

April 11, 2025

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

RE: Comments of the Minnesota Department of Commerce
Docket No. E999/M-25-99

Dear Mr. Seuffert:

Attached are the comments of the Minnesota Department of Commerce (Department) in the following matter:

In the Matter of the 2025 Biennial Transmission Projects Report.

The notice for comment was filed by the Commission on February 14, 2024.

The Department makes certain recommendations and is available to answer any questions the Minnesota Public Utilities Commission may have.

Sincerely,

/s/ Dr. SYDNIE LIEB
Assistant Commissioner of Regulatory Analysis

SR/ad
Attachment



Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce

Docket No. E999/M-25-99

I. INTRODUCTION

Minnesota Session Laws, 2024, Chapter 127, Article 42, Section 52 took effect on May 25, 2024.¹ Subdivision 2 requires that an entity that owns more than 750 miles of transmission lines in Minnesota include in the November 1, 2025 biennial transmission report information regarding:

- the locations on its transmission system experiencing or likely to experience high levels of congestion;
- information on the cost impact of this congestion to ratepayers; and
- an evaluation of the feasibility of grid enhancing technologies (GETs) to address each instance of grid congestion.

Subdivision 3 requires the Minnesota Public Utilities Commission (Commission) approve, reject, or modify each implementation plan submitted pursuant to subd. 2. In order to allow the Commission to provide guidance on the inclusion of GETs in the biennial transmission report the Commission issued a notice to obtain feedback on various issues related to GETs.

II. PROCEDURAL BACKGROUND

May 25, 2024 A new section of Minnesota Statutes that requires utilities to submit a GETs Report along with the biennial transmission plan took effect.

February 14, 2025 The Commission issued a notice for comment concerning which methodology is appropriate for calculating the payback period of grid enhancing technologies (GETs).²

According to the Notice, the following topics are open for comment:

- In addition to the frequency of congestion and increased costs to ratepayers (as required by Subd 2, clause 2), what, if any, issues, costs, and benefits are relevant to calculating the payback period of GETs installed to reduce transmission system congestion?

¹ [Laws of Minn. 2024, ch. 127, art. 42, sec. 52.](#)

² *In the Matter of the 2025 Biennial Transmission Projects Report, Notice of Comment Period*, February 14, 2025, Docket No. E999/M-25-99. (eDockets) [20252-215350-01](#), (Hereinafter, "Notice").

- What methodology should the Commission direct affected transmission owners to use in calculating the payback period of GETs in reducing congestion?
- What payback period *value* should the Commission set as the threshold at which a GETs project must be included in the implementation plan portion of a GETs Report?
- Should the Commission request or require transmission owners to evaluate the cost effectiveness or payback periods of GETs projects addressing locations likely to experience high levels of congestion during the next five years (Subd. 2, clause 3), in addition to those with existing congestion (Subd. 2, clause 1)?
- Are there equity, workforce, or environmental justice factors the Commission should consider when developing a GETs payback period methodology?
- Are there other issues or concerns related to this matter?

Below are the comments of the Minnesota Department of Commerce (Department) regarding the issues in the Notice.

III. DEPARTMENT ANALYSIS

A. ISSUES RELEVANT TO PAYBACK PERIOD

The first topic listed in the Notice is “In addition to the frequency of congestion and increased costs to ratepayers (as required by Subd 2, clause 2), what, if any, issues, costs, and benefits are relevant to calculating the payback period of GETs installed to reduce transmission system congestion?”

Laws of Minn. 2024, ch. 127, art. 42, sec. 52, subd. 2 states that congestion is a priority to include in the calculation method for the payback period of GETs. Subdivision 2 further requires consideration of frequency of congestion and increased cost to ratepayers of that congestion.³

However, the costs and benefits associated with the payback period are not limited to congestion benefits. The two primary publications that informed the Department’s analysis were the U.S. Department of Energy’s *Grid-Enhancing Technologies: A Case Study on Ratepayer Impact*⁴ report and the Idaho National Laboratory’s presentation *Assessing the Value of Grid Enhancing Technologies*:

³ [Laws of Minn. 2024, ch. 127, art. 42, sec. 52.](#)

⁴ *Grid-Enhancing Technologies: A Case Study on Ratepayer Impact*, U.S. Department of Energy, (2022). Available at: [U.S. DOE GETs Report](#). (Hereinafter “GETs Report”).

