MINNESOTA
PUBLIC UTILITIES COMMISSION

Staff Briefing Papers – Volume 2

Meeting Date	October 31, 2024		Agenda Item **6
Company	Northern States Power Co. d/b/a Xcel Energy		
Docket No.	E002/M-23-467		
	In the Matter of the Petition of Northern States Power Co. d/b/a Xcel Energy for Approval of the Transmission Cost Recovery (TCR) Rider Revenue Requirements for 2023 and 2024, Tracker True-Up, and Revised Adjustment Factors		
Issues	1. Is Xcel Energy in compliance with relevant ordering paragraphs in Commission Orders issued July 23, 2020 in Docket No. E002/M-19-666, September 27, 2019 in Docket No. E-002/M-17-797, and June 28, 2023 in Docket No. E-002/M-21-814? 2. Should the Commission establish Performance Incentive Mechanisms (PIMs) for Xcel Energy's AMI and FAN investments? 3. Should the Commission take any other action related to Xcel Energy's AMI and FAN investments?		
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✓ **Relevant Documents**	**Date**
Docket E002/M-21-814	
Staff Briefing Papers, May 4, 2023 Agenda, Volume 2 – Docket 21-814	April 26, 2023
Order Approving Rider Recovery, Capping Costs, and Setting Filing	June 28, 2023
Xcel Energy – Compliance Filing, Transmission Cost Recovery Rider	September 25, 2023
Xcel Energy – Compliance Filing, Attachment A	September 25, 2023
Docket E002/M-23-467	

✓ **Relevant Documents**	**Date**
Initial Filing – Transmission Cost Recovery Rider	November 1, 2023
Xcel Energy – Letter (TCR Annual Report)	April 12, 2024
Comments – Joint Comments on TCR Topics 4 and 5	July 31, 2024
Xcel Energy – Reply Comments	August 26, 2024

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Acronyms, Definitions, and Relevant Dockets

ADMS	Advanced Distribution Management System
AGIS	Advanced Grid Intelligence and Security
AMI	Advanced Metering Infrastructure
AMR	Automated Meter Reading
BCA/CBA	Benefit Cost Analysis/Cost Benefit Analysis
CPP	Critical Peak Pricing
DI	Distributed Intelligence
DR	Demand Response
ECO	Energy Conservation and Optimization
FAN	Field Area Network
FLISR	Fault Location, Isolation, and Service Restoration
HAN	Home Area Network
HCA	Hosting Capacity Analysis
IDP	Integrated Distribution Plan
PBR	Performance Based Ratemaking
PIM	Performance Incentive Mechanism
PTR	Peak Time Rebate
QSP	Quality of Service Plan
TCR	Transmission Cost Recovery
TOU	Time of Use

Table 1: Related Dockets and Orders

Docket	Description	Relevant Order
E002/CI-17-401	Commission Investigation to Identify and Develop Performance Metrics, and Potentially, Incentives for Xcel Energy's Electric Utility Operations	Jan 8, 2019 Order
E002/M-17-775 E002/M-17-776	Xcel's Residential Time of Use Rate Design Pilot Program Xcel's 2017 Biennial Distribution Grid Modernization Report	Aug 7, 2018 Order
E002/M-17-797	Xcel Transmission Cost Recovery Rider Revenue Requirements for 2017 and 2018, and Revised Adjustment Factor	Sep 27, 2019 Order
E002/M-19-666	Xcel Energy's Integrated Distribution Plan and Advanced Grid Intelligence and Security Certification Request	Jul 23, 2020 Order
E002/DI-20-627	Department Stakeholder Process Informing the Report on the Metrics, Performance Evaluation Methods, and Consumer Protection Conditions to be applied to Xcel Energy's Advanced Metering Infrastructure and Field Area Network Projects Certified in Docket No. E002/M-19-666	
E002/M-20-680	Procedural Paths Forward Integrated Distribution Plan and AGIS Certification Request & Transmission Cost Recovery Rider	
E002/M-21-814	Xcel Transmission Cost Recovery Rider Revenue Requirements for 2021 and 2022, Tracker True-up and Revised Adjustment Factors	Jun 2, 2022 Order Jun 28, 2023 Order

1. Statement of the Issues

1. Is Xcel Energy in compliance with relevant ordering paragraphs in Commission Orders issued July 23, 2020 in Docket No. E002/M-19-666, September 27, 2019 in Docket No. E-002/M-17-797, and June 28, 2023 in Docket No. E-002/M-21-814?
2. Should the Commission establish Performance Incentive Mechanisms (PIMs) for Xcel Energy's AMI and FAN investments?
3. Should the Commission take any other action related to Xcel Energy's AMI and FAN investments

2. Executive Summary

Volume 1 discusses the Company's 2023-2024 TCR request for cost recovery of certified costs.

Volume 2 contains decisions related to the Commission's consideration of performance incentives for Xcel's implementation of Advanced Metering Infrastructure (AMI) and the

associated Field Area Network (FAN). The Commission approved the Company's AMI/FAN investment in the prior Transmission Cost Recovery (TCR) rider but conditioned that approval on Xcel accomplishing approved performance targets. The Commission required the Company to file performance incentive mechanisms in this TCR filing.

This paper covers the following information:

- A history of the Commission's consideration of AMI and FAN
- A summary of AMI and FAN deployment
- Xcel's Performance Incentive Mechanism (PIM) proposal
- The Joint Commenters (Department, OAG, CUB) reaction to the Company's proposal and alternative PIM options
- Staff Analysis

At the conclusion of the briefing paper Staff offers a suggested deliberation outline to guide the Commission through its discussion.

3. Introduction and Background

Xcel's November 1, 2023 Petition for Approval of the Transmission Cost Recovery (TCR) Rider Revenue Requirements for 2023 and 2024, Tracker True-Up, and Revised Adjustment Factors requested recovery for several distribution-grid modernization projects through the 2024 TCR Rider. Xcel also petitioned to true-up costs for several transmission projects that were previously recovered through TCR and will be moving into base rates as of January 1, 2024. Most of these are projects that the Commission has previously approved for TCR Rider recovery. Pursuant to the Commission's September 15, 2023 Order in Docket No. E002/M-22-574 accepting Xcel's 2022 Hosting Capacity Analysis (HCA) Report, Xcel is also requesting costs associated with its HCA be recovered in the 2024 TCR rider. Recovery of these costs and a discussion of the adjustment factors for the 2023-2024 TCR are discussed in Volume 1. Volume 2 pertains to order points from the Commission's June 28, 2023 Order in Docket E002/M-21-814 requiring the development of Performance Incentive Mechanisms (PIMs) for Xcel's Advanced Metering Infrastructure (AMI) and Field Area Network (FAN) investments.

A. Statutory Overview

In 2015, the Legislature amended Minn. Stat. § 216B.2425 to add an additional requirement for utilities operating under multiyear rate plans to file biennial reports on investments that utilities consider necessary to modernize the transmission and distribution system. Investments could focus on enhancing reliability, improving security against cyber and physical threats, and increasing energy conservation opportunities by facilitating communication between the utility and its customers through the use of two-way meters, control technologies, energy storage and microgrids, technologies to enable demand response, and other innovative technologies. Also in 2015, the Legislature amended Minn Stat. § 216B.2425, subd. 7b, the Transmission Cost Recovery (TCR) rider statute, to allow for rider recovery of certain distribution costs associated with new facilities, planning, and grid modernization investments certified by the Commission under Minn. Stat. § 216B.2425. Lastly, under Minn. Stat. § 216B.16, subd. 7b, utilities can

petition to recover costs associated with certified TCR projects in a proceeding separate from a project's certification under Minn. Stat. § 216B.2425.

B. Regulatory History

Xcel's Automatic Meter Reading (AMR) technology was implemented in the mid-1990s and was scheduled to reach the end of its contracted service agreement with Landi+Gyr in 2021. Accordingly, the Company started investigating options for its metering system, including consideration of Advanced Metering Infrastructure (AMI). As early as its 2015 Biennial Distribution Grid Modernization Report, Xcel indicated it anticipated using a certification request for new meters under Minn. Stat. § 216B.2425.[1]

In its 2017 Biennial Distribution Grid Modernization Report, Xcel requested certification of a residential Time of Use (TOU) pilot that would deploy 17,500 AMI meters to its customers. While the focus of the pilot was the TOU rate, Xcel explained the pilot would also allow it to test out AMI technology.[2] The Commission certified the TOU pilot and associated AMI deployment in its August 7, 2018 Order in Docket No. E002/M-17-776.

