



414 Nicollet Mall  
Minneapolis, MN 55401

October 1, 2020

—Via Electronic Filing—

Will Seuffert  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, MN 55101

RE: COMPLIANCE FILING-DRAFT RATE DESIGN ROADMAP  
INTEGRATED DISTRIBUTION PLAN  
DOCKET NO. E002/M-19-666

Dear Mr. Seuffert:

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission the enclosed Draft Rate Design Roadmap in compliance with their July 23, 2020 ORDER ACCEPTING INTEGRATED DISTRIBUTION PLAN, MODIFYING REPORTING REQUIREMENTS, AND CERTIFYING CERTAIN GRID MODERNIZATION PROJECTS.

Pursuant to Minn. Stat. § 216.17, subd. 3, we have electronically filed this document with the Minnesota Public Utilities Commission, and copies have been served on the parties on the attached service list. Please contact Martha Hoschmiller at (612) 330-5973 or [martha.e.hoschmiller@xcelenergy.com](mailto:martha.e.hoschmiller@xcelenergy.com) or me at (612) 330-6613 or [amy.a.liberkowski@xcelenergy.com](mailto:amy.a.liberkowski@xcelenergy.com) if you have any questions regarding this filing.

Sincerely,

/s/

AMY LIBERKOWSKI  
DIRECTOR, REGULATORY PRICING & ANALYSIS

Enclosures  
c: Service List

STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION

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

IN THE MATTER OF XCEL ENERGY'S  
INTEGRATED DISTRIBUTION PLAN AND  
ADVANCED GRID INTELLIGENCE AND  
SECURITY CERTIFICATION REQUEST

DOCKET NO. E002/M-19-666

**COMPLIANCE FILING  
DRAFT RATE DESIGN ROADMAP**

**INTRODUCTION**

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission this filing in compliance with Order Point 12 of the July 23, 2020 Order in the Company's Integrated Distribution Plan (IDP) proceeding.<sup>1</sup> Order Point 12 requires the Company to produce a draft rate design "roadmap" with input from stakeholders to be filed by October 1, 2020. Below we detail the draft rate design roadmap items outlined in the Commission's Order.

12. *Xcel must produce a draft rate design "roadmap" with input from stakeholders and file it with the Commission by October 1, 2020. The Commission delegates authority to the Executive Secretary to set schedules and gather information on, or refer to the appropriate docket(s), the following:*
  - a. *A summary of the Company's current advanced rate designs and demand management programs, advanced rate designs in development, and relevant industry best practices.*
  - b. *A timeline for proposing advanced rates and/or demand management programs for all customer classes.*
  - c. *A discussion on what should be discussed in petitions for rate design changes, including:*
    - i. *Whether program design strategies will be needed to support low income customer participation in these offerings,*
    - ii. *Application to distributed energy resources and beneficial electrification,*

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<sup>1</sup> Docket No. E002/M-19-666; ORDER ACCEPTING INTEGRATED DISTRIBUTION PLAN, MODIFYING REPORTING REQUIREMENTS, AND CERTIFYING CERTAIN GRID MODERNIZATION PROJECTS.

- iii. *Implementation plans, including education and outreach to customers, and*
- iv. *Evaluation plans.*

In providing this draft roadmap, we intend to collate information from different proceedings into a single compliance filing. These initiatives, while appropriately docketed and reviewed separately, may be unwieldy for stakeholders to track, and it is our hope that this draft roadmap enables a more comprehensive understanding of the fit of the various initiatives into the larger landscape. While many of the embedded citations to docket numbers are omitted, a helpful table is provided to the referenced proceedings.

## **DRAFT RATE DESIGN ROADMAP**

### **A. A summary of the Company’s current advanced rate designs and demand management programs, advanced rate designs in development, and relevant industry best practices**

The Company has experience developing advanced rate designs for both residential and commercial and industrial (C&I) customer classes, in addition to pursuing an electric vehicle (EV) time of use-based pilot and other demand management programs as well. Below, we outline the Company’s guiding rate design principles and objectives as well as relevant industry best practices which have served as the foundation for our current and planned rate design efforts.