*Modeling, Analysis, and Business Justification.*⁵ Tables 1 and 2 below summarizes the benefits and costs associated with GETs drawn from these sources.

Table 1: Grid Enhancing Technologies Benefits

Reduced Renewable Curtailment
Reduced Transmission Congestion
Reduced Price Differentials
New Asset Deferral
Improved Situational Awareness
Resilience and Contingency Support
Asset Health Monitoring
Reduced Cost of New Interconnection

The benefits listed in Table 1 generally could be quantified, but in different ways.

Table 2: Grid Enhancing Technologies Costs

Project Capital Cost
Project Operations and Maintenance Costs

The GETs projects’ capital costs, listed in Table 2, would be quantified based upon project life, rate of return, tax rates, and other accounting factors.

B. ISSUES RELEVANT TO PAYBACK PERIOD

The second topic listed in the Notice is “What methodology should the Commission direct affected transmission owners to use in calculating the payback period of GETs in reducing congestion?”

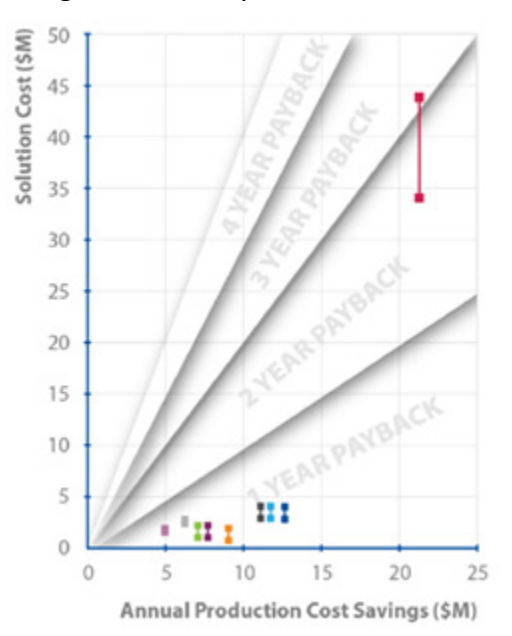
A payback calculation takes the dollar costs and attempts to determine how quickly the revenues will offset the costs. For example, an individual might purchase an energy-efficient lightbulb for \$5. The lightbulb might reduce the individual’s electricity bill by \$1 annually. In this instance payback period would be 5 years. The calculation is appropriate because the dollar amounts are in the same terms—dollars spent by and received by the individual. However, if payback calculations use two sets of dollars that are not in a common framework, then those calculations will produce meaningless results. A

⁵ Grid Enhancing Technologies in Long-Term Transmission Planning, The Institute of Electrical and Electronics Engineers (2023). Available at: [IEEE GETs Presentation](#). (Hereinafter “IEEE Presentation”).

comparison that is mathematically invalid because the terms are in different frameworks is likely to lead to absurd results.

For example, as discussed above in section III.A, the Department reviewed various publications discussing how to evaluate the cost effectiveness of GETs projects. The INL Report discussed using a payback period analysis. An example of the analysis is shown in Figure 1 below.

Figure 1: INL Payback Period Chart⁶



In this instance the analysis comparing Solution Cost to Annual Production Cost Savings, as shown in Figure 1, appears to be flawed. The proposed analysis would compare annual revenues actually received by ratepayers (the flow of production cost savings) to a cost that is not actually paid by ratepayers (the solution’s capital cost, which is a stock or onetime payment). The flaw stems from the lack of relation between the two amounts being compared; while production cost savings are realized by ratepayers, the solution’s cost would not be paid by ratepayers (or received by shareholders) in one installment, as assumed in Figure 1. Instead, ratepayers would pay the cost of the project over a number of years, the duration of which reflects the life of the project. The actual cost paid by ratepayers could vary widely depending on the expected life of the projects, rate of return, and several other factors.

