

March 5, 2018

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E002/M-17-817

Dear Mr. Wolf:

Attached are the *Comments* of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

A Petition by Northern States Power Company, doing business as Xcel Energy, for approval by the Minnesota Public Utilities Commission (Commission) of a residential EV Service Pilot Program.

The *Petition* was submitted on November 17, 2017. The petitioner is:

Amy A. Liberkowski
Director, Regulatory Pricing & Analysis
Northern States Power Company doing business as:
Xcel Energy
414 Nicollet Mall
Minneapolis, MN 55401

The Department recommends that the Commission **approve** the *Petition*, with modified reporting requirements.

The Department is available to answer any questions that the Commission may have.

Sincerely,

/s/ DANIEL W. BECKETT
Rates Analyst
651-539-1874

DWB/lt
Attachment

Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. E002/M-17-817

I. BACKGROUND AND SUMMARY OF PROPOSAL

On January 30, 2015, Northern States Power Company d/b/a Xcel Energy (Xcel or the Company) filed its *Petition for Approval of a Residential Electric Vehicle Charging Tariff* in compliance with Minnesota Statute Section 216B.1614 in Docket No. E002/M-15-111. Minnesota Statute Section 216B.1614 provides that the Minnesota Public Utilities Commission (Commission) may approve a proposed electric vehicle (EV) charging tariff if the utility demonstrates that the tariff does the following:

- Appropriately reflects off-peak versus peak cost differences in the rate charged;
- Includes a mechanism to allow the recovery of costs reasonably necessary to comply with the EV tariff statute, including costs to inform and educate customer about the financial, energy conservation, and environmental benefits of electric vehicles and to publicly advertise and promote participation in the customer-optional tariff; and
- Incorporates the cost of metering or submetering within the rate charged to the customer.

On June 22, 2015, the Commission approved Xcel's petition for an electric vehicle charging tariff and required Xcel (as well as the other utilities that filed in that docket) to submit an annual compliance report detailing the number of customers taking service under the tariff, energy usage, and a description and accounting of development and promotional costs. The Commission also approved the use of each utility's existing green pricing tariff rate for the renewable-energy-source option.

On June 1, 2016, Xcel filed its annual compliance report for 2015 and, among other things, detailed the prohibitive nature of the program to that point regarding the necessary installation of a second meter. The Company stated that it had made this point a part of its promotional materials and that the costs associated with installing an additional meter was too much for some customers.

On June 1, 2017, Xcel filed its annual compliance report for 2016 and, among other things, provided an update to the second meter issue and stated that they had engaged stakeholders to look into alternatives for reducing the costs associated with owning an electric vehicle. The Company stated its desire to develop a pilot program to address this issue and said it would be filing a petition related to it.

On November 17, 2017, Xcel filed its *Petition for Approval of a Residential EV Service Pilot Program* (Petition). The Petition stated that the Company proposed to offer residential customers the option to enroll in an Electric Vehicle Service Pilot Program, which would offer customers an off-peak rate design paired with new electric vehicle charging equipment. The Petition requested that the Commission:

- approve the proposed Residential EV Service Pilot Program;
- approve the proposed Customer Agreement and Residential EV Service Pilot Tariff;
- approve the proposed accounting treatment; and
- approve the requested rule variance.

Presently, the Company offers customers the opportunity to purchase electricity for the purposes of charging an electric vehicle either through paying whole-house Time of Use (TOU) rates, or the Company's Residential EV rates offered in its Residential EV Service tariff as established in Docket No. E002/M-15-111.

A. *CURRENT EV OFFERINGS*

Currently, the Company offers its customers who own or lease an EV three different options for rates to be paid for the charging of EVs – Residential Standard Rate, Time of Use Rate (TOU), or EV Rate as established under its Residential Electric Vehicle Service tariff approved in Docket No. E002/M-15-111. The Company stated that the on-peak and off-peak energy rates included in its proposed pilot are the same as those currently offered in its Residential Electric Vehicle Service tariff and the whole house Residential Time of Day Service tariff. Table 1 below lists the different options that are currently available to EV customers:

Table 1 – Current Electric Vehicle Rate Options for Xcel Customers

Rate Options*	Monthly Charge	Off-Peak charge per kWh - All year	On-Peak Charge per kWh - June-Sept.	On-Peak Charge per kWh - Oct.-May
EV Rate	\$4.95	\$0.04260	\$0.21096	\$0.16968
Time of Use Rate	\$10 - \$12	\$0.04260	\$0.21096	\$0.16968
Residential Standard Rate	\$8 - \$10	\$0.10580	\$0.10580	\$0.10580

Along with choosing one of the three rate options listed above, the Company instructs customers to determine the level of charging required for their vehicle, depending on the mileage driven. The Company suggests that interested customers consult an EV charging equipment provider for help in understanding what equipment is required for their specific needs. Specifically, customers incur costs associated with acquiring and installing a second meter, a charging device and/or dedicated wall outlet, and premise wiring and permit costs.

