

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

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

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

DOCKET NO. E002 / M-17-776

**COMMENTS OF THE OFFICE OF
THE ATTORNEY GENERAL**

The Office of the Attorney General – Residential Utilities and Antitrust Division (“OAG”) respectfully submits its comments in response to Northern States Power Company’s (“Xcel” or “the Company”) 2017 Biennial Report on Distribution Grid Modernization (“the Report”). In the Report, Xcel requests that the Commission take five actions:

- Certify the residential Time of Use (“TOU”) rate pilot proposed in Docket No. E-002/M-17-775;
- Certify the Fault Location, Isolation, and Service Restoration (“FLISR”) system;
- Allow the Company to file a Grid Modernization Report and certification request on November 1, 2018, which Xcel states will include its proposal to move to forward with a broad rollout of Advanced Metering Infrastructure (“AMI”);
- Allow the Company to submit annual Grid Modernization Reports and certification requests through at least 2022; and,
- Establish a procedural schedule for consideration of the TOU Pilot in Docket 17-775 and certification of the TOU Pilot and FLISR that will result in a final decision no later than June 1, 2018.

The Commission should certify the TOU Pilot as Xcel has requested. The Commission should deny certification of FLISR at this time, but should allow Xcel to propose it again in future certification requests, or to proceed with the project and seek to include it in base rates like the vast majority of its investments. The Commission should also deny Xcel's request to accelerate certification filings in the future, and should instead apply the statutory language that permits certification filings only in odd-numbered years.

I. PROCEDURAL ISSUES.

Xcel requests that the Commission establish a procedural schedule that will ensure a decision on its TOU Pilot, and resolve the certification requests for the TOU Pilot and FLISR, no later than June 1, 2018. In asking that the Commission's decision be made by June 1, 2018, Xcel refers to the procedural schedule established in Minnesota Statutes section 216B.2425. This section provides that utilities must file a transmission projects report with the Commission by November 1 of each odd-numbered year—in this instance, 2017.¹ The statute further provides that the Commission must (1) adopt a state transmission project list and (2) certify, certify as modified, or deny certification of the transmission and distribution projects by June 1 of each even numbered year—in this instance, 2018.

The Commission has taken steps toward fulfilling Xcel's request by establishing a comment period ending on February 5, 2018, and reply comment period ending on February 26, 2018. This should provide ample time for the Commission to reach a decision on certification of the TOU Pilot and FLISR by June 1, 2018.

An additional word must be said, however, regarding the TOU Pilot. Minnesota Statutes section 216B.2425 only requires the Commission to make a decision on whether to certify the

¹ Minn. Stat. § 216B.2425, subd. 2(a).

TOU Pilot by June 1, 2018.² The statute does not place any limitations on the Commission’s schedule for determining the specific parameters of any TOU Pilot tariff that is approved. As the Commission recognized in the last biennial proceeding, the prudence of projects that are considered for certification will be determined in other, later proceedings.³ Similarly, if the Commission determines that more time is required to review the specific provisions of Xcel’s TOU pilot proposal, the Commission could certify the TOU Pilot by June 1 deadline in this proceeding, while considering the specifics in the TOU pilot docket on a different schedule. It appears that the Commission’s current schedule will decide the certification issue and the tariff design issue at the same time, but it is worth noting that the Commission could take additional time for the details of the TOU Pilot design, or future grid modernization projects, after it determines whether the projects should be certified.

II. XCEL’S REQUEST FOR CERTIFICATION.

Xcel requests certification of two projects: the TOU Pilot and FLISR. This section will first discuss the standards the Commission should apply in deciding whether distribution grid modernization projects should be certified, and then discuss each project separately.

A. CERTIFICATION STANDARDS

There are no specific standards in law, rule, or Commission order to apply when considering certification of a distribution grid modernization project. Instead, the Commission must look to a number of sources in making a decision on certification requests. This section will summarize the relevant law, the Commission’s past decisions, and some policy concerns,

² *Id.*

³ 2016 Order at 9 (“The Commission’s decision represents only a finding that the project is consistent with the requirements of section 216B.2425. Any rider recovery of costs associated with the project will be determined in response to a [later] petition At that time, Xcel will have the burden of establishing the prudence of the costs it requests to recover”).

with the goal of providing standards that the Commission should apply when deciding whether to certify a project.

