

Staff Briefing Papers

Meeting Date	May 27, 2021	Agenda Item **1
Company	Dakota Electric Association E111/M-21-127	
Docket No.	In the Matter of Dakota Electric Association Petition to Implement a Pilot Multi-Family Residential Electric Vehicle Service and Pilot Non-Residential Electric Vehicle Service	
Issues	Should the Commission approve, modify, or reject Dakota Electric Association's proposal for a Pilot Multi-Family Residential Electric Vehicle Service and Pilot Non-Residential Electric Vehicle Service?	
Staff	Hanna Terwilliger hanna.terwilliger@state.mn.us	651-201-2243

Relevant Documents	Date
Dakota Electric, Initial Petition	February 12, 2021

Initial Comments

Clean Energy Groups (Fresh Energy, MCEA, NRDC, Sierra Club, Union of Concerned Scientists, and Plug In America)	March 15, 2021
Department of Commerce	March 15, 2021

Reply Comments

Dakota Electric Association	April 2, 2021
Department of Commerce	April 19, 2021

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The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

Pilot Description

On February 12, 2021, Dakota Electric Association filed a proposal to implement two new pilot services related to electric vehicles. The first would be available for non-residential customers, for example business who wish to install charging. The second would be available to customers who live in multi-family homes, as a separately installed service. Both pilots are based on Dakota Electric’s existing Residential EV Service rate, which the Commission first approved in October of 2012 (Docket 12-874).

Non-Residential Electric Vehicle Service

Dakota proposed to make this rate available to non-residential members receiving service on Schedules 41 (Small General), 46 (General), and 54 (General Service Time-of-Use), but not for multi-family buildings, for which Dakota has proposed a separate rate. The proposed rate schedule and tariff conditions are based on Dakota’s existing Residential EV Service, with some modifications. Members would need to install a separately metered service for EV charging, with the metering setup to be approved prior to the installation of the service. Unlike the residential EV service rate, members would not be required to prove EV registration.¹

The rate design uses the same time periods as the Residential EV service, and does not have a fixed monthly fee or demand charges. Dakota developed the energy charges using the same approach for its Residential EV Service, which includes wholesale power costs, distribution line loss, meter costs, and distribution system costs. For the on-peak period, on-peak wholesale energy, capacity, and transmission costs were included. Dakota summarized this process on pages 7 to 8 of its filing, and included the calculations in an attachment. Participants will have the opportunity to enroll in Wellspring, Dakota’s renewable energy program. Table 1 summarizes the resulting rates.²

Table 1: Non-Residential EV Service Rates

	Energy Charge	Definition of Periods
Off-Peak	\$0.0689	9 pm to 8 am Mon – Fri, all day Weekends and Holidays
On-Peak	\$0.2706	4 pm to 9 pm Mon – Fri
All other times	\$0.1137	8 am to 4 pm Mon – Fri

Multi-Family Residential EV Service

Dakota’s second proposed pilot is for a multi-family specific rate, which would be available as a separate, individually metered service to members living in multi-family housing. Dakota removed the proof of EV registration to enroll in the service, as it is likely building owners will be the ones initiating the rate and not individual EV owners. The building owner would be responsible for installing the separately metered circuit for the new EV Service.³

¹ Dakota, Petition, pp, 6-7

² Dakota, Petition, pp. 7-8

³ Dakota, Petition, p. 9

Dakota proposed to use an identical rate design to its Residential EV Service, as it will be used by residential EV drivers. Members will have the opportunity to enroll in Wellspring. Table 2 outlines the proposed rate design.⁴

Table 2: Multi-Family Residential EV Service Rates

	Energy Charge	Definition of Periods	
Off-Peak	\$0.0755	9 pm to 8 am Mon – Fri, all day Weekends and Holidays	
On-Peak	\$0.1100	4 pm to 9 pm Mon – Fri	
All other times	\$0.1377	Jun-Aug	8 am to 4 pm Mon – Fri
	\$0.1238	all other months	

Party Comments

Two parties commented on Dakota’s proposal, the Department and the Clean Energy Groups (CEG)⁵.

CEG recommended Commission approval, pointing to the numerous benefits EV can provide to customers, ratepayers, and society. In particular, CEG supported Dakota’s time-of-use rate design for both proposals that exclude demand charges. The Department similarly supported approval of the pilot proposals, with minor reporting and pilot term modifications.