#### *1. Guiding Principles, Objectives and Relevant Industry Best Practices*

The Company has a vision to provide 100 percent carbon-free electricity by 2050 – for many years, we have focused on supporting the clean energy transition and have encouraged efficient use of the power grid. To aid in these objectives, Xcel Energy has recently announced our vision to drive toward powering 1.5 million electric vehicles across our service areas by 2030, which will involve increasing access to electricity as a transportation fuel. When setting pricing and rolling out new programs to aid in these visions, we seek to enhance the customer experience by empowering customers with information, tools, and options and provide products and services that provide benefits to all customers. Essential to providing maximum benefit to customers is creating design flexibility for the changing technology landscape.

The Company is guided by the following principles when putting forth any new rate design proposal:

- Produce annual revenues that total the allowed revenue requirement;
- Accurately reflect the resource costs of providing service; and

- Balance precision and complexity with practical considerations such as rate continuity, customer understanding, and administrative practicality.

We have distilled industry best practices of rate design into the following primary objectives. Rates should be:

- designed based on fundamental principles;
- modified to consider current policy with stakeholder input;
- piloted and evaluated to gather learnings and solid data;
- explained through customer education provided prior to mass rollout; and
- structured to be adjustable in order to meet goals.

## 2. *Residential Rates*

### a. *Current Rates*

The Company's history of innovative rate design dates to before 1980, when the Company implemented seasonal rates to account for the highs and lows of seasonal energy use, including special rates for electric space heating customers, as well as two-period time of use (TOU) rates for residential customers. More recent applications of advanced rate design for residential customers include rates to serve income qualified customers and Electric Vehicle Charging Rates, including special EV rates that leverage TOU rates as well as EV Home Service rates where the charger is used as meter.

### b. *Recent Rate Innovation – TOU Pilot Program*

The Company will soon begin its Residential Time of Use (TOU) Rate Design Pilot program, Flex Pricing, which is a two-year study of the influence of price signals and other information on customer energy use.<sup>2</sup> The pilot's rate design is based on an innovative approach, the Cost Duration Model, developed specifically to enable the rate design study. The results of the pilot will help inform the development of more sophisticated rate design for use more broadly among the Residential class.

The Company developed this pilot using market research, engaging outside expertise, working closely with stakeholders, and reviewing best practices from similar programs throughout the country. Through these efforts, we were able to identify and prioritize objectives for the pilot's design; increase our understanding of customer interests,

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<sup>2</sup> Order, August 7, 2018. Docket No. E002/M-17-775. The Company's September 10, 2020 letter informed the Commission of the revised November 1, 2020 program launch date.

knowledge level, and preferences with respect to potential TOU pilot program features; and leverage other energy companies' learnings and expertise.

Our review of industry best practices informed many of our pilot features. We adopted an opt-out approach to customer enrollment (a feature of a Sacramento Municipal Utility District (SMUD) program); selected Advanced Metering Infrastructure (AMI) meters (participants in a National Grid program overwhelmingly selected AMI meters and these participants were similar to Minnesota customers in that they were motivated to enroll by cost savings and helping the environment); and implemented a five-hour peak duration (which is consistent with many other TOU rates, including City of Fort Collins 7,200 customer opt-out rate, the Arizona Public Service TOU rates, Hawaiian Electric Companies, and several pilot TOU rates in California.)

Through this pilot, the Company seeks to understand how customers respond to information, tools, messages, and price signals, and to gain insights into how these responses are distinguished by market segment. By measuring variations in how different types of customers engage with and respond to these elements, the Company will be well-positioned to develop potential revisions to the proposed pilot design, or the features of administering a future roll-out.

The Company anticipates that we will gain learnings about the ability to provide increased customer energy usage information to empower customers to make choices that reduce system peak loads and support efficient energy use. By increasing the accessibility of customer usage information – both through increased granularity and frequency – we hope to enable customers to understand their patterns and identify opportunities to benefit from TOU rates.

The energy rate design for this pilot is derived from the Cost Duration Method, which was developed to better link the recovery of system costs to the time periods during which system assets are being utilized. The on-peak price level compared to the off-peak price level provides a strong 4:1 on-peak to off-peak ratio. The summer on-peak rate, including fuel costs reaches 25.949 cents per kWh, which provides a strong price signal for demand reduction at a price level at the edge of what can be justified when looking at the cost on marginal investments like a new combustion turbine. The summer on-peak rate, including fuel costs, reaches 25.949 cents per kWh, which provides a strong price signal for demand reduction at a price level at the edge of what can be justified when looking at the cost on marginal investments like a new combustion turbine.