The Commission first considered cost recovery for a project certified under Minn. Stat. § 216B.2425, Xcel's Advanced Distribution Management System (ADMS), in Xcel Energy's 2017 TCR.[3] As part of that proceeding, Commission Staff flagged changes in Xcel's estimated costs for ADMS from the certification request to the cost recovery proceeding and questioned whether the Commission had sufficient information to approve the cost recovery request. Commission Staff was concerned that with much larger pending investments, such as AMI and FAN, there was not a clear enough standard for review of grid modernization investments.[4] The Commission agreed, and in its September 27, 2019 Order in Xcel's TCR set forth requirements for the Company when it made a future cost recovery filing for AMI and FAN.[5] Furthermore, the Commission authorized the Department of Commerce to seek specialized technical services under Minn. Stat. § 216B.62, subd. 8 to assist in its review and recommendations on grid modernization requirements in future proceedings.[6]

In 2019, Xcel Energy filed a certification request for its Advanced Grid Intelligence and Security (AGIS) Initiative, which included the rollout of AMI and an associated FAN as part of its 2019 Integrated Distribution Plan (IDP).[7] During the proceeding, stakeholders raised concerns about

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[1] Xcel Energy, 2015 Biennial Report - Distribution Grid Modernization, October 30, 2015, Docket No. E002/M-15-962, p. 10-11
[2] Xcel Energy, 2017 Biennial Report – Distribution Grid Modernization, November 1, 2017, Docket No. E002/M-17-776, p. 20-21
[3] Docket No. E002/M-17-797
[4] May 23, 2019, Staff Briefing Papers, Docket No. E002/M-17-797, p. 45-46
[5] September 27, 2019 Order, Docket E002/M-17-797, Order Para. 9, p. 13-15
[6] *Id.,* Order Para. 10, p. 15
[7] Docket No. E002/M-19-666

what "certification" under Minn. Stat. § 216B.2425 entailed, specifically whether it constituted preapproval of the projects and would impact future cost recovery and prudency reviews.[8]

In its July 23, 2020 Order certifying AMI and FAN, the Commission explained that "certification does not constitute a pre-judgment of whether costs will be recovered through riders or base rates. Certification simply permits a utility to request rider recovery in the future, which the Commission may approve or deny based on the facts available at that time."[9]

Furthermore, recognizing the importance of future cost recovery decisions, the Commission outlined specific steps to develop a more complete record prior to a cost recovery request for AMI and FAN investments:

- Future cost recovery would be based on Commission-approved performance metrics, and a cost recovery request must include a proposal for specific metrics and a description of how Xcel would maximize AMI and FAN benefits for ratepayers.[10]
- The Commission requested the Department convene stakeholders and prepare a report with recommendations on specific metrics, detailed methods for evaluating performance, and consumer protections or other conditions, including cost caps, for AMI and FAN.[11]
- In any cost recovery proposal, Xcel must include:
    - A discussion of mechanisms that will be employed to maximize cost reductions and minimize cost increases.
    - A demonstration that the utility has thoroughly considered the feasibility, costs, and benefits of alternatives to the selected technologies.[12]
- 60 days prior to a petition to seek rider recovery for AGIS costs, Xcel Energy shall file preferred procedural paths forward with one option being a contested case.[13]

During the fall of 2020, the Department of Commerce convened stakeholders and developed a report titled "Methods for Performance Evaluations, Metrics, and Consumer Protections for AMI and FAN" in accordance with Order Para. 9 from the July 23, 2020 Order in Docket E002/M-19-666.[14] A key portion of the stakeholder work and the report was the development of a list of AMI and FAN related metrics[15], which the Department recommended should be used as "the baseline for consideration in the cost recovery proceeding."[16]

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[8] July 23, 2020 Order Accepting Integrated Distribution Plan, Modifying Reporting Requirements, and Certifying Certain Grid Modernization Projects, Docket No. E002/M-19-666, p. 10-11
[9] *Id.,* p. 12
[10] *Id.,* Ordering Paragraph 8, p. 16
[11] *Id.,* Ordering Paragraph 9
[12] *Id.,* Ordering Paragraph 9, p. 17
[13] *Id.,* Ordering Paragraph 13
[14] December 1, 2020, Report of the Minnesota Commerce Department, Division of Energy Resources, Docket E999/DI-20-627
[15] Found in the Department's March 15, 2022 filing with the Appendices to its Dec 1, 2020 Report, Docket E999/DI-20-627, PDF p. 262
[16] *Id.,* p. 29

On November 24, 2021, Xcel Energy filed its 2021-2022 Transmission Cost Recovery Rider in Docket E002/M-21-814 which included the costs for AMI and FAN. The Department and Xcel negotiated an agreement, which the Commission accepted, on the appropriate procedural path for review of the 2021 TCR, which included the Company providing additional information on AMI and FAN and holding a series of workshops on the technologies.[17] As part of this agreement, the Company filed an updated cost benefit analysis on its AMI and FAN investments on October 14, 2022.

On June 28, 2023, the Commission issued its Order Approving Rider Recovery, Capping Costs, and Setting Filing Requirements for Xcel's 2021-2022 TCR Rider.[18] In the Order, the Commission took the following actions related to AMI and FAN:

- Approved 2021 and 2022 TCR recovery of AMI and FAN projects.[19]
- Established individual cost caps for AMI and FAN, for both capital and O&M expenses.[20]
- Required Xcel to track any incremental cost savings or revenues attributable to AMI and FAN and return them to customers through the TCR annual true-up.[21]
- Required Xcel to provide an annual report on a series of metrics and qualitative information.[22]
- Required Xcel to file an update describing the Company's consideration of AMI and FAN benefits and to what extent existing metrics in the Performance Base Metrics (PBR) proceeding (Docket No. E002/CI-17-401) could capture those benefits.[23]
- Required Xcel to file three years of historical data for a series of metrics related to AMI and FAN and delegated authority to the Executive Secretary to set baselines for those metrics following a negative check off process.[24]
- Required Xcel to set interim performance targets for a series of AMI and FAN metrics based on projected benefits from the Company's cost benefit analysis (CBA) filed in the present docket, along with proposed evaluation methods for each metric.[25]
- Required Xcel to propose Performance Incentive Mechanisms (PIMs) for a series of performance targets using the PIMs design process outlined in the PBR proceeding (Docket No. E002/CI-17-401).[26]

On September 25, 2023, Xcel submitted a compliance filing on Order Points 14 and 15 from the Commission's June 28, 2023 Order in Docket 21-814, which required the Company to file three years of historical data and provide interim performance targets for what were termed

[17] June 2, 2022 Order, Docket E002-M-21-814
[18] Docket No. E002/M-21-814
[19] June 28, 2023 Order, Docket E002/M-21-814, p. 7, Ordering Para. 3
[20] *Id.*, p. 7-8, Ordering Para. 4
[21] *Id.,* p. 8, Ordering Para. 5
[22] *Id.,* p. 8-9, Ordering Para. 9-10
[23] *Id.,* p. 9, Ordering Para. 11
[24] *Id.,* p. 9, Ordering Para. 14
[25] *Id.,* p. 9-10, Ordering Para. 15
[26] *Id.,* p. 10, Ordering Para. 16

"Performance Evaluation" metrics. Table 2 describes the original metrics approved in the Commission's June 28, 2023 Order, whether Xcel proposed a modification, and the baseline and proposed interim target(s).

Table 2: Xcel Proposed Metrics Baselines and Targets[27]

Metric from Jun 28, 2023 Order	Sep 25, 2023 Xcel Alternative	Baseline and Target
$ spent on meter replacement due to failure	Meter Failure Rate	Baseline: 1.84% AMR meter failure rate Target: 0.5% AMI annual meter failure rate
Field trips due to customer equipment damage	# of canceled outage orders due to AMI, all days	Baseline: 0 canceled outage orders due to AMI, all days No target set at this time
"Ok on arrival" outage field visits		
Capital and O&M $ spent on storm recovery		
Percent of disconnects done remotely	n/a	Baseline: 0% 2023: 50% 2024: 60% 2025: 65% 2026-2028: 70%
Percent of reconnects done remotely	n/a	Baseline: 0% 2023: 70% 2024: 80% 2025: 90% 2026-2028: 95%
$ of bad-debt write-offs	# of days to complete credit disconnection	Baseline: 11.8 days 2023: 9.6 days 2024: 8.4 days 2025: 7.8 days 2026-2028: 7.1 days
Usage on unassigned accounts	n/a	Baseline: 89,031 MWh 2023: 87,250 MWh (2%) 2024: 83,760 MWh (5.9%) 2025: 77,059 MWh (13.4%) 2026-2028: 71,224 MWh (20%)
Increase in Retail Revenue	# of theft/meter tampering cases completed	Baseline: 30 theft/meter tampering cases completed 2023: 34 cases completed 2024: 38 cases completed

[27] September 25, 2023 Compliance Filing, Docket E002/M-21-814, summary of proposals on p. 8-28

		2025: 42 cases completed 2026: 48 cases completed 2027: 54 cases completed 2028: 60 cases completed
Customer energy price savings due to time-of-use (TOU) rates	n/a	Baseline: 0 Target: 0
Avoided tons of CO_2 emissions due to TOU Rates	n/a	Baseline: 0 Target: 0
Customer savings due to critical peak pricing (CPP)	n/a	Baseline: 0 Target: 0
Capital and O&M $ spent on Asset Health and Reliability projects and Capacity projects	Narrative description of the Company's use of AMI data to inform system investment plans	Baseline: none Target: none

Xcel's September 25, 2023 filing contained additional information on the Company's justifications for each metric, baseline, and target, along with a proposed evaluation method. The Company also noted that the compliance cost to measure and report on the above metrics is "substantial" and it would provide more detailed information about the cost in future filings.[28]

On November 1, 2023, Xcel filed its Petition for Approval of its 2023-2024 Transmission Cost Recovery Rider.

On July 31, 2024, the Department of Commerce, Office of the Attorney General, and Citizens Utility Board filed comments as the "Joint Commenters" pertaining to topics related to PIMs for Xcel's AMI and FAN investments. The Department of Commerce separately filed comments on the other portions of Xcel's TCR filing, which are summarized in Volume 1.

On August 26, 2024, Xcel Energy filed reply comments.

On October 31, 2024, the matter will come before the Commission.

4. AMI and FAN Deployment Progress

As of September 30, 2023, the Company had installed 512,250 meters, or 37% of the total expected deployment of 1.4 million meters. The Company anticipates installing 600,000 meter in 2024 before completing deployment in 2025. The Company has installed approximately 43% of FAN devices and anticipates completing FAN deployment by the end of 2024.[29]

[28] Xcel Energy, Compliance Filing, November 1, 2023, Docket 21-814, p. 11
[29] *Id.*

Xcel forecasts AMI and FAN deployment will be $67 million under the Commission's approved cost caps, as depicted in Tables 3 and 4 below.