At this time, it is not clear to the Department how to calculate a technically valid payback. Further development by the utilities is warranted. However, one analysis would be to calculate the cost paid by ratepayers each year for the project as documented in Table 2 above. Then, the present value the stream of annual costs would be calculated using the appropriate discount rate. The analysis would calculate the ratepayer benefits each year as documented in Table 1 above. The present value of the stream of benefits using the same discount rate would be calculated. Then the two present value

⁶ IEEE Presentation at 3, 14.

numbers, one for costs and one for benefits, can be compared to arrive at a valid comparison—a benefit/cost ratio (BCR).

Clearly if the calculated ratio is greater than 1 the project would pass the test. However, there is a degree of uncertainty in the results and there are non-quantifiable benefits that the Commission may consider in making the ultimate determination regarding whether a particular project is in the public interest. The Department discusses the appropriate BCR further in the next section. The Department welcomes feedback on how to appropriately calculate a valid payback period for GETs.

C. PAYBACK PERIOD VALUE

The third topic listed in the Notice is “What payback period *value* should the Commission set as the threshold at which a GETs project must be included in the implementation plan portion of a GETs Report?”

Laws of Minn. 2024, ch. 127, art. 42, sec. 52, subd. 2(5) states:

An entity that owns more than 750 miles of transmission lines in Minnesota, as reported in the state transmission report submitted to the Public Utilities Commission under Minnesota Statutes, section 216B.2425, by November 1, 2025, must include in that report information that:

(5) analyzes the cost-effectiveness of installing grid enhancing technologies to address each instance of congestion identified in clause (1) by using the information developed in clause (2) to calculate the payback period of each installation, using a methodology developed by the commission;

This subdivision requires the calculation of a payback period for each GET, and requires the Commission to develop a methodology. In the previous section, the Department outlines why a payback period is an not appropriate methodology to calculate the value of a GET project, and instead justifies why a BCR is more appropriate for this application.

The value of a GET can be derived from both its revenue impacts and from learning opportunities of deploying a GET. As described in the previous section, the traditional decision criterion to proceed with any project analyzed in a cost-benefit analysis is a BCR of 1.0. For example, the Federal Energy Regulatory Commission (FERC) requires that long range transmission plans use a minimum BCR of no greater than 1.25.⁷ A BCR of 1.25 ensures that uncertainty in price or benefit accrual will still result in a cost beneficial project, which is particularly relevant for multi-billion dollar transmission projects. However, low-cost GETs warrant an opposite approach for some circumstances. The most relevant consideration to use a lower BCR is because of the nascency of GETs in Minnesota. Furthermore, the

⁷ FERC Order 1920. See page 25. Day Pitney, LLP. *FERC Final Rule on Transmission Planning – Order No. 1920*. (May 16, 2024). Available at: https://www.iso-ne.com/static-assets/documents/100011/a05_nepool_counsel_memo_transmission_planning_final_rule.pdf

Department expects to see a variety of GETs deployed within Minnesota. To the extent practicable, five total projects for each GET are sought by the Department to ensure that sufficient learning opportunities are created. GETs include dynamic line ratings (DLR) dynamic transformer ratings (DTR), power flow controllers (PFC), and topology optimization (TO).

The Department is aware of three GETs projects in Minnesota. The projects include:

- Northern States Power Company d/b/a Xcel Energy's (Xcel) 2023 DLR LineVision project in Monticello;^{8,9}
- Great River Energy's (GRE) 2024 DLR Heimdall project;¹⁰ and,
- GRE 2025 DLR Prisma Photonics project.¹¹

All of the projects use DLR technologies, although each is from a different DLR vendor. The current portfolio of projects leaves significant room for more projects. DLR and DTR projects have localized benefits and pose minimum risks to the transmission system, which warrant a lower BCR to incentivize more of these projects. For the first five DLR and DTR projects, it is appropriate to employ a BCR of 0.75, if five projects cannot be generated at a BCR of 1.0.¹² PFC and TO present unique challenges because both technologies re-route power from congested areas to uncongested areas of the grid,¹³ which can lower congestion in one location but increase congestion elsewhere. For this reason, it is appropriate to use a more conservative BCR, consistent with the FERC minimum BCR of no greater than 1.25.

