

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Dan Lipschultz	Commissioner
Valerie Means	Commissioner
Matthew Schuerger	Commissioner
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In the Matter of a Commission Investigation
to Identify Performance Metrics,
and Potentially, Incentives for Xcel Energy’s
Electric Utility Operation

ISSUE DATE: September 18, 2019

DOCKET NO. E-002/CI-17-401

ORDER ESTABLISHING
PERFORMANCE METRICS

PROCEDURAL HISTORY

On June 12, 2017, the Commission issued an order in the general rate case approving a multi-year rate plan for Northern States Power Company, d/b/a Xcel Energy (Xcel; the Company), and opening this docket to “identify and develop performance metrics and standards, and potentially incentives, to be implemented during the multi-year rate plan.”¹

On September 22, 2017, the Commission issued a Notice of Comment Period. Between December 2017 and October 2018, the Commission received comments and proposed decision options from a number of stakeholders; the Commission met on November 1, 2018 to consider the matter.

On January 8, 2019, the Commission issued an order establishing a Performance Incentive Mechanism (PIM) Process.² The PIM process includes seven steps; the January 2019 order accomplished steps 1 (“articulate goals”) and 2 (“identify desired outcomes”).

The goals established in the January 2019 order were “to promote the public interest by ensuring environmental protection; adequate, efficient, and reasonable service; reasonable rates; and the opportunity for regulated entities to receive a fair and reasonable return on their investments.”³ The outcomes identified in the order were “affordability; reliability, including both customer and system-wide perspectives; customer service quality, including satisfaction, engagement and

¹ *In the Matter of the Application of Northern States Power for Authority to Increase Rates for Electric Service in the State of Minnesota*, Docket No. E-002/GR-15-826, Finding of Fact, Conclusions, and Order (June 12, 2017).

² *In the Matter of a Commission Investigation to Identify and Develop Performance Metrics, and Potentially, Incentives for Xcel Energy’s Electric Utility Operations*, Docket No. E-002/CI-17-401, Order Establishing Performance-Incentive Mechanism Process (January 8, 2019)(the January 2019 order).

³ *Id.*, at 11–12.

empowerment; environmental performance, including carbon reductions and beneficial electrification; and cost effective alignment of generation and load, including demand response.”⁴ The Commission also identified seven metric design principles to guide development of metrics in step 3 of the PIM process.

On March 20, 2019, an initial stakeholder meeting was convened with a goal of engaging stakeholders in discussing potential metric topics. Thirty-six stakeholders attended the meeting.⁵

On April 5, 2019, the Commission issued a Notice of Comment Period for PIM step 3, the identification of performance metrics. The Commission solicited public comments on proposed metrics, measurement of proposed metrics, and alignment with outcomes, goals, and principles established in the January order.

The initial comment period was from April 5 to May 6, 2019, and the reply comment period lasted until June 4, 2019.

On May 15, a second stakeholder meeting was convened “to support a robust reply comment period in advance of the Commission’s consideration of an initial list of metrics”⁶ Thirty stakeholders attended the second meeting.

The following parties submitted comments, with a majority submitting both initial and reply comments:

- Center for Energy and the Environment (CEE)
- Minnesota Center for Environmental Advocacy
- Fresh Energy
- American Council for an Energy-Efficient Economy
- Xcel Large Industrials
- Minnesota Office of the Attorney General (OAG)
- Minnesota Department of Commerce, Division of Energy Resources (the Department)
- City of Minneapolis
- Suburban Rate Authority
- Xcel
- Citizens’ Utility Board
- Vote Solar
- Midwest Cogeneration Association
- GDS Associates, Inc.
- R Street Institute

On August 16, 2019, the matter came before the Commission.

⁴ *Id.*, at 12.

⁵ Great Plains Institute, 2019 Stakeholder Engagement Process Meeting 1 Summary Report (April 5, 2019).

⁶ Great Plains Institute, 2019 Stakeholder Engagement Process Meeting 2 Summary Report, at 7 (May 24, 2019).