Table 3: AMI Forecast ($M)[30]

	Capital	O&M	Total
Pre 2021	$10.4	$3.0	$13.4
2022	$32.7	$2.3	$35.0
2023	$96.1	$6.1	$102.2
2024	$118.0	$15.7	$133.7
2025	$63.2	$16.5	$79.7
2026	$20.2	$15.5	$35.7
2027	-	-	-
2028	-	-	-
Total	$340.6	$59.1	$399.7
Cost Cap	$366.3	$92.9	$459.2
Variance	**-$25.7**	**-$33.8**	**-$59.5**

Table 4: FAN Forecast($M)[31]

	Capital	O&M	Total
Pre 2021	$7.7	$0.6	$8.3
2022	$11.9	$0.2	$12.1
2023	$44.8	$0.2	$45.0
2024	$18.4	$0.1	$18.5
2025	$9.0	$0.1	$9.1
2026	$1.3	$0.1	$1.4
2027	$0.7	-	$0.7
2028	$1.9	-	$1.9
Total	$95.7	$1.3	$97.0
Cost Cap	$98.1	$6.4	$104.5
Variance	**-$2.4**	**-$5.1**	**-$7.5**

Xcel also provided an update on the implementation of customer facing products and services enabled by AMI and DI and their implementation status, depicted in Table 5.

[30] Xcel Energy, Petition, November 1, 2023, Docket E002/M-23-467 p. 21, Table 3
[31] *Id.*

Table 5: AMI and DI Products and Services[32]

Product / Service	Available	Target End User	Available before AMI	Enabled by AMI	Enhanced or Enabled by DI
Web Portal (Energy Usage Dashboard)	Current	Customer	Y	Y – Additional Info Available	Y
On Demand Meter Reads	Current	Customer	N	Y	N
Green Button Connect My Data	Current	3rd Party Access (Customer & 3rd Party)	Y	Y – Additional Info Available	N
Green Button Download My Data	Current	Third Party Access (Customer)	Y	Y – Additional Info Available	N
Bring-Your-Own- Device / Software Development Kit	Current	3rd Party Access (3rd Party)	N	Y	Y
Outage Notifications to Company Systems	Current	Customer	N	Y	N
Advanced Rates	TBD	Customer	Limited	Y	N
High Bill Alerts	Current	Customer	N	Y	N
Budget Alerts	Current	Customer	N	Y	N
Energy Action Days	Current	Customer	Y	Y	N
My Energy Connection Release 1	Fall '23	Customer	N	Y	Y
My Energy Connection Release 2	TBD	Customer	N	Y	Y
Xcel Energy Launchpad	Current	3rd Party Access (Customer)	N	Y	Y
*High Impedance Detection**	Current	Utility	N	N	Y
*Remote Connect/Disconnect**	Current	Utility/Customer	N	Y	N
*Power Quality**	Current	Utility	N	Y	N
*Theft Detection**	Current	Utility	Y	Y – Enhanced	N
*Meter Diagnostics**	Current	Utility	N	Y	N
*EV Detection**	Testing	Utility	N	Y	Y
*Location Awareness**	Testing	Utility	N	Y	Y
*Grid Visibility Tool**	Current	Utility	N	Y	N
Momentary Outages	Current	Utility	N	Y	N

**not listed in Table 1 of Xcel's report however they were listed in the narrative portion on pages 6-10, therefore Staff has added them here. Staff also requested clarification from Xcel on filling out these additional categories.[33]*

[32] November 1, 2023 AMI Annual Report, Docket 21-814, p. 5, Table 1
[33] Ex Parte Communication, October 14, 2024, Docket E002/M-23-467, p. 3

5. Xcel PIMs proposal

A. Background

During the comment period on Xcel's 2021-2022 TCR Rider proposal, the Joint Commenters (Department, OAG, CUB) offered recommendations that spoke to the Commission's July 23, 2020 Order which conditioned future cost recovery for AMI and FAN on "accomplishing Commission-approved metrics and performance evaluations for the certified projects."[34]

These stakeholders recommended that cost recovery of Advanced Meter Infrastructure (AMI) and Field Area Network (FAN) components should be subject to certain conditions, including a requirement for Xcel to submit Performance Incentive Mechanisms (PIMs) with associated penalties, and additional reporting requirements. Joint Commenters recommended that PIMs for AMI and FAN be developed using the PIM Design Process established in Docket No. E002/CI-17-401 (the performance-based regulation docket for Xcel).

The Commission approved TCR recovery of AMI and FAN as proposed for the 2021-2022 rider and required that Xcel report on a set of 12 Performance Evaluation metrics and targets reflecting AMI and FAN benefits (replicated below in Table 6).[35]

[34] July 23, 2020 Order, Docket E002/M-19-666, Order Para. 8, p. 16

[35] Order Approving Rider Recovery, Capping Costs, and Setting Filing Requirements issued June 28, 2023 in Docket No. E-002/M-21-814

Table 6: AMI and FAN Performance Evaluation Metrics and Targets

Benefit	Metric and # from Table 3	Target
Distribution Management Efficiency	Capital and O&M $ spent on Asset Health and Reliability projects and Capacity projects (A)	1% reduction
Outage Management Efficiency	Capital and O&M $ spent on storm recovery (B&C)	10% Capital reduction .1% O&M reduction
Avoided Meter Purchases	$ spent on meter replacement due to failure (D)	Undefined
Reduced Field and Meter O&M Expenses	Field trips due to customer equipment damage (E)	50% reduction
	Percent of disconnects and reconnects done remotely (F&G)	70% of disconnects 90% of reconnects
	"Ok on arrival" outage field visits (H)	50% reduction
Reduced Consumption on Inactive Meters	Usage on unassigned accounts (I)	20% reduction
Reduced Bad Debt Expense	$ of bad-debt write-offs (J)	8% Reduction
Reduced Theft/Meter Tampering	Increase in Retail Revenue (K)	Undefined
Load Flexibility Benefits	Customer energy price savings due to time-of-use (TOU) rates (L)	Undefined
	Avoided tons of CO_2 emissions due to TOU Rates (M)	4,500 tons annual reduction
	Customer savings due to critical peak pricing (CPP) (N)	Undefined

The Commission also approved a more extensive list of 77 "Transparency Metrics" which are included in Xcel's AMI and FAN Reporting in its November 1, 2023 TCR Annual Report filed separately in this docket, and in Attachment 3 to the Petition. Xcel's PIM proposal is included as Attachment 15.

B. AMI and FAN Reporting

Xcel's Petition Attachment 3 responds to the Commission's June 28, 2023 Order Point 13, which required the Company to provide an update on AMI and FAN benefits that Xcel cited when originally proposing AMI and FAN—deployment; reliability; EVs; meter adaptability; high-impedance detection; connectivity; safety; security; and use of customer data—and to discuss where these benefits may already be reflected in existing reporting. Overall, Xcel states it currently reports more than 100 items across a variety of dockets and suggested that existing reporting and metrics, stated this level of reporting effectively captures the benefits of AMI and FAN, and stated additional reporting is not necessary.

C. Proposed PIM structure

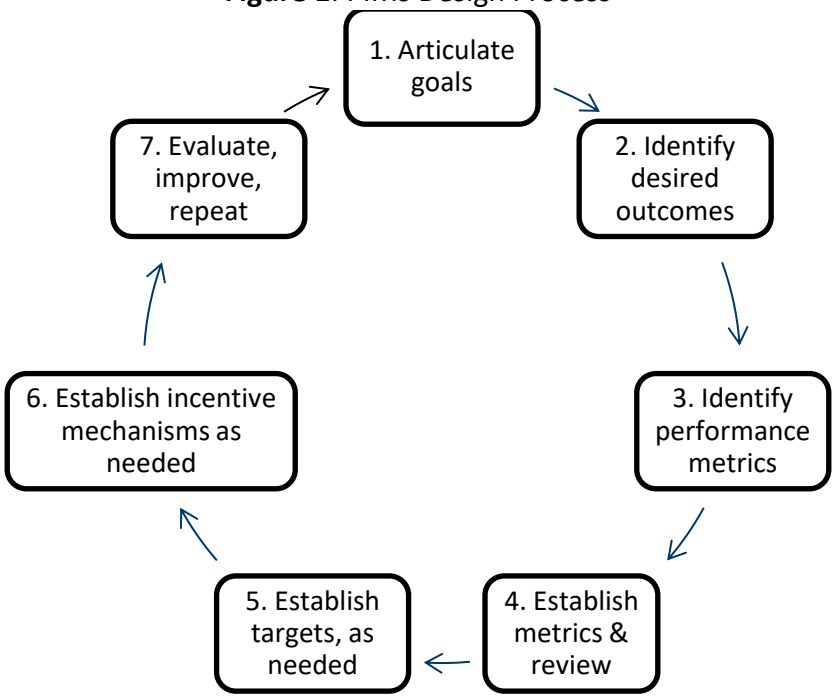
Order Point 16 of the Commission's June 28, 2023 Order in Docket No. E002/M-21-814 (TCR Order) states:

16. In the Company's next TCR Rider Proceeding, Xcel shall propose Performance Incentive Mechanisms (PIMs) for each performance target listed in Attachment 1, Table 1 of Staff Briefing Papers–Volume 2 [Performance and Evaluation metrics] filed on April 26, 2023, using the PIM Design Process outlined in Docket No. E-002/CI-17-401. Xcel's PIM proposal shall include, at minimum, the following elements:
    a. PIM structure.
    b. The dates when the PIMs will take effect and terminate.
    c. Determination of 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.
    d. Determination of the incentive values to be associated with each PIM.
    e. Specific mechanisms for effectuating a penalty or incentive on the Company.
        i. Xcel's PIM proposal must include at least two penalty options: one that calculates the penalty as a proportion of the incremental costs of the proposed investments compared to the least-cost alternative, and another that calculates the penalty as a proportion of the return on these incremental costs.
        ii. Xcel's PIM proposal must consider Hawaii's approach with use of penalties and incentives for performance at certain thresholds and a "deadband," a neutral zone around the target for acceptable performance with no attached penalty or incentive.
    f. An explanation of how stakeholders were engaged in the creation of PIMs.

