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June 1, 2018

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

Re: Minnesota Power Electric Vehicle Tariff Report and
Proposed EV Tariff Modification
Docket No. E015/M-15-120

Dear Mr. Wolf:

Minnesota Power hereby submits, via electronic filing, its third annual Compliance Filing for its electric vehicle tariff under Minn. Stat. § 216B.1614. Through this filing the Company also requests approval of a revised Residential EV Tariff offering in order to provide a bridge to a more customer-friendly and beneficial experience for its EV-owning customers. These changes increase charging flexibility and bring the rate into alignment with the Company's Pilot Rider for Residential Time-of-Day Service. The full details of the requested revision can be found within this Compliance filing.

Please contact me at the number or email above with any questions or concerns.

Respectfully,

Jenna Warmuth

JW:sr
Attach.

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STATE OF MINNESOTA

BEFORE THE

MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of Minnesota Power's Petition for Approval of Residential Off-Peak Electric Vehicle Service Tariff	Docket No. E015/M-15-120 **2018 COMPLIANCE FILING AND PROPOSED EV TARIFF MODIFICATION**

I. INTRODUCTION

In its June 22, 2015 Order Approving Tariffs and Requiring Filings in the above referenced proceeding (the "June 22, 2015 Order"), the Minnesota Public Utilities Commission ("Commission") authorized implementation of Minnesota Power's (or "the Company") Residential Off-Peak Electric Vehicle Service tariff ("EV Tariff"), with an effective date of July 1, 2015. In its June 22, 2015 Order, the Commission required the following:

> Annually, by June 1st, each utility must file an Electric Vehicle Tariff Report in its electric vehicle tariff docket. Minnesota Power must include, on a per-quarter basis and in addition to the information required by Minn. Stat. § 216B.1614, subd. 3(1) and (2), the following information in its reports:
>
> - the number of customers who have arranged to purchase electricity under the tariff;
> - the total amount of electricity sold under the tariff;
> - the amount of energy sold in on- and off-peak periods, if applicable;
> - a brief description of all development and promotional activities and their costs;
> - the number of customers choosing the renewable-source option;
> - the status of the communications costs tracker account, if applicable; and
> - copies of any EV promotional materials distributed to customers.

On October 26, 2017 the Commission issued an order accepting the Company's 2017 Compliance filing as well as outlining further requirements for Minnesota Power in 2018 as follows:

> Minnesota Power shall include in its next annual report an evaluation of options to reduce the upfront cost burden for customers looking to opt into the EV tariff, including but not limited to a discussion of sub-metering technologies available. Minnesota Power shall also include a timeline for filing a proposed pilot program or implementation of any other feasible option.

Minnesota Power respectfully submits this Third Annual Report for its Residential Off-Peak EV Tariff for the period ending April 30, 2018. The Company submits this report pursuant to the prior orders and requests that the Commission accept its 2018 Annual Report and requested changes to its EV Tariff.

II. COMPLIANCE REPORTING

A. THE NUMBER OF CUSTOMERS WHO HAVE ARRANGED TO PURCHASE ELECTRICITY UNDER THE TARIFF; TOTAL AMOUNT OF ELECTRICITY SOLD UNDER THE TARIFF; AND AMOUNT OF ENERGY SOLD IN ON- AND OFF-PEAK PERIODS, IF APPLICABLE; THE NUMBER OF CUSTOMERS CHOOSING THE RENEWABLE-SOURCE OPTION;

Minnesota Power enrolled 2 customers in the EV Tariff during the applicable reporting period (May 1, 2017 to April 30, 2018). Zero customers chose the renewable source option in 2017. The monthly summary of participating customers, on-peak and off-peak energy sold, and total energy sold is shown below in Table 1.

Additionally, it was discovered that one of the participating customers experienced a hardware malfunction resulting in all-day availability of the meter supporting the customer's second service for the EV Tariff. This issue has since been corrected.

Table 1: Total Amount of Electricity Sold by Month

Billing Month	Participating Customers	Total Monthly Energy Sold (kWh)[1]
May-2017	1	0
Jun-2017	1	0
Jul-2017	1	564
Aug-2017	1	579
Sep-2017	1	534
Oct-2017	1	710
Nov-2017	2	625
Dec-2017	2	933
Jan-2018	2	1,115
Feb-2018	2	811
Mar-2018	2	886
Apr-2018	2[2]	535
Total:		**7,292**

[1] The figure in the column titled "Total Monthly Energy Sold (kWh)" represents the amount of kWh participating customers were billed for in the applicable "Month". Customer #1 enrolled May 25, 2017 (first bill was received on July 12, 2017) and Customer #2 enrolled November 11, 2017 (first bill was received on November 21, 2017). Billing dates follow the customers billing period, which is the reason for "0" in May and June, even though the customer was actively participating in the rate and consuming energy through their EV-specific meter.

[2] During the month of April 2018 only one participating customer had a billing date, resulting in a smaller figure for "Total Monthly Energy Sold (kWh)".

B. A BRIEF DESCRIPTION OF ALL DEVELOPMENT AND PROMOTIONAL ACTIVITIES AND THEIR COSTS;

Minnesota Power has invested resources, primarily in the form of time and labor, in the development and promotion of electric vehicles ("EVs") in its service territory and statewide over the past year. Below is an overview of the various methods and channels the Company has been using to educate customers on the benefits of electric vehicles and to inform them of the Company's EV Tariff. For its 2018 Annual Report Minnesota Power tracked direct costs related to promotional activities at $1,665 (this does not include labor, materials or advertisements that the Company designed and printed in-house). The largest investment Minnesota Power made in EV promotional activities was for the Arrowhead Home Show display, which also provided the highest amount of individual interaction with the public, as outlined in more detail below.

COMMUNITY EVENTS

As Minnesota's Plug-in Electric Vehicle Market continues to develop, the Company believes education and outreach are foundational to customer understanding and adoption of EV technology. As shown in Table 2, the Company has continued to invest time and resources in direct in-person community engagements, which have proven valuable in understanding customers' desires and concerns surrounding electric transportation.

Table 2: Outreach and Education Expenditures

Date	Event	Description	Estimated # of Interactions & Cost
06/07/2017	"Kick the Tires" at Whole Foods Co-op Grocery – Hillside Location; Duluth, MN.	EV display at local retailer with Drive Electric MN's Nissan Leaf (on temporary loan), information on EVs and the Company's EV Tariff.	80 | $0
06/08/2017	"Kick the Tires" at Minnesota Power Corporate Headquarters; Duluth, MN.	EV display at the Company's Duluth Headquarters building with Drive Electric MN's Nissan Leaf (on temporary loan), information on EVs and the Company's EV Tariff.	60 | $98
06/08/2017	Local ribbon cutting for a new public EV charging station.	Celebration and media event for the City of Duluth's EV charging station commissioning. 8 EV owning customers participated.	40 | $0
06/12/2017	"Kick the Tires" at Whole Foods Co-op Grocery – Duluth Denfeld Location.	EV display at local retailer with Drive Electric MN's Nissan Leaf (on temporary loan), information on EVs and the Company's EV Tariff.	30 | $0

09/09/2017	"Kick the Tires" at the Duluth Harvest Festival.	EV display with three Minnesota Power customers who volunteered their vehicles and answered questions. The Company had a representative present to offer information and answer questions regarding EVs and the Company's EV tariff.	200 | $99
02/20/2018 - 02/21/2018	Electric Transportation Expo at the Energy Design Conference[3]; Duluth, MN.	Display of Battery Electric Vehicles, Plug-in Hybrid Electric Vehicles, Hybrid Bucket Truck, Level 2 EVSE and informational materials on the Company's EV Tariff, a Duluth-based Electric Boat manufacturer and the Duluth Transit Authority's all-electric transit buses. Additionally, five dealerships brought in EVs for displays and two models were available for test drives. There was also a session for conference attendees titled: *Electric Cars and Buildings: What Should Real Estate Owners and Building Industry Professionals Know About Charging?* Presented by PlugInConnect.	350 | $29
04/04/2018 - 04/08/2018	"Kick the Tires" at the Arrowhead Home and Builder Show; Duluth, MN.	EV display with the Company's EV Fleet Vehicle. The Company had a representative present to offer information and answer questions regarding EVs and the Company's EV Tariff.	650 | $1,439
05/01/2018 - 05/02/2018	Drive Electric MN EV Days at the Capitol	Participated in collaborative event consisting of EV briefings with State Representatives, and "Kick the Tires" display on various forms of electric transportation.	100 | $0

ONLINE AND SOCIAL MEDIA

Minnesota Power recently updated its Electric Vehicle resource page[4] located on the Company's website. New and improved sections include:

- Basic Concepts of EVs
- Description of the Company's new Battery Electric Vehicles
- Types of EVs
- Costs of Charging/MN Power's Off-Peak EV Rate
- Range of EVs
- Types and Locations of Charging (Home/Public)

[3] See website http://www.duluthenergydesign.com for more information.
[4] See website https://www.mnpower.com/EV.

- Performance of EVs in Cold Weather
- Environmental Benefits
- Purchase Price and Costs of Ownership for an EV
- Contact Information for Company EV Representative

Through Company social media channels[5] Minnesota Power shared information about upcoming events and new materials available for customers. To date, the costs of communicating to customers through this outreach channel have been minimal. Examples of communications posted by the Company through these channels are included in Attachment A.

STAKEHOLDER AND PARTNER ENGAGEMENT

The electric transportation market is an area of growing interest for many utilities, public organizations, private companies, policy makers, and special interest groups. Minnesota Power has taken a broad and far-reaching approach to learn about existing business models for EV charging infrastructure, EV-related rates and incentives for customers, and regulatory developments throughout the country. The Company has continued to build relationships locally and nationally to better understand the developing EV market and how it relates to customers within its service territory. Figure 1 below depicts the interrelation of stakeholders and partners working together to develop the growing electric transportation market.

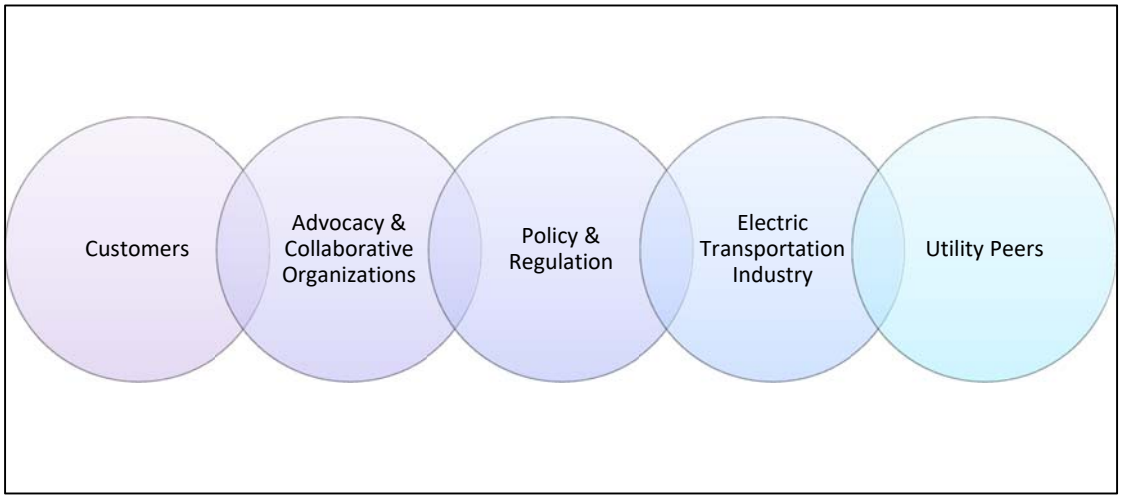

Figure 1: Stakeholders and Collaborative Partners

Customer Engagement

The Company values engagement with early-adopter customers that have incorporated electric transportation into their daily lives. Minnesota Power has also enjoyed direct and regular contact with over two-dozen EV-owning customers. The Company participates in the regional Northeast Minnesota Plug-in Electric Vehicle Owners Group[6] forum and

[5] See websites https://www.facebook.com/minnesotapower and https://twitter.com/mnpower for more information.
[6] See website http://www.pluginconnect.com/mnpevowners.html for more information.

events. To effectively encourage further adoption of EVs, understanding customer needs and perceptions is critical. Customer conversations range from planning a future EV purchase to expressing reluctance or animosity toward EVs. Utilities may best address these consumer needs and concerns with customer products and service offerings.

In addition to residential customers, the Company has spoken with commercial, municipal and wholesale customers about electric vehicles under a variety of applications (fleet vehicles, school and transit buses), as well as charging infrastructure for public and internal use at customer facilities. This has ranged from private retail and restaurant businesses, to hospitals and state correctional facilities. The Company plans to submit detailed comments related to this matter in response to the Commission's May 9, 2018 Notice for Comments related to Electric Vehicle Charging and Infrastructure in Docket No. E999/CI-17-879.

Electric Vehicle Charging

The Company has engaged with representatives from several private companies about their offering of hybrid services in relation to a smart-charging pilot. The singular or combined offerings depend on each individual company's structure and whether they are an Electric Vehicle Service Equipment ("EVSE") product manufacturer, a charging network provider or charging site operator.

1. EVSE product manufacturers create and sell physical equipment to support the charging of electric vehicles. Companies that Minnesota Power has spoken to include ChargePoint[7], ClipperCreek[8] and Tesla[9].
2. Charging network providers offer technology related options to support retail services (payment processing, customer support, etc.) and infrastructure monitoring. Companies that Minnesota Power has spoken to include ChargePoint, Greenlots[10] and OATI[11].
3. Site operators offer services related to physical maintenance and repairs of EV charging infrastructure (retail and private). Minnesota Power has spoken to ChargePoint and ZEF Energy[12].