The Company states in its *Petition* that the costs associated with this process have been prohibitive for some. On average, costs related to the foregoing may range from \$1,725 to \$3,525 per customer, along with the acquisition of a second metered service ranging from \$200 to \$2,000. As of April 2017, the Company has 93 customers participating in its EV tariff.¹ Some customers also may choose the default Residential Standard Rate for EV charging.

B. SUMMARY OF PETITION

The Company stated that it engaged with stakeholders to “provide a forum for pilot plan communications, feedback exchange, and to encourage stakeholder participation in the development of the Company’s pilot plan.”² The proposed pilot program would consist of a two-year term and be available to up to 100 customers. Xcel stated the following key objectives of the proposed pilot:

- Identify any cost savings of the proposed pilot relative to the Company’s current EV Service option;
- Improve the overall customer experience in terms of electric vehicle charging, including reducing perceived barriers to adopting electric vehicles;
- Maintain safety, reliability, and billing accuracy and learn from the pilot how the technology in EVSEs relates to the Company’s stated requirements.

¹ Number taken from the Company’s November 15, 2017 Compliance Filing in Docket No. E002/M-15-111.

² Page 6 of the *Petition*

Participants would choose either a bundled or a pre-pay option for installation of Electric Vehicle Service Equipment (EVSE) required for participation. The Company stated that “EVSE is charging equipment that communicates with the vehicle in order to safely supply an appropriate amount of electricity.”³ Participants choosing the bundled option would be subject to a \$27.45 monthly customer charge while participants choosing the pre-pay option would be subject to a \$13.88 monthly customer charge. The customer charge is calibrated to recover Xcel’s costs for “customer accounting, customer services, including load-monitoring and data management and maintenance of the EVSE charging equipment”⁴ with the bundled customer charge also recovering the carrying cost associated with the EV charging and metering equipment. As noted above, the Company proposes that the per-kwh TOU rates for the pilot be the same as the current EV tariff rates.

Xcel requests that the customer education and vendor outreach costs be included in the existing tracker account established in Docket E002/M-15-111.

In developing the pilot, Xcel issued a Request for Information (RFI) to various EV charging and metering equipment vendors to assess the available technologies and their feasibility as it related to the pilot plan. The Company received responses from seven providers and consisted of two technology types – EVSE with embedded load monitoring and EVSE with external load monitoring. Xcel noted that, “While the EVSE with embedded load monitoring capabilities may cost incrementally more than a non-networked option, customers will avoid the cost of upgrades for installing a second meter.” The Company invited five of the providers to participate in product testing as a result of Xcel’s Request for Proposals (RFP), which established certain criteria that vendors should meet as it related to reliability and functionality of the EVSE. The Company listed the following minimum functional requirements it sought in the EVSE:

- Metering and billing accuracy of plus or minus 2 percent;
- Ability to retrieve 15-minute interval energy usage data;
- Secure data transfer between the customer and the Company;
- Secure onboard data storage for 15 minute interval data for minimum of 90 days;
- 10 watt standby power consumption maximum;
- Charging device must be UL listed;
- Compatible metering data format (XML, MV90, OCPP and CNMP);
- Certain administrative privileges that enable the Company to access charging data and to receive information from the EVSE; and
- Editing controls that prevent data tampering.

³ Footnote 1 of the *Petition*.

⁴ Page 19 of the *Petition*.

Three of the five invited providers were selected for participation, and Xcel indicated that it is negotiating terms with those vendors. Xcel will purchase the EVSE units from the vendors, and the vendors will be responsible for collecting customer usage data and providing the data to the Company on a daily basis.