Xcel includes a discussion of each of these items and proposed performance incentive mechanisms as TCR Petition Attachment 15. The PIM process approved by the Commission comprises seven steps, shown in the figure below, including establishment of goals, outcomes, and metrics, which should be developed using the Commission's metric design principles. In the PBR process, the Commission has required at least three years of data for each metric before developing associated baselines, targets, or incentives.[36]

[36] Xcel Petition, Attachment 15, p. 2, citing to Docket No. E002/CI-17-401, ORDER ACCEPTING REPORT AND SETTING ADDITIONAL REQUIREMENTS (February 9, 2022), at Order Point 5.

Figure 1: PIMs Design Process



As a precursor to filing proposed PIMs, the Commission required Xcel to propose interim performance target for the "Performance and Evaluation Metrics" depicted in Table 6 above. In Xcel's September 25, 2023 filing in Docket No. E002/M-21-814, it proposed six (6) interim performance targets in compliance with the Commission's Order.[37] In that filing Xcel explained that its proposed interim targets were modifications of the original "Performance and Evaluation Metrics" in order to better set targets that complied with the Commission's Metric Design Principles from Docket 17-401.[38] Xcel stated the development of PIMs for AMI and FAN is "leapfrogging the PBR process: In our September 25, 2023 filing, we set baselines and targets, where possible, without three years of comparable data. Now, with this filing, we are proposing PIMs."[39]

The six (6) interim performance targets Xcel proposed in its September 25, 2023 filing in Docket 21-814 are:

1. Meter failure rate,
2. Percentage of disconnects done remotely,
3. Percentage of reconnections done remotely,
4. Usage on unassigned accounts,
5. Number of days to complete a credit disconnection, and

[37] Order Approving Rider Recovery, Capping Costs, and Setting Filing Requirements issued June 28, 2023 in Docket No. E-002/M-21-814, Order Points 14-15
[38] Xcel Energy, Compliance Filing, September 25, 2023, Docket E002/M-21-814, p. 5
[39] Xcel Petition, Attachment 15, p. 2

6. Number of theft/meter tampering cases completed.

The targets proposed in the September 25, 2023 filing formed the base of the Company's PIMs proposal in the instant docket.

Xcel stated that performance targets #1 (meter failure rate) and #5 (number of days to complete a credit disconnection) are inappropriate for PIMs. AMI meters are anticipated to have a lower failure rate than legacy AMR meters, which is anticipated to result in lower replacement meter purchases. However, Xcel explained that actual meter failure rates are outside its control and therefore not appropriate for a performance incentive. With the remote disconnection capability of AMI meters, Xcel can disconnect past-due accounts more quickly which can lower the Company's bad debt expense. However, Xcel stated, "we understand incentivizing the Company to maximize the speed of disconnections is counter to the priorities of customer advocates, the Company, and the Commission,"[40] and therefore Xcel felt an incentive or penalty related to the speed of disconnections is not appropriate. Xcel reported that it discussed this issue with stakeholders, who agreed. Xcel proposed a single PIM that considers the four remaining performance metrics:

1. Percentage of disconnects done remotely,
2. Percentage of reconnections done remotely,
3. Usage on unassigned accounts, and
4. Number of theft/meter tampering cases completed.

Xcel believed that combining these performance metrics into a single PIM is appropriate because doing so is consistent with the Commission's design principle that metrics should be tied to a policy goal (in this case, the goal of maximizing AMI benefits), and because combining the metrics will reduce the impact of year-to-year variability of individual metrics.[41]

Decision Option 2005 implements Xcel's proposed PIM.

D. Effective Dates

Xcel proposed the PIM go into effect on January 1, 2030, which will enable the Commission to revisit targets and baselines after three years of AMI data have been collected. The PIM would last for 10 years through December 31, 2040. Xcel believes 10 years is sufficient time to gauge performance and is the duration of AMI performance tracking in plan for Illinois utilities.[42] Xcel proposed revisiting targets every three years during the future TCR Rider proceedings.

Decision Option 2009 implements PIMs in 2030.

E. Incentive Values

The Commission's 2023 TCR Order requires the Company to propose at least two penalty options:

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[40] Xcel Petition, Attachment 15, p. 4
[41] *Id.*
[42] *Id.* p. 5, citing Section 16-108.5(f) of the Illinois Public Utilities Act.

1. A proportion of the incremental costs of the proposed investments compared to the least-cost alternative, and
2. A proportion of the return on these incremental costs.

For penalty option 1, Xcel presented $2.8 million, reflecting the full "incremental costs of the proposed investment compared to the least cost alternative." For the purposes of PIM development, Xcel identified the "least cost alternative" as non-Distributed Intelligence (DI) capable AMI meters.[43] For penalty option 2, Xcel offered $1.1 million, the net present value difference in *returns* between the selected AMI meters and non-DI capable meters, when adjusting the cost benefit analysis (CBA) to reflect the least cost alternative.

Xcel preferred the $1.1 million penalty "because it is meaningful to the Company without having a potential chilling effect on grid modernization investments," and would be consistent in scale with underperformance penalties in the Company's Quality of Service Plan (QSP) proceedings.[44]

Xcel proposed that the incentive amount is symmetrical to the penalty, i.e., $1.1 million. Xcel considered an asymmetrical structure but stated "we do not see a compelling policy reason for the Commission to more heavily incentivize overperformance for these metrics" and therefore suggested a symmetrical incentive structure.

F. Neutral Zones/Deadbands

Neutral zones or "deadbands" are a range around a performance target to account for uncertainty and acknowledge a range of acceptable performance. Xcel provided illustrative deadbands using historical data where available. The deadbands are *illustrative* because, Xcel stated, "revisiting targets in 2029, after we have three full years of updated data with AMI, is imperative." Historical data included the Covid-19 pandemic period, which may be anomalous for certain metrics. Historical data also reflected results before AMI implementation, which Xcel believed makes it inappropriate to use to set performance targets.[45]

Using historical data, Xcel determined that +/- 1.5 standard deviations would capture approximately 85 percent of historical performance for each metric and would be an appropriate deadband. Xcel proposes setting a neutral range around each individual target that spans -1.5 to +1.5 standard deviations around the target level, and then to use the aggregated results of performance on the four metrics to determine penalties or incentives, discussed further in the following section. Table 7, included below, illustrates its +/- 1.5 standard deviations approach for the proposed performance metric "Percentage of disconnects done remotely." In this example, the neutral range would span from 58% to 82% if the target percentage of disconnections performed remotely is set at 70%.

[43] Xcel Petition, Attachment 15, p. 9
[44] *Id.*
[45] *Id.*

Table 7: Illustrative Penalty/Incentive Thresholds – Remote Disconnection (kWh)

Year	**Interim Target** (% of disconnections done remotely)	**Penalty Threshold*** (-1.5 standard deviations)	**Incentive Threshold*** (+1.5 standard deviations)
2023	50%	38%	62%
2024	60%	48%	72%
2025	65%	53%	77%
2026-2028	70%	58%	82%

** Performance for the four PIM metrics would be aggregated to assess overall performance and assess a penalty or incentive.*

As noted earlier, the illustrative targets shown were developed using historical data, and Xcel proposes that both baselines and targets are revised using three full years of data with AMI before the PIM goes into place.

G. Evaluating Performance and Effectuating the PIM

Xcel proposes to use a scoring rubric to aggregate performance results on each metric into one PIM for purposes of determining if the PIM penalty or incentive is activated. Xcel proposes that performance within the deadband / neutral zone is given a score of 0, performance above the upper threshold gets a score of +1, and performance below the lower threshold gets a score of -1. The scores for each of the four metrics will be added together, and the penalty would be activated if the net score is -1 or lower while the incentive would be activated if the net score is +1 or higher. Xcel provides two examples of how its proposal would work, shown below.

Table 8: Example 1

Metric	**2023 Performance Example**	**Threshold Result**	**Score**
Remote Disconnection	30%	Penalty	-1
Remote Reconnection	98%	Incentive	+1
Unassigned Usage	85,500,000 kWh	Deadband	0
Theft/Tamper Cases	11	Penalty	-1
Net Score/Result		**Penalty**	**-1**

Table 9: Example 2

Metric	**2023 Performance Example**	**Threshold Result**	**Score**
Remote Disconnection	35%	Penalty	-1
Remote Reconnection	50%	Penalty	-1
Unassigned Usage	72,500,000 kWh	Incentive	+1
Theft/Tamper Cases	63	Incentive	+1
Net Score/Result		**No PIM**	**0**

The first example would result in a performance penalty while the second would not result in a PIM being applied. Xcel proposes to provide this performance assessment in TCR Rider Petitions after the PIM is in effect and would include the penalty or incentive in the calculation of the TCR rate factor, as applicable.

H. Stakeholder Engagement

Xcel notes it met with representatives from the Joint Commenters (the Department of Commerce, Office of the Attorney General, and Citizens Utility Board) as well as Energy CENTS Coalition in October 2023 to provide an overview of its intended proposal. These stakeholders agreed the Company should not be incentivized to complete disconnections more quickly, and thus agreed with removing interim target #1 from consideration for a PIM. On other matters, stakeholders expressed a need to review the filing before sharing additional feedback.[46]

6. Joint Commenters Initial Comments

A. Compliance with Commission Order Points

The Joint Commenters laid out an analysis of Xcel's compliance with the Commission's June 28, 2023 Order in Docket E002/M-21-814:

[46] Xcel Petition, Attachment 15, p. 12

Table 10: Compliance with Commission Order Points

Requirement	Joint Commenters Analysis	Complied?
Xcel required to file data for the prior 3 years for the Performance and Evaluation Metrics (Order Point 14)	The Joint Commenters determined Xcel compiled with this order point, except for the three load flexibility metrics, for which it found the Company provided a reasonable explanation of why it could not provide the data.[47]	Yes
Xcel required to provide interim performance targets for the Performance and Evaluation Metrics. (Order Point 15)	The Joint Commenters found Xcel is not fully compliant with this order point as it did not provide targets for customer energy price savings due to TOU rates and customer savings due to CPP. They were unpersuaded by the Company's claims it did not have enough information to develop targets, stating they could have used data from potential studies like the 2019 Brattle Group study on load flexibility potential for Xcel Energy.[48]	Partial
Required Xcel to file information about the functionality, deployment, and benefits of AMI and FAN. (Order Point 9)	The Joint Commenters found Xcel to be compliance with this order point.[49]	Yes
Required Xcel to file an annual report for the Transparency Metrics. (Order Point 10)	The Joint Commenters found Xcel had complied with this order point, however they requested information on several additional metrics outlined in Appendix B.[50]	Yes
Required Xcel to propose a PIM for each metric the Performance and Evaluation Metrics. (Order Point 16)	The Joint Commenters explained that Xcel was not in compliance with this order point as it had not proposed a PIM for each metric, however they also explained that PIMs for every metric were not appropriate at this time.[51]	Yes

The Joint Commenter's detailed evaluation of the compliance with Commission Order points can be found in Appendix B (p. 29-41) of their initial comments.