Vehicle Manufacturers

The Company has contacted several vehicle (automobile and transit bus) manufacturing companies to gain a better understanding of their interests and roles in the various aspects of the expanding EV market. Minnesota Power has consulted with eLion[13], New Flyer[14], Nissan[15], Proterra[16], and Tesla.

[7] See https://www.chargepoint.com/ for more information.
[8] See https://www.clippercreek.com/ for more information.
[9] See https://www.tesla.com/ for more information.
[10] See https://greenlots.com/about/ for more information.
[11] See https://www.oati.com/oati-announces-new-electric-vehicle-solution for more information.
[12] See https://www.zefenergy.com/ for more information.
[13] See https://thelionelectric.com/ for more information.
[14] See https://www.newflyer.com/ for more information.
[15] See https://www.nissanusa.com/vehicles/electric-cars/leaf.html for more information.
[16] See https://www.proterra.com/products/ for more information.

Auto Dealerships

The Company continues to share information with car dealerships in its service territory regarding Minnesota Power's EV-related products and services. The Company has also inquired about details surrounding the barriers and risks that these businesses face regarding selling and servicing Plug-in Electric Vehicles. Generally, dealerships within the Company's service territory have shared that there is insufficient consumer demand for EVs to justify the required investments necessary to certify their dealerships. Manufacturers typically require that dealership mechanics attend specialized training and purchase EV-specific servicing equipment before a dealership can sell or service EVs.

EMPLOYEE EVENTS AND PROMOTIONS

Minnesota Power recognizes that employees residing within its service territory may be viewed as a resource for EV information by non-employee customers and their personal contacts. The Company has made information increasingly available through employee communications, its employee intranet, and employee trainings and events. Communication has focused on "Kick the Tires" events, charging infrastructure, and EV-focused Energy Design Conference activities. Please refer to Attachment B for full details of these employee-specific communications and events.

Advocacy and Collaborative Organizations

Minnesota Power is an active member of Drive Electric MN[17] and collaborates regularly with other members to identify opportunities to encourage the deployment of EV and EV charging infrastructure. The Company has received support from other members for its efforts and events, while also reciprocating when able to lend support, share information, and provide representatives for functions outside of the Company or its service territory.

In addition to participating in Drive Electric MN, the Company has engaged with various organizations (American Lung Association[18], Clean Energy Resource Teams (CERTs) [19], E Source[20], PlugInConnect[21], and Smart Electric Power Alliance (SEPA) EV Working Group[22]) regarding advocacy, program development, and promotion of electric transportation.

Policy and Regulation

Minnesota Power has continued to closely follow the Minnesota Pollution Control Agency's ("MPCA") ongoing plan and development of project requirements for the Volkswagen Settlement[23]. The Company also successfully collaborated with other Drive Electric MN members and partners to advocate for the MPCA to reduce the minimum threshold for Direct Current Fast Charger ("DCFC") project proposals from a 150-kilowatt capacity to a

[17] See http://www.driveelectricmn.org/about-us/ for more information on the organization and its members.
[18] See http://www.lung.org/our-initiatives/healthy-air/outdoor/what-makes-air-unhealthy/transportation.html for more information
[19] See https://www.cleanenergyresourceteams.org/technology/transportation for more info and https://www.cleanenergyresourceteams.org/blog/duluth-area-drivers-get-firsthand-look-electric-vehicles for a collaborative blog between the Company and CERTs.
[20] See https://www.esource.com/end-use-emerging-technology for more information
[21] See https://www.pluginconnect.com/ for more information
[22] See https://sepapower.org/electricvehicles/ for more information.
[23] See https://www.pca.state.mn.us/air/minnesotas-plan for more information on MN's plan for the Volkswagen Settlement funding.

50-kilowatt capacity, as communicated in the initial draft released for public comment. Refer to the group's filed comments to the MPCA in Attachment C. Minnesota Power continues to evaluate opportunities for Company engagement as it relates to addressing Minnesota's air quality impacts from diesel-fueled vehicle emissions and lack of public DCFC infrastructure.

The Company has also been engaging in several other policy-focused efforts and events that support the adoption of electric vehicles or seek to understand the potential benefits of the electrification of transportation:

- Center for Energy and Environment (CEE)[24] – Strategic Electrification Forum
- Great Plains Institute – "solar+EV"[25]
- Track and lend support to electric vehicle focused legislative efforts

Utility Peers

Minnesota Power has consulted with various utility peers to share information, compare offerings and provide insights on lessons learned through offerings and pilots in Minnesota, and throughout the country. The Company has experienced a very open and collaborative dialogue with all stakeholders, but has regular contact with representatives from fellow utilities. A Company representative also participated in an Investor Owned Utility panel at the Commission's March 16, 2018 EV Workshop.

COMPANY EV FLEET VEHICLES

To develop the Company's internal understanding of what its EV-owning customers experience and promote EVs, the Company has invested in two 2017 Chevrolet Bolt[26] Battery Electric Vehicles by way of a three-year lease. Employees are encouraged to utilize the vehicles for business travel where roundtrip distances are within expected range estimates (range is impacted by outside temperature and traveling speeds) and there is access to convenient public charging along the route. The knowledge gained has proven invaluable and the Company is currently exploring the option to let employees utilize the vehicles for personal use (subject to a signed agreement and employee-provided insurance).

Consumers may view their utility as a resource when it comes to information about EVs and charging. The Company-purchased vehicles provide a heightened level of credibility when speaking with customers and the public, and also serve as a conversation starter when visiting with customers. Please refer to Attachment D for several customer communications about the Company's new EVs and events providing an opportunity to see them in person.

Employee use of the vehicles is prioritized for events that provide the best opportunity to promote the vehicles (community events, expos, etc.) and, in turn, EV technology. The vehicle lease agreements began in February of 2017 and each vehicle currently has over 3,000 miles on the odometer. As an additional benefit the Company expects to experience

[24] See https://www.mncee.org/resources/events-webinars/2018/spring-forum-2018-strategic-electrification/ for more info on CEE's Strategic Electrification Forum.
[25] See http://www.betterenergy.org/blog/press-release-initiative-creates-first-of-its-kind-opportunity-for-solar-energy-electric-vehicles/ for more information on the "solar+EV" pilot.
[26] See http://www.chevrolet.com/electric/bolt-ev-electric-car for more information on the Chevrolet Bolt.

some cost savings with respect to vehicle rental costs and employee mileage reimbursements for use of personal vehicles through the lease of these vehicles.

MASS OUTREACH AND MEDIA RECOGNITION

The Company has been featured in several regional news outlet stories over the reporting period for promoting manufacturer discounts on EVs to customers[27] and hosting an expo for the public on electric transportation[28]. Utility Dive[29] also highlighted a national effort that Edison Electric Institute[30] led, with 44 supporting utility and trade groups (which included ALLETE), requesting Congress to lift the manufacturing cap on the Federal EV tax credit[31]. Refer to Attachment E for a copy of the letter to Congress.

C. THE STATUS OF THE COMMUNICATIONS COSTS TRACKER ACCOUNT, IF APPLICABLE; AND

The Company invested a significant amount of time and resources into EV outreach and education in 2017, as evidenced in Table 2 on Pages 4-5. As the EV market expands, the Company anticipates ongoing outreach and implementation efforts to spur market growth. The Company will continue to track and evaluate its EV communication and promotional expenses and will include costs in a future rate review proceeding, if deemed necessary.

D. COPIES OF ANY EV PROMOTIONAL MATERIALS DISTRIBUTED TO CUSTOMERS.

Copies of additional EV promotional materials are included as Attachment F to this filing. The included items were shared via community events, press release and through the Company's social media outlets.

III. ALTERNATIVE METERING DISCUSSION

Minnesota Power currently offers an EV Charging Tariff that meets the requirements as defined in Minn. Stat. § 216B.1614. The current Rate requires customers to have a secondary service and meter. This requirement is to accurately account and bill for the electric consumption under the separate Tariff for the Residential Off-Peak Electric Vehicle Service Rate. The Company's Electric Service Regulations and Extension Rules regarding facilities providing Electric Service to customers are found in the Minnesota Power Rate Book – Volume I, Section VI.[32] These Regulations and Rules are the Company's guide for determining which costs will be paid by the Company and which will be paid by the customer regarding the Alteration of Facilities[33], electric

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[27] See http://www.fox21online.com/2017/06/07/discounts-rebates-making-electric-cars-affordable/ for the full article.
[28] See http://www.duluthnewstribune.com/news/science-and-nature/4406568-electric-cars-have-arrived-duluth and http://www.fox21online.com/2018/02/19/28th-annual-energy-design-conference-expo-back-decc/ for the full articles.
[29] See https://www.utilitydive.com/ for more information on Utility Dive.
[30] See http://www.eei.org for more information on the Edison Electric Institute.
[31] See https://www.utilitydive.com/news/utilities-pressure-congress-to-lift-ev-tax-credit-manufacturing-cap/519345/ for the full article.
[32] See Section VI https://www.mnpower.com/content/documents/customerservice/mp-ratebook.pdf for Minnesota Power Electric Service Regulations and Extension Rules.
[33] See Section VI, p. 3.9, Rev. 16 #35 https://www.mnpower.com/content/documents/customerservice/mp-ratebook.pdf for Minnesota Power Electric Service Regulations and Extension Rules relating to Alteration of Facilities.

service extensions,[34] and Point of Delivery[35]. In addition to charges a customer may incur from the Company, the customer will need to provide their own facilities to meet the Point of Delivery (the point where Company's wires are joined to Customer's service entrance conductors or apparatus, unless otherwise specified in the Customer's Service Agreement). Depending on site-specific conditions, the customer may be required to hire a licensed electrician and have the work inspected by the local authority, which could lead to additional costs.

The Company understands that there are significant upfront costs to customers interested in joining the Rate, and this may be a barrier to entry. The costs of these service installations can widely vary by customer site. Existing and emerging technologies may eventually eliminate the need for a second service. Minnesota Power evaluated five existing sub-metering technologies as depicted in Figure 2 below.

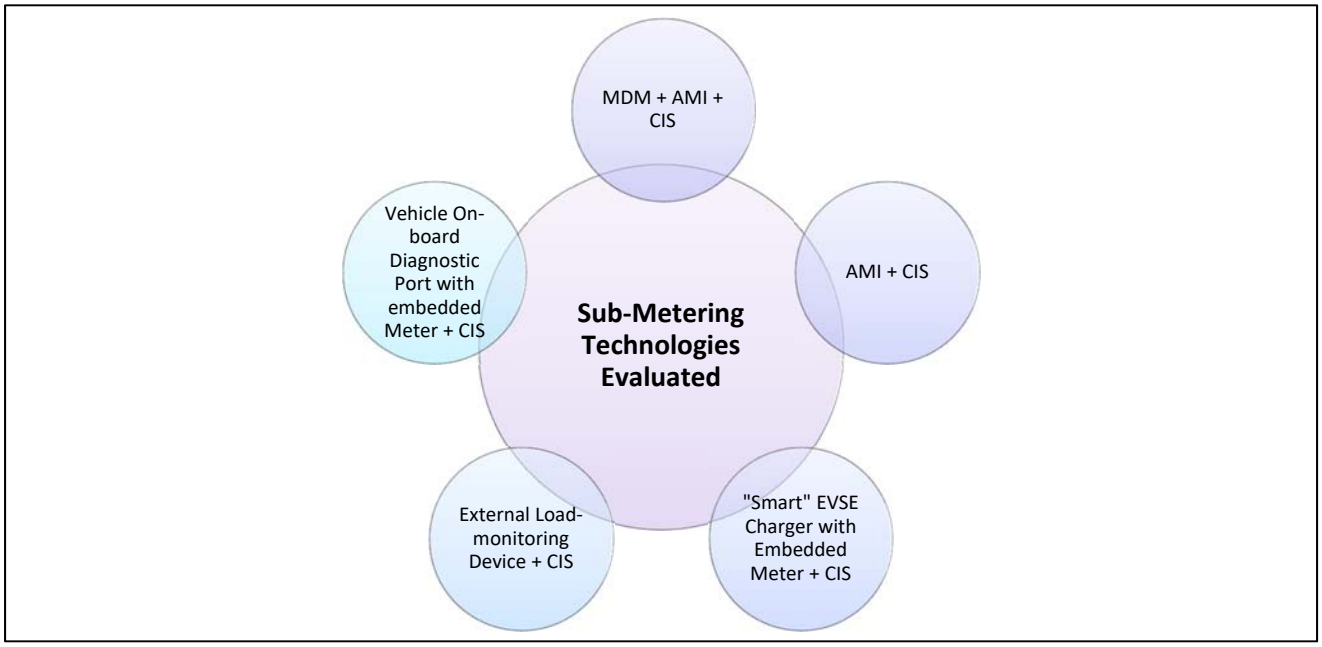

Figure 2: Smart Charging Technologies Evaluated

1) Meter Data Management System + Advanced Metering Infrastructure + Customer Information System

This technology would utilize Advanced Metering Infrastructure ("AMI"), the Customer Information System ("CIS"), and a Meter Data Management system ("MDM"). The AMI network would communicate the meter data back to the MDM, which would provide the CIS the usage data, and the CIS would calculate the separate customer bill segments.

