

January 6, 2023

Mr. Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 East Seventh Place, Suite 350
Saint Paul, MN 55101-2147

RE: Docket Nos.: 17-401 In the Matter of a Commission Investigation to Identify and Develop Performance Metrics and, Potentially, Incentives for Xcel Energy's Electric Utility Operations and 20-406 In the Matter of Xcel Energy's Annual Report on Safety, Reliability, and Service Quality and Petition for Approval of Electric Reliability Standards

Dear Mr. Seuffert:

The City of Minneapolis ("Minneapolis") respectfully submits these comments regarding development of equity-focused locational performance metrics for Xcel Energy.

Minneapolis appreciates Xcel Energy's ("Xcel") development of the Locational Reliability, Equity – Service Quality and Equity – Reliability Map ("Map").¹ The Map is an excellent resource, simple to use, and helpful for identifying locational differences in service.

While the Map is a foundational first step, additional metrics are necessary to display in the map that show the full range of outages customers are experiencing and to meet the Commission's objectives for considering performance-based incentives for locational reliability.

Our responses to the Commission's questions and specific recommendations follow.

- 1. Do the existing metrics (CELI 12, CEMI 6, percent of customers experiencing one or more involuntary disconnections in a year, and low-income energy efficiency and energy bill assistance program participation) and demographic data used adequately address the Commission's Order for the development of future metrics? Are any modifications needed?**

Low-Income Energy Efficiency and Energy Bill Assistance Program Participation

Minneapolis supports low-income energy efficiency and energy bill assistance program participation reporting in the Map. To be most impactful on low-income customers' health and well-being, the energy efficiency programs must lead to more advanced efficiency measures, such as weatherization and efficient

¹ Xcel Energy 2021 MN Electric Service Quality Interactive Map.

<https://xeago.maps.arcgis.com/apps/webappviewer/index.html?id=6b87f4d407864b939bcea05aad05bdd1>

appliances as well as measures that are more easily accomplished, like lighting.

Therefore, Minneapolis recommends augmenting the rates of participation in low-income energy efficiency programs with the following data for each census tract in the next version of the map:

- total low-income energy efficiency program funding for the year (\$) and
- average program benefit (\$ per participant).

Electric Disconnections

The information provided in the map regarding disconnects is appropriate. The Energy Equity Project Report states that ‘energy insecurity, and shutoffs in particular, have a profound effect on households’ health, well-being, and financial stability.’² The authors assert that disconnections put people’s lives at risk and call for innovative policies to protect vulnerable populations. Some policy concepts that were called out in the report included mandatory enrollment in efficiency programs; mandatory enrollment in affordability programs; and decreasing caps on the number of customers a utility is allowed to shutoff.³ While this may be outside of the immediate questions about the Map itself, Minneapolis shares these policy options as having the potential to inform future actions or performance-based metrics related to electric disconnects.

Reliability

Minneapolis continues to support the use of IEEE-1366-2012⁴ metrics, Customers Experiencing Multiple Interruptions (CEMI) and Customers Experiencing Long Interruptions (CELI), as discussed during the stakeholder meetings. These metrics identify the percentage of customers with reliability below some threshold of outages annually. Customer-centric measures like CEMI and CELI can help target improvements in reliability for the most impacted customers and be the basis for performance-based incentives.

However, analysis of the Map and discussions with regulatory experts suggest the proposed metrics of CEMI-6 and CELI-12 alone are not adequate to demonstrate an earned incentive—additional CEMI and CELI metrics that track additional standards of service would aid the Commission’s decision-making for possible future performance incentives for equitable locational reliability. Minneapolis recommends including additional thresholds for CEMI and CELI as discussed below.

Customers Experiencing Multiple Interruptions (CEMI)

The Map includes a reliability metric of CEMI-6, the percentage of Customers Experiencing Multiple Interruptions of six or more outages in one year.

Minneapolis supports the use of CEMI-6 as being beneficial for identifying geographies with the most urgent need for investments in service and reliability. We also recommend tracking CEMI-1 to reflect a higher quality service as well. Having data on both CEMI-1 and -6 may aid the Commission with identifying appropriate metrics possibly leading to the development of a performance-based incentive. The Commission may find additional intervals helpful as well.

² Energy Equity Project Report. University of Michigan School for Environment and Sustainability. 2022. https://energyequityproject.com/wp-content/uploads/2022/08/220174_EEP_Report_8302022.pdf

³ *Id.* at 55.

⁴ Minneapolis notes that IEEE may have updated its guidance on CEMI and CELI as part of its 1366-2022 update. We do not have access to the standard approved this year and so weren’t able to consider these updates as part of our comments. <https://standards.ieee.org/ieee/1366/7243/>

There is precedent in at least five states where utilities track and report multiple CEMI values that represent a range of reliability. Table 1 shows varying standards by state with a range from CEMI-1 to CEMI-12.⁵

STATE	CEMI REPORTING
California	Requirement to report CEMI-12
Connecticut	Requirement to report CEMI-3 to 10
Delaware	Requirement to report CEMI-8
DC	Requirement to report CEMI-8
Florida	Requirement to report CEMI-5 for utilities > 50,000 customers
Maryland	Requirement to report CEMI-2, 4, 6, and 8
Michigan	DTE Energy Reporting CEMI-1 to 10
New Jersey	Atlantic City Electric reporting CEMI on a company and district basis
North Dakota	Northern States Power reporting on CEMI-4 to 6
Washington	Avista reporting on CEMI-0 to 6

Table 1 CEMI reporting in the U.S. (Jul 2020)

Minneapolis supports Xcel's plan to report the three-year average for CEMI values.