FINDINGS AND CONCLUSIONS

I. Introduction

Minn. Stat. § 216B.16, subd. 19, authorizes the Commission to require a utility proposing a multiyear rate plan “to provide a set of reasonable performance measures and incentives that are quantifiable, verifiable, and consistent with state energy policies.” The statute also authorizes the Commission “to initiate a proceeding to determine a set of performance measures that can be used to assess a utility operating under a multiyear rate plan.” Xcel proposed a multiyear rate plan in 2016, and when the Commission approved the plan it also initiated this docket to determine appropriate performance measures for Xcel.

In PIM steps 1 and 2, the Commission established desired goals, outcomes, and principles for metric design.⁷ In this order, the Commission will complete step 3 of the PIM process (identification of performance metrics) and establish the schedule and process for step 4 (establishment and review of performance metrics).

To facilitate discussion of proposed performance metrics, the Commission solicited comments on the following general topics:

- What should be measured to evaluate utility performance under each of the Commission-established performance outcomes, and why?
- What, if anything, should not be measured to evaluate utility performance under the Commission-established outcomes?
- Are there other concerns the Commission should consider as it establishes performance metrics for Xcel Energy’s electric utility operations?⁸

The Commission also specified supporting information to be included in party comments. Parties were asked to be as specific as reasonably possible, identify whether proposed metrics were already being reported, recommend any changes to existing metrics, and describe considerations in developing formulas and data sources, among other information.

In this order, the Commission will establish performance metrics in the general outcome categories established in the January 2019 order: affordability, reliability, customer service quality, environmental performance, and cost-effective alignment of generation and load.

⁷ January 2019 order, at 11-13.

⁸ *In the Matter of a Commission Investigation to Identify and Develop Performance Metrics, and Potentially, Incentives for Xcel Energy’s Electric Utility Operations*, Docket No. E-002/CI-17-401, Notice of Comment Period, attachment A (April 5, 2019).

II. Comments

A. Affordability

1. Metrics proposed by stakeholders

In total, stakeholders proposed approximately 31 metrics⁹ for the outcome of affordability. Although a wide range of metrics were proposed, many were on the general topics of average bills, rates, disconnections or arrearages, and equity.

Several stakeholders proposed a metric of average customer bills, reasoning that the actual amount of a customer's bill has the most direct impact on affordability. There was disagreement about whether average bill amounts are useful outside the residential sector, since bill amounts for commercial and industrial customers are heavily influenced by business decisions such as facility hours and manufacturing changes. Some stakeholders also discussed challenges in using average bill amounts as a metric. For example, CEE noted that although beneficial electrification,¹⁰ such as adoption of electric vehicles, could cause a customer's bill to increase, this type of increase "should not be considered a mark against the utility's affordability performance."¹¹ CEE suggested that this metric "may need to be designed in a way that accommodates the customer bill implications of increasing levels of electrification over time."¹²

Various rate-related metrics were proposed by stakeholders, including base rates or fuel costs compared to state and national averages, average cost of electricity per unit, and average retail rates. Most stakeholders recommended separating the rate metric by customer class, either in place of or in addition to a general metric for all customers combined. The Department recommended adoption of an all-in "revenue per kilowatt-hour (kWh)" metric; according to the Department, this information is "difficult to locate"¹³ because it is not currently aggregated in one measurement, but it is "critically important to Xcel's customers."¹⁴

Several stakeholders proposed metrics relating to disconnections or arrearages, reasoning that these metrics show evidence of unaffordability. At the Commission meeting, most stakeholders agreed that it would be beneficial to include both arrearages and disconnections as separate metrics; an increase in arrearages could indicate an affordability issue even if disconnections were ultimately avoided through payment plans or other means.

Finally, there were various metrics proposed around the issue of equity. Stakeholders had widely varying approaches to this topic; proposed metrics included participation in low-income

⁹ Numbers of suggested metrics are approximate because metrics proposed by different parties were counted even if they were substantially similar.

¹⁰ Beneficial electrification refers to the replacement of end-user fossil fuel consumption with electric service in order to reduce energy costs and emissions that contribute to climate change.

¹¹ CEE comments, at 3 (May 6, 2019).

¹² *Id.*

¹³ Department reply comments, at 10 (June 4, 2019).