The Company stated that participants that enroll in the proposed pilot program would choose their EVSE from Xcel's list of approved vendors and a qualified contractor would install the EVSE at their home.⁵ As noted above, under Xcel's current EV tariff, customers must pay for the installation of a second meter, as well as the costs associated with charging equipment. A key goal of the proposed pilot is to evaluate the potential for cost savings; therefore, Xcel plans to track contractor's actual costs of installing the EVSE, and require the contractor to provide a cost estimate for installing a second metering device.

Xcel requested that the EV charging equipment obtained for the purposes of the pilot be exempted from the requirements of Minnesota Rules, parts 7820.3700 and 7820.3800, and the Company's associated tariff provisions. Xcel requested that the EV charging equipment not be defined as metering equipment for the purposes of the pilot.

Xcel proposed to include in its annual reports filed in Docket No. E002/M-15-111 information on pilot implementation, including:

- performance of the technology,
- number of participants and associated electricity sold under the tariff (shown on a quarterly basis),
- tracker balances,
- cost savings for pilot participants compared to 2-meter alternatives

The Company also committed to report on learnings regarding "customer experience and pilot performance"⁶ in their annual safety, reliability, and service quality reports.

C. COMMISSION'S NOTICE OF COMMENT PERIOD

On November 22, 2017, the Commission issued a *Notice of Comments Period and Request for Information*. The Commission requested comments on the following topics:

⁵ The Company states that the proposed pilot program would only consist of customers who live in a single-family home, defined as a detached single-family home, townhome/row house, or duplex.

⁶ Page 17 of the *Petition*.

- Are the proposed monthly customer charges reasonable and will they encourage participation in the program?
- Should the Commission require any additional reporting requirements beyond Xcel's proposal?
- What should happen at the end of the pilot?
- Should the Commission approve Xcel's Tariff and Customer Agreement?
- Should the Commission approve Xcel's proposed accounting treatment?
- Should the Commission approve Xcel's request for a rule variance?
- Are there other issues or concerns related to this matter?

The Commission also asked Xcel to provide detailed cost support for the monthly customer charges.

II. ANALYSIS

A. GOVERNING STATUTE AND XCEL'S REQUEST

Minnesota's EV Charging Tariff statute, Minn. Stat. § 216B.1614, governs the terms of the Company's current EV tariff. Minn. Stat. § 216B.1614 provides that the Commission may approve a proposed electric vehicle (EV) charging tariff if the utility demonstrates that the tariff does the following:

- Appropriately reflects off-peak versus peak cost differences in the rate charged;
- Includes a mechanism to allow the recovery of costs reasonably necessary to comply with the EV tariff statute, including costs to inform and educate customer about the financial, energy conservation, and environmental benefits of electric vehicles and to publicly advertise and promote participation in the customer-optional tariff; and
- Incorporates the cost of metering or submetering within the rate charged to the customer.

The Company stated that its proposed pilot will comply with Minn. Stat. § 216B.1614 in that it will offer appropriately reflected off-peak versus peak cost differences.

The Department notes that Xcel has already complied with the requirements of Minn. Stat. § 216B.1614, which required public utilities to submit EV tariff proposals by February 1, 2015. However, the statute provides a useful guide. Xcel's proposed pilot can largely be thought of as assessing the economics and customer acceptance levels of different types of Electric Vehicle Supply Equipment paired with an off-peak rate design as compared to the existing Electric Vehicle program, which requires the installation of an additional meter. Presently, customers

who own an EV can choose one of three previously listed rates – EV Rate, TOU Rate, or Residential Standard Rate. The Company stated that costs associated with installing a second meter are a prohibitive factor in purchasing an electric vehicle and/or participating in the Company’s current EV Service rate. The Department appreciates Xcel’s efforts to develop this pilot as a tool to continue to evaluate EV tariff options and enhance customer offerings.

B. PROPOSED MONTHLY CHARGES

Xcel stated that its proposed monthly charges would consist of two different options – a Pre-Pay Option that covers the cost of EVSE equipment and its installation, including customer accounting, data management, and other pilot-related costs, and a Bundled Service Option that excludes the EV charging and metering equipment costs. Table 2 shows what the proposed monthly charges for EV service would be under the pilot.

Table 2 – Proposed Monthly Charges for EV Service

Proposed Rate Options	Monthly Charge for EV Service	Illustrative Monthly Usage Charges⁷
Bundled Option	\$ 27.45	\$ 24.64
Pre-pay Option	\$ 13.88	\$ 24.64

The Company, in a response to PUC Information Request #1, stated that the Bundled Service Option is broken into five parts and designed to recover the following costs:

- EVSE with load monitoring;
- EVSE installation;
- Load Monitoring and Data Management;
- maintenance service; and
- customer accounting and information.