Non-Residential Pilot

The Department requested Dakota clarify whether “participants in the Non-Residential EV Service pilot are offering EV charging to the broader public as part of a participants’ course of business, or whether this service is to be used exclusively for the participant’s EV(s).” If participants are offering EV charging to third parties, the Department requested Dakota outline how it would track end use rates charged to customers by third parties.⁶

In reply, Dakota indicated it anticipated participants in the non-residential EV rate would offer charging under a variety of scenarios, including fleet, employee, and public charging. Given the variety of use cases, Dakota did not plan to track rates charged to end use customers.⁷

In response to Dakota, the Department recommended Dakota track end use rates offered to customers by pilot participants, consistent with what was required in prior pilots offered by Minnesota Power, Otter Tail Power, and Xcel Energy.⁸

Multi-Family Pilot

On the Multi-Family pilot, the Department expressed concern that requiring building owners to pay for the separate service could limit participation even when there are residents that desire to have onsite EV charging. Therefore, it requested Dakota discuss whether this was indeed a barrier, and if there were methods to address it via rebates or other incentives to encourage

⁴ Dakota, Petition, p. 10

⁵ Fresh Energy, Minnesota Center for Environmental Advocacy, Natural Resources Defense Council, Sierra Club, Union of Concerned Scientists, and Plug In America

⁶ Department, Initial, p. 3

⁷ Dakota, Reply, p. 2

⁸ Department, reply, p. 3

multi-family building owner participation. The Department also requested Dakota provide additional information on whether its new AGi (Advanced Grid Infrastructure) meters could submeter individual EV charging use to a common EV meter at a multi-family building.⁹

Dakota responded due to the service and meter configurations at multifamily locations, the installation of a separately metered service will likely be similar in cost to submetering charging load. Additionally, for its AGi meters, implementing additional submetering would have its own costs associated with the administrative and billing processes, which would likely negate cost savings from eliminating the second service requirement.¹⁰

While the Department had lingering concerns that the costs of installing additional metering may limit pilot enrollment, it concluded Dakota's outreach efforts and assistance in directing building owners towards applicable rebates for Level 2 chargers would help address these barriers.¹¹

Revolt and Wellspring Programs

The Department asked why Dakota did not propose to enroll customers in either rate in the existing Revolt program, which retires wind RECs for the life of the vehicle for no cost.¹² Dakota explained its new services are not tied to individual vehicles, therefore it would be difficult to implement for the pilot programs.¹³

CEG requested Dakota report on the number of participants choosing to enroll in Wellspring during the pilots.¹⁴ In reply comments, Dakota indicated it could provide the number of participants under each program electing to enroll in Wellspring.

In its reply comments, the Department agreed with CEG's recommendation to provide data on Wellspring participation, and recommended Dakota also provide data on the number of participants on the EV-1 and Storage Rates (Dakota's existing residential EV options) who participate in Revolt.¹⁵

Energy and Demand Data

CEG recommend Dakota include daily/seasonal load profiles in its annual reporting "so that stakeholders can better understand how participants' charging behaviors align with TOU price signals as well as the degree of seasonal variation in behavior."¹⁶

In reply comments, Dakota indicated as an alternative to CEG's request for load profiles, it "provide the relative amount of energy that is purchased in each energy pricing component for both proposed rates."

⁹ Department, Initial, p. 4

¹⁰ Dakota, Reply, p. 3

¹¹ Department, Reply, p. 4

¹² Department, Initial, p. 7

¹³ Dakota, Reply, p. 3

¹⁴ CEG, Initial, pp. 2-3

¹⁵ Department, Reply, p. 6

¹⁶ CEG, Initial, pp. 2-3

The Department supported requiring information on energy and demand data, and suggested that as Dakota implements its AGi meters, if more granular information is available, it provide that data.¹⁷

Commission's General EV Order

The Department requested the Commission clarify whether Order Points 6b (evaluation criteria) and 16 (a list of topics for the filing to address) from the Commission's February 1, 2019 EV Order apply to Dakota Electric.¹⁸ Dakota Electric provided information on both order points in its reply comments in response to the Department's request.

Staff Analysis

Staff recommends that if Dakota is amenable to providing the information in Order Points 6b and 16 voluntarily in future filings, no further clarification is necessary at this time.

Pilot Definition

The Department questioned why Dakota termed the two programs "pilots" given they do not have term or participant limits. Therefore, the Department requested Dakota "propose a clear pilot duration and a reasonable limit on the number of participants allowed to enroll in both pilot programs." Dakota provided the following response to the Department's concern:

This recommendation poses some challenges. Dakota Electric desires to gain consumption and load data to help refine these initial pilot rates. If we specify a duration for the pilot and don't have enough participants, we won't have enough data to analyze. We also don't know the number of EV chargers that could be installed at each participant site, which makes selecting a participation limit challenging. To address the DOC recommendation, Dakota Electric proposes that the pilot designations for these two services remain in place until at least the Cooperative's filing of the next general rate case.

In reply comments, the Department found Dakota's suggestion of leaving the pilot in place until the Coop's next rate case, likely in 2024, where it could evaluate the next steps for the rates. The Department also recommended in the interim Dakota provide annual information on enrollment in the two pilot rates (**Decision Option 4**).

