MINNESOTA
PUBLIC UTILITIES COMMISSION

Staff Briefing Papers

Meeting Date	**November 2, 2023**		**Agenda Item **4**
Company	Northern States Power Company d/b/a Xcel Energy		
Docket No.	E002/CI-17-401		
	In the Matter of the Commission Investigation to Identify and Develop Performance Metrics and, Potentially, Incentives for Xcel Energy's Electric Utility Operations		
Issues	What action should the Commission take on performance-based regulation for Xcel Energy (Xcel or the Company), including Xcel's 2021 and 2022 performance-based regulation annual reports (PBR reports)?		
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✓ **Relevant Documents**	**Date**
Xcel Energy, Proposed Metric Methodology and Process Schedule	October 31, 2019
Report- 2020 Performance Metrics Annual Report, Xcel Energy	April 30, 2021
Compliance Filing- 2021 Annual Report- Performance Metrics and Incentives, Xcel Energy	April 29, 2022
Report- 2022 Performance Metrics Incentives Annual Report, Xcel Energy	April 28, 2023
Errata filing, Xcel Energy	July 11, 2023
Participant Comments and Replies	

✓ **Relevant Documents**	**Date**
Comments, Department of Commerce	July 28, 2023
Comments, Center for Energy & Environment and Fresh Energy	July 28, 2023
Comments, Xcel Energy	July 31, 2023
Comments, Office of the Attorney General, Residential Utilities Division	July 31, 2023
Comments, Citizens Utility Board of Minnesota	July 31, 2023
Comments, R Street Institute	July 31, 2023
Comments, Environmental Law & Policy Center and Vote Solar	August 1, 2023
Reply Comments, Department of Commerce	August 10, 2023
Reply Comments, Xcel Energy	August 14, 2023
Reply Comments, Fresh Energy	August 14, 2023
Letter, Office of the Attorney General, Residential Utilities Division	August 14, 2023
Reply Comments, Citizens Utility Board of Minnesota	August 14, 2023
Reply Comments, City of Minneapolis	August 15, 2023

Orders in docket no. E002/CI-17-401, unless indicated	
Order Approving Amendments to Service-Quality Tariff, docket nos. E,G002/CI-02-2034 and E,G002/12-383	August 12, 2013
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, Findings of Fact, Conclusions, and Order	June 12, 2017
Order Establishing Performance-Incentive Mechanism Process	January 8, 2019
Order Establishing Performance Metrics	September 18, 2019
Order Accepting Reports, Establishing Reliability Standards, and Requiring Additional Filings issued in docket no. E002/M-19-261	January 28, 2020
Order Establishing Reporting Methodologies and Reporting Schedules	April 16, 2020
Order Accepting Integrated Distribution Plan, Modifying Reporting Requirements, and Certifying Certain Grid Modernization Projects, docket no. E002/M-19-666	July 23, 2020
Order Accepting Reports, Requiring Additional Filings, and Establishing Workshop, docket no. E002/M-20-406	December 18, 2020
Order issued in docket nos. E,G002/CI-02-2034 and E,G002/12-383	February 18, 2021
Order Accepting Report and Setting Additional Requirements	February 9, 2022
Order Accepting Reports and Setting 2021 Reliability Standards, docket no. E002/M-21-237	March 2, 2022

✓ **Relevant Documents**	**Date**
Order Approving Modified Load-Flexibility Pilots and Demonstration Projects, Authorizing Deferred Accounting, and Taking Other Action, also issued in docket no. E002/M-21-101	March 15, 2022
Order issued in docket no. E002/M-22-162	November 9, 2022
Order, also issued in docket no. E002/M-20-406	May 18, 2023
Order Approving Rider Recovery, Capping Costs, and Setting Filing Requirements issued in docket no. E002/M-21-814	June 28, 2023

Relevant Documents, Other Dockets	
Xcel Petition filed in docket no. E,G002/ CI-02-2034	April 16, 2012
Xcel IRP at pages 36, 70 and Appendix N10- Nuclear Worker Transition Plan	July 1, 2019
Xcel AMI Remote Disconnect / Reconnect Petition in Docket no. E002/M-22-233	May 20, 2020
Xcel Reply Comments, Section 4: Modeling and Rebuttal, p. 120 of 173, Docket No. E002/RP-19-368, June 25	June 25, 2021
Xcel initial filing made in Docket No. E002/M-21-814	November 24, 2021
Xcel Petition filed in docket no. E002/M-23-145	March 31, 2023
2023 Annual Demand Response Report, Docket 20-421	February 1, 2023
Xcel Compliance Filing for Transmission Cost Recovery Rider, docket no. E002/M-21-814	September 25, 2023

Table of Contents

List of Acronyms

ACSI	American Customer Satisfaction Index
AMI	Advanced Metering Infrastructure
ASAI	Average System Availability Index
CAIDI	Customer Average Interruption Duration Index
CELID	Customers Experiencing Lengthy Interruption Durations
CEMI	Customers Experiencing Multiple Interruptions
CFS	Carbon Free Standard
CPP	Critical Peak Pricing
CWR	Cold Weather Rule, season October – April
ECO	Energy Conservation and Optimization Act
EIA	US Energy Information Administration
FAN	Field Area Network
IEEE	Institute of Electrical and Electronics Engineers
IIJA	Infrastructure Investment and Jobs Act
IOU	Investor-Owned Utility
IRA	Inflation Reduction Act
MISO	Midcontinent Independent System Operator (maintains flow of high-voltage electricity across 15 states and Manitoba, Canada, facilitates an energy market, and grid planning)
MYRP	Multi-year Rate Plan
NGIA	Natural Gas innovation Act
NOX	Nitric Oxide
PBR	Performance-Based Regulation
PIM	Performance Incentive Mechanism
PM	Particulate Matter (solid particles and liquid droplets in the air)
PPA	Power Purchase Agreement
QSP	Xcel's Service-Quality Plan / Quality of Service Plan tariff/ Service-Quality tariff
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SO_2	Sulfur Dioxide
SRSQ	Safety, Reliability, and Service Quality
TCR	Transmission Cost Recovery
TOU	Time of Use

I. Issue

What action should the Commission take on performance-based regulation (PBR) for Xcel Energy (Xcel or the Company), including Xcel's 2021 and 2022 performance-based regulation annual reports (PBR reports or annual PBR reports)?

As presented in Staff's May 26, 2023 Notice of Comment in the instant docket as well as in comments filed in response, the following topics are before the Commission:

- Procedural next steps
- Accepting the Company's 2021 and 2022 PBR reports
- Commission's overall position on reporting, baselines, and targets
- Existing metrics and data review, including considering baselines and targets
- Changes to metrics
- Creating an online scorecard

II. Background

Minnesota Statute § 216B.16, subd. 19, parts (a) and (h) authorize the Commission to 1) require a utility filing a multiyear rate plan (MYRP) to provide a set of reasonable performance measures and incentives that are quantifiable, verifiable, and consistent with state energy policies, and/or 2) initiate a proceeding to determine a set of performance measures that can be used to assess a utility operating under a MYRP. Xcel Energy's (Xcel or the Company) 2015 rate case included a set of performance mechanisms for the Commission's consideration. To further develop the measures, the Commission's June 12, 2017 Order in the 2015 rate case authorized the instant docket to "identify and develop performance metrics and standards, and potentially incentives, to be implemented during the multi-year rate plan."[1]

On January 8, 2019 the Commission adopted the Performance Incentives Mechanism (PIM) process proposed by the Office of Attorney General, Residential Utilities Division (OAG) and established goals and outcomes for Xcel's PBR proceeding.[2] In its Order the Commission explained:

> A key purpose of this docket is to further align the Company's performance with the public interest. The Commission seeks to streamline metric reporting, to better align it with the other parts of the utility's regulatory system, and to use this process to identify where existing metrics do not adequately meet the metric design principles.[3]

[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). Order Point 8.

[2] Order Establishing Performance-Incentive Mechanism Process, January 8, 2019, docket no. E-002/CI-17-401.

[3] Order Establishing Performance-Incentive Mechanism Process, January 8, 2019, docket no. E-002/CI-17-401 at 11; see metric design principles in ordering paragraph 2c at 12

The outcomes established in the January 8, 2019 Order included affordability, reliability, customer service quality, environmental performance, and cost-effective alignment of generation and load, including demand response. The Order also established a set of metric design principles.

In its September 18, 2019 Order the Commission continued to work through the OAG's PIM process. The Commission approved a set of 33 reporting metrics under the five established outcomes and directed Xcel and parties to develop methods to calculate, verify, and report on the metrics (see Appendix A for complete list of metrics).

In its April 16, 2020 Order the Commission again moved forward in the PIM process. It approved a data collection methodology and reporting schedule for the 33 metrics established in the January 8, 2019 Order.

On April 30, 2021, Xcel Energy filed its first annual report which shared data collected in 2020; the Commission accepted the report in its February 9, 2022 Order. On April 29, 2022 and April 28, 2023, Xcel filed its second and third PBR annual reports for data from 2021 and 2022, respectively. The reports comprise three years of reporting data on the metrics established in the Commission's January 8, 2019 Order.

On May 26, 2023, the Commission issued a Notice of Comment Period contemplating the Commission's next move through the PIM process. The Notice asked what action the Commission should take in Xcel's PBR proceeding, including accepting the second and third reports as well as if and how the Commission should establish baselines and targets.

Since the close of the extended comment period on August 14, 2023, seven groups filed initial comments and six filed reply comments. In this briefing paper, Staff presents procedural next steps in the docket no. E002/CI-17-401 (PBR Docket) proceeding, offers review and interpretation of the 2020-2022 PBR reports, discusses participant comments on each metric established in the September 18, 2019 Order, and examines potential baselines and targets.

III. PIM Process Review and Decisions Before the Commission

Minn. Stat. § 216B.16 and previous Commission Orders initiated a process focused on establishing performance measures and, potentially, incentives that can be used to assess a utility operating under a MYRP. The step-by-step process is summarized in Table 1 below.

Table 1: Performance Incentive Mechanism Process

Step	Action	Order Accomplishing Step
1	Articulate goals	January 8, 2019
2	Identify desired outcomes	January 8, 2019
3	Identify performance metrics	September 18, 2019
4	Establish metrics & review	September 18, 2019; April 16, 2020
5	Establish targets as needed	
6	Establish incentive mechanisms as needed	
7	Evaluate, improve, repeat	

The Commission's PBR process shown above expects metrics to be set and reported on; however, the process only requires targets and incentives *to be considered*, and then set if needed. Staff notes that the Commission has completed the expected steps of the process in Steps 1-4. As discussed further in these briefing papers, the Department offered two paths to move to step five: 1) the Commission can move forward setting baselines and targets for some metrics now (**Decision Option 22**), or 2) wait and consider setting baselines and targets after the Company files its next annual report (begin at **Decision Option 29**). Staff notes that the second path entails another year of a "reporting only" approach but does not preclude the Commission from taking up baselines and target in the future. Additionally, the Commission must also consider whether to accept the Company's 2021 and 2022 Annual PBR Reports, make changes to any metrics, and whether Xcel should post an online performance scorecard.

IV. Procedural Next Steps

A. Positions of the Parties

Center for Energy and Environment (CEE) and Fresh Energy argued that data collected during the pandemic produced three years of historic baseline data that are not "appropriate" or "predictive" of current or future performance.[4] More, due to recent legislative changes including the ECO act and Minnesota's commitment to 100% clean electricity generation by 2040, CEE and Fresh Energy stated the Commission should take no action on PBR targets until there is greater certainty of legislative impacts.

Xcel initially recommended the Commission establish some baselines and targets,[5] but ultimately agreed with other commenters that the Commission should take no action at this time and requested postponing the discussion of baselines and targets until the Company files its year 2023 metrics report in April 2024.[6]

Though not advocating to pause the process, Citizens Utility Board (CUB) and Environmental

[4] Initial Comments, Fresh Energy and Center for Energy and Environment (CEE), July 28, 2023, docket no. E002/CI-17-401 at 1
[5] Xcel initial comments discussed baselines at 13 and targets at 17; Attachment A proposed targets and baselines.
[6] Xcel replies at 2

Law and Policy Center (ELPC)/Vote Solar noted that the Commission should be wary of pandemic-related and legislative impacts on PBR.[7] CUB advised that data may have been skewed by the pandemic and attempted to smooth COVID impacts by creating a baseline from six years of historic data (2017-2022); however, CUB questioned **"**whether data from years prior to 2020 remains representative of a typical year moving forward."[8]

The OAG and Minnesota Department of Commerce, Division of Energy Resources (Department) recommended baselines and targets that would move the PBR process forward. With respect to baselines, the Department spoke only to the impact of the Pandemic on some affordability metrics. For arrearages and disconnects only, the Department suggested creating baselines by removing data from 2020 and 2021, years that reflect Pandemic performance, and instead using data from 2016-2019 and 2022.[9] Conversely, the OAG explained that reliability metrics showed that the Pandemic did not impact performance. The OAG quoted Xcel's report:

> As Xcel itself noted, during 2021—in the midst of the COVID-19 Pandemic—"NSPM's SAIDI performance was at the 1st quartile performance level." This seems to indicate that for all its ravages, the COVID-19 pandemic did not meaningfully impair Xcel's ability to maintain reliable service for its customers, and supports the use of Xcel's most current reported reliability data in setting baselines and targets.[10]

Both the Department and OAG saw nuance in that targets could be set for some metrics, like those with targets already established by existing legislation, but perhaps not for others like the environmental metrics that may be impacted by recent federal or state legislation. Similarly, the City of Minneapolis noted that pausing the PBR process may only be necessary for metrics "where federal and state policy and program changes might impact performance target expectations."[11] The OAG reasoned, "in setting baselines and targets without further delay, the Commission could enable performance analysis at an earlier date, thus bringing the parties to this proceeding closer to review and refinement of at least some metrics."[12]

V. Xcel's 2021 and 2022 PBR Reports

As noted above, the Company has now filed three years of data on the metrics established under the categories of affordability, reliability, customer service quality, environmental performance, and cost-effective alignment of generation and load. The Commission accepted

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[7] Initial Comments CUB at 7 and ELPC/Vote Solar at 3, both July 31, 2023 in docket no. E002/CI-17-401. Also, Replies, Fresh Energy, August 14, 2023, Docket No. E002/CI-17-401

[8] Initial Comments, Citizens Utility Board (CUB), July 31, 2023, docket no. E002/CI-17-401 at 7-8

[9] Reply Comments, Department, August 10, 2023, docket no. E002/CI-17-401 Attachment A.

[10] Initial Comment, Office of Attorney General (OAG), July 31, 2023, at 7 quoting text from Xcel 2022 SRSQ Report at 36.

[11] City of Minneapolis, Reply Comments, August 14, 2023 (listed in eDockets as Aug. 15), docket no. E002/CI-17-401 at 1

[12] Office of the Attorney General, Reply Comments, August 14, 2023, docket no. E002/CI-17-401 at 1-2

the Company's first year of reporting in its February 9, 2022 Order. Staff recognizes that the most recent Notice of Comment did not include a prompt to analyze the Company's 2021 and 2022 data; as such, respondents did not comment directly on the data provided. However, CEE, Fresh Energy, the Department, ELPC/Vote Solar, City of Minneapolis, and R Street recommended the Commission accept the Company's 2021 and 2022 PBR Reports. The OAG and Department did not comment on the matter. Xcel's initial comments also recommend approval of both 2021 and 2022 reports.

Staff supports acceptance of 2021 and 2022 reports though notes that some data need to be clarified, as discussed below.

VI. Commission's Position on Reporting, Baselines, and Targets

A. PBR vs Quality of Service Plan/ Service-Quality Tariff (QSP)

The Commission's earliest discussion on Performance Metrics, its June 12, 2017 Order in the Company's 2015 rate case, named the Company's Quality of Service Plan/ Service-Quality Tariff (QSP) metrics as Xcel's existing performance metrics.[13] Later in the Order, the Commission concluded, "that a new docket will provide the best venue for determining what combination of metrics and incentives, **in addition to those** already in Xcel's QSP, would appropriately align utility and ratepayer interests [emphasis added]."[14] As the "new docket" referenced by the Commission has progressed into the topics before the Commission at this current agenda meeting, the Department concluded that QSP should be modified or terminated with PBR to ensure no conflicting targets were set nor double punishments received.[15] The Department also prompted Xcel to speculate on how QSP metrics, targets, and incentives might be incorporated into PBR.

In replies, the Company stated that it does not support a move of QSP targets to PBR as the current QSP process is effective and moving QSP would not offer significant benefit. More, the Company linked the QSP targets to safety, reliability, and service quality (SRSQ) proceedings, perhaps because there is metric overlap between the two dockets (see Appendix A). Xcel stated that because SRSQ is defined in Minnesota Rules and impacts more utilities than just Xcel, *if* QSP were to be modified, *then* the Commission should open an "all utility" docket to examine impacts of targets and incentives on SRSQ proceedings.[16]

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[13] Findings of Fact, Conclusions, and Order issued June 12, 2017 in docket no. E-002/GR-15-826 at 23, "The Commission concludes that a new docket will provide the best venue for determining what combination of metrics and incentives, in addition to those already in Xcel's QSP Tariff, would appropriately align utility and ratepayer interests."

[14] Findings of Fact, Conclusions, and Order issued June 12, 2017 in docket no. E-002/GR-15-826 at 23

[15] Initial Comments, Department, filed July 28, 2023, docket no. E002/CI-17-401 at 6

[16] Xcel replies August 14, 2023 at 3.

1. Staff Analysis

Staff does not believe the record is developed enough to determine the future of QSP; more, the QSP docket was not noticed in the instant proceeding. Staff does support reviewing performance in the QSP docket, including penalties, and considering how that performance would interact with PBR if targets and/or incentives were to be set (see Appendix B). Staff notes that in its January 8, 2019 Order the Commission stated PBR metrics "should complement and inform evaluation of utility performance" and that "performance metric systems should be designed to complement – not replace – other parts of a utility's regulatory system such as multi-year rate plans and cost trackers."[17]

B. Evaluating Metrics and Targets

1. Long-term Evaluation

Commenters also suggested a plan to review metrics and targets with regularity moving forward. The Department, City of Minneapolis, and OAG agreed that the Commission should order review and refinement of metrics and targets every three years.[18] The Company agreed and also stated that targets need to allow for long-term planning and investments and therefore supports targets tied to long-term policy goals.[19]

2. Current Evaluation

At this juncture in the PBR proceeding, commenters suggested adding new metrics to this docket and removing some metrics that may no longer be beneficial. Commenters, like OAG and Xcel, also requested removal of redundant reporting, stating that redundancy increases costs due to additional staff time, and is burdensome for administrators and for "stakeholders who often have limited time to weed through the myriad sources in which vital information is filed."[20] Xcel, for example, recommended "a focused approach" where only metrics with targets or incentives would be reported in the instant docket.[21]

3. Staff Analysis

Regarding redundancy, Staff notes that if slightly different search queries or calculations are used to pull or analyze the same data across dockets, it would indeed be burdensome for utilities to file that information. Stakeholders would also likely find it confusing to comprehend slight differences in each data set. Therefore, while Staff agrees that redundant reporting is burdensome and confusing, staff believes problems instead arise when reporting is not

[17] Order Establishing Performance-Incentive Mechanism Process, January 8, 2019, docket no. E002/CI-17-401 in ordering paragraph 2c at 12.
[18] Office of the Attorney General, Reply Comments, August 14, 2023, docket no. E002/CI-17-401 at 2. Dept replies at 11. City of Minneapolis Replies, August 14, 2023 in docket no. E002/CI-17-401 at 2 mentioning only reliability.
[19] Xcel Initial comments at 16
[20] Office of the Attorney General, Reply Comments, August 14, 2023, docket no. E002/CI-17-401 at 3
[21] Xcel initial at 8

standardized across dockets. Staff understands work has been done to align PBR reporting with other dockets like SRSQ[22] and, in service of these decisions, Staff recommend that the Commission focus on consistency of reporting data across dockets rather than addressing redundancy.

C. Calculating Baselines

The Department and Company use a different meaning for baseline, at times. For some metrics, the Department and OAG calculated a baseline as an average, using three years of historic data. Xcel suggested that generally, using three years of *rolling* data to form baselines was appropriate; meaning baselines would change annually. For other metrics, the Department used, "what it considered to be pre-existing benchmarks or a calculation that would provide a baseline."[23] Staff interprets this to be a minimum acceptable threshold. The Commission may wish to ask for clarification on calculating baselines during the agenda meeting.

1. Staff Analysis

First, staff sees value in setting a common definition of baseline data. In Staff's experience, baseline data are collected during the time before an "intervention" which, in the instant docket, would be prior to instituting targets or incentives. Under this definition, baselines are used as a starting point against which to measure the impact of an intervention. Staff sees value in discussing which years of historical data to include in a static baseline calculation. Baselines would be established once and would not change regularly. Staff only sees a need for rolling baselines if performance targets were derived from baseline data.

Regarding review and potential updates, Staff supports regular discussions of metrics and targets. Three years, as suggested, would fit with the approximate cadence for which new multi-year rate cases could be filed. Though, Staff does support static baselines, if targets were to be based on those baseline data, e.g. improvement from baseline, Staff would also support review of baselines every three years. At that time, the Commission could consider a second, "time-2 baseline" that would reflect the most recent static three year average, if appropriate.

D. Targets

Xcel defines targets through its work with Synapse as follows:

> A performance target defines the precise level of service that a utility is expected to achieve during a particular time period. Targets may be used simply to provide guidance for a utility, with neither a penalty nor reward attached. Performance targets can also be used as the basis for providing a utility with a financial incentive

[22] Order Establishing Methodologies and Reporting Schedules, April 16, 2020 docket no. E-002/CI-17-401 at ordering paragraph 1h and at 9.
[23] Dept replies at 8.

to achieve desired outcomes.[24]

Thus, the presence of a target, even absent an incentive, may have positive impacts on utility performance. Targets may also change, as goals change over time.

The Company, Department, and OAG commented on setting targets as summarized in Table 2 below.[25] Xcel initially suggested a limited number of targets for metrics, all based on existing QSP or IRP values, though ultimately recommended waiting until more data were collected. The Department recommended a two-tiered approach in which first, if a metric has a pre-existing baseline or benchmark defined in Minnesota Rule, tariff, or Order, then the Commission simply transfer that benchmark to PBR.[26] Second, the Commission could set baselines and targets for metrics that were developed from other proceedings or created for PBR. The Department saw value in creating a holistic picture of baselines, targets, and later, incentives to "allow the Commission to consider and balance trade-offs between affordability, reliability, customer service quality and environmental concerns necessary to develop a PBR outcome similar in scope to one developed using cost-of-service regulation."[27] Finally, some of the OAG's targets aligned with Xcel's and the Department's while others were more aggressive.

1. *Staff Analysis*

Staff created Table 2 to show areas of agreement across commenters' proposed targets, with italicized items noting slight differences. More, Staff conducted an in-depth review of 13 states' PBR proceedings as discussed below (see Appendix C for greater detail).

[24] Initial Comments, Xcel, at 14
[25] Xcel and others also offered thoughts on incentives, but Staff is under the impression that the Commission will discuss these during a future proceeding.
[26] Department initial comments at 16-17.
[27] Department replies at 4

Table 2: Commenters' Proposed Targets

Metric	Xcel	OAG	Department
Affordability	*None*	Rates and Bills 5% below national average Decreased arrears and disconnections	Rates and Bills 5% below national average Decreased arrears and disconnections
Reliability	Use QSP/SRSQ targets for SAIDI, SAIFI, CEMI, and CELID	Use QSP/SRSQ targets for SAIDI, SAIFI, CEMI, CELID, *CAIDI, and ASAI and maintain or improve*	Use QSP/SRSQ targets for SAIDI, SAIFI, CEMI, CELID, *CAIDI, and ASAI*
Customer Service	Use QSP targets for Calls, Bills, and Complaints	*Improve on* QSP targets for Calls, Bills, and Complaints	Use QSP targets for Calls, Bills, and Complaints
Environment	Total Carbon Emissions based on IRP	*No Comment*	Total Carbon Emissions *& Intensity; Total Criteria Pollutants and Intensity* based on IRP

Staff looks at alignment in metric targets, and greatly appreciates the Department's Reply Comment Attachments A and B which provide extraordinary detail across the comments. Italics used to highlight differences.

Staff is grateful that the Department acknowledged the potential insights offered by NARUC's PBR working group.[28] Staff is a member of this group and began to examine how other states have approached PBR with a review of the spreadsheet referenced by the Department. Staff conducted an in-depth review of 13 states' PBR proceedings. Not meant to be comprehensive, the review instead represents a deep dive into multiple ways states are enacting PRB (Appendix C). Staff concluded that some states are reporting only metrics, simply reported as a set of values, while others report metrics compared to a specific target.

More, not all metrics require an incentive; for example, in Hawaii only a small subset of "priority metrics" have a performance incentive mechanism. Targets may be set based on existing information, like policy goals, Commission rules, third party benchmarks, or targets calculated in other dockets (like a rate case). With pre-existing targets, it is possible to set PBR targets without first collecting baseline data. Some targets are built on a utility's baseline data, such that performance is targeted to be at or near that average for a certain percent of time. In Hawaii, some targets are not a numerical value but are instead percent decrease or increase from a previous year or set of forecasted values, for example a GHG target that is a straight-line reduction from 2019 -2045. Other metrics, like use of a certain programs, set participation targets as 100% of customers who have smart meters. Some metrics do not have targets but instead are rewards for each customer signed up for a specific rate or service.

[28] Initial comments, Department of Commerce, filed July 28, 2023 in Docket No. E002/CI-17-401 at 29, "The Department also suggests the Commission ask interested parties to review the NARUC publication titled: "Tracking State Developments of Performance-Based Regulation" and to provide feedback on the information included in that document."