1. Legal Framework For Grid Modernization Certification.

Every two years, all utilities and transmission owners are required to submit a transmission projects report to the Commission.⁴ Minnesota Statutes section 216B.2425, subdivision 2(e) (“the Certification Statute”) also requires utilities operating under a multi-year rate plan to submit a report identifying “investments that it considers necessary to modernize the transmission and distribution system” by:

- Enhancing reliability;
- Improving security against cyber and physical threats;
- 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.⁵

The Certification Statute allows utilities to request certification of distribution grid modernization projects that are identified in the report. Certification allows a utility to request cost recovery through the transmission cost recovery (“TCR”) rider. Utilities may request recovery of three types of distribution grid modernization costs through the TCR rider: (1) the costs, net of revenues, of new distribution facilities that are certified as a priority project; (2)

⁴ Minn. Stat. § 216B.2425, subd. 2.

⁵ *Id.* at subd. 2(e).

costs for distribution planning required under Minnesota Statutes section 216B.2425; and (3) investments in “distribution facilities to modernize the utility’s grid that have been certified by the commission.”⁶

While these statutes lay out how a utility can request certification, and, to some extent, what may happen after a project is certified, they do not provide any clear criteria or standards for the Commission to use in deciding whether a project *should* be certified. The Commission faced this same dilemma in the last biennial grid modernization proceeding.

2. The Commission’s First Certification Decision.

Xcel filed the first ever distribution grid modernization report and certification request in Docket No. 15-962. In the absence of any specific criteria for deciding what should be certified, the Commission determined that it would “interpret the statute on a case-by-case basis until such time as a comprehensive list of criteria is established.”⁷ While the Commission did not adopt any specific criteria, the reasoning that the Commission applied in deciding whether to certify previous projects can provide some guidance on how to review the projects at issue in this proceeding.

In Docket No. 15-962, Xcel requested certification of two projects: an Advanced Distribution Management System (“ADMS”), and the Belle Plaine Solar + Battery Storage demonstration project (“Belle Plaine Project”). The AMDS is a “collection of software applications designed to monitor and control the entire electric distribution network efficiently and reliably.”⁸ The Belle Plaine Project was intended to “explore the benefits of battery storage

⁶ Minn. Stat. § 216B.16, subs. 7b(a)(1), (b)(4), and (b)(5).

⁷ 2016 Order at 9.

⁸ 2016 Order at 5.

combined with solar,” and “defer capital improvements” and the Belle Plaine substation.⁹ The Commission approved certification of the ADMS, and denied verification of the Belle Plaine Project.

The Commission denied certification of the Belle Plaine Project because Xcel had not demonstrated that the two goals of the project were consistent with Minn. Stat. § 216B.2425, subd. 2(e). Xcel had not shown how the goal of deferring substation upgrades would be “consistent with modernizing the transmission or distribution system,” or “satisfy any of the other criteria listed in” the Certification Statute.¹⁰ Regarding the goal of exploring solar plus battery storage, the Commission determined that Xcel had not established that the project was “necessary to modernize the grid,” and would “bring one or more of the benefits listed in the statute.”¹¹

In contrast, the Commission approved certification of the ADMS because Xcel had demonstrated that it was “necessary” to modernize the distribution system, and “fit squarely within” the list of grid modernization objectives in the Certification Statute, particularly the objectives of enhancing reliability, increasing conservation opportunities, and control technologies.¹² The Commission determined that, because ADMS had a “foundational role in grid modernization,” Xcel should be incentivized to complete the project by moving forward before a comprehensive set of certification criteria were developed.

While the Commission explicitly did not adopt any criteria to apply to future certification decisions, the reasoning it applied in the last proceeding can provide two points of guidance on how to approach the decision in this proceeding. First, one project was rejected in part because

⁹ *Id.*

¹⁰ 2016 Order at 11.

¹¹ *Id.*

¹² *Id.* at 9.

Xcel did not demonstrate that the project was “necessary” for grid modernization.¹³ In contrast the Commission concluded that investment in ADMS should be certified because it has a “foundational role in grid modernization,” and allowing Xcel to “seek rider recovery” would “encourage rapid development in ADMS.”¹⁴ This indicates that Xcel must demonstrate that future projects are “necessary” and “foundational” for grid modernization in order to obtain certification and become eligible to seek rider recovery.

Second, one project was rejected in part because Xcel did not demonstrate that it would “bring one or more of the benefits listed in the statute.”¹⁵ The Certification Statute provides a list of grid modernization objectives including enhancing reliability, improving security against cyber and physical threats, 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, and technologies to enable demand response, and other innovative technologies.¹⁶ The Belle Plaine Project was not certified because Xcel did not demonstrate that it fit into this list; in contrast, the ADMS was certified because it “fit[] squarely” within this list.¹⁷ It appears that, in order to obtain certification, a project must be related to at least one of these objectives.

While these examples do not necessarily provide specific criteria that must be met, they are based upon the limited statutory guidance available, and have been relied upon in the past to guide the Commission’s decisions.

¹³ 2016 Order at 11.

¹⁴ *Id.* at 9.

¹⁵ *Id.*

¹⁶ *Id.* at subd. 2(e).

