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# Ten-Year Plan

NORTH DAKOTA

Prepared for the North Dakota Public Service Commission

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*June 30, 2020*

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# North Dakota Ten-Year Plan

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June 30, 2020

NorthWestern Corporation d/b/a NorthWestern Energy ("NorthWestern") submits this Ten-Year Plan for North Dakota facilities in accordance with the rules and regulations of the North Dakota Public Service Commission governing the siting of energy conversion and transmission facilities pursuant to Chapter 49-22 of the North Dakota Century Code.

## **Section A: Existing Energy Conversion Facilities<sup>1</sup>**

1. NorthWestern owns 10% of the 427-MW Coyote Generating Station, which is located near Beulah in Mercer County. This plant began commercial operation May 1, 1981. The other owners of the plant are Otter Tail Power Company (35%), Minnkota Power Cooperative, Inc. (30%), and Montana-Dakota Utilities Co. (25%). Otter Tail operates the plant. Please refer to Otter Tail's Ten-Year Plan<sup>2</sup> for additional data.
2. NorthWestern does not plan to remove any generating facilities in North Dakota from service during the next ten years.

## **Section B: Proposed Energy Conversion Facilities under Construction**

None in North Dakota. See Section J for proposed facilities in South Dakota.

## **Section C: Proposed Energy Conversion Facilities on Which Construction is intended within the Ensuing Five Years**

None.

## **Section D: Proposed Energy Conversion Facilities during the Next Ten-Year Time Period**

None.

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<sup>1</sup> An "electric energy conversion facility" is a plant, addition, or combination of plant and addition designed for or capable of wind generation exceeding one-half MW or generation by any other means exceeding 50 MW. NDCC § 49-22-03(5).

<sup>2</sup> Otter Tail's 2018 North Dakota Ten-Year Plan was filed in Docket No. PU-18-274.

## **Section E: Existing Electric Transmission Facilities<sup>3</sup>**

1. NorthWestern's transmission facilities in North Dakota are:
  - A segment of 115-kV line from Ellendale south to the South Dakota border; and
  - Approximately the first 23.1 miles of the 345-kV line from the Coyote Plant towards Center. This line was put into service in 1980.
2. NorthWestern does not project the retirement of any transmission facilities rated 115-kV or above within the next ten-year time period.

## **Section F: Proposed Electric Transmission Facilities on which Construction is intended within the Ensuing Five Years**

None.

## **Section G: Proposed Electric Transmission Facilities during the Next Ten-Year Time Period**

None.

## **Section H: Regional Coordination**

In South Dakota, NorthWestern Energy is a transmission-owning member of the Southwest Power Pool (SPP), located in Zone 19, a.k.a. the Upper Missouri Zone ("UMZ"). NorthWestern transferred functional control of its South Dakota electric transmission facilities to SPP on October 1, 2015, and continues to update the qualifying facilities under the SPP Tariff on an annual basis.

NorthWestern has been coordinating and planning with other systems since 1950, resulting in interconnections, interchange contracts, and the joint construction of facilities. This joint planning effort with neighboring utilities continues today, as NorthWestern is an active participant in the UMZ Coordination Group ("UMZCG"), which comprises entities with load and transmission facilities registered under Zone 19.

Prior to SPP's April 1, 2020 deadline, the UMZCG submitted zonal planning criteria for Zone 19. SPP will use the zonal planning criteria for all transmission-owning members in Zone 19 in its

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<sup>3</sup> An "electric transmission facility" is an electric transmission line and associated facilities with a design of more than 115 kV. NDCC § 49-22-03(6).

Integrated Transmission Planning (ITP) process for the 2021 planning year and beyond. The UMZCG worked together for more than 12-months to develop the zonal planning criteria, and will now realize the benefits of all SPP qualifying transmission within the zone being studied under the same planning criteria.

NorthWestern also actively participates in the SPP Integrated Transmission Planning (ITP) process, which analyzes reliability, economic, and policy needs within the region and along the seams of neighboring Regional Transmission Organizations (“RTOs”).

In North Dakota, NorthWestern has interconnection agreements with Otter Tail Power Company and Montana-Dakota Utilities Co. NorthWestern is a co-owner of the 427-MW Coyote Generating Station and its associated bulk transmission facilities with Minnkota Power Cooperative, Inc., Otter Tail Power Company, and Montana-Dakota Utilities Company. Similar joint ventures in both South Dakota and Iowa permit NorthWestern and the other owners to realize economies in construction of large generation stations and to provide services required by our customers through fewer facilities with minimal environmental impact.

