific budget categories."	DEA indicates that it is supportive of removing the requirement for IDP-specific budget categories. DEA states that it does not track costs in a manner consistent with the IDP, it tracks costs according to "what" was built rather than "why" it was built. ²²

In general, the Department finds DEA's responses to the above requests for additional information within the current IDP proceeding in reply comments to be adequate. The Department nonetheless observes that there is room for improvement in the Cooperative's presentation of NWA information and its discussion of its grid modernization plans. Recommendations for addressing these informational deficiencies are provided in the relevant sections below.

²⁰ *Id.*, at 13.

²¹ *Id.*, at 13-14.

²² *Id.*, at 14.

Table 2. IDP Requests for Additional Information to be Provided at a Later Date

Topic	Request for Commission to Direct DEA to:	Reply from DEA
Beneficial Electrification	“The Department recommends the Commission order DEA to file a supplemental filing that proposes a plan to accelerate beneficial electrification for its customers, including a discussion of how to incentivize dual fuel adoption, and provide forecasts of expected grid impacts of the same.”	DEA indicates its excitement about heat pump deployment and other beneficial electrification opportunities through the ECO program, the IRA, and other offerings. DEA indicates its intentions to make use of the Home Efficient Rebate Program (HOMES) and Home Electrification and Appliance Rebate Program (HEAR) once available. DEA states that it would be a better use of resources to discuss beneficial electrification further in the next IDP rather than in a supplemental filing, once state and federal programs are fully rolled out. ²³
Resiliency	“The Department recommends the Commission direct DEA to develop a suite of metrics to track resiliency, including SAIDI and SAIFI, MEDs, and other metrics to the extent warranted.”	DEA notes that it already tracks SAIDI, SAIFI, and CAIDI in its Annual SRSQ report. DEA indicates its support for tracking resiliency and notes its participation in Outage Data Initiative Nationwide (ODIN) which seeks to standardize grid resiliency metrics. DEA states that, if the Commission is to review resiliency performance, it should offer guidance on how to track resiliency. ²⁴

The Department is generally satisfied with DEA’s response to the above requests for additional information to be provided at a later date. However, the Department offers recommendations for additional actions that the Cooperative should take related to beneficial electrification planning and the measurement of resiliency performance. These recommendations are included in the relevant sections below.

²³ *Id.*, at 14-16.

²⁴ *Id.*, at 16.

C. THE PURPOSE OF THE IDP

In its reply comments, the Cooperative speaks to the need for clarification on the role of the IDP, stating that “[a]fter reviewing the Department comments, Dakota Electric believes that further discussion of how the Commission reviews the IDP and what information or discussion is necessary to achieve the Commission’s five purposes noted above may be warranted.”²⁵ The Department concurs with the Cooperative: in the Department’s view, a clearer understanding of the Commission’s informational standards and review expectations beyond what is articulated plainly in the IDP filing requirements would be helpful for all participating parties. Further clarification from the Commission will help to establish objective standards of review for the IDP and to resolve potential disagreements relating to the extent of information that DEA should reasonably be expected to provide in its IDP filings. Moreover, certain topics in the Notice of Comment Period for this proceeding invite clarification on the role of the IDP. For example, Topic 2 asks whether “additional information [is] necessary for improved clarity.”

As noted above in the introduction to this section (“Department Analysis”), the Department acknowledges that DEA is a not-for-profit member-owned cooperative and that it may therefore approach distribution investment decision-making in a different fashion than other utilities. Notwithstanding differences in organizational financial structure, however, the Department still believes that the IDP can serve a critical role for DEA and its member-owners in facilitating efficient grid planning and investment.

D. RECOMMENDATIONS FOR ENHANCED INFORMATION REQUIREMENTS

In this section, the Department provides discussion and recommendations to improve the quality of information in DEA’s IDP, to enhance the usefulness of this plan. The Department especially focusses on the need for detailed information about grid modernization investments, other distribution grid spending, and NWAs, and on resiliency reporting.