The Department recommends that a benefit cost ratio of 1.0 be used for all dynamic line rating and dynamic transformer rating projects, unless a benefit cost ratio of 0.75 is necessary to generate a maximum of five projects for each technology.

The Department recommends that a benefit cost ratio of 1.25 be used for all power flow controller and topology optimization projects.

⁸ *In the Matter of the Investigation into Transmission-Curtailment Matters, Drivers, and Potential Solutions to Limitations Resulting from the Nobles County Substation*, Northern States Power Company, d/b/a Xcel Energy, Reply Comments, November 12, 2024, Docket No. E999/CI-24-316, (eDockets) [202411-211835-02](#), at 6.

⁹ LineVision. *LineVision's V3 Transmission Line Monitoring System installed in Colorado, Minnesota and Wisconsin to Increase Grid Capacity and Safety*. Utility Dive, (February 25, 2021). Available at: <https://www.utilitydive.com/press-release/20210225-linevisions-v3-transmission-line-monitoring-system-installed-in-colorado/>

¹⁰ Great River Energy. *Grid optimization project kicks off with drone installation event*. (May 8, 2024). Available at: <https://greatriverenergy.com/cooperatives-articles/grid-optimization-project-kicks-off-with-drone-installation-event/>

¹¹ Great River Energy. *Great River Energy partners with Prisma Photonics to deploy advanced grid monitoring solution across Minnesota*. (January 14, 2025). Available at: <https://greatriverenergy.com/company-news/great-river-energy-partners-with-prisma-photonics-to-deploy-advanced-grid-monitoring-solution-across-minnesota/>

¹² Note that only two additional DLR projects would be eligible for the 0.75 BCR, and this decision criterion should only be used if no other higher value projects can fulfill the five-project quota.

¹³ *In the Matter of the Investigation into Transmission-Curtailment Matters, Drivers, and Potential Solutions to Limitations Resulting from the Nobles County Substation*, Minnesota Department of Commerce, Initial Comments, October 23, 2024, Docket No. E999/CI-24-316, (eDockets) [202410-211261-02](#), at 14 and 16.

D. ADDRESSING FUTURE CONGESTION

The fourth topic listed in the Notice is “Should the Commission request or require transmission owners to evaluate the cost effectiveness or payback periods of GETs projects addressing locations likely to experience high levels of congestion during the next five years (Subd. 2, clause 3), in addition to those with existing congestion (Subd. 2, clause 1)?”

The Department supports an analysis of all current and projected grid congestion, with one exception. GETs deployment cannot happen instantaneously. Deployment times may range from months to years. Therefore, it does not make sense to study GETs solutions when transmission upgrades are planned, such that the deployment of a GET would not have sufficient time to accrue benefits to offset its cost. For example, if a more capital-intensive GET, such a PFC, has a three-year lead time and there is a planned transmission upgrade at year four, which would alleviate the need for the GET, then the GET project does not need to be considered. However, if the GET will continue to produce benefits even after the expected transmission upgrade, albeit at a diminished rate, the GET should not be immediately disqualified.

The Department recommends that GETs projects should be studied for all current and projected areas of congestion, so long as the project can generate benefits for a minimum of two operational years.

E. EQUITY ISSUES

The fifth topic listed in the Notice is “Are there equity, workforce, or environmental justice factors the Commission should consider when developing a GETs payback period methodology?”

The Commission regularly aims to balance issues related to equity, workforce, and environmental justice when making decisions on utility investments; decisions made on GETs investments should be no different. The Department supports an analysis similar to those performed in other Commission decisions and provides the following as discussion for how equity could be considered in developing a GETs methodology.