The rate produces symmetry in pricing with each time period effectively doubling to get to the peak rate. Meanwhile, the price for most hours is 10 percent less than the current flat

rate which gives a steady stream of mid-peak savings to participants.

A key feature of the TOU rate is defining the off-peak time window as midnight to 6:00 a.m. Stakeholders and surveyed customers both expressed strong interest in “Shifting customer energy use to overnight periods when wind generation is highest.” The Company examined times with low load conditions and used existing data from MISO to confirm times with higher than average renewable energy on the margin. This led to the off-peak pricing of the rate plan.

While the Cost Duration Method focuses on assigning embedded costs to high-load hours, the output of the model clearly shows strong price signals that act as marginal cost proxies. Indeed, when evaluating locational marginal price (LMP) ratios, the final rate design provides greater spreads between TOU periods. This is partly because LMP energy prices are just that, energy linked prices, while the TOU rate is primarily focused on capacity savings. Again, this aligns with goals identified by stakeholders to “Reduce peak demand-related system costs to mitigate need for future investments in the system.”

Under the pilot program, the three TOU rate periods are: an on-peak period from 3:00 p.m. to 8:00 p.m. on non-holiday weekdays, an off-peak period from midnight to 6:00 a.m. on all days, and a middle period for all other hours. These periods and associated rates are intended to achieve several objectives. First, the on-peak period is intended to reduce peak demand by encouraging customers to reduce consumption during peak load hours. Second, the design is intended to encourage customers to shift consumption to a focused off-peak period of lowest system loads when low cost wind energy is also likely to be on the margin. Finally, the TOU periods are also selected so that the mid-period, which represents the majority of hours, results in a rate that is similar to today’s existing volumetric flat rates.

### *3. Commercial and Industrial (C&I) Rates*

#### *a. Current Rates*

Some of the Company’s rate design innovations for C&I customers also date back to before 1980, such as seasonal demand rates, peak controlled rates, and demand and energy rates differentiated by voltage. In 2007, we implemented mandatory TOU rates for C&I customers using above one MW. We also offer an energy charge credit and demand limiter rate provisions. More recent C&I rate design offerings include a Light Rail rate, the Photovoltaic Demand Credit Rider, revised Standby rates, and Economic Development rates (Business Incentive and Sustainability (BIS) Rider, Competitive Response Rider). In addition, we implemented a sales true-up

mechanism in our last rate case, and extended this mechanism for all customer classes in 2020.<sup>3</sup> We note that revenue decoupling mechanisms such as this are an important tool, as they protect customers and the Company from uncertain financial impacts of transformative changes in rates as well as align interest in important policy matters such as conservation measures and demand response.

*b. Recent Rate Innovations – General TOU Pilot*

In early 2020, the Company filed a proposal to refresh its Time-of-Use Service rate design for the demand-billed commercial and industrial class.<sup>4</sup> The Commission has invited other rate-design proposals into this dedicated proceeding, and the Company looks forward to both receiving and providing feedback in this process.<sup>5</sup>

As with our Residential TOU pilot rate design, our new proposed General TOU Service tariff rate was designed to reflect system hourly and seasonal costs with price signals that encourage customers to reduce peak demand, as well as to shift energy usage into periods that have a greater availability of renewable energy resources. This new tariff has been designed to collect a revenue level that is comparable with the current two-period General Time-of-Day (TOD) Service tariff, and to eventually serve as its successor. The current TOD tariff uses two time periods, with an on-peak period of 9:00 a.m. – 9:00 p.m. weekdays and other hours and holidays considered as off-peak. The proposed rate design shares the key design feature of the Residential TOU pilot with the use of three pricing periods, and also introduces three seasonal levels of system demand charges.

We are proposing a phased approach to approving and implementing this new General TOU Service. Specifically, we proposed that the initial Petition review be limited to approval of the proposed new rate structure. Following the Commission's review of that structure, we proposed initiating a separate proceeding to address the implementation of that structure. This methodical approach aligns with the Company's planned installation of new AMI meters throughout our territory, which will provide us with an opportunity to calibrate the new TOU rates as part of our implementation plan. This will provide the necessary information and analysis time to ensure both reasonable customer bill impacts for all load profiles and an unchanged total revenue level from transferring to the significantly revised new rate design.

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<sup>3</sup> Docket Nos. E002/GR-15-826 and E002/M-19-688.

<sup>4</sup> Petition, January 17, 2020. Docket No. E002/M-20-86.