E. Staff Note on Scope of PBR Docket

Xcel stated that the scope of PBR was limited to electricity service.[29] Staff acknowledges that as only Xcel Electric has a multi-year rate plan[30], only that branch of service may be considered eligible for PBR under Minn. Stat. § 216B.16 subd. 19, parts (a) and (h). However, in practice, such a divide is less distinct. For example, Xcel reports that many of its customers receive both gas and electric service and that as such, service quality metrics reflect both gas and electric customers. More, while reporting on gas utility's distribution system and upstream fugitive methane emissions would not be a direct reflection of the Company's electric system, the Commission has ordered methane as a reporting metric in the instant docket.

Staff envisions PBR as a system-wide summary of Xcel's performance. The Commission will need to determine if it is appropriate to consider gas as a part of that system or not, especially as there is now a dedicated natural gas resource planning process underway.[31]

VII. Existing Metrics: Data Review and Discussion on Baselines and Targets

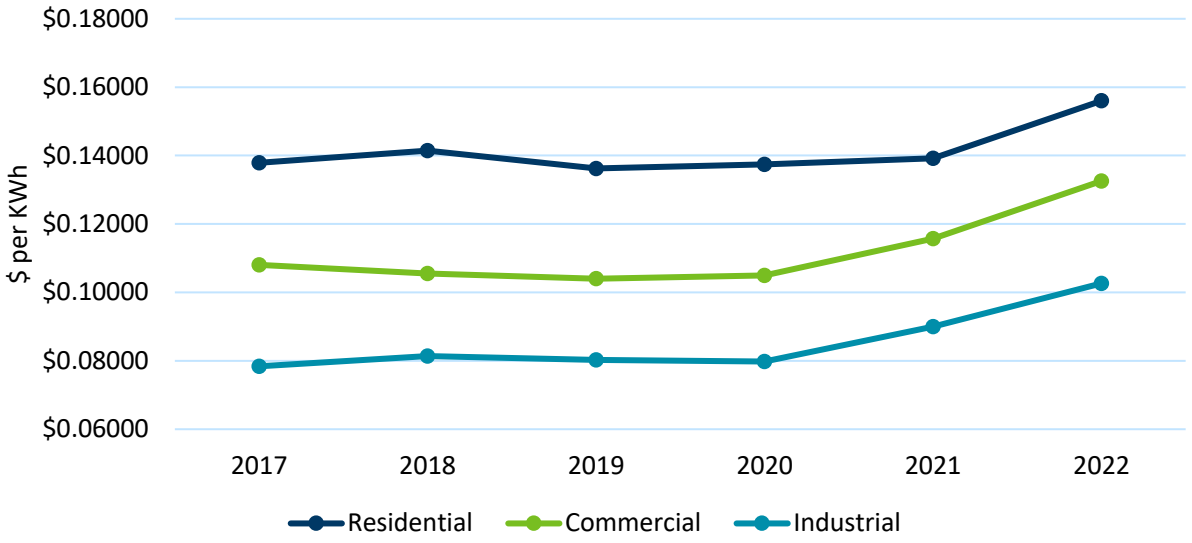
A. Affordability Metrics

1. *Staff Summary of Annual Reports and Presentation of Historic Data – Rates and Bills*

As reported in Xcel's most recent PBR annual report, rates for all three customer classes, residential, commercial, and industrial, were highest in 2022 but the lowest rates were not necessarily the earliest year of data collection (Figure 1).

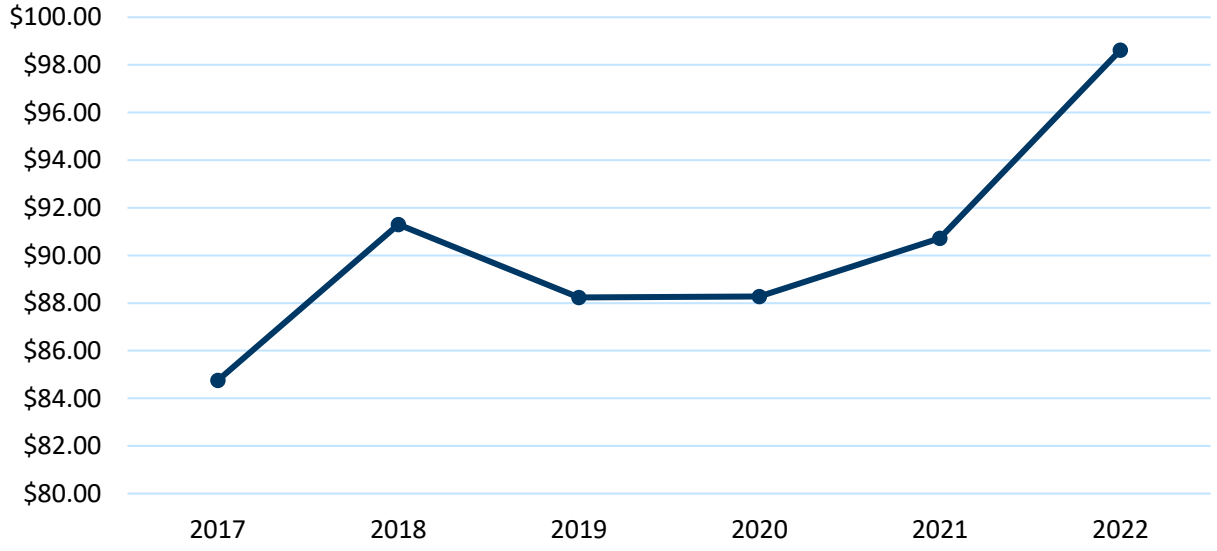
[29] Xcel replies filed August 14, 2023 in docket no. E002/CI-17-401 at 12
[30] In the Matter of the Application of Northern States Power for Authority to Increase Rates for Electric Service in the State of Minnesota, Docket No. E-002/GR-15-826, Finding of Fact, Conclusions, and Order (June 12, 2017).
[31] See docket no. G008,G002,G011/CI-23-117.

Figure 1: Customer Rates 2017 - 2022



While rates are a standard value for all customers, bills are dependent on energy usage and therefore vary by customer characteristics. As shown in Figure 2 below, Xcel's most recent PBR annual report included data from 2017-2022. The report stated that residential customers' average monthly bill ranged from $84.75 in 2017 to $98.62 in 2022. Average monthly bills for commercial and industrial customers were not required to be reported in PBR annual reports.

Figure 2: Average Monthly Bill, Residential Customers



2. Participant Comments

The OAG did not recommend baselines for bills or rates but did recommend baselines for arrears and disconnects using the most recent three years of historic data (see section below).

Similarly, CUB did not recommend baselines for bills or rates but did postulate that, "Reviewing this broader data set may reduce some of the concerns described above, but we question whether data from years prior to 2020 remains representative of a typical year moving forward."[32] The Staff analysis section for rates and bills will apply commenters' logic to show what a baseline using the three and six most recent years of data would look like. Staff's figure also shows the Department's recommend baseline. The Department recommended baselines for rates and bills set at the U.S. Energy Information Administration (EIA) national average for the most recent year; the baseline for bills was calculated using a correction factor based on the usage of Minnesota customers (see Figures 3 and 4).[33]

For targets, the OAG recommended setting targets for rates, as described by the Legislature in MN Statute §216C.05, at 5% below the national average, using data reported by the EIA; the OAG recommended the same target for bills, 5% below the national average.[34] The Department also recommended targets at 5% below the national average for rates and 5% below the "national average corrected for MN usage" for bills, both calculated from values reported by the EIA for the most current year of data, 2021 (see Figures 3 and 4).[35]

Importantly, the Department identified three caveats when using EIA data. First, the EIA information has a temporal lag such that the data will always be one year behind (for example, while the Company just filed its 2022 data, only 2021 EIA data are available). Second, the Department did not review EIA data collection procedures so EIA data may need to be modified to be comparable to the rate information provided by Xcel. Finally, data could need corrections generally. Specifically, regarding average monthly residential bills, the Department proposed a calculation of the product of the EIA national residential rate multiplied by the average number of kilowatt hours consumed by an Xcel MN residential ratepayer.[36]

The Company recommended establishing baselines for rates and bills metrics utilizing the Commission's most recent approved rates in Docket No. E002/GR-21-630, as shown in the Company's Electric Tariff Book.[37] The Company does not support establishing targets or PIM methodologies for rates or residential customer bills. The Company explained:[38]

1. Rates are set by the Commission and balance a variety of policy concerns so are therefore out of the Company's control.
2. Targets, and potential future incentives, should not be contingent upon other states' Commission decisions, including customer rates and programs offered. Again, these

[32] CUB initial comments at 7
[33] Department initial comments in E002/CI-17-401 at 24. Correction factor: EIA National rates by customer class for most recent available year multiplied by the average monthly residential usage for an Xcel residential customer.
[34] Initial comments, OAG at 3-5; Dept initial at 20; referencing Minn. Stat. 216C.05, Subd 2 (4).
[35] Department initial at Attachment A p1
[36] Dept initial at 20
[37] Xcel comments filed July 31, 2023 in docket no. E002/17-401 in Attachment A p1.
[38] Xcel Reply Comments filed August 14, 2023 in docket no. E002/CI-17-401 at 4-7. Quoted text in 3 found at 5.

variables are out of the Company's control.
3. Commenters "cherry-picked" only one of the Legislature's goals but that goal may be in tension with other goals, for example, "increased conservation efforts are specifically designed to reduce consumption, which, unless offset by other forms of load growth, will result in the need for the utility to increase rates."
4. Affordable rates may be subjective, as some C&I and wealthier customers could likely afford much higher rates.

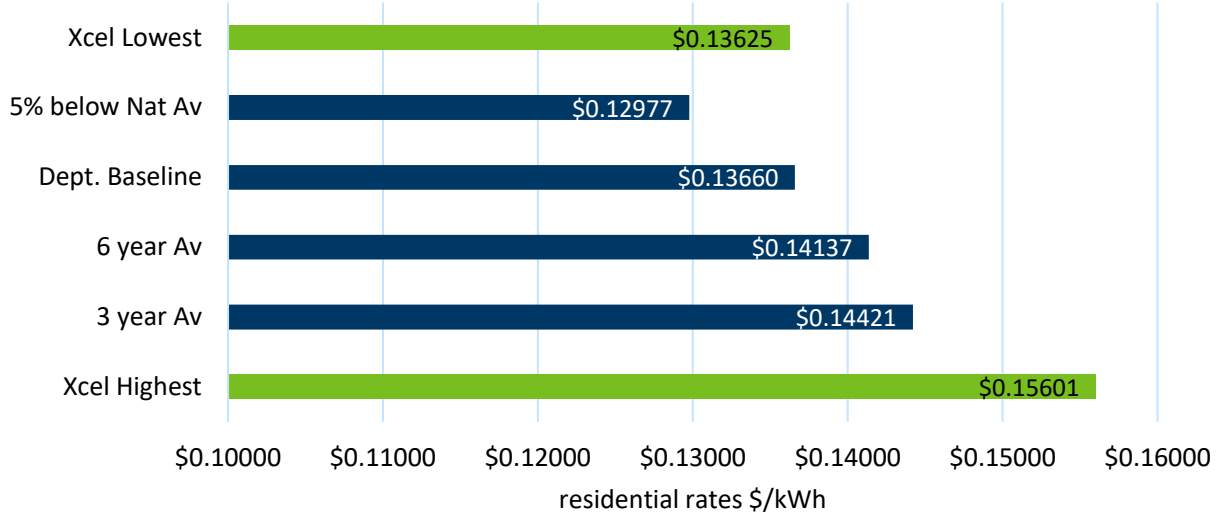
3. Staff Analysis

Staff supports calculating a baseline for bills and rates, to provide comparison to performance in subsequent years. Staff does not agree with the Company's recommendation to set baselines based on its most current rates; to Staff, as discussed previously, this equates a baseline with a "minimum acceptable threshold." More, such recommendations do not consider average performance with respect to customer energy use, changes to that use over time, or rate changes across rate cases.

Staff supports the use of historic data to establish baselines. Using six years of data would smooth Pandemic impacts and align with the Department's recommendation regarding treatment of arrears and disconnection baselines, discussed below. Alternatively, baselines could also be established using the most recent three years of data, in alignment with the OAG's recommendation for setting arrearage and disconnection baselines.

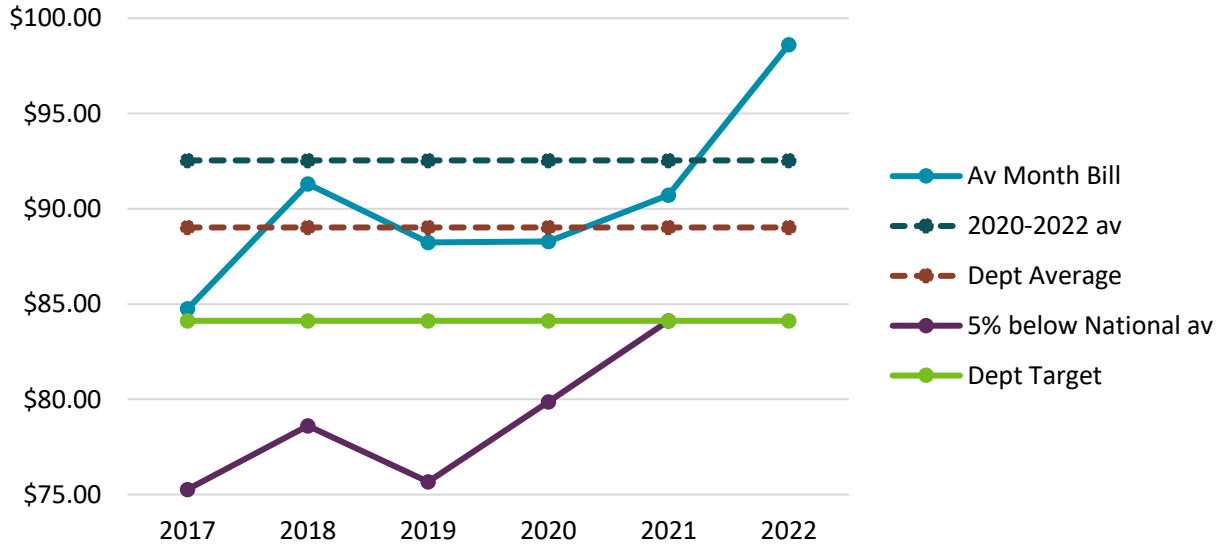
Staff created Figure 3 below to focus on residential rates only. The figure shows two solid lines representing the single highest and single lowest residential rates as reported by Xcel in its most recent PBR report, during the study period 2017- 2021, the years for which EIA data are available. The figure also shows how different baselines compare to historical data. Finally, Staff compares data to a target of 5% below the national average. Figure 3 shows that potential baselines and the lowest residential rate were still above the Legislature's policy goal of 5% below the national average. However, the figure also shows an increase in the national average which suggests that Minnesota residential rates may have moved into closer alignment with national trends.

Figure 3: Highest and Lowest Residential Rates vs Baselines & Potential Target



As shown in Figure 4 the average residential bill was also consistently higher than 5% below the national average; note, the Department suggested the most recent year of National EIA data, adjusted for Xcel's average monthly usage, serve as a performance target. The figure also shows how potential baselines, three years of historic data and the Department baseline, compare to historical data as well as how EIA data over time compare to Xcel's data.

Figure 4: Proposals for Targets & Baselines, Average Monthly Bill, Residential Customers



*National averages from EIA data are adjusted following the Department method.

Staff supports the Company reporting EIA data to provide a comparison to the national average residential bill and residential rates, to give context to Xcel's performance. However, if incentives were to be considered for this metric in the future, Staff understands that factors

outside of the Company's control influence bills, like other Commissions' decisions on rates, customer usage patterns, and reliance on gas vs electric fuel. Therefore, some affordability metrics are in tension with the Commission's metric design principles. While the question of incentives is not before the Commission currently, Staff flags this issue for future Commission decisions.

4. Staff Summary of Annual Reports and Presentation of Historic Data – Disconnections and Arrears

Staff next compared disconnections to arrearages. Average bills increased exponentially since 2019. While arrears also grew exponentially for part of the pandemic, from 2021-2022 arrears slowed their increase and now show linear growth. This may indicate customers' ability to pay bills and / or the Company working with customers to establish appropriate payment plans. The rate of disconnections decreased from 2017-2019, pre-pandemic, at a rate of 1,419 disconnections per year. Conversely, from 2020-2022, the rate of disconnections grew more quickly, at a rate of 3,222 disconnections per year. However, in considering all six years of data, the number of disconnections has not returned to pre-pandemic levels.

5. Participant Comments

In acknowledgment of the marked impact of the Pandemic on disconnections and arrears, the Department advocated for using data from 2016-2022, but removing 2020 and 2021 values, to create baselines.[39] The OAG set arrearage and disconnection baselines from a three-year historical average.[40] Xcel disagreed with both methods, stating that baselines should be set once AMI is fully deployed. The Company predicted that the 2025 full AMI deployment target, and the Commission-approved practice of remote disconnections, will allow quicker disconnections. This would produce a temporary increase in disconnections that could be followed by a decrease when customers become familiar with how to reach out for help.[41]

With respect to targets, the Company agreed that an affordability PIM should focus on disconnections and stated that targets should be set once new post-AMI-deployment baseline data are collected. The Company also recommended incentive structures but recognized those discussions would be prompted by a subsequent Commission comment period. Xcel does not support establishing a target or PIM associated with arrearage levels.

[39] Initial Comments, Department, at 19
[40] Initial comments, OAG at 5
[41] Xcel Energy AMI REMOTE DISCONNECT/RECONNECT PETITION filed May 20, 2020 in Docket no. E002/M-22-233

Figure 5: Residential Disconnections

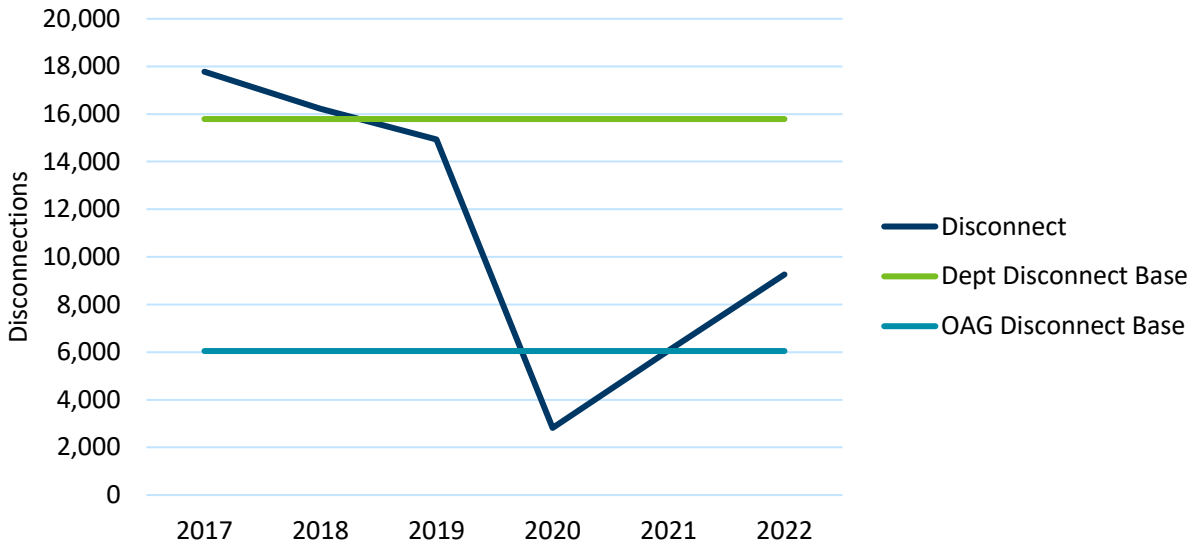
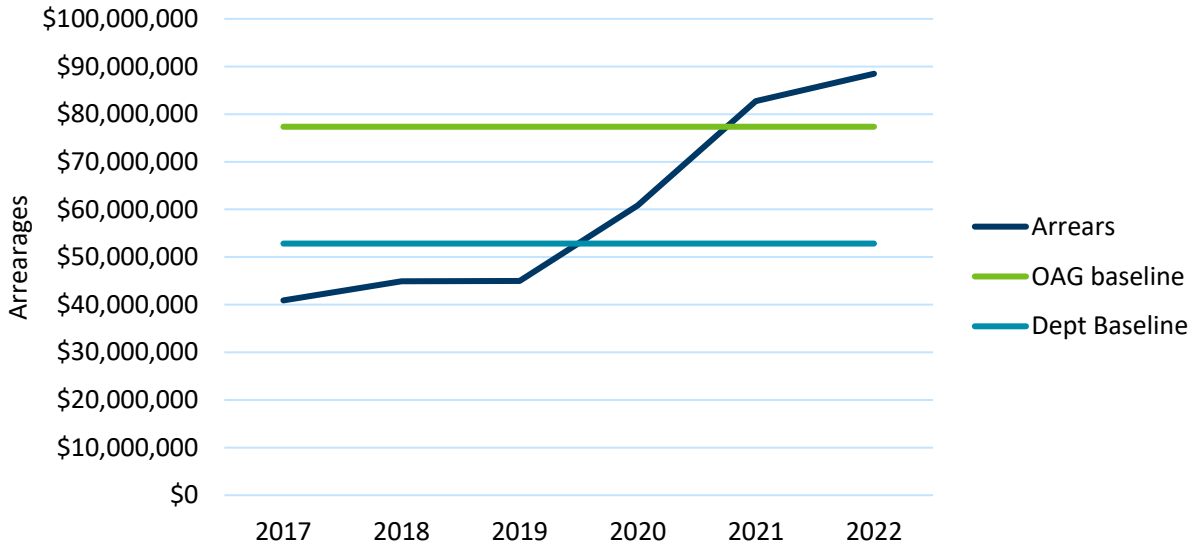


Figure 6: Residential Arrearages



The Department did not offer a target for arrears or disconnects.

> The Department defers to the Commission regarding whether the Company should initiate actions to bring those metrics back into line with historical amounts and the timeline related to that decision. This action could potentially set targets for these two metrics.[42]

But in replies, the Department said it could support targets of reductions in both arrears and

[42] Initial Comments, Department, at 10

disconnections.[43]

The OAG suggested that PBR could be a tool for a concurrent reduction in **both** arrears and disconnects to improve from pandemic levels.[44] CUB and the OAG noted that both metrics should improve together as, for example, disconnecting more customers in attempts to reduce arrears, would not be productive.[45] CUB noted that in some instances, increased arrearages should be tolerated if higher arrearages are a product of more affordable payment plans.[46] To this extent, CUB suggested filing *additional* data which the Company[47] supports:

- The number of customers (and the percentage of all residential customers) who were under one or more payment plans during the reporting period;
- The percentage of payment plans that ended in default that then prompted a disconnection;
- The average percent reduction in arrears per customer participating in a payment plan during the reporting period.

6. Staff Analysis

The Commission may decide to set baselines for affordability metrics using the OAG's or Department's methods. Staff believes the inclusion of Pandemic data in establishing baselines could allow evaluation of Utility and customers' "return to normal" after the Pandemic. The Commission may then decide to set targets for rates and bills at 5% below the national average or by some other method; and targets for disconnections and arrears to decrease from a baseline. The Commission may also choose to take no action.

Staff appreciates CUB's suggestion of payment plan data. The number of customers on payment plans, as well as average payment amount and plan duration, exist in Xcel's residential customer status reports, filed monthly in docket no. YY-02. Figure 7 shows that payment plan use increases during cold weather rule (CWR) season (October-April) when signing up for and maintaining a payment plan protects a customer from disconnection. Figure 7 also shows that payment plan use decreased when there was a moratorium on disconnections during the Pandemic. Importantly, Figure 7 shows that 75% or more of customers who are past due, and could have a payment plan,[48] are not signed up for a payment plan.

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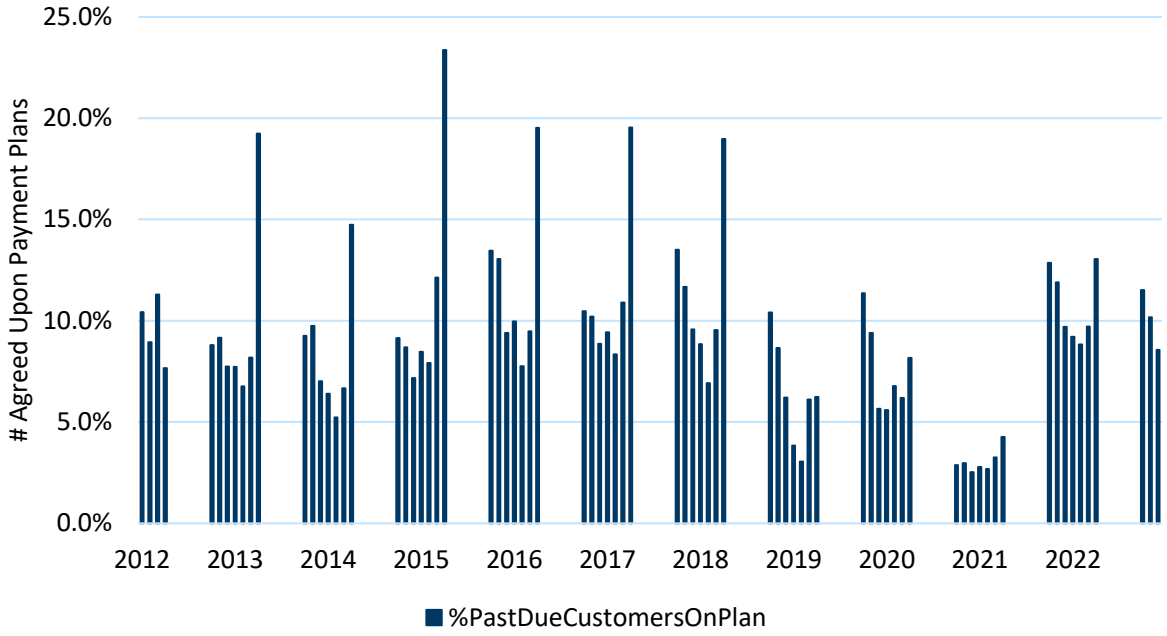
[43] Department replies at 12
[44] Initial comments, OAG at 5
[45] Initial comments, OAG, at 5 and Reply Comments CUB filed August 14, 2023 in docket no. E002/CI-17-401 at 2
[46] CUB initial comments at 8
[47] Reply comments, Xcel, August 14, 2023 at 9 and 17.
[48] MN Statute §216B.096 all customers during CWR, regardless of income, are eligible for payment plans and will not be disconnected during CWR if they maintain their payment plan.

