

**STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION**

Katie Sieben	Chair
Valerie Means	Commissioner
Matthew Schuerger	Commissioner
Joseph Sullivan	Commissioner
John Tuma	Commissioner

April 22, 2020

**In the Matter of Xcel Energy’s Integrated
Distribution Plan and Advanced Grid
Intelligence and Security Certification
Request**

Docket No. E002/M-19-666

SUPPLEMENTAL COMMENTS OF FRESH ENERGY

Fresh Energy submits these supplemental comments in response to the Commission’s April 1, 2020 *Notice of Extended Comment Period* on the 2019 Integrated Distribution Plan (“IDP”) and Advanced Grid Intelligence and Security (“AGIS”) certification request submitted by Northern States Power Company, dba Xcel Energy (“Xcel” or “NSP” or “the Company”). We first address the Company’s 2019 IDP and then the proposed AGIS initiative and requests for certification.

2019 Xcel IDP

Fresh Energy continues to believe Xcel has sufficiently met the Commission’s filing requirements and to support acceptance of the 2019 IDP.

We remain concerned by the lack of detail or demonstration of need for the Company’s Incremental System Investment (ISI) Initiative. Xcel states that “we are prepared to more broadly initiate the ISI if the Commission agrees and wants to separately pursue or otherwise take up the matter.”¹ Fresh Energy would not support this step at this time.

¹ Xcel, *Reply Comments* filed April 10, 2020 in Docket 19-666, Attachment A, p. 13 ([link](#))

AGIS Certification Request

1. Should the Commission approve, modify, or deny certification of the following investments which are components of Xcel Energy's AGIS Initiative at this time?

(i) Implications of Certification

Fresh Energy continues to be concerned by the lack of clarity around the meaning and implications of certification² and to recommend that the Commission provide direct guidance on the *criteria* distribution projects must meet in order to be certified and the relationship between certification and cost recovery, either before or simultaneous with its certification determination for AGIS. We recommend this guidance clearly address the role of project performance goals and evaluation at the time of both certification and cost recovery.

As discussed further below, it is both reasonable and essential to set performance targets for investments of this scale. While we largely support the Company's grid modernization plans, we are concerned by an apparent lack of interest in oversight on Xcel's part, at least at this stage. Performance targets and a verification process are essential for ensuring customers receive the benefits Xcel claims will accrue from these investments. Such targets are best practice for grid modernization projects regardless of whether recovery is sought in a rate case or through riders.

(ii) Fresh Energy Recommendations on Xcel's Proposed AGIS and APT Investments

In this section, Fresh Energy responds to Xcel and other parties' comments on the technical merits and value of certification for the Advanced Grid Intelligence and Security (AGIS) initiative and the advanced planning tool (APT).

a. Advanced Metering Infrastructure ("AMI")

As stated in our initial comments, Fresh Energy supports Xcel's plans to implement AMI. We believe the Company has satisfied the content requirements in the Commission's August 7, 2018 Order and demonstrated that AMI will modernize the distribution system by increasing energy conservation opportunities by facilitating communication between the utility and its customers, and will provide a beneficial replacement to the Company's current AMR system.

² The Department of Commerce states concerns about: "1) the continued unclear meaning of certification (both as written and as experienced in practice), 2) the experience of escalating project costs, and 3) the lack of sufficiently delineated certifications (lack of clarity regarding whether certification applies to the cost and technology certified or the cost, technology, and resulting capabilities (and all else claimed))." Fresh Energy agrees that each of these questions is in need of clarification. Department of Commerce, Initial Comments filed March 17, 2020 in Docket 19-666, p. 18 ([link](#))

Fresh Energy continues to recommend that Xcel develop a Draft Rate Design Roadmap to accompany the next IDP. We understand that Xcel has developed or is in the process of developing several advanced rate design initiatives, and applaud the Company's work on this front. We agree that Xcel is in a different stage of rate design development that Hawaiian Electric Company was in 2016.³ Xcel's residential time of use pilot, the electric vehicle home service program, and revisions to General Service time of use rates are important and significant steps forward, and efforts in which Fresh Energy has been actively involved.

