NorthWestern Energy
Delivering a Bright Future

May 11, 2016

Chairman Keith Regier
Energy & Telecommunications Interim Committee
Legislative Services Division
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Chairman Regier and members of the Energy & Telecommunications Interim Committee, I am regretfully unable to be at your Kalispell meeting. I need to attend a meeting at the Montana Public Service Commission at the same time I expected to be at the ETIC meeting on Friday.

Accordingly, I have prepared the enclosed summary, which represents NorthWestern Energy's ("NorthWestern") update on the Net Metering policy discussions between NorthWestern and the Montana Renewable Energy Association ("MREA") in my absence.

Sincerely,

Pat Corcoran

Pat Corcoran
NorthWestern Energy

Enclosure

Cc: Sonja Nowakowski, Todd Everts

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MONTANA ENERGY AND TELECOMMUNICATION INTERIM COMMITTEE
May 13, 2016

LAYING THE FOUNDATION FOR THE ESTABLISHMENT OF FUTURE DISTRIBUTED ENERGY RESOURCES PUBLIC POLICIES.

This document represents NorthWestern Energy's ("NorthWestern") update on Net Metering policy discussions between NorthWestern and the Montana Renewable Energy Association ("MREA"). NorthWestern's participation has generally been guided by the following Definitions and Goals and Objectives.

Definitions

Distributed Energy Resources ("DER") consists of a range of smaller-scale and modular devices designed to produce electricity, typically on-site behind a customer's meter. They normally include renewable energy technologies (e.g., solar panels and wind turbines), and can include energy storage devices (e.g., batteries). DER offers utility customers the ability to generate a portion or all of their electricity needs, with any surplus sold to or otherwise disposed of by the electric utility.

DER Metering types typically include:

- Net Energy Metering ("NEM") – a single meter that measures the net amount of a customer's monthly electricity use; that is a customer's electric use offset by the customer's generation output;
- Dual Metering that measures a customer's electricity use and production independently including, for example, a:
    - Smart Meter – a single intelligent meter that can measure a customer's instantaneous usage, usually in 15 minute/hourly intervals; and,
    - Smart Inverter - a single intelligent inverter that can measure a customer's instantaneous generation output, usually in 15 minute/hourly intervals.

DER System Impact, Costs and Benefits Analysis – an electric utility system analysis that measures the timing of a DER customer's usage and DER generation throughout the day, month and year in order to better understand the impact of DER on the utility delivery system; which, in turn, will also help verify and properly allocate the costs and benefits associated with DERs on a utility's system.

Purpose

The eventual establishment of new and/or refined Montana public policy that properly addresses DER Interconnection Standards, Metering Requirements and the future allocation of

appropriate cost and benefits, to a new and separate class of DER utility customers and customers who do not implement DER ("Nonparticipants").

DER Goals and Objectives

Goals

Safe and Reliable Systems

- On the utility's delivery system; and,
- For the utility customer.

Reformative

- Leads to long-term and sustainable public policies;
- Facilitates changes in how the utility and its customers interact; and,
- Proactively promotes the development of universal agreement for a sustainable future for DER on an integrated utility distribution grid.

Equitable

- Ensures DER services are provided in a transparent, competitive, and cost effective manner;
- Supported by appropriate cost recovery from all customers, including those with DER, for the services they are receiving from the Utility's distribution grid;
- All parties are considered and no costs are transferred to the utility or inappropriately to the Nonparticipants; and,
- Easily administered.

Measurable and Controllable

- Time of Use Smart metering and systems (e.g. data collection, billing) are required in order to separately measure a customers' usage, and the amount of DER generation; and,
- DER systems are controllable by the Utility in order to maintain the safety and reliability of its delivery system.

Objectives

- Reform Montana's existing Net Metering policy as one component of a larger DER framework;
- Implement Interconnection Standards and Rules that ensure safe and reliable utility delivery and customer DER systems;
- Require metering systems that measure and gather the detailed customer and generation interval metered data needed to support and quantify DER service;
- Conduct a DER Cost Benefit Analysis supported by the level of detailed data necessary to properly quantify the costs and benefits;
- Implement separate DER tariffs and rates in order to better reflect the cost structure for providing electric service to a new class of DER customers;
- Allocate costs and benefits such that DER services can be justified to Nonparticipants;
- Meet customers' changing utility service needs and expectations; and,

- Ensure that utility companies are also able to offer products and services on both sides of the meter, including DER.

Settlement Reviews, Discussions and Conclusions

NorthWestern Energy and the Montana Renewable Energy Association have attempted to fully analyze, discuss and consider various changes and/or alternatives to the existing Montana NEM Statutes. These discussions are friendly, cooperative and forthright, and although guided by the primary interests of the respective parties, both sides recognized the need to give up something, in order to get something (i.e. "Give to Gets") going forward.

Both parties remain interested in working together in a pro-active and collaborative way and continuing to explore alternatives, rather than engaging in the form of the battle that took place during the 2015 Montana Legislative Session on Net Netering.

However, the parties continue to struggle with finding any approach that varies materially from the existing NEM Statute, and benefits one side or the other, without a detailed DER Cost Benefit Analysis. The lack of any detailed data specific for NorthWestern's existing NEM customer installations or any other data specific to NorthWestern's service territory has stymied that effort.

Such an analysis is difficult and very subjective without detailed customer load and generation interval metered data. Such data is not available through NEM which is currently used by NorthWestern's net metering customers. As described above, this single meter approach simply nets customer generation with their usage, and only produces a single monthly figure. The analysis requires Dual Metering allowing for the accumulation of detailed customer usage and generation output data (in 15 minute or hourly intervals) for all DER customers, in order to properly analyze the costs, and benefits that exists from the DER over time.

At this time we continue discussions around the following three objective from above, to see if we can frame an alternative approach or process:

- Implement Interconnection Standards and Rules that ensure safe and reliable utility delivery and customer DER systems;
- Require metering systems that measure and gather the detailed customer and generation interval metered data needed to support and quantify DER service;
- Conduct a DER Cost Benefit Analysis supported by the level of detailed data necessary to properly quantify the costs and benefits;

NorthWestern is in the process of simulating such DER detailed data using similar hourly customer load research usage data gather for other purposes, and the hourly solar output data from its Beck Hill Solar Demonstration Project by Deer Lodge. The initial results of that analysis will be available in the next few weeks.

Interest in DER, particularly customer on-site and community-scale solar are continually increasing, and it is very important that Montana develop a forward looking DER policy. The impacts of DER, including solar DER, on the electric grid, as well as its true costs and benefits,

need to be better understood in order to properly establish and implement balanced DER public policies going forward.