Figure 7: Percent of Past Due Customers on Payment Plans



Last, Staff flags Xcel's discussion of AMI. Staff does not find it reasonable to delay setting a baseline and target for disconnections until after full AMI deployment. Waiting until full AMI deployment, with the estimated 2025 full-deployment date, and then collecting three years of baseline data would stretch into 2028. Then, additional stakeholder comments would need to be taken on those baseline data. Staff suggests that instead, when data are analyzed, data could be labeled as pre- and post-AMI deployment and compared as two datasets.

Also, though the intent behind allowing remote disconnects was savings, in cost and staff time, the ability to undertake remote disconnections need not preclude the Company from working with customers to try to prevent disconnection in the first place. Indeed, especially considering the remote disconnections enabled by AMI, PBR could be used to encourage working with customers towards reduced disconnections and manageable payment plans where the Company may not otherwise have an incentive to do so.

B. Reliability Metrics

1. Staff Summary of Annual Reports and Presentation of Historic Data

Staff first compares normalized SAIDI, SAIFI, and CAIDI data QSP targets, where applicable, and to IEEE normalized values. For context, since 2020, the Commission began setting reliability targets for Xcel based on the IEEE benchmarking second quartile for large utilities.[49] In its

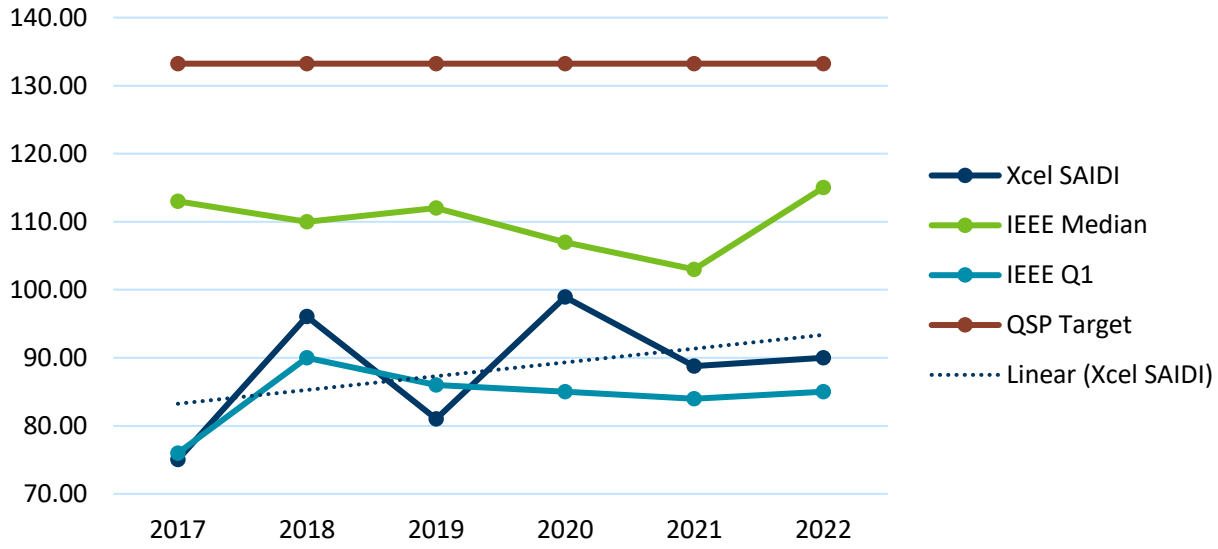
[49] In its Order Accepting Reports, Establishing Reliability Standards, and Requiring Additional Filings issued January 28, 2020 in docket no. E002/M-19-261, the Commission set reliability targets for 2019 based on a five-year rolling average but required discussion of a transition to IEEE or EIA data at pt 4. Benchmarking began with Order

Order, the Commission wrote:

> Although the Department recommended against use of IEEE benchmarking, the Commission is persuaded that it is reasonable to further explore its usefulness. The Commission will therefore require utilities to report reliability based on the traditional five-year rolling average at the work-center level but will require utilities to use IEEE benchmarking to measure system-wide performance. This approach will help form a clearer understanding of the potential advantages of IEEE benchmarking for measuring service quality performance.[50]

The Company has consistently had fewer and shorter interruptions compared to the IEEE median values and at times, performed better than IEEE first quartile (Q1) values.

Figure 8: SAIDI (normalized)



Accepting Reports, Requiring Additional Filings, and Establishing Workshop issued December 18, 2020, docket no. E002/M-20-406 set 2020 Standard at pt 11. Order Accepting Reports and Setting 2021 Reliability Standards issued March 2, 2022 in docket no. E002/M-21-237 at pt 8. Order issued November 9, 2022 in docket no. E002/M-22-162 set 2022 standards at pt 4.

[50] Order Accepting Reports, Requiring Additional Filings, and Establishing Workshop issued December 18, 2020, docket no. E002/M-20-406 at 3-4.

Figure 9: SAIFI (normalized)

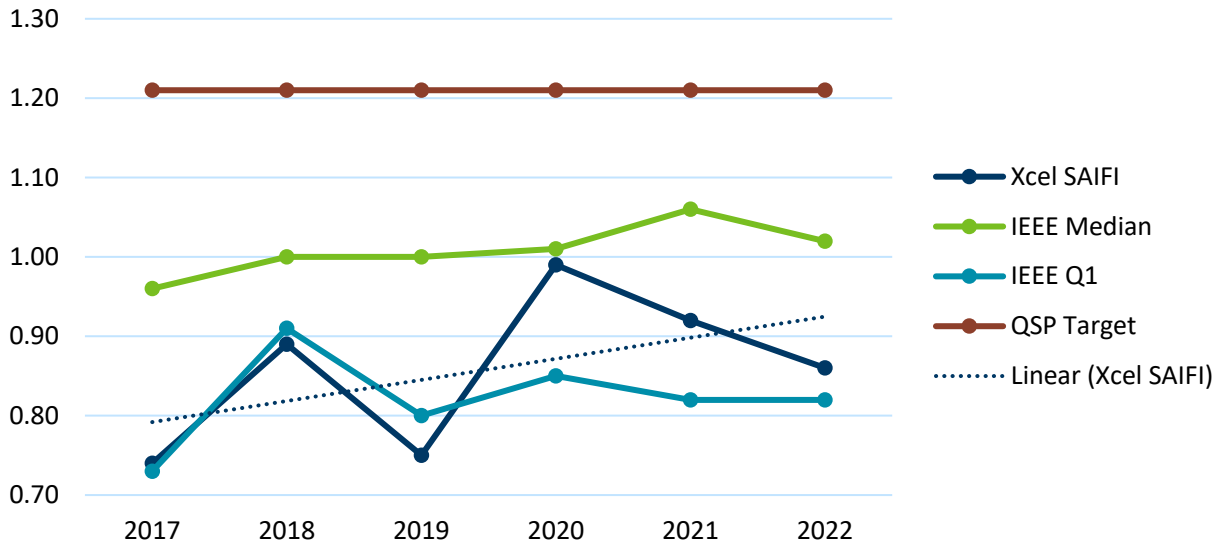
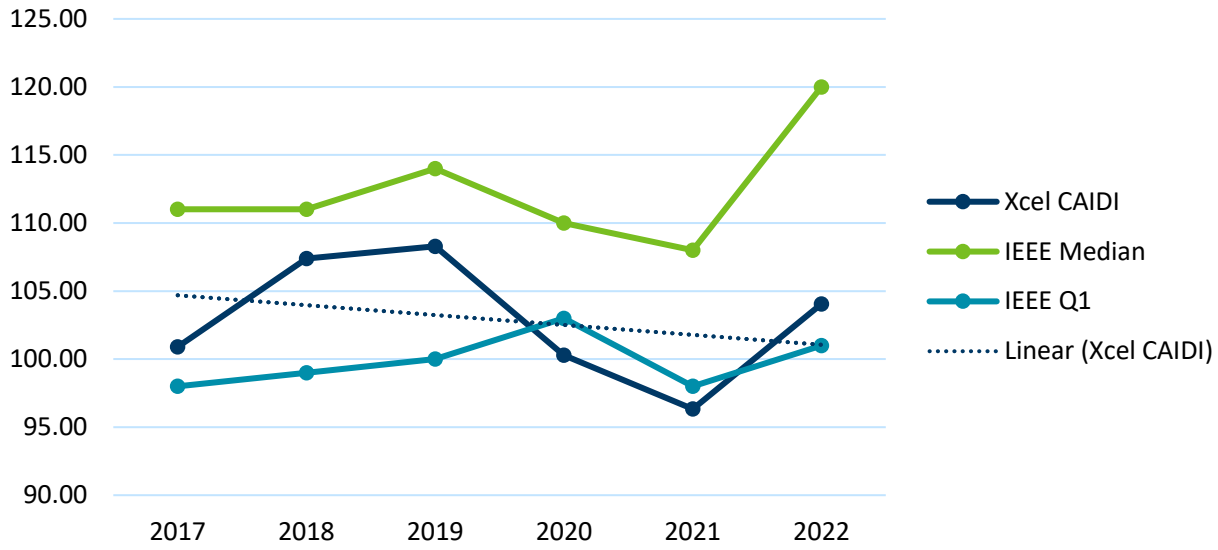


Figure 10: CAIDI (normalized)



2. Participant Comments

The Company noted:

> A system level CAIDI target does not add value in addition to the established SAIDI and SAIFI targets and underperformance penalties. CAIDI often conflicts with improvements to SAIFI, since CAIDI is a ratio of SAIDI and SAIFI. Thus, CAIDI can be misleading on a system level if SAIDI and SAIFI are reduced, which is improving the overall system reliability, but CAIDI could increase.[51]

[51] Replies, Xcel, August 14, 2023 at 10.

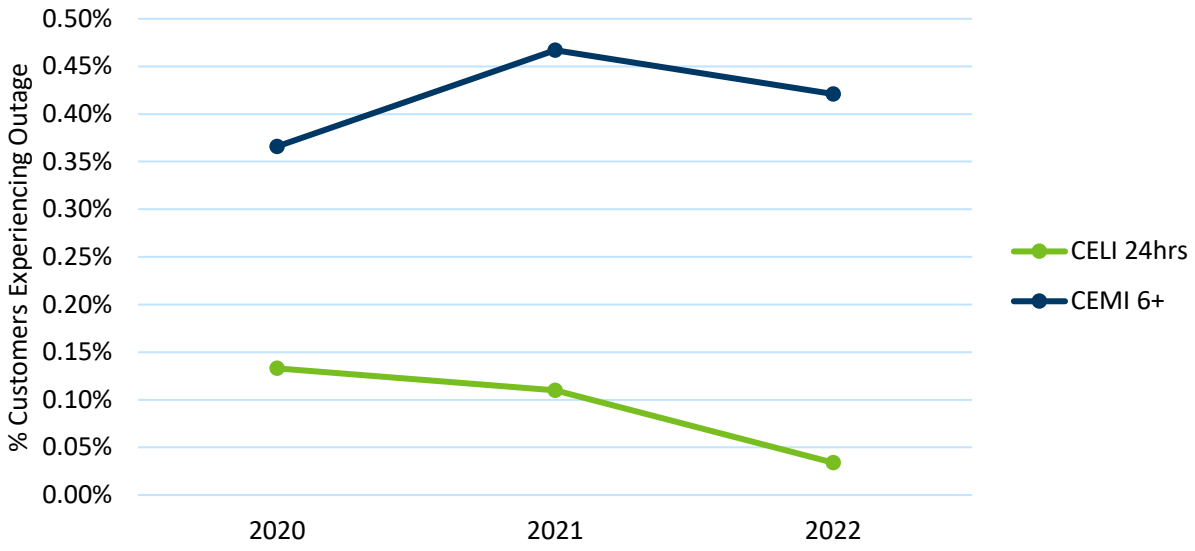
The Company recommended setting baselines using a three-year rolling average and targets in alignment with QSP for SAIDI, SAIFI, CELID and CEMI only, as targets for CAIDI and ASAI would be redundant as they are derivatives of SAIDI and SAIFI.[52]

The Department recommended using preexisting baselines for SAIDI, SAIFI, CAIDI, CELID, and CEMI as well as a conversion of SAIDI for ASAI.[53] The OAG recommended using the most recent three years of historic data to calculate baselines for all reliability metrics; but noted that if stakeholders were concerned about pandemic impacts, pre-2020 data could be used.[54] The OAG reasoned that IEEE data may not be directly comparable to any one utility, because of system differences. Therefore, targets and benchmarks should be set based on Xcel's historic performance. More, using Xcel's own data would eliminate gap in when IEEE data become available and when PBR reports are filed.[55]

The Department recommended setting targets SAIDI, SAIFI, CAIDI, CEMI 6+ and CELID 24 hours consistent with existing QSP and SRSQ dockets. The Department also recommended a target for the Average System Availability Index (ASAI) metric that is consistent with the preexisting SAIDI target. The OAG noted that IEEE data, albeit published in the Fall when PBR reports are filed in Spring, provide targets for SAIDI, SAIFI, and CAIDI. However, the OAG stated, meeting these targets is already required of Xcel via Commission Orders in the SRSQ dockets and "meeting a performance target should require more than merely meeting the minimum standard to avoid a penalty."[56] Ultimately, the OAG advocated for using the Company's own data to set targets to improve and maintain reliability but did not provide target values.[57]

[52] Xcel replies at 9-10
[53] Dept replies at 16
[54] OAG initial at 7
[55] Office of the Attorney General, Reply Comments, August 14, 2023, docket no. E002/CI-17-401 at 2
[56] OAG initial at 6
[57] OAG replies at 2

Figure 11: Historic CEMI 6+ and CELID 24 hours Performance



3. Staff Analysis

The Commission will need to consider setting baselines and targets for reliability metrics. First, for baselines. Staff is comfortable using the three most recent years (rolling) or 2020-2022 data to calculate historic averages to serve as baselines but would have concern *if* those baselines were to be used for eventual target-setting as doing so would conflict with decisions to move to IEEE benchmarking in the SRSQ proceeding. Staff would prefer a static baseline. Staff does not support the Department's recommendation to use IEEE annual benchmark data as such a value would represent, perhaps, a minimum acceptable threshold but would not show Xcel's historic pre-intervention performance.

The Commission may also consider targets, specifically if targets should align with QSP or SRSQ targets as the Department recommended that reliability targets align with one or both of those proceedings. Importantly, there are different targets for QSP and SRSQ with SRSQ being more aggressive. For some reliability metrics, the Department recommended adopting targets from IEEE annual benchmark data; Staff clarifies and reflects in decision options that these targets should be those established in the 2022 SRSQ (filed in April of 2023, Docket No. E002/M-23-73) because that is the most recent year of data filed prior to implementation of any PBR targets.

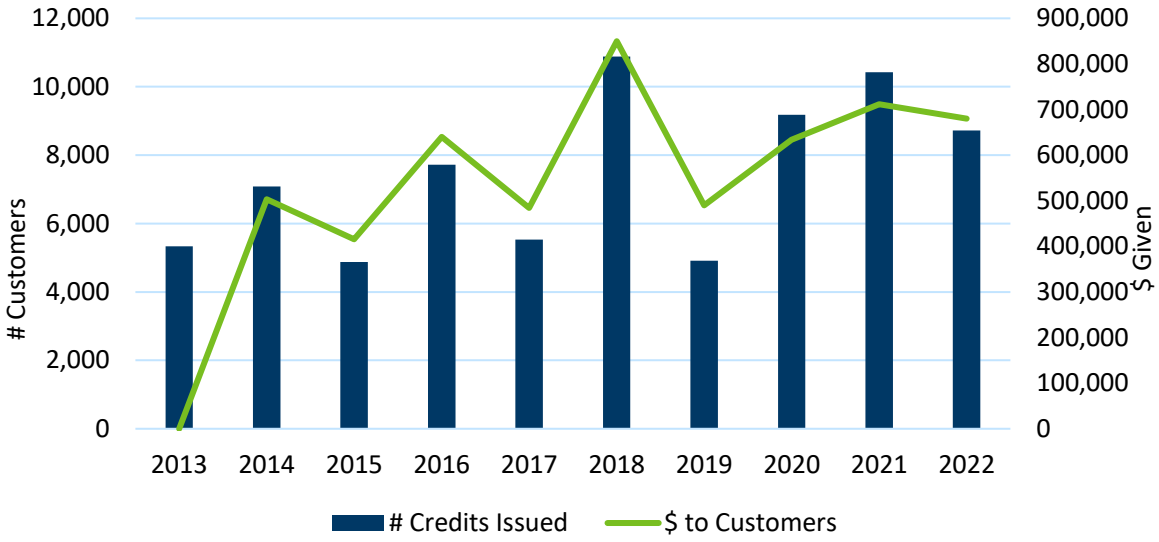
Also, if, in the future, the Commission sets performance incentives, it will be important to consider that SAIDI, SAIFI, CELI, and CEMI have associated underperformance penalties in Xcel's QSP. However, only once, prior to the Company's current QSP, for which the tariff was updated in 2013, has the Company made an underperformance payment for SAIDI or SAIFI.[58] In contrast, the Company has issued customer outage credits every year since the 2013 QSP

[58] Xcel Petition filed April 16, 2012 in docket no. E,G002/ CI-02-2034 at 4. SAIDI = 109.97

update (Figure 12 and Appendix B).[59] Though staff reiterates that no decision on incentives is currently before the Commission.

The Commission will also need to determine how it would operationalize targets for CELID and CEMI. SAIDI, SAIFI, CAIDI, and ASAI following the Department's calculation, have numerical targets that performance can exceed or not. However, CEMI and CELID do not have numerical targets and instead, require a penalty paid out on a per-customer basis, not to exceed $1 million. Staff is unclear how a target would be set beyond "decrease" or "not increase."

Figure 12: QSP Outage Credits



For now, Staff concurs with one of the Department's recommendations, regarding use of IEEE data as targets for reliability performance in SAIDI, SAIFI, and CAIDI. Later, should the Commission proceed with setting incentives, the Commission may consider the less-aggressive QSP targets for SAIDI and SAIFI as the upper bound of a neutral deadband for which no incentive would be attached to performance. Staff considers the inclusion of an ASAI target to be unnecessary as it would be calculated from an existing metric with an associated target.

[59] The Company's tariff requires outage credits of $200 for customers with tracked and untracked municipal pumping outages, $50 to customers with outages lasting 24 hours or longer (also a PBR metric CELID 24 hours), $50 to customers with six or more outages (also a PBR metric CEMI 6+), and credits to customers experiencing consecutive outages: Credits in addition to Single Year Outage credits but not applicable to municipal pumping customers. Customers receive $75 if they experience five (5) or more interruptions in two consecutive years; $100 if they experience four (4) or more interruptions for three (3) consecutive years; $125 if they experience four (4) or more Interruptions for four (4) consecutive years and each consecutive year thereafter. Order Approving Amendments to Service-Quality Tariff, August 12, 2013, docket nos. E,G002/CI-02-2034 and E,G002/12-383 at 5.

C. Customer Service Quality Metrics

1. *Staff Summary of Annual Reports and Presentation of Historic Data – Billing Accuracy*

Since 2013, the Company's billing invoice accuracy has been at least 99.8%. The QSP target for billing invoice accuracy is 99.3%.[60]

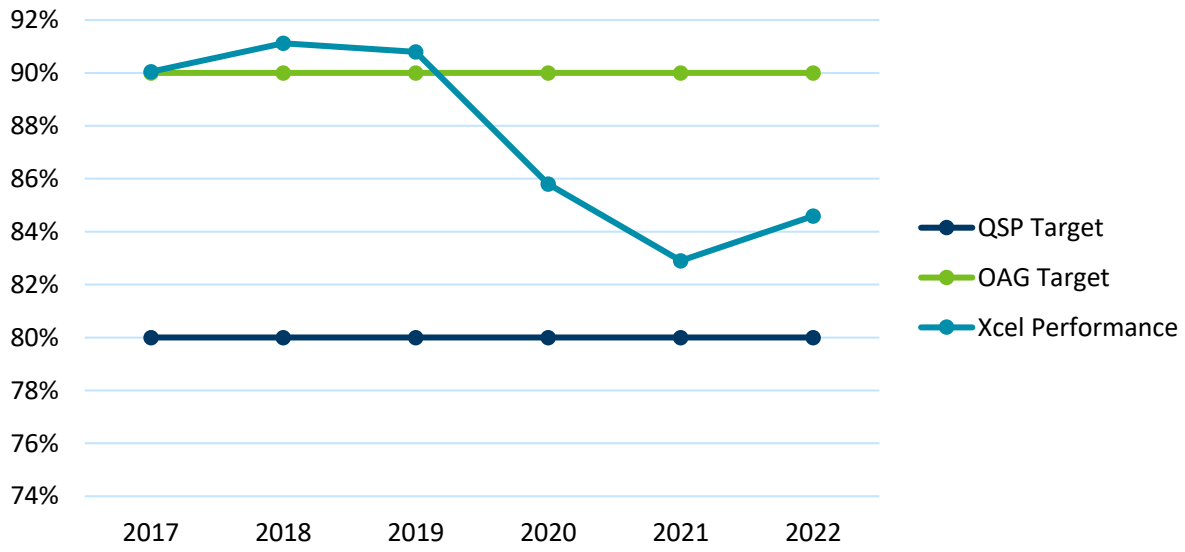
2. *Participant Comments*

The Department advocates for setting the PBR target for billing invoice accuracy at the same level as QSP. The OAG argued for a more aggressive target of 99.8% accuracy advocating for the Company to maintain its high performance.[61]

3. *Staff Summary of Annual Reports and Presentation of Historic Data – Call Center and Complaints*

Call center responsiveness, a measure that includes calls answered by agents and Xcel's automated response system, has consistently met the target of 80% of calls answered within 20 seconds established by MN Administrative Rule 7826.1200. From 2013-2022, performance ranged from 81% to 91% of calls answered within 20 seconds; performance peaked in the four years prior to the pandemic and was about 84% from 2020-2022. Complaints increased prior to the pandemic and decreased in 2020, potentially due to the moratorium on disconnections, and then increased beginning in 2021.

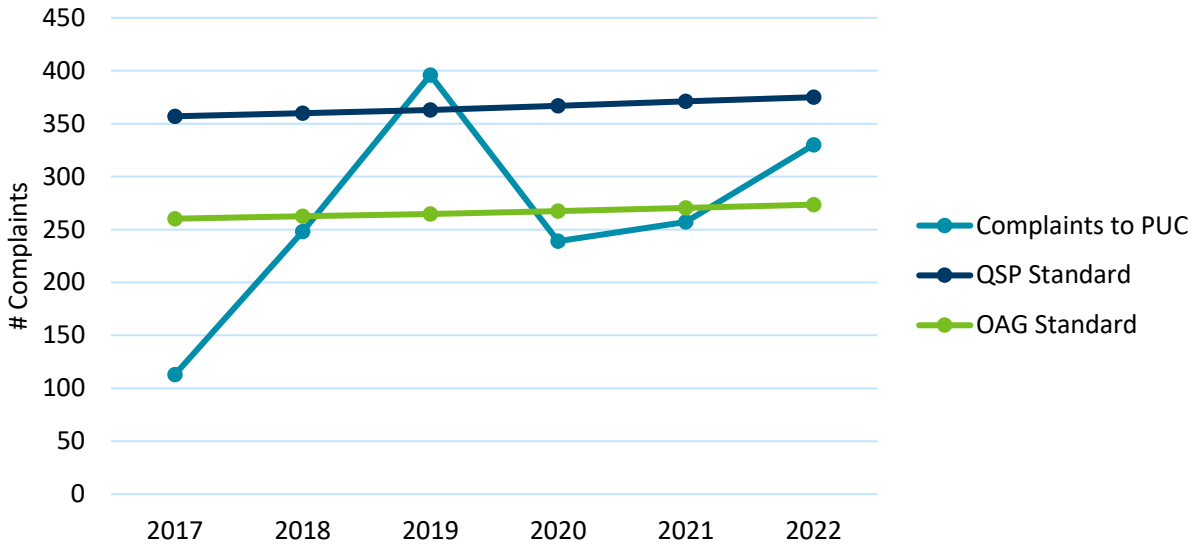
Figure 13: Call Center Performance



[60] Stated in Department reply comments, Attachment A at 3. However, the QSP Order issued August 12, 2013 docket no. E,G-002/M-12-383 lists 98.7 or greater percent invoice accuracy which, is three standard deviations from the Company's five-year average.

[61] OAG initial at 9; Department replies at 16

Figure 14: Complaints to PUC vs Standards



4. Participant Comments

The Department advocated for setting targets for call center response time, complaints, and invoice accuracy that are the same as the existing QSP targets. The OAG argued for targets that set a higher bar for performance than QSP and Minnesota Rules. The OAG felt it was appropriate that a target be higher than merely meeting the minimum requirement to avoid a penalty.[62] The Company opposed setting targets that differ from QSP as doing so would be, "confusing, unnecessary, and overly punitive."[63]

5. Staff Analysis

The Commission will need to consider setting baselines and targets for customer service metrics. and specifically whether these should align with or be more aggressive than QSP / SRSQ targets. If, in the future, the Commission sets performance incentives, it will be important to consider that complaints, billing invoice accuracy, and call center response time have associated underperformance penalties in Xcel's QSP.

At present, the Company has only paid customer service underperformance penalties twice since 2005. In 2019 the complaint limit was surpassed, and the Company made the required $1 million underperformance payment.[64] Prior to the Company's current QSP[65], the previous QSP structure had been in place for seven years and only once, in 2005, due to severe weather and

[62] OAG initial at 8
[63] Xcel replies at 11
[64] Order issued February 18, 2021 in docket nos. E,G002/CI-02-2034 and E,G002/12-383.
[65] Order Approving Amendments to Service-Quality Tariff issued August 12, 2013 in docket nos. E,G002/CI-02-2034 and E,G002/12-383.