¹⁴ *Id.*, at 14.

affordability programs and various energy poverty metrics. In particular, the City of Minneapolis proposed a public online map that would include demographic information in addition to a variety of equity-related metrics, such as service disconnections, participation in energy assistance programs, and public health data related to residential energy performance. The City also suggested several information-only metrics to be publicly available online, mostly relating to the use of assistance programs.

2. Commission action

The Commission will select four metrics to measure the outcome of affordability.

First, the Commission agrees with stakeholders who supported an average monthly bill metric for residential customers; although rates are not the only factor contributing to a customer's bill, affordability for residential customers ultimately hinges on the total amount the customer pays to the Company each month. Because commercial and industrial customers' bills are heavily affected by business decisions, average monthly bill amounts are not a particularly useful metric for these customer classes. Therefore, the Commission will adopt this metric only with respect to residential customers.

Second, the Commission concurs with the Department's reasoning that revenue per kWh is an important metric and will adopt the metric accordingly. This metric will aggregate various data and make it easier for customers to find and understand key information about their rates and bills; customers can compare this information to existing national rate information to see how their rates compare to the national average.

Third and fourth, the Commission will adopt the metrics of total arrearages and total disconnections for nonpayment for residential customers. Although these metrics are related in that arrearages often lead to disconnections, the Commission believes that both metrics are separately important; excessive or increasing arrearages may indicate a lack of affordability even if the Company does not ultimately disconnect the customer.

Although the Commission is not adopting an affordability metric specific to the topic of equity, affordability is a key indicator of equity and the four metrics it has adopted collectively address the issue. Additionally, as discussed below, the Commission will adopt various equity metrics in other outcomes to give a holistic picture of Xcel's performance in the area of equity.

Additionally, the Commission will order Xcel to work with stakeholders to develop and file a proposed methodology and timeline for calculating, verifying, and reporting each of the metrics established in this order no later than October 31, 2019. The Commission anticipates that data collection for a majority of the metrics will begin January 1, 2020, except where otherwise specified.

B. Reliability

1. Metrics proposed by stakeholders

In total, stakeholders proposed approximately 33 metrics for the outcome of reliability. Several stakeholders supported the use of existing interruption metrics, including System Average

Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI), Customer Average Interruption Duration Index (CAIDI), Customers Experiencing Long Interruption Duration (CELID), Customers Experiencing Multiple Interruptions (CEMI), and Average Service Availability Index (ASAI)¹⁵. Because a majority of these metrics are already measured and reported by the Company, no work is necessary to implement the metrics. Additionally, according to the Department, the existing reliability metrics are favorable because they are results-oriented and do not dictate the means used to achieve reliability.

Another proposed metric was Momentary Average Interruption Frequency Index (MAIFI), which would measure the frequency of very short interruptions in service. Although a form of this metric is already reported in Xcel's Annual Safety, Reliability, and Service Quality Performance Reports, Xcel stated that the Company currently has "limited capability to capture with any level of accuracy, momentary interruptions occurring on [the] distribution system."¹⁶ Xcel is currently in the process of installing Advanced Metering Infrastructure (AMI) and stated that "AMI will provide the technological capabilities to broadly track momentary interruptions"¹⁷ once installation is complete.

Several parties also proposed or supported a metric of locational reliability — in other words, a metric that illustrates whether reliability differs by geographic area. At the Commission meeting, Xcel noted that, similar to MAIFI, the Company currently has some ability to measure locational reliability, but additional technology may be needed for complete, detailed reporting.

Various metrics related to power quality were proposed by stakeholders, including changes in voltage; number of power quality or voltage complaints; and specific issues such as transient change, sag, surge, undervoltage, harmonic distortion, noise, stability, and flicker. Stakeholders broadly agreed that power quality is an important metric and impacts individual customers' perspective on reliability. However, Xcel stated that the Company may need additional time to develop the technical ability to report these metrics.

Commenters proposed a variety of other reliability metrics. For example, several parties proposed a metric that would measure the use of energy storage technologies to increase reliability; however, the OAG disagreed with the use of this metric, stating that storage "is a technology that could improve reliability, not a measurement of reliability. . . . [M]etrics that more directly measure reliability outcomes will appropriately capture that use of storage."¹⁸

2. Commission action

The Commission will adopt several initial reliability metrics and will direct Xcel to work with stakeholders to develop additional metrics for future implementation.