¹⁷ *Id.* at 8.

3. The Commission Has The Authority To Consider Any Factors That Are Relevant.

The Commission is not limited to considering only those factors that were included in the last biennial grid modernization Order. By granting the Commission the authority to certify projects, but choosing not to designate specific criteria for doing so, the Legislature delegated to the Commission the authority to determine what factors and criteria should be applied to the certification decision.

One factor that the Commission should consider for each project is whether it is appropriate to recover through a rider. The primary consequence of certifying a project is to allow Xcel to seek rider recovery of costs in the future. While certification does not necessarily guarantee recovery of all costs spent on a certified project, it is a significant step towards obtaining special cost recovery outside of the normal ratemaking process. As such, the Commission should consider whether an investment is reasonable to recovery through a rider at the time of the certification decision.¹⁸

The Commission may wish to consider other factors, such as whether there are established metrics to measure the performance of grid modernization investments, the timing of when investments should be made, concerns about leap-frogging technology, and interactions with the utility's base rates and rate case schedule. These Comments will address some of these factors where they are relevant to the projects up for certification, but it is not necessary to create an exhaustive list of criteria. Factors that are important for some projects may not be relevant to others, and it is probably impossible to anticipate all the factors that should be considered for

¹⁸ While the Commission does have the authority to deny rider recovery of a certified project at a future TCR filing, Xcel will likely begin spending money once a project is certified. As a practical matter, the most reasonable and efficient time to consider the appropriateness of rider recovery is the certification decision, *before* Xcel begins spending significant funds. Holding that decision until the time of a future TCR filing would place Xcel in a difficult position if it expended funds based on the expectation of rider recovery and recovery were ultimately denied.

grid modernization investments years from now. The point is that grid modernization investments will present a wide variety of issues to the Commission, and the Commission should retain the flexibility to respond on a case-by-case basis.

B. THE COMMISSION SHOULD CERTIFY THE TOU PILOT.

The Commission should certify Xcel's residential TOU Pilot, presented in detail in Docket No. 17-775, because it is a necessary component of moving forward with grid modernization, clearly fits within the grid modernization objectives of the Certification Statute, and is a reasonable expense for rider recovery. In these Comments, the OAG explains the reasons why the TOU Pilot should be certified. The OAG's Comments in Docket No. 17-775, which are being filed simultaneously, explain why the TOU Pilot should be approved with modifications.

First, the TOU Pilot is necessary because it is an essential part of any future AMI rollout for Xcel. AMI, when utilized in a cost effective and prudent way, is an important part of grid modernization that will provide better information to both customers and the utility, allow more sophisticated demand response, reduce operations costs, and improve reliability. While there are benefits of AMI, there are also significant costs. It is important for the Commission to have a full understanding of the value of any benefits that could come from AMI, so that they can be effectively compared against the cost.

One of the important benefits that can come from AMI is to unlock new rate designs for customers. TOU rate designs, in particular, can provide system benefits by reducing peak demand, which should reduce system costs on the generation, transmission, and distribution systems. TOU rate designs may also encourage conservation by educating customers, and enable additional components of demand response to be incorporated. The TOU Pilot is necessary in order to ensure that the Commission has some baseline information when it

considers a future cost-benefit analysis for AMI rollout, and so that an effective TOU rate is available at the time of future AMI rollout. If the TOU Pilot does not move forward, then this information will not be available for the Commission's future consideration, and the potential benefit of an effective TOU rate may not be available when AMI is installed.

Second, the TOU Pilot clearly fits within the grid modernization described in the Certification Statute. The TOU Pilot is related to "increasing energy conservation opportunities," "facilitating communication . . . using two-way meters," "control technologies, and "enable[ing] demand response."¹⁹ The capability to unlock new rate design options that can provide more accurate price signals to customers and help to reduce system costs is a key benefit of grid modernization.

Third, the context of the TOU Pilot demonstrates that it is an appropriate cost for rider recovery. The TOU Pilot was not included in Xcel's MYRP because Xcel did not propose it and no cost estimates were sufficiently developed at the time. In fact, the process that ultimately led to the TOU Pilot petition was recommended by intervening parties, including the OAG. In addition, compared to other, more general infrastructure investments, the specificity of the TOU Pilot indicates that the costs are likely to be fully incremental to the costs included in Xcel's MYRP. Further, while broad rollout of TOU in the future may reduce system costs, it is unlikely that the TOU Pilot, alone, will significantly reduce costs. This lessens the need to conduct a holistic review of Xcel's rates to balance the increased costs for the TOU Pilot. Finally, the TOU Pilot is clearly defined and limited in duration. Based on these factors, it is reasonable to allow the costs of the TOU Pilot to be recovered through a rider.