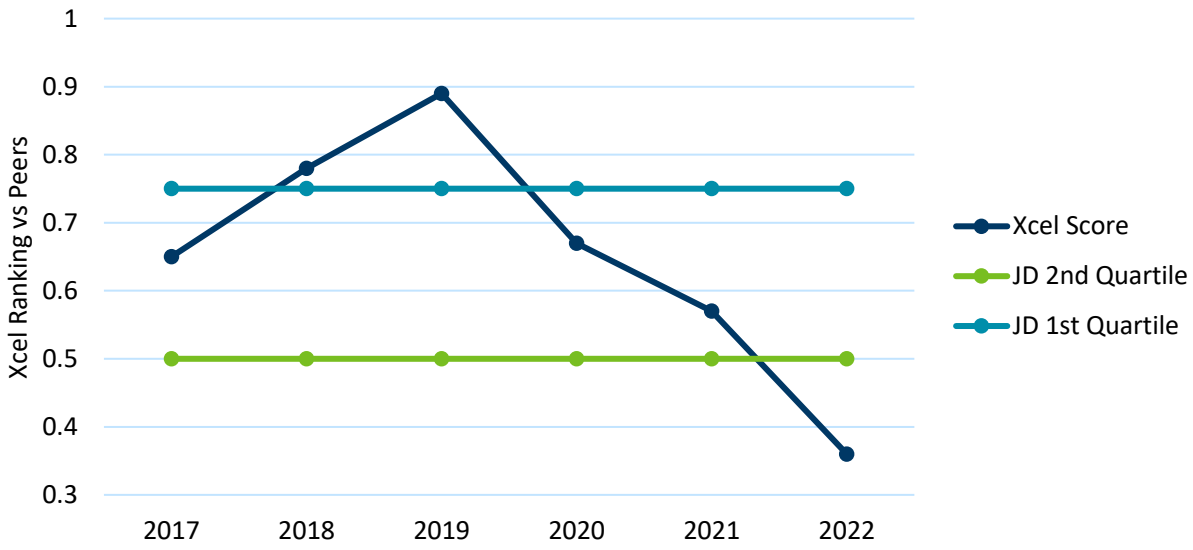
implementation of a new billing system, the Company made an under-performance payment for call center response time (79.3% answer rate within 20 seconds).[66]

6. Staff Summary of Annual Reports and Presentation of Historic Data – JD Power Satisfaction

The Company's JD Power performance improved prior to the pandemic but has been decreasing since 2020. The JD Power overall satisfaction metric is multi-faceted, capturing customer care, price, billing, reliability, communications, and corporate citizenship.

The Department recommends that the fiftieth (50%) percentile be identified as the baseline. The Company advocated for setting baseline as 3-year rolling average, stating that "this will more accurately account for industry trending as well as gage our customer satisfaction."[67]

Figure 15: JD Power Score vs Standards



In terms of setting targets, the Company offered further support for comparing performance to its own history rather than peers. Indeed, Xcel reports that most of its customers receive combined gas and electric service. The Company acknowledged the impacts of combined service provision, stating:

> A review of the peer combination gas and electric utilities within the JD Power Study shows that they have average percentile rankings below the 50th percentile historically. The high cost of gas the past couple of years will contribute to customers' perceptions of cost and value.[68]

[66] Xcel Petition filed April 16, 2012 in docket no. E,G002/ CI-02-2034 at 4.
[67] Xcel replies at 11
[68] Xcel Replies at 11

JD Power does not have an existing QSP target and to this extent, the Department stated that this metric did not lend itself to a target-based approach.[69]

7. Staff Analysis.

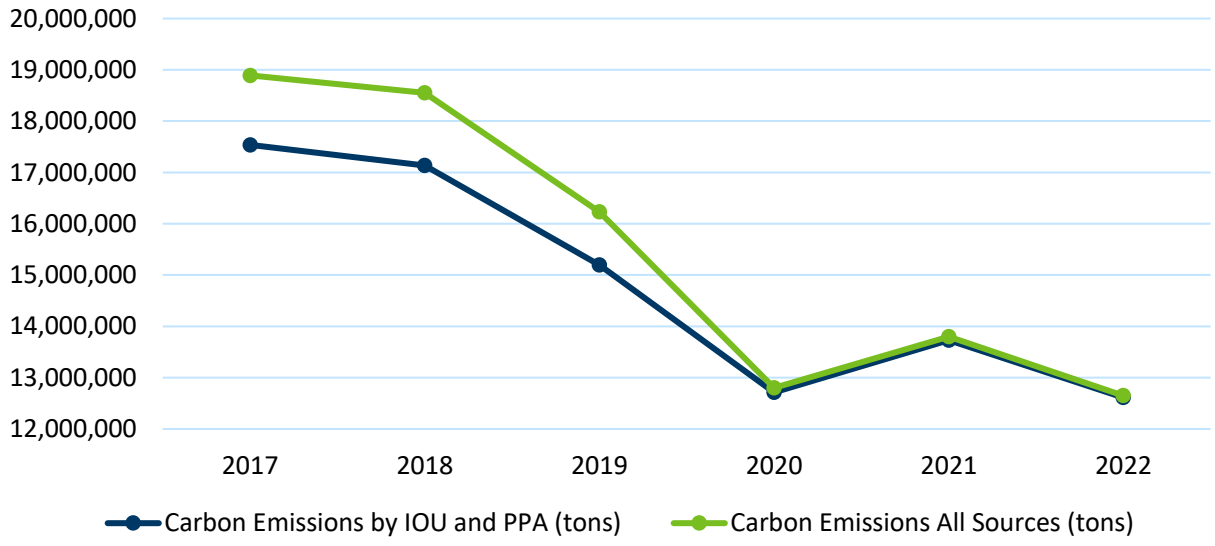
If the Commission did wish to set a target that would perhaps be a "stretch" goal and provide a fixed point by which to compare Xcel's performance, Staff notes that other states' Commissions have set targets for quartile one performance.

D. Environmental Performance Metrics

1. Staff Summary of Annual Reports and Presentation of Historic Data

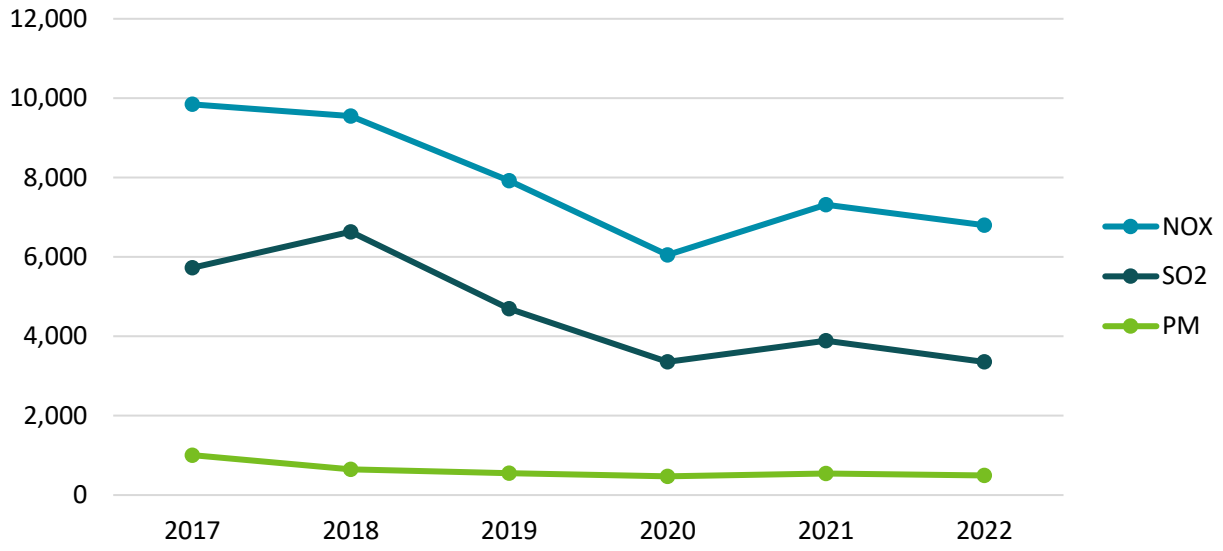
The Company's emissions levels decreased steadily until the pandemic in 2020 and then increased, but to less than pre-pandemic levels.

Figure 16: Carbon Emissions (tons)



[69] Dept initial comments at 24

Figure 17: Other Emissions (tons)



2. Participant Comments

Commenters agreed that new legislation, like the 100% carbon free energy standard by 2040, will likely impact environmental metrics. CEE and Fresh Energy cited unknown future impacts from this legislation and others, like ECO and the Clean Air Act, as reason to delay setting targets.[70]

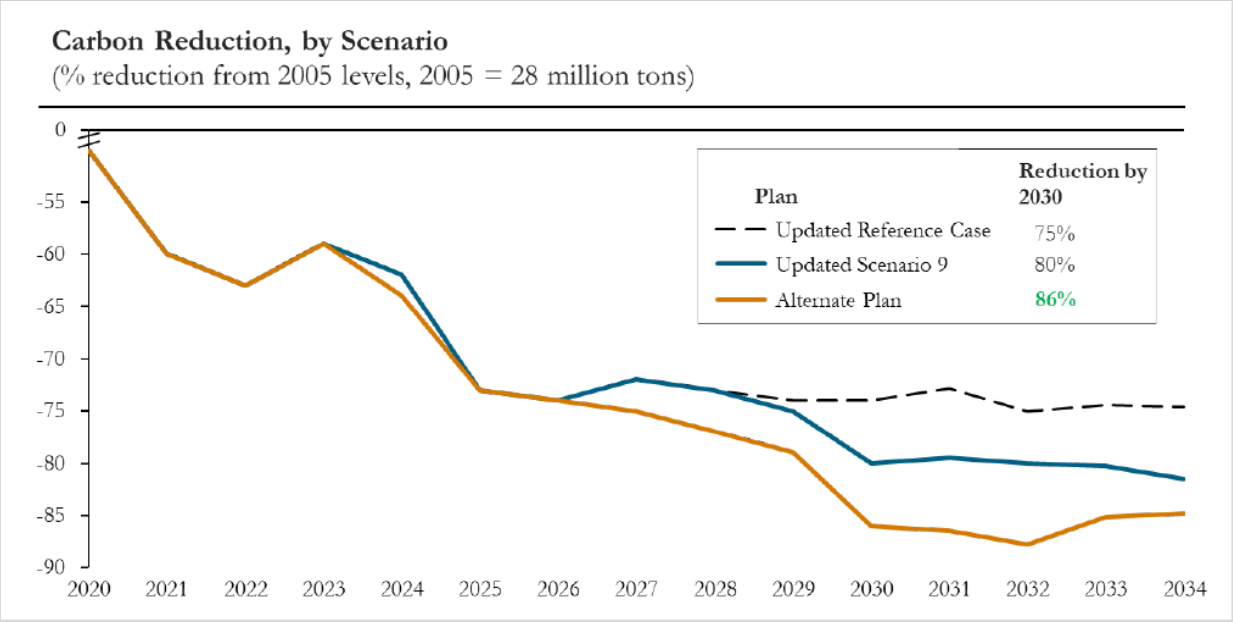
The Department calculated baselines for environmental metrics of carbon emissions and carbon intensity as well as criteria pollutant emissions and intensity using three-year averages (2020-2022). However, the Company only calculated a baseline for carbon emissions and stated that a single baseline year taken from its most recent approved IRP was appropriate. The OAG did not calculate baselines or targets.

The Department recommended targets set using the Company's most recently approved IRP. In a permissible ex parte communication filed September 26, 2023, the Department explained that the IRP includes the annual forecasted emissions. Once forecasts were calculated and submitted, forecasts would serve as the target for total carbon emissions by source (utility-owned or all sources) and the carbon intensity by source (utility-owned or all sources). Staff notes these values are not included in the record, but are available for commenters running the EnCompass model (for an example output see Figure 18).[71] Therefore, data would have to be filed in the instant docket or obtained via an Information Request.

[70] CEE and Fresh Energy initial comments July 28, 2023 at 2 and ELPC & Vote Solar initial comments July 31, 2023 at 3 both in docket no. E002/CI-17-401

[71] Figure from Docket No. E002/RP-19-368, June 25, 2021 Xcel Reply Comments, Section 4: Modeling and Rebuttal, p. 120 of 173

Figure 18: Carbon Reduction by Scenario



After forecasts were established as the target for total annual carbon emissions and total carbon intensity, Xcel's actual total annual carbon emissions and actual total carbon intensity would be reported to determine if the Company met the targets or not. To be more aggressive, the Commission could establish targets lower than forecasted amounts.

The Company stated, "consistent with our recommendation to perform a federal and state policy review for the next PBR Annual Report filed in April 2024, we will propose five-year target increments, based on the most recent approved IRP emission reduction actual calculations, to potentially begin in 2025."[72] The Company also stated that it may move faster:

> As evidenced by the Minnesota Legislature passing House File 7, Second Engrossment, establishing a requirement that all utilities meet 100 percent of their Minnesota retail sales with carbon-free electricity by 2040, environmental policies are critically important to the State of Minnesota. We, as a Company, have stated many times our own goals to be a leader in the clean energy transition and expect our future resource plans to meet – and likely exceed – the requirements outlined. For this reason, we believe it is appropriate to set targets for exceeding the requirements of the new law.[73]

3. Staff Analysis

Staff believes it may be difficult for emissions targets to be consistent with the Carbon Free Standard (CFS) as proposed by the Company. The CFS requires carbon free resources to satisfy

[72] Xcel reply comments at 14
[73] Xcel initial comments at 22

80% of utility energy sales by 2030, moving to 90% in 2035, and 100% in 2040. Targets may be met with the purchase of Renewable Energy Credits. To comply with the Standard, Staff understands that utility generation will shift towards less carbon intense resources. However, until 2040, the use of carbon-emitting resources is still "allowed," and during this time the Standard does not specify how much carbon a chosen generation resource could emit.[74]

Moving forward, Staff believes some clarifying information is necessary. First, the Commission will need to clarify if carbon values in PBR and the IRP reflect values for Xcel's entire system or just Minnesota. Second, targets were recently set for Xcel's deployment and use of AMI (docket no. 21-814). Staff believes work done in the instant proceeding should align. Third, as the Company is anticipated to file its next IRP in early 2024, Staff believes it will be useful to generate a mechanism for translating IRP data into targets for emissions in the instant docket. Further, Staff understands that with forecasts, accuracy decreases the further into the future the forecast projects; therefore, selecting the forecast time period from which to generate targets will require consideration. Finally, Staff notes that the regulatory cost of carbon may also function as an incentive for utility performance related to carbon emissions and that PBR should capture these impacts.[75]

4. Avoided CO_2

In addition to metrics on system wide emissions reductions, the Commission also included two metrics on avoided CO_2 emissions from the electrification of transportation and of buildings, agriculture, and other sectors. Table 3 depicts the approved metrics and calculation methodology.

Table 3: Avoid CO_2 Metrics and Methodology

Outcome and Commission-Approved Metric	**Approved Calculation Method Reported Annually**
5a.) CO_2 emissions avoided by electrification of transportation – Alternative & Original approach	Percent of EVs in Xcel Energy's MN service territory participating in managed charging programs or on whole-house TOU rates.
5b.) CO_2 emissions avoided by electrification of transportation – Alternative & Original approach	Percent of managed charging customers' residential EV charging load occurring during off-peak hours.
5c.) CO_2 emissions avoided by electrification of transportation – Alternative & Original approach	The difference between emissions from annual EV use and displaced emissions that otherwise would have occurred from equivalent travel by gasoline vehicles.
6.) CO_2 emissions avoided by electrification of buildings, agriculture, and other sectors	Calculate CO_2 avoidance based on comparison of CO_2 emitted to provide same service (water heating, space heating, etc.) with electricity vs. with fossil fuel.

[74] Staff notes that additional details on the CFS are being developed in docket no. E999/CI-23-151.
[75] Regulatory Cost of Carbon discussed in docket nos. E999/CI-07-1199 and E999/DI-22-236 and was most recently set at $75/ton at the Commission 14 September 2023 agenda meeting.

Xcel reported metrics for CO_2 emissions avoided by electrification of transportation (metrics 5a, 5b, and 5c) but did not have any results under CO_2 emissions avoided by electrification of buildings, agriculture, and other sectors (metric 6). Figures 19-21 depict the metrics for CO_2 emissions avoided by electrification of transportation under the three calculation methods highlighted above as reported by Xcel.

Figure 19: Percent of EVs in Xcel's Service Territory on a Managed Charging Rate

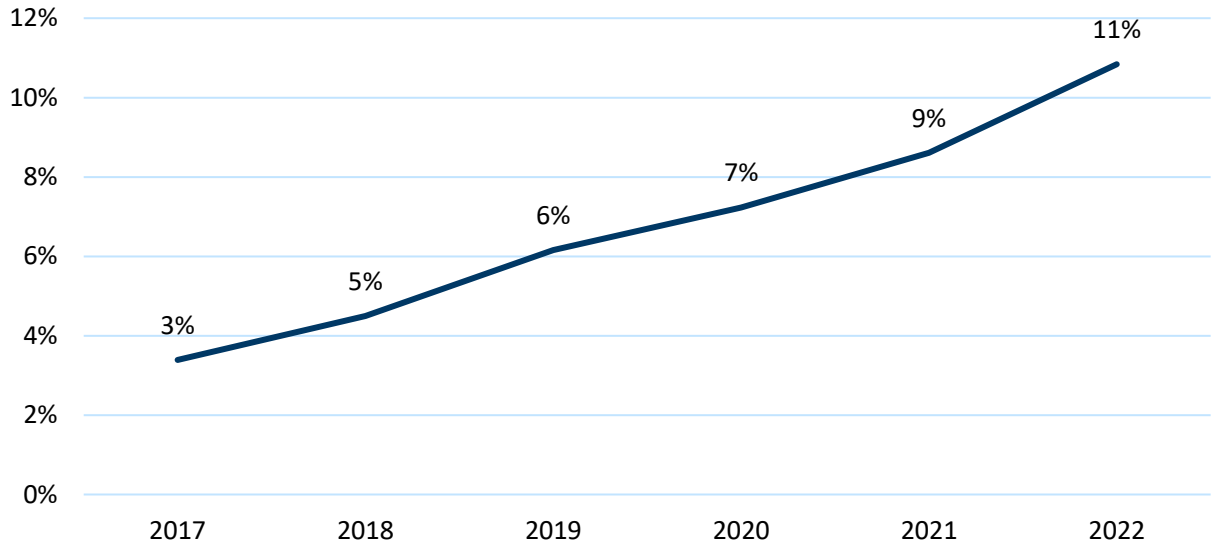


Figure 20: Percent of EV Charging Occurring Off-Peak

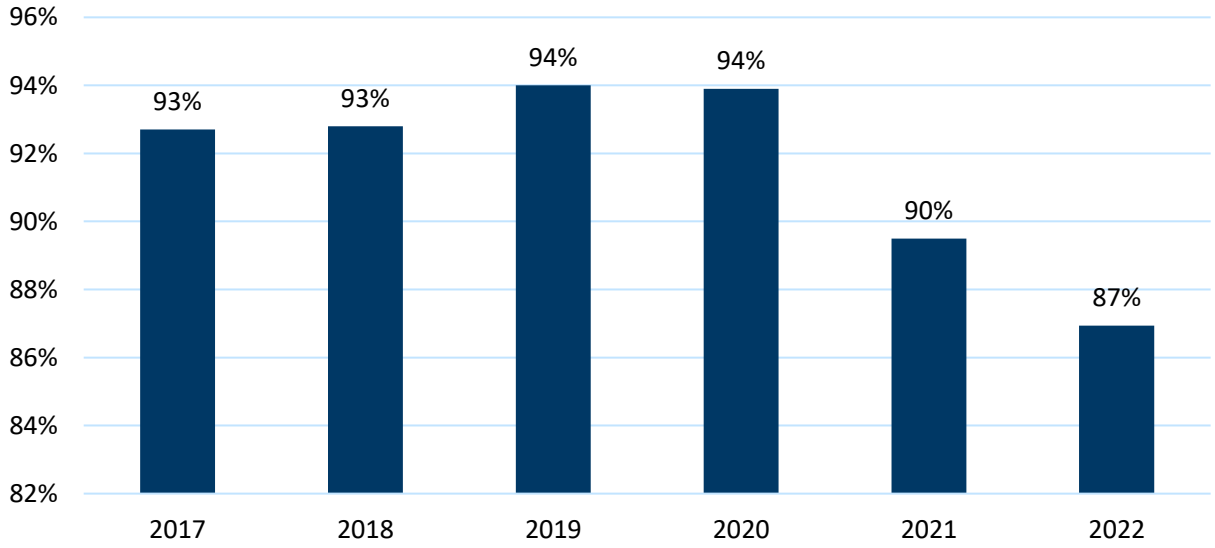
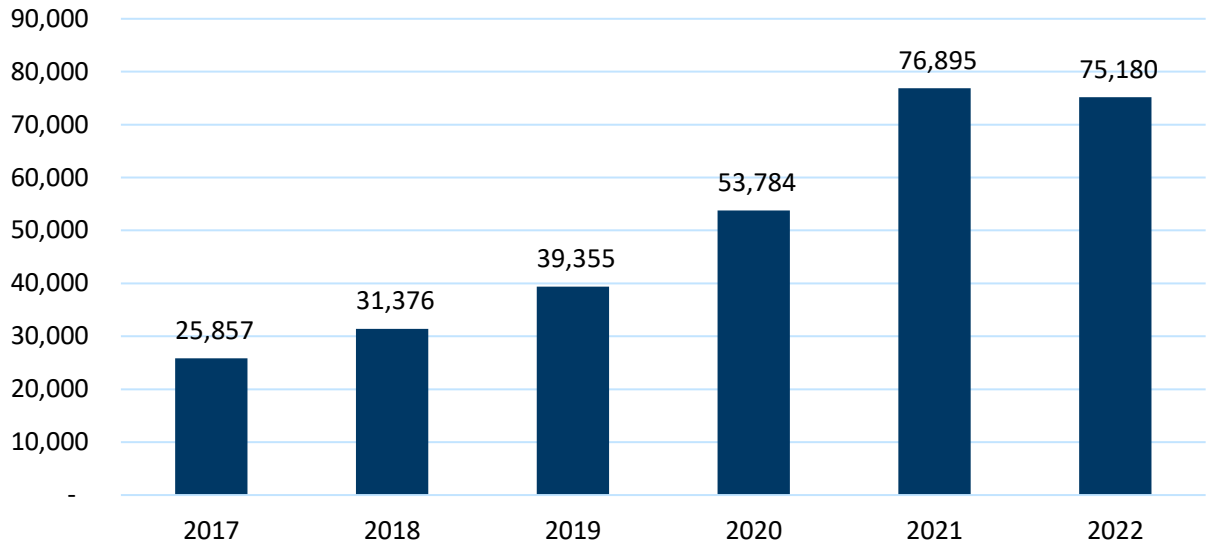


Figure 21: Avoided CO_2 Emissions from EV Charging (tons)



The Department calculated baselines for the seven sub-metrics associated with the CO_2 Emissions Avoided - Transportation metric using a static average with the existing two or three years of data. However, given uncertainty around federal policy and Xcel's own changes to its EV charging programs, the Department determined it was not appropriate to set targets for the transportation electrification metrics. The Department did not make a recommendation on whether to adopt the baselines it calculated. For CO_2 Emissions Avoided - Electrification of buildings, Agriculture and Other Sectors, the Department did not calculate baselines or targets as the metric lacked both methodology and data.[76]

While Xcel preferred not to set baselines for the Avoided CO_2 metrics for reasons noted in prior sections, it calculated baselines for CO_2 Emissions Avoided – Transportation in Attachment A to its initial comments using a rolling three-year weighted average. Like the Department, Xcel did not calculate baselines for CO_2 Emissions Avoided - Electrification of buildings, Agriculture and Other Sectors due to a lack of data.[77] In reply comments, the Department recommended adopting Xcel's proposal to use a rolling 3-year weighted average for CO_2 Emissions Avoided – Transportation but did not provide any further justification for its change in position from initial comments.[78]

Table 4 depicts the Department's and Xcel's calculated baselines for the transportation electrification metrics from Attachment D to its initial comments.