Additionally, the Company stated that the cost associated with the EVSE is based on a blended price, which averages the three pre-qualified vendors and totals no more than 10 percent above what the lowest bidder was. The Company stated that this method is used with the intent to preserve customer choice and allow more EVSE suppliers to participate. The Company’s stated aim is to recover the costs associated with the elements listed above, but

⁷ The Company stated that these rates assume 1,000 miles of driving per month, 3.3 kWh per mile, and 95% of charging off-peak, as well as fuel and rider charges.

also to see if this method is reasonable for recovery of costs associated with the program. In its response to PUC Information Request #1, the Company stated that “[t]he pilot has been designed to help the Company and stakeholders learn more about the cost of this type of service in the Company’s service territory, determine whether these cost estimates are accurate, and whether there are total cost savings compared to the current EV rate.”⁸

As the Company has stated in its filing, and in Comments in Docket No. E002/M-15-111, concerns have been raised by customers regarding the prohibitive nature of the costs associated with owning an EV and purchasing electricity from Xcel. The cost structure Xcel proposed in this filing seeks to address that issue. The Department agrees with the Company’s proposed method for cost recovery, as well as their method for averaging the different vendor prices up to a threshold so as to preserve choice and affordability.

However, the Department requests that the Commission ensure that Xcel provides sufficient specificity in its annual reports in order for the Commission and stakeholders to be informed of the learnings of the pilot in terms of costs and rates. At a minimum for instance, the Department expects Xcel’s reports to include the number of customers choosing the bundled option, the associated costs and revenues with the bundled option, how many choose the pre-pay option, the associated costs and revenues with the pre-pay option, which types of EVSE equipment are chosen by the participants, and the contractors’ estimated second-meter installation costs.

C. PROPOSED ACCOUNTING TREATMENT

Minnesota Statutes §216B.1614, subd.2, paragraph (c) 2 states the following:

The commission may approve the tariff if the public utility has demonstrated that the tariff:

Includes a mechanism to allow the recovery of costs reasonably necessary to comply with this section, including costs to inform and educate customers about the financial, energy conservation, and environmental benefits of electric vehicles and to publicly advertise and promote participation in the customer-optional tariff.

The Company stated that it expects to incur certain costs for customer education and information initiatives related to its proposed pilot program during its life. The Company requests that these costs be considered part of the criteria listed above and included in its

⁸ Pp. 2-3 of the Company’s December 11, 2017 response to PUC Information Request No. 1

current tracker account associated with its EV tariff. Table 3 below shows what the Company proposes for its budget related to customer information and education for the pilot program.

Table 3 – Proposed Customer Education and Information Budget

Education and Information Budget	Estimated Amount
Dealer and Trade Outreach	\$10,000
Dealer Referral Incentive	\$10,000
Events/Collateral	\$7,000
Digital Channels	\$6,700
Direct Mail	\$4,500
Bill Onserts	\$3,000
Total	\$41,200

The Department has reviewed Xcel’s proposed accounting treatment and recommends approval as these costs are an extension of what the Company has already incurred through its EV tariff. The Company stated that these estimated amounts are derived from experience with the same or similar activities of other programs, specifically their current EV service tariff. The Department supports the Company’s request for including costs associated with customer education and information initiatives in the already established tracker account under the EV Service Tariff established in Docket No. E002/M-15-111. The Department recommends approval of this request and agrees that costs from the tracker should be moved to general rates as soon as practicable.

On page 19 of the Petition, Xcel also noted that:

The purchase and installation of the EV charging and metering equipment will be capitalized as an Electric Distribution asset to FERC Account 101, Plant in Service in plant account 370 Meters. ... The Company also requests that the capitalized costs be allowed in rate base and receive a return on investment. Treatment of these assets at the end of the pilot will be dependent on the pilot’s outcome and end-of-life accounting treatment will be made at that time.

The Department agrees with this approach.