¹⁵ ASAI is not currently reported by Xcel, but the Company should be able to report it based on existing data because it is derived from SAIDI, which is reported by the Company.

¹⁶ Xcel comments, at 11 (May 6, 2019).

¹⁷ *Id.*

¹⁸ OAG reply comments, at 5 (June 4, 2019).

The Commission will adopt the six existing reliability metrics — SAIDI, SAIFI, CAIDI, CELID, CEMI, and ASAI. The Commission believes that these are valuable metrics that capture a range of useful data on service interruptions; they will also be simple to implement since Xcel already measures and reports them. The Commission will direct Xcel to report these metrics both with and without major event days¹⁹ in order to provide a complete picture of service interruption frequency and severity.

The Commission will also adopt the following metrics for future implementation. For the “future metrics” outlined below, the Commission will require Xcel to include a progress report and proposed implementation timeline in its October 31 filing.

First, the Commission will direct Xcel to work with stakeholders to develop measurements and reporting methodology for MAIFI, locational reliability, and power quality. The Commission agrees with the stakeholder reasoning discussed above but recognizes that additional work and technology infrastructure may be needed before these metrics can be widely implemented, particularly the installation of AMI meters.

The Commission will also direct Xcel and stakeholders to develop metrics to measure equity as it relates to reliability. Although the proposed metrics in this area did not specifically relate to equity, the Commission believes that equity in service reliability is an important topic that should be addressed in Xcel’s performance metrics. Xcel and stakeholders are directed to determine an appropriate method to measure and report on equity, which could include geography, income, or other benchmarks relevant to reliability.

C. Customer service quality

1. Metrics proposed by stakeholders

In total, stakeholders proposed approximately 32 metrics for the outcome of customer service quality. A major category of proposed metrics was some type of customer satisfaction score or survey. Currently, third-party customer satisfaction scores are available from J.D. Power and the American Customer Satisfaction Index (ACSI), and Xcel has an in-house customer experience measurement program. Stakeholders described benefits and drawbacks to each method — for example, Xcel stated that it would cost between \$75,000 and \$100,000 to access ACSI’s full suite of metrics; however, the OAG pointed out that in-house measurements can be both expensive and unreliable. CEE recommended that the Commission and stakeholders develop a new customer survey to be implemented by a third party; however, the Department noted that survey design is complicated and time-consuming, and may be just as costly as subscribing to an existing third-party source. Despite these disagreements, parties supported use of some type of customer service score or measurement.

Stakeholders also proposed several metrics that directly relate to customer experience, such as call center response time, billing invoice accuracy, and number of customer complaints. Each of these metrics is currently reported and no additional work would be needed to implement them.

¹⁹ Major event days are generally days on which the system experiences stresses beyond those normally expected, such as severe weather, causing an unusually high level of service interruptions.

Stakeholders proposed several equity-related metrics, including rates of low-income and renter participation in energy efficiency programs, market-rate versus subsidized buildings served, and customers eligible for affordability programs who are also participating in energy efficiency programs. Xcel stated at the Commission meeting that it supports equity metrics in theory but may not have the technical ability to gather the proposed data because it does not track its customers' income levels directly. However, Xcel stated that it does have information on whether each customer is a participant in the Low Income Home Energy Assistance Program (LIHEAP), which could potentially be used as a proxy for income information.

2. Commission action

The Commission will adopt several metrics on customer service quality and will direct Xcel to consider possible future metrics with stakeholder input.

First, the Commission will adopt the publicly available customer satisfaction scores created by J.D. Power and ACSI as a customer service quality metric. Although only public data is available without additional expense, these existing measurements require no additional work to implement and provide valuable impartial insights into Xcel's customer service performance. The Commission will also direct Xcel to work with stakeholders to explore the possibility of either subscribing to a third-party service such as ACSI for detailed survey results, or developing a new survey. The Commission needs more information from Xcel and stakeholders before determining whether it makes sense to require additional customer service measurements, and if so, what those measurements should be. Xcel is directed to include information about this discussion in its October 31 filing.