[76] Department, Comments, p. 10
[77] Xcel, Initial, Attachment A, p. 3 (PDF p. 32)
[78] Department, Reply, p. 16

Table 4: Department and Xcel Proposed Baselines for Avoided CO_2 Metrics

Outcome/Metric Description	Department Baseline	Xcel Baseline
5.) CO_2 emissions avoided – transportation – three sub-metrics		
5a.) Percent of EVs participating in managed charging programs on whole house rates	9%	9.3%
5a.) Customers on EV-specific managed charging rates or are on whole-house TOU rates who have self-identified as EV owners	2,016 customers	n/a
5a) Number of EVs registered in Xcel's service territory	20,695 vehicles	n/a
5b.) Percent of managed charging customers residential EV charging load occurring during off-peak hours	88%	90.9%
5b.) Total annual energy consumed by EVs charging during off-peak hours at the residence of customers enrolled in Xcel's EV TOU rates or other managed charging programs	5,679 MWh	n/a
5b.) Total annual energy consumed by EVs charging at residences of customers enrolled in Xcel's EV TOU rates or other managed charging programs	6,451 MWh	n/a
5c.) Carbon dioxide avoided calculated from EV charging (tons/year)	5,807 tons	71,410
6.) CO_2 emissions avoided – buildings, agriculture, and other sectors -	Not calculated – no data	n/a

Xcel did recommend establishing a future target for CO_2 Avoided by Buildings, Agriculture, and Other Sectors. The Company explained that while it has reported "negligible building electrification," it believes that it will be able to propose a target in its 2024 Annual PBR report (filed in April of 2025). Xcel indicated it would likely propose a future baseline of zero for CO_2 Avoided – Buildings, Agriculture, and Other Sectors. The Company noted that recent legislative changes including the 2021 Energy Conservation and Optimization Act (ECO), Natural Gas innovation Act (NGIA), and Inflation Reduction Act (IRA) will drive increased levels of consumer electrification. Additionally, the new GHG accounting frameworks developed for NGIA and ECO will allow the Company to better quantify emissions reductions from electrification assisting with calculation of the target.[79] In reply comments the Department noted it did not support Xcel's proposal as currently written for a future target for beneficial electrification.[80]

5. Staff Analysis

Metric and Baseline Calculation Clarifications

In its 2022 annual report, Xcel indicated that it aligned the data for 20220 on its vehicle

[79] Xcel, Comments, p. 23
[80] Department, Reply Comments, p. 6

electrification metrics with the EV Annual Report timeframe (May – April) rather than the annual reporting cycle of PBR (January – December). While Staff acknowledges that being able to compare the data across reports is a valid approach, Staff believes this is outweighed by having a different reporting time frame for transportation electrification metrics than other PBR data which could cause confusion when evaluating overall utility performance. Furthermore, data in the EV Annual reports is reported on a more granular month by month basis, meaning anyone wishing to compare the data between the two reports could adjust the data from the EV Annual Reports to a calendar year basis. Therefore, Staff suggests the Commission require Xcel use calendar year data instead of EV Reporting year data to avoid confusion with the rest of PBR. (**Decision Option 47**)

Staff also notes that Xcel's source of data for EV registration is not consistent with the approved methodology, which indicates it would use "the most reliable source of vehicle registration data from the Commission, the Minnesota Pollution Control Agency (MPCA), or the Minnesota Department of Transportation (MN DOT)." In clarification emails with Staff, the Company explained:

> The system updates have not been consistent to align with our reporting and it doesn't look like an update was completed in 2022. We don't want to use the PUC website as a source for some or some years and our data for others. It seems more reliable to use our own reporting."

However, Staff has been unable to find Xcel's source of EV registration data in any of its Annual Reports. Staff acknowledges that the PUC's data does not align exactly with the reporting year, however it is verifiable and based on actual EV registrations instead of an unknown, unverifiable data source. Table 5 compares using Xcel's EV registration data from an unknown source with the PUC's EV data, which comes directly from the Minnesota Department of Vehicle Services. Staff notes it is using calendar year data for each year, including with Xcel's data, for consistency (see discussion above).

Table 5: Comparison of Xcel and PUC EV Registration Data

		2022	2021	2020
Number on Managed Rate	Xcel	2,860	1,761	n/a
	PUC	2,860	1,761	1,060
Number of EVs	Xcel	20,941	20,449	n/a
	PUC	23,115	16,038	12,764
% on Managed Rate	Xcel	13.66%	8.61%	7.23%
	PUC	12.37%	10.98%	8.30%

Table 6 below shows how the PUC data vintages align with calendar year data. The PUC's EV registration data is pulled as a snapshot of EV data at a particular point in time. Aside from the first year of data, the data vintage has been within 1 month or less of the start of the calendar year, giving a representational sample of that year's EV registrations. Staff notes that going

forward there will also be a more consistent data pull at the same time of year for EV data, with the possibility to update the data more than once per year. Staff recommends the Commission either require Xcel to use the PUC EV Registration Data (**Decision Option 49**) or, in the alternative make a compliance filing with the source of its EV registration data (**Decision Option 50**). Staff notes Xcel has only provided EV registration data for two reporting years, while the PUC's data goes back to 2018.

Table 6: Alignment of EV Registration Data with Calendar Year

April 2019	February 2020	February 2021	December 2021	January 2023
Calendar year 2018	Calendar year 2019	Calendar Year 2020	Calendar Year 2021	Calendar Year 2022

Finally, Xcel recommended using a rolling 3-year weighted average to calculate baselines for the CO_2 Emissions Avoided– Transportation metrics. Staff notes the Company did not provide information about how it weighted the averages in its calculations. The Department used static three-year averages to set baselines in Attachment D, but in reply comments recommended using Xcel's rolling three-year average. Staff recommends the Commission maintain consistency with how it sets baselines for other metrics, with a preference for using static three-year average of 2020-2022 data. (**Decision Option 52**)

Given the discussions and suggested clarifications above, Staff recommends the Commission require Xcel to make a compliance filing that recalculates the metrics and baselines in line with any adopted changes. (**Decision Option 53**)

In summary, Staff recommends the Commission take the following steps to clarify and standardize the data the CO_2 Emissions Avoided– Transportation metrics:

- Choose a reporting timeframe: calendar year or EV Report year (**Decision Option 47 or 48**)
- Choose a source for EV registration data: PUC annual registration data or Xcel's data source. If the Commission chooses Xcel's source, require a compliance filing with the information used to determine the number of EV registrations. (**Decision Option 49 or 50**)
- Choose how Xcel should calculate the baselines: rolling three-year average or a static three-year average. (**Decision Option 51 or 52**)
- Require Xcel to make a compliance filing that updates the metrics and baselines based on the decisions made above. (**Decision Option 53**)

<u>CO_2 Emissions Avoided – Buildings, Agriculture, and Other Sectors</u>

Staff agrees with the Department that the time is not ripe to set targets for CO_2 Emissions Avoided – Buildings, Agriculture, and Other Sectors. (**Decision Option 72**) The Commission may wish to review whether this metric is compatible with the Metric Design Principles approved in the Commission's January 8, 2019 Order in the PBR Docket. Staff questions whether the metric as envisioned by Xcel is "sufficiently objective and free from external influences" and measures

a behavior that is wholly within a utility's control. Electrification of non-transportation sectors is largely dependent on overall market forces and state and federal policies such as rebates from the Inflation Reduction Act. To the extent that utility actions directly impact beneficial electrification, these actions typically fall within the scope of a utility's ECO or NGIA plans, which already gives an incentive and mechanism for cost recovery, negating the need for additional performance incentives.

To the extent the Commission wishes to ensure newly electrified load is optimized to align with renewable generation, Staff believes this is covered under the next section titled "Cost Effective Alignment of Generation and Load." For example, the CO_2 Emissions Avoided - Transportation sub-metrics 5a and 5b are reflections of both the number of EV customers Xcel has enrolled in managed charging rates and the amount of charging that has been shifted off-peak, rather than direct avoidance of CO_2 for all vehicle usage. Both these sub-metrics are more reflective of the cost-effective alignment of generation and load rather than environmental performance.

Staff acknowledges that tracking these metrics may be useful for stakeholders and the public to be better informed on the status of electrification efforts in Xcel's service territory. However, given Xcel is focused on setting targets for electrification ahead of having measurable data it may be useful for the Commission to clarify its intent with this metric moving forward. Staff suggests the Commission may wish to delegate authority to the Executive Secretary to solicit stakeholder comments on the future of the avoided CO_2 metrics, including whether it is in the public interest to consider them for targets, and potentially future incentives. (**Decision Option 5**)

E. Cost-Effective Alignment of Generation and Load

The Commission established six metrics on the Cost-Effective Alignment of Generation and Load. Below Staff breaks the discussion of the metrics into three sections: Demand response, Shape-Shift-Shed, and Load Net of Renewables.

1. Demand Response

The first metric established under this section is demand response (DR), including (1) capacity available (MW & MWh) and (2) amount called (MW, MWh per year). In its annual reports and calculation methodology Xcel indicated this is a system generated metric. Figure 22 displays the amount of DR capacity available, and the amount called, while Figure 23 displays DR energy available and called.

Figure 22: DR Capacity Available vs DR Capacity Called

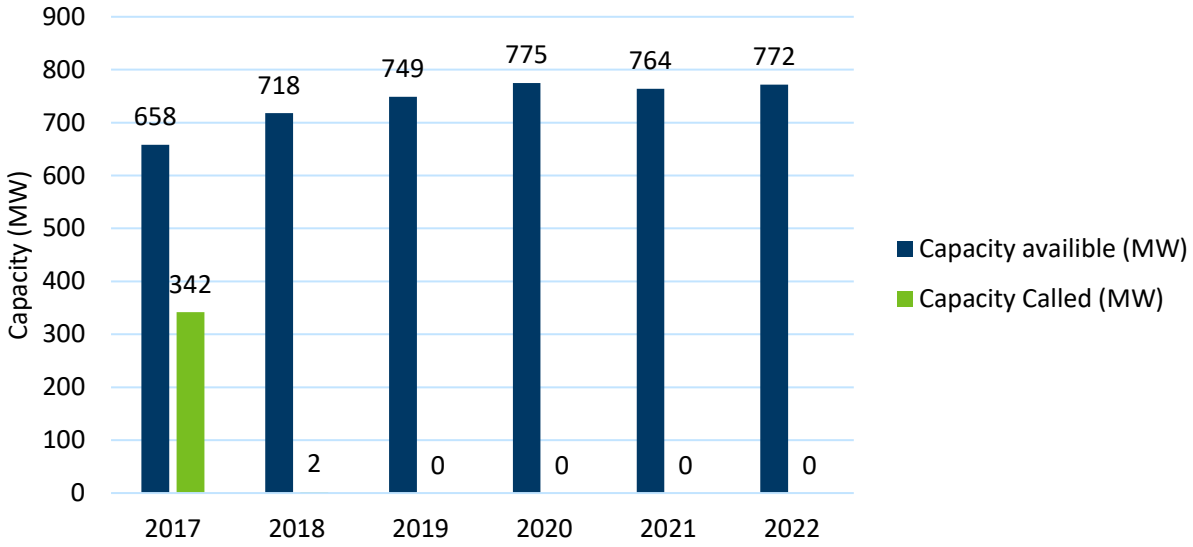
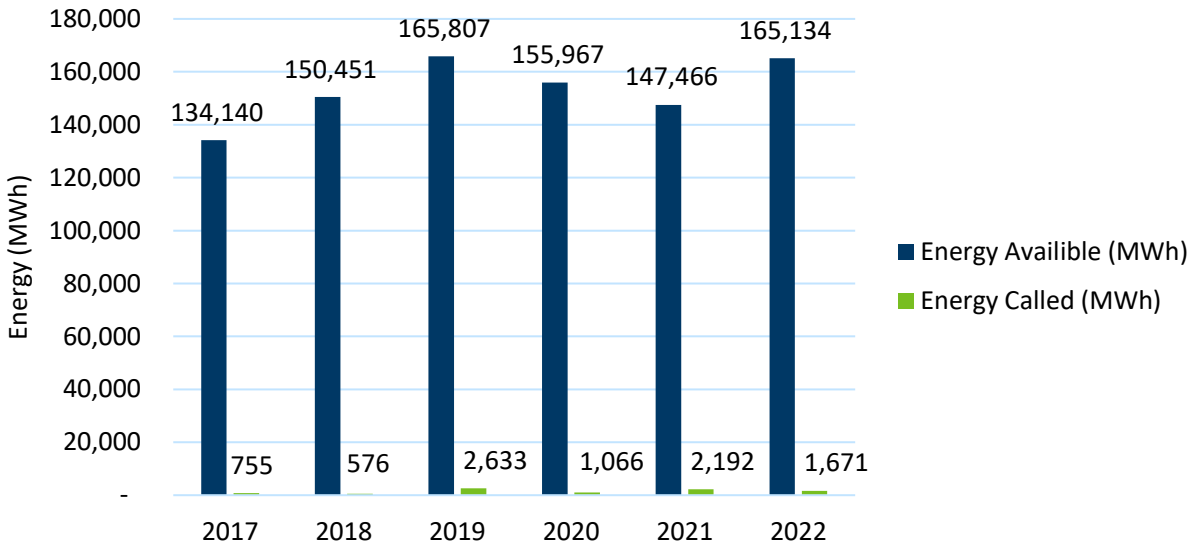


Figure 23: DR Energy Available vs DR Energy Called



The Department identified a baseline of 764 MW and 156,189 MWh of available demand response, and a 557 MWh baseline for amount called using a three-year static average of 2020-2022 data.[81] The Department identified the DR metric as pre-existing and explained it believed the Commission had set a target for the metric in Xcel Energy's 2015 IRP proceeding where it required the Company to procure 400MW of additional demand response by 2023.[82] The Department noted that the Commission may not agree with its interpretation of the 2015 IRP DR requirement as setting a target for demand response, and as such only made a suggestion

[81] Department, Initial, Row 9, Table 1, p. 17
[82] Department, Initial, p. 6

that the Commission adopt it as the target, rather than a full-fledged recommendation.[83]

The Department provided the information below for baseline values, listing the docket source and where calculated values are located:

Table 7: Department Baseline for Demand Response Metric

Description	Baseline Source	Baseline Value	Baseline Calculation
Demand response, capacity available and amount called	Docket Nos. E002/M-01- 1024, E002/M-02-421 and E002/RP-15-21	Capacity Available – 764 MW, Amount Callable – 156,189 MWh, Amount Called – 557 MWh	2022 reported program information

The Department also recommended the Commission eliminate the DR performance incentive metric as the Commission did not approve Xcel's incentive proposal in Docket E002/M-21-101 and appeared to refer it to Xcel's Conservation Improvement Program.[84] (**Decision Option 7**)

Staff notes that in its reply comments Xcel appears to have interpreted the Department's recommendation for a DR target as a recommendation for how to establish the baseline. Regardless, Staff believes Xcel would make a similar argument regardless of whether it is for a target or baseline, and as such has summarized Xcel's arguments as referring to the Department's suggestion to establish a 400MW target for demand response.

Xcel disagreed with the Department's suggestion to set 400MW as the [target] for demand response for two reasons. First, Xcel explained that the 400MW DR requirement set in its 2015 IRP was for its entire upper Midwest integrated system, which is comprised of Minnesota, Wisconsin, North Dakota, South Dakota, and Michigan, however the PBR proceeding is focused on the Company's Minnesota service territory. Second, the Company noted that "it has not yet been determined whether the Company is able to meet [the 400 MW] requirement as customers begin to choose which program best meets their need or determine that other opportunities are more impactful to their business."[85] Furthermore, Xcel explained "the potential of demand response will be determined in the Company's next Upper Midwest IRP, and demand response scenarios will be modeled to determine the cost-effective achievable potential of demand response" and that "the Company suggests that targets should not be set until this cost-effective achievable potential is determined." Xcel preferred to wait until 2024 to establish baselines, as recommend by CEE and Fresh Energy, however if the Commission wishes to move forward with baselines, the Company recommended using a three-year rolling average. (**Decision Option 58**).

In reply comments the Department stated it "will not recommend a baseline for the Demand

[83] Department, Initial, p. 9
[84] Department, Initial, p. 11
[85] Xcel, Reply, pp. 14-15

response, including capacity available (MW & MWh).” The Department also no longer listed a suggested target of 400 MW by 2023 in its recommendations.[86]

2. Shape, Shift, Shed

The Commission set three new metrics that measure the integration of customer loads with utility supply. Specifically, it adopted the following metrics:

- Amount of DR that SHAPES customer load profiles through price response, time varying rates, or behavior campaigns.
- Amount of DR that SHIFTS energy consumptions from times of high demand to times when there is a surplus of renewable generation.
- Amount of DR that SHEDS loads that can be curtailed to provide peak capacity and supports the system in contingency events:
  - for Available Load
  - for Actual Load Reduction Achieved

Table 8 depicts the data from Xcel’s April 2023 Annual PBR Report. As these are new metrics, data begins in 2020. Staff notes the results for shed – available and shed – called are the same as the results for the Demand Response metric above (Figures 22 and 23).

Table 8: Shape, Shift, and Shed Results

Outcome	2022	2021	2020
2.) Shape	Shaping activities such as fuel switching and time of use rates are still being reviewed as part of our pilot efforts; the first results of the residential pilot were filed on Feb. 10, 2023, in Docket No. E002/M-17-775.		
3.) Shift	Shifting activities such as fuel switching and time of use rates are still being reviewed as part of our pilot efforts.		
4a.) Shed – Available	Total Capacity Available in MN • 772 Gen. MW • 165,134 Gen. MWh	Total Capacity Available in MN (summer 2021) • 764 Gen. MW • 147,466 Gen. MWh	Total Capacity Available in MN (summer 2020) • 755 Gen. MW • 155,967 Gen. MWh
4b.) Shed - Actual	Total Actual Capacity called (2022) • 0 Gen. MW • 1,671 Gen. MWh	Total Actual Capacity called (2020) • 0 Gen. MW • 2,192 Gen. MWh	Total Actual Capacity called (2020) • 0 Gen. MW • 1,066 Gen. MWh

The Department discussed the Shape, Shift, Shed metrics. The Department identified that there was sufficient data to calculate a baseline for the shed metric that is identical to the baseline for the demand response metric. The Department was unable to calculate baselines for the shape or shift metrics as Xcel has not yet provided data. In Attachment C to its comments the

[86] Department, Reply, p. 16

Department requested Xcel provide a timeline for data in reply comments.[87]

In reply comments Xcel identified that it had few load shifting programs, identifying the recently launched Peak Flex Credit Pilot (Docket 21-101) and not-yet-approved measures in its 2024-2026 ECO Triennial Plan (Docket 23-92). Xcel estimated it would not have data available for load shifting metrics until 2025. For load shaping, Xcel provided results from its residential time-of-use (TOU) rate pilot, stating that on average participants in the pilot reduced their summer on-peak demand by up to 1.6%. The Company did not provide further information on additional load shaping data or timelines.[88]

R Street's initial comments focused on the Cost-Effective Alignment of Generation and Load metrics. R Street explained that from the reported data Xcel appeared to make little progress on the identified metrics. In R Street's opinion, Xcel has little incentive to invest in demand response, therefore the Commission may wish to consider setting targets for the metrics under this outcome.[89] R Street also suggested the Commission should consider modifying the existing metrics or create a new metric to track demand response enabled by aggregators partnering with Xcel. For example, R Street suggested adding a part 3 to the first metric "amount under contract by an aggregator of retail customers (MW & MWh).[90]

Minneapolis supported R Street's proposed additional metrics and the development of additional demand response.[91]

In reply comments the Department did not support R Street's proposed additional metrics on DR aggregators.[92]

3. Load Factor for Load Net of Variable Renewable Generation

Table 9: Load Net of Renewable Metric performance

	2022	2021	2020	2019	2018	2017
Load factor for load net of variable renewable generation. Measurement will help determine how well Xcel Energy is shaping load to integrate with most cost-effective supply including demand response, energy efficiency and DERs. The closer to one the measurement is, the more load is being shaped.	40.5%	41.2%	46.79%	52.05%	51.68%	51.72%

[87] Department, Initial, Attachment C, p. 2 (PDF p. 37)
[88] Xcel, Reply, p. 15
[89] R Street, Initial, p. 3
[90] R Street, Initial, p. 4
[91] City of Minneapolis Reply Comments filed August 14, 2023 in docket no. E002/CI-17-401 at 2.
[92] Department, Reply, p. 13

Xcel requested the removal of the "Load Factor for Load Net of Variable Renewable Generation" from the list of approved metrics. The Company explained the metric was less impactful in "measuring the effectiveness of demand response efforts due to the rapid adoption of variable renewable generation." Xcel noted the increase in renewable energy adoption resulted in a reduced amount of energy in the load net of variable renewable generation. Therefore, the Company questioned whether the potential of demand response would be sufficient to reduce the load factor.[93]

The Department noted that the results in Table 9 suggest Xcel's performance has been declining, which may indicate that a reevaluation of the metric is necessary. Therefore, the Department did not develop a baseline or target for this metric.[94]

In reply comments the Department stated it did not have time to review Xcel's proposed change to the metric and instead recommended the Company include a discussion of the proposed elimination of the metric in its next Annual PBR report.[95]

Fresh Energy disagreed with Xcel's proposal to remove the metric, stating the changes to net load factor do not mean this metric is not useful as demand response programs and other efforts to match renewable generation to load can take longer to deploy than renewable generation. Fresh Energy recommended continuing reporting on the metric until additional review could take place.[96]

In reply comments Xcel acknowledged the interest from docket participants in ongoing reporting Load Net of Renewables metric and agreed to continue including the data and working with stakeholders to update the metric.[97] Xcel recommended developing a new methodology "for showing how demand response can illustrate effectiveness, especially as we begin to focus on demand response efforts that do not impact peak reduction – such as load flexibility."[98]

4. Staff Analysis

<u>Demand Response Baselines, Targets, and (potentially) Incentives</u>

Staff agrees with Xcel that it is not appropriate to use the 400MW requirement from its IRP as a target in the docket as the 400MW requirement pertains to Xcel's integrated upper Midwest system. Table 10 compares the amount of demand response on Xcel's integrated system compared to the amount of demand response in its Minnesota service territory.

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[93] Initial Comments, Xcel Energy, July 21, 2023 docket no. E002/CI-17-401 at 27
[94] Department, Initial, pp. 21-22
[95] Department, Reply Comments, p. 9 and p. 16
[96] Fresh Energy, Reply Comments, p. 2
[97] Xcel, Reply, p. 16
[98] Xcel, Reply, p. 16

Table 10: Demand response, capacity available (MW)

	2022	2021	2020	2019	2018	2017
Integrated System[99]	968 MW	943 MW	942 MW	897 MW	824 MW	851 MW
Minnesota	772 MW	764 MW	755 MW	749 MW	718 MW	658 MW

Staff's understanding is that the Department is no longer recommending the establishment of baselines or targets for any of the Cost-Effective Alignment of Generation and Load metrics. The Department did not make any recommendations for when it may be appropriate to reevaluate baselines and targets. Xcel similarly preferred not to establish baselines or targets until further evaluation.

However, Staff notes that the Commission has expressed an interest in Xcel's performance with regards to demand response in recent months,[100] and as such may be interested in more concrete plans to move forward with baselines, targets, and potentially incentives or penalties, for demand response. The Commission previously ordered Xcel to develop a performance incentive mechanism for DR in its April 16, 2020 Order in the instant docket, however the Commission rejected Xcel's proposed DR incentive mechanism in its March 15, 2022 Order in Docket 21-101, the Company's Load Flexibility Pilots, stating that "a substantial driving factor behind the approved load-flexibility pilots is to help Xcel make progress toward its existing obligation to acquire 400 MW of additional demand-response capacity by 2023 under the 2017 IRP order, and the record does not support a finding that any further incentive beyond that mandate is reasonable to induce Xcel to pursue these pilots at this time."[101]

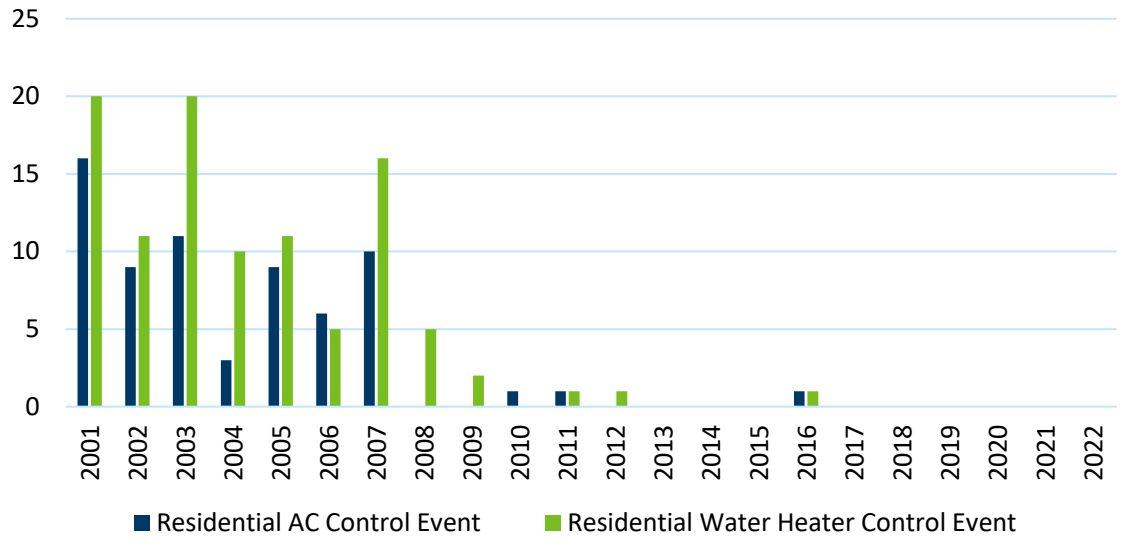
While the record discussed a target for overall procurement of Demand Response under the first metric, no party offered a target for Demand Response called. Setting a target for DR dispatch presents an additional challenge as Xcel typically does not call its demand response unless ordered to do so for a MISO system emergency or for annually required test events. Staff notes that MISO tariff rules do not prevent Xcel from calling its DR resources outside of a MISO system emergency. Historically Xcel called its Saver Switch and Water Heater programs multiple times a year, however around 2008 it stopped using its resources outside of test and research events. Figure 24 shows Xcel's historical dispatch of its SaverSwitch and Water Heater programs.

[99] 2023 Annual Demand Response Report, Docket 20-421

[100] For example, discussions during oral arguments at the August 24, 2023 agenda meeting for Docket 22-600, at the Commission's CIP planning meeting on Tuesday, September 19, 2023, and the MISO quarterly meeting on September 22, 2023.