<sup>5</sup> Notice, January 24, 2020. Docket No. E002/M-20-86.

The primary goal of this new rate design is to provide pricing signals that more accurately represent the Company's service costs to customers. The tariff focuses pricing incentives to encourage lower customer loads when system loads net of renewable generation are highest. The proposed price signals also encourage shifting usage to times that will allow for greater integration of renewable generation. The Commission can signal support for innovative policies such as this new three-period General TOU tariff by providing mechanisms that allow for full recovery of the cost of the innovations.

This rate design is also consistent with the Commission's direction to optimize the cost-effective integration of EVs by encouraging efficient use of the system to benefit our customers, including non-EV owners. It further required utilities to file plans to optimize EV benefits by, for example, aligning charging with periods of lower customer demand and higher renewable energy production and by improving grid management and overall system utilization/efficiency. The Company responded to this guidance when it proposed the use of the new Residential TOU rate design in our Residential Electric Vehicle Home Service proposal. Similarly, the C&I TOU proposal is consistent with these objectives.

#### *4. Application of Advanced Rate Design Through EV Pilots*

The Company has also implemented and proposed a number of EV charging pilot programs for both residential and C&I customers featuring advanced rate design and price signals to encourage off-peak energy usage. Our slate of EV programs demonstrates how TOU rates can be leveraged. Currently we offer the following EV programs that utilize TOU rates:

- Whole home time-of-use EV Charging Tariff
- EV Service Pilot
- EV Home Service
- EV Subscription Service Pilot

In addition, we are in the process of developing a customer-provided equipment managed charging offering.

The Company believes there are several different approaches that it can harness to optimize EV benefits. The two predominant methods include (1) the use of rates to send a price signal to customers that encourages charging in preferred times or (2) the use of direct-load control to manage when charging occurs and the rate of charging. Depending on the particular rate design and program incentives, these approaches can be used in combination or as substitutes, and at this early stage of EV adoption, the

Company is testing both. In Minnesota, the Company offers its residential EV customers an optional time-of-use (TOU) rate, Residential EV Charging tariff, which provides a separate service dedicated to EV charging. The Company has seen that over 90 percent of the charging on this rate occurs during off-peak hours. The Company recognizes that the cost of establishing a second service and the additional metering costs for this dedicated charging service to join this rate are significant and in response has developed alternative service approaches such as by offering the Residential EV Service Pilot that reduces upfront costs. An expansion of the pilot into a permanent offering was recently verbally approved by the Commission.

In addition, institutional, commercial, and industrial customers participating in either the Fleet EV Service Pilot or the Public Charging Infrastructure Pilot, must join a time-varying rate that encourages customers to charge off-peak. Beyond rates, the Company also filed a residential EV demand response pilot through the Conservation Improvement Program (CIP), though the proposal was not approved.

Outside of Minnesota, the Company is testing different approaches to optimize EV benefits. In Colorado, for instance, the Company has received approval to test a unique demand management program that partners with automakers, in which the Company manages demand by interfacing directly with the automaker and the vehicle. The Company will send hourly grid information to automakers who will use this information, in tandem with data from the driver and the vehicle, to send an optimized charging schedule to the vehicle every time it plugs in at home. The pilot is designed to shift EV charging outside of the Company's system peak, place the charging into the cheapest hours of the day, and mitigate the curtailment of wind power. The Company envisions bringing this and other approaches to Minnesota.

## *5. Voluntary Rates*

The Company has implemented a number of voluntary rate programs for customers with specific needs or desires in their energy services:

- Windsource, offered since 2003;
- Renewable\*Connect, offered since 2017
- Optional TOU rates under 1 MW;
- Interruptible rates;
- Saver's Switch;
- Solar Rewards;
- Community Solar Gardens bill credit; and
- Certified Renewable Percentage.

## 6. Demand Response

With respect to demand response (DR), we have demonstrated our commitment to achieve an additional 400 MW by 2023 in our July 2019 Integrated Resource Plan (IRP) filing in Docket No. E002/RP-19-368, which was supplemented on June 30, 2020. We note that “demand management” falls under DR as a specific type of demand response effort. New demand management programs and efforts are being considered as part of these overall efforts.

In addition to engaging stakeholders through the Demand Response Potential Study (provided by The Brattle Group) and development of our resultant plans, we engaged stakeholders on this as part of our IRP and continue to do so through the ongoing performance metrics and incentives stakeholder process. Table 1 below outlines our DR five-year action plan.