Minn. Stat. § 216B.1691, subd. 9(a) directs the Commission to maximize local benefits of the state’s renewable energy objectives; the reasonable actions the Commission must take and the benefits that must be maximized include:

- (1) the creation of high-quality jobs in Minnesota paying wages that support families;
- (2) recognition of the rights of workers to organize and unionize;
- (3) ensuring that workers have the necessary tools, opportunities, and economic assistance to adapt successfully during the energy transition, particularly in environmental justice areas;
- (4) ensuring that all Minnesotans share (i) the benefits of clean and renewable energy, and (ii) the opportunity to participate fully in the clean energy economy;

- (5) ensuring that statewide air emissions are reduced, particularly in environmental justice areas; and
- (6) the provision of affordable electric service to Minnesotans, particularly to low-income consumers.¹⁴

To the extent that GETs provide opportunities for jobs, or the opportunity to work with suppliers, the utility should, to the extent reasonable, maximize the benefit of those opportunities to employ local, unionized labor and to work with diverse suppliers. Minn. Stat § 216B.2422, subd. 4a., regarding Integrated Resource Plans, also discusses local jobs:

As part of a resource plan filing, a utility must report on associated local job impacts and the steps the utility and the utility's energy suppliers and contractors are taking to maximize the availability of construction employment opportunities for local workers. The commission must consider local job impacts and give preference to proposals that maximize the creation of construction employment opportunities for local workers, consistent with the public interest, when evaluating any utility proposal that involves the selection or construction of facilities used to generate or deliver energy to serve the utility's customers, including but not limited to an integrated resource plan, a certificate of need, a power purchase agreement, or commission approval of a new or refurbished electric generation facility.¹⁵

The Commission must also balance several environmental factors. As stated above, at Minn Stat. § 216B.1691 Subd. 9(a)¹⁶ the Commission must take actions:

- (4) ensuring that all Minnesotans share (i) the benefits of clean and renewable energy, and (ii) the opportunity to participate fully in the clean energy economy;
- (5) ensuring that statewide air emissions are reduced, particularly in environmental justice areas; and
- (6) the provision of affordable electric service to Minnesotans, particularly to low-income consumers.

As defined in the new legislation, GETs are solutions that reduce congestion or enhance the flexibility of the transmission system by increasing the capacity of a high voltage line.¹⁷ “Transmission congestion is defined by the U.S. Department of Energy (DOE) as the economic impact on the users of electricity resulting from physical transmission constraints that limit the amount of power flow to ensure safe and

¹⁴ [Minn Stat. § 216B.1691, subd. 9\(a\)](#)

¹⁵ [Minn Stat § 216B.2422, subd. 4a.](#)

¹⁶ [Minn Stat. § 216B.1691, subd. 9\(a\).](#)

¹⁷ [Minnesota Session Laws, 2024, Chapter 127, Article 42, Section 52, Subd. 1\(e\).](#)

reliable operation.”¹⁸ Although sometimes a useful tool to ensure safe and reliable operation of the grid, congestion often results in the curtailment of renewable resources.¹⁹ Therefore, grid operators are forced to utilize potentially less-direct (perhaps more costly) transmission routes or increase reliance on higher-cost fuels or fossil fuels in order to reliably serve load.²⁰ Therefore, grid operators are forced to utilize potentially less-direct (perhaps more costly) transmission routes or increase reliance on higher-cost fuels in order to reliably serve load.²¹ As load increases, congestion and curtailments will only worsen unless current infrastructure is modified to support a highly renewable system.²² The Department supports maximizing the benefits of GETs to address renewable curtailments so that all Minnesotans have access to the benefits of renewable energy and the associated emissions reductions. Further, the Department supports reductions in congestion and curtailments as a method for increasing the efficiency of the grid to avoid additional undue costs.

There is also the broader equity topic of procedural justice. According to Yale Law, “Procedural justice speaks to the idea of fair processes, and how people’s perception of fairness is strongly impacted by the quality of their experiences and not only the end result of these experiences.”²³ In general, Commission processes should aim to be procedurally just. Yale Law provides four central features that serve as a basis for an individual’s perception that they were treated in a “procedurally just” fashion:²⁴

1. Whether they were treated with dignity and respect;
2. Whether they were given voice;
3. Whether the decision-maker was neutral and transparent; and
4. Whether the decision-maker conveyed trustworthy motives.

