

**State of Minnesota
Before the Public Utilities Commission**

Nancy Lange	Chair
Dan Lipschultz	Commissioner
Matt Schuerger	Commissioner
John Tuma	Commissioner
Katie Sieben	Commissioner

In the Matter of Xcel’s 2017 Biennial Distribution Grid
Modernization Report

Docket No. E002/M-17-776

Initial Comments of the Citizens Utility Board of Minnesota

I. Introduction

The Citizens Utility Board of Minnesota (“CUB”) appreciates the opportunity offered by the Minnesota Public Utilities Commission (“PUC” or “the Commission”) to submit these initial comments regarding the 2017 Biennial Distribution Grid Modernization Report (“2017 Report”) filed by Northern States Power Company, d/b/a Xcel Energy (“Xcel”).

The 2017 Report discusses Xcel’s proposed investments in grid modernization technology. In particular, Xcel lays out its “building block” approach, by which it discusses how each technology investment supports not only other investments but also broader benefits for customers. For example, investments in advanced metering infrastructure (“AMI”) and wireless digital communications technologies support new pricing programs such as time of use (“TOU”) rates for Xcel’s customers. By providing regular reports, the Commission and all stakeholders will be able to work with Xcel to track the promised benefits of these investments for Xcel’s customers, such as improvements in outage response, and ensure that the benefits are realized. This sharing of information is crucial to ensuring that Xcel’s customers can understand how the utility is selecting, deploying and managing grid modernization investments.

The Commission should focus not on specific technologies but on the overall objectives of grid modernization to make sure that Xcel remains on a path that will deliver more efficient and reliable service, enable options for customers interested in distributed energy resources (“DER”) and provide new pricing programs for customers to manage their energy usage. “In these analyses, what stakeholders, utilities and commissions should focus on is not a particular type of technology – e.g. Microsoft versus Apple – but the purpose of the technology – e.g. word processing. A commission’s job is not to micromanage utility technology investments but ensure that the investments in question serve the goals of reliable and affordable service as well as broader policy goals.”¹ The ultimate goal of any of these policies is that customers benefit as much as possible from grid modernization investments.

The Commission should define the desired outcomes from grid modernization efforts, as is under discussion in Docket No. 15-556, and use those outcomes to monitor Xcel’s investment performance.

¹ CUB Initial Comments, Docket No. 15-556, 8/21/17 at 2.

Xcel should be directed, then, to present a comprehensive distribution system plan demonstrating how those outcomes will be achieved. This plan should include not only specific technology investment proposals but also a cost/benefit analysis for the overall plan. This analysis can be used to make sure that all potential benefits for customers are identified and ultimately captured. A distribution system plan will allow the Commission and parties to Xcel's biennial (or annual) distribution grid modernization reports to better understand the case for particular investments and how those investments fit into an overall grid modernization strategy. Progress towards capturing the benefits and controlling the costs of grid modernization investments can be tracked through the use of utility performance metrics.²

With this integrated approach to grid modernization, CUB believes that Xcel can succeed in its goal to position its distribution system to meet future needs and customer expectations. We look forward to working with Xcel, the Commission and other stakeholders on these efforts.

II. Cost Recovery

CUB notes that, while portions of these investments may be recovered outside of the Transmission Cost Recovery Rider ("TCR"), ultimately all of these investments are paid for by Xcel's customers.³ The Commission has a critical role in overseeing the cost of these investments not only as pilots but at scale throughout Xcel's system. Careful attention should be paid to the total costs of these investments and how each investment can support other important policy objectives, such as the integration of distributed energy resources. While CUB agrees with an incremental approach to grid modernization investments, the Commission should remain focused on the overall costs and benefits of grid investments. The ultimate costs of these investments will be millions of dollars, which will be recovered over many years. Even if each particular investment is only one piece of a larger whole, the Commission, stakeholders and Xcel's customers need to understand how each piece relates to each other.

More concerning to CUB is the proposal to continue to use a rider to recover these costs. While the law and past practice allow Xcel to obtain "certifications" for specific investments, such as their advanced distribution management system ("ADMS"), there is no reason that, going forward, these projects cannot be certified and then recovered in a general rate case. The Commission has no obligation to allow cost recovery outside of a rate case, nor to do so through the TCR. Doing so will hinder the Commission's ability to conduct the type of holistic review necessary to ensure that all of these investment costs are reasonable and prudently incurred.

Moreover, each investment affects other areas of a utility's business. More granular data from circuits and feeders, or power quality data from advanced meters, impacts the utility's meter data management system and asset management programs. A TOU pilot will impact the utility's customer call center, billing and customer engagement teams. The investments being made by Xcel have ripple effects felt throughout the utility, which can and should be reviewed not in separate rider proceedings but in an integrated rate case.