[47] Joint Commenters, Initial, p. 7-8
[48] *Id.,* p. 8
[49] *Id.*
[50] Joint Commenters, Initial, p. 8
[51] *Id.,* p. 8-9

B. Joint Commenters' PIM proposal

The Joint Commenters agreed that using the principles for PIM development established in Xcel's PBR proceeding (Docket No. E-002/CI-17-401) is generally appropriate for the instant docket, however they noted in the current proceeding the goal of PIMs is not to revise the regulatory construct, but rather to hold Xcel "accountable for delivering the promised benefits of its investment."[52] The Joint Commenters criticized Xcel's PIM proposal as lacking in accountability to deliver the benefits outlined in the cost benefit analysis included in their 2021 TCR filing. They also objected to establishing incentives for remote reconnections, remote disconnections, or reduced theft and meter tampering at this time.[53]

The Joint Commenters had three main objections to the Company's PIM design. First, they disliked how Xcel combined four metrics into a single PIM, stating that it was "needlessly complex and lacking in transparency" and did not explain why all four metrics are valued equally when they had different values in the Company's cost benefit analysis. Second, the Joint Commenters did not believe a symmetrical penalty/incentive structure for PIMs was appropriate, given that Xcel already earns a return on the capital investments from AMI and FAN. Instead, they explained penalty-only PIMs may be appropriate, and incentives should be reserved for exceptional performance with substantial ratepayer benefits. Finally, the Joint Commenters objected to Xcel's proposed 2030 implementation date given the cost benefit analysis indicated benefits should begin to accrue in 2024.[54]

The Joint Commenters recommended an alternative PIM proposal with the implementation of three PIMs in 2026. They acknowledged that this was a limited proposal and explained that there should be a more comprehensive set of PIMs in the future to fully capture the benefits of AMI and FAN through an annual review process. The Joint Commenters maintained the Company's proposed PIM on Unassigned Usage and proposed two new PIMs for Meter Failure Rate and Load Shifting and Load Reduction. They did not recommend adoption of the Company's three other proposed PIMs: percentage of disconnects done remotely, percentage of reconnections done remotely, and number of theft/meter tampering cases completed.[55]

The Joint Commenters disagreed with the Company's total proposed incentive/penalty amount, stating that it was not enough to "induce meaningful utility action." They recommended setting a higher amount for both the penalty and the incentive, found on page 11 of their July 31, 2024 initial comments, plus incremental costs associated with excessive meter failures. The Joint Commenters recommended that the full penalty or incentive be awarded if the threshold is reached, however they were also open to a pro rata approach if the Commission prefers.[56]

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[52] *Id.,* p. 9
[53] *Id.,* p. 10
[54] *Id.*
[55] Joint Commenters, Initial, p. 11
[56] *Id.,* p. 11-12

i. Joint Commenters PIM #1: Unassigned Usage PIM

The Joint Commenters recommended a PIM for the reduction of unassigned usage, or consumption on inactive meters. This occurs when there is no longer an occupant or customer of record at a site yet there is still energy consumption occurring. As explained by the Joint Commenters, contact attempts occur through multiple methods before the premise is determined to be unassigned, and arrears are collected from all ratepayers as bad debt. Therefore, the Joint Commenters determined that a penalty-only PIM for unassigned usage would be appropriate to reduce the amount of bad debt recovered from all ratepayers. They suggested a target of a 20% reduction in unassigned usage from a pre-AMI baseline, and if the Company does not reach that target in any given year, it be assessed a penalty equal to 50% of the benefit as calculated in Xcel's AMI cost benefit analysis (trade secret amount on page 12 of Joint Commenters Initial Comments).[57]

To ensure that no vulnerable customers are unintentionally impacted, the Joint Commenters recommended the Commission formalize the Company's policy of not disconnecting unassigned accounts during Cold Weather Rule season. Furthermore, the Joint Commenters recommended formalizing Xcel's current thresholds for disconnecting unassigned usage, which is 500kWh of consumption AND 60 days of vacancy.[58] (**Decision Option 2006**)

A detailed description of the Joint Commenters rational, calculations, and incentive amounts can be found in Appendix A (p. 22-23) of their initial Comments.

ii. Joint Commenters PIM #2: Meter Failure Rate PIM

The Joint Commenter's second PIM is based on the reduced meter failure rate Xcel expects to see with its AMI meters. While Xcel argued that a PIM for meter failure rate was inappropriate because it is not within the Company's control, the Joint Commenters disagreed, stating that lower meter failure rate was one of the quantified benefits in the CBA used to support the decision to move to AMI meters. In the Joint Commenter's opinion, the risk for excessive meter failure should be borne by the Company, and not ratepayers.[59]

The Joint Commenters recommended setting the penalty threshold for meter failure at 0.5% per year, consistent with the assumptions from Xcel's CBA. The Joint Commenters recommended the following calculation for the meter failure rate:

$$Failure\ Rate = \#\ of\ failed\ meters\ \div total\ \#\ of\ AMI\ meters\ purchased$$

The penalty would be calculated using the following formula for any year where failures exceeded 0.5%:

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[57] *Id.,* p. 12
[58] *Id.,* p. 12-13
[59] Joint Commenters, Initial, p. 13

$$Penalty = (Failure\ Rate - .05\%) \times total\ \#\ of\ AMI\ meters\ purchased \times cost\ of\ replacement\ meter$$

The Joint Commenters explained that the cost of the meter replacement included in the penalty should be inclusive of Xcel's rate of return.[60]

A detailed description of the Joint Commenters rational, calculations, and incentive amounts can be found in Appendix A (p. 23-24) of their initial Comments.

iii. Joint Commenters PIM #3: Load Shifting and Load Reduction PIM

The Joint Commenter's final recommendation is for a PIM that will incentivize the Company to realize the load shifting and load reduction benefits outlined in the CBA. The Joint Commenters disagreed with Xcel that evaluation of load shifting and reduction should occur in programmatic dockets, and not in the AMI proceeding. In the Company's CBA, it estimated a significant benefit from critical peak pricing (CPP) rates, and the Joint Commenters explained that "now that it has received approval for ratepayer funding, a portion of which will begin flowing to utility shareholders, the Company wishes to excuse itself from delivering the benefits it claimed ratepayers would receive and upon which the Commission, in part, approved cost recovery."[61]

To remedy this issue, the Joint Commenters recommended a load shifting and reduction PIM that is effective in 2026 with both penalties and rewards. The PIM would count reductions and shifting from Xcel's CPP rate approved as part of its General Time-of-Use Pilot, along with the Company's proposed Peak Time Rebates (PTR) program. Thresholds for both penalties and incentives would be set based on the benefits outlined in the CBA, which were based on the 2019 Brattle Group study on load flexibility potential for Xcel Energy's service territory. Because there are no current plans for opt-out CPP or PTR offerings, the Joint Commenters recommended the penalty threshold be set at the opt-in deployment rate outlined in the Brattle study. Furthermore, because the Company has not yet rolled out CPP and PTR rates, the Joint Commenters recommended a deadband that is 20% lower than the opt-in targets.[62]

The Joint Commenters calculated symmetrical penalty and reward values for meeting the Load Shifting and Reduction thresholds at 50% of the expected benefits from the CBA. The total amount for the penalties in 2030 can be found on page 16 of the trade secret version of the Joint Commenters Initial Comments. The Joint Commenters noted that Xcel already stands to earn an incentive for the CPP and PTR programs through its ECO portfolio, which could result in double compensation. Therefore, if the Commission approves the Load Shifting and Reduction

[60] *Id.,* p. 14
[61] *Id.,* p. 15
[62] Joint Commenters, Initial, p. 16

PIM, the Joint Commenters recommended disallowing any incentives for CPP/PTR through ECO.[63] (**Decision Option 2007**)

A detailed description of the Joint Commenters rational, calculations, and incentive amounts for each proposed PIM can be found in Appendix A (p. 23-28) of their initial Comments.

C. Summary of performance targets for proposed PIMs

Table 11 depicts the proposed performance targets for the Joint Commenters three PIMs proposals.

Table 11: Joint Commenters Proposed PIMs for Approval – Performance Targets[64]

	Unassigned usage (kWh)	**Meter failure rate**	**Load shifting and load reduction (MW)**	
	Penalty Threshold	*Penalty Threshold*	*Penalty Threshold*	*Reward Threshold*
2026	71,224,800	0.50%	76	247
2027	71,224,800	0.50%	79	249
2028	71,224,800	0.50%	83	250
2029	71,224,800	0.50%	86	253
2030	71,224,800	0.50%	89	254

The Joint Commenters proposed incentive and penalty amounts can be found on page 17 of the Trade Secret version of their initial comments in Table 3.

Decision Option 2004 adopts the Joint Commenters PIMs proposal as described in their initial comments in Tables 2 and 3.