¹⁹ Minn. Stat. § 216B.2425, subd. 2(e).

C. THE COMMISSION SHOULD NOT CERTIFY THE FLISR PROJECT.

According to Xcel’s petition, FLISR is a “form of distribution automation that involves the deployment of automated switching devices that work to detect feeder mainline faults, isolate them, and restore power to unfaulted section—decreasing the duration and number of customers affected by any outage.”²⁰ Xcel proposes to deploy FLISR over a ten-year period at an estimated cost of \$65 million.

In contrast to the TOU Pilot, the OAG recommends that Commission deny certification of Xcel’s FLISR investment. The OAG does not intend, with this recommendation, to suggest that Xcel should not pursue FLISR or other reliability investments. FLISR may be a reasonable investment. But that does not mean that it should be certified for recovery through the TCR Rider. Applying the reasoning the Commission used in the last biennial proceeding, and the additional factors recommended in these Comments, demonstrates that it would not be reasonable to certify FLISR at this time for several reasons.

1. Xcel Has Not Demonstrated That FLISR Is “Necessary” For Grid Modernization.

Xcel has not demonstrated that FLISR is “necessary” for grid modernization. The Certification Statute provides that projects proposed for certification must be “necessary” to modernize the distribution system.²¹ Regardless of whether FLISR is a reasonable grid modernization investment, it is not necessary in order to move forward with grid modernization. In the last biennial grid modernization proceeding, the Commission certified the ADMS, in part, because it was a foundational investment that was necessary in order for other grid

²⁰ Petition at 2.

²¹ Minn. Stat. § 216B.2425, subd. 2(e).

modernization work to move forward.²² FLISR does not share this same foundational characteristic,²³ and for that reason does not satisfy the statutory requirement that only investments that are “necessary for modernization” may be certified.

2. Xcel Has Not Estimated Any Cost Savings From Improved Efficiency For FLISR, And Any Cost Savings Would Not Be Captured By The TCR Rider.

Based on Xcel’s filings it appears that investment in FLISR should lead to cost savings through efficiency that Xcel has not estimated, and which would not be captured through rider recovery. Xcel’s petition indicates that there should be some efficiency improvements if FLISR is installed. Xcel states that the FLISR system would give it the ability to operate “critical points on the distribution system” remotely, without having to dispatch a crew.²⁴ Xcel explained that doing the work remotely would be “faster, safer, and allow[] the efforts of [its] crews to be more focused and thus productive.”²⁵ Because of “operational efficiency,” Xcel explained that it will be able to “identify and . . . restore the root cause of an outage faster,” and then “get to the next outage factor.”²⁶ Xcel also explained that FLISR would allow it to “better manage, in real-time, the flow of electricity on the grid,” by remotely opening and closing switches from the control center rather than sending crews to do the work.²⁷ These efficiency improvements could lead to substantial cost savings.

The expectation of cost savings is confirmed by research. The United States Department of Energy published a report on its Smart Grid Investment Grant program in 2016. One of the Key Results was that utilities “reduced O&M costs by automatic functions that previously

²² 2016 Order at 9.

²³ It is worth noting that Xcel does not include FLISR under the “Foundational Elements of Grid Modernization” section of its Petition, instead including investments such as FAN, which is necessary to operate FLISR, and AMI.

²⁴ Petition at 28.

²⁵ Petition at 28.

²⁶ *Id.*

²⁷ *Id.*

required field crews,” including savings in “labor costs, truck rolls, vehicle-miles traveled, and replacement parts.”²⁸ One utility that implemented system-wide distribution automation, which included FLISR, avoided approximately \$4.8 million in distribution operations costs over a three and a half year period, in addition to switching cost savings, and reduced costs and emissions from optimized truck rolls.²⁹

The OAG noticed that Xcel had not calculated any cost savings from FLISR in its Petition, so asked the Company to do so in OAG Information Request 4, which is attached as Exhibit 1. In its response, Xcel indicated that it did not have any estimates for potential cost savings. Further, although Xcel stated that it was “expecting improved crew productivity,” it appears to argue that FLISR would not result in any cost savings despite the increase in productivity.

It is particularly concerning that Xcel did not produce any cost savings estimates for FLISR because the purpose of its request for certification is to support a future request for rider recovery. If FLISR is certified, Xcel will be able to seek rider recovery of its costs in the future, but the rider will not capture the cost savings that should result from the investment. It is even more concerning that Xcel disputes that FLISR could result in cost savings from increased efficiency. Many types of grid modernization investments should lead to cost savings through improved grid operations or labor efficiency, and Xcel *should* be expected to have estimates of those potential savings when it brings them to the Commission for consideration.