Staff Analysis

Staff modified the language under several reporting recommendations to align with language required by the Commission in other EV dockets, captured in **Decision Option 3**. Parties original language is included in Appendix A.

Staff draws the Commission's attention to **Decision Options 3c and 3d**, which pertains to data on energy and demand. Dakota, CEG, and the Department all recommended various language around the granularity of reporting on energy and demand profile data. Staff's new proposed language requests the more detailed load profile data, but allows Dakota to file the energy and demand data by time period in the utility's tariff if not available. This is identical to reporting

¹⁷ Department, Reply, p. 7

¹⁸ Department, Reply. p. 5

language used for numerous EV pilots proposed by Xcel Energy, Otter Tail Power, and Minnesota Power. Staff believes this should balance CEG's, Dakota's, and the Department's recommendations on energy and demand profile data.

Staff notes some of the Department's recommendations were provided in reply comments, therefore the Commission may wish to confirm with Dakota that it is willing and able to provide the requested data in the format noted below.

Decision Options

1. Approve Dakota Electric Association's pilot proposal for a Non-Residential EV Service. *(Dakota, CEG, Department)*
2. Approve Dakota Electric Association's pilot proposal for Multi-Family Residential EV Service. *(Dakota, CEG, Department)*
3. Require Dakota Electric Association include the following information in its voluntary annual report filed in Docket E111/M-12-874, with a copy filed in this docket, E111/M-21-257. Where applicable, include data in spreadsheet format (.xlsx). The Commission delegates authority to the Executive Secretary to establish final reporting format and to clean up any inconsistencies between various existing reporting requirements in individual dockets.
 - a. Number of participants in the Non-Residential EV Service *(Department, modified by staff)*
 - b. Number of participants in the Multi-Family EV Service pilot *(Department, modified by staff)*
 - c. Level of demand (in kilowatts) resulting from electric vehicles during each hour of the day, or if not yet available, during each time period in a utility's time differentiated tariff *(Staff modification of CEG, Department, Dakota)*
 - d. Consumption of electricity (in kilowatt-hours) by electric vehicles during each hour of the day, or if not yet available, during each time period in a utility's time differentiated tariff *(Staff modification of CEG, Department, Dakota)*
 - e. Number of pilot participants under each rate electing to enroll in Wellspring. *(CEG, Department)*
 - f. Number of residential participants in the EV-1 rate and storage rate enrolled in Revolt *(Department)*
 - g. Number of site hosts who maintain default pass-through rates, and electricity prices charged to end use customers for site hosts who opt-out of default pass-through rates *(Department, modified by staff)*
 - h. An evaluation of whether there are sufficient participants in each program *(Department)*
4. At the time of its next rate case, require Dakota to evaluate whether the pilot programs should continue, expand to a full offering, or end the pilot programs and transition its participants to a different rate offering. *(Department)*
5. Where not otherwise noted, require Dakota Electric to submit a compliance filing consistent with the Commission's decision in this matter no later than 30 days after the issuance of the Order.

Appendix A: Original Party Language

Department

1. The Department recommends that Dakota track the rate design offered to third parties by participants in the Non-Residential EV Service pilot and report how many participants are offering the default rate design in Dakota's annual EV filing.

Reflected in Decision Option 3g

2. The Department recommends that Dakota provide enrollment information for both the Non-Residential EV Service and Multi-Family EV Service pilot program and evaluate whether it has sufficient participants in each pilot program in its annual EV filing.

Reflected in Decision Options 3a, 3b, and 3h

3. The Department recommends that, at the time of its next rate case, Dakota evaluate whether the pilot programs should continue, expand to a full offering, or end the pilot programs and transition its participants to a different rate offering.

Decision Option 4

4. The Department recommends that Dakota provide the relative percentage of residential members participating in the present EV-1 rate and storage rate who have enrolled in the Revolt program, as well as the relative percentage of multi-family and non-residential EV participants that have signed up for the Wellspring program in its annual EV filing.

Dakota Electric's language, Reflected in Decision Options 3e and 3g

5. The Department recommends that Dakota provide detailed consumption information in Dakota's annual EV filing consistent with CEGs' recommendation if detailed consumption information can be collected by Dakota through its AGi effort.

Reflected in Decision Options 3c and 3d

CEG

1. We recommend that Dakota Electric track participant enrollment in applicable renewable energy rate option(s) and report on number of participants and any electricity cost difference between the groups as part of its voluntary annual EV filing

Reflected in Decision Option 3e and 3g

2. We also request that Dakota Electric Share aggregated daily and annual load profiles for the two pilot rates in the annual EV filing.

Reflected in Decision Options 3c and 3d

Dakota

1. Provide the relative amount of energy that is purchased in each energy pricing component for both proposed rates

Reflected in