Second, the Commission will adopt the metrics of call-center response time, billing invoice accuracy, and number of customer complaints. These metrics are already measured and reported, and the Commission believes that they provide valuable insights into Xcel's customer service performance in areas that directly affect customers' experience.

Finally, the Commission will direct Xcel to propose, in consultation with stakeholders, metrics relating to equity in customer service quality. Although stakeholders proposed several metrics relating to equity, it is unclear whether Xcel has the technical ability to implement those metrics. The Commission understands that it is important to carefully choose well-developed metrics and will allow more time for Xcel and stakeholders to work out details in this area. Xcel and stakeholders are directed to determine an appropriate method to measure and report on equity, which could include geography, income, or other benchmarks relevant to customer service quality.

D. Environmental performance

1. Metrics proposed by stakeholders

Stakeholders proposed approximately 44 metrics for the outcome of environmental performance, including metrics in the categories of emissions, beneficial electrification, and deployment of particular renewable technologies such as solar generation.

Many stakeholders proposed metrics related to emissions, with a variety of different approaches. Some stakeholders recommended measuring emissions compared to a baseline, or measuring emission reductions; some preferred a measurement of emissions per MWh, also known as emission intensity. Stakeholders also differed on what type of emissions should be measured — carbon dioxide (CO₂) emissions, criteria pollutant emissions, or both.

Stakeholders also proposed various metrics related to beneficial electrification in other sectors, reasoning that environmental benefits can result from the use of electricity to replace less environmentally-friendly fuel sources, particularly in carbon-heavy sectors such as transportation. Xcel proposed methodologies for measuring the extent to which beneficial electrification reduces emissions from transportation and other sectors of the economy. Other stakeholders generally supported Xcel's proposal as a starting point, while recognizing that the methodology is complicated and needs additional discussion and refinement. Stakeholders also noted potential issues with this metric; for example, it may be difficult to correctly calculate how much electrification would occur without Xcel's actions, and changes in other sectors are at least partially outside of Xcel's control.

Several stakeholders proposed a metric that involved measuring amounts of renewable generation, or amounts of solar generation specifically. However, the OAG recommended not adopting any metrics that require use of a specific technology; rather, the OAG supported the use of outcome-focused metrics that allow Xcel to use whatever technology will permit the Company to achieve the desired outcome. Additionally, the Department noted that Xcel is currently exceeding its solar energy goals, so there is no need to encourage Xcel to acquire more.

2. Commission action

The Commission will adopt metrics in the areas of carbon emissions, criteria pollutant emissions, and impact of electrification on carbon dioxide emissions in other sectors.

First, the Commission will adopt the metrics of total carbon emissions and carbon emission intensity. The Commission will specifically order that these metrics be reported separately for utility-owned facilities and power purchase agreements (PPAs) versus all sources; Xcel has more direct control over utility-owned facilities and PPAs, but the Commission is also interested in carbon emission data that reflects energy obtained from the market.

Next, the Commission will adopt the metrics of total criteria pollutant emissions and criteria pollutant emission intensity. Although many stakeholder proposals focused on carbon emissions, the Commission believes it is also important to track other types of pollutant emissions because of their environmental impacts.

Finally, the Commission will adopt metrics measuring the impact of electrification in other sectors, including transportation, agriculture, and buildings generally. The Commission recognizes that it may be complicated to measure cross-sector impacts, but believes that, based on the work that has already been done, Xcel and stakeholders will be able to determine an adequate measurement methodology in the next step of the PIM process.

E. Cost-effective alignment of generation and load

1. Metrics proposed by stakeholders

Stakeholders proposed approximately 52 metrics for the outcome of cost-effective alignment of generation and load. Although a wide variety of metrics were proposed, many stakeholders focused on metrics that measure demand response.