Advantages:

- Robust load-control, data collection and analytics capability with MDM
- Utility owns and manages the metering asset

[34] See Sec VI pp. 4-41, Rev. 14 https://www.mnpower.com/content/documents/customerservice/mp-ratebook.pdf for Minnesota Power Electric Service Regulations and Extension Rules relating to electric service extensions.
[35] See Section VI, p. 3.2, Rev. 16, Section 1 #4 https://www.mnpower.com/content/documents/customerservice/mp-ratebook.pdf for Minnesota Power Electric Service Regulations and Extension Rules relating to Point of Delivery.

- Eliminates the need for the customer to install second service through the use of subtractive metering
- Eliminates the need to integrate systems with third party vendors, which may present a host of challenges including but not limited to: data privacy, system control, error resolution, and other complications
- Customers can choose their own EVSE
- Customer has access to hourly usage data through Minnesota Power's MyAccount[36] for all meters under the Service Agreement (can separate household meter, EV meter, etc.)

Barriers & Disadvantages:

- Current absence of an MDM
- AMI deployment throughout the service territory is over 40%, with an expected completion date of 2025

As outlined in Minnesota Power's most recent Time-of-Day Rate Pilot[37] and Safety, Reliability and Service Quality[38] filings; the Company is evaluating vendor responses to Request for Proposals to deploy an MDM. While the Company's AMI deployment is approaching 50% and AMI network coverage is at 95%, the absence of an MDM requires the Customer Information System to process large volumes of data delivered by the AMI network. CIS is not designed to consume interval data; validate and edit meter reads, or retain the millions of meter records that are received each day from the AMI network. An MDM can process this data and will also allow for flexibility to change the on- and off- peak time of a rate. Currently, making a change to the on- and off-peak time periods would require procurement and/or reprogramming of new meters and a meter exchange for every customer on a time-varying rate.

2) Advanced Metering Infrastructure + Customer Information System

This technology would utilize AMI and the CIS. The AMI network would communicate the hourly usage data from the AMI back to the CIS. The CIS would then calculate the separate customer bill segments. While this option appears to have similar advantages as Option 1, there are significant disadvantages associated with implementing this option without an MDM. CIS is not designed to process large volumes of data received from AMI and without an MDM, and would result in significant billing complexities. Additionally, there would be limited load-controlling capabilities.

Advantages:

- Utility owns and manages the metering asset
- Eliminates the need for customer to install second service through the use of subtractive metering

[36] MyAccount is an online customer tool where customers can see their bills and bill history, make online payments, track energy use, and set energy markers.
[37] Docket No. E015/M-12-233
[38] Docket No. E015/M-18-250

- Eliminates the need to integrate systems with third party vendors, which may present a host of challenges including but not limited to: data privacy, system control, error resolution, and other complications
- Customers can choose their own EVSE
- Customer has access to usage data through MyAccount for all meters under the Service Agreement (can separate household meter, EV meter, etc.)

Barriers & Disadvantages:

- AMI deployment throughout the service territory is over 40%, expected completion date of 2025
- Introduces a significant amount of billing complexities and manual billing processes

Currently, this option would not be available, as over 50% of the Company's residential customers do not yet have the AMI required to support subtractive metering (current timeline for service territory-wide AMI installation is 2025). Additionally, the AMI network needed for communication between the AMI and the CIS is not currently fully deployed (expected completion of year-end 2018). If the Company were to pursue this option once AMI network coverage is fully deployed, there would be a need for additional resources to support manual billing processes as participation in the EV Tariff grows.

In order for the CIS to automatically generate a bill for both the Residential Service and the EV Service, the CIS must receive the meter readings from both of the meters on the same day. If the Customer Information System does not receive meter readings from both (Residential and EV) meters on the same day, then the CIS cannot automatically create the bill and a billing exception is created. The billing exceptions must be manually resolved (a combination of office and field personnel may be required), within two business days, in order to create the bills manually for the customers. For the current subtractive metering services that are installed, approximately 23% of those services, every month, do not have the required meter reads in the CIS at the time of billing and need to be manually billed. The Company has concerns about the staffing levels necessary to support these additional processes as customer enrollment grows. CIS systems are not designed to process time-varying, dynamic rate data in an efficient manner and it is expected that manual billing issues will continue to present a challenge for the Company until an MDM is in place and fully functional.

3) "SMART" EV CHARGER WITH EMBEDDED METER + CUSTOMER WI-FI

This technology would require a fixed EVSE charger at the customer location with an embedded meter and communication capabilities. The customer site will need a sufficient and reliable Wi-Fi network in order for usage data to be sent to the EV charging network provider (a third party). With physical infrastructure in place at the customer site, next the Company would require a third party vendor to integrate their metering database with the Company's Customer Information System. Alternatively, the Company would establish a manual upload of the customer usage information as exported from the third party vendor metering database. The frequency of this billing data import to the CIS could vary depending on the offering. Instead of the more common practice of incorporating the off-

peak discount into every bill, the Company could work with the third party to track the usage on the EV meter and calculate a rebate reward (bill credit or payment issued to customer) on a scheduled basis.

Advantages:

- Potential for load-control, data collection and analytics capability
- Eliminates the need for the customer to install second service through the use of subtractive metering via a third-party device
- Would likely provide customers access to a third party portal where they could view their usage in detail (only on EV meter)
- Uses existing vendors that meet accuracy and cyber security standards

Barriers & Disadvantages:

- Costs and complexity of third party integration (integrating systems with third parties presents a host of challenges including but not limited to: data privacy, system control, error resolution, and other complications)
- Billing disputes could be complex
- Limits EVSE charger options for customer
- Monthly charges to the customer for administering the rate may outweigh monthly savings or create a lengthy payback on upfront investments
- Requires customer Wi-Fi, which presents possible issues of reliability in accessing meter reads and billing calculations, specifically in rural areas where Wi-Fi access can be limited or less reliable

While there are multiple vendors offering this solution within the marketplace, the Company considers this an emerging technology and may require a variance of Minn. Rules 7820.3700 and 7820.3800. Minnesota Power has been closely monitoring Xcel Energy's progress and is eager to learn from the recently approved residential EV-service pilot[39]. The Company does not believe there is sufficient saturation or demand in its service territory to justify the resources that would go into implementing this option at this time.

4) External Load Monitoring + Customer Wi-Fi

This solution would require a fixed external load-monitoring solution paired with the customer's EVSE charger and communication capabilities. The customer site would need a sufficient and reliable Wi-Fi network in order for usage data to be sent to the external load-monitoring vendor (a third party).

With physical infrastructure in place at the customer site, next the Company would require a third party vendor to integrate their metering database with the Company's Customer Information System. Alternatively, the Company would establish a manual upload of the customer usage information as exported from the third party vendor metering database. The frequency of this could vary depending on the offering. Instead of the more common practice of incorporating the off-peak discount into every bill, the Company could work with

[39] Docket No. E002/M-17-817.

the third party to track the usage on the EV meter and calculate a rebate reward (bill credit or payment issued to customer) on a scheduled basis.

Advantages:

- Eliminates the need for the customer to install second service through the use of subtractive metering via a third-party device
- Would likely provide customers access to a portal where they could view their usage in detail (only on EV meter)
- Allows more flexibility with the customer's choice of EVSE

Barriers & Disadvantages:

- Costs and complexity of third party integration (integrating systems with third parties presents a host of challenges including but not limited to: data privacy, system control, error resolution, and other complications)
- Quality of metering data
- Billing disputes could be complex
- Monthly charges to the customer for administering the rate may outweigh monthly savings or create a lengthy payback on upfront investments
- Requires customer Wi-Fi, which presents possible issues of reliability in accessing meter reads and billing calculations, specifically in rural areas where Wi-Fi access can be limited or less reliable

While there are multiple vendors offering this solution within the marketplace, the Company considers this an emerging technology and may require a variance of Minn. Rules 7820.3700 and 7820.3800. Additionally, the Company found no example of an existing utility offering or pilot utilizing this technology. Currently, the Company does not believe there is sufficient saturation or demand in its service territory to justify the resources that would go into implementing this option.

5) Vehicle Monitoring System with Embedded Meter + Cellular Signal

This solution would require a fixed vehicle monitoring system within the vehicle's on-board diagnostics (OBD) port and 3G cellular coverage in order for usage data to be sent to the external load-monitoring vendor (a third party).

With physical infrastructure in place at the customer site, next the Company would require a third party vendor to integrate their metering database with the Company's Customer Information System. Alternatively, the Company would establish a manual upload of the customer usage information as exported from the third party vendor metering database. The frequency of this could vary depending on the offering. Instead of the more common practice of incorporating the off-peak discount into every bill, the Company could work with the third party to track the usage on the EV meter and calculate a rebate reward (bill credit or payment issued to customer) on a scheduled basis. Additionally, the Company would need to work with the vendor to establish a geographical map of acceptable charging (only locations served by Minnesota Power).

Advantages:

- Eliminates the need for the customer to install second service through the use of subtractive metering via a third-party device
- Would likely provide customers access to a third party portal where they could view their usage in detail (only on EV meter)
- Allows more flexibility for the customer to choose their own charging locations (especially customers in multi-unit housing that may charge in various locations, or share a charger)
- Uses existing vendors that meet accuracy and cyber security standards

Barriers & Disadvantages:

- Costs and complexity of third party integration (integrating systems with third parties presents a host of challenges including but not limited to: data privacy, system control, error resolution, and other complications)
- Quality of metering data
- Billing disputes could be complex
- Monthly charges to the customer for administering the rate may outweigh monthly savings or create a lengthy payback on upfront investments

While the Company discovered at least one vendor offering this solution within the marketplace, it is considered an emerging technology and may require a variance of Minn. Rules 7820.3700 and 7820.3800. Additionally, the Company's geographical service territory has many pocketed areas served by other electric utilities (municipal and co-operative), which creates challenges for geographically based billing events or rebate payments to the customer for off-peak charges. The Company does not believe there is sufficient saturation or demand in its service territory to justify the resources that would go into implementing this option.

IMPLEMENTATION TIMELINE

The Company's preferred path is Option 1, which requires the implementation of a Meter Data Management system. Minnesota Power believes this solution will modernize the customer experience in many of the Company's product and service offerings for all customer classes, but especially its residential customers. As an electric utility with service territory outside of the Twin Cities metropolitan area with lower adoption rates of plug-in electric vehicles, the Company believes it is best to continue to invest its resources in further education and outreach to promote electric vehicle technology. Additionally, the Company has established many valuable relationships and has built a network of contacts within the EV charging industry and will continue to evaluate options that may be best implemented through partnerships with third parties.

For purposes of a proposed timeline, the Company plans to continue progress on the implementation of its MDM and AMI infrastructure. Prior to MDM and AMI completion, the Company recognizes the importance of making more timely improvements to its existing EV Tariff. The proposed changes are outlined in Section IV of this filing.

IV. TARIFF PROPOSALS AND PILOT OPTIONS

CURRENT CHALLENGES WITH EV TARIFF

As outlined in prior sections, Minnesota Power is evaluating multiple avenues to best serve its EV customers. In lieu of delving into a smart charging pilot immediately, Minnesota Power plans to monitor Xcel's progress on its "smart charger" pilot. However, the Company also believes it is imperative to respond to clear customer signals. The current customers on Minnesota Power's EV Rate have provided invaluable information regarding the challenges faced with Minnesota Power's current off-peak controlled-access EV Tariff offering. This includes malfunction of the hardware installed at the customer site, which can result in the meter not energizing at 11 p.m. or staying energized all of the time. Additionally, eight hours is not always sufficient time to fully charge a depleted battery, especially in the winter months when charging rates are slower and batteries are less efficient (using more kWh/mile). In light of these challenges and customer feedback, the Company proposes the changes described below to its EV Tariff.

Current EV Tariff:

Energized only for the time period between 11 p.m. and 7 a.m. daily

Monthly Service Charge: $4.25

Off-Peak Energy Charge: 4.332¢ per kWh

The current service offering and rate design has several advantages and disadvantages. Minnesota Power experiences a high level of metering accuracy and is also able to control the electric load corresponding to the EV Tariff's pre-determined off-peak hours. However, charging outside of the off-peak hours (as defined in the Tariff) is restricted, and in some cases this is problematic, based on feedback from customers on the EV Tariff.

Minnesota Power does not have a full AMI installation or coverage at this time, so the Company must rely on an aging system for control of the EV Tariff on- and off-peak periods. As with any aging technology, the current infrastructure tends to have complications. Issues can involve Company-owned hardware, or hardware and network failure of the contracted provider. This legacy hardware is becoming scarce and more expensive as the industry moves to more modern infrastructure. Additionally, customers aren't always supportive of restrictions on charging availability and prefer to have the ability to charge at any time of day, especially in situations of necessity. Based on limited anecdotal evidence, Minnesota Power has also found that some EV chargers do not work effectively when they have been without power and are required to start charging automatically when energized.

RESIDENTIAL EV TARIFF PROPOSAL

Minnesota Power is requesting approval of changes to its existing Residential EV Tariff. These changes increase charging flexibility and bring the rate into alignment with the Company's Pilot Rider for Residential Time-of-Day Service. The redlined version of the current tariff can be found in Attachment G and illustrates the proposed changes that include:

- The service would be available 24 hours a day. The word "Off-Peak" would be removed from the name of the EV Tariff, thus changing it to Residential Electric Vehicle Service.