A 2010 PUC report identified the situations in which "it may be appropriate to allow outside-of-rate-case mechanisms under which costs can be tracked, and potentially recovered, without requiring a rate case to be filed": "if cost factors between rate cases change *dramatically* and *unpredictably*, are *substantial* in

² See generally Docket No. 17-401.

³ See, e.g. 2017 Report at 23.

magnitude, and are due to factors that are *beyond the control* of the utility.”⁴ In those cases, allowing cost recovery via a rider can help reduce or eliminate regulatory lag and ensure utilities a reasonable opportunity to recover prudent costs. In addition, riders have been used in MN to address “a perceived need to remove disincentives to investment in areas where the pure economics were asserted to be not singularly compelling, but which, nevertheless, advanced public policy goals; e.g., renewable generation, emission reduction.”⁵

CUB agrees that riders can be a useful mechanism, for example, if the goal is to reduce the number of rate cases or shorten a perceived “regulatory lag” in the recovery of large capital costs. However, that same elimination of regulatory lag may eliminate utility incentives to control costs. A utility may also find it easier to make additional investments through a rider than improve other areas of their business. For example, the 2010 PUC report stated that allowing automatic rider recovery of fuel costs but not power plant upgrades may encourage a utility to continue spending on fuel and not make a plant more efficient.⁶

One of the reasons the traditional rate case model exists is to ensure that utilities manage the risk of poor investments, quantify the financial impacts on the overall business and have an incentive to prudently manage all – not just some – of their investment portfolio. Allowing substantial cost recovery through riders not only breaks up the financial picture into separate pictures, but it takes a considerable toll on Commission and intervenor staffs to understand, track and litigate each separate proceeding.⁷ Time spent by utilities managing these proceedings translates into increased expenses recovered in rate cases. For customers, these proceedings make it more difficult to understand their bills. Finally, using the TRC for everything will assign the costs by a consistent portion across customer classes. However, the benefits of these investments may not accrue to customer types at the same proportion. A rate case allows for adjustment of these costs; the TRC does not.

Xcel argues that one advantage of its multi-year rate plan (“MYRP”) is that MYRPs “increase the incentive for utilities to operate efficiently by loosening the link between a utility’s costs and its revenues – strengthening the incentive for utilities to contain costs. Customers realize these efficiencies through rates that are locked-in for the period.”⁸ Adding costs to riders during a MYRP undermines a utility’s incentive for cost control and increases customers’ rates during the MYRP. As the 2010 PUC report stated, “[b]y eliminating regulatory lag and allowing immediate pass-through of certain types of cost increases, meaningful and binding incentives to control costs could be substantially eroded.”⁹

Therefore, riders should be used for circumstances where the costs are low in comparison to the overall utility revenue requirement, unable to be predicted with accuracy in advance, volatile in nature, and outside of the utility’s control. In other words, the “risk to [traditional] incentives is especially significant when special recovery is allowed for cost categories [...] that are *not* always outside the control of the

⁴ Minnesota Public Utilities Commission, [“Report to the Legislature: Utility Rate Study, As Requested by Laws of Minnesota, 2009, Chapter 110,”](#) 2010 (“PUC Report”), at 2, italics original.

⁵ PUC Report at 7

⁶ PUC Report at 7.

⁷ For example, PUC and Department of Commerce staff spent more than 6000 hours on “automatic recovery filings” in 2008. PUC Report at 8.

⁸ Xcel Initial Comments, Docket 17-401 at 14.

⁹ PUC Report at 7.

utility, unpredictable or substantial.”¹⁰ In this case, the costs of at least some of what is proposed should be recovered in a general rate case, not in a TCR proceeding. There, the Commission and stakeholders can give full consideration to the costs and benefits of utility investment options, how the costs should be distributed among utility customers, and how investment risk (such as technology failure, cost overruns, or inability to deliver benefits at scale) can be managed.

III. Costs and Benefits Analysis

Xcel lists many reasons that investment in these distribution grid technologies is good, and CUB agrees with these goals. While CUB has no objection to – and indeed supports – the general technologies behind Xcel’s proposed investments, almost no detail is provided on the costs and benefits of each. No detail is given on how the technology vendors will be selected, how the risk of technology obsolescence will be managed nor how costs will be controlled. There is no discussion of how the benefits will be quantified or captured for customers. For example, while Xcel does provide a general cost summary and restoration value for its proposed fault location isolation and service restoration (“FLISR”) project, there is no description of the useful life of the technology, potential cost of early retirement of other assets, or quantification of the total resource cost of each feeder upgraded.¹¹

The basic elements of a cost/benefit framework can be adapted for grid modernization technology such as FLISR and used by the Commission to evaluate each proposed investment. Ongoing costs, such as operation and maintenance (O&M) expense, are added to capital investment costs. The total costs are then compared with the benefits such as operational benefits (e.g. storm restoration expense reduction, avoidance of capital investment, reduced maintenance costs) and any related increase in delivery service revenues. Other benefits, which may be indirect, can also be included, such as the economic value associated with improved reliability as well as societal benefits (e.g. changes in emissions). The final sum is then converted to a net present value, which reflects the costs and benefits over the lifetime of the investments. In short, if the value exceeds the costs, the Commission can and should consider that investment appropriate and prudent.