**Table 1: Demand Response Five-Year Action Plan**

						Estimated Cumulative Potential (Gen. MW)			
	Program	Regulatory Path	Program Status	2017 (Baseline)	2019	2020	2021	2022	2023
Existing Programs	Electric Rate Savings	CIP (admin); Rate Case (discounts)	Existing	503	461	518	519	520	522
	Residential Demand Response (Including Saver's Switch and AC Rewards)	CIP (admin); Rate Case (discounts)	Existing	348	436	460	474	487	498
	AC Rewards (Smart Thermostats) - Incremental Growth above existing projections	CIP	Existing	-	-	14	59	60	61
	Peak Partner Rewards	CIP	Existing	-	-	15	42	45	45
	Small Business Smart Thermostats	CIP	Existing	-	-	3	4	5	9
	<b>Subtotal Existing</b>			<b>851</b>	<b>897</b>	<b>1,010</b>	<b>1,098</b>	<b>1,117</b>	<b>1,135</b>
New Programs	Two-way communication switches - Saver's Switch Technology Update	CIP	2021-2023 Triennial Plan Filing	-	-	-	-	-	19
	Interruptible Tariff(s)	Miscellaneous Filing	Tariff Filing Fall 2020	-	-	-	40	90	115
	<b>Subtotal New</b>			<b>-</b>	<b>-</b>	<b>-</b>	<b>40</b>	<b>90</b>	<b>134</b>
Non-Traditional Programs	Grid Enabled Electric Water Heaters	Non-Traditional - TBD	In design, partially allowed as part of Saver's Switch	-	-	-	4	9	13
	Commercial Building Controls (Auto DR)	Non-Traditional - TBD	In design - Currently not cost-effective	-	-	-	10	15	22
	Other	Non-Traditional - TBD	Various programs in design	-	-	-	-	-	-
	<b>Subtotal - Non-Traditional</b>			<b>-</b>	<b>-</b>	<b>-</b>	<b>14</b>	<b>24</b>	<b>35</b>
<b>Total Existing, New and Non-Traditional Programs</b>				<b>851</b>	<b>897</b>	<b>1,010</b>	<b>1,152</b>	<b>1,230</b>	<b>1,304</b>

Incremental Program Capacity (Gen. MW)	0	46 <sup>6</sup>	159	301	379	453
Incremental Program Capacity with Reserve Margin (MW)						469

We have taken a measured approach to adding incremental DR, in order to hear from stakeholders, incorporate their feedback, and take time to identify the right opportunities as new technologies have come to market and the Company's plans for modernized meters have crystalized. Our demand response portfolio has increased by 73 Gen. MW to date, and we anticipate that our newly launched programs will see an uptick in participation through 2021 once the impacts of today's economy are normalized.

Programs such as our the Residential TOU Pilot have also been designed with an aim to support the achievement of the Company's demand response goals. TOU pricing programs can expand the benefits of demand response, and the Company's proposed TOU pilot is a complimentary effort as we explore opportunities to grow our demand response portfolio. The Company continues to review new opportunities for demand response by determining cost-effective potential across our service territory

We note that we will file a demand response petition in a new miscellaneous docket later this year and will annually report on our demand response portfolio and progress toward achieving the 400 MW requirement as ordered by the Commission in Docket No E002/M-20-421.

**B. A timeline for proposing advanced rates and/or demand management programs for all customer classes.**

*1. Near-Term Program Roll-outs*

As discussed above, the Company has several rate design proposals and pilots in various stages of roll-out, including several that are still pending approval of the Commission. In the near-term, we recently notified the Commission of our intention to begin the Residential TOU Pilot program on November 1, 2020 after initially delaying the start due to the COVID-19 pandemic disrupting many customers' usual daily routines. We expect the pilot will provide a valuable opportunity to test assumptions, to develop and refine strategies, and to implement learnings efficiently prior to broader implementations. The pilot will last for two years – until November

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<sup>6</sup> We note that we saw a drop in controllable load in 2018 of 27 Gen. MW due to both attrition and a result of a change in our methodology for calculating interruptible demand calculations that was more useful to MISO. We have since seen expansion of our programs by a net increase of load of 46 Gen. MW and a total incremental increase of 73 Gen. MW compared to the 2017 baseline.