- Service Condition 4 would be removed. A switching device approved or supplied by the Company and paid for and installed by the Customer would no longer be required.
- The Off-Peak Energy period is expanded to be in alignment with the current Residential Time-of Day Service. The On-Peak Energy period would be defined as 8:00 a.m. to 10:00 p.m., Monday through Friday, inclusive, excluding holidays. The Off-Peak Energy period would include all other hours. Holidays would be those days nationally designated and celebrated as New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas.
- The flat per kWh energy charge is replaced with on- and off-peak energy charges. For the purposes of this tariff sheet the rates were calculated using the weighted average of the Company's current five-block residential energy rates, plus the current on- and off-peak Energy Charge Adjustment amounts from the Pilot Rider for Residential Time-of-Day Service[40]. Further detail of this calculation is included as Attachment H. As in the Residential Time-of-Day rate, there would be a lower off-peak energy rate and higher on-peak rate, which would continue to send a strong price signal for EV customers to utilize the charging service during off-peak hours. These rates could be updated with the same methodology following the outcomes of the Company's current rate case[41] and Residential Time-of-Day[42] dockets.

Table 3: Revised Tariff Charges

Weighted Average		Energy Charge Adjustment		Off-Peak Energy Charge
$0.06893	+	-$0.02990	=	$0.03903

Weighted Average		Energy Charge Adjustment		On-Peak Energy Charge
$0.06893	+	$0.04870	=	$0.11763

FUTURE COMMERCIAL TARIFF

Minnesota Power is currently examining options for a commercial EV tariff. As was recently communicated publicly, the Duluth Transit Authority ("DTA") is procuring seven fully electric Proterra[43] transit buses in the third quarter of 2018. This is made possible via a $6.3 million grant awarded to the DTA from the Federal Transit Administration's Low or No Emission Vehicle Program[44] in 2015. The Company has been engaging the DTA in ongoing discussions to support this innovative program. Minnesota Power is actively researching alternative rate design options

[40] Pilot Rider for Residential Time-of-Day Service tariff sheet is included as Attachment I.
[41] Docket No. E015/GR-16-664.
[42] Docket No. E015/M-12-233.
[43] See https://www.proterra.com/ for more information.
[44] See https://www.transit.dot.gov/funding/grants/lowno for more information.

for low-load-factor customers similar to the DTA that wish to deploy DCFC. Load factor characteristics often associated with facilities deploying DCFC stations can lead to high demand charges for charging stations relative to their low utilization. Recognizing the significantly different load profile of DCFC facilities as compared to average commercial customers, the Company is examining a possible commercial EV charging pilot program in an attempt to mitigate these high demand charges. Such a program would also provide incentives to shift demand to off-peak times as much as possible. Some of the rate design options Minnesota Power is investigating to recover capacity costs while also limiting the demand charge impacts include but are not limited to:

- On- and off-peak demand and energy charges
- Reducing or eliminating demand charges during off-peak periods
- Limiting demand charges by using a pre-determined cap
- Seasonal demand charges
- Collection of distribution costs through on- and off-peak flat volumetric rates rather than demand charges
- The "100 hours approach" – Dividing total energy consumption by 100 hours to set limit for billing demand[45]

Minnesota Power could file such a pilot program as a miscellaneous filing either in this docket or in a separate docket as needed. The Company welcomes stakeholder input as its looks to develop a rate design best tailored to commercial EV charging needs.

V. CONCLUSION

Minnesota Power has invested substantial time and resources towards understanding the developing EV market and the preferences and viewpoints of its customers and stakeholders. As the EV market grows and demand increases for specialized product and service offerings, the Company is positioning itself to respond in an expeditious, yet balanced, manner. An important element of this will be a streamlined and straightforward customer experience in terms of any rate offerings, product support, system integration and customer data presentment. It is the Company's view that a future sub-metering offering implemented through an internal Meter Data Management system holds the most promise for a cost-effective and attractive EV offering. As the Company works towards reducing barriers for customers through its planned MDM, it will closely monitor the development of external pilot and utility offerings, while continuing to focus on customer and stakeholder outreach. In the interim of the MDM and full AMI implementation, the Company requests approval of its revised Residential EV Tariff offering in order to provide a bridge to a more customer-friendly and beneficial experience for its EV-owning customers.

[45] Similar to Xcel Energy's General Service and General Time of Day tariffs.: https://www.xcelenergy.com/company/rates_and_regulations/rates

When the Company's MDM and AMI solutions are fully implemented and operational, multiple rate and service options will become feasible and options to further address the upfront cost for customers will be reevaluated.

Dated: June 1, 2018

Respectfully submitted,

Jenna Warmuth
Senior Public Policy Advisor
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 355-3448
jwarmuth@mnpower.com

Minnesota Power an ALLETE Company shared MPR News's post.

Published by Kelley Power [?] · May 25, 2017 ·

MPR News
May 25, 2017 ·

Ten years ago, lawmakers pledged to cut Minnesota's greenhouse gas emissions 80 percent by 2050. Officials today concede they've barely moved the needle, but they're hoping new technology can reenergize the effort.

MN's greenhouse gas goal flopped. New goal: 'electrify everything'

A big part of that strategy, many experts agree, is to take the gains the state has made in greening its electricity grid and transfer that to other sectors.

MPRNEWS.ORG

804 people reached

Boost Unavailable

Minnesota Power Retweeted

MPR News @MPRnews · 25 May 2017

MN's greenhouse gas goal flopped. New goal: 'electrify everything'
mprnews.org/story/2017/05/...

2 6 9

Minnesota Power an ALLETE Company shared Whole Foods Co-op's event.

Published by Kelley Power [?] · June 6, 2017 ·

You have a chance to "kick the tires" of a new electric vehicle from 3-7 p.m. on Wed., June 7 at the Whole Foods Coop in Duluth. Details below.

JUN 7 **Electric Cars!**
Wed 3 PM · 610 E 4th St, Duluth, MN 55805-2055, ...
Katie, Dani and 11 friends

✓ Going

285 people reached

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Minnesota Power @mnpower · 6 Jun 2017

Stop and "kick the tires" of a new electric vehicle at Hillside @WholeFoodsCoop in Duluth from 3-7 pm, Wed., 6/7 thanks to @DriveElectricMN

1 1

Minnesota Power an ALLETE Company added an event.
June 7, 2017 ·

Stop down between 7-9 AM to "charge up your morning" and "kick the tires" of a new Nissan Leaf electric car and enjoy coffee and donuts on us! The car is on display courtesy of our partners at Drive Electric MN. Hope to see you there.

JUN
8

Check out a 100% electric-powered Niss...
Thu 7 AM · Minnesota Power, at 30 West Superior ...
Diana and Don went

✓ Going

Minnesota Power an ALLETE Company added 3 new photos.
Published by Kelley Power [?] · June 8, 2017 ·

Today, we officially opened a new, 9-unit SOLAR-POWERED electric vehicle (EV) charging station in the Endion parking lot of Duluth's Canal Park (across from the Canal Park Inn). It's the perfect place to charge an EV heading up or back from a scenic drive along Lake Superior's North Shore. Because the electricity that charges the EVs is from solar energy, the car port is a NET ZERO ENERGY USER!

This project is a partnership between MP, the City of Duluth, Enbridge and Hunt Electric. Our thanks to Drive Electric MN for loaning us the Nissan Leaf! #ChargeForward

5,777 people reached

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Minnesota Power @mnpower · 8 Jun 2017

New solar-powered electric car charging station in DLH. Partners: @cityofduluth @Enbridge Hunt. MP bit.ly/2s8XBJJ @DriveElectricMN

3 12

Minnesota Power an ALLETE Company added an event.
June 9, 2017 ·

Stop by to learn more about the new Nissan Leaf 100% electric vehicle on loan to Minnesota Power from our partners at Drive Electric Minnesota.

JUN
12

Electric Vehicle demo; 3-6 p.m. on Jun...
Mon 3 PM · Whole Foods Co-op · Duluth
You like Minnesota Power an ALLETE Company

★ Interested

1 person reached

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Minnesota Power @mnpower · 9 Jun 2017
Learn more about new solar-powered electric vehicle charging station in Duluth by reading our online MP Journal at bit.ly/2s4i41E
2
2

Minnesota Power an ALLETE Company
Published by Kelley Power [?] · June 15, 2017 ·

Learn more about the new solar-powered electric vehicle charging station in Duluth's Canal Park by reading about it in our online MP Journal at http://bit.ly/2s4i41E

Minnesota Power is an ALLETE Company - Partners celebrate solar-powered charging station in Canal Park

Minnesota Power, a division of ALLETE, Inc., provides electricity in a 26,000-square-mile electric service territory located in northeastern Minnesota.

MNPOWER.COM

Learn More

3,815 people reached

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Minnesota Power Retweeted

Drive Electric MN @DriveElectricMN · 17 Aug 2017

Get up to $17,500 off a NEW @NissanLeaf through Sept. 30 while supplies last driveelectricmn.org/deals/ #ChargeForward @NissanElectric

1 2

Minnesota Power an ALLETE Company shared Good Morning Northland on WDIO's post.

Published by Kelley Power [?] · February 12 ·

The 28th annual Energy Design Conference is next week. NEW this year: FREE 15 minute mini-sessions open to the public on solar, electric vehicles, HVAC and more! TUESDAY, FEB. 20 from 4:30-5:30 p.m. in the exhibit hall at the DECC in Duluth.

Good Morning Northland on WDIO
February 12 ·

Minnesota Power an ALLETE Company is hosting the 28th annual Energy Design Conference & Expo next week. They're looking toward the future of energy-efficient technologies!

www.wdio.com

WDIO.COM

1,091 people reached

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Minnesota Power an ALLETE Company added 3 new photos.
Published by Kelley Power [?] · February 14 ·

TEST DRIVE AN ELECTRIC VEHICLE – Feb. 20 in Duluth! FREE and OPEN TO THE PUBLIC

As part of Minnesota Power's 28th Annual Energy Design conference, there will be seven various types of electric vehicles on display in the Exhibit Hall at the @DECC in Duluth. PLUS, there will be two vehicles available to TEST DRIVE:

• Chevrolet Volt Plug-in Hybrid Electric Vehicle
- Tues., Feb. 20 from Noon - 5:30 p.m. (on display from Ranger Chevrolet Buick GMC)
• Mitsubishi Outlander Plug-in Hybrid Electric Vehicle
- Tues., Feb. 20 from 10:30 a.m. - 5:30 p.m. (on display from White Bear Mitsubishi)

Test drive one of the above EVs OR simply check out the following EVs also on display, including Minnesota Power's NEW CHEVY BOLT, NEW Tesla Model 3, Tesla Model S, Toyota Prius Prime and a Chrysler Pacifica

Minnesota Power @mnpower · Feb 14

TEST DRIVE ELECTRIC VEHICLES Feb 20 @DuluthDECC! FREE & OPEN TO PUBLIC. As part of our Energy Design conference, 7 EVs will be on display in Exhibit Hall. Test drive: Chevy Volt noon-5; Mitsubishi Outlander 10:30am-5:30pm. Other EVs displayed: TESLA MODEL 3, our Chevy Bolt, more!

3 4

Minnesota Power an ALLETE Company
Published by Kelley Power [?] · February 19 ·

Come on down to the Energy Design Conference for our FREE homeowner sessions to learn more about classics like energy-efficiency rebates and heating and cooling, to new technologies like solar energy and electric vehicles from 4:30-5:30 p.m. tomorrow (Tues., Feb. 20) at the DECC. Afterwards, visit the Exhibit Hall or chat with our experts who will be on-hand to answer questions. Learn more at www.duluthenergydesign.com

2,228 people reached

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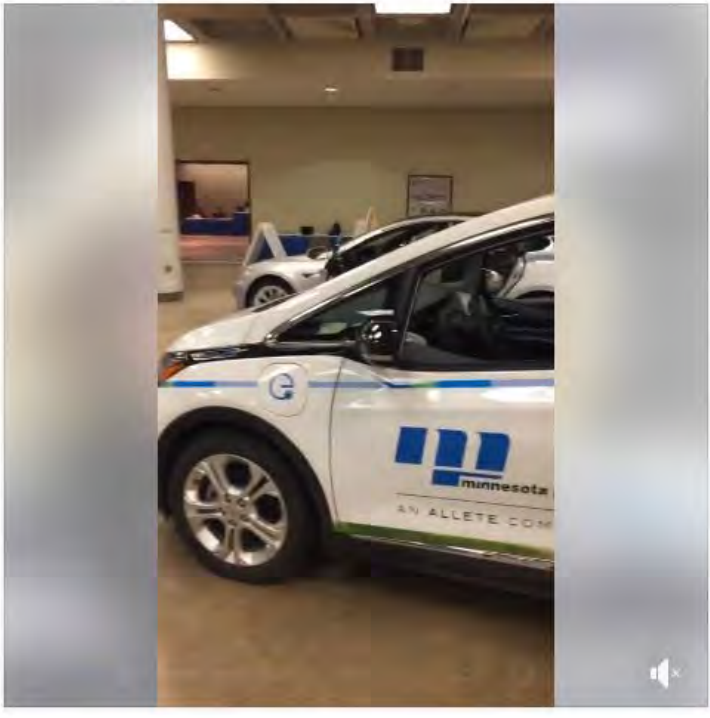
Minnesota Power an ALLETE Company was live.
Published by Kelley Kim Eldien [?] · February 20 ·

Come on down to the DECC - Duluth Entertainment and Convention Center to test drive an electric vehicle (EV) from noon to 5 today! And from 430-530 check out our free mini sessions on solar, EVs, HVAC and more!



1,825 people reached

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Minnesota Power @mnpower · Feb 20

TEST DRIVE #ElectricVehicles TODAY - TUES, FEB 20 @DuluthDECC! FREE & OPEN TO PUBLIC. Ride & drives noon-5 for our Chevy Bolt (pictured) and a Volt.

WED, FEB 21: Test drive Mitsubishi Outlander from 10–6. See a TESLA MODEL 3 and visit our Energy Design Conf. exhibit hall, too!