D. Joint Commenters' Response to Xcel PIM proposal

i. Remote Disconnection PIM

The Joint Commenters stated that "it is inappropriate to incentivize remote disconnection since this outcome adversely affects certain customers…remote disconnections, even if providing monetary savings to all customers through reduced O&M, may unduly harm vulnerable customers." They recommended continuing to track remote disconnections but not establish a target or PIM for this outcome.[65]

ii. Remote Reconnection PIM

The Joint Commenters supported tracking and reporting on a remote reconnection metric but did not support an incentive at this time. They explained that Xcel now only conducts disconnects for customers before noon on a business day, allowing an opportunity to conduct a remote reconnection on the same day. This results in reduced O&M with field benefits, but it is

[63] *Id.*
[64] *Id.,* p. 17, Table 2
[65] Joint Commenters, Initial, p. 18

a small monetary saving compared to the benefits the CBA indicated for remote disconnections.[66]

iii. Reduced Theft and Meter Tampering PIM

The Joint Commenters were concerned that there was not a way to sufficiently track and attribute the factors surrounding meter theft and tampering to the AMI meters themselves. Specifically, they explained "An increase in the number of identified and completed cases could be driven by enhanced detection capabilities; at the same time, the increase could be caused by external factors completely unrelated to AMI technology, such as if instances of theft and meter-tampering materially increase over time." Therefore, they recommended tracking this metric and once it is better known how AMI contributes to reduced meter theft and meter tampering reevaluate whether a PIM should be established.[67]

E. Additional Metrics and Potential Future PIMs

The Joint Commenters noted that while they were optimistic about their recommended PIMs to maximize AMI benefits for the targeted metrics, there were other areas where additional benefits need to be recognized. For example, the Joint Commenters noted there had not been PIMs proposed for operational efficiencies, reliability benefits, or reduced meter reading expenses. The Joint Commenters acknowledged there may be challenges to tracking benefits associated with the outcomes, but believed it was "premature" to abandon the development of future PIMs on these topics. Accordingly, they recommended the Commission require Xcel to track all benefits from the AMI and FAN CBA to the extent practicable, or if not possible, a reasonable proxy. Table 12 depicts the Joint Commenters additional reporting requirements they would like added to the AMI annual report. [68]

[66] *Id.*
[67] *Id.,* p. 19
[68] *Id.*

Table 12: Additional Reporting Requirements for AMI Annual Report[69]

Associated Category from Prior TCR reporting requirements	Outcome
Reduced field and meter O&M	Percentage of disconnection completed remotely
	Percentage of reconnection completed remotely
	Reduced field trips due to customer equipment damage
	Reduced "Ok on arrival" outage field visits
	Reduction in field trips for voltage investigations
Reduced theft/meter tampering	Reduced theft/meter tampering (not cases completed)
	Reduced meter reading expenses
	Reduced outage duration
Distribution management efficiency	Reduced O&M spending on asset health and reliability and capacity projects
	Reduced capital spending on asset health and reliability and capacity projects
Outage management efficiency	Reduced O&M spending on storm recovery
	Reduced capital spending on storm recovery
Reduced bad debt expense	Reduced uncollectable/bad debt expense

The Joint Commenters acknowledged some metrics may already be tracked and reported but included the table "all outcomes for which there is any doubt about current reporting practices." They further explained the purpose of this reporting is "to isolate the effect of AMI and FAN to the extent possible; thus, for example, it is more desirable for Xcel to report the reduction in capital spending on storm recovery *attributable to AMI and FAN* than simply to report total storm recovery spending."[70]

F. Future Process Recommendations

The Joint Commenters explained that PIMs are not a "set it and forget it" exercise and will need to be adjusted to accommodate changing circumstances. They noted there is a balance to be struck between giving regulatory certainty to Xcel and ensuring PIMs continue to provide the proper incentives to maximize benefits. Therefore, the Joint Commenters made the following procedural recommendations:

1. The initial PIMs should become effective January 1, 2026, for a first measurement year running from January 1, 2026, through December 31, 2026.
2. The Company should be required to submit an annual performance report by February 28 of the following year. The first annual performance report would be due by February 28, 2027.

[69] *Id.,* p. 20, Table 4
[70] Joint Commenters, Initial, p. 20, Footnote 47

3. Within the annual performance report, Xcel should provide performance results and incentive calculations for all effective PIMs.
4. The Commission should establish procedures and a timeline for review of the annual performance report, with scope for intervenor participation.
5. The Commission should establish the conditions under which modifications to the PIMs portfolio might be made in conjunction with the review of the annual performance report, and the Commission should also establish the extent of permissible modifications to the PIMs portfolio allowed in conjunction with the review of the annual performance report.
6. The Commission should establish the terms of any "off ramps" for individual PIMs, whereby individual PIMs would be terminated if not functioning as intended.
7. The Commission should establish a cadence for a comprehensive review—a more intensive and holistic review of the PIMs portfolio. The Commission should also establish the scope and timeline for the comprehensive review and should establish any other relevant procedures for this review.[71]

7. Xcel Reply Comments

In Reply Comments, Xcel recommended rejecting the Joint Commenters' PIMs proposals and disagreed with Joint Commenter's assertion that its PIM proposal was not fully compliant with the Commission's prior order. Overall, Xcel believed that existing reporting on AMI and FAN is extensive and, in combination with the cost caps approved by the Commission, no additional performance tracking or incentivization is necessary to protect ratepayers. Xcel also asserted that all PIMs should be developed and implemented through the PBR process, and recommends the Commission suspend any decisions on AMI and FAN PIMs until after a decision on broader PIM efforts in the PBR docket.

A. Compliance with Commission Order

Xcel rejected the Joint Commenters' assertion that Xcel's proposal was not fully compliant with the Commission's 2023 TCR Order. Joint Commenters suggested the Company did not meet the Commission's requirements to provide targets for certain metrics or to propose PIMs for each one. Xcel disagreed that the Commission required a PIM proposal for *each* benefit included in the original CBA, noting that the Order directed the proposal to use "projected benefits used in the CBA submitted in support of our AMI and FAN projects, *and any other pertinent information"* (emphasis Xcel's).[72]

Attachment A to Xcel's Reply Comments includes the Company's justification for excluding two of the six interim metrics (Meter Failure Rate and Number of Days to Complete a Credit Disconnection) from its proposed PIM in response to the Joint Commenters.

[71] Joint Commenters, Initial, p. 21
[72] Xcel Reply Comments, p. 13

B. Response to Joint Commenter's PIM Proposal

i. Existing AMI and FAN Reporting

Xcel recommended rejecting the Joint Commenters' PIMs proposals, stating:

> The Joint Commenters argue that several PIMs are needed to protect customers. We strongly disagree. The Commission has established robust customer protections for both cost recovery through cost caps and with respect to our performance through extensive reporting as mentioned above…. The extensive reporting we are providing ongoing across several dockets offers robust information on the benefits we are realizing for customers from our AMI and FAN investments, and no additional reporting or performance measures are necessary.[73]

Xcel included as Attachment B, a list of 87 AMI and FAN metrics that it tracks and reports on in compliance with the Commission's June 28, 2023 TCR Order, Order Point 10.

ii. Appropriate Process for PIM Development

Rather than recommending adoption of *any* of the PIMs proposed in this proceeding, the Company recommended that all PIM development and implementation should be done in the PBR proceeding, stating:

> All PIMs development appropriately belongs in the PBR docket and should be done on the same timeline, following the same Metric Design Principles, the same PIM process and Goals-Outcomes-Metrics hierarchy, and done in a comprehensive way.[74]

The Company explained that it proposed a narrowly defined PIM in this docket in compliance with the Commission's Order, but expressed concern that setting PIMs in this proceeding short-circuits the established seven-step PBR process, risked misalignment with the Commission's metric design principles, and did not allow for comprehensive consideration of the metrics in relation to other performance metrics and Commission goals.[75] Xcel expressed concern that "implementing specific PIMs in this proceeding creates inconsistencies that may result in negative outcomes for the Company, regardless of our performance."[76]

Additionally, Xcel believed that establishing PIMs in a docket outside the PBR proceeding may be inconsistent with state law giving the Commission authority to establish performance measures, Minn. Stat. § 216B.16, subd. 19(h).[77] This provision states:

> (h) The commission may initiate a proceeding to determine a set of performance measures that can be used to assess a utility operating under a multiyear rate plan.

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[73] Xcel Reply Comments, p. 7
[74] *Id.,* p. 6
[75] *Id.*
[76] *Id.,* p. 10
[77] *Id.,* p. 11

Xcel appears to read this statute as requiring that performance measures be established in the PBR proceeding or, at least, using the standards and procedures established in the PBR proceeding.[78]

For these reasons, Xcel recommended the Commission suspend any decisions on AMI and FAN PIMs until the Commission determines how PBR efforts will continue.

iii. Consistency with the PBR Proceeding and Metric Design Principles

Xcel provided several reasons why it believes the "Joint Commenters' proposal disregards and contradicts the PBR docket":

- The proposed 2026 implementation date means that baselines and targets would have to be set before the Company can collect three years of AMI data.
- The penalties included in the proposed PIMs would hold the Company to targets that were developed using flawed data and/or that are not realistic due to factors beyond the utility's control including the impacts of Covid-19.
- The proposed load shifting PIM conflicts with existing metrics for cost-effective alignment of generation and load in the PBR proceeding, and would not complement established regulatory oversights of demand response programs in docket 08-133.
- The proposed meter failure rate PIM proposes a performance metric for something "completely outside the Company's control," which is contrary to the Commission's metric design principles.
- The Commission suspended the timeline for development of baselines, targets and performance incentives in the PBR docket until 2026 for reasons that are relevant to AMI and FAN – including concerns about the usefulness of baseline data that includes the Covid-19 pandemic.

Xcel continued to support reporting on the benefits originally projected in its CBA, but stated that the benefits need to be reevaluated using updated data before targets or incentives are established.[79]

While Xcel disagrees with the adoption of PIMs in the TCR Rider, it preferred its proposal to that of the Joint Commenters, stating that the "flexible approach we advocated for in our Petition strikes the proper balance of proposing meaningful metrics while not disregarding the work that has been done and that continues in the PBR docket."[80]

[78] *Id.*
[79] Xcel Reply, p. 12
[80] *Id.,* p. 10

8. Staff Analysis

A. Overview on PIMs for AMI and FAN

Before discussing Xcel and the Joint Commenters PIMs proposals, Staff believes it is important to take a step back and evaluate how the Commission arrived at where it is now in Xcel Energy's AMI and FAN deployment and cost recovery.