The Department appreciates the Commission’s work to present to create a transparent, trustworthy process and to treat stakeholders and ratepayers with dignity and respect. There is often a high barrier to entry to the regulatory process at any level—especially for a member of the public. The barriers are even more challenging for parties historically underrepresented in regulatory processes. The Department is aware that there are several dockets in which equity issues are being highlighted across the Commission’s jurisdiction. The Department continues to support highlighting equity and working to increase the transparency and access to the regulatory process, particularly for stakeholders who are historically underrepresented in regulatory processes. Additionally, the Department welcomes feedback and suggestion from the other parties in this docket as to how best to incorporate equity factors into a GETs methodology.

¹⁸ U.S. Department of Energy, (February 2022) *Grid-Enhancing Technologies: A Case Study on Ratepayer Impact*. Retrieved from: [Grid Enhancing Technologies - A Case Study on Ratepayer Impact - February 2022 CLEAN as of 032322.docx](#) at .pdf 16.

¹⁹ *Id.*, at .pdf 15.

²⁰ *Id.*, at pdf 16.

²¹ *Id.*, at pdf 16.

²² *Id.*

²³ Yale Law School (The Justice Collaboratory). *Procedural Justice*. Retrieved from: [Procedural Justice | Yale Law School](#)

²⁴ *Id.*

F. OTHER ISSUES

The sixth topic listed in the Notice is “Are there other issues or concerns related to this matter?”

The Department expects that GETs solutions studied in isolation may not produce a sufficient number of viable projects. Xcel provides a prelude to this result in its Supplemental Comments in Docket No. E999/CI-24-316, where Xcel presents the following table:

Table 3: Xcel Presentation of DLR Suitability in Southwest Minnesota

Contingency Description	Binding Hours	Avg Shadow Price	SW MN Impact	Constraint Type	Equipment Type	Candidate for DLR	Comments
HELENA-SHEAS LAKE 345	1,699	(\$96.7)	Yes	Thermal	Line – Substation Limited	No	DLR cannot be used on substations.
ACTUAL	1,678	(\$25.9)	Yes	Stability	N/A (Generation Limited)	No	DLR cannot be used on stability constraints.
CHUB LAKE-HELENA 345 (0960)	483	(\$28.4)	Yes	Thermal	Line – Substation Limited	No	DLR cannot be used on substations.
HELENA-SHEAS LAKE 345	293	(\$104.1)	Yes	Thermal	Line – Conductor Limited	Yes	Constraint meets criteria to evaluate further for DLR.
NOBLES 345/115 TR9	189	(\$10.7)	Yes	Thermal	Transformer	No	DLR cannot be used on transformers.
SHEAS LAKE - WILMARTH 345	180	(\$87.8)	Yes	Thermal	Line – Substation Limited	No	DLR cannot be used on substations.
CHUB LAKE-HELENA 345 (0960)	157	(\$165.3)	Yes	Thermal	Line – Conductor Limited	No	Past outage related constraint that does not meet criteria for DLR.
NOBLES 345/115 TR10	129	(\$14.4)	Yes	Thermal	Transformer	No	DLR cannot be used on transformers.
CRANDALL - WILMARTH 345	108	(\$142.4)	Yes	Thermal	Transformer	No	DLR cannot be used on transformers.
SCOTT CO 345/115 TR9	92	(\$52.5)	Yes	Thermal	Transformer	No	DLR cannot be used on transformers.
	85	(\$19.7)	Yes	Thermal	Transformer	No	DLR cannot be used on transformers.
SHEAS LAKE - WILMARTH 345	85	(\$58.7)	Yes	Thermal	Transformer	No	DLR cannot be used on transformers.

Source: Xcel Supplemental Comments – Appendix A²⁵

In Table 3 Xcel presents a list of transmission constraints in southwest Minnesota, and screens whether the projects are suitable for DLR. Xcel lists 12 constrained areas, and identifies only one project that may be suitable for DLR. In a subsequent meeting with the Department, Xcel presented a preliminary analysis of DLR, DTR, and PFC, and found that none of the solutions are viable in southwest Minnesota. While it is possible that Xcel may identify suitable GETs in other locations in Minnesota, the preliminary results suggest that Xcel may present no viable GETs in the 2025 Biennial Transmission Report.