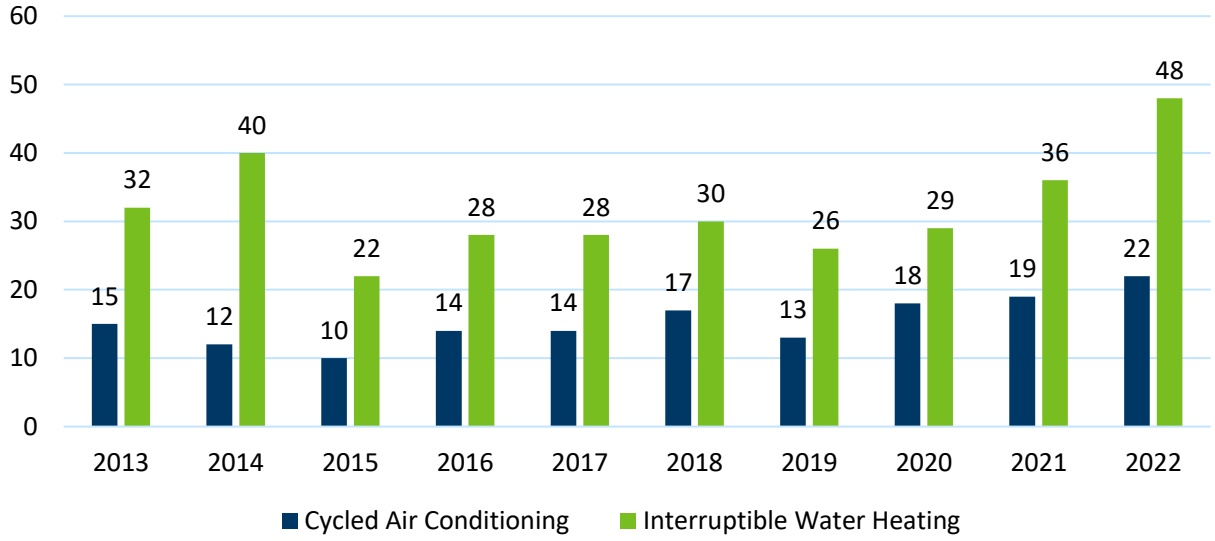
[101] ORDER APPROVING MODIFIED LOAD-FLEXIBILITY PILOTS AND DEMONSTRATION PROJECTS, AUTHORIZING DEFERRED ACCOUNTING, AND TAKING OTHER ACTION, Docket E002/M-21-101; E002/CI-17-401, p. 23

Figure 24: Xcel Demand Response Dispatch (excluding test events)[102]



Staff compares Xcel's recent DR programs to Great River Energy's (GRE) demand response programs, which have been called with increasing frequency over the past few years. Figure 25 depicts GRE's dispatch of its Residential Air Conditioning and Water Heater programs.

Figure 25: GRE Demand Response Dispatch[103]



As explained by GRE at the MISO quarterly meeting on September 22, 2023, GRE calls its demand response for economic reasons and not just in response to MISO capacity events.

To design an appropriate DR incentive and/or penalty, the Commission needs to establish baselines and targets for one or more of the metrics listed above. The Department offered

[102] Annual Compliance Reports, Docket E002/CI-01-1024
[103] Compiled from data access on October 10, 2023: https://lmguide.grenergy.com/HistoryForm.aspx

baseline values for the demand response and shape metrics in initial comments, along with a target of 400 MW in line with the Commission's 2015 IRP order, however as noted above the Commission has been reluctant to incentivize Xcel to do what is already required by Order. Staff is comfortable using the Department's static 3-year average of 2020-2022 data to calculate a baseline for the demand response metrics, however Staff does not believe the current record offers targets in line with the Commission's previous actions. The Commission could look to several potential sources to assist with development, such as Xcel's forthcoming IRP or the 2019 DR potential study done by the Brattle Group. The Commission could also order Xcel to file a revised Demand Response incentive mechanism as it did in prior orders. Regardless, additional record development is necessary. **Decision Option 59** delegates authority to the Executive Secretary to continue development of the record around Cost Effective Alignment of Generation and Load outcome.

Shape, Shift, and Shed Metrics

Staff notes Xcel has not yet submitted data under the Shape or Shift metrics, and the Shed metrics appear to be identical to the DR metric. Staff sees value in Xcel identifying which of its existing tariffs and programs qualify under shape, shed, shift, along with projected participation in a compliance filing. This could assist the commission in determining the breakdown of future potential programs. For example, in Reply Comments Xcel calls the Peak Flex Credit (approved Docket 21-101) a load shift program – however the Commission's Order approving the Peak Flex Credit refers to it as a load shed program. Based on the description of the Peak Flex Credit Staff also interprets it as a contributing towards the shed rather than the shift metric. **Decision Option 8** would require a compliance filing with information on programs that qualify under the shape, shift, and shed metrics.

Load Net of Renewables

Staff believes more information is needed to evaluate whether Load Net of Renewables is a useful metric. Staff reviewed Xcel's original calculation methodology in the October 31, 2019 filing and subsequent annual reports and was unable to find how Xcel arrived at the values in the reports. To gauge Xcel's performance Staff believes it would be important to see Xcel's calculations at how it arrived at the percentages, including what the Company's overall load factor is. Staff recommends Xcel submit this information in a compliance filing within 30 days of the Commission's order in this docket. (**Decision Option 10**)

Staff concurs with the Department and Fresh Energy that Xcel should continue to report the metric. Staff notes that other metrics under the Cost-Effective Alignment of Generation and Load indicate that Xcel is not currently using demand response to shape, shift, or shed load to any meaningful degree – therefore logically it follows that the Load Factor metric would not see any improvement. Xcel should be recognized for its efforts to rapidly bring renewable energy on to the system, however that does not mean that the metric itself may not have future value or is a negative indicator for renewable energy procurement – rather it is an indicator that more work needs to be done to optimize load to align with renewable generation.

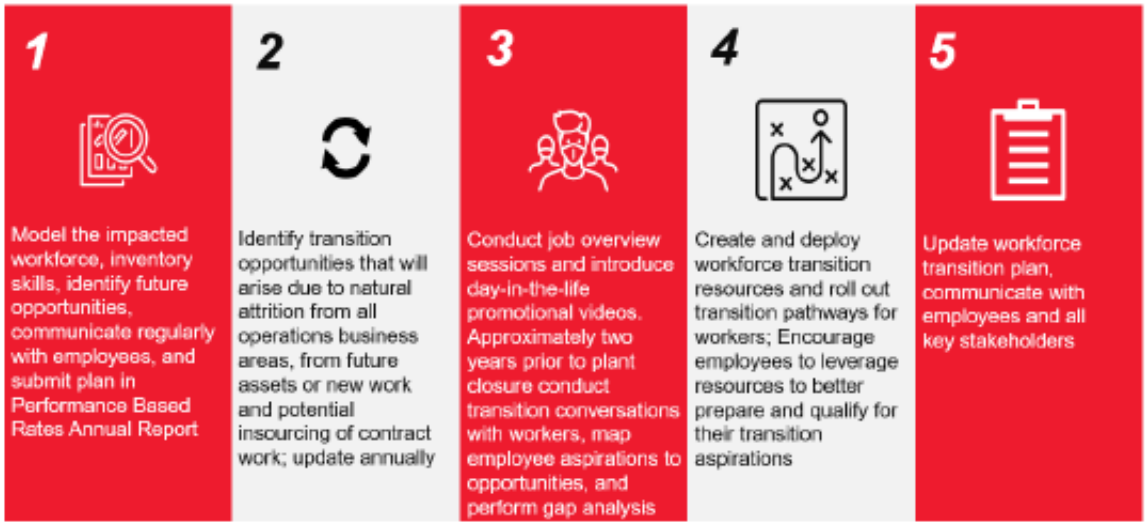
VIII. Changes to Metrics: Move or Pause Reporting

A. Workforce Transition

1. *Staff Summary of Annual Reports and Presentation of Historic Data*

In its September 18, 2019 Order, the Commission directed 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.[104] The Commission's February 9, 2022 Order adopted Xcel's workforce transition metric and required additional stakeholder feedback into its workforce transition plan ahead of data in 2022 (see Figure 26).[105]

Figure 26: Xcel Workforce Transition Metric Process



2. *Participant Comments*

The Company has recommended moving this metric, for future development, in the Workforce docket borne of Xcel's most recent integrated resource plan (Docket No. E002/M-22-265).[106] The Department also recommended the Commission transfer the Workforce Transition Plan metric to docket no. E002/M-22-265 and noted, while this is an important topic, it doesn't affect most of Xcel's customers and may not appropriate for inclusion in the PBR.[107] No one disputed moving the workforce transition metric.

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[104] Order Establishing Performance Metrics issued September 18, 2019 in docket no. E002/CI-17-401. See p11 and Ordering paragraph 3.

[105] Order Accepting Report and Setting Additional Requirements, Feb 9, 2022, docket no. E002/CI-17-401 at pt 9

[106] Xcel initial at 24

[107] Dept initial at 10

3. Staff Analysis

At present, the metric more resembles a plan for how it will transition work from retiring facilities as shown above in Figure 26. So far, the metric has not been developed into agreed upon measurable components, like number of workers trained or apprenticeships awarded.

Currently, the Company reports on its workforce across multiple dockets including: Docket No. 20-492 where utilities report "Create Jobs" and "Women, Minority and Veteran Businesses" engaged to provide economic support for COVID-19 pandemic; Docket No. 19-368 where the Commission required Xcel to create a workforce transition plan serving workers from retiring generation facilities through collaboration with IBEW, CEE, DEED, and MN Energy Transition Office which resulted in the opening of Docket No. 21-558[108]; the Company's CIP triennial filing 2024-26 includes a workforce development program. Docket No. 22-265 is a more recent docket, with its impetus in the Company's 2020-2034 resource plan, in which the Commission ordered a new docket, focused on supporting workers at retiring generating facilities in Minnesota, including Sherco and King.[109]

Staff believes that there is value in taking a holistic view on workforce transition and developing and refining how the Company approaches transitioning its workforce. Staff supports moving the metric to Docket No. E002/M-22-265 for refinement, just as the Commission did with the Company's Locational Reliability, Equity – Service Quality and Equity – Reliability Map.[110] Then, if the Commission finds it appropriate to set targets and incentives, a directive could be issued to stakeholders in the workforce docket to develop specific metrics and later, refer those metrics back to PBR.

B. MAIFI$_E$ / Power quality

Momentary Average Interruption Frequency Index (MAIFI) and Power quality metrics are dependent on AMI deployment.[111] Meter deployment is projected to be complete in 2025, the Company can then begin tracking in 2026, and reporting in 2027. No groups disputed this timeline.

The Company provided an update that 462,500 meters have been installed. The Company explained supply chain shortages delayed meter deployment but now, meter supply has

[108] See July 1, 2019 filing of IRP at pages 36, 70 and Appendix N10- Nuclear Worker Transition Plan

[109] Order Approving Plan with Modifications and Establishing Requirements for Future Filing, April 15, 2022, in Docket No. E002/RP-16-368. See ordering paragraph 24.

[110] Xcel Energy, Proposed Metric Methodology and Process Schedule, October 31, 2019, Docket No. E002/CI-17-401. Order ACCEPTING REPORTS, ESTABLISHING RELIABILITY STANDARDS, AND REQUIRING ADDITIONAL FILINGS issued January 28, 2020 DOCKET NO. E-002/M-19-261.

[111] Note, Xcel reports MAIFIE in Service Quality Annual Reports but data reflect only reports from Supervisory Control and Data Acquisition (SCADA) systems. AMI will enable detection of momentary interruptions at the customer's meter that were caused by overcurrent protective devices that do not provide automatic reporting to the Outage Management System (OMS). As stated in Xcel Comments in the instant docket filed July 31, 2023 at 9.

significantly improved from 2022 to 2023 and the Company expects to complete deployment in mid-2025.[112]

C. ACSI Customer Satisfaction metric

Xcel and the Department agreed that the American Customer Satisfaction Index (ACSI) metric should be removed because publicly available ACSI information is very limited, it does not provide additional insight beyond what is already provided by JD Power information, and because it does not benchmark against as large of a peer utility group as JD Power.[113] Both recommended continued reporting of JD power scores.

D. Fugitive Methane

The Commission required the Company to include discussions of methane emissions in its Annual PBR reports.[114] Presently, the Commission receives narrative data on how the Company reduces gas leaks and quantitative data on fugitive methane from the Company's distribution system using the EPA Mandatory Greenhouse Gas Reporting Rule, 40 CFR Part 98, Subpart W.

1. Staff Summary of Annual Reports and Presentation of Historic Data

The Company has made physical changes to its distribution system to reduce methane emissions like replacement of cast iron and unprotected steel distribution mains (Table 11), avoiding natural gas releases during system construction work, increased leak survey frequency, and replaced existing high-bleed controllers.[115]

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[112] Xcel compliance filing made September 25, 2023 in docket no. E002/M-21-814 at 29-30.

[113] Xcel initial comments at 27.

[114] Order Establishing Methodologies and Reporting Schedules, April 16, 2020 in docket no. E-002/CI-17-401 at Order point 1d. At time of Order, record not sufficiently developed to set methane emissions metric; Ordered the Company to, "Include a discussion of fugitive emissions of methane in the first annual report, including a proposed methodology for reporting fugitive emissions for methane in the "Carbon dioxide emissions avoided by electrification of buildings, agriculture, and other sectors" metric under environmental performance." Next, Order Accepting Report and Setting Additional Requirements issued Feb 9, 2022 in docket no. E002/CI-17-401 at Order point 6 Ordered the Company to provide more detailed information on upstream methane emissions as well as feasibility of reporting data on methane emissions from the full fuel cycle.

[115] Annual Report filed April 29, 2022 in docket no. E002/CI-17-401 at 17

Table 11: Pipe Replacement by Year

Pipe Type	2020	2021	2022
Distribution Mains	91% (plastic) 8.4% (protected steel)	88% (plastic) 10% (protected steel)	91.59% (plastic) 7.69% (protected steel)
Distribution Services	97% (plastic) 1.3% (protected steel)	96% (plastic) 1.7% (protected steel)	97.29% (plastic) 1.13% (protected steel)

*Replacement from cast iron and unprotected steel. Cast iron pipes have a GHG emission factor of 1,157 kg/mile, protected steel distribution mains have an emission factor of 97 kg/mile and plastic distribution mains 29 kg/mile.[116] Thus, replacement reduces methane emissions.

The Company has also joined in peer initiatives to exchange information and commit to reducing emissions. The Company joined ONE Future coalition of natural gas companies working together to keep methane emissions across the gas supply chain to 1% or less of throughput by 2025 and keep the Company's distribution system emissions at or below 0.2% from the distribution system. Staff shows methane emissions compared to the latter goal. Note, updated methane emissions figures were provided by the Company to show only the Minnesota portion of the company's emissions; both values are shown in Figure 27.[117]

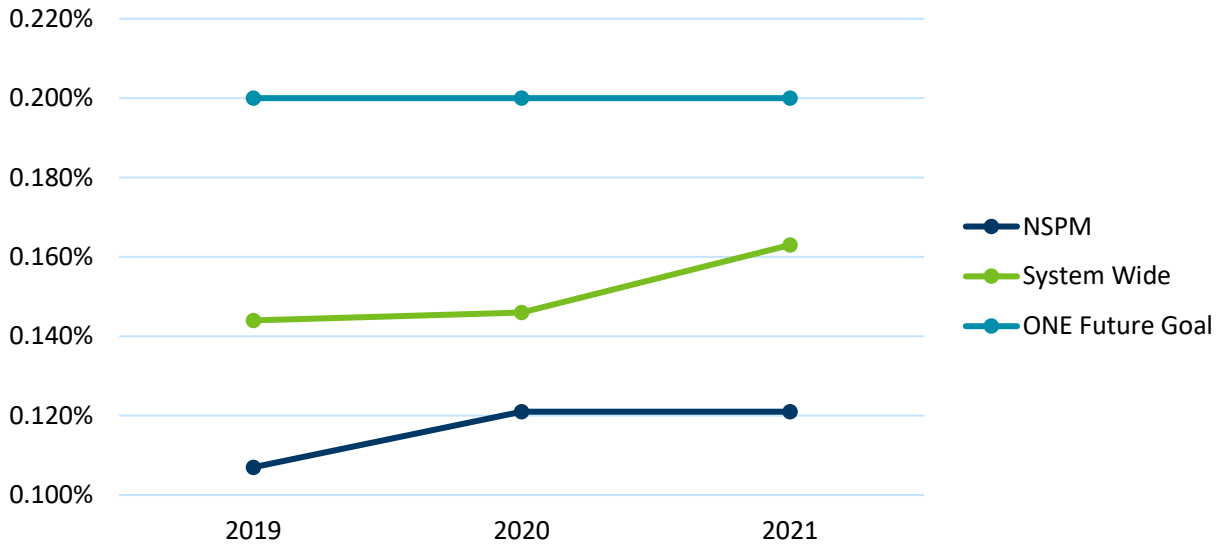
Further, in November 2021, the Company announced a net-zero vision for natural gas by 2050, with an interim goal to reduce greenhouse gas emissions 25% by 2030. The Company will source only certified low-methane emissions natural gas for both power generation and gas distribution and have net-zero methane emissions for its gas distribution system.[118]

[116] Cited in Xcel's annual report filed April 29, 2022 at 17, NGSI Methane Emissions Intensity Protocol, Version 1.0, at pages 33-34. See ngsi_methaneintensityprotocol_v1.0_feb2021.pdf (aga.org).

[117] The Company also participates in: Methane Challenge- oil and natural gas companies publicly report actions taken to reduce emissions; to do so, join one or both ONE future, commitment to reduce their Company's emissions rate to 1%, or Best Management Practices (BMP), commitment to use commercially available technologies. Natural Gas STAR- resources and peer information sharing on best practices to reduce methane emissions; since 1993 report cumulative reductions of 1,719,307,246 Mcf since 2020 and $5,157,921,729 saved. STAR program ended in 2022 though EPA still facilitates informal information-sharing. In MN, Xcel (2008-2022) and CenterPoint Energy Minnesota Gas (1997 - 2022) participated. EPA.gov website accessed August 30, 2023.

[118] Compliance Filing- 2021 Annual Report- Performance Metrics and Incentives, Xcel Energy, April 29, 2022 at 19.

Figure 27: Methane Emission Rate



2. Comments on Upstream Emissions

The Company maintains emissions from upstream and midstream sources are out of Company's control. For example, sellers are not required to share methane data. The Company said that it had included in its request for purchase proposals a voluntary request for disclosure of methane intensity; however, no producer shared that information.[119] More, the Company buys gas from pooled resources so it is unable to ascertain the individual supplier from which each gas molecule originated. Finally, certified natural gas had been purchased for a Colorado pilot project but, in terms of replication of that pilot, most wells that are certified do not support MN.[120]

To this extent, the Commission's Metrics Design Principle 2c(4) states that a metric should be sufficiently objective and free from external influences. Metrics should seek to measure behaviors that are within a utility's control and free from exogenous influences, such as weather or market forces.[121] The Company cited this principle in its request to move discussions of methane emissions to the gas resource planning docket.[122] The Department found it reasonable for the Company to conclude that adequate upstream methane emissions data are unavailable, but advocated for continued examination of how to measure emissions from the full fuel cycle.

The Department did have concern with eventual upstream methane calculations as the Inflation Reduction Act (IRA) imposes a direct "charge" on methane emissions from natural gas

[119] Xcel Energy annual PBR report filed April 29, 2022 in docket no. E002/CI-17-401 at 20
[120] Xcel Energy annual PBR report filed April 29, 2022 in docket no. E002/CI-17-401 at 20
[121] Order Establishing Performance-Incentive Mechanism Process, January 8, 2019, docket no. E-002/CI-17-401
[122] Xcel replies at 12-13

wells gathering facilities and pipelines. This emissions charge begins at $900 per metric ton in 2024 and increases to $1,500 per metric ton in 2026.[123] The Company replied that the "fee may not directly impact calculation of upstream methane emissions" and that "the IRA Methane Emissions Reduction Program also directs EPA to update GHG Reporting Protocol regulations" but emphasized those updates are not done.[124] Staff is unsure if this response adequately addresses the Department's concern; the Commission may wish to follow up on this line of inquiry.

3. Comments on Distribution System Emissions

The Department calculated baseline emissions from Xcel's gas distribution system and requested the Company discuss the availability of comparable data from other gas distributors in its reply comments. The Company reported it did not have access to any data that were not already publicly available and that it did not see the purpose of such information.[125] As discussed previously, the Company has stated that PBR is meant to focus on the electric system only and should exclude gas data, especially now that there is a gas resource planning docket. The Department acknowledged that upstream emissions, outside of the Company's direct control, may be more appropriate for development in the gas resource plan docket and more, moving all methane data to gas resource planning may yield administrative efficiency.[126]

4. Staff Analysis

The Commission has two questions before it on this issue. First, whether methane should be reported at all in the instant docket, as a new gas resource planning proceeding has been opened and the instant docket is meant to focus on electricity, not gas. Second, whether upstream emissions should be reported as these emissions may be out of the Company's control. Staff notes the Department is awaiting Xcel's April 2024 filing for a reply to a question about methane fees.

E. New Metric: Interactive Equity and Service Quality Map

The Commission found that the Company's Interactive Equity and Service Quality map met the requirements of the Commission's Sept 18, 2019 Order; further, the Commission required Xcel to conduct an analysis that examines whether there is a relationship between poor performance on the five identified metrics displayed on the interactive map and equity indicators as well as steps it would take to rectify any disparities found.[127]

[123] Department initial at 5
[124] Xcel replies at 13
[125] Xcel replies at 12
[126] Department replies at 9
[127] Order May 18, 2023 in docket nos. E-002/M-20-406 and E-002/CI-17-401. Required Xcel to file this analysis and any actions that could remediate disparities with its next service quality report due April 1, 2024.

1. Participant Comments

In initial comments, the Company stated that the map could be used to set a target to decrease the percent of actual customer disconnections per 1,000 customers disconnected in the identified equity-based census block groups. To achieve this target, the Company could utilize the existing Electric Service Quality Interactive Map to identify census block groups at or below 185% of Federal Poverty Level that show the lowest affordability program participation and greatest disconnection rates. Xcel could then target LIHEAP outreach to the identified areas. Such information could be described as "Decreasing Customer Disconnections in Identified Areas of Concentrated Poverty."[128]

ELPC/ Vote Solar, CUB, the OAG, and the City of Minneapolis (City) supported this idea. The City stated, "while reliability could be supported by federal funding and AMI deployment, it isn't a mandate that Xcel pursue more equitable locational reliability and service."[129]

However, in replies the Company clarified that it had not proposed a new metric but only to utilize the existing disconnection metric to establish a future target and potentially a PIM focused on decreasing customer disconnections, once AMI deployment was complete. Currently, Xcel takes no position on the metric locational reliability.[130]

2. Staff Analysis

Staff appreciates that commenters kept the map in the Commission's sightline. However, Staff is not inclined to pursue further action on the map, acknowledging Xcel's commitment to hire a third-party consultant to analyze the map and to pursue actions to address inequities that may be brought to the Company's attention after analyses.[131] Staff looks forward to an update from the Company in April 2024, perhaps one that draws on strategies identified in the Company's initial comments.

To continue forward progress on the Interactive Equity and Service Quality map in the instant docket, Staff offered an alternative decision option. This option, Staff believes, more accurately captures where the Commission is at in the PBR process. As the map has already been found adequate, the next step in the PBR process would be to require the Company to propose a method by which to calculate baseline data, just as was done for the other metrics in this proceeding, as well as to calculate targets that are based on existing Orders or Legislation.

F. Fuel Cost

R Street believes the Commission may consider what percentage of rate and bill increases are

[128] Initial Comments, Xcel Energy, July 31, 2023 in docket no. E002/CI-17-401, at 17-20
[129] City of Minneapolis Reply Comments filed August 14, 2023 (though listed as 15 Aug in eDockets) in docket no. E002/CI-17-401 at 1
[130] Xcel replies at 9
[131] Order May 18, 2023 in docket nos. E-002/M-20-406 and E-002/CI-17-401. And Xcel Reply August 14, 2023 in docket no. E-002/CI-17-401 at 10.

due to generation fuel increases, since that is typically treated as a pass-through cost to customers. R Street suggested the Commission consider how well Xcel is negotiating and reducing its fuel cost risk.[132] The OAG saw value in R Street's suggested metric, however "the OAG echoes the Department's recommendation, and suggests that the Commission wait to create this metric until there has been a reasonable opportunity to evaluate the impact of the new fuel clause adjustment process in Docket No. E999/CI-03-802."[133] Xcel also referenced the Department comments and the separate proceeding already addressing this matter.[134]

IX. Online Scorecard

In its 2019 and 2020 Orders, the Commission tasked Xcel with producing a public-facing scorecard to display its performance and directed Xcel and stakeholders to develop measurement methodologies and future metrics with an eye towards implementation of public reporting in the future.[135] Xcel first presented a draft scorecard in its 2021 filing in the instant docket. The Company reviewed other states' dashboards / scorecards and gave cost estimates that a simple scorecard updated annually would cost approximately $125,000 to develop and approximately $200,000 for annual maintenance. The simple version may be more appropriate for residential and commercial stakeholders wishing to check performance on a few metrics. A more extensive scorecard that was automated and/or linked to an external website could increase costs up to $1.5 million. The extensive version may be more suitable if the audience for such a scorecard is frequent commenters and interveners.[136] Xcel proposed a simple scorecard (Figure 28).

[132] R Street Initial Comments, July 31, 2023 in docket no. E-002/CI-17-401 at 5
[133] Office of the Attorney General, Residential Utilities Division, August 14, 2023, docket no. E002/CI-17-401 at 2-3.
[134] Xcel replies at 7.
[135] Orders Establishing Performance Metrics issued September 18, 2019 in docket no. E002/CI-17-401 at 11. And Establishing Methodologies and Reporting Schedules issued April 16, 2020 in docket no. E002/CI-17-401 at 8.
[136] End users / targets of the scorecard postulated by the Department in reply comments at 7

Figure 28: Sample Performance Metrics Scorecard

Xcel Energy®

Performance Metrics Scorecard

April 30, 2021

Category	Metric	Previous Year Trend	2020	2019	2018	2017	2016
Affordability	Average Residential Bill	↑	$88.28	$83.74	$91.30	$84.75	$83.73
Reliability	SAIDI	↑	All Days: 134.19 Normalized: 98.92	All Days: 124.50 Normalized: 81.02	All Days: 125.00 Normalized: 96.07	All Days: 141.70 Normalized: 57.04	All Days: 214.39 Normalized: 90.45
Customer Service Quality	Customer Complaints	↓	.1341 per 1000 Customers	.2244 per 1000 Customers	.1417 per 1000 Customers	.0651 per 1000 Customers	.0571 per 1000 Customers
Environmental Performance	Total Carbon Emissions	↓	12,801,300 tons	16,229,466 tons	18,549,479 tons	18,891,471 tons	18,972,617 tons
Cost Effective Alignment of Generation and Load	Demand Response	↔	Total Capacity: 754.6 MW 155,967 MWh	Total Capacity: 737 MW 164,716 MWh	Total Capacity: 731 MW 155,645 MWh	Total Capacity: 658 MW 134,140 MWh	Total Capacity: 723 MW 134,550 MWh

1. *Participant Comments*

Xcel discussed this scorecard in stakeholder meetings and while the group was interested in greater certainty in metrics before moving forward with a scorecard,[137] the group did agree that the eventual scorecard should be hosted on Xcel's website and updated annually which implies to staff the lower cost manual update option. The Company and Department support this format, though each offered two modifications. In contrast, ELPC/Vote Solar asked for a scorecard displaying all data with links to those data, rather than the subset of five metrics, that is updated quarterly or semi-annually.[138] The Company disagrees with ELPC/Vote Solar's update frequency explaining PBR data are only required to be filed annually[139] and it would be burdensome and contravene the docket intention to require a scorecard to be updated more often.