The Department stresses that the IDP is the venue for the Cooperative to provide detailed information about its grid investment plans. In its IDP, DEA should clearly identify its grid investment objectives and the benefits and costs of its planned investments. Further, goals, benefits, and costs should be quantified to the maximum extent possible, although the Cooperative should still address these effects qualitatively if complete quantification is not possible. Even if the Cooperative has already provided relevant information in another proceeding, it should not fear redundancy in including the same information in the IDP.

I. Grid Modernization

In these reply comments, the Department focuses on DEA’s presentation of grid modernization information in its IDP and reply comments with an understanding that reviewing grid modernization in an integrated context is especially key to achieving the objectives of the IDP. As the Department has

²⁵ *Id.*, at 3.

recently emphasized in its comments in other proceedings, it is especially important to evaluate grid modernization investments in an integrated context because grid modernization investments are often interdependent and interactive with other parts of the distribution grid.

Unlike traditional grid investments that are generally not optional, grid modernization investments are often undertaken electively, because they promise to yield incremental benefits. These benefits may include avoidance of the need for traditional investments. To ensure that grid modernization investments are cost effective, their costs and benefits should be rigorously evaluated with reference to the range of reasonable alternatives. Further, this evaluation should account for both interdependencies between grid modernization components and interactions with the wider grid.

Importantly, the need for transparency into DEA's grid modernization plans through the IDP stands—even without the same incentive concerns that may be present with other, for-profit electric utility companies—consistent with the Department's earlier comments above. The Department acknowledges without reservation that Dakota Electric Association, as a member-owned cooperative, is oriented to pursuing only those investments that are in the customer interest. Nonetheless, in the Department's view, the IDP process offers a singular (and singularly valuable) occasion for stakeholders and the Commission to review distribution grid investments plans and to provide timely feedback that can help DEA to optimize its spending.

a. Costs and Benefits of Specific Investments

The Department appreciates the expanded discussion of benefits and costs for the Advanced Grid Infrastructure (AGI) project provided by DEA in its reply comments. DEA included this discussion in response to the Department's request that DEA "discuss" the costs and benefits of the AGI, Advanced Metering Infrastructure (AMI), and Load Control Receive (LCR) programs, and the Department finds the information provided by DEA to be sufficiently responsive. Through this supplemental discussion, DEA provided additional insight into the benefits and costs of the AGI project—clarifying that the metering costs of the AGI project had come in under-budget as a result of both cost reductions and greater than expected benefits.²⁶ DEA's reply comments also include new quantification of LCR program benefits that had not been included in the IDP, and also offer an estimated valuation for the demand response capacity bid into the wholesale market that was partly facilitated by investments in LCR.²⁷

However, it does not appear that DEA provides a complete update on the costs and benefits of its AGI program in either its IDP or reply comments. While the Department acknowledges that the Commission has already ruled on the prudence of these investments, and neither cost recovery nor certification is at issue for AGI projects in the instant proceeding, the Department clarifies its position that DEA should endeavor to include a comprehensive update on the costs and benefits of AGI

²⁶ *Id.*, at 7.

²⁷ *Id.*, at 8-9.

investments with its IDP. To the extent practicable, DEA should be providing a quantitative accounting of costs incurred and benefits realized to date for these projects, specifically highlighting any variances in costs or changes in benefits relative to earlier projections. The Department notes that its position is arguably less stringent than the IDP filing requirements, which call for DEA to provide a cost-benefit analysis for every grid modernization project included in the 5-Year Action Plan “based on the best information it has at the time and include[ing] a discussion of non-quantifiable benefits.”²⁸ The Department is not specifically calling on DEA to prepare new CBAs for each grid modernization investment, though the Department notes that the requirement to provide cost and benefit information for all grid modernization investments would appear to apply regardless of the status of these investments as contemplated, planned, proposed, authorized, or partly in-service.

There is good reason for DEA to provide a complete update on the benefits and costs of grid modernization projects not yet completed. Benefits and costs are liable to change, and the IDP is an ideal venue to take stock of these developments. While some of the required quantitative information on benefits and costs may be available in the other dockets references in the IDP and reply comments, it is both generally preferable and consistent with the objectives of the IDP to include this information again with the IDP filing. In light of the foregoing discussion, the Department offers the following recommendation:

In future IDPs, DEA should provide more complete quantification of the benefits and costs of all grid modernization projects anticipated to begin within a five-year interval, consistent with the IDP filing requirements.