A closer examination of Table 3 reveals that there may be a number of substation and transformer constraints that may prevent the realization of further benefits of GETs due to these constraints. The primary purpose of GETs deployment is to alleviate congestion, and therefore an analysis of GETs should include a holistic analysis of the transmission system. While it is not appropriate to include new or reconducted transmission lines in the GETs analysis, it is appropriate to analyze a suite of constraints that lead to congestion. The analysis could include interactions of multiple GETs, a GET coupled with a substation or transformer upgrade, or a substation or transformer upgrade made in isolation. Any of these interactions may alleviate congestion to a greater extent, and more cost-effectively, than the study of GETs in isolation.

²⁵ The first row of the table, which lists the constraint name, is removed to fit the table into a standard page. *In the Matter of the Investigation into Transmission-Curtailment Matters, Drivers, and Potential Solutions to Limitations Resulting from the Nobles County Substation*, Northern States Power Company, doing business as Xcel Energy, Supplemental Comments, December 3, 2024, Docket No. E999/CI-24-316, (eDockets) [202412-212628-01](#).

The Department recommends that the analysis of GETs include:

- A. Interactions of multiple GETs;
- B. Interactions of a single GET with a substation or transformer upgrade; and
- C. Substation or transformer upgrades in isolation.

IV. DEPARTMENT RECOMMENDATIONS

Based on the Department's analysis the Department has prepared recommendations, which are provided below. The recommendations correspond to the subheadings of Section III above.

C. PAYBACK PERIOD VALUE

- C.1. The Department recommends that a benefit cost ratio of 1.0 be used for all dynamic line rating and dynamic transformer rating projects, unless a benefit cost ratio of 0.75 is necessary to generate a maximum of five projects for each technology.
- C.2. The Department recommends that a benefit cost ratio of 1.25 be used for all power flow controller and topology optimization projects.

D. ADDRESSING FUTURE CONGESTION

- D.1. The Department recommends that GETs projects should be studied for all current and projected areas of congestion, so long as the project can generate benefits for a minimum of two operational years.

F. OTHER ISSUES

- F.1. The Department recommends that the analysis of GETs include:
 - Interactions of multiple GETs;
 - Interactions of a single GET with a substation or transformer upgrade; and
 - Substation or transformer upgrades in isolation.

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. E999/M-25-99

Dated this **11th** day of **April 2025**

/s/Sharon Ferguson

First #	Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
1	Christina	Brusven	cbrusven@fredlaw.com	Fredrikson Byron		60 S 6th St Ste 1500 Minneapolis MN, 55402- 4400 United States	Electronic Service		No	M-25-99
2	Generic	Commerce Attorneys	commerce.attorneys@ag.state.mn.us		Office of the Attorney General - Department of Commerce	445 Minnesota Street Suite 1400 St. Paul MN, 55101 United States	Electronic Service		Yes	M-25-99
3	Ian M.	Dobson	ian.m.dobson@xcelenergy.com	Xcel Energy		414 Nicollet Mall, 401-8 Minneapolis MN, 55401 United States	Electronic Service		No	M-25-99
4	Sharon	Ferguson	sharon.ferguson@state.mn.us		Department of Commerce	85 7th Place E Ste 280 Saint Paul MN, 55101-2198 United States	Electronic Service		No	M-25-99
5	Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	1400 BRM Tower 445 Minnesota St St. Paul MN, 55101-2131 United States	Electronic Service		Yes	M-25-99
6	Christine	Schwartz	regulatory.records@xcelenergy.com	Xcel Energy		414 Nicollet Mall FL 7 Minneapolis MN, 55401- 1993 United States	Electronic Service		No	M-25-99
7	Will	Seuffert	will.seuffert@state.mn.us		Public Utilities Commission	121 7th PI E Ste 350 Saint Paul MN, 55101 United States	Electronic Service		Yes	M-25-99