Regardless of Xcel's progress advanced rate design, a comprehensive roadmap describing a utilities' plans for implementation of rate design and customer engagement initiatives to maximize the benefits of AMI should be completed when a utility embarks on AMI implementation. A framework for robust and comprehensive rate design planning, stakeholder engagement, and discussion of the interaction between new meter technology and customer benefits will be useful to the Company, regulators, and customers alike.

We believe such a roadmap would be a relatively simple document for Xcel to develop, especially given the utilities' progress on rate design already. Our proposal is that the roadmap describe the range of potential advanced rate designs, their current applications, plan for expansion, and a timeline for expanding and deepening the availability of advanced rate designs in Minnesota. Fresh Energy does not believe development of such a document would need to delay or supplant other rate design efforts.

Should the Commission choose to make a certification determination at this time, Fresh Energy recommends that the Commission approve Xcel Energy's certification request for AMI and direct Xcel to develop a Draft Rate Design Roadmap to be filed as part of the Company's next rate case or the next IDP, whichever is first.

b. Field Area Network ("FAN")

Fresh Energy reiterates our support for Xcel's synergistic use of a single communications network for both AMI and intelligent grid devices and, should the Commission choose to make a certification determination at this time, we recommend that the Commission approve the Company's certification request for the FAN.

c. Fault Location, Isolation, and Service Restoration ("FLISR")

Fresh Energy continues to believe that Xcel Energy's plan to deploy FLISR is not justified. Xcel explains that FLISR only improves reliability related to

³ *Id.*, Attachment A, pp. 22-25

mainline feeder events, and is not intended and cannot improve reliability from tap, secondary, services, or service transformer events.⁴ In response to a Fresh Energy information request, Xcel provided five years (2015-2019) of historical outage history for the 206 feeders it proposes for FLISR. The data reveal that 17 (8.25%) of the proposed feeders had zero outages caused by mainline feeder events during the last 5 years, and another 35 feeders (17%) had only one outage caused by a mainline feeder event in the last 5 years. Fresh Energy believes the Company has failed to demonstrate the need for such a significant investment and recommends that the Commission deny Xcel's certification request for FLISR at this time.

d. Integrated Volt-Var Optimization ("IVVO")

Fresh Energy continues to enthusiastically support implementation of IVVO in Minnesota. We appreciate that Xcel "believe[s] it is reasonable to expect a 1.25 percent overall energy savings from our proposed IVVO implementation."⁵ While we encourage the Company to aim for greater energy savings and reductions in peak demand, we are comfortable supporting Xcel's planned investments in this technology as long as the Company commits to achieving a minimum 1.25% reduction in customer energy consumption and 0.7% reduction in NSP system peak demand.

2. Should the Commission certify the Advanced Distribution Planning Tool ("APT") at this time?

Fresh Energy continues to strongly support the APT and recommends that the Commission approve certification of the tool, if making certification determinations at this time.

3. What, if anything, should the Commission set as conditions or clarify if granting certification of these distribution projects?

As described in initial comments, Fresh Energy recommends that the Commission require the Company to define and track metrics tied to the major AGIS Cost-Benefit Analysis ("CBA") benefit categories and key CBA assumptions, and report on these on an annual basis. Performance on these metrics could be an important data point when considering requests for recovery in the TCR rider process.

4. What should the Commission consider or address related to realizing benefits of each of the investments in the Company's AGIS Initiative for ratepayers?

⁴ Xcel Response to Fresh Energy IR 51 Attachment A, Docket 19-666, at tab 'Notes'

⁵ Xcel, *Reply Comments* filed April 10, 2020 in Docket 19-666, Attachment A, p. 14

Fresh Energy continues to believe that it is important for the Commission to hold the Company accountable for achieving the customer benefits it claims in its CBA. We disagree with the Company's assertion that "Performance metrics...deserve consideration but are more appropriately addressed in a cost-recovery proceeding."⁶ Performance goals are also appropriate in planning proceedings and provide significant benefit to the utility, stakeholders, and regulators by identifying specific targets that the planning effort seeks to achieve.