To improve clarity and transparency in DEA’s reporting on its grid modernization plans, the Cooperative should provide a more formal “Action Plan” detailing the anticipated timing of grid modernization projects over the next five years, consistent with the IDP filing requirements. In the instant IDP, DEA did not provide this detail about its efforts to upgrade GIS, or the outage management system (OMS) and SCADA systems, nor did the Cooperative detail the costs and benefits of these projects, though these investments are all reasonably classified as grid modernization. The Department thus offers the following recommendation:

In future IDPs, DEA should include a formal Action Plan detailing the anticipated timing of grid modernization projects over the next five years.

II. Measuring the Impact of Distribution Grid Investments

In this section, the Department includes new recommendations on maximizing the cost effectiveness of DEA’s broader distribution grid investment programs, consistent with discussion offered by the Department in the other utilities’ IDP proceedings that are currently ongoing. To optimize planning and

²⁸ IDP Filing Requirement D.1.K.

investment, DEA should aim to quantify the impacts of its traditional distribution grid investments across key dimensions.

To this end, and to the extent relevant and measurable, DEA should be quantifying 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.

The Department recognizes that quantifying investment impacts may be challenging. The Department thus provides the following recommendation, with scope for DEA to address how it will be best able to quantify investment impacts.

The Department recommends that the Commission direct DEA 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 DEA will evaluate these impacts for each budget category, indicating for each category whether DEA 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.

III. NWAs

In its initial comments, the Department included several requests for additional information relating to the Cooperative's evaluation of NWA opportunities. The Department thanks the Cooperative for its replies but finds that certain additional information is still required to complete the record on this topic area. Most critically, the Department finds detail lacking from the Cooperative's discussion of NWA feasibility for the Cedar Substation and Feeders project, Lakeville Substation and Feeders project, and Fisher Substation Rebuild Projects.

As the Department noted in its initial comments, IDP filing requirement 3.E.1 calls for "an analysis on how non-wires alternatives compare in terms of viability, price, and long-term value" for any "forthcoming project or project in the filing year" that is expected to exceed \$2 million.²⁹ Since the

²⁹ IDP Filing Requirement 3.E.1.

Cooperative did not provide this analysis in its IDP, the Department requested in initial comments that the Cooperative address in reply comments whether these needs were suitable for current or future NWA analysis. The Cooperative provided the following response:

Both the Cedar Substation and Feeders Project and the Lakeville Substation and Feeders Project are derived from capacity and reliability concerns due to system expansion and backfeeding contingency if a nearby substation was to have an outage. Land costs, location, and the size requirements of an NWA make, these projects unsuitable for an NWA analysis (sic). Further, we also had significant concerns due to the potential load size increases in these areas that could result in significant operational constraints that could prevent us from providing firm capacity and reliability with an NWA. The Fisher Substation Rebuild has similar concerns for capacity and reliability; however, this project arose due to age-related concerns as the equipment is over 40 years old. This project is not suitable for an NWA due to the reliability concerns of the existing substation, capacity requirements, and land constraints. The nature of these projects and locations do not lend themselves to being suitable for NWA analysis, which is why no analysis was provided. Dakota Electric does not rule out using an NWA in the future for the proper project scope.³⁰

In a narrow sense, the Cooperative complied with the Department's reply in furnishing the above explanation for why NWA analyses were not appropriate for the noted substation and feeder projects. However, the Department concludes that the consideration of NWAs as potential solutions to meet these needs does not meet the standard put forth in the IDP filing requirements.

The Department therefore recommends that the Commission direct DEA to provide in its next IDP a more detailed assessment of NWA suitability for qualifying opportunities. The Department clarifies that such an evaluation need not necessarily rise to the level of a full-blown cost-benefit analysis, but that it should be rigorous and quantitative to the extent possible rather than simply relying on expert judgement. The Department further expects the Cooperative to provide records of all data considered and analyses undertaken (i.e., at the screening stage) to determine whether a detailed NWA analysis is indicated. For all needs for which a detailed analysis is undertaken, the Cooperative should provide documentation of this analysis in its IDP.