D. TARIFF AND CUSTOMER AGREEMENT

The Department reviewed Xcel's proposed Electric Vehicle Pilot Service tariff and Customer Agreement, and does not object to the terms therein. The Department notes that the proposed tariff mirrors the terms of Xcel's existing EV tariff to a large extent, with a noticeable exception, however. In its existing EV tariff, Xcel has a provision stating the customer's option to purchase renewable energy with the following language included:

Customers have the option to elect all or a portion of the supply of electricity under this schedule from renewable energy resources. The renewable energy supply option is available subject to the provisions contained in the Voluntary Renewable and High-Efficiency Energy Purchase (Windsor Program) Rider, or other available rate schedule for voluntary renewable energy supply that is applicable.

Xcel's proposed tariff for its pilot program only includes the first sentence above in the section of the proposed tariff addressing the Renewable Energy Supply Option.⁹ To promote consistency with its current EV tariff, and to maintain clarity for the customer in the event they choose to purchase energy in this pilot program from renewable resources, the Department requests that Xcel add the second sentence stated above to its proposed pilot tariff.

As detailed in the proposed Electric Vehicle Pilot Service tariff (Attachment D of the Petition), peak period rates (9 a.m. – 9 p.m. Monday through Friday) are \$0.21096 for the months of June through September, and \$0.16968 for all other months; while off-peak rates are \$0.04260. These rates and definitions of peak periods are consistent with what the Company currently offers in its EV and TOU tariffs. Additionally, consistent with its EV tariff, customers who enroll in the pilot program would be excluded from the R*C neutrality charge.

The Commission's Notice requested comment on what should happen at the end of the pilot. The Company's proposed Customer Agreement (Attachment C of the Petition) stated the following regarding EVSE equipment and the options customers have at the end of the pilot:

Customers who choose the bundled service can:

- have the EVSE removed at no cost and move back to their previous rate;
- purchase the EVSE from the Company for a cost equal to the undepreciated balance of the EVSE and either (i) move back to their previous rate or (ii) move to any new

⁹ Page 5 of Attachment D in its *Petition*.

- EV charging tariff offered by the Company that is compatible with the EVSE already in place; or
- have the EVSE replaced or upgraded if the Company offers a new EV Charging tariff involving a different technology.

Customers who choose the pre-pay option can:

- elect to have the Company transfer ownership of the EVSE to the customer at no cost and either (i) move back to their previous rate or (ii) move to any new EV charging tariff offered by the Company that is compatible with the EVSE already in place; or
- have the EVSE replaced or upgraded if the Company offers a new EV Charging tariff involving a different technology.

The Department concludes that the options listed provide customers with reasonable choices should the pilot end.

The Department notes that the Company included a sample bill form to show that participants would clearly see the kWh charges under the pilot as well as non-pilot charges. Xcel did not explicitly state that it would include the bill format in its proposed tariff. The Department notes that, if the pilot becomes permanent, the corresponding bill form should be added to Xcel's Rate Book.

E. RULE VARIANCE

Xcel requested that the EV charging equipment obtained for the purposes of the pilot be exempted from the requirements of Minnesota Rules, parts 7820.3700 and 7820.3800, and the Company's associated tariff provisions. Minnesota Rules, parts 7820.3700 and 7820.3800 govern matters related to inaccurate electric meters and electric utility billing errors, respectively. Among other things, these rules establish the criteria for recalculating bills due to inaccurate meters, and remedies for over- or under-charges due to billing errors.

The Company proposed to not define the EV charging equipment purchased for the purposes of the proposed pilot as "metering equipment" so that the requirements in terms of meters in the above-referenced Minnesota Rules would not apply. Xcel reasoned that matters related to inaccurate meters and billing errors would instead be governed by the provisions laid out in the Customer Agreement and tariff. A primary reason for this request, as Xcel stated, is the fact that the EV charging equipment would depend a great deal on the home WiFi networks of customers.

Section 2.3 under “EVSE Installation, Maintenance, and Title” in the Company’s proposed Customer Agreement states the following:

Participant shall maintain the connection between the EVSE and an Internet Service Provider via Wi-Fi connection, for the operation of the EVSE under this Agreement. Late, incomplete, or inaccurate EVSE usage information will be disregarded where the lack of WiFi service is the cause of the data transmission failure. As a result, any actual EV charging during these intervals will be billed at the Participant’s current rate and will not be adjusted in any future bills if any EV usage data is subsequently received.

The Company’s proposed provision governing issues related to WiFi connectivity is reasonable given the fact that the equipment is a relatively new technology and one of the stated intents of the pilot is to test the equipment and its feasibility.