In initial comments, Fresh Energy acknowledged that Company witnesses Bloch, Cardenas, and Duggirala, provided details in their testimony of the underlying assumptions in the CBA benefit calculations, and provided a summary table of the assumptions labeled "Figure 2 - Metrics for Key CBA Assumptions." Figure 2 shows that the Company provided baselines and targets for some, but not all of the assumptions. We requested that the Company, in its reply comments, provide baselines, targets and a plan for measuring, verifying and reporting on all of the top benefit categories and key CBA assumptions for the AGIS investments.

In its reply comments, Xcel stated, "We provided available documentation regarding the assumptions we used to develop the AGIS Cost Benefit Analysis for AMI, IVVO and FLISR in the IDP – specifically in the Direct Testimony of Company Witnesses Michael Gersack, Kelly Bloch, Christopher Cardenas, and Ravi Duggirala in Attachments M1, M2, M4, and M5, respectively. In each of the AGIS categories, witnesses devoted significant discussion of the assumptions underlying the baseline information used to develop the various benefit calculations."⁷

Figure 2 of our initial comments (copied below) shows that Fresh Energy was unable to identify from the Company's testimony the baselines and targets for all of the metrics. Should the Commission choose to make a certification determination for any of the AGIS components at this time, we recommend that it require Xcel to provide baselines, targets and a plan for measuring, verifying and reporting on all of the top benefit categories and key CBA assumptions.

⁶ *Id.*, p. 27

⁷ *Id.*, Attachment A, p. 28

AGIS Component	Metric	Baseline	Target	Source
AMI (capital)	Capex for Asset Health/Reliability, Capacity Projects	TBD	1% Reduction	Bloch, p. 164
	Storm Related Capital Restoration Costs	TBD	10% Reduction	Bloch, p. 165
	AMI Meter Failure Rate (avoided meter purchases)	N/A	0.5%	Bloch, p. 165
AMI (O&M)	Annual Trips for Damaged Customer Equipment	1,796 Trips	50% Reduction	Bloch, p. 170
	Annual Trips for Residential Annual Disconnection	TBD	70% Reduction	Bloch, p. 171
	Annual Trips for Residential Annual Reconnection	TBD	95% Reduction	Bloch, p. 171
	Annual "OK on Arrival" Field Visits	7,464 Trips	50% Reduction	Bloch, p. 172
	Annual Voltage Investigation Field Visits	2,858 Trips	50% Reduction	Bloch, p. 173
	O&M for Asset Health/Reliability, Capacity Projects	TBD	0.1% Reduction	Bloch, p. 173
	O&M for Storm Related Activity	\$2.1 million	10% Reduction	Bloch, p. 174
AMI (other)	Customer-minutes of Outage (CMO) Major Events	115 million	0.5% Reduction	Bloch, p. 177
	CMO Single Customer Events	1.05 million	20% Reduction	Bloch, p. 178
	CMO Tap Level Events	TBD	TBD	Bloch, p. 179
	Cost of Consumption on Inactive Meters	TBD	20% Reduction	Cardenas, p. 62
	Commodity Bad-debt Expense	TBD	8% Reduction	Cardenas, p. 64
	Residential Demand Shift from TOU Rates	TBD	161 MW	Duggirala, p. 28
	Medium & L Demand Shift from TOU Rates	TBD	52 MW	Duggirala, p. 28
	Residential Peak Demand Reduction from CPP	TBD	164 MW	Duggirala, p. 28
	Medium & L Peak Demand Reduction from CPP	TBD	90 MW	Duggirala, p. 28
IVVO	Customer Energy Consumption	TBD	1.5% Reduction	Bloch, p. 272
	Electrical Loss Savings	TBD	225-900 MWh	Bloch, p. 274
	System Peak Demand	TBD	0.7% Reduction	Bloch, p. 275

Xcel states that "it would not be reasonable for the Company to commit to the costs or the savings we estimated in the CBA underlying our certification request."⁸ We disagree. If investments are approved in part based on a CBA analysis, customers should have reasonable certainty that these benefits will be achieved. In initial comments, we noted that twelve benefit categories make up 96% of the total benefits in the Company's CBA. We believe the benefit levels Xcel has included in its CBA are reasonable and achievable. We believe tracking performance of these twelve metrics is reasonable to maximize benefits to customers while keeping reporting efficient and focused.