The Department thanks DEA for its response regarding the benefits used in NWA analysis. The Department requests that comparable narrative clarifications of benefit calculations be provided in future IDPs.

The Department understands that creating well-supported documentation for each of the tests takes time and resources. However, the Department notes that the use of multiple test cases allows for the unique perspectives of each test to be evaluated and discussed. The Department also looks towards the Commission for clarification on the necessity of each of the Minnesota Test Cases in NWA analyses in future IDPs.

³⁰ DEA reply comments at 4-5.

Finally, the Department makes the following recommendation:

The Department recommends that the Commission direct DEA to provide in its next IDP clarification about which categories of capital projects warrant detailed discussions of NWA viability and/or NWA analysis. The Department further requests that the Commission provide guidance whether the requirements of filing requirement E.1 are applicable to all project purposes or only certain project purposes.

IV. Resiliency

In its initial comments in this proceeding, the Department recommended that the Commission direct Dakota Electric to develop a suite of metrics to track resiliency. The Department begins by clarifying this recommendation, which was written with a typographical error. The recommendation in initial comments was provided as follows: “The Department recommends the Commission direct Minnesota Power to develop a suite of metrics to track resiliency, including SAIDI and SAIFI, MEDs, and other metrics to the extent warranted.”³¹

The Department clarifies that the reference to major event days (MEDs) in this recommendation is incorrect. The correct statement of this recommendation is presented below:

The Department recommends the Commission direct Dakota Electric Association to develop a suite of metrics to track resiliency, including SAIDI with MEDs and SAIFI with MEDs, and other metrics to the extent warranted.

The Department appreciates DEA’s interest in tracking resiliency, and its participation in the Outage Data Initiative Nationwide (ODIN) which seeks to standardize grid resiliency metrics. DEA already tracks normalized and non-normalized values of SAIDI, SAIFI, and CAIDI in its Annual SRSQ Report, which measures reliability but does not accurately measure resiliency. Isolating SAIDI, SAIFI, and CAIDI values during major events alone would capture resiliency more accurately.

DEA states that clarification and guidance from the Commission on how resiliency should be tracked and reviewed is warranted.³² The Department reiterates its initial recommendation for DEA to develop a suite of resiliency metrics and supports the Commission providing guidance to the utilities on how resiliency might be tracked and reviewed.

E. BENEFICIAL ELECTRIFICATION AND RELATED ISSUES

The Department notes that while the Cooperative is required to include in its IDP information about distributed generation and EVs,³³ it is not similarly obligated to address beneficial electrification. Yet, electrification of heat and cooling and other beneficial electrification is key to achieving the state’s

³¹ Department initial comments at 25.

³² DEA reply comments at 16.

³³ DEA is not required to submit a Transportation Electrification Plan (TEP) but is required to report how many electric vehicles (Filing Requirement 3.A.21) and charging stations are on its system (Filing Requirement 3.A.22).

climate policy goals. As such, the Department requested in its initial comments that DEA provide a plan for accelerating beneficial electrification and to provide forecasts of the expected grid impacts of this beneficial electrification. At minimum, the Department is requesting that DEA provide the same level of information about beneficial electrification as it did for distributed generation and EVs.

The Department observes that some of the beneficial electrification loads present much bigger challenges for grid management than do electric vehicles given that some of these loads are relatively impervious to load-shifting. For example, it would be unacceptable to shift cooking load to off-peak hours. The coldest part of the day is at night when heat pump loads will be at their highest, which is also coincident with the ideal electric vehicle charging window. It is similarly unacceptable to expect long durations without heat input during the coldest days of winter, which may be coincident with future peak loads.³⁴ Electric-heating-only customers do not have the option to cycle their heat, while dual fuel applications offer more grid adaptability, but also require significantly more planning from the Cooperative. Commercial and industrial electrification poses even greater challenges for managing the distribution grid. These examples all illustrate the importance of planning for these new loads now, to incorporate future beneficial electrification into grid planning to avoid costly grid upgrades later.