1, 2022 – after which we expect to have greater learnings to draw from to scale the rate design to more customers.

The Company has not yet presented a proposal for rate succession or a transition to a broader rollout at the conclusion of the pilot. However, as required by the Commission’s Order, we will work with interested parties to develop a post-pilot transition plan for pilot participants and to develop a plan to fully implement a TOU rate for all residential customers after completion of the pilot<sup>7</sup>.

In addition, our General TOU program proposal is still in the early stages of the regulatory process. Due to the extended time between this filing and the availability of the enabling technology, as well as the likely number of interested parties wishing to carefully review the new rate design, we have proposed to separate the consideration of rate structure and tariff implementation. This will allow us to fully consider all the issues of rate design and then subsequently tailor an implementation plan that considers how that rate structure will interact with the rest of our revenue recovery. Our petition lays out a plan for review

## *2. Post-AMI Rate Development*

We are nearing the end of life of our existing electric meter technology and are preparing to install AMI at customers’ homes and businesses over the next few years. This new technology is a key enabler of more complex rates, such as the three-period design proposed in our General TOU Pilot, because AMI capabilities allow for the determination of the necessary time-differentiated billing unit quantities. We noted in our 2019 Integrated Distribution Plan filing that we plan to install approximately 1.3 million AMI meters throughout our Minnesota service territory starting in the third quarter of 2021.<sup>8</sup> By the end of 2023, we anticipate that over 90 percent of the meter installations will be complete.

As this AMI installation is ongoing, we will monitor the energy usage levels and patterns of C&I customers that have AMI meters installed before the General TOU tariff is made available to adequately determine the actual TOU load characteristics of individual customers in the demand metered class. The information gathered during the monitoring period will be essential to precisely calibrating the rate design and rate components to refine the new General TOU tariff for revenue consistency with

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<sup>7</sup> See Ordering Point Nos. 5 and 6 of the Commission’s August 7, 2018 Order in Docket No. E002/M-17-775.

<sup>8</sup> See Page 53 of Attachment M2 filed in our 2019 Integrated Distribution Plan (Docket No. E002/M-19-666).

current tariffs and to ensure reasonable billing impacts for individual customers in the demand customer class. A TOU rate design challenge for demand-metered customers is the need for individual customer peak loads by TOU period and the related impact on several billed kW demand calculations. Also, reasonably incorporating the proposed removal of the current Energy Charge Credit provision into other rate design components is another significant challenge that will require interval usage data from all customers. Finally, any potential modifications to the tariff resulting from this calibration process would be subject to Commission review and approval. These necessary steps are expected to be complete in 2024, coinciding with AMI at all customer sites.

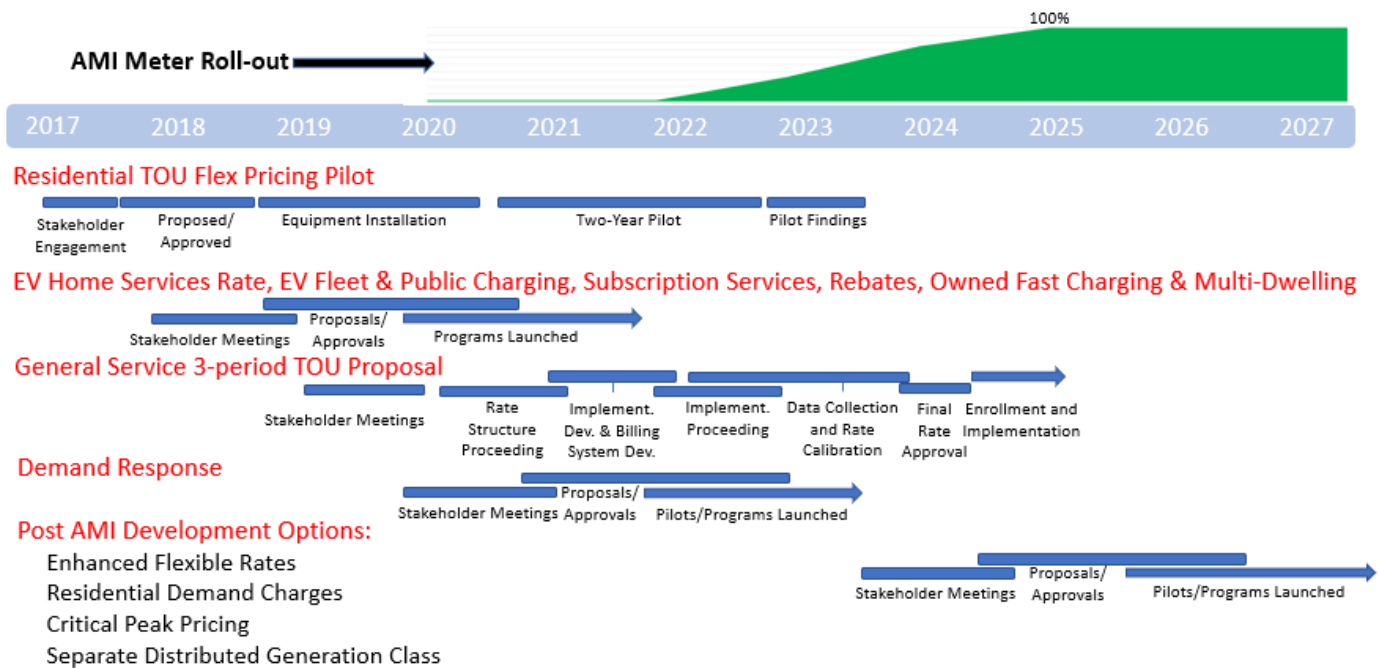
After the full AMI rollout, we will have a greater visibility into customer usage. We will be able to replace load research samples with actual data for class cost allocations. AMI provides measurement capability to increase rate options, target price signals and customer segments. AMI offers the opportunity to lower future system costs by incentivizing customers to change energy usage.