Fresh Energy continues to recommend that the Commission require the Company to measure and report its progress on achieving the CBA benefits and underlying CBA assumptions for each AGIS investment. Fresh Energy recommends the company provide this information in an annual report starting November 1, 2020 to be filed in this docket.

5. At the stage of certification, what consideration should the Commission give to subsequent cost recovery, via either the Transmission Cost Recovery rider or general rate case, for each of the AGIS investments?

As discussed in our Initial Comments, Fresh Energy believes that an approval of certification should indicate that a project has demonstrated additional importance and

⁸ *Id.*

warrants consideration for rider recovery. We propose that, at minimum, the utility should demonstrate that the project is a priority project above and beyond normal distribution projects, consistent with Minn. Stat. §216B.16 Subd. 7b(a)(1).

Fresh Energy's Recommendations:

Fresh Energy reiterates our recommendations from Initial Comments, with two exceptions:

9. The Commission approves Xcel's request for Certification of the proposed IVVO investment, conditioned on a commitment by Xcel to achieve achieving a minimum 1.25% reduction in customer energy consumption and 0.7% reduction in NSP system peak demand as a result of IVVO technologies.
[Modified from Initial Comments]

11. Xcel shall submit a compliance filing within 30 days of this Order date providing baselines, targets and a plan for measuring, verifying and reporting on all of the top benefit categories and key CBA assumptions, as shown below.
[New]

AGIS Component	Metric	Baseline	Target	Source
AMI (capital)	Capex for Asset Health/Reliability, Capacity Projects	TBD	1% Reduction	Bloch, p. 164
	Storm Related Capital Restoration Costs	TBD	10% Reduction	Bloch, p. 165
	AMI Meter Failure Rate (Avoided Meter Purchases)	N/A	0.5%	Bloch, p. 165
AMI (O&M)	Annual Trips for Damaged Customer Equipment	1,796 Trips	50% Reduction	Bloch, p. 170
	Annual Trips for Residential Manual Disconnection	TBD	70% Reduction	Bloch, p. 171
	Annual Trips for Residential Manual Reconnection	TBD	95% Reduction	Bloch, p. 171
	Annual "OK on Arrival" Field Visits	7,464 Trips	50% Reduction	Bloch, p. 172
	Annual Voltage Investigation Field Visits	2,858 Trips	50% Reduction	Bloch, p. 173
	O&M for Asset Health/Reliability, Capacity Projects	TBD	0.1% Reduction	Bloch, p. 173
	O&M for Storm Related Activity	\$2.1 million	10% Reduction	Bloch, p. 174
AMI (other)	Customer-minutes of Outage (CMO) Major Events	115 million	0.5% Reduction	Bloch, p. 177
	CMO Single Customer Events	1.05 million	20% Reduction	Bloch, p. 178
	CMO Tap Level Events	TBD	TBD	Bloch, p. 179
	Cost of Consumption on Inactive Meters	TBD	20% Reduction	Cardenas, p. 162
	Commodity Bad-debt Expense	TBD	8% Reduction	Cardenas, p. 164
	Residential Demand Shift from TOU Rates	TBD	161 MW	Duggirala, p. 128
	Medium & L Demand Shift from TOU Rates	TBD	52 MW	Duggirala, p. 128
	Residential Peak Demand Reduction from CPP	TBD	164 MW	Duggirala, p. 128
IVVO	Medium & L Peak Demand Reduction from CPP	TBD	90 MW	Duggirala, p. 128
	Customer Energy Consumption	TBD	1.5% Reduction	Bloch, p. 172
	Electrical Loss Savings	TBD	225-900 MWh	Bloch, p. 174
	System Peak Demand	TBD	0.7% Reduction	Bloch, p. 175

Conclusion

Thank you for the opportunity to provide these additional comments on Xcel's 2019 IDP and AGIS intuitive. We look forward to continuing to support this exciting work.

/s/ Isabel Ricker

Isabel Ricker
Senior Policy Associate, Energy Markets
Fresh Energy
408 Saint Peter Street, Suite 220
St. Paul, MN 55102
ricker@fresh-energy.org
651.294.7148

/s/ Curt Volkmann

Curt Volkmann
President
New Energy Advisors, LLC
Consultant to Fresh Energy
curt@newenergy-advisors.com
847.910.6138