As noted above, Xcel's AMR meters were at the end of their life and required replacement. A utility must have meters as a core part of electric service. Therefore, when Xcel proposed replacing its meters in the late 2010s, the question before the Commission was not "should Xcel replace its electric meters" but rather "which electric meters should Xcel invest in." At this key juncture in the energy transition where distributed energy resources and demand side management are increasingly important to meeting Minnesota's clean energy goals, Staff does not believe any participant in this docket would dispute that investing in AMI technology is necessary to optimizing the distribution system as a resource. Indeed, all members of the Joint Commenters recommended *approval* of AMI and FAN investments in the prior TCR.

If, as all participants seem to agree, the selection of AMI and FAN was in the public interest, Staff believes the next question is, how can Xcel maximize the additional benefits AMI meters bring compared to AMR meters. Again, Staff does not believe there is dispute that the benefits of AMI meters should be maximized.

In the prior TCR proceeding, commenters focused heavily on the cost benefit analysis performed by Xcel to explain the purchase of AMI, versus AMR, meters. The analysis formed the basis of the decision-making tool for AMI and FAN and for setting metrics. However, Staff is concerned that more time is being spent designing, reporting, and tracking a large list of metrics and performance incentives that reflect AMI capabilities that are *possible* to measure, rather than focusing efforts on AMI features that are of key importance. More, Staff is concerned that using a CBA as the basis for setting performance metric targets and PIMs is inappropriate given many of the benefits are influenced by factors beyond the installation of AMI and FAN.

The Commission confronted the difficulties of attributing impacts from utility investments to specific metrics like reliability and capital spending in its consideration of utilities' 2023 IDPs. In the IDPs, the Department recommended the Commission require utilities "to provide a proposal for measuring the capacity, reliability, ratepayer, and equity impacts of its distribution grid investments in its next IDP."[81] In those proceedings Staff noted concerns,

> about the degree of accuracy of such predictions in general, as well as the accuracy of predicting incremental benefits as system investments may work in concert to improve reliability or other aspects of a utility's system. To this end, even if predictions of incremental improvements are made, distribution system data are collected across

[81] July 2, 2024, Staff Briefing Papers, Dockets E111/M-23-420; E015/M-23-258; E017/M-23-380; E002/M-23-452.

> multiple proceedings such that it may be impossible to prove a single cause-and-effect relationship between an investment and, for example, an improved SAIDI score.
>
> Xcel confronted this same issue in its Transmission Cost Recovery Rider (TCR) Compliance filing regarding the basis for cost recovery of AMI and Field Area Network (FAN) investments, stating "the fact that the benefits modeled in our CBA will not necessarily create near-term, direct cost savings or net budget reductions – combined with the reality that the benefits and metrics are affected by outside factors – create challenges in ongoing evaluation of the benefits in the context of AMI."
>
> ….
>
> Staff has concerns about being able to attribute specific improvements to individual programs. While utilities may predict the expected benefits of its investments for purposes of a cost benefit analysis, it may not be practical to hold them to those predictions by expecting actual benefits that are exactly equal to predictions. Staff is hesitant to create a situation where a plethora of metrics are proposed, but in practice are not feasible or meaningful to evaluate performance.[82]

Staff continues to have these concerns around AMI and FAN reporting, specifically where participants seek to attribute portions of improvements (or declines) in broad metrics like reliability or capital spend to an individual technology. When the Commission first certified AMI and FAN in 2020, there were many unknowns about the technology, functionalities, and potential benefits. With subsequent proceedings the Commission and stakeholders have gained more awareness about AMI and FAN technologies and more experience with designing metrics. Staff believes that at this juncture in the AMI/FAN cost recovery process, the Commission may wish to reexamine whether it wants to proceed with performance metrics now that it has gained more experience with metric design and with data collection and tracking.

Many of the benefits of AMI and FAN are related to more widespread, system-level outcomes that are measured by the metrics developed for the PBR docket. The Commission recognized the potential for overlap with new, AMI/FAN-specific metrics when, in its June 28, 2023 Order, it required Xcel to file an update describing "the extent to which existing metrics in PBR might reasonably serve to capture" the benefits of AMI and FAN.[83]

Staff believes the chosen "AMI and FAN Performance Evaluation Metrics" largely fall into two buckets: metrics that are also influenced by additional factors beyond the performance of the AMI meters and metrics that are strongly correlated with AMI and FAN technology (Table 13)

[82] September 25, 2023 Compliance Filing, Transmission Cost Recovery Rider, E002/M-21-814, p. 5
[83] June 28, 2023 Order, Docket No. E002/M-21-814, Order Point 13, p. 9

Table 13: Categorization of AMI/FAN Performance Metrics

Influenced by Additional Factors and Program Design	**Connected to AMI/FAN technology**
Capital and O&M $ spent on Asset Health and Reliability projects and Capacity projects	$ spent on meter replacement due to failure
Capital and O&M $ spent on storm recovery	Usage on unassigned accounts
Field trips due to customer equipment damage	Reduced Theft/Meter Tampering
"Ok on arrival" outage field visits	Percent of disconnects and reconnects done remotely
$ of bad-debt write-offs	
Customer energy price savings due to time-of-use (TOU) rates	
Avoided tons of CO_2 emissions due to TOU Rates	
Customer savings due to critical peak pricing (CPP)	

Staff asserts that metrics in Table 13 that are heavily influenced by additional factors are not good candidates for performance incentives under the Commission's PIMs process, as it would be difficult if not impossible to attribute the portion of metric improvement attributable to AMI/FAN technology compared to other factors, such as rate and program design in a TOU docket or the Company's disconnection practices. Metrics that are directly linked to the installation of AMI and FAN technologies, such as reduced theft or meter tampering, are better candidates for PIMs.

In addition, as metrics suitable for PIMs would offer much smaller expected benefits, Staff questions whether the efforts and cost to administer a PIM would outweigh the expected incremental benefit. In the Company's September 25, 2023 Compliance filing, it stated "there is a substantial cost to the ongoing measurement and reporting discussed above, and we want to make sure the Commission and parties are aware to ensure the value of the tracking and reporting is commensurate with the cost. We are conducting internal analysis and refining our cost estimates, and we intend to provide further details in future filings."[84]

Staff requested the Company's cost estimate for the development of AMI and FAN reporting tracking which thus far Xcel estimates to be $2.9 million. This included:

- $2.3 million in capital expenditures and $225,000 in O&M in 2023-2024 to add a workstream to its AMI software development to track the Commission approved metrics.

[84] Xcel Energy, September 25, 2023 Compliance Filing, Docket 21-814, p. 29

- The addition of a new full-time position to the Distribution Operations business area in Q2 2023 to lead the balance of the metric reporting development efforts and ongoing value measurement and reporting activities.
- A full-time dedicated contractor to supplement those efforts in 2024.

The Company explained the $2.9 million does not include other internal labor costs, including hundreds of additional employee hours across multiple business areas to ensure calculations and data were accurate. Xcel indicated there would be additional ongoing annual costs to comply with the AMI and FAN reporting that it has not yet been able to estimate.[85] Staff notes that this cost is larger than the Company's proposed PIM incentive/penalty amount.

The Commission may wish to consider whether it is worthwhile to parse out the incremental benefits attributable to AMI/FAN, or whether it makes more sense to assess overall performance of benefits related to these technologies at a utility level as part of the existing PBR proceeding in Docket No. 17-401. To this extent, it may be more efficient to approach performance through the PBR docket and spend less time designing individual metrics for each grid modernization technology. If a utility is meeting its overall goals in the PBR docket, including affordability goals which are set to keep bills low, Staff believes the Commission should be agnostic as to how they are achieved – that holistic view is what allows the utility to have flexibility to innovate with clear targets and goals.

The Commission could decide that it does not wish to continue with PIMs for AMI and FAN in this or future TCR proceedings, and instead determine the next steps on performance-based incentives through Docket 17-401 in 2026.

B. Concerns with specific PIMs and PIM design

If the Commission decides to proceed with PIMs in the instant docket, Staff offers the following considerations when deciding which PIMs to adopt.

First, neither Xcel nor the Joint Commenters discuss where the cost recovery for the proposed PIMs would come from. The Commission did not reach a point in the PBR docket where it discussed cost recovery for PIMs. Determining where the costs from penalties or incentives would be recovered contributes to the effectiveness of the PIMs, as a penalty that is recovered from shareholders (as it is in the Company's Quality of Service Plan) could have a different impact on Xcel than an incentive recovered through a rider from all ratepayers (as is the case with ECO incentives). If the Commission decides to move forward with PIMs it should clarify where recovery for penalties and/or incentives would occur. Staff recommends that the Commission require Xcel to file a proposal for the cost recovery mechanism for the PIMs with the next TCR (**Decision Option 2010**).

Staff has specific concerns with the Joint Commenters design of the Load Shifting and Load Reduction PIM. First, there are already several metrics that relate to load flexibility in the PBR docket, under the "cost effective alignment of generation and load" outcome, which would

[85] Ex Parte Report, October 14, 2024, Docket 23-467

raise the potential for double counting of incentives in the future. Second, as the Joint Commenters also pointed out, there is an existing mechanism, ECO, under which Xcel is already receiving incentives for the CPP and PTR rates. Staff is unclear why it is necessary to create an entirely new mechanism and complicate the existing ECO mechanism when one already exists.

Furthermore, the two rates the Joint Commenters have identified, CPP and PTR, do not require customers to have the new AMI meters installed to enroll in the program, although AMI meters do enhance the ease of enrollment and widespread rollout of the rates.[86] Therefore, assigning an incentive mechanism in the AMI/FAN cost recovery docket to the performance of these two rates is inappropriate as there is not a direct causal relationship between them, which goes against the Commission's metric design principals. Finally, on October 21, 2024 the Department of Commerce (a member of the Joint Commenters) filed a letter in Docket 20-86 recommending Xcel suspend its C&I TOU rate pilot, which includes the CPP component of this PIM.