As a result of this additional insight into customer usage, we will have better data to support future rate design changes. The possible changes we could make in the future include:

- More specific price signal-based rates;
- Flexible (TOU period) rates;
- Broader tariff use of demand charges;
- Specific rates for high-cost days;
- Interactive demand response rate offerings;
- Peak Time Rebates or Critical Peak Pricing;
- New customer segmentation; and
- Separate DG class.

Chart 1 below provides a timeline of planned programs and potential timing for post-AMI rate development.

**Chart 1: Rate Design Timeline**



### C. A discussion on what should be discussed in petitions for rate design changes

The Company believes that each new rate design proposal is unique and should be evaluated based on its own objectives, goals, and timelines. While we do not believe that requirements for petitions for rate design changes should be too prescriptive, we agree that each new rate design petition should address the following requirements noted in the Commission's Order:

- i. Whether program design strategies will be needed to support low income customer participation in these offerings,
- ii. Application to distributed energy resources and beneficial electrification,
- iii. Implementation plans, including education and outreach to customers, and
- iv. Evaluation plans.

We note that, where relevant, we have already been including these items in new petitions for rate design changes. In addition, upon receiving stakeholder input, we agree to make our best attempt to determine rate impacts by class in future rate design proposals.

Given the many rate design programs that have been approved, are pending, or are forthcoming, each with its own separate objectives and plan, we do not believe it is

practical to have one centralized docket for all rate design discussions. We have mapped out current and pending dockets for reference in Table 2 below.