²⁸ United States Department of Energy, Distribution Automation, results from the Smart Grid Investment Grant Program at 29 (Sept. 2016), *available at* https://energy.gov/sites/prod/files/2016/11/f34/Distribution%20Automation%20Summary%20Report_09-29-16.pdf.

²⁹ *Id.*

3. It Is Not Clear That There Is A Need For Substantial Investments To Improve Reliability When Xcel Is Accomplishing Its Existing Reliability Targets.

Xcel suggests that FLISR will not improve efficiency or reduce costs, but will improve reliability. It is not clear, however, that there is a need for significant expenditures to improve reliability at this time. The Commission has established performance metrics and set reliability targets for Xcel to accomplish in its Quality of Service Plan (“QSP”). According to the QSP, Xcel is expected to achieve System Average Interruption Duration Index (“SAIDI”) of less than 133.23 minutes, and a System Average Interruption Frequency Index (“SAIFI”) of less than 1.21 outage events.³⁰ Xcel faces a financial penalty for each year that it does not achieve these targets.³¹ Based on its existing investments, Xcel has achieved its reliability targets every year since the Commission amended the QSP in 2013.

Table ###
Xcel’s Electric Reliability Performance³²

	2013	2014	2015	2016	Target
SAIDI	91.12	79.85	86.83	89.49	133.23
SAIFI	0.86	0.78	0.79	0.81	1.21

In fact, Xcel has dramatically outperformed its reliability targets in each year. In its worst year of performance, 2013, Xcel still outperformed its reliability goals by approximately thirty percent in both reliability metrics.

The status quo is that Xcel is easily accomplishing its reliability targets *without* FLISR. From that light, it may not make sense to invest a lot of ratepayers’ money in improving reliability targets unless the Commission decides to set more ambitious reliability targets for

³⁰ Order Approving Amendments to Service-Quality Tariff, *In the Matter of the Petition of Xcel Energy for Approval of Amendments to Its Natural Gas and Electric Service-Quality Tariffs Originally Established in Docket No. E,G-002/CI-02-2034*, Docket No. E,G-002/M-12-383 (Aug. 12, 2013).

³¹ *Id.*

³² Data is drawn from Xcel’s 2016, 2015, 2014, and 2013 QSP Reports in Docket No. 12-383.

Xcel.³³ While improving reliability sounds like a useful objective, it is important to recognize that most performance improvements are likely to come with increased costs. Without some indication that customers are unsatisfied with their current level of reliability, and that they are willing to pay for increased performance, it may not be the most effective way to invest in grid modernization at this time. And, even if the Commission does decide to set new reliability targets, then there should be some analysis demonstrating that FLISR is the most cost-effective way to improve reliability before it is certified.

4. It Is Unclear Whether FLISR is An Incremental Cost Above The Distribution Costs Included In Xcel's MYRP.

One concern that must be addressed whenever a utility seeks rider recovery is whether the investment in question is truly incremental compared to the level of investment included in base rates. If it is not, then rider recovery would result in double recovery. For some investments, like large transmission projects, it is relatively simple to determine whether the costs are incremental. In contrast to large, unique transmission projects, Xcel makes many distribution investments each year. Determining whether specific projects are incremental above the level of investment included in base rates can be challenging—this is one reason that riders are not a perfect solution for all cost recovery problems.

In its Petition, Xcel states that it intends to “implement[] FLISR rather than continuing to rollout [] existing automated devices” that it has been installing on its distribution system.³⁴ This appears to indicate that Xcel has historically been making a certain level of investment in automated devices, and will stop doing so if it invests in FLISR. It seems likely that the historical level of investment in automated devices is incorporated into Xcel’s base rates, which

³³ The Commission’s ongoing performance metrics docket will likely address the existing reliability metrics and any appropriate modifications to those metrics and to any associated targets.

³⁴ Petition at 27.

would raise concerns about double recovery if Xcel reduces investments that were in its last rate case (but still recovers them through base rates) and also recovers new investments through a rider.

To obtain more information, the OAG issued Information Request 002 and asked Xcel to identify the “existing automated devices” that would no longer be installed and provide data about them. Xcel provided some information in response, but did not directly address the issue of incremental investment levels.³⁵ The OAG asks that Xcel clarify in its reply comments whether its base rates include investments for “existing automated devices” that it will no longer make if FLISR is certified. Further, while this is a concern that should be addressed, the OAG would continue to recommend that FLISR not be certified even if Xcel demonstrates that the costs are fully incremental.

5. Conclusion Regarding FLISR.

The OAG recommends that the Commission deny certification of FLISR at this time, but allow Xcel to propose FLISR again in future biennial reports. In the alternative, Xcel could choose (or be ordered) to pursue FLISR and include the costs in a future rate case filing like the vast majority of investments the Company makes. Including FLISR in a rate case, rather than a rider, would mitigate some of the concerns related to eligibility through the Certification Statute, capturing cost-savings, and incremental costs, but concerns related to current reliability targets should still be addressed.