Staff does wish to emphasize the role that time of use rates and demand response programs play in delivering benefits from AMI functionality to customers. However, AMI meters are simply an enabler for this technology, they in and of themselves cannot ensure that the rates perform well – that is done in rate design dockets and in the program implementation.

Staff is also concerned about the Company's insistence that it use three years of *AMI* data to set the baselines for any performance metrics. If the Commission is seeking to measure the benefits of AMI as compared to AMR it should use data prior to AMI implementation to see the relative improvements AMI makes as compared to AMR meters. If the Commission decides to implement Xcel's PIM Staff recommends it require the Company to use pre-AMI data to set the baselines for its metrics.

C. Maximizing Benefits of AMI Meters

Staff believes an important missing focus in the evaluation of AMI and FAN benefits is the implementation of programs outlined in the Company's anticipated products and services roadmap, submitted with its April 17, 2023 Supplement to the 2021 TCR filing. The roadmap is depicted in Table 14 below.

[86] Staff clarified with Xcel that Peak Time Rebates, Behavioral Demand Response, Critical Peak Pricing, and TOU require interval-based meters, but not necessarily an AMI meter. October 14, 2024, Ex Parte Filing.

Table 14: AMI Product and Service Roadmap[87]

Day One (2022)	Near-Term (through 2025)	Future (2025+)
• Energy Usage Dashboard • Enhanced Web and Mobile Apps • Energy Usage Alerts and Notifications • Green Button Connect My Data • Enhanced Communication Options with Behind the Meter Systems (HAN)	• Enhanced Outage Notifications • Emergency and Safety Notifications • Personalized Notifications • Power Quality Analysis • Whole Facility Monitoring • Rate Advisor • Time Varying Rates • Virtual Energy Audits • Demand management optimization • Enhanced access to battery storage and electric vehicles • Green notifications and controls • Enhanced DER detection and enablement	• Artificial Intelligence Enabled Notifications • Smart Premise Restoration • Enhanced Microgrid Integration • Smart Safety Disconnect • Enhanced Automated Demand Response

The programs outlined above will be key to accomplishing both the quantified benefits from the CBA, and the benefits that are more difficult to quantify. As noted in Table 5 in the introduction, Xcel is well on its way towards implementing many of these efforts. Staff believes there could be value in requiring Xcel to continue to report on the implementation status of the programs enabled by AMI, DI, and FAN in future AMI annual reports (**Decision Option 2015**).

D. Reporting

The Commission has required an extensive list of annual reporting requirements for Xcel's AMI and FAN deployment, both via the Performance and Evaluation Metrics and through the Transparency Metrics. Many of these data points are similar or identical to information reported across other dockets. The Commission recognized the challenges of the splintered nature of reporting on distribution and grid modernization data points across various dockets in Xcel Energy's 2023 IDP, and delegated authority to the Executive Secretary to work with stakeholders to develop a comprehensive list of existing distribution data reporting requirements and a proposal for future data reporting locations through a "Distribution Data Reporting Requirements" workgroup.[88]

Staff believes that the list of "Transparency Data" reported in the TCR proceeding, as well as the additional data requested by the Joint Commenters (**Decision Option 2016**), fits into this effort. Working through the Distribution Data Reporting Requirements Workgroup to clarify existing

[87] Xcel Energy, TCR Supplement, August 17, 2022, Docket E002/M-21-814, p. 21, Table 2
[88] September 16, 2024 Order, Docket E002/M-23-452, Order Para. 13, p. 24

and proposed AMI/FAN reporting could result in a more efficient use of resources and allow for better discussions and understanding between stakeholders and Xcel. While Staff does not believe adopting any decision options are necessary for this work, it may be helpful for the Commission to verbally reinforce its expectation that a second look is taken at the Transparency Metrics to determine which are necessary for AMI and FAN evaluation, and which are broader data pieces impacted by multiple technologies or factors.

Staff also recommends the Commission find the Company is in compliance with the relevant order points from past Orders and accept the Company's 2023 AMI Annual report. (**Decision Options 2013 and 2014**)

E. Suggested Deliberation Outline

Procedurally, Staff offers the following outline for the Commission to discuss next steps for PIMs for AMI and FAN:

First, the Commission may decide whether it would like to move forward with PIMs in the present docket:

- Do not adopt PIMs for AMI/FAN investments. (Decision Option 2001)

OR

- Suspend a decision option on PIMs until the outcome of the PBR proceeding is clearer. (Decision Option 2002)

OR

- Adopt PIMS in the instant proceeding. (Decision Option 2003)

If the Commission decides to adopt PIMs, it may then decide which PIMs it wishes to adopt:

- Adopt Xcel's proposed combined PIM starting in 2030 (Decision Option 2005 and 2009)

OR

- Adopt the Joint Commenter's three PIMs starting in 2026 (Decision Options 2004, 2006, 2007 and 2008)

If the Commission decides to adopt PIMs, it will need to decide on future procedural matters for the PIMs process. (Decision Options 2010– 2012)

Finally, regardless of the path the Commission takes on PIMs, it may make decisions on future reporting and metrics related to AMI and FAN rollout, found in Decision Options 2013 through 2016.

9. Decision Options

Whether PIMs for AMI and FAN should be adopted

If the Commission adopts DO 2001 or DO 2002, it may proceed to Decision Options 2013 though 2016 (Reporting). If the Commission Adopts Decision Option 2003 it should proceed through DOs 2004-2012.

2001. Suspend consideration of PIMs for AMI and FAN.

OR

2002. Suspend any decisions on AMI and FAN PIMs until the Commission determines how PBR efforts will continue. (Xcel)

OR

2003. Approve PIMs in the current docket. (Joint Commenters)

PIMs for AMI and FAN (if PIMs adopted)

The Commission may select 2004 or 2005

2004. Approve the three PIMs as proposed by the Joint Commenters in Table 2 and Table 3 of their initial comments. (Staff Interpretation of Joint Commenters)

OR

2005. Approve Xcel's joint PIM as proposed in Attachment 15 of the Company's November 1, 2023 petition. (Xcel, if PIMs adopted)

If the Commission adopts DO 2004 it may also adopt DO 2006 and/or 2007.

2006. Require Xcel to only disconnect accounts for unassigned usage once they reach 500kWh of consumption and 60 days of vacancy. (Staff interpretation of Joint Commenters)

2007. Require Xcel to exclude Critical Peak Pricing and Peak Time Rebates from its ECO incentive calculations. (Staff interpretation of Joint Commenters)

Start date for PIMs (if PIMs adopted)

The Commission may select 2008 or 2009

2008. The initial PIMs shall become effective January 1, 2026, for a first measurement year running from January 1, 2026, through December 31, 2026. (Joint Commenters)

OR

2009. The initial PIMs shall become effective January 1, 2030, for a first measurement year running from January 1, 2030, through December 31, 2030. (Xcel, if PIMs adopted)

Process for Future Proceedings (if PIMs adopted)

The Commission may select any combination of 2010 through 2012 if it adopts PIMs

2010. Require Xcel to file a proposal for the cost recovery mechanism for the approved PIMs with the next TCR. (Staff, if PIMs adopted)

2011. Require Xcel to file an annual performance report by February 28 of the year after each measurement year. The first annual performance report is due by February 28, [2027 or 2030]. Within the annual performance report, Xcel shall provide performance results and incentive calculations for all effective PIMs. (Joint Commenters)

2012. Require Xcel to work with the Joint Commenters to develop a proposal on the procedural steps outlined below and file it with the next TCR filing. (Staff interpretation of Joint Commenters)
    a. Establish procedures and a timeline for review of the annual performance report, with scope for intervenor participation. (Joint Commenters)
    b. Establish the conditions under which modifications to the PIMs portfolio might be made in conjunction with the review of the annual performance report and establish the extent of permissible modifications to the PIMs portfolio allowed in conjunction with the review of the annual performance report. (Joint Commenters)
    c. Establish the terms of any "off ramps" for individual PIMs, whereby individual PIMs would be terminated if not functioning as intended. (Joint Commenters)
    d. Establish a cadence for a comprehensive review—a more intensive and holistic review of the PIMs portfolio along with the scope and timeline for the comprehensive review and any other relevant procedures for this review. (Joint Commenters)

Reporting

The Commission may select any combination of DO 2013 through 2016.

2013. Find Xcel is in compliance with the relevant points from the Commission's Orders issued July 23, 2020 in Docket No. E002/M-19-666; September 27, 2019 in Docket No. E-002/M-17-797; and June 28, 2023 in Docket No. E-002/M-21-814.

2014. Accept the ongoing reporting the Company proposed in its first AMI Annual Report filed on November 1, 2023. (Xcel)

2015. Require Xcel to report on the implementation of programs and service enabled by AMI, DI, and FAN in future Annual AMI reports. (Staff)

2016. Require Xcel to develop metrics and report on the following items in the Company's Annual AMI report. (Staff interpretation of Joint Commenters)

Category (Staff Briefing Papers)	Outcome
Reduced field and meter O&M	Percentage of disconnection completed remotely
	Percentage of reconnection completed remotely
	Reduced field trips due to customer equipment damage
	Reduced "Ok on arrival" outage field visits
	Reduction in field trips for voltage investigations
Reduced theft/meter tampering	Reduced theft/meter tampering (not cases completed)
	Reduced meter reading expenses
	Reduced outage duration
Distribution management efficiency	Reduced O&M spending on asset health and reliability and capacity projects
	Reduced capital spending on asset health and reliability and capacity projects
Outage management efficiency	Reduced O&M spending on storm recovery
	Reduced capital spending on storm recovery
Reduced bad debt expense	Reduced uncollectable/bad debt expense