Minnesota Rules, part 7829.3200, subp. 1 establishes the following criteria for evaluating a variance request:

The Commission shall grant a variance to its rules when it determines that the following requirements are met:

- A. enforcement of the rule would impose an excessive burden upon the applicant or others affected by the rule;
- B. granting the variance would not adversely affect the public interest; and
- C. granting the variance would not conflict with standards imposed by law.

Xcel did not apply the above 3-factor test to its request, characterizing it as an exemption of the equipment from the requirements of the rule, rather than a variance of the rule to allow the Company to treat pilot participants differently in terms of errors due to metering equipment failure or error.

The Department concludes that enforcement of the Minnesota Rules governing matters related to inaccurate electric meters and billing errors in the proposed pilot would impose an excessive burden upon the Company as, unlike Xcel’s existing customer metering equipment, the technology involved in the proposed pilot is dependent on the participant’s WiFi connections. Some customers may have relatively less reliable, or speedy, WiFi connections than others, making it difficult for Xcel to be held to the same standard as if the Company were solely responsible for accurate meter functioning. The Department also agrees that the variance would not adversely affect the public interest as it is limited to a two-year pilot program consisting of 100 customers, so any negative effects related to WiFi speeds would be limited in

scope to the pilot program and its participants. Furthermore, the Department is not aware that granting the rule variance would conflict with standards imposed by law.

The Department supports the variance requested, limited to errors occurring due to the pilot participant's WiFi connection.

The Department requests that Xcel provide information in its reports informing stakeholders and the Commission of the extent to which WiFi connections impacted pilot participation, including how often WiFi connectivity issues prevented billing under the pilot.

The Department recommends that the Commission grant the Company a variance to Minnesota Rules, parts 7820.3700 and 7820.3800 and the associated tariff language in Xcel's Electric Rate Book, limited to errors occurring due to the pilot participant's WiFi connection.

F. REPORTING REQUIREMENTS

Minn. Stat. § 216B.1614, Subd. 3 states:

Each public utility providing a tariff under this section shall periodically report to the commission, as established by the commission and on a form prescribed by the commission, the following information, organized on a per-quarter basis:

- (1) the number of customers who have arranged to purchase electricity under the tariff;
- (2) the total amount of electricity sold under the tariff; and
- (3) other data required by the commission.

The Company stated that it will, along with its annual report in Docket No. E002/M-15-111, include reports regarding the pilot program on or before June 1st after the first full year of implementation. As a part of this filing, the Company proposed to include the following:

- number of participating customers and amount of electricity sold in the program;
- tracker balances;
- analyses of customer cost savings; and
- learnings on customer experience and pilot performance under Xcel's safety and reliability standards

The Tracker balances the Company referred to is an account that is used to track spending on costs associated with promoting its EV tariff, including "sponsorship and participation in community events, digital advertising, print materials, other customer communications, and

planning.”¹⁰ The Company stated in its June 1, 2017 annual compliance filing that the tracker balance year-to-date total is \$106,050.29.

Given that this proposed pilot would provide a wealth of learning opportunities, the Department suggests that a more detailed list of minimum reporting requirements might be useful. As noted above, the Department recommends that the Commission require inclusion of the following reporting requirements, at a minimum:

- the number of customers choosing the bundled option;
- the costs and revenues associated with the bundled option;
- the number of customers choosing the pre-pay option;
- the costs and revenues associated with the pre-pay option;
- which types of EVSE equipment are chosen by the participants;
- the contractors’ estimated second-meter installation costs;
- the extent to which WiFi connections impacted pilot participation; and
- how often WiFi connectivity issues prevented billing under the pilot.

The Department also recommends a reporting frequency that is greater than the once annual filing the Company is required to make regarding its existing EV tariff. As the proposed pilot is to only last two years, it would be helpful to have updates on the program at least twice a year.

III. RECOMMENDATIONS

Based on its review, the Department recommends that the Commission approve Xcel’s *Petition*, modified to add the following sentence to the Renewable Energy Supply Option section of the proposed pilot tariff: “The renewable energy supply option is available subject to the provisions contained in the Voluntary Renewable and High-Efficiency Energy Purchase (Windsor Program) Rider, or other available rate schedule for voluntary renewable energy supply that is applicable.”

The Department also recommends that the Commission require biannual reports including, at a minimum:

- number of participating customers and amount of electricity sold in the program;
- tracker balances;
- analyses of customer cost savings;

¹⁰ Xcel’s June 1, 2017 *Annual Compliance Report* in Docket No. E002/M-15-111.