2. *Staff Analysis*

At present, the Commission has two decisions. First, whether to require the Company to display a public-facing scorecard on the Company's website or wait to require this until some future time, if at all. Second, if the Company is to proceed with a scorecard, the Commission may

[137] Xcel, 2021 Annual Report Performance Metrics and Incentives, April 29, 2022, docket no. E-002/CI-17-401 at 24. Also, Xcel Replies filed August 14, 2023 in the same docket discuss waiting for legislative certainty and AMI data.

[138] Initial Comment, Environmental Law & Policy Center & Vote Solar, July 31, 2023, docket no. E002/CI-17-401 at 2

[139] See Order Establishing Methodologies and Reporting Schedules issued April 16, 2020 in docket no. E002/CI-17-401 at 8

either require a simple, annually updated scorecard that may be modified to include targets as opposed to not metrics and/or the JD Power score rather than customer complaints, or require a more comprehensive scorecard that links to all PBR data and is updated semi-annually or quarterly.[140]

X. Staff Concluding Analysis of PBR

Staff reiterates that Minn. Stat. § 216B.16 states the Commission may "require the utility to provide a set of reasonable performance measures and incentives," and/or "initiate a proceeding to determine a set of performance measures that can be used to assess a utility operating under a multiyear rate plan." PBR is discussed within the context of a MYRP, as one means of evaluation and a method, financial or otherwise, to direct utility performance. Under this legislation, previous Commission Orders initiated a step-by-step process for the Commission to consider performance measures and, potentially, incentives that can be used to assess a utility operating under a MYRP. The step-by-step process, and what the Commission has accomplished to date, is shown again in Table 12 below.

Table 12. Performance Incentive Mechanism Process

Step	Action	Order Accomplishing Step
1	Articulate goals	January 8, 2019
2	Identify desired outcomes	January 8, 2019
3	Identify performance metrics	September 18, 2019
4	Establish metrics & review	September 18, 2019; April 16, 2020
5	Establish targets, as needed	
6	Establish incentive mechanisms as needed	
7	Evaluate, improve, repeat	

While the Commission must now make some decisions on specific metrics and reporting practices, the most important decision is deciding whether it will be more beneficial to assess and incentivize utility performance by 1) establishing baselines and targets now **or** 2) continuing "reporting only." To this extent, the Department offered two paths: 1) the Commission moves forward setting baselines and targets as needed now (completing Step 5 of the process), or 2) continues reporting and waits to consider setting baselines and targets until the next set of annual reports are filed in April 2024.

Some stakeholders, especially CEE, Fresh Energy, and the Company, argued the merits of waiting. They argued that recent legislation is likely to impact utility performance in ways that cannot be perfectly known at present. Waiting will provide a firmer grasp of what the Company

[140] Department suggested the exchange customer complaints for the JD Power score which, offers a comparison to other utilities in Reply Comments, filed August 10, 2023 in docket no. E002/CI-17-401 at 7. Also, Xcel Replies filed August 14, 2023 in the same docket at 3, "we recommend it [scorecard] contain a small amount of high interest targets – not metrics – that should be identified once targets are developed."

can and must do under new legislation.[141] To this extent, Staff emphasizes that PBR is not meant to incentivize performance the Company is already required to do by law or Commission Order. Waiting may give clearer insight as to where PBR incentives are needed and where they are not. More, waiting to act on PBR allows the Commission and Company to assess and report on legislative impacts.

A. The Benefits of Reporting and Targets

The Department and OAG offered a way to move PBR forward and proposed baselines and targets. No targets are currently in place and thus, cannot impact utility performance. However, if targets *were* in place, Staff shows current Company performance compared to proposed targets in Table 13 below.

Table 13. Performance in 2022, unless noted, Compared to Proposed Targets

Category	Do Individual Metrics Meet Target?
Affordability	Arrears increasing since 2020
	Disconnections increasing since 2020
	Average monthly residential bill $90.72 > EIA national average $88.55 and > $84.12 (5% below national average)
	Av. Rate kWh Residential: $0.1392 > EIA $0.1366 Commercial: $0.1158 > EIA $0.1122 Industrial: $0.09 > EIA $0.0718
Reliability	ASAI ↓ from 2021
	CAIDI < IEEE Q2 targets
	CEMI & CELID ↓ from 2021
	SAIDI and SAIFI < QSP and IEEE Q2 targets
Customer Service	JD Power < Q2
	Call center response met QSP but not OAG's higher target
	Complaints met QSP but not OAG's higher target
	Invoice accuracy met highest target
Environment	C & PM emissions ↓ from 2021*
	No EV targets set
	No Data for CO_2 avoided in buildings and agriculture
Generation & Load	0 MW DR called

All EIA data are from 2021 (most recent available) and are compared to Xcel's 2021 data. Red shading shows where targets would NOT have been met; green shows where targets would have been met; yellow shows where commenters proposed different targets and the Company may have met some of those targets. *Staff did not have access to EnCompass model data to compare environmental projected to actual performance.

[141] For example, as implementation of the Carbon-Free Standard, including changes to the Renewable Energy Standard and Solar Energy Standard, is considered in docket no. E999/CI-23-151.

Table 13 shows that the Company's performance for some reliability and customer service metrics already meets proposed targets. This may be interpreted to show the benefit of reporting and targets. For example, Xcel is already meeting SRSQ targets for SAIDI and SAIFI. In SRSQ, if a utility fails to meet reliability goals, no penalty is imposed but the utility is expected to provide a narrative explanation for how it will improve performance. Therefore, setting targets in PBR for metrics without existing targets, as well as continued reporting, may be beneficial. More, additional incentives may not be needed.

Table 13 also shows an important distinction between Xcel's system performance versus individual customer impacts. Table 13 shows that SAIDI, SAIFI, and CAIDI meet proposed targets. In practice in the QSP docket, Xcel has only been penalized once for system-wide reliability performance. However, Table 13 also shows decreasing CELID and CEMI, but every year Xcel's actual performance is such that Xcel is penalized and must credit the bills of customers experiencing lengthy (CELI) and repeated (CEMI) outages. Thus, metrics, targets, or incentives may not completely stop negative customer impacts but may play a role in mitigating them, or balancing among competing influences on the customer experience, like bills and reliability. The Commission will need to determine if setting targets for individual customer metrics is appropriate.

Regardless of a decision to set targets and baselines or wait, there were no objections to continued data collection. Regular reporting does provide a way to assess utility performance. More, continued data collection may show if the transparency of annual reporting incents the Company achieve the Commission's goals and outcomes.

Continuing to collect data and contemplate PBR preserves future options for the Commission. Later, the Commission may pursue incentives, like financial mechanisms, for metrics that are currently "reporting only," like disconnection. More, the Commission could choose to take greater action towards goals like customer service or climate goals; for example, by pairing environmental PIMs with the 2040 CFS legislation.

B. New Metrics and PIMs for AMI/FAN

In deciding PBR targets and potentially, incentives, the Commission must consider that Xcel is currently developing PIMs and has metrics for its Advanced Metering Infrastructure (AMI) and Field Area Network (FAN) distribution grid modernization projects. The Commission certified AMI and FAN in its July 23 2020 Order in Docket No. E002/M-19-666, and explained that certification was, "made with the recognition, and acceptance from Xcel, that all future cost recovery will be based upon the Company accomplishing Commission-approved metrics and performance evaluations for the certified projects."[142] Recovery through the Transmission Cost

[142] Order Accepting Integrated Distribution Plan, Modifying Reporting Requirements, and Certifying Certain Grid Modernization Projects issued July 23, 2020 in docket no. E002/M-19-666. Ordering paragraphs 7 & 8.

Recovery (TCR) rider, for costs incurred in 2022, will be based on performance.[143]

On June 28, 2023 in Docket No. E002/M-21-814 the Commission Ordered a set of 12 performance evaluation metrics and targets reflecting AMI/FAN benefits.[144] For those 12 metrics, the Commission ordered the Company to file three years of baseline data, targets, and evaluation methods. The Company was also required to propose PIMs for the 12 metrics in its next TCR Rider Proceeding. For any benefits that may not be captured by AMI metrics, the Company was ordered to consider if benefits could be captured by PBR.[145]

In its September 25, 2023 compliance filing the Company explained how it could calculate baselines, interim targets, and evaluate its methodologies.[146] The Company did note that before proposing baselines and targets, the PBR process first collected three years of baseline data and TCR was therefore "leapfrogging" that process. The Company also explained that it does not have time of use (TOU) or critical peak pricing (CPP) rates broadly available in Minnesota[147] and eventual evaluation of rates and programs should happen in individual dockets where such a program is proposed. Thus, the Company did not propose baselines or targets for bills and emissions in the TCR docket.[148] More, the Company wrote, "the PBR docket includes metrics related to the outcome "Cost Effective Alignment of Generation and Load [related to DR available and called, SHAPE, SHIFT, SHED, and load factor metrics listed]" and that "the above metrics are appropriate and sufficient to evaluate the Company's performance in this area."[149] Note that Table 14 shows there are no TCR cost recovery metrics related to cost effective alignment of generation and load beyond reduced costs and emissions from TOU and CPP rates.

Table 14 shows that while PBR and AMI/FAN have similar outcomes, the metrics used to assess those outcomes will not overlap if the Commission chooses to accept the Company's proposed

[143] As part of the Company and Department's settlement agreement, the Commission approved language stating that if the Company's TCR rider petition had not been considered before December 31, 2022, the Commission would approve recovery of the 2020 and 2021 AMI and FAN revenue requirements. Order, Settlement Agreement, June 2, 2022 in docket no. E002/M-21-814.

[144] In its November 24, 2021 Transmission Cost Recovery (TCR) Rider petition in Docket No. E002/M-21-814, Xcel sought cost recovery for AMI and FAN. The Company explained how AMI and FAN will provide two-way communication that can increase outage response speed as well as interval data that can facilitate time dependent rates with which customers could monitor and manage their energy use. The Company described additional benefits to the grid, EVs, and data ground-truthing.

[145] Order Approving Rider Recovery, Capping Costs, and Setting Filing Requirements issued June 28, 2023 in docket no. E002/M-21-814

[146] Xcel Compliance Filing for Transmission Cost Recovery Rider filed Sept. 25, 2023 in docket no. E002/M-21-814. The Company set interim targets for the three years during (2023-2025) and then immediately after AMI deployment (2026-2028). The Company believed interim targets, targets different from those in its initial petition and CBA, were appropriate because the original CBA was based on benefits realized throughout the entire 20-year life expectancy of the meters and complete deployment.

[147] The Commission's July 17, 2023 Order in electric rate case Docket No. E002/GR-21-630 required Xcel to propose a permanent Residential Time-of-Use rate by December 31, 2023.

[148] Xcel Compliance Filing, Sept. 25, 2023 in docket no. E002/M-21-814 at 25-27.

[149] Compliance filing September 25, 2023 in docket no. E002/M-21-814 at 26-27

metric revisions compared to the Commission's June 28, 2023 Order.[150] Please see full extent of PBR, QSP, SRSQ, and AMI alignment and original AMI performance metrics in Appendix A.

Table 14: PBR Metrics and All AMI / FAN Cost Recovery Metrics

PBR Metric	Target	AMI/FAN June 2023	AMI/FAN Sept 2023
# Residential Disconnections	↓	% Remote Disconnects/ Reconnects	% Remote Disconnects/Reconnects
Arrearages	↓	Bad Debt Write-Offs (target 8% reduction)	# of days to complete credit disconnection
Rates kWh	5% ↓ Nat Av.	Revenue increase from reduced meter tampering	# of theft /meter tamper cases completed
Av. Residential Bill	5% ↓ Nat Av.	Customer energy savings due to CPP & TOU rates	None (no wide-scale TOU rates in place)
CO_2 & Criteria Pollution Emissions	Align with IRP	Avoided CO_2 Emissions due to TOU rates (target 4,500 tons annual reduction)	None (no wide-scale TOU rates in place)
SAIDI, SAIFI, CAIDI, CELID 24 hrs, CEMI 6+, ASAI, Equity	Align with QSP and SRSQ	Storm-related savings and Reduced OK on Arrival field visits	# of canceled orders due to AMI
		Capital and O&M spending on asset health & reliability and capacity projects	Narrative
		Meter replacement spending	Meter failure rate
		Field trips due to equip. damage	# of canceled orders due to AMI
		Usage, kWh, on unassigned accounts	Usage, kWh, on unassigned accounts

PBR reflects Xcel's entire system while AMI and FAN are tools within that system. However, PBR and AMI/FAN are intertwined such that AMI/ FAN deployment will produce system benefits that will likely be captured in PBR. More, TCR and PBR proceedings cite full deployment of AMI/FAN as a necessity to reach some performance goals. While the Company could recover costs based on performance in both dockets, for AMI those cost would be related exclusively to "discrete investments" and would be recovered through riders.[151] In PBR, incentives would be tied to performance for systemwide goals, capturing how the Company is doing across all

[150] Order Approving Rider Recovery, Capping Costs, and Setting Filing Requirements issued June 28, 2023 in docket no. E002/M-21-814

[151] Xcel Compliance Filing made September 25, 2023 in docket no. E002/M-21-814 at 8

dockets and programs and incentives would likely be determined in a rate case.

Staff considers that in the future, parties may raise concerns about the Company receiving both PBR incentives and AMI/FAN investment recovery. If, for example TOU rates did become widely implemented, the Commission has already ordered cost recovery to be based on performance for AMI/FAN. The Commission would proceed with metrics as developed in that docket. If or when discussions of incentives are prompted in the instant proceeding, alignment between TCR and PBR could be broached at that time.[152] More, as PIMs are developed for AMI/FAN, it may be appropriate to transfer learnings from TCR to PBR.

C. Conclusion

In sum, Staff believes that having both baselines and targets allows contextualization of Utility performance, independent of the impact of targets on that performance. If the Commission chooses to set targets, doing so will be an exercise in priority setting. Targets could be set for only some metrics and/or refined, for example, once there is greater certainty around legislative impacts. Regarding possible incentives under Step 6 of the PIM process, Staff anticipates that Xcel will file its next MYRP on November 1, 2024, and notes that future consideration of incentives under the PBR framework will likely need to coincide with MYRP proceeding timelines. This includes ample time for record development in the PBR Docket *before* a MYRP is filed with the Commission.

[152] Importantly, parties have not had the chance to comment on the AMI data in the instant docket and the deadline for filing incentive mechanisms for AMI / FAN is with the company's next TCR petition which has not yet been filed.

XI. Decision Options

The main decision before the Commission is whether to move forward with setting baselines and targets for PBR metrics (Step 5 of the PIM process) at this time. The Department provided two paths for the Commission's consideration; they are captured in the decision options below: Path 1 suspends the decision on baselines and targets, and Path 2 establishes baselines and sets targets for some metrics. Additional items for the Commission's consideration are listed first.

Acceptance of Reports

1. Accept the Company's 2021 and 2022 Annual PBR Reports. (Department, CUB, ELPC/Vote Solar, City of Minneapolis, Xcel)

2. Review and revise metrics every third year, beginning with the Company's 2022 Annual PBR Report filed April 28, 2023. (Staff modification of OAG, Department, Xcel)

Scorecard

3. Approve the development of an online public scorecard with a stationary image updated annually with the following five performance metrics:
    a. Average Monthly Bill for Residential Customers
    b. System Average Interruption Duration Index (SAIDI)
    c. Residential Customer Service (JD Power overall score)
    d. Total carbon emissions by
        i. utility-owned facilities
        ii. PPAs
        iii. all sources
    e. Demand response, including capacity available (MW & MWh).

    (Department, Xcel would support though prefers to wait until a later date when metrics are finalized)

OR

4. Approve the development of an online public scorecard with an image that is updated semi-annually or quarterly, shows data for all current PBR metrics, and includes links to the relevant data. (ELPC/Vote Solar)

Modify Existing Metrics

5. Delegate Authority to the Executive Secretary to solicit stakeholder comments on the future of the avoided CO_2 metrics, including whether it is in the public interest to consider them for targets, and potentially future incentives. (Staff)

6. Modify metrics 1-3, 4a, and 4b under "Cost Effective Alignment of Generation and Load" to include aggregator programs enabled by Xcel. (R Street)

7. Remove the demand response performance incentive metric. (Department)

8. Within 60 days of the Commission Order, require Xcel to make a compliance filing identifying which of its existing tariffs and programs qualify under shape, shed, shift, metrics along with current and projected participation over the next 3 years. (Staff)

9. Direct Xcel to work with interested parties to re-evaluate the calculation of the "Load factor for load net of variable renewable generation" and file an update with its 2023 Annual PBR Report, filed in April 2024. (Department Initial with Staff modification; Fresh Energy and Xcel support)

10. Require Xcel to make a compliance filing within 30 days of the order showing the calculations for Load Net of Variable Renewable Generation metric, including the overall system load factor with renewable generation included. (Staff)

11. Approve the Company's request to move the Workforce Transition Plan metric to Docket No. E002/M-22-265. (Xcel, Department)

12. Discontinue the requirement that Xcel provide information from the American Consumer Satisfaction Index (ACSI) for the Residential customer satisfaction metric. (Xcel, Department)

13. Rename the metric currently titled Existing multi-sector metric [which refers to JD Power comprehensive score] to Residential customer satisfaction. (Department with staff addition)

Methane

14. Continue to require reporting on the methane emissions-related metrics until such time that the Commission has identified an appropriate natural gas docket for reporting those metrics. (Department)

15. Direct Xcel to include in its 2023 Annual PBR Report, filed in April 2024, a discussion of its proposal to move the three methane emissions-related metrics to an appropriate natural gas docket. (Department)

16. Move reporting of the methane emission information in the Environmental Performance Outcome Metrics seven through nine - methane emissions from the Company's distribution system, upstream methane emissions, and methane emissions across the full fuel cycle - to Natural Gas Resource Plan dockets. (Xcel with Staff Addition)

New Metrics

17. Approve the inclusion of a new future metric related to locational reliability and equity. (Department, ELPC/Vote Solar, originally discussed by Xcel)

OR

18. Require Xcel to propose baseline data and a target for the locational reliability and equity metric in its 2023 Annual PBR Report, filed in April 2024. (Staff alternative)

19. Require the Company to file the following information with its 2023 Annual PBR Report, filed in April 2024:
    a. The number of customers (and the percentage of all residential customers) who were under one or more payment plans during the reporting period
    b. The percentage of payment plans that ended in a default that then prompted a disconnection
    c. The average percent reduction in arrears per customer participating in a payment plan during the reporting period.

    (CUB, Xcel)

20. Require the Company to report on fuel cost risk mitigation in its next annual PBR report, filed in April 2024, by providing the percentage of increase in rates and bills that can be attributed to fuel costs. (R Street)

OR

21. Delegate authority to the Executive Secretary to include a discussion of fuel cost risk mitigation, as needed, in a comment period in the instant docket after the results of the new Fuel Cost Adjustment (FCA) pilot process in Docket No. E999/CI-03-802 have been analyzed. (OAG, Department)

PATH 1: Suspend Decision on Baselines and Targets

22. Suspend Decision on Baselines and Targets until after Annual Reports are filed in April 2024. (CEE, Fresh Energy, CUB, City of Minneapolis, and Xcel, preferred)

With Path 1, the Department recommends the Commission also do the following; however, Decision Options 23-28 can be done whether path one or path two is selected:

23. Direct the Company to provide an initial assessment of current metrics as they relate to newly passed federal and state policies in its 2023 Annual PBR Report filed in April 2024. (Xcel)

24. Delegate authority to the Executive Secretary to open a process for parties to perform a full metric review and response after the Company files its 2023 Annual PBR Report in 2024. (Xcel, with staff modification)

25. Delegate to the Executive Secretary to include, in a forthcoming comment period, directions to review the existing scope and population of metrics in this proceeding with other state-level PBR proceedings to determine if either the scope or population of metrics should be modified before continuing to the baseline and target setting phase of the process. (Department, with staff modification)

26. Delegate to the Executive Secretary to include, in a forthcoming comment period, directions to identify a goal or goals for the PBR process. (Department, with staff modification)

27. Require the Company to include, in its 2023 annual PBR filing made April 2024, a discussion of how a PBR plan would interact with other Commission proceedings such as the Service Reliability and Service Quality (SRSQ) and the Integrated Resource Plan (IRP) processes. (Department)

28. Direct Xcel to provide a proposal for the future of the QSP tariff and how the Commission might incorporate the targets for the metrics identified in that tariff in its 2023 Annual PBR Report, filed in April 2024. (Department)

PATH 2: Establish Baselines and Set Targets for Some Metrics

If Path 2 is selected, the Commission should also consider Decision Options 29-72:

BASELINES

Affordability
Select one of 29-31

29. Direct Xcel to provide a methodology for calculating the Rates per KWh metric baseline using Energy Information Administration rates information for all customer classes and in aggregate in its 2023 annual PBR report, filed April 2024. (Department, OAG)

OR

30. Establish baselines for Rates and Bills metrics utilizing the Commission's most recent approved rates in Docket No. E002/GR-21-630. (Xcel)

OR

31. Establish baselines for Rates and Bills metrics by calculating the 3-year static average of 2020-2022 data. (Staff)

Select 32 or 33

32. Establish baselines for arrearages and disconnections using the 3-year static average of 2020-2022 data. (OAG, Staff interpretation of Department Reply Comments Attach. A)

OR

33. Establish baselines for arrearages and disconnections using the static average of 2016-2019 and 2022 data. (Department, Staff interpretation of Department Reply Comments Attachment A)

Reliability

Select 34 with either 35 or 36 and with either 37 or 38. Or only select 39.

34. Establish the pre-existing baselines using IEEE annual benchmark data as established in the 2022 SRSQ (filed in April of 2023, Docket #23-73) for the following metrics:
    a. SAIDI
    b. SAIFI
    c. CELID
    d. CEMI

    (Department and Xcel, with staff inclusion of IEEE for clarification)

35. Establish a three-year rolling average baseline for CAIDI. (Xcel)

OR

36. Establish the pre-existing baselines using IEEE annual benchmark data as established in the 2022 SRSQ (filed in April of 2023, Docket #23-73) for CAIDI. (Department)

37. Approve the use of converted IEEE SAIDI information to determine the baseline for ASAI. (Department)

OR

38. Establish a three-year rolling average baseline for ASAI. (Xcel)

39. Establish baselines that use Xcel's most recently reported data to calculate 3-year static average of 2020-2022 data for the following six metrics (OAG):
    a. SAIDI
    b. SAIFI
    c. CAIDI
    d. CELID
    e. CEMI
    f. ASAI

Customer Service

Select 40 or 41 and select one option from 42-44

40. Use the pre-existing baselines from the Company's most recently approved Service Quality Tariff for the following three metrics:
    a. Call center response time
    b. Billing invoice accuracy
    c. Number of customer complaints.

    (Department, with Staff addition for clarity)

    OR

41. Establish baselines using 3-year static average of 2020-2022 data for
    a. Call center response time
    b. Billing invoice accuracy
    c. Number of customer complaints

    (Staff)

42. Establish the fiftieth (50th) percentile of the J.D. Power annual residential customer survey as the baseline for the Residential customer satisfaction metric. (Department)

    OR

43. Establish a three-year rolling average for a Customer Satisfaction baseline. (Xcel)

    OR

44. Establish a 3-year static average of 2020-2022 data for a Customer Satisfaction baseline. (Staff)

Environment

Select 45 or 46

45. Direct Xcel to include in its 2023 Annual PBR Report, filed in April 2024:
    a. a discussion of its proposal to establish future carbon dioxide baseline for the Total carbon emissions metric by using the Company's most recent IRP information.
    b. A discussion of its proposal not to develop baselines for the following metrics:
        i. Carbon intensity (emissions per MWh)
        ii. Total criteria pollutant emissions
        iii. Criteria pollutant emission intensity per MWh

    (Department)

OR

46. Establish baselines for total carbon emissions and carbon intensity (all sources) and total criteria pollutant emissions and intensity (all sources) using a 3-year static average of 2020-2022 data. (Staff interpretation of Department Reply Comments Attachment A)

Select 47 or 48

47. Direct Xcel to report data for the CO_2 Emissions Avoided – Transportation metric based on the calendar year. (Staff)

OR

48. Direct Xcel to report data for the CO_2 Emissions Avoided – Transportation metric based on the EV Annual Reporting time cycle (May – April) (Staff interpretation of Xcel position)

Select 49 or 50

49. Direct Xcel to use the PUC's electric vehicle registration data for calculating the CO_2 Emissions Avoided – Transportation sub metric. (Staff)

OR

50. Direct Xcel to make a compliance filing detailing how it determines the number of electric vehicle registrations within its service territory. (Staff alternative)

Select 51 or 52

51. Establish Xcel's proposed rolling 3-year weighted average methodology for the CO_2 Emissions Avoided – Transportation metric. (Department, Xcel)

OR

52. Establish baselines for the CO_2 Emissions Avoided – Transportation metric using a 3-year static average of 2020-2022 data. (Staff)

Select 53 with any combination of 47 through 52

53. Within 30 days of the Commission's order, require Xcel to make a compliance filing that recalculates the CO_2 Emissions Avoided – Transportation metric and baselines in accordance with the decisions above.