III. XCEL’S REQUEST FOR ADDITIONAL CERTIFICATION FILINGS.

In addition to its requests for certification, Xcel requests that the Commission allow it to (1) file an additional certification request in 2018, and (2) file annual certification requests each

³⁵ OAG Information Request 002, Exhibit 2.

year until at least 2022. The Commission should deny Xcel’s request because it is not consistent with the statutory framework provided by the Legislature, and because several policy concerns indicate that it is not the appropriate time to accelerate certification of distribution grid modernization projects.

A. THE CERTIFICATION STATUTE CREATED BY THE LEGISLATURE ONLY ALLOWS CERTIFICATION REQUESTS IN ODD-NUMBERED YEARS.

The Certification Statute lays out a detailed process for certifying and then recovering distribution grid modernization projects through the TCR rider. In developing the statute, the Legislature specifically limited the distribution grid modernization projects that can be recovered through a rider to those that are certified.³⁶ The Legislature provided only one avenue for projects to be proposed for certification: the State Transmission and Distribution Plan, which *must* be filed in odd-numbered years.³⁷ Xcel’s proposal to file certification request in both odd- and even-numbered years is not provided for in statute.

If the Legislature had wanted to allow a utility to file certification request every year, it could have done so. In fact, it has done so for some other riders. The riders authorized under Minnesota Statutes sections 216B.1635 and .1636 both allow a utility to file once per year. The Legislature has also provided an alternate path for obtaining rider recovery of transmission investments—the certificate of need process under Minnesota Statutes section 216B.243. The Legislature chose not to provide an alternate method to certify distribution grid modernization investments.

The Commission has broad authority over utilities like Xcel, but the Legislature is the body with the authority to develop new riders. There would be no need for statutes like the

³⁶ Minn. Stat. § 216B.16, subd. 7b.

³⁷ Minn. Stat. § 216B.2425, subd. 2(a), €

Certification Statute if the Commission could create and modify riders on its own. Further, the argument that the Commission can modify or expand statutory procedures for rider recovery could extend beyond the confines of this proceeding. The fact that the Legislature has found it necessary to create a variety of riders through statute, in combination with the limits on rate changes found in Minnesota Statutes section 216B.16, suggests that the authority to create and modify riders (and eligibility for rider recovery) resides with the Legislature. The Legislature deliberately crafted a specific process for requesting certification of grid modernization projects, and that statutory process cannot be expanded to accommodate Xcel's investment strategies.

B. IT IS NOT THE APPROPRIATE TIME TO ACCELERATE CERTIFICATION OF GRID MODERNIZATION PROJECTS.

Xcel's request for accelerated certification filings should be denied because it is not allowed by statute, but there are also several policy concerns which indicate that Xcel's proposal would not be reasonable at this time. First, the regulatory context of this proceeding, and Xcel's Multi-Year Rate Plan, indicate that the Commission should be cautious before expanding the use of riders by accelerating certification filings. Second, it would be better to wait until grid modernization performance metrics are developed before accelerating the use of rider recovery mechanisms.

1. The Commission Should Be Cautious Before Expanding Use Of Riders.

One reason that the Commission should deny Xcel's request for accelerated certification filings is that the Commission should be cautious about expanding the use of riders in the current regulatory context. Riders are a special ratemaking treatment that should be the exception, rather

than the rule.³⁸ Xcel has a lot of riders. In fact, it has twenty-six riders for fuel costs, transmission costs, renewable energy development costs, and now it has a rider for distribution grid modernization costs.³⁹ Riders are generally good for utilities because they reduce regulatory lag and allow faster recovery of expenditures at very little risk for loss or disallowance. Riders are not, however, always good for ratepayers. Regulatory lag can be beneficial because it requires a utility to live within its means between rate cases by incentivizing cost control, careful investment, and prudent decision-making with the money provided by ratepayers.

When utilities have riders to cover their major areas of cost pressure—which at this time appear to primarily be related to transmission costs, renewable energy development, and grid modernization—it can also become challenging to get a clear picture of the utility’s overall finances. A rate case provides a snapshot of the whole utility business, capturing costs, cost savings, and carefully allocating those expenses to ratepayers. Recovering costs piecemeal through riders can limit the regulator’s ability to review the whole utility business, which can make it more difficult to ensure that overall rates are just and reasonable.