1

Minnesota Power an ALLETE Company
Published by Kelley Power [?] · February 22 ·

Interesting read on how over half the cars sold in Norway (a similar climate to Duluth, MN) are #ElectricVehicles - more details below. You can also learn more about our new Chevy Bolt EV fleet vehicles in the article below.

Electric cars sales, efficiency continue to grow

DULUTH—If Northlanders really wanted to be like Norwegians we'd stow the cross-country skis and stoic love of cold and buy a Tesla.Norway reached a milestone in December when electric vehicles accounted for 52 percent of all new vehicles sold...

DGLOBE.COM

Learn More

2,385 people reached

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Minnesota Power an ALLETE Company shared Duluth News Tribune's post.

Published by Kelley Power [?] · February 22 ·

A great article about the growing interest in #ElectricVehicles, including our new and fun-to-drive Chevy Bolt fleet vehicle on display at this week's Energy Design Conference in Duluth. #innovation

Duluth News Tribune
February 20 ·

Lightbulb moment here, Northland: Electric cars work in the cold.

Electric cars have arrived in Duluth

If Northlanders really wanted to be like Norwegians we'd stow the cross-country skis and stoic love of cold and buy a Tesla.Norway reached a milestone in December when electric vehicles accounted for 52 percent of all new vehicles...

DULUTHNEWSTRIBUNE.COM


Minnesota Power @mnpower · Feb 22
A great article about the growing interest in #ElectricVehicles, including our new and fun-to-drive @ChevyBolt_GM fleet vehicle on display at this week's Energy Design Conference in Duluth. #innovation
Duluth News Tribune @duluthnews
Electric cars have arrived in Duluth trib.al/UwdfqrG
1

Minnesota Power an ALLETE Company added 2 new photos.
Published by Kelley Power [?] · March 18 ·

Mark your calendars for the Arrowhead Home & Builders Show coming April 4-8 at the DECC! Visit our staff to hear about our energy conservation programs, along with specials on energy-efficient products, and check-out our electric vehicle!
www.shamrockprod.com/visitor/homeshow/homeshowvhome.aspx

3,041 people reached

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Recent Activity

Boosted on Mar 18
Audience: Zip codes list 2 (start w/55719)
By Kelley Power · Completed

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Minnesota Power @mnpower · Mar 20
Mark your calendars for the Arrowhead Home & Builders Show coming April 4-8 to the @DuluthDECC! Visit our MP staff to hear about our energy conservation programs, along with specials on energy-efficient products, and check-out our electric vehicle! shamrockprod.com/visitor/homesh...
3

Minnesota Power an ALLETE Company
Published by Kelley Power [?] · April 4 at 2:42am ·

We're at the Home Show and ready to answer your energy questions! Make sure to swing by our booth to learn about Power of One® programs, get LED discount coupons, sign up to win an energy-saving kit and check out our electric vehicle. The Arrowhead Home and Builders Show runs April 4 – April 8. For details and hours, visit https://decc.org/event/arrowhead

Arrowhead Home & Builder Show - Duluth Entertainment Convention Center

For over half a century hundreds of exhibitors have been bringing the newest, most exciting products on the market from ...

DECC.ORG

1,476 people reached

Boost Unavailable

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Minnesota Power an ALLETE Company
Published by Kelley Power [?] · April 5 at 5:57am ·

We're at the Home Show at the DECC in Duluth and ready to answer your energy questions! Make sure to swing by our booth to learn about Power of One® programs, get LED discount coupons, sign up to win an energy-saving kit and check out our electric vehicle. The Arrowhead Home and Builders Show runs April 4 – April 8. For details and hours, visit https://decc.org/event/arrowhead

1,474 people reached

Boost Unavailable

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Minnesota Power @mnpower · Apr 5

We're at the Home Show @DuluthDECC & ready to answer your energy questions! Make sure to swing by our booth to learn about Power of One® programs, get LED coupons, sign up to win #energysaving kit and check out our #ElectricVehicle. The show runs Apr 4–8. decc.org/event/arrowhead

1 1 2

Minnesota Power an ALLETE Company
Published by Kelley Power · April 11 at 1:37pm ·

Check out our #ElectricVehicle page at:
www.mnpower.com/Environment/ElectricVehicles

You can get your questions answered about:
- Electric Vehicle types
- Cost to charge (our EV rates)
- Mileage between charges
- Where to plug-in in MN
- Cold weather performance
- How they're good for the planet
- Price

1,205 people reached

Boost Unavailable

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5

2 Shares

Minnesota Power
@mnpower

Following

Check out our #ElectricVehicle page: mnpower.com/Environment/El .... @DriveElectricMN Get your questions answered on:
-Electric Vehicle types
-Cost to charge (our EV rates)
-#Mileage between charges
-Where to plug-in in MN
-Cold weather performance
-How they're good for planet
-Price

these vehicles:

Reduce America's reliance on foreig petroleum and keep more money in economy.

11:40 AM - 11 Apr 2018

3 Likes

3

Minnesota Power an ALLETE Company added 2 new photos.
Published by Kelley Power [?] · April 12 at 5:24am ·

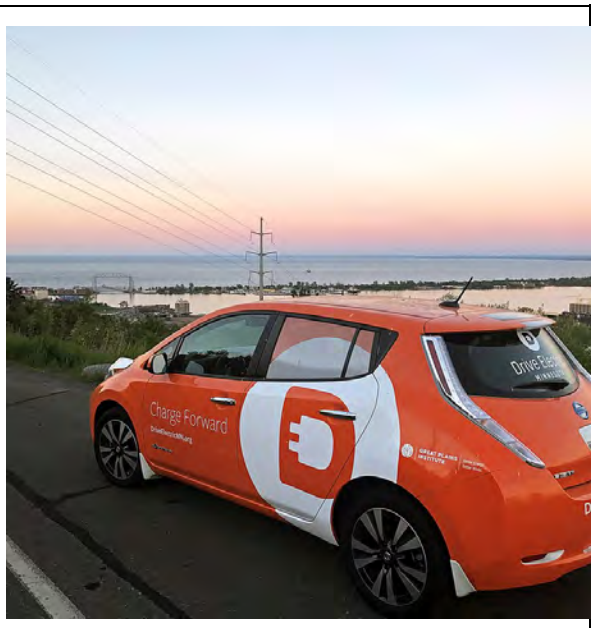
FUN FOR THE FAMILY! Check out our new electric vehicle and stop by our booth at the 9th Annual Northland Community Wellness Day this Sat., Apr. 14 from 10-2 at the Essentia Duluth Heritage Center. FREE entry and parking - open to the public. #ProudSponsor

The event highlights local wellness resources and services through interactive exhibits, workshops and family friendly activities. The mission of Northland Community Wellness Day is to promote healthy families and communities through education and awareness on health & wellness, public safety, sustainability and financial literacy. https://northlandcwd.org

1,180 people reached

Boost Unavailable

Minnesota Power hits the road with electric vehicle



Minnesota Power, in collaboration with Drive Electric Minnesota, has a Nissan Leaf electric vehicle (EV) in Duluth through at least June 16 to promote electric transportation and help people learn more about the rapidly advancing technology.

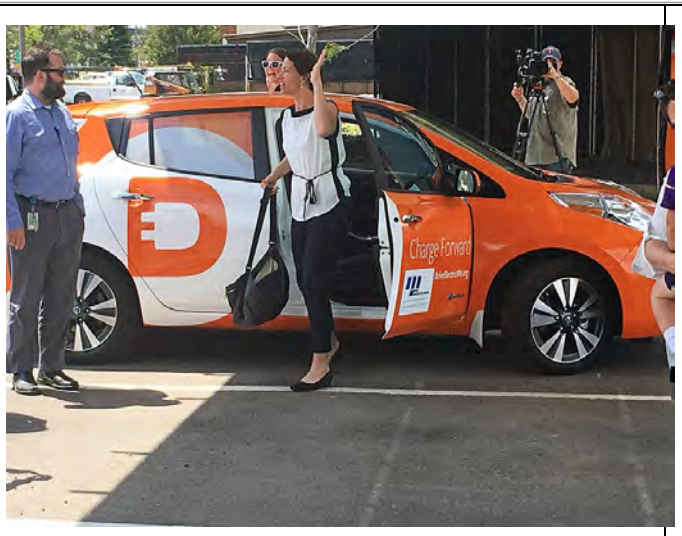
The MP Customer Solutions team has a number of “Kick the Tires” events scheduled, with room for more. In addition to giving people a chance to check out the vehicle, MP’s knowledgeable staff will provide information on available models, special discounts for Minnesota Power customers and employees, tax credits, and recently installed and future charging stations. They’ll also answer any questions and help you decide whether an electric vehicle is right for your lifestyle.

The four “Kick the Tires” events are:

- **Monday**, June 12, from 3-6 p.m. at the Denfeld Whole Foods Co-op on Grand Avenue in Duluth
- **Wednesday**, June 14, from 8:30-11 a.m. at Superior Water, Light and Power office
- **Friday**, June 16, from 7-9 a.m. at the Herbert Service Center

If you’d like the MP team to visit your site or event between now and June 16, email ElectricVehicles@mnpower.com. Click here to learn more about EVs.

Partners celebrate electric vehicle charging station in Canal Park



Minnesota Power, the city of Duluth, Enbridge and Hunt Electric celebrated completion of the region's first public electric vehicle charging station on Thursday.

About 40 people and media outlets attended the event in the parking lot near Endion Station on a warm, sunny day, and seven electric vehicles, six with private owners and one Nissan Leaf MP has on display through Drive Electric Minnesota, were there to demonstrate the charging station.

Kris Spenningsby, supervisor of retail accounts for Minnesota Power, said the project was borne out of the partners' search for ways to reduce carbon emissions in our day-to-day lives.

"Little projects like this and big projects like Camp Ripley all go into making that goal achievable," he said.

Duluth Mayor Emily Larson said the city has a goal to reduce its greenhouse gas emissions 80 percent by 2050, and the charging station is a sign of the partners' commitment to clean energy.

"Partnering renewable energy with parking and convenience in the heart of our tourist district is just fantastic," she said. "We achieve our energy goals when we work well in partnership with others."

John Swanson, vice president of major projects for Enbridge, said his company has invested about $5 billion in renewable energy, including wind, solar, hydro, biomass and geothermal resources.

"We need to bring every technology available to the table," he said. "This project is a great example."

Brad Boos, president of Hunt Electric's Duluth branch, said solar energy projects have become a big part of the company's business, with more than 400 megawatts of projects under contract or pending this year.

"Hunt is now focusing on renewables," he said.

The three private partners invested about [redacted] in the project in Canal Park and donated it to the city of Duluth, which contributed the use of the space and will operate and maintain the facility for its expected 25-year lifespan. The solar array became operational last

week.

Some facts about the charging carport and electric vehicles:

- The 54-kilowatt canopy is constructed of 171 solar modules, each module rated at 315 watts.
- The project has nine chargers. Four dual-port charging stations offer eight plug-ins that can charge a vehicle in two to six hours, depending on vehicle make and model. The ninth charger is a more powerful DC fast-charging station capable of charging a vehicle in 20 to 40 minutes.
- When fully charged, electric cars can travel from about 100 miles to about 200 miles, depending on vehicle make and model.
- The charging station's solar panels will feed electricity into the energy grid when the EV chargers are not in use, making the charging carport a net zero energy user.
- Charging a vehicle will cost 80 cents an hour for the slower chargers and $1 an hour for the more powerful fast-charger. These costs are in addition to standard parking lot rates.
- Electric vehicles generally average a little more than 3 miles per kilowatt-hour. In terms of gasoline, that translates into about 100 miles per gallon.
- The carport also offers covered parking for additional vehicles.

"I think this is a great example of how we can work together and achieve a project that works well for everybody," Spenningsby said.

Pam Schmitt, customer solutions analyst I, and **Paul Helstrom**, renewable program lead, contacted and organized the private electric vehicle owners who took part in Thursday's event and also worked with Drive Electric Minnesota to arrange to display the Nissan Leaf in the area.

28th Energy Design Conference amps up the charm with mini sessions, expanded EV display

Minnesota Power's Energy Design Conference and Expo celebrated its 28th year by adding new tricks to the mix with an opening plenary keynote speaker, mini sessions, an expanded electric vehicle display, and a special preconference with tours of local businesses putting energy efficiency to work.

With over 500 attendees, 37 exhibitors, and 52 educational sessions, the conference Feb. 19-21 at the Duluth Entertainment Convention Center offered a wide variety of resources for attendees and homeowners interested in learning about energy-efficient building and sustainable design. Despite a snowstorm, attendees came out to learn about tried-and-true methods of energy-efficient building as well as new technologies on the horizon.

"The EDC continues to be a unique opportunity to help educate our contractors, builders, and customers on Minnesota Power's CIP programs, energy-efficient building, and the latest innovations in the world of energy," said **Amanda Oja**, MP customer solutions analyst and Energy Design Conference coordinator.

Business tours in special preconference

A special preconference training titled "Innovative Technologies and Applications" gave attendees an opportunity to learn about technologies ready for prime time and those on the horizon. In the morning they listened to presentations on the creative use of technology, space utilization, building repurposing, and occupant culture. In the afternoon they hopped on buses and visited the City of Duluth Tool House, Cirrus Air Craft, the DECC, and Blacklist Artisan Ales to see energy-efficient technologies and applications up close and put to work.

Tim Gallagher, supervisor of program implementation, said the combination of presentations and site visits gave participants a comprehensive understanding of energy-efficient technologies.

"Attendees were able to hear directly from our business customers about how they are using new technologies and new strategies to make their businesses more efficient," Gallagher said. "It brought their understanding to a new level to see these technologies up close and in real life."