The information requested by the Department is supplemental to DEA's applicable Energy Conservation Optimization (ECO) filing made in concert with Great River Energy (GRE). At minimum, the Department expects the Cooperative to determine the number of beneficial electrification devices at a system level, and ideally on each feeder. The Cooperative should also share historical adoption rates, ideally at each feeder, and forecast beneficial electrification rates for at least a system-wide level. These forecasts should be used to identify feeders at risk of being unable to supply power to support the increased adoption of beneficial electrification technologies. Ideally, this exercise should be combined with EV forecasting to understand the interactions between these technologies.

The Commission's Order from Docket E,G-999/CI-22-624 specifically mentions IDPs and beneficial electrification (other electrification measures):

The utilities shall maximize the benefits of the Inflation Reduction Act [IRA] in future resource acquisitions and requests for proposals in the planning phase, petitions for cost recovery through riders and rate cases, resource plans, gas resource plans, integrated distribution plans, and Natural Gas Innovation Act innovation plans. In such filings, utilities shall discuss how they plan to capture and maximize the benefits from the Act, and how the Act has impacted planning assumptions including (but not limited to) the predicted cost of assets and projects and the adoption rates of electric vehicles, distributed energy resources, and other electrification measures.³⁵

³⁴ Great Plains Institute and the Center for Energy and Environment. *Decarbonizing Minnesota's Natural Gas End Uses: Stakeholder Process Summary and Consensus Recommendations* (July 2021).

³⁵ Order, In the Matter of a Joint Investigation into the Impacts of the Federal Inflation Reduction Act, Docket No. E,G-999/CI-22-624 (September 12, 2023). (eDocket No. [20239-198869-01](#)).

As the IDP is the central reporting mechanism for understanding all critical developments on the distribution grid, the IDP should at least include a discussion of how the IRA is impacting the distribution grid. As discussed in Docket E,G-999/CI-22-624, the Cooperative has an obligation to ensure that the benefits of the IRA are maximized to ensure value to ratepayers. A beneficial electrification plan is expected to be heavily influenced by the IRA. Further, while the ECO Program could potentially be the appropriate venue for the tracking all beneficial electrification IRA benefits, the ECO Program will not administer federal and state rebate programs and tax incentives. Beneficial electrification will be addressed in gas utilities' Natural Gas Innovation Act (NGIA) and Integrated Resource Plans (IRP)s.

The complexity and interconnectedness of beneficial electrification planning necessitates a broader perspective and plan for the deployment of these programs. This would either require a modification of the ECO Program scope or would require a filing in a non-ECO docket. The Department does not take a position on the proper venue for *developing* a plan, but simply advocates for the creation of a plan that takes a broader perspective on all federal and state funding to ensure that ratepayers receive the maximum value from the IRA. Regardless of whether this plan is filed in this docket or another, the plan should be reported on in the IDP. The Department welcomes a broader discussion about how beneficial electrification planning should be conducted and in which dockets information should be reported.

While the Department understands that the Commission's September 12, 2023 Order did not allow sufficient time for the Cooperative to include IRA impacts in its IDP filing, the Department requests a supplemental filing to ensure that IRA benefits are maximized by planning before the IRA-funded programs are released. Programs such as HOMES, HEAR³⁶ and the State Heat Pump Rebate³⁷ will likely require energy audits and a triage system of energy efficiency improvements that need to happen before a heat pump could be installed. This will require the development of expertise to physically deliver energy audits, but also to organize a system to deliver energy bills and coordinate and fund energy audits to support the program. The Cooperative should be planning ahead of time to educate its partners, build internal staff capacity, and have a plan in place for how to maximize the benefits of the new IRA programs.