In addition to these general concerns, there are some specific concerns with expanding riders for Xcel because it is currently under a Multi-Year Rate Plan. Unlike a traditional rate case that looks at only one year of expenses, Xcel is operating under a four-year rate plan that will extend through the end of 2019. This is the first MYRP of such a significant length, and the Commission has already expressed concern that it was not coupled with performance metrics and possibly other provisions to protect ratepayers. It is not clear, at this time, how riders should be

³⁸ See, e.g., MINNESOTA PUBLIC UTILITIES COMMISSION, REPORT TO THE LEGISLATURE: UTILITY RATES STUDY AS REQUIRED BY LAWS OF MINNESOTA, 2009, CHAPTER 110 (June 2010), <https://www.leg.state.mn.us/docs/2010/mandated/100762.pdf>.

³⁹ STIPULATION OF SETTLEMENT, *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota*, Docket No. E-002/GR-15-826, Attachment 3 (Aug. 16, 2016).

handled under a long MYRP, and the Commission should be cautious before expanding their use, especially in a way that was not contemplated by the Legislature.

Further, in its MYRP Xcel reached an agreement with some parties not to seek out new riders during the plan.⁴⁰ The TCR rider, and the process for certifying grid modernization projects and recovering them through the TCR rider, already existed when Xcel reached its agreement. But Xcel's proposal to accelerate the speed at which it can seek certification of distribution grid modernization projects for rider recovery does not seem consistent with its agreement not to use riders that existed at the beginning of the MYRP.

2. Grid Modernization Performance Metrics Have Not Yet Been Developed.

Grid modernization projects should be designed to reduce system costs for customers, and improve the utility's performance in areas that are valuable to customers. To make sure that customers are receiving benefit from grid modernization investments, it is important to have metrics in place that can measure the impact that the investments are having on utility performance. In some areas, such as reliability, the Commission has metrics that can be applied relatively easily. In many other areas, however, the Commission is still in the process of developing metrics. Until those metrics are available, it may be very difficult to compare the costs of grid modernization investments to the potential benefits, or to determine whether they are producing the improved performance that they should.

In addition, many grid modernization investments will require the utility to operate them effectively after completion in order to maximize benefits for customers. For example, FLISR may be able to improve the utility's reliability, but it will only do so if the system is operated

⁴⁰ STIPULATION OF SETTLEMENT, *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota*, Docket No. E-002/GR-15-826 (Aug. 16, 2016).

efficiently, and if the utility modified its operations to take advantage of the new information it obtains. Future grid modernization investments, such as volt-var optimization, could also provide benefits such as lower system costs—but *only* if they are operated effectively. In other words, the cost-effectiveness of the many grid modernization investments will depend on the utility’s operational performance. The Commission does not currently have any metrics in place to measure operational performance of grid modernization investments. Until those tools are in place, it may be challenging to ensure that grid modernization investments produce the maximum possible benefit for customers.

In its Comments in Docket No. 17-401, the OAG recommended a process to develop performance metrics for Xcel. In these Comments, the OAG recommended that the Commission focus on the development of metrics that can measure the performance of the utility in achieving the desired regulatory outcome of grid modernization. By using this process, the Commission could develop metrics to measure important areas, and then set targets if warranted. In its performance metrics Comments, the OAG also recommended that the Commission adopt a regulatory goal of operational effectiveness. The resulting regulatory outcomes and performance metrics could be used to track how grid modernization investments increase operational effectiveness. At this time, however, these tools are not available. Without these tools in place, it may not be reasonable to accelerate the pace at which projects are proposed for certification at this time.

3. The Commission Should Not Accelerate Certification Filings, And Should Consider Suspending Them Until The MYRP Is Concluded And Grid Modernization Metrics Are Developed.

In light of these concerns (and also because it would be inconsistent with statute), the Commission should reject Xcel’s proposal to accelerated certification filings. Further, the Commission should exercise caution and restraint in certifying any grid modernization projects

until Xcel's MYRP is concluded and grid modernization performance metrics can be developed.⁴¹

IV. CONCLUSION.

The Commission should certify the TOU Pilot, and deny certification of FLISR. The Commission should also deny Xcel's requests to allow an additional certification filing in 2018 and allow annual certification requests in the future.

Dated: February 5, 2018

Respectfully submitted,

LORI SWANSON
Attorney General
State of Minnesota

s/ **Ryan P. Barlow**

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ATTORNEYS FOR OFFICE OF THE
ATTORNEY GENERAL – RESIDENTIAL
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⁴¹ Because the Legislature did not provide any specific criteria for the certification decision, the Commission has the authority to decline certification of projects if it determines that it would best serve the public interest.

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Xcel Energy

Docket No.: E002/M-17-776

Response To: Office of the Attorney Information Request No. 4
General

Requestor: Ryan Barlow

Date Received: November 9, 2017

Question:

Reference: Report at 28

The Report states that FLISR will “increase[e] crew productivity,” and will allow work that is now done manually to be done remotely. Produce all estimates possessed or requested by Xcel of the potential cost savings benefit of FLISR.