Customers Experiencing Long Interruptions

Minneapolis supports Xcel's reporting of CELI-12, which shows geographies where 12-hour outages occur with disproportionate frequency. The census tracts from the Map show significant and concerning variability in CELI-12 reliability levels within Xcel's service area.

The data demonstrate inequities in locational reliability. We request that Xcel use the data to close the reliability gap so that the customers on the poorest performing feeders are brought to the level of service that those on the highest performing feeders experience.

Minneapolis recommends that in addition to CELI-12, CELI-6 be reported as well since a 6-hour outage would be experienced as a lengthy interruption by many customers. Measuring and reporting CELI-6 will also provide more actionable information for the basis of possible performance-based incentives.

Minneapolis supports Xcel's plan to report a three-year average for CELI values.

3. Are there other issues or concerns related to this matter?

Minneapolis highly values the goal of providing equitable locational reliability within Xcel Energy's service area, but also wants equitable, reliable service compared to other utilities serving Minnesota.

The US Energy Information Administration (EIA) publishes IEEE reliability metrics for utilities in the United States annually, including System Average Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI), and Customer Average Interruption Duration Index (CAIDI).⁶ Table 2 shows sample 2021 data for five utilities serving the Twin Cities area, including Xcel.

⁵ Moving Beyond Average Reliability Metrics. S&C Electric Company. Jul 2020.

<https://www.sandc.com/globalassets/sac-electric/documents/public---documents/documents---all-documents/technical-paper-100-t128.pdf?dt=638074258431113822>

⁶ [EIA's Annual Electric Power Industry Report](#), Form EIA-861.

	All Events (With Major Event Days)			Without Major Event Days				
Utility Name	SAIDI (minutes per year)	SAIFI (times per year)	CAIDI (minutes per interruption)	SAIDI (minutes per year)	SAIFI (times per year)	CAIDI (minutes per interruption)	Number of Customers	Outages Recorded Automatically
Connexus Energy	38.792	0.501	77.429	27.535	0.367	75.027	139,583	Y
Dakota Electric Association	57.700	0.680	84.853	21.000	0.330	63.636	111,103	Y
Shakopee Public Utilities	7.323	0.114	64.237	7.323	0.114	64.237	18,772	N
Wright-Hennepin Coop Elec Assn	34.629	0.484	71.548	30.723	0.484	63.477	53,390	Y
Northern States Power Co - Minnesota	129.935	1.042	124.698	92.270	0.934	98.790	1,311,845	Y

Table 2 EIA 2021 Electric Power Industry Report: Reliability metrics for Xcel Energy and other utilities serving the Twin Cities Metro Area.

Minneapolis is concerned that the 2021 EIA data shows a significant disparity in service reliability levels between Xcel Energy and four neighboring utilities in the Metro Twin Cities area, with Xcel customers experiencing more frequent and longer outages on average. The data demonstrates an opportunity and need for Xcel to improve its level of service reliability for its Minnesota customers.

There are now federal resources to help improve reliability in Minnesota, and Minneapolis encourages Xcel to consider pursuing funding opportunities as appropriate to address areas with locational reliability and service issues to help offset the costs associated with needed upgrades that are outside of its capital improvement plan. The data that Xcel utilized to develop the reliability outputs for the Map should allow Xcel to actively plan for improvements in geographies where customers are experiencing multiple outages per year and/or lengthy outages every year. The City of Minneapolis views this as a high priority.

Summary and Conclusion

Xcel's reliability map is an excellent resource for guiding efforts to deliver more equitable service to customers across geographies and to communities of color within Xcel's service area. Ultimately, the Map may be useful for generating baseline equity ratings and form the basis for possible development of performance-based incentives.

The City of Minneapolis recommends the Commission:

- Require Xcel to augment the rates of participation in low-income energy efficiency programs with the following data for each census tract in the next version of the map:
 - total low-income energy efficiency program funding (\$) and
 - average program benefit (\$ per participant);
- Require Xcel to track and report CEMI-1 as well as CEMI-6, at minimum;
- Require Xcel to report CELI-6 as well as CELI-12; and
- Direct Xcel to close the reliability gap so that the customers on the poorest performing feeders are brought to the level of service that those on the highest performing feeders experience.

Minneapolis appreciates the Commission's consideration of our comments on this important topic.

Respectfully submitted,



Kim W. Havey (He/Him)
Division Director
Sustainability, Healthy Homes and the Environment

STATE OF MINNESOTA)

) ss.

CERTIFICATE OF SERVICE

COUNTY OF HENNEPIN)

I, Stacy A. Miller, of the City of Minneapolis, County of Hennepin, State of Minnesota, affirm that on the 6th day of January 2023, I served a copy of the following via e-mail and/or via U.S. Mail:

COMMENTS OF THE CITY OF MINNEAPOLIS regarding Docket Nos. 17-401 and 20-406

at the last known mailing addresses and email addresses of said entities/individuals on the attached Service List. If by U.S. Mail, I placed said document in postage prepaid envelope and placed same in the U.S. Post Office in Minneapolis, Minnesota for delivery by the United States Postal Service.



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Electronic Service Members Docket 20-406

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