Opening plenary keynote

The EDC welcomed Peter Yost, a nationally recognized expert on high performance building to kick off the conference with his perspective on "The Art, the Science, and the Business of High-Performance Homes."

“It was awesome to have the opportunity to welcome attendees at the start of the event and have an expert like Peter Yost to set the tone for the conference,” Oja said.

Electric vehicle display

For the second year, the EDC included an electric transportation exhibit on the lower level of the DECC. Conference attendees, as well as the general public, got a first-hand look at eight electric vehicles from Chevrolet, Chrysler, Toyota, Mitsubishi, and Tesla. The display included four battery electric vehicles that run entirely on electricity and four plug-in hybrid electric vehicles that have a smaller battery and gasoline backup to power the electric motor when the battery has been depleted.

The “Electric Transportation Room” also featured Minnesota Power's hybrid bucket truck, a display by local electric boat manufacturer Symphony Boats and information about the fully electric Proterra transit buses being delivered to the Duluth Transit Authority in May. Minnesota Power and Superior, Water, Light and Power both had their 2017 Chevy Bolts on display.

“It was so great to hear customers get excited about seeing this technology for the first time. There was a very positive vibe throughout the conference and tenfold the amount of traffic we had last year,” said **Pam Schmitt**, customer solutions analyst with Minnesota Power.

Many people came to check out the Tesla Model 3, one of the first of the newly available, more affordable Teslas to be delivered to a reservation holder in the Midwest. The waiting list for delivery of the Model 3 is 400,000 worldwide.

Free mini-sessions

The EDC introduced new mini sessions for attendees who registered for the conference and invited the general public to attend them for free. The sessions took place during during the Tuesday night reception and included 15-minute, high-level presentations on air source heat pumps, utility incentives, solar energy, and electric vehicles.

“We wanted to give both our attendees and the general public a chance to get a high level introduction to some hot topics in the energy world and the opportunity to visit with exhibitors and the presenters to learn more,” Oja said. “We were happy with the turnout as we tried a new avenue to reach our customers.”

Positive press

The EDC received some great press coverage this year. Check out a few of the interviews below.

WDIO-TV

Duluth News Tribune

Drive Electric MINNESOTA

March 6, 2018

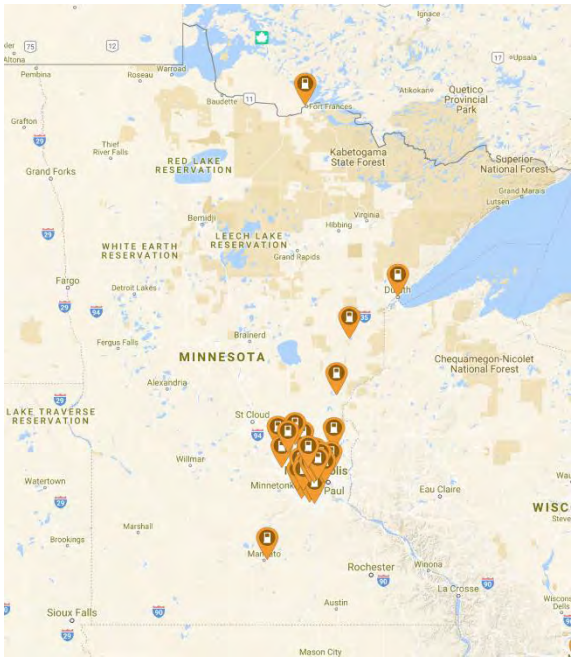
Commissioner John Linc Stine
Minnesota Pollution Control Agency
520 Lafayette Road N
St. Paul, MN 55155

Dear Commissioner Stine,

Drive Electric Minnesota (Drive Electric MN), a private-public partnership working hard to make Minnesota a national leader in the adoption of electric vehicle (EV) technology and charging infrastructure commends the MPCA for the great process that incorporated stakeholder input following the Volkswagen Settlement announcement. Drive Electric MN largely supports the elements laid out in the Volkswagen Settlement Beneficiary Mitigation Draft Plan.

As indicated through the stakeholder process, the EV community demonstrated a strong interest in EV charging and EV trucks and buses. Exciting opportunities exist for EV trucks and buses including deployment of transit buses in Duluth and the Twin Cities, EV school buses in Lakeville, and EV bus manufacturing in St. Cloud and Crookston. Drive Electric MN commends the MPCA on listening to stakeholders and carving out a dedicated grant program for heavy-duty EVs while also allowing them to compete in other grant programs.

Drive Electric MN also supports targeting 15% of the funds toward EV charging stations. However, **we recommend that the minimum requirement for DC fast chargers is changed to 50kW** to support the buildout of more chargers. While it's understandable that the minimum requirement is in place to accommodate future needs of EVs and reduce the time it takes to charge, Minnesota currently lacks the necessary fast charging infrastructure to increase EV adoption (displayed in the map to the left). Thus, Minnesota is in a critical state to build out the network at a lower 50-kilowatt capacity during Phase 1 and build up to 150-kilowatts in subsequent phases when the demand for charging will be higher. Lower speed 50kW DC fast chargers offer a considerable cost savings ($60,000) compared to higher 150kW DC fast chargers ($170,000), enabling more chargers to be built using the same funds. Using the same guidelines proposed in the Draft Plan while reducing the minimum requirement to 50kW would allow 33 DC fast chargers to be installed around the state, helping



DC fast chargers in Minnesota as of March 16, 2018. Does not include Tesla Superchargers.

to tackle the critical range anxiety barrier commonly cited among prospective EV adopters.
It should be noted that while Drive Electric MN partners stress the importance of building out the network, we feel it is also crucial to create a resilient network, requiring that 50kW chargers be installed with upgrades in mind. For example, installing infrastructure to allow for additional plugs at the same station coupled with a Level 2 backup will help establish a resilient network, particularly along highway corridors where there's a critical need to charge vehicles prior to reaching their destination.

Drive Electric MN partners are excited to collaborate, identify cost-share, build partnerships, and make this program a success for cleaner air in Minnesota.

Sincerely,

Drive Electric MN Partners:

American Lung Association in Minnesota
Center for Energy and the Environment
ChargePoint
Connexus Energy
Dakota Electric Association
Elk River Municipal Utilities
Fresh Energy
General Motors
Great River Energy
Greenlots
Kline Nissan
Minnesota Auto Dealers Association
Minnesota Plug in Vehicle Owners Circle
Minnesota Pollution Control Agency
Minnesota Power
Nissan North America
Otter Tail Power Company
PlugInConnect
Xcel Energy
ZEF Energy

Electric ride.
Clean drive.

Be on the lookout for Minnesota Power's electric vehicles in your neighborhood. We're excited to have two 2017 Chevy Bolts as part of our vehicle fleet, giving us firsthand knowledge about EV technology when visiting with customers. We also installed an EV charging station in Duluth's Canal Park and plan to install more charging stations across our service territory this summer. Watch for the Bolts at area trade shows, exhibits and community events—we look forward to answering your questions about EVs.

Benefits of EVs

- Reduced carbon footprint. Zero tailpipe emissions, which contribute to climate change and air pollution.
- Reduced reliance on petroleum, making the U.S. less vulnerable to price spikes and supply disruptions. Almost all U.S. electricity is produced from domestic sources.
- Less maintenance. Quiet operation. Fun to drive!

Fill 'er up—with electric energy

Charging times vary by EV model and the type of charger used.

- **Level 1**: Standard 120-volt outlet. Eight hours of charging provides about 40 miles of range.
- **Level 2**: Standard 240-volt outlet, the same as used for an electric clothes dryer. Provides between 20 and 30 miles of range per hour of charging. Available at many public charging stations.
- **DC fast charger**: Typically available at public stations. Compatible with most EVs and very fast, typically providing a charge of up to 100 miles in less than 30 minutes.

Charging locations

Minnesota Power, in partnership with the city of Duluth and others, installed a charging station in Duluth's Canal Park in 2017. The station has eight Level 2 plug-ins and one DC fast charger. The charging station's canopy also features 54 kilowatts of solar panels, which supply enough electric energy to meet the needs of about 7-8 homes a year.

Various online tools and mobile apps for locating charging stations are available. One of the most popular is www.plugshare.com.

EV rate

We offer a discounted electricity rate for charging an EV during off-peak hours between 11 p.m. and 7 a.m. daily.

About our Bolts

- **Cost**: Starts at $37,500 (with up to $7,500 in federal tax credits). Leasing available.
- **Acceleration**: 0-60 in 6½ seconds.
- **Battery**: Lithium ion.
- **Range**: Up to 238 miles on full charge (or 119 mpg equivalent).
- **Accolades**: Top Safety Pick by the Insurance Institute for Highway Safety, 2017 North American Car of the Year, 2017 Motor Trend Car of the Year.

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EnergyForward

VISIT MNPOWER.COM/EV OR EMAIL ELECTRICVEHICLES@MNPOWER.COM TO LEARN MORE

Electric ride.
Clean drive.

Take a few minutes to kick the tires on a new EV (electric vehicle) while you're at the **Arrowhead Home and Builders Show** April 4-8 in Duluth. We're parking one of the two all-electric Chevy Bolts we recently added to our fleet just across the aisle from our Power of One conservation booth.

Learn more about electric vehicles, how to set up a charging location, and Minnesota Power's EV rate at **mnpower.com/EV**.

"Kick the tires"
on a 100% electric vehicle

Visit **mnpower.com/EV**
to learn more

#chargeforward

+ + YouTube +

About: Chevy Bolt

Cost: Starts at $37,495 (up to $7,500 available in federal tax credits). Leasing option available.

Range: Up to 238 miles on full charge* or 119 mpg equivalent

Top Speed: 93 mph **Transmission:** Single Speed

Torque: 266 - goes from 0-60 mph in 6.5 seconds

Horsepower: 200 **Drivetrain:** Front wheel drive

Weight: 3,563 pounds

Size: "Small station wagon" as designated by the EPA with 94 cu ft of passenger space, 17 cu ft of cargo space and room for 5 passengers

Maintenance: Typically requires less because there are no oil changes or engine upkeep. Drivers still need to maintain tires, air filters, brakes, hoses, etc.

Battery: Chemistry: Nickel-rich lithium-ion
Size: 60kWh (additional 12-volt for internal controls)
Weight: 960 lbs **Cells:** 288

Motor: 200 hp (150 kW) and 266 lb ft (361 N m) electric motor

Body composition: Steel and aluminum (doors, tailgate and hood are aluminum)

Charging rates and estimated times (empty to full):**
Level 1 (120v) 3-5 miles of range added per hour, 48h
Level 2 (240v) 20-30 miles of range added per hour, 9h 20m
DC fast charging at 50kW 180 miles of range added per hour, 1h (owner's manual recommends only fast charging to 80% for consistent fast charging)
Regenerative braking may also add charge to the battery.

Where manufactured: GM's assembly plant in Orion Township, MI

Safety: Awarded a Top Safety Pick by the Insurance Institute for Highway Safety when equipped with the Driver Confidence II package

Accolades:
- North American Car of the Year for 2017
- 2017 Motor Trend Car of the Year
- Automobile Magazine 2017 All Star
- Listed in Time Magazine Best 25 Inventions of 2016

Warranty: Bumper-to-bumper limited warranty – 3 years/36,000 miles
Battery warranty: 8 years/100,000 miles
Roadside assistance and courtesy transportation: 5 years/60,000 miles

*Range is affected by various factors such as heat, cold, grade, etc.
**These figures are approximations and may vary by individual Chevy Bolt

Learn more about **MP's EV rate:** www.mnpower.com/EV
Chevy Bolt: www.chevrolet.com/bolt-ev-electric-vehicle

March 13, 2018

The Honorable Mitch McConnell
Majority Leader
United States Senate
Washington, DC 20510

The Honorable Paul Ryan
Speaker
United States House of Representatives
Washington, DC 20515

The Honorable Chuck Schumer
Democratic Leader
United States Senate
Washington, DC 20510

The Honorable Nancy Pelosi
Democratic Leader
United States House of Representatives
Washington, DC 20515

The Honorable Orrin G. Hatch
Chairman
Committee on Finance
United States Senate
219 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Kevin Brady
Chairman
Ways and Means Committee
United States House of Representatives
1102 Longworth House Office Building
Washington, DC 20515

The Honorable Ron Wyden
Ranking Member
Committee on Finance
United States Senate
219 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Richard E. Neal
Ranking Member
Ways and Means Committee
United States House of Representatives
1102 Longworth House Office Building
Washington, DC 20515

Subject: Section 30D Electric Vehicle Credit

Dear Majority Leader McConnell, Leader Schumer, Speaker Ryan, Leader Pelosi, Chairmen Hatch and Brady and Ranking Members Wyden and Neal:

As you work to formulate the Fiscal Year 2018 omnibus spending legislation, we write to you in support of the Section 30D electric vehicle (EV) tax credit and urge you to modify the credit by eliminating the existing manufacturer cap. The EV credit is essential to foster the rapid adoption and deployment of electric vehicles, which in turn will boost our economic and national security and continue to create the next generation of well-paying American jobs.

First-mover companies—all American manufacturers—are all likely to hit the existing 200,000 vehicle-per-manufacturer cap this year, just as a new generation of affordable, state-of-the art EVs hits the market. These automakers created thousands of American EV jobs by making early investments in EV research and development, manufacturing capacity, and charging infrastructure. Maintaining the

current cap will effectively raise the cost to consumers for certain vehicles, skewing car choices and sales just at the time when electric vehicle sales are beginning to climb and choices are expanding.