**Table 2: Referenced Proceedings**

<b>Docket</b>	<b>Matter Caption</b>
E002/M-01-1479	In the Matter of Northern States Power Company dba Xcel Energy Renewable Energy Rate Implementation Plan (Windsor Program)
E002/CI-13-315	In the Matter of a Rate for Large Solar Photovoltaic Installations
E002/M-15-111	In the Matter of Northern States Power Company for Approval of a Residential Electric Vehicle Charging Tariff
E002/CI-15-115	In the Matter of a Commission Inquiry Into Standby Service Tariffs
E002/M-15-188	In the Matter of the Petition of Northern States Power Company for Approval of a One-Time Cancellation Charge Waiver of the Company Tariff Requirements for Peak Controlled Services
E002/CI-15-662	In the Matter of an Alternative Rate Design Stakeholder Process for Xcel Energy
E002/M-15-985	In the Matter of the Petition of Northern States Power Company for Approval of a Renewable*Connect Pilot Program
E,G002/CIP-16-115	2020 CIP Extension Plan
E002/CI-17-401	In the Matter of a Commission Investigation to Identify and Develop Performance Metrics, and Potentially, Incentives for Xcel Energy's Electric Utility Operations
E002/M-17-695	In the Matter of the Petition of Northern States Power Company for Approval of Revisions to the Renewable*Connect Pilot Program
E002/M-17-775	In the Matter of the Petition of Northern States Power Company for Approval of a Time of Use Rate Design Pilot Program
E002/M-17-817	In the Matter of the Petition of Northern States Power Company for Approval of a Residential EV Service Pilot Program
E999/CI-17-879	In the Matter of a Commission Inquiry into Electric Vehicle Charging and Infrastructure
E002/M-18-643	In the Matter of the Petition of Northern States Power Company for Approval of Electric Vehicle Pilot Programs
E002/M-19-33	In the Matter of the Petition of Northern States Power Company for Approval of a Renewable*Connect Program
E002/M-19-186	In the Matter of the Petition of Northern States Power Company for Approval of a Residential EV Subscription Service Pilot Program
E002/RP-19-368	In the Matter of Xcel Energy's 2020-2034 Upper Midwest Integrated Resource Plan
E002/M-19-559	In the Matter of the Petition of Northern States Power Company for Approval of the Electric Vehicle Home Service Program
E002/M-19-688	In the Matter of Northern States Power Company d/b/a Xcel Energy for Approval of True-Up Mechanisms
E002/M-19-666	In the Matter of Xcel Energy's Integrated Distribution Plan and Advanced Grid Intelligence and Security Certification Request
E002/M-20-86	In the Matter of the Petition of Northern States Power Company for Approval of General Time-of-Use Service Tariff

**Table 2, continued**

E002/M-20-180	In the Matter of Northern States Power Company's 2019 Annual Revenue Decoupling Mechanism Pilot Program Report
E002/M-20-421	In the Matter of AEMA's Petition Requesting a Miscellaneous Docket to Direct Xcel Energy to Implement 400 MW of Demand Response by 2023
E,G002/CIP-20-473	2021-2023 MN CIP Triennial Plan
E999/DI-20-627	In the Matter of the Department Stakeholder Process Informing the Report on the Metrics, Performance Evaluation Method, 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

We look forward to engaging with parties on the issues pertinent to each proposal in each respective docket.

#### **D. Stakeholder Input**

In compliance with the Commission's Order to file a draft rate design roadmap with input from stakeholders, the Company hosted an online workshop on September 9, 2020 to present details about our current and planned advanced rate design efforts and to solicit feedback on the draft rate design roadmap. Invitations for the workshop were extended to a broad cross-section of organizations who have been participants in our IDP and other proceedings before the Commission. In general, workshop participants seemed supportive of our efforts, though there were a few areas of interest that participants would like to see us explore more fully.

One participant requested that new rate design proposals include an estimate of the rate impact by class. We noted that it is not always possible to do this with precision, and some pilots are often not intended to demonstrate specific class impacts. However, we will make our best attempt to determine rate impact by class in future rate design proposals. We have noted this above in our discussion of what should be included in petitions for rate design changes.

Another participant sought additional information about how the success of a pilot is measured and how we determine that a pilot should become a permanent offering. A pilot is constrained by time, budget and participation in order to generate learnings to potentially bring a full program to scale. Pilots are our opportunity to test concepts and fully vet outcomes in order to offer a full program that will benefit customers without bringing undue risk to customers or the Company. Each proposed pilot has stated objectives and measurements for success which we include in the initial pilot petition. In addition, each proposal includes a timeline for how long the pilot will run in order to gain a full set of learnings in a pilot format before considering whether the

offering could become a permanent program. Each of these details varies by proposal. We aim to make these parameters clear in our pilot petitions, but we need flexibility within each pilot to analyze the results in order to determine whether a pilot should be offered as a permanent program. We note some of this information in our discussion above about what should be included in petitions for rate design changes.

## **CONCLUSION**

We appreciate the opportunity to provide this Draft Rate Design Roadmap. As described in this filing, the Company is engaged in significant advanced rate design initiatives and expects robust engagement from stakeholders in the various pending and future rate design proposal dockets. We respectfully request the Commission accept this compliance filing.

Dated: October 1, 2020

Northern States Power Company

## CERTIFICATE OF SERVICE

I, Paget Pengelly, hereby certify that I have this day served copies of the foregoing document on the attached list of persons.

xx by depositing a true and correct copy thereof, properly enveloped with postage paid in the United States mail at Minneapolis, Minnesota

xx electronic filing

**Docket Nos.        E002/M-19-166**

Dated this 1<sup>st</sup> day of October 2020

/s/

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