Demand response is an important resource for keeping the evolving grid efficient and reliable. Demand response is a tool for shifting electricity consumption away from peak load times, for reshaping the underlying load profiles, and, when needed, for shedding load; it can be used to avoid unnecessary investments in generation and distribution infrastructure, increase overall system efficiency, and improve reliability. Various stakeholders agreed that including one or more demand response metrics is important because there is currently no significant financial incentive for utilities to invest in demand response. CEE stated that, although there are clear benefits to the development of demand response programs, any investments in this area are “not currently likely to earn a rate of return.”²⁰ Similarly, Fresh Energy stated that “[t]here is currently a significant disincentive for the utility to match demand with generation, as the utility can earn a return on building additional generation. . . .”²¹ However, “it is in the public interest to encourage the utility to shift electricity demand to the times when renewable electricity is available and at its lowest cost.”²²

Stakeholders proposed many demand response metrics. Some proposed metrics focused on measuring the demand response itself, such as available demand response capacity and amount called, while others focused on modifying customer demand to better spread out load profiles over time (for example, the use of time-varying rates that establish lower costs for off-peak usage, and levels of customer enrollment in such programs).

2. Commission action

The Commission will adopt several metrics related to demand response.

First, the Commission will adopt the metrics of demand response capacity available (measured in megawatts (MW)) and amount called (measured in MW and MWh per year). Both of these metrics together will show valuable baseline data and allow for comparison of capacity and demand over time.

The Commission will also adopt metrics that measure the integration of customer loads with utility supply. Specifically, the Commission will adopt metrics measuring the amount of demand response that (1) shapes customer load profiles through price response, time-varying rates, or behavior campaigns, (2) shifts energy consumption from times of high demand to times when there is a surplus of renewable generation, and (3) sheds loads that can be curtailed to provide peak capacity and support the system in contingency events. These three metrics will illuminate

²⁰ CEE reply comments, at 4 (June 4, 2019).

²¹ Fresh Energy comments, at 3 (May 6, 2019).

²² *Id.*

the various types of demand response on Xcel's system and provide sufficient detail to show how Xcel is aligning generation with load.

Finally, the Commission will direct Xcel to propose, in consultation with stakeholders, metrics that measure the effectiveness and success of the shaping, shifting, and shedding metrics adopted above, both individually and in aggregate. Various stakeholders proposed different methods of measurement, such as net load. However, the Commission believes that more discussion and collaboration is needed to choose the specific methods that will be used.

F. Additional proposed outcome – workforce diversity

In addition to the five outcomes the Commission adopted in its January 2019 order, the City of Minneapolis proposed requiring Xcel to measure and report on the diversity of its workforce. The Commission believes that diversity and community engagement and impact are important topics that require additional stakeholder work. The Commission will direct Xcel to work with stakeholders to develop a metric to measure workforce and community development impact, which may include workforce diversity, safety, compensation, or other relevant factors.

G. Other topics

In the April 2019 Notice of Comment Period, parties were also asked to address several miscellaneous topics, including:

- Should the Commission seek to limit itself to a specific number of metrics, either in total or under each Outcome, and why?
- Should the Commission mandate that the metrics it eventually selects be part of a dashboard in a publicly-accessible area, such as Xcel's website?

The Commission agrees with the numerous stakeholders that supported adoption of a small number of metrics. Dozens of additional metrics were proposed beyond the metrics the Commission will adopt in this order. Although many of those metrics would provide interesting and potentially valuable information, the Commission intentionally selected a small number of core metrics to avoid delays in implementation and to avoid unnecessary burden on Xcel while still gathering sufficient data to measure Xcel's performance on key outcomes.

Many stakeholders supported the idea of making metrics available to the public via an online dashboard. The Commission believes that there may be merit to the idea of a public dashboard, but recognizes that it would take some time to implement. Although the Commission will not establish a timeline for implementation of a public dashboard in this order, the Commission will direct Xcel and stakeholders to develop measurement methodologies and future metrics with an eye towards implementation of public reporting in the future.

The Commission will also establish several principles to guide the stakeholder process going forward. These principles, laid out in ordering paragraph 7 below, were discussed at the Commission meeting and widely supported by Xcel and stakeholders.