The ECO program offers just one avenue for DEA to potentially accelerate beneficial electrification. Other paths toward electrification may also increase administrative complexity. The Cooperative should prepare for this complexity in advance of program rollout to optimize the benefit for ratepayers. Given that the Federal HOMES/HEAR and State Heat Pump rebate programs are income-

³⁶ Minnesota Department of Commerce. "Home Energy Rebates," (last updated February 12, 2024). Available at: <https://mn.gov/commerce/energy/consumer/energy-programs/home-energy-rebates.jsp>.

³⁷ Minnesota Department of Commerce. "Residential Heat Pump Rebate Program," (last updated February 8, 2024). Available at: <https://mn.gov/commerce/energy/consumer/energy-programs/heat-pump.jsp>.

based, DEA should identify who its income-qualified customers are, and how to ensure equity in the distribution of incentives.

Further resources are needed to educate partners and customers on how to navigate the complex web of federal and state rebates, federal tax credits, and utility rebates and to ensure that funding is not double counted in any of these programs. Without this support for customers, there is a significant risk that customers will not succeed in taking advantage of the incentives available to them and end up liable for additional expenses that they had never planned on at the point of sale. Mitigating this risk requires a system to be in place to ensure internal checks on the workflow and process of which funding is eligible, which funding is awarded, and how the cash flow of rebates is directed.

A useful beneficial electrification plan would address these immediate needs. There is a much higher potential for information to be shared about beneficial electrification throughout all of the regulated utilities' territories. The State of Colorado has implemented a program that requires much more comprehensive data sharing requirements than those discussed already.³⁸ Adoption of such a program would bring beneficial electrification planning more in line with Transportation Electrification Plans (TEP)s.

DEA states in its reply comments that it does not believe a supplemental filing is necessary prior to its next IDP filing. The Cooperative cites its Docket No. E,G999/CI-22-624 discussion about maximizing the benefits of the IRA in support of its planning for the IRA. While the Cooperative discusses beneficial electrification, among other areas of IRA influence, it does not outline specific plans for the programmatic delivery of IRA funding, and it does not develop forecasts of grid impacts of IRA-funded technologies. Specifically, the Cooperative states "Dakota Electric is evaluating the IRA and has not made any adjustments to its investment plans. If, through its IDP and regular planning processes, the Cooperative identifies programs or incentives that will improve the economics of new infrastructure, or refurbishment, projects, Dakota Electric it will take this into account in its decision-making process and attempt to maximum[ize] benefits to our members."³⁹ Despite the future delivery of state-delivered programs, IRA tax credits are available now, but the impacts of the credits, or how to ensure the credits are maximized by DEA, are not discussed and further do not appear to impact DEA's planning for these impacts. While the Department understands that GRE is involved in the planning and administration of ECO program incentives, these represent just one source of funding for beneficial electrification amongst several IRA-funded opportunities.

While DEA states both its own reluctance and the Commission's reluctance to engage in targeted marketing programs, the Department notes that targeting may be necessary. The HOMES, HEAR, and

³⁸ Colorado Revised Statutes 2023. Title 40 Statute 3.2-109 "Beneficial electrification plans for electric utilities." Available at: [C.R.S. 40-3.2-109](#).

³⁹ In the Matter of a Joint Investigation into the Impacts of the Federal Inflation Reduction Act. Docket No. E,G999/CI-22-624, DEA Petition, (January 30, 2023) (eDocket No. [20231-192677-01](#)).

State Heat Pump Rebates specifically require the targeting of at least low- to moderate-income customers. While targeting of electric heating customers is not required by the IRA, general advertising could be confusing for customers receiving information that does not apply to them, and as discussed, there is already a considerable amount of potential confusion between the many layers of funding available, and particularly to ensure that the full available funding is received. For example, as discussed in the Department's initial comments, the interruptible rate offers significantly better economics for natural gas heat pump adoption, while electric customers will be unable to have interruptible service, as there is no backup heat source. For these reasons, a targeted approach should at least be considered.

Finally, the Department seeks to reiterate its initial message that the purpose of beneficial electrification planning at this stage is to simultaneously save ratepayers money and reduce carbon emissions. These goals can only be accomplished with proactive grid planning and engagement to ensure that the unprecedented amount of funding available for beneficial electrification is not underutilized.