Select 54 or 55

54. Direct Xcel to calculate baselines and targets for CO_2 Emissions Avoided – Buildings, Agriculture, and Other Sectors with its 2023 Annual PBR Report, filed in April 2024. (Staff interpretation of Xcel)

OR

55. Do not establish baselines at this time for CO_2 Emissions Avoided – Buildings, Agriculture, and Other Sectors. (Department)

Alignment of Generation and Load

Select 56, 57, or 58. 59 can be selected with any of the options.

56. Do not establish a baseline for demand response including capacity available (MW & MWh). (Department)

OR

57. Establish a baseline for available and called demand response using a 3-year static average of 2020-2022 data. (Staff)

OR

58. Establish a three-year rolling baseline for available demand response capacity. (Xcel)

59. Delegate authority to the Executive Secretary to continue development of the record around Cost Effective Alignment of Generation and Load outcome. (Staff)

TARGETS

Affordability

60. Adopt a target of five percent below the national average for the:
    a. Rates per KWh, for residential, industrial, and commercial customers.
    b. Average residential monthly bill, adjusted for MN average residential monthly use per customer.

    (Department with staff modification, OAG)

61. Adopt a target to decrease both number of residential disconnections and total dollar amount of arrearages from the baseline value. (OAG, CUB, Department)

Reliability

62. Adopt the pre-existing QSP targets for the following five metrics (Department, Xcel):
    a. SAIDI
    b. SAIFI
    c. CELID
    d. CEMI

OR

63. Adopt targets for SAIDI, SAIFI, and CAIDI consistent with those set annually in Xcel's SRSQ docket (Staff interpretation of Department)

64. Adopt a target for the Average System Availability Index (ASAI) metric that is consistent with the pre-existing SAIDI SRSQ target. (Department)

Customer Service

Select 65 or 66; Select 67, 68, or take no action.

65. Adopt the non-reliability-related electric-related metrics with targets included in the Company QSP tariff:
    a. call center response time
    b. billing invoice accuracy
    c. number of customer complaints

    (Department)

    OR

66. Adopt targets for:
    a. call center response time at 90% of calls answered by a representative within 20 seconds and all calls handled via self-service in the Company's Interactive Voice Response System
    b. billing invoice accuracy at 99.8% accurate
    c. number of customer complaints forwarded from the Commission to the Company at less than the ((Number of Customers/1000) x 0.1500).

    (OAG)

67. Adopt Residential customer satisfaction metric target of Quartile 2 from the J.D. Power annual residential customer survey. (Staff)

    OR

68. Adopt Residential customer satisfaction metric target of Quartile 1 from the J.D. Power annual residential customer survey. (Staff)

Environment

69. Adopt mass carbon emission targets on a single year from most recent approved electric IRP. (Xcel)

70. Direct Xcel to include with 2023 Annual PBR Report, filed in April 2024, predicted emissions for its preferred resource plan. Xcel shall file the data for
    a. Total carbon emissions by utility-owned facilities and PPAs and all sources
    b. Carbon emissions per MWh by utility-owned facilities and PPAs and all sources
    c. Total criteria pollutant emissions
    d. Criteria pollutant emission intensity per MWh

    (Staff interpretation of Department recommendation)

71. Direct Xcel to file a proposal to establish a future target for emissions avoided by building and other sector electrification when the Company files its 2024 Annual PBR Report in April of 2025. (Xcel)

72. Do not calculate targets at this time for electrification of buildings, agriculture, and other sectors. (Department)

XII. Appendix A. Comparison of Performance-Type Metrics Across MN Dockets

With respect to "existing metrics" referenced in the Commission's January 8, 2019 Order, Staff highlights the following:

1. Xcel's Service Quality Tariff- set performance targets and underperformance penalties;[153]
2. Xcel's Advanced Metering Infrastructure (AMI)- reporting on AMI deployment and utilization and the Company's September 25, 2023 compliance filing proposing:
    a. "The quantifiable and verifiable incentive values associated with each PIM for performances above and below future associated targets. This may include a neutral zone around any particular target for acceptable performance."
    b. "Specific mechanisms for effectuating a penalty or incentive on the Company."[154]
3. MN Rules for Safety Reliability and Service Quality- reporting on several service indicators, but does not attach incentives to performance;[155]
4. MN Statute on Energy Conservation and Optimization sets an annual energy-savings goal. A utility earns a financial incentive for meeting its annual goal.[156]
5. In subsequent Orders in the PBR Docket the Commission also established a set of performance metrics and approved data collection and reporting methods.[157]

PBR	QSP	AMI	SRSQ
• Av monthly bill • Rates/kWh • Arrearages (res.) • Disconnects (res.)		• **% Disconnects/ reconnects done remotely** • ~~**Bad debt write-offs**~~ ***#Days to complete credit disconnection*** • ~~**Retail revenue increase from reduced tampering**~~ ***#theft/meter tamper cases completed*** • ~~**Customer energy price savings due to TOU rates & critical peak pricing**~~ ***None***	Disconnections
Complaints forwarded from	Complaints forwarded from	Complaints re: installation & inaccurate metering	Complaints, including

[153] Order Approving Amendments to Service-Quality Tariff, August 12, 2013, in dockets no. E,G-002/M-12-383 and E,G-002/CI-02-2034
[154] Order Approving Rider Recovery, Capping Costs, and Setting Filing Requirements, June 28, 2023, docket no. E-002/M-21-814 see ordering paragraphs 10-16. Quoted text at paragraph 16.
[155] Minnesota Rules 7826.0300 - 7826.2000 filed annually by investor-owned gas and electric utilities.
[156] MN Statute §216B.2403
[157] Order Sept 18, 2019 and April 16, 2020.

CAO	CAO		forwarded from CAO
Call center response time	Call center response time	Calls re: installs or time-varying rates	Call center response time
• JD Power Scores • Equity in customer service		Customer survey on the adequacy and clarity of communications prior to installation of advanced meters & outage communication	JD Power Scores
SAIDI	SAIDI	• Customer minutes of outages • ~~**Storm-related savings**~~ • Field visits: ~~**"OK on arrival"**~~ & voltage investigations. • ***#Canceled outage orders due to AMI***	SAIDI
SAIFI	SAIFI		SAIFI
CAIDI, CELID 24 hrs, CEMI 6+, ASAI, Equity, Location	Outage credits to customers experiencing CELI-24 hrs and CEMI-6; consecutive years CEMI-4, 5		CAIDI, CELI, CEMI, & ASAI. Also, bulk power interruption, circuit interruption data, voltage performance, staffing, & major service interruptions
	Gas Emergency Response Time		
Invoice Accuracy	Invoice Accuracy	AMI meters used in billing and estimated bills	
	Timeliness of Invoice Adjustments		
• CO_2 & criteria pollutant emissions • Fugitive methane		~~**Avoided CO_2 emissions due to TOU rates**~~ ***None (no TOU rates in place)***	
Avoided emissions EVs and building electrification			

DR available & called		Enrollment in demand management programs	
		• ~~**Capital and O&M spending on asset health & reliability and capacity projects.**~~ ***Narrative*** • ~~**Meter replacement spending**~~ ***Meter failure rate*** • ~~**Field trips for equip. damage**~~ • **Usage in kWh on unassigned accts**	

*AMI column bolded text indicates where Xcel is developing PIMs; all AMI performance metrics are included in table. Non-bold is an AMI tracking metric; not all tracking metrics included in table. Metrics approved by Commission in its June 28, 2023 Order in docket no. E002/M-21-814. Some new metrics were proposed in the Company's compliance filing made September 25, 2023 in docket no. E002/M-21-814; proposed changes are italicized with metric proposed to be change shown in strikethrough text.

XIII. Appendix B. Staff Analysis of Existing Incentive Structures

A. Advanced Metering Infrastructure (AMI)

Baseline data and PIM proposal in development per commission order issued June 28, 2023 in docket no. E002/m-21-814, filed sept 25, 2023- stakeholders could consider this PIM structure as we don't want to duplicate efforts of our stakeholders so we can build on the groundwork Xcel has already done- open a subsequent comment period ahead of rate case anticipated for November 2024.

B. Conservation Improvement Plan (CIP)

Per MN 216B.241 Subd 1c (b) A public utility providing electric service has an annual energy-savings goal equivalent to 1.75 percent of gross annual retail energy sales unless modified by the commissioner under paragraph (c). A public utility providing natural gas service has an annual energy-savings goal equivalent to one percent of gross annual retail energy sales, which cannot be lowered by the commissioner.

DSM financial incentive based on energy savings is calculated by utilities in accordance with the Commission's December 9, 2020, Order Approving 2021-2023 Parameters for Shared Savings Demand-Side Management Financial Incentive in Docket No. E,G999/CI-08-133.

Xcel reported in its most recent CIP filing, "In 2022, our electric CIP portfolio surpassed the 1.5 percent energy savings target established in Minn. Statute §216B.241. This is the tenth year in a row the Company has exceeded this energy savings targets. In 2022, we achieved nearly 648 GWh of electric savings or 2.33 percent of sales and generated nearly $243 million in net benefits for our electric customers. The results were achieved while spending $104 million (78 percent of our approved budget)."[158]

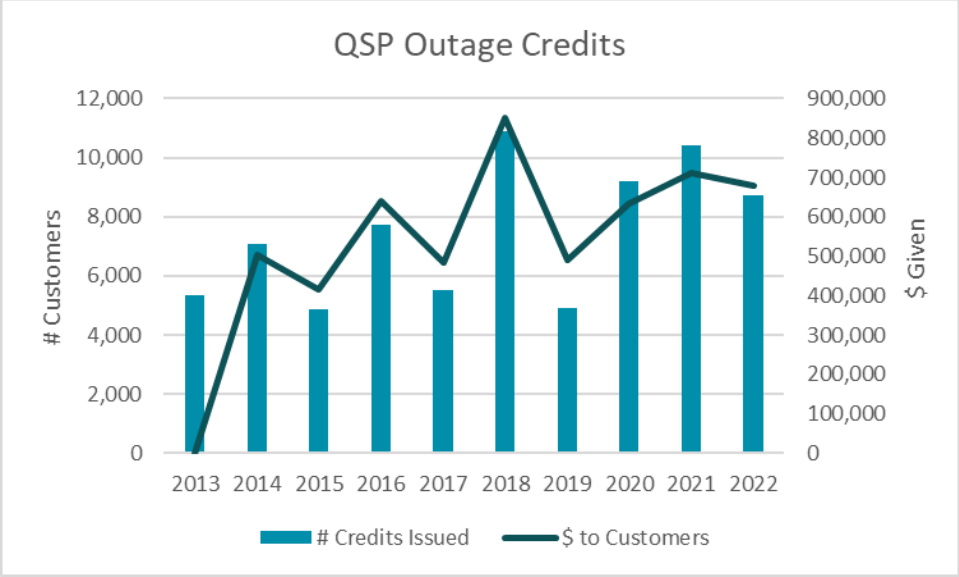
C. Quality of Service Plan/ Service-Quality Tariff (QSP)

The Company is required to credit $500,000 to customers via bill credits and invest $500,000 in distribution system maintenance and repairs if pre-established limits are surpassed for the following: customer complaints, telephone response time, SAIDI and SAIFI, natural gas emergency response time, accurate invoices and invoice adjustment timeliness, and customer outage refunds. Annual reports filed in QSP (docket no. E002/12-383). The Company has been within performance thresholds for all criteria in all reported years, apart from 2019 in which the complaint limit was surpassed and the Company made the required $1million underperformance payment.[159] Prior to the Company's current QSP tariff, Ordered in 2013[160], the QSP tariff had been in place for seven years and only once, in 2005, due to severe

[158] Petition, Xcel Energy, filed March 31, 2023 in docket no. E002/M-23-145
[159] Order issued February 18, 2021 in docket nos. E,G002/CI-02-2034 and E,G002/12-383.
[160] Order Approving Amendments to Service-Quality Tariff issued August 12, 2013 in docket nos. E,G002/CI-02-2034 and E,G002/12-383.

weather and implementation of a new billing system, the Company had to make under performance payments (for SAIDI (109.97) and Telephone Response Time (79.3% answer rate within 20 seconds)).[161]

The Company's tariff requires outage credits of $200 for customers with tracked and untracked municipal pumping outages, $50 to customers with outages lasting 24 hours or longer (also a PBR metric CELID 24 hours), $50 to customers with six or more outages (also a PBR metric CEMI 6+), and credits to customers experiencing consecutive[162] outages. The Company has issued outage credits to customers in every year since the QSP tariff was instituted by Order in 2013. See figureXX.



[161] Xcel Petition filed April 16, 2012 in docket no. E,G002/ CI-02-2034 at 4.

[162] Credits in addition to Single Year Outage credits but not applicable to municipal pumping customers. Customers receive $75 if they experience five (5) or more interruptions in two consecutive years; $100 if they experience four (4) or more interruptions for three (3) consecutive years; $125 if they experience four (4) or more Interruptions for four (4) consecutive years and each consecutive year thereafter. Order Approving Amendments to Service-Quality Tariff issued August 12, 2013 in docket nos. E,G002/CI-02-2034 and E,G002/12-383 at 5.

XIV. Appendix C. State PBR Highlights- Not Comprehensive but Showing Policies that may be transferable to the instant docket.

State Authority	Metrics	Targets	Incentive Mechanism
Illinois Pursuant to the Energy Infrastructure Modernization Act (IL Public Act 97-616) and other initiatives, Ameren and ComEd have been consulting with the Smart Grid Advisory Council and reporting on their AMI implementation plan since 2013.	AMI deployment and customer use of meters, including web portal access and customers with energy use changes; demand reductions via special rates; data access; emissions reductions from reduced manual meter readings; storage; system benefits; customer service	No	No
Massachusetts Dept of Public Utilities can establish PBR for gas and electric under G.L. c. 164, § 1(E)	Grid Spending Customer Satisfaction and Engagement Reduced Peak System Demand Climate Adaptations and GHG reductions	Use 3rd party benchmark Company sets targets to reflect peak events Alignment with Policy to reduce to 80% of 1990s CO_2 levels by 2050.	Company proposal- PBR would adjust base revenues, offer a consumer dividend, and asymmetrical earnings sharing mechanism to reflect benefits of moving from cost-of-service to PBR.
Oklahoma utility, Arkansas Oklahoma Gas, files Performance Based Rate Plan annually; Commission decides annually if rates increased, decreased, or unchanged. SB could have legally required PBR but did not get to hearing. Open docket to consider PBR for electric utilities.	In 2014, Arkansas Oklahoma Gas filed Customer Retention Plan (CRP) to counteract declines in customer base. CRP to include Service Line Replacement, Weatherization, and Heating Equipment Rebate Programs. PBR tariff provides cost recovery for these programs.		Set authorized ROE at 10.5% and earned return calculated annually. A ROE dead-band of 100 basis points is hereby established. The dead-band shall be from 10.00% to 11.00% in which no rate change shall occur. A PBR rate increase will be triggered only when the ER is below 10.00%, as explained in Paragraph 3.5. Similarly, any credit and sharing with the Company's customers shall occur only when the ER is above 11.00% and shared 75/25 customers/company.
Rhode Island Commissioner Anthony produced Guidance Document on principles of PBR	PIM in use now is Energy Efficiency in four categories: low-income, residential market rate programs, C&I, and yet-to-be defined equity	Energy efficiency PIM has set energy savings targets	Like MN CIP, programs are funded with prospective charge.
Vermont utilities required to submit Cost of Service plan but alternative	Capital Expenses Exogenous Storm Costs Power Portfolio- emissions, % carbon free,	GMP began reporting in 2021 with acknowledgement that baseline data could be	Additionally, all VT utilities have a type of service quality plan which includes at least one "service guarantee"

regulation allowed under 30 VSA § 218D. Green Mountain Power (GMP) has the following PBR metrics:	and peak load profiles DER DG EVs Customer Relationship Automation	used to set incentives	credit / financial benefit to the customer if utility fails to meet service commitments. In future, PBR will use indexing formula to update ROE and adjustment model used by Canadian regulators
Maryland utilities filing any rate case can also file PIMs as of September 2020 in case no. 9681	Each utility must propose its own PIMs and those PIMs must align with State policy objectives	Utilities must collect baseline data and propose PIM performance standards for metrics that justify the proposed maximum performance ranges that are a ―stretch challenge‖ on the higher performance range and a credible risk on the lower performance range.	Will use a graduated reward/penalty structure but parties have not agreed on monetary incentives versus adjustments to ROE, like staff's recommended gradual increase to the ROE incentive adjustment range with caps associated with each year of the MRP, *i.e.*, +/- 5 basis points in 2021, +/- 15 basis points in 2022, and +/- 25-basis points in 2023. Utilities will also propose PIM milestones and will earn financial rewards for achieving a milestone with a set timeline.
North Carolina PBR allowed under HB 951 and may include PIMs and tracking metrics. 2020 NC regulatory Process recommended combined MYRP, decoupling, and PBR	PIMs must be consistent with policy goals as defined in NC Gen. Stat. §62-133.16(a)(8). Three recently approved PIMs for DEP Time Differentiated and Dynamic Rate Enrollment PIM; Reliability SAIDI excluding MED; Renewables integration and Encouragement as number of net-metered customers. Three tracking-only metrics- call center response time, beneficial electrification from incremental load of EV, and analysis of 10 worst-performing circuits	No specific Target but will reward company with $5 for every new customer enrollment in TOU rates. Upside only PIM, with a shared savings-like structure that would distribute 30.0% of the total peak reduction joint benefit to DEP and 70.0% to customers. SAIDI revised as needed due to expected grid investments; graduated penalties based on DEP's failure to maintain SAIDI below certain threshold tiers based upon five-year historic averages, adjusted for statistical confidence levels. Incentive up to $4mil if utility exceeds previous three-year rolling average AND surpasses	N.C. Gen. Stat. §62-133.16(c)(4) provides that the total of all potential and actual PIM incentives or penalties cannot exceed 1% of the utility's total annual revenue requirement that is used to fix rates during the first year of a MYRP

		goals in Carbon Plan	
Washington State companies must propose a MYRP in its rate case and in approving a MYRP, the Commission must determine a set of performance measures. Senate Bill 5295 moves towards MYRP and PBR for gas and electric utilities.	Puget sound electric (PSE) has a demand response PIM. PSE also has reporting-only metrics including Grid Resiliency, Environmental impacts, customer affordability, and Equity		PBR Work Plan- develop and report on metrics (Oct 2021-Dec 2023); Investigate MYRP revenue adjustment mechanisms (april 2023-Mar 2024); Design PIMs and examine interplay between existing mechanisms, MYRPs, performance metrics, and PIMs (Jan 2024-Dec 2024); examine alternatives to COS regulation (Jan-Dec 2025)
Michigan Commission instituted service quality and reliability standards. Power Grid initiative launched 2019. PA 341 (in 2021) authorizes shared savings mechanism for electric utility to capitalize on Energy Waste Reduction strategies	Report SAIDI, SAIFI, and CAIDI on a rolling five-year average. Power quality reporting began 2009.		Seeming intention to focus incentives on distribution system and transition to DERs. Workgroup in 2022 to study use of financial incentives. Open comment period (Sept. 2023) on straw proposal to connect utility earnings to outage duration and frequency.
Washington DC Commission has authority to use alternative forms of regulation pursuant to DC Code § 34-911	Tracking Metrics have baselines of 2+ years of data and report: GHG emissions; Energy Efficiency; Peak demand reduction; DERs; CEMI-3. CEMI-3 data reported at the District, Ward, and neighborhood levels and provide heat maps, with and without "Major Service Outages."	Tracking Metrics are compared to targets.	Working group Phase 2 will focus on targets and incentives for 2023-2025. PIM guidance in Order 20755 included: "PIMs should be considered only when the utility lacks an incentive (or has disincentive) to align its performance with the public interest, there is evidence of under-performance, and evidence that improved performance will deliver incremental benefits
Connecticut adopts concerted effort of MYRP, earnings sharing with surplus resulting from PBR, revenue decoupling, equalized treatment of capex and opex spending, PBR layered onto COS, IDP. See legislation Sec. 16-244aa	Adopted priority outcomes for the State: Business operations and investment efficiency, comprehensive and transparent system planning, distribution system utilization, reliable and resilient electric service, social equity, GHG reductions, customer empowerment, quality		Phase two will develop PIMs, revenue adjustment mechanisms, and IDPs. Phase two scheduled for completion later in 2024.

	customer service, and affordability.		
Maine's Energy efficiency budgets, programs, and incentives are administered by Efficiency Maine with MPUC oversight. Energy Efficiency targets set in State Climate Action Plan 35-A MRSA § 10119& 10104. More, gas, electric, and communications all have service quality PIMs.	Service quality tracked with PIMs. Communications: installations, repairs, call answer time, outages, and trouble reports. Gas: new service install time and response time to odor leak calls. Electric- SAIDI, SAIFI, CAIDI, call center response, billing errors and estimates, and a customer survey. The survey will be reviewed annually with no benchmarks or penalties. More, each year the companies will present a Performance Report Card to customers.	Communications benchmarks and YTD averages reported. Gas time targets set for 5 sub-metrics and company must perform within the designated time periods 70% of the time to avoid a penalty, based on company's calculation of historic averages. Leak response set at responding to 95% of calls within 1 hour- based on Commission Rule Chapter 420 section 7(E). Electric reliability benchmarks set for 3 years based on 5-year historic average; call center response AND billing errors and estimates have same benchmarks adopted in company's rate case.	Communications SRSQ annual filing with company penalty given as customer rebate. Gas- $50,000 cap, over cap returned to customers. Any revenue adjustments imposed by the New Service Installation Metric will be held in a separate account and used as an offset to residential and small commercial customer contributions for the following year. Electric metric shortfall penalties not automatic but subject to a separate investigation. Annual decoupling revenue reconciliations for under-recovery limited to 2% revenue increases for each class, with amounts exceeding the cap deferred for recovery in subsequent years.
Hawaii Order 37507 issued Dec 2020 established PBR framework: annual adjustment to HECO target revenues based on Annual Revue Adjustment formula and PIMs. Commission may use 'reopener' to examine PIM at any time.	HECO website shows scorecard & reported metrics compared to targets for 10-15yrs. Metrics: Affordability, capital formation, cost control, customer engagement, customer equity, DER asset effectiveness, electrification of transportation, GHG reduction, grid investment efficiency, interconnection experience, and resilience. HI also has key performance metrics reported since 2015 and existing PIMs for items including reliability and customer service	Targets for only some metrics: Cost control- comparison to base year, increased at rate of inflation. Customer engagement- % of customers with AMI (implies use of AMI). Electrification targets are decrease/ increases from previous year or alignment with forecasted values; GHG target is a straight-line reduction from 2019 - 2045 target. Interconnection is days to connect and 100% survey response.	PIMs developed for priority metrics. Interconnection Approval Time- Tiered reward and penalty targets. Low-Moderate Income energy efficiency- reward capped at $2 million work in concert with clean energy group's programs. Reward- $/kWh for energy saved above 100% of Commission-approved program savings amount threshold. AMI utilization PIM is reward only and calculated on a target revenue basis. September 2023 Order to temporarily suspend Earnings Sharing Mechanism as utilities respond to catastrophic Maui Wildfires.

Additional practices to consider in PIM Step 6, establishing incentive mechanisms, as needed:

Hawaii's Revenue Adjustment Mechanisms

Revenue Adjustment Mechanisms	
MRP with Indexed Revenue Adjustment	**5-Year Control Period** with **Externally-Indexed Revenue Adjustment** allowing interim revenue changes pursuant to an indexed formula: **Annual Revenue Adjustment = (Inflation) - (X-Factor) + (Z-Factor) - Customer Dividend**
Earnings Sharing Mechanism (ESM)	Apply an **ESM** that provides both "upside" and "downside" sharing of earnings between the utility and customers when earnings fall outside a Commission-approved range
Major Project Interim Recovery (MPIR)	Examine the **MPIR adjustment mechanism** to determine how it can continue to provide relief for appropriate projects during the MRP consistent with other approved PBR objectives and mechanisms
Revenue Decoupling and Existing Cost Trackers	Continue to utilize **revenue decoupling** (i.e., the Revenue Balancing Account), to true up revenues to an annual revenue target and existing **cost tracking mechanisms** (e.g. PPAC, ECRC, etc.) to track and recover certain approved costs
Off-Ramps	Develop **off-ramp** mechanisms to provide for review of approved PBR mechanisms, pursuant to specified circumstances or conditions
Performance Mechanisms	
Performance Incentive Mechanisms (PIMs)	Implement a set of **PIMs** designed to help drive achievement of the following priority outcomes: *Interconnection Experience*; *Customer Engagement*; and *DER Asset Effectiveness*
Shared Savings Mechanisms	Develop **shared savings mechanisms** to address priority outcomes including *Grid Investment Efficiency* and *Cost Control*, mitigate capex bias, and reward pursuit of cost effective solutions to meet customer needs
Scorecards and Reported Metrics	Publish **Scorecards** with targeted performance levels to track progress against the priority outcomes of *Interconnection Experience, Customer Engagement, Cost Control*, and *GHG Reduction* and utilize **Reported Metrics** to highlight performance on the priority outcomes of *Affordability, Customer Equity, Electrification of Transportation, Capital Formation*, and *Resilience*

North Carolina's Potential PIM structures:

Shared savings or shared net benefits- Incentives can be based on shared net benefits or savings that allow a utility to keep a portion of the net benefits or savings created by achieving targets. Net benefits are calculated using avoided costs that a utility would have incurred without the program minus the cost of the program itself.
Percentage adders based on spending PIMs can allow a utility to earn a percentage return on their spending on some programs, like energy efficiency or DERs, if they meet performance targets or program goals. Allows utilities to earn a return on expenses that would otherwise be a pass-through.
Fixed rewards or penalties Utilities can earn or be penalized a fixed amount based on achievement of targets.
Adjustment to a utility's regulated ROE PIMs can make a basis point adjustment of a utility's regulated ROE, which could more fundamentally impact utility investment decisions