- learnings on customer experience and pilot performance under Xcel's safety and reliability standards;
- the number of customers choosing the bundled option;
- the costs and revenues associated with the bundled option;
- the number of customers choosing the pre-pay option;
- the costs and revenues associated with the pre-pay option;
- which types of EVSE equipment are chosen by the participants;
- the contractors' estimated second-meter installation costs;
- the extent to which WiFi connections impacted pilot participation; and
- how often WiFi connectivity issues prevented billing under the pilot.

/lt

CERTIFICATE OF SERVICE

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

**Minnesota Department of Commerce
Comments**

Docket No. E002/M-17-817

Dated this 5th day of March 2018

/s/Sharon Ferguson

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
David	Aafedt	daafedt@winthrop.com	Winthrop & Weinstine, P.A.	Suite 3500, 225 South Sixth Street Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_17-817_M-17-817
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	No	OFF_SL_17-817_M-17-817
Alison C	Archer	aarcher@misoenergy.org	MISO	2985 Ames Crossing Rd Eagan, MN 55121	Electronic Service	No	OFF_SL_17-817_M-17-817
Ryan	Barlow	Ryan.Barlow@ag.state.mn.us	Office of the Attorney General-RUD	445 Minnesota Street Bremer Tower, Suite 1400 St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_17-817_M-17-817
James J.	Bertrand	james.bertrand@stinson.com	Stinson Leonard Street LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-817_M-17-817
William A.	Blazar	bblazar@mnchamber.com	Minnesota Chamber Of Commerce	Suite 1500 400 Robert Street North St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-817_M-17-817
James	Canaday	james.canaday@ag.state.mn.us	Office of the Attorney General-RUD	Suite 1400 445 Minnesota St. St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-817_M-17-817
Jeanne	Cochran	Jeanne.Cochran@state.mn.us	Office of Administrative Hearings	P.O. Box 64620 St. Paul, MN 55164-0620	Electronic Service	No	OFF_SL_17-817_M-17-817
John	Coffman	john@johncoffman.net	AARP	871 Tuxedo Blvd. St. Louis, MO 63119-2044	Electronic Service	No	OFF_SL_17-817_M-17-817
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1800 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_17-817_M-17-817

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Corey	Conover	corey.conover@minneapolismn.gov	Minneapolis City Attorney	350 S. Fifth Street City Hall, Room 210 Minneapolis, MN 554022453	Electronic Service	No	OFF_SL_17-817_M-17-817
Carl	Cronin	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_17-817_M-17-817
Leigh	Currie	lcurrie@mncenter.org	Minnesota Center for Environmental Advocacy	26 E. Exchange St., Suite 206 St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_17-817_M-17-817
Joseph	Dammel	joseph.dammel@ag.state.mn.us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St. Paul, MN 55101-2131	Electronic Service	No	OFF_SL_17-817_M-17-817
Ian	Dobson	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_17-817_M-17-817
John	Farrell	jfarrell@ilsr.org	Institute for Local Self-Reliance	1313 5th St SE #303 Minneapolis, MN 55414	Electronic Service	No	OFF_SL_17-817_M-17-817
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_17-817_M-17-817
Edward	Garvey	edward.garvey@AESLconsulting.com	AESL Consulting	32 Lawton St Saint Paul, MN 55102-2617	Electronic Service	No	OFF_SL_17-817_M-17-817
Janet	Gonzalez	Janet.gonzalez@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-817_M-17-817
Kimberly	Hellwig	kimberly.hellwig@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-817_M-17-817

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Michael	Hoppe	il23@mtn.org	Local Union 23, I.B.E.W.	932 Payne Avenue St. Paul, MN 55130	Electronic Service	No	OFF_SL_17-817_M-17-817
Julia	Jazynka	jjazynka@energyfreedomcoalition.com	Energy Freedom Coalition of America	101 Constitution Ave NW Ste 525 East Washington, DC 20001	Electronic Service	No	OFF_SL_17-817_M-17-817
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2265 Roswell Road Suite 100 Marietta, GA 30062	Electronic Service	No	OFF_SL_17-817_M-17-817
Linda	Jensen	linda.s.jensen@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134	Electronic Service	No	OFF_SL_17-817_M-17-817
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-817_M-17-817
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-817_M-17-817
Mark J.	Kaufman	mkaufman@ibewlocal949.org	IBEW Local Union 949	12908 Nicollet Avenue South Burnsville, MN 55337	Electronic Service	No	OFF_SL_17-817_M-17-817
Thomas	Koehler	TGK@IBEW160.org	Local Union #160, IBEW	2909 Anthony Ln St Anthony Village, MN 55418-3238	Electronic Service	No	OFF_SL_17-817_M-17-817
Michael	Krikava	mkrikava@briggs.com	Briggs And Morgan, P.A.	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-817_M-17-817