Response:

The principle benefit of FLISR is reliability improvement for customers. While we are expecting improved crew productivity, we are not expecting that to result in substantive cost savings. Rather, as we discuss below, our customers will realize the productivity gains through increased reliability, stemming from our ability to better focus the crews on just the system issues that require hands-on construction or trouble expertise. We will realize the productivity gains by our crews being able to more quickly turn their attention to proactive system work, such as asset health, or capacity projects.

We are expecting that the remote control capabilities of the Advanced Distribution Management System (ADMS) and increased information from the advanced FLISR features will *negate the need for a crew* in some circumstances – and *better inform our crew dispatch*, when a crew is needed to address the issue. For example, for certain tasks such as planned switching, or moving loads from one feeder to another, we can leverage the remote control capabilities of FLISR – negating the need to dispatch a crew. In the case of outage events, FLISR will restore sections of the distribution system (and thus customers) automatically; FLISR will also communicate more precisely the location of remaining issues that require crew skills and attention to remedy. With FLISR providing increased system intelligence and enabling remote

control capabilities, our crews will get to the remaining issues faster – improving the reliability experience for customers – and allowing them to more quickly return their attention to planned system work.

Preparer: Dan Lysaker
Title: Senior Engineer
Department: Grid Modernization
Telephone: 651.229.2382
Date: November 22, 2017

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Xcel Energy

Docket No.: E002/M-17-776

Response To: Office of the Attorney General Information Request No. 2

Requestor: Ryan Barlow

Date Received: November 9, 2017

Question:

Reference: Report at 27

The Report states that Xcel intends to “implement[] FLISR rather than continuing to rollout the existing automated devices.”

Identify the “existing automated devices” that will no longer be installed. For each calendar year from 2012 to 2017, identify the number and cost of the “existing automated devices” that were installed.

Response:

As discussed in the Direct Testimony of Ms. Kelly A. Bloch in our recent multiyear rate case (Docket No. E002/GR-15-826), we have been updating various aspects of our distribution infrastructure. When assets are considered for replacement, we consider whether the functionality of a particular asset can be enhanced to promote grid modernization. Ms. Bloch provides a couple of examples including, that we are replacing electro-mechanical relays with solid-state relays, which are not only communication-enabled, but are also capable of providing fault data that our Advanced Distribution Management Systems (ADMS) can use to calculate probable fault location.¹

During the 2012 to 2017 period, we installed approximately 40 automated devices in Minnesota. Most of this work was an extension of the existing automated systems in

¹ See Bloch Direct at pages 9-13.

place on our 34.5kV feeders, with 12 of the devices coming from the installation of two new 34.5kV substations.²

During this time period, the cost of a fully constructed and in-serviced automated device was approximately \$70,000 on average. These installations involve roughly \$40,000 in material, with the rest of the cost attributed to on-site installation. We note that this total does not include associated information technology costs, communication network costs, or engineering and design costs.

We summarize the number of new automated devices installed by year and the approximate material and installation costs in Table 1 below.

**Table 1: New Automated Device Installations – State of Minnesota
(millions)**

	2012	2013	2014	2015	2016	2017	Total
Number of Devices	4	4	2	16	12	3	41
Total Installed Cost	\$0.280	\$0.280	\$0.160	\$1.02	\$0.840	\$0.210	\$2.790

As discussed by Ms. Bloch, we have made these investments as part of our ongoing management of the distribution system. This program has been very successful in improving reliability on our 34.5kV system – and FLISR will be able to leverage these past investments, using them as part of the automated system in ADMS.³

Preparer: Dan Lysaker
 Title: Senior Engineer
 Department: Grid Modernization
 Telephone: 651.229.2382
 Date: November 22, 2017

² On our 35kV feeders, we typically install feeder automation because of the length of the feeder, and higher customer counts.

³ These devices are the “automated overhead switches” that we discuss in our response to OAG Information Request No. 3.



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February 5, 2018

Mr. Daniel Wolf, Executive Secretary
Minnesota Public Utilities Commission
121 Seventh Place East, Suite 350
St. Paul, MN 55101-2147

RE: *In the Matter of Xcel's 2017 Biennial Distribution Grid Modernization Report*
MPUC Docket No. E-002/M-17-776

Dear Mr. Wolf:

Enclosed and e-filed in the above-referenced matter please find Comments of the Minnesota Office of the Attorney General – Residential Utilities and Antitrust Division.

By copy of this letter all parties have been served. An Affidavit of Service is also enclosed.

Sincerely,

s/ **Ryan P. Barlow**

RYAN P. BARLOW

Assistant Attorney General

(651) 757-1473 (Voice)

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Enclosures

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