IV. RECOMMENDATIONS

The Department provide the following recommendations:

- 1. The Department recommends that the Commission accept Dakota Electric Association's 2023 IDP.***
- 2. In future IDPs, DEA should provide more complete quantification of the benefits and costs of all grid modernization projects anticipated to begin within a five-year interval, consistent with the IDP filing requirements.***
- 3. In future IDPs, DEA should include a formal Action Plan detailing the anticipated timing of grid modernization projects over the next five years.***
- 4. The Department recommends that the Commission direct DEA 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 DEA will evaluate these impacts for each budget category, indicating for each category whether DEA 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.***

- 5. The Department recommends that the Commission direct DEA to provide in its next IDP a more detailed assessment of NWA suitability for qualifying opportunities. The Department clarifies that such an evaluation need not necessarily rise to the level of a full-blown cost-benefit analysis, but that it should be rigorous and quantitative to the extent possible rather than simply relying on expert judgement. The Department further expects the Cooperative to provide records of all data considered and analyses undertaken (i.e., at the screening stage) to determine whether a detailed NWA analysis is indicated. For all needs for which a detailed analysis is undertaken, the Cooperative should provide documentation of this analysis in its IDP.***
- 6. The Department recommends that the Commission direct DEA to provide in its next IDP clarification about which categories of capital projects warrant detailed discussions of NWA viability and/or NWA analysis. The Department further requests that the Commission provide guidance whether the requirements of filing requirement E.1 are applicable to all project purposes or only certain project purposes.***
- 7. The Department recommends the Commission direct the Cooperative to develop a suite of metrics to track resiliency, including SAIDI with MEDs and SAIFI with MEDs, and other metrics to the extent warranted.***
- 8. The Department recommends the Commission order DEA to file a supplemental filing that proposes a plan to accelerate beneficial electrification for its customers, including a discussion of how to incentivize dual fuel adoption for space heating and electrification of water heating, and provide forecasts of expected grid impacts of the same.***

CERTIFICATE OF SERVICE

I, Nicole Westling, 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. E111/M-23-420

Dated this **24th** day of **May 2024**

/s/Nicole Westling

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Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.	76 W Kellogg Blvd St. Paul, MN 55102	Electronic Service	No	OFF_SL_23-420_M-23-420
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Trevor	Smith	trevor.smith@avantenergy.com	Avant Energy, Inc.	220 South Sixth Street Suite 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-420_M-23-420
Beth	Soholt	bsoholt@cleangridalliance.org	Clean Grid Alliance	570 Asbury Street Suite 201 St. Paul, MN 55104	Electronic Service	No	OFF_SL_23-420_M-23-420
Sky	Stanfield	stanfield@smwlaw.com	Shute, Mihaly & Weinberger	396 Hayes Street San Francisco, CA 94102	Electronic Service	No	OFF_SL_23-420_M-23-420
Byron E.	Starns	byron.starns@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_23-420_M-23-420
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Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD	4445 W 77th Street Suite 224 Edina, MN 55435	Electronic Service	No	OFF_SL_23-420_M-23-420
Lise	Trudeau	lise.trudeau@state.mn.us	Department of Commerce	85 7th Place East Suite 500 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_23-420_M-23-420
Roger	Warehime	roger.warehime@owatonna utilities.com	Owatonna Municipal Public Utilities	208 S Walnut Ave PO BOX 800 Owatonna, MN 55060	Electronic Service	No	OFF_SL_23-420_M-23-420
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Robyn	Woeste	robynwoeste@alliantenerg y.com	Interstate Power and Light Company	200 First St SE Cedar Rapids, IA 52401	Electronic Service	No	OFF_SL_23-420_M-23-420
Christopher	Zibart	czibart@atcllc.com	American Transmission Company LLC	W234 N2000 Ridgeview Pkwy Court Waukesha, WI 53188-1022	Electronic Service	No	OFF_SL_23-420_M-23-420
Kurt	Zimmerman	kwz@ibew160.org	Local Union #160, IBEW	2909 Anthony Ln St Anthony Village, MN 55418-3238	Electronic Service	No	OFF_SL_23-420_M-23-420