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Douglas	Larson	dlarson@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_17-817_M-17-817
Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.	8300 Norman Center Drive Suite 1000 Bloomington, MN 55437	Electronic Service	No	OFF_SL_17-817_M-17-817
Ryan	Long	ryan.j.long@xcelenergy.com	Xcel Energy	414 Nicollet Mall 401 8th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_17-817_M-17-817
Paula	Maccabee	Pmaccabee@justchangela.w.com	Just Change Law Offices	1961 Selby Ave Saint Paul, MN 55104	Electronic Service	No	OFF_SL_17-817_M-17-817
Peter	Madsen	peter.madsen@ag.state.mn.us	Office of the Attorney General-DOC	Bremer Tower, Suite 1800 445 Minnesota Street St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_17-817_M-17-817
Kavita	Maini	kmains@wi.rr.com	KM Energy Consulting LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_17-817_M-17-817
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_17-817_M-17-817
Joseph	Meyer	joseph.meyer@ag.state.mn.us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St Paul, MN 55101-2131	Electronic Service	No	OFF_SL_17-817_M-17-817
Kevin	Miller	kevin.miller@chargepoint.com	ChargePoint, Inc.	254 E. Hacienda Avenue Campbell, California 95008	Electronic Service	No	OFF_SL_17-817_M-17-817
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_17-817_M-17-817

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-817_M-17-817
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_17-817_M-17-817
Michael	Noble	noble@fresh-energy.org	Fresh Energy	Hamm Bldg., Suite 220 408 St. Peter Street St. Paul, MN 55102	Electronic Service	No	OFF_SL_17-817_M-17-817
Carol A.	Overland	overland@legalectric.org	Legalelectric - Overland Law Office	1110 West Avenue Red Wing, MN 55066	Electronic Service	No	OFF_SL_17-817_M-17-817
Jeff	Oxley	jeff.oxley@state.mn.us	Office of Administrative Hearings	600 North Robert Street St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-817_M-17-817
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	OFF_SL_17-817_M-17-817
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-817_M-17-817
Inga	Schuchard	ischuchard@larkinhoffman.com	Larkin Hoffman	8300 Norman Center Drive Suite 1000 Minneapolis, MN 55437	Electronic Service	No	OFF_SL_17-817_M-17-817
Zeviel	Simpser	zsimpser@briggs.com	Briggs and Morgan PA	2200 IDS Center80 South Eighth Street Minneapolis, MN 554022157	Electronic Service	No	OFF_SL_17-817_M-17-817

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Anne	Smart	anne.smart@chargepoint.com	ChargePoint, Inc.	254 E Hacienda Ave Campbell, CA 95008	Electronic Service	No	OFF_SL_17-817_M-17-817
Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.	76 W Kellogg Blvd St. Paul, MN 55102	Electronic Service	No	OFF_SL_17-817_M-17-817
Byron E.	Starns	byron.starns@stinson.com	Stinson Leonard Street LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-817_M-17-817
James M.	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	470 U.S. Bank Plaza 200 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-817_M-17-817
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_17-817_M-17-817
Andrew	Twite	twite@fresh-energy.org	Fresh Energy	408 St. Peter Street, Ste. 220 St. Paul, MN 55102	Electronic Service	No	OFF_SL_17-817_M-17-817
Lisa	Veith	lisa.veith@ci.stpaul.mn.us	City of St. Paul	400 City Hall and Courthouse 15 West Kellogg Blvd. St. Paul, MN 55102	Electronic Service	No	OFF_SL_17-817_M-17-817
Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine	225 South Sixth Street, Suite 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-817_M-17-817
Cam	Winton	cwinton@mnchamber.com	Minnesota Chamber of Commerce	400 Robert Street North Suite 1500 St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_17-817_M-17-817

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_17-817_M-17-817
Patrick	Zomer	Patrick.Zomer@lawmoss.com	Moss & Barnett a Professional Association	150 S. 5th Street, #1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-817_M-17-817