ORDER

1. The Commission establishes the following metrics for each outcome identified in the January 8, 2019 Order:
 - a. Affordability
 - i. Rates per kWh based on total revenue, reported (1) by customer class and (2) with all classes aggregated
 - ii. Average monthly bills for residential customers
 - iii. Total arrearages for residential customers
 - iv. Total disconnections for nonpayment for residential customers
 - b. Reliability
 - i. Initial metrics:
 1. System Average Interruption Duration Index (SAIDI)
 2. System Average Interruption Frequency Index (SAIFI)
 3. Customer Average Interruption Duration Index (CAIDI)
 4. Customers Experiencing Long Interruption Duration (CELID)
 5. Customers Experiencing Multiple Interruptions (CEMI)
 6. Average Service Availability Index (ASAI)
 7. Items 1 to 6 must be reported with and without major event days.
 - ii. Future metrics:
 1. Momentary Average Interruption Frequency Index (MAIFI)
 2. Locational reliability
 3. Power quality
 4. Equity – reliability by geography, income, or other relevant benchmarks
 - c. Customer service quality
 - i. Initial customer satisfaction metrics:
 1. Existing multi-sector metrics, including ACSI and J.D. Power
 - ii. Possible future customer satisfaction metrics:
 1. Commission-approved utility-specific survey
 2. Subscription to third-party customer satisfaction metrics

- iii. Utility performance metrics:
 - 1. Call center response time
 - 2. Billing invoice accuracy
 - 3. Number of customer complaints
 - iv. Equity metric – customer service quality by geography, income, or other relevant benchmarks
 - d. Environmental performance
 - i. Total carbon emissions by (1) utility-owned facilities and PPAs and (2) all sources
 - ii. Carbon intensity (emissions per MWh) by (1) utility-owned facilities and PPAs and (2) all sources
 - iii. Total criteria pollutant emissions
 - iv. Criteria pollutant emission intensity (criteria pollutant emissions per MWh)
 - v. CO₂ emissions avoided by electrification of transportation
 - vi. CO₂ emissions avoided by electrification of buildings, agriculture, and other sectors
 - e. Cost-effective alignment of generation and load
 - i. Demand response, including (1) capacity available (MWh) and (2) amount called (MW, MWh per year)
 - ii. Integration of customer loads with utility supply, including:
 - 1. Amount of demand response that shapes customer load profiles through price response, time varying rates, or behavior campaigns;
 - 2. Amount of demand response that shifts energy consumption from times of high demand to times when there is a surplus of renewable generation;
 - 3. Amount of demand response that sheds loads that can be curtailed to provide peak capacity and supports the system in contingency events; and
 - 4. Metrics that measure the effectiveness and success of items 1 to 3, individually and in aggregate.
2. Xcel shall work directly and collaboratively with interested parties to develop proposed specific methods to calculate (to the extent not already developed), verify, and report each of the metrics outlined above.
 3. Xcel shall also work with stakeholders on development of a future metric to measure workforce and community development impact.
 4. No later than October 31, 2019, Xcel shall file a description of the corresponding methodology underlying each of the metrics outlined above, and a proposed process

schedule for reporting the metrics. For metrics identified above as “future metrics,” Xcel and stakeholders are directed to provide an update on methodology development in the October 31, 2019 filing, including a proposed schedule for finalizing methodology and a timeline of when reporting is anticipated to begin.

5. The Commission hereby delegates authority to the Executive Secretary to issue notices, set schedules, and designate comment periods for PIM step 4, including initial and reply comments.
6. It is anticipated that the Commission will consider the record and comments on PIM step 4 no later than the end of first quarter 2020. It is also anticipated that the metrics approved by the commission could be reported to the commission for a period beginning January 1, 2020.
7. The Commission establishes the following guidance for Xcel and stakeholders:
 - a. Utility performance metrics should be focused on results and outcomes. Metrics should not prescribe detailed or specific tools or tactics. This will provide the utility the opportunity to be flexible and tailored to its unique system and customers' needs.
 - b. Metrics should not support the deployment of specific technologies such as only one type of electric generation, unless such information is needed for a utility to comply with statutes.
 - c. Metrics identified to gauge environmental performance should directly measure environmental emissions and impacts.
 - d. Parties should develop measurement methodologies and future metrics with an eye toward development of a utility performance dashboard.
 - e. Metrics directed by the Commission at this stage of the process are not to be viewed as the final, exclusive list. As stakeholders work forward through the PIM process they may propose reshaping or adding to the metrics outlined above.
8. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

Daniel P. Wolf
Executive Secretary



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