As electricity providers, our utilities are working to support the interest shown by our customers and local governments in electric vehicles and the charging infrastructure to support their deployment. We are educating consumers and supporting infrastructure development so these technologies achieve economies of scale. We look forward to a time when EVs may help support grid services, the integration of renewable resources or demand response, thereby enhancing the efficiency of the electric grid.

Eliminating the manufacturers' cap will provide certainty to both automakers and consumers. It will also allow the utility industry to enable an electrified transportation future that creates and sustains more American jobs, reduces our reliance on foreign oil, makes our air cleaner, and our communities more sustainable. Thank you for your consideration of our request.

Sincerely,

ALLETE
(Minnesota and Wisconsin)

American Electric Power
(Arkansas, Indiana, Kentucky, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Virginia and West Virginia)

AVANGRID
(Connecticut, Maine, Massachusetts and New York)

CMS Energy
(Michigan)

Consolidated Edison
(New York)

Dayton Power & Light
(Ohio)

DTE Energy
(Michigan)

Duke Energy Company
(Florida, Indiana, Kentucky, North Carolina, Ohio, and South Carolina)

Duquesne Light Company
(Pennsylvania)

Edison Electric Institute
(Members in all 50 states)

Edison International
(California)

Eversource Energy
(Connecticut, Massachusetts and New Hampshire)

Florida Power & Light
(Florida)

Green Mountain Power
(Vermont)

Hawaiian Electric
(Hawaii)

Indianapolis Power & Light
(Indiana)

Kansas City Power & Light
(Kansas and Missouri)

Liberty Utilities
(Arizona, Arkansas, California, Connecticut, Georgia, Kansas, Maine, Maryland, Michigan, Minnesota, Missouri, New Hampshire, Nevada, Oklahoma, Pennsylvania, and Texas)

Long Island Power Authority
(New York)

MidAmerican Energy Company
(Illinois, Iowa and South Dakota)

National Grid
(Massachusetts, New York and Rhode Island)

National Rural Electric Cooperatives Association
(over 900 members in 46 states)

NV Energy
(Nevada)

Pacific Gas & Electric
(California)

Pacific Power
(California, Oregon and Washington)

Portland General Electric
(Oregon)

Public Service Company of New Mexico Resources
(New Mexico and Texas)

Public Service Electric and Gas
(New Jersey)

PSEG Long Island
(New York)

Rocky Mountain Power
(Idaho, Utah and Wyoming)

Sacramento Municipal Utility District
(California)

Salt River Project
(Arizona)

Seattle City Light
(Washington)

Southern Company
(Alabama, Florida, Georgia and Mississippi)

Tacoma Public Utilities
(Washington)

Utah Associated Municipal Power Systems
(Utah)

Bypass the gas pump

Discounted rate for electric vehicles

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Minnesota Power can help keep your electric vehicle charged and ready to go.

Option 1: Choose Minnesota Power's off-peak service rate

We offer a discounted electricity rate for charging an electric vehicle (EV) during off-peak hours between 11 p.m. and 7 a.m. daily. The EV rate is reserved for residential customers.

Service under this rate will be separately metered. There will be a cost to install the additional meter and a monthly service charge of $4.25. Taking service under this rate also gives you the option to purchase energy from Minnesota Power's current mix of energy supply sources or entirely from renewable energy sources.

Option 2: Plug it in anytime just like any other electric device

Use the electric service you already have at home, plugging in to any standard 120-volt outlet. Most EVs will be charged in eight to 10 hours. Or plug into a standard 240-volt circuit like the kind used for an electric clothes dryer. It will take about four to five hours to charge most EVs. Standard electric rates apply.

How much will it cost?

Your bill will depend on the type of electric vehicle you own and whether you sign up for Minnesota Power's off-peak service rate for electric vehicles.

Charging up away from home

Find the location of other charging stations by going to maps.google.com and searching for "EV charging stations in Minnesota."

More information

Call Minnesota Power at 218-722-2625 or visit mnpower.com/ElectricVehicles. Whatever rate you choose, you'll want to contact an electrician to make sure your home's wiring can meet your vehicle's charging requirements.

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mnpower.com/electricvehicles

16021 | 02.19.16

All-New Nissan LEAF®† World's Best-Selling Electric Car[1] – 100% Electric

Want to join us in making a difference?

As part of our effort to accelerate electric vehicle adoption throughout the United States, Nissan North America, Inc. is offering eligible employees and customers of Minnesota Power a special opportunity to purchase the all new, 100% electric, 2018 Nissan LEAF®. With each new 2018 Nissan LEAF® purchase during the program period, eligible customers can receive a $3,000 rebate [2] off MSRP, during the program period, plus a potential federal tax incentive of up to $7,500.[3] State incentives may also be available! [3]

NISSAN
Innovation that excites

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How do you receive this great incentive?

Simply bring a copy of this flyer, both pages, along with your monthly electric bill to your participating local Nissan dealership * to receive a $3,000 rebate [2] (off MSRP) on a new 2018 Nissan LEAF®. This limited time offer expires June 30, 2018 and cannot be combined with other Nissan special incentives.

Fleet Certification Code:

B73191

Key Features	
More Range, Lower Starting MSRP	**Up to 151 mile range[4] at a lower starting MSRP[5]** • **Starting at $29,990 MSRP[5] vs 2017 LEAF @ $30,680 ($690 Savings)**
All-New Design	**All new exterior and interior styling reflecting Nissan design language** • Exterior: Nissan V-motion grille, boomerang tail lamps, and "floating" roof • Interior: Nissan Gliding Wing form instrument panel, clean and modern design
Intelligent Driving	**Optional ProPILOT Assist[6] helps make highway driving easier and less stressful** • Follows the car in front of you and maintains a set distance while helping to keep your vehicle centered in the lane
One-Pedal Driving	**e-Pedal[7] mode lets you drive with one pedal** • Nissan unique capability is that LEAF can come to a complete stop (and hold) without touching the brake pedal even on steep hills
Safety Technology	**Standard Automatic Emergency Braking[8].** • Available Automatic Emergency Brake with pedestrian detection[9].

See your local participating Nissan Dealer for complete details: https://www.nissanusa.com/nissandealers/

All-New Nissan LEAF®† World's Best-Selling Electric Car[1] – 100% Electric

[1] World's Best-Selling EV based on cumulative sales data from Dec. 2010 – Dec. 2017

[2] **ELIGIBILITY REQUIREMENTS AND OTHER RESTRICTIONS APPLY. PROOF OF ELIGIBILITY REQUIRED.** The $3,000 Nissan Fleetail Rebate off MSRP is available to eligible consumers of *Minnesota Power;* proof of employment, membership or a copy of their utility bill referencing *Minnesota Power,* their name, and both pages of this flyer. Available on purchase from new dealer stock. Down payment may be required. Subject to residency. This incentive cannot be combined with any other Nissan special incentives. See dealer for details. Ends June 30, 2018.

[3]The incentives referenced are for informational purposes only. This information does not constitute tax or legal advice. All persons considering use of available incentives and additional perks should consult with their own tax or legal professional to determine eligibility, specific amount of incentives available, if any, and further details. The incentives and additional perks are not within Nissan's control and are subject to change without notice. Interested parties should confirm the accuracy of the information before relying on it to make a purchase. Residency restrictions may apply. See https://www.energy.gov/eere/electricvehicles/electric-vehicles-tax-credits-and-other-incentives for qualification requirements and conditions.

[4]MY18 EPA range of 151 miles. Actual range may vary based on driving conditions. Use for comparison only.

[5]2018 Nissan LEAF® S starts at $29,990. 2018 Nissan LEAF® SL starts at $36,200 MSRP as shown. Prices are Manufacturer's Suggested Retail Price excluding $885 destination charge, tax, title, license and options. Dealer sets actual price.

[6]ProPILOT Assist cannot prevent collisions. Always monitor traffic conditions and keep both hands on the wheel. See Owner's Manual for safety information.

[7]e-Pedal: Monitor traffic conditions and use conventional brake as needed to prevent collisions. See Owner's Manual for safety information.

[8]Automatic Emergency Braking cannot prevent all collisions and may not provide warning or braking in all conditions.

[9]Automatic Emergency Braking with Pedestrian Detection cannot prevent all collisions and may not provide warning or braking in all conditions. Driver should monitor traffic conditions and brake as needed to prevent collisions. See Owner's Manual for safety information.

†For complete product details on the 2018 Nissan LEAF please go to https://www.nissanusa.com/electric-cars/2018-leaf/

For Release: Sept. 22, 2016

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Manager - Corporate Communications
Minnesota Power/ALLETE
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arutledge@mnpower.com

Contact: Pakou Ly
Public Information Coordinator
City of Duluth
(218) 730-5309

Contact: Shannon Gustafson
Media Relations Mgr, U.S. Liquids Pipelines & Projects
ENBRIDGE
218-464-5725

NEWS

City of Duluth joins Minnesota Power, Enbridge on solar-powered electric vehicle charging carport in Canal Park

DULUTH, Minn. — Minnesota Power and Enbridge today announced a partnership with the city of Duluth and Hunt Electric to bring a solar-powered electric vehicle (EV) charging carport to Duluth's Canal Park for public use.

The project will bring nine EV chargers covered by a 54-kilowatt solar panel canopy to the Endion Station parking lot. It will also offer covered parking for additional vehicles in Canal Park. Four Level Two dual-port charging stations will offer eight plug-ins that will charge a vehicle in two to six hours, depending on vehicle make and model. The ninth charger will be a more powerful DC fast charging station capable of charging a vehicle in 20 to 40 minutes.

The three private partners will invest in the project and donate the facility to the city of Duluth when the project is complete. The city will contribute the use of the space and perform operation and maintenance of the facility over its expected 25-year lifespan.

"Minnesota Power is pleased to partner with the City of Duluth, Enbridge and Hunt on this exciting project. Investing in electric vehicle charging stations across our service territory is a way to help foster and grow this new technology and build the infrastructure to meet the changing energy needs of our customers," said Pat Mullen, Vice President of Marketing for Minnesota Power.

In addition to its financial investment in the project, Minnesota Power will **c**ontract with Hunt Electric to construct the charging stations and the solar photovoltaic generating system, provide the solar generator's connection to the energy grid and take the lead role in design. Hunt Electric, the main contractor for the facility, will contribute additional in-kind construction services.

Enbridge also will provide project guidance and split the Solar Renewable Energy Credits that the project produces with the city under a separate agreement.

"Enbridge is pleased to participate in this highly collaborative, innovative project. As a company, we take great pride in meeting our primary responsibility of safely and reliably delivering energy to people across North America. What people may not know is that we have also made significant investments in renewable energy," said John Swanson, Enbridge's Vice President of Major Projects Execution.

A key component of the carport is that the solar power generated is designed to offset the power used to charge vehicles. The solar panels will feed electricity into the energy grid when the EV chargers are not in use, making the charging carport a net zero energy user.

“This project makes me so proud because it represents strong partnerships that are forward thinking and result in significant public benefit. Duluth is taking it to the next level through this new collaboration with MN Power, Enbridge and Hunt Electric to construct solar powered charging stations,” said Duluth Mayor Emily Larson. “This is one additional way that we can take advantage of renewable energy technology, diversify how we conserve energy and lower our carbon footprint. I committed $500,000 earlier this year to our City’s Energy Plan and am committed to doing more as Mayor and as a resident.”

Pending Duluth City Council approval Monday night, construction is expected to begin immediately. The solar-powered EV charging stations should be operating by May 2017.

Minnesota Power provides electric service within a 26,000-square-mile area in northeastern Minnesota, supporting comfort, security and quality of life for 144,000 customers, 16 municipalities and some of the largest industrial customers in the United States. More information can be found at www.mnpower.com.

The statements contained in this release and statements that ALLETE may make orally in connection with this release that are not historical facts, are forward-looking statements. Actual results may differ materially from those projected in the forward-looking statements. These forward-looking statements involve risks and uncertainties and investors are directed to the risks discussed in documents filed by ALLETE with the Securities and Exchange Commission.

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Sunlight powers charging station for electric vehicles

IN PARTNERSHIP WITH:

THE CITY OF DULUTH MINNESOTA

ENBRIDGE Life Takes Energy

HUNT Electric Corporation

The city of Duluth, Minnesota Power, Enbridge and Hunt Electric partnered to develop the first solar-powered electric vehicle charging station for public use in the region. The project grew out of their efforts to find ways to reduce carbon emissions and use more renewable energy.

The three private partners invested in the project and donated the facility to the city of Duluth. The city will contribute the use of the space and operate and maintain the facility over its expected 25-year lifespan. Total cost of the project is about $378,000.

- The 54-kilowatt canopy is constructed of 171 solar modules, each module rated at 315 watts, which supplies enough electric energy to meet the needs of about 7-8 homes per year.
- The project has nine chargers. Four dual-port charging stations offer eight level 2 plug-ins that can charge a vehicle in two to six hours, depending on vehicle make and model. The ninth charger is a more powerful DC fast-charging station capable of charging a vehicle in 20 to 40 minutes.
- When fully charged, electric cars can go from about 100 miles to about 200 miles, depending on vehicle make and model.
- The charging station's solar panels will feed electricity into the energy grid when the EV chargers are not in use, making the charging carport a net zero energy user.
- Charging a vehicle will cost 80 cents an hour for the slower chargers and $3 an hour for the more powerful fast-charger. These costs are in addition to standard parking lot rates.
- Electric vehicles generally average a little more than 3 miles per kilowatt-hour. In terms of gasoline, that translates to about 100 miles per gallon.
- The carport also offers covered parking for additional vehicles.