With respect then to grid modernization investments, the Commission should require Xcel to list the benefits for each proposed investment, quantify those benefits, ensure that the benefits outweigh the costs, and ensure that Xcel achieves those benefits as the projects are being implemented and beyond. Doing so will help ensure that Xcel’s ratepayers benefit from the investments they are being asked to fund. It will help the Commission evaluate the prudence of investments using measures that can be more readily quantified and verified, rather than having to understand all of the ins and outs of the technologies. With respect to rate design, this will help the Commission evaluate which benefits accrue to which customers. Since the benefits may not accrue equally to different customer classes, it may be appropriate for the Commission to assign a greater portion of the costs to certain classes. Most importantly for Xcel’s customers, identifying and quantifying the benefits will help the Commission hold Xcel accountable for achieving those benefits.

¹⁰ PUC Report at 8, emphasis in original.

¹¹ CUB also notes that Xcel only makes reference measuring the system impacts of outages – specifically the average duration of a system outage – not the average number of system interruptions or interruptions for customers. Known as “CAIDI,” the customer average interruption duration index, and “CAIFI,” the customer average interruption frequency index, these additional metrics are also informative.

If these projects are certified, Xcel should be required to report on the outcomes of these investments, improvement in specific performance metrics such as customer outages, and what types of additional data Xcel is now able to collect with respect to its grid operations. This will help the Commission place these investments in the larger picture of its grid modernization objectives. For example, data gathered from advanced meters and FLISR will help inform plans to integrate DER. If the Commission can see how each building block is actually performing, it can make sure the final puzzle is a solid foundation for achieving the broader goals of Minnesota.

At minimum, CUB therefore recommends that (1) the Commission should ensure a full consideration of the costs/benefits of proposed measures before allowing costs to be added to TCR; (2) there be a showing of specific benefits for Xcel's ratepayers; (3) there should be a directive that if TCR is used, any cost savings be reflected immediately; and (4) even if TCR is used initially for these investments, these costs be included in future rate cases.

IV. Data Access and Security

CUB agrees with Xcel that grid modernization allows much more granular data collection, on not only the performance of Xcel's distribution grid is collected but also on how customers use energy.¹² This data should be made available to the public and to stakeholders. It is important both for customers to see their own data, so that they can better understand their opportunities for saving money and reducing the emissions impacts of their energy use. It should also be provided to stakeholders so that parties such as CUB may use data to evaluate opportunities for cost savings and emissions savings. One reason the Commission should order Xcel to file a distribution system plan is to ensure the orderly, regular reporting of system data that can inform DER placement, impacts of rate designs and, potentially, baselines for performance-based ratemaking. As CUB noted in its 8/21/17 comments in Docket No. 17-556: "In many cases, squeezing extra efficiency out of a distribution system works against the business interests of vertically integrated, investor-owned utilities. [...] For this reason, and because third parties may be more nimble than utilities, informed third parties may achieve greater efficiency and cost-effective DER implementation than the utility alone."¹³ Access to data is crucial to enable this to happen..

CUB recognizes that not all data can be shared publicly. In some cases, security or privacy concerns may restrict how Xcel can make data available. Customer usage data should only be shared subject to compliance with rules the Commission may set on privacy and customer authorization.

V. Public Engagement

Communities United for Responsible Energy (CURE) filed comments in this docket on November 30, 2017, addressing the need for public engagement in transmission and distribution planning. CUB makes no comment on CURE's filing at this time except to note that this is an important question to consider in the context of distribution grid planning and grid modernization.

¹² See, e.g. 2017 Report at 2, 6-7, 22-23, 28.

¹³ CUB Initial Comments, Docket No. 17-775, at 9.

VI. Conclusion

CUB recommends that the Commission:

1. Certify Xcel's TOU rate pilot.¹⁴
2. Decline to certify Xcel's FLISR Project at this time and ask Xcel to conduct a cost-benefit analysis for the Commission to review.
3. In Docket No. 15-556, define the objectives of grid modernization, then require each utility to submit distribution system plans.
4. Allow Xcel to file annual grid modernization reports in this docket.
5. Consider cost recovery for grid modernization investments in Xcel's next rate case, or in the alternative, discuss how TCR may be used in conjunction with rate cases to ensure investment costs are being prudently incurred and the full effects of investments on Xcel services and processes are reviewed.
6. Require Xcel to make grid data and privacy-protected customer data that is generated through grid modernization investments available to the public.

Thank you for the opportunity to provide these comments.

Respectfully submitted,

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¹⁴ CUB believes the TOU pilot will help to reduce customer costs and emissions, and should move forward. See CUB's 2/5/18 Initial Comments in Docket No. 17-775 for detail.

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