MINNESOTA POWER SECTION V PAGE NO. 8

ELECTRIC RATE BOOK - VOLUME I REVISION ~~Original~~1

RESIDENTIAL ~~OFF-PEAK~~ ELECTRIC VEHICLE SERVICE

RATE CODES

28

APPLICATION

To electric service for residential customers for the sole purpose of recharging electric vehicle(s) ~~which will be energized only for the time period between 11 p.m. and 7 a.m. daily~~. Service is subject to Company's Electric Service Regulations and any applicable riders.

TYPE OF SERVICE

Single phase, 60 hertz, voltages of 120 to 240 volts, supplied through one meter at one point of delivery.

RATE (Monthly)

Service Charge $4.25

Off-Peak Energy Charge
All Off-Peak kWh (per kWh) ~~4.332~~3.903¢

On-Peak Energy Charge
All On-Peak kWh (per kWh) 11.763¢

Plus any applicable Adjustments.

RENEWABLE ENERGY OPTION

Customers taking service under this schedule have the option to purchase energy from the Company's current mix of energy supply sources at the rates shown above or entirely from renewable energy sources. "Renewable energy" means electricity generated through use of any of the following resources: wind, solar, geothermal, hydro, trees or other vegetation, or landfill gas. Participation by the Customer is voluntary, and Customers who elect this option shall commit to renewable energy for no less than one year. The rate for the renewable energy option will include a 2.5¢ per kWh surcharge in addition to the 4.332¢ per kWh energy charge shown above.

MINIMUM CHARGE (Monthly)

The Minimum Charge shall be the Service Charge plus any applicable Adjustments.

ADJUSTMENTS

RESIDENTIAL ~~OFF-PEAK~~ ELECTRIC VEHICLE SERVICE

1. There shall be added to or deducted from the monthly bill, as computed above, a fuel and purchased energy adjustment determined in accordance with the Rider for Fuel and Purchased Energy Adjustment.

2. There shall be added to the monthly bill, as computed above, an emissions-reduction adjustment determined in accordance with the Rider for Arrowhead Regional Emission Abatement (AREA).

3. There shall be added to the monthly bill, as computed above, a transmission investment adjustment determined in accordance with the Rider for Transmission Cost Recovery.

4. There shall be added to the monthly bill, as computed above, a renewable resource adjustment determined in accordance with the Rider for Renewable Resources.

5. There shall be added to the monthly bill, as computed above, a conservation program adjustment determined in accordance with the Rider for Conservation Program Adjustment. The combination of the fuel adjustment and the Conservation Program Adjustment shall be shown on customer's bill as the Resource Adjustment.

6. There shall be added to the monthly bill, as computed above, an emissions-reduction adjustment determined in accordance with the Rider for Boswell Unit 4 Emission Reduction.

7. Plus the applicable proportionate part of any taxes and assessments imposed by any governmental authority which are assessed on the basis of meters or customers, or the price of or revenues from electric energy or service sold.

8. Bills for service within the corporate limits of the City of Duluth shall include an upward adjustment as specified in the Rider for City of Duluth Franchise Fee.

PAYMENT

Bills are due and payable 15 days following the date the bill is rendered or such later date as may be specified on the bill.

CONTRACT PERIOD

Not less than thirty days or such longer period as may be required under an Electric Service Agreement.

SERVICE CONDITIONS

1. The Residential Off-Peak Electric Vehicle Service load shall be separately served and metered and shall at no time be connected to facilities serving Customer's

RESIDENTIAL ~~OFF-PEAK~~ ELECTRIC VEHICLE SERVICE

other loads. To be eligible for this rate, Customer must also take Residential Service under the General, Space Heating, or Seasonal rate.

2. The total connected off-peak load shall not exceed 100 kW.

3. Company shall not be liable for any loss or damage caused by or resulting from any interruption of service except in the case of gross negligence on the part of the Company.

~~4. Customer's load shall be controlled by a switching device approved or supplied by Company and paid for and installed by Customer. Customer must provide a continuous 120 volt AC power source at Company's control point for operation of Company's control equipment.~~

~~5~~4. The rate contemplates that this service will utilize existing facilities with no additional major expenditures. Customer shall pay Company the installed cost of any additional facilities required which are not supported by this rate.

5. On-Peak and Off-Peak Energy Defined: The On-Peak Energy shall be defined as energy taken from 8:00 a.m. to 10:00 p.m., Monday through Friday, inclusive, excluding holidays. The Off-Peak Energy shall include energy taken during all other hours. Holidays shall be those days nationally designated and celebrated as New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas.

Rate Calculation - Residential Electric Vehicle Service

	1/ Billing Units		2/ Unit Charge		Operating Revenues
	350,000,000	x	$0.05098	=	$17,843,000.00000
	209,492,000	x	$0.06735	=	$14,109,286.20000
	200,443,000	x	$0.08168	=	$16,372,184.24000
	98,913,000	x	$0.08445	=	$8,353,202.85000
	123,207,000	x	$0.08937	=	$11,011,009.59000
Totals [a]	982,055,000			[b]	$67,688,682.88000

3/ Energy Charge Adjustment

Off-Peak	On-Peak
-$0.02990	$0.04870

Weighted Average
[b]/[a]= $0.06893

Weighted Average		Energy Charge Adjustment		Off-Peak Energy Charge
$0.06893	+	-$0.02990	=	$0.03903

Weighted Average		Energy Charge Adjustment		On-Peak Energy Charge
$0.06893	+	$0.04870	=	$0.11763

1/ Billing Units were taken from the 2009 retail rate case (Docket # EO15/GR-09-1151)
2/ Current Residential rates - not adjusted for interim rates
3/ Current Energy Charge Adjustment rates from Residential Time-of-Day Service

PILOT RIDER FOR RESIDENTIAL TIME-OF-DAY SERVICE

APPLICATION

Applicable to customers taking service under Residential Service Schedule 20 (General) or Schedule 22 (Space Heating), for single-family dwellings in the following ZIP code areas: 55805, 55806, 55807, 55810, 55811, 55812, 55720, 55733, 55779, 55803 and 55808. All provisions of the Residential Service Schedule shall apply to the Residential Time-Of-Day service under this Rider except as noted below. This voluntary experimental Rider is limited to current participants under this Rider.

RATE MODIFICATION

Customers will be billed at the Residential Service rate, plus the following Energy Charge Adjustments shall apply:

	Energy Charge Adjustment
All Off-Peak kWh	-2.990¢/kWh
All On-Peak kWh	4.870¢/kWh
Critical Peak Pricing kWh	77.000¢/kWh

SERVICE CONDITIONS

On-Peak and Off-Peak Period Defined: The On-Peak Periods shall be defined as 8:00 a.m. to 10:00 p.m., Monday through Friday, inclusive, excluding holidays and Critical Peak Pricing periods as defined below. The Off-Peak Periods shall include all other hours. Holidays shall be those days nationally designated and celebrated as New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas.

Critical Peak Pricing Declaration and Notification: The Company at its sole discretion will determine when to declare a Critical Peak Pricing period. Normal Critical Peak Pricing periods will be declared in the summer during only the following hours: from 12:00 p.m. to 3:00 p.m. of each day that the Company declares to be a critical peak day and in the winter during only the following hours: from 5:00 p.m. to 8:00 p.m. for each day the Company declares to be a critical peak day.

PILOT RIDER FOR RESIDENTIAL TIME-OF-DAY SERVICE

The Company may declare a maximum of 50 hours of Critical Peak Pricing periods per calendar year.

The Company shall make reasonable efforts to notify Customers of normal Critical Peak Pricing periods in advance by 8:00 p.m. on the prior day for normal events and at least four hours prior to emergency events. Normal Critical Peak Pricing periods will generally occur on high demand days for meeting the peak electric loads and system energy requirements of the Company. Emergency Critical Peak Pricing periods will occur at times when the Midwest Independent Transmission System Operator (Midwest ISO or MISO) determines the reliability of the system is at risk and the MISO issues an Energy Emergency Alert Level 2 Event (EEA 2). The maximum duration for an emergency Critical Peak Pricing period will be eight (8) hours.

Critical Peak Pricing period notifications for normal and emergency events will be made electronically via the Company's Web site and email as well as through the Interactive Voice Response ("IVR") automated calling system; however, it is the Customer's responsibility to receive such notice, check the Company's Web site or call a phone number specified by the Company to determine if a critical peak day has been declared.

SPECIAL RULES

1. Any Customer choosing to be served on this Rider thereby waives all rights to any billing adjustment arising from any claim that the bill for the Customer's services would be cheaper on any alternative rate schedule for any period of time.

2. If Customer served under this Rider moves to a different dwelling, the Customer has the option to retain time-of-day billing at the new premise or decide to discontinue time-of-day billing.

PRIVACY PROVISION

The Company follows its standard operational privacy guidelines and practices for all customers, including those participating in this Rider. The Company complies with the State and Federal laws and regulations governing utility customer data use such as the Federal Power Act, the Minnesota Public Utilities Act, and the Minnesota State Statues (such as Chapters 47 and 248 B.).

PILOT RIDER FOR RESIDENTIAL TIME-OF-DAY SERVICE

The Company routinely collects data about and from its Customers through various sources as part of the normal course of providing services. Customer personal information, account and usage details, billing information, and program participation details are secured and retained in internal and online databases in accordance with the Company's standard operational guidelines which maintain administrative, technical, and physical safeguards to protect the privacy and security of the information. These safeguards include but are not limited to encryption, password protection, and secured files and buildings.

Survey and Portal Data:

To participate in the pilot Rate, Customers are asked to set up a user ID and password through a secure on-line portal called the Power of One® Choice Portal. This is an enhanced adaptation of the Company's existing Power of One® Portal offered through its conservation program and features new tools and information about energy usage information for pilot participants. As part of the pilot, the Company asks all customers to complete the Your Home Energy Report ("YHER") questionnaire as an initial step. Results from the questionnaire generate an YHER which serves as an educational tool offered to residential customers as part of the Company's conservation program. This survey asks questions about the Customer's dwelling, including size and age of home, heating and cooling systems, and appliance holdings. In addition to the standard YHER questions, DOE-specified questions relating to education, income, energy awareness, and the pilot program are included for pilot participants. No questions or responses are required. Additional feedback surveys and communications will be delivered through the portal during the course of the pilot.

Survey responses, online portal activity including a daily count of page views, click-through data for websites, and other customer engagement statistics will be collected and reported.

Energy Consumption Data:

Energy consumption and tariff data will be collected during the participation period. This data includes:

a. Date and hour of each day, with time zone;
b. Hourly interval meter usage data for 0-12 months prior to commencement of the Rider (depending upon the date of meter installation relative to start of Rider) and during the participation period;

PILOT RIDER FOR RESIDENTIAL TIME-OF-DAY SERVICE

c. Hourly weather data from the nearest weather station for 12 months prior to commencement of the Rider and during the participation period;
d. Tariff sheet reference (i.e., which tariff sheet(s) each customer was on and the date range that the customer was on that tariff sheet for the 12 months prior to the commencement of the Rider);
e. Start date of billing cycle;
f. Monthly electricity bill (i.e., $ amount) for 12 months prior to commencement of the Rider;
g. Electricity usage from the monthly bill for 12 months prior to commencement of the Rider and during the participation period; and
h. For each event, the type of notification, number of notification channels, number of hours in advance, and success or failure (e.g., for customer #492, for the critical event on 5/03/2012, notified via email – email bounced, notified via phone – no answer).

STATE OF MINNESOTA	)	AFFIDAVIT OF SERVICE VIA
	) ss	ELECTRONIC FILING
COUNTY OF ST. LOUIS	)	

Susan Romans, of the City of Duluth, County of St. Louis, State of Minnesota, says that on the 1st day of **June, 2018** she served Minnesota Power's Compliance Filing in **Docket No. E015/M-15-120** to the Minnesota Public Utilities Commission and the Energy Resources Division of the Minnesota Department of Commerce via electronic filing. The persons on the attached service list were served as requested.

Susan Romans

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	Yes	OFF_SL_15-120_Official
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_15-120_Official
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_15-120_Official
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_15-120_Official
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_15-120_Official
Kimberly	Hellwig	kimberly.hellwig@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-120_Official
Lori	Hoyum	lhoyum@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_15-120_Official
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_15-120_Official
James D.	Larson	james.larson@avantenergy.com	Avant Energy Services	220 S 6th St Ste 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-120_Official
Douglas	Larson	dlarson@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_15-120_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Susan	Ludwig	sludwig@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_15-120_Official
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_15-120_Official
Kevin	Miller	kevin.miller@chargepoint.com	ChargePoint, Inc.	254 E. Hacienda Avenue Campbell, California 95008	Electronic Service	No	OFF_SL_15-120_Official
Herbert	Minke	hminke@allete.com	Minnesota Power	30 W Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_15-120_Official
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_15-120_Official
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-120_Official
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_15-120_Official
Jennifer	Peterson	jjpeterson@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_15-120_Official
Marcia	Podratz	mpodratz@mnpower.com	Minnesota Power	30 W Superior S Duluth, MN 55802	Electronic Service	No	OFF_SL_15-120_Official
Thomas	Scharff	thomas.scharff@versoco.com	Verso Corp	600 High Street Wisconsin Rapids, WI 54495	Electronic Service	No	OFF_SL_15-120_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_15-120_Official
Karen	Turnboom	karen.turnboom@versoco.com	Verso Corporation	100 Central Avenue Duluth, MN 55807	Electronic Service	No	OFF_SL_15-120_Official
Andrew	Twite	twite@fresh-energy.org	Fresh Energy	408 St. Peter Street, Ste. 220 St. Paul, MN 55102	Electronic Service	No	OFF_SL_15-120_Official
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_15-120_Official