## **Section I: Environmental Impact**

Environmental considerations continue to be a critical aspect of NorthWestern’s planning process. We are committed to providing utility services that reliably and cost-effectively meet our customers’ needs, while protecting the quality of the environment. We are vigilant in monitoring the impacts of our operations on the environment, in complying with the spirit, as well as the letter, of environmental laws and regulations, and in responsibly managing the natural resources under our stewardship.

### **NorthWestern’s Statement of Environmental Policy**

NorthWestern Energy's policy is to provide cost-effective, reliable, and stably priced energy while being good stewards of the natural resources and complying with environmental regulations. We apply the following environmental principles in our day-to-day business:

1. Our business practices reflect a respect for, and a commitment to, sustainability and the long-term quality of the environment.
2. One of our priorities is being good stewards of natural and cultural resources at our hydroelectric projects.
3. We comply with the spirit as well as the letter of environmental laws and regulations.
4. Environmental issues and impacts are an integral part of our planning, operating and maintenance decisions.
5. We promote our customers' efforts to conserve energy.
6. We support providing energy through non-carbon emitting and renewable resources when consistent with our statutory requirement to provide cost-effective energy.

7. We strive to minimize the generation of wastes and promote the reuse and/or recycling of materials.
8. We seek to continuously improve our environmental compliance and stewardship.
9. We embrace a team culture where positive environmental stewardship and compliance are encouraged, mentored, and rewarded.

Our contractors and consultants must comply with this policy when working for or representing NorthWestern Energy.

## Section J: Projected Demand for Service

### *Historical Growth and Long-Range Forecast*

The ten-year historical growth of NorthWestern's loads, all of which are geographically located in eastern South Dakota, is as follows:

<b>Year</b>	<b>Peak Demand (MW)</b>	<b>Increase (%)</b>	<b>Increase (MW)</b>
<b>2010</b>	311	8.7	25
<b>2011</b>	341	9.6	30
<b>2012</b>	329	(3.5)	(12)
<b>2013</b>	295	(10.3)	(34)
<b>2014</b>	302	2.4	7
<b>2015</b>	306	1.3	4
<b>2016</b>	331	8.2	25
<b>2017</b>	329	(.006)	(2)
<b>2018</b>	330	.003	1
<b>2019</b>	333	.009	3

The projected future growth for the next ten-year time period is as follows:

<b>Year</b>	<b>Peak Demand (MW)</b>	<b>Increase (%)</b>	<b>Increase (MW)</b>
<b>2020</b>	338.8	-1.2%	-4.2
<b>2021</b>	338.8	0.0%	0.1

<b>Year</b>	<b>Peak Demand (MW)</b>	<b>Increase (%)</b>	<b>Increase (MW)</b>
<b>2022</b>	338.9	0.0%	0.1
<b>2023</b>	339.0	0.0%	0.1
<b>2024</b>	339.1	0.0%	0.1
<b>2025</b>	339.2	0.0%	0.1
<b>2026</b>	339.3	0.0%	0.1
<b>2027</b>	339.4	0.0%	0.1
<b>2028</b>	339.5	0.0%	0.1
<b>2029</b>	339.6	0.0%	0.1

These projections are based upon historical trends and known changes for a 50/50 forecast for NorthWestern’s South Dakota service territory based on guidance from SPP.

*Description of Generation Facilities to Meet the Projected Demand*

NorthWestern owns 23.4% of the Big Stone Plant in northeast South Dakota. Other owners of the 475-MW coal-fired facility are Montana-Dakota Utilities and Otter Tail. This facility came online in May 1975.

NorthWestern owns 8.7% of Neal Electric Generating Unit 4, located near Sioux City, Iowa. NorthWestern is one of 13 owners in this 644-MW coal-fired facility. This unit came online in July 1979.

NorthWestern installed a simple-cycle 52-MW combustion turbine addition within its South Dakota service territory in Aberdeen, South Dakota. This unit came online in April 2013.

NorthWestern purchased the 80-MW Beethoven Wind Farm, located south of Tripp, South Dakota, from Beethoven Wind, LLC, on September 25, 2015. This wind farm went into commercial operation in May 2015.

NorthWestern added eight 1-MW diesel fired mobile reciprocating engine (RICE) units to its portfolio in 2019. The Aberdeen Siebrecht Substation and the Yankton Northwest Substation will each store and interconnect four units when the units are not being utilized for local reliability needs throughout other areas of the NorthWestern system.

NorthWestern is adding 60-MW of gas-fired internal combustion engines at Huron, South Dakota, as a replacement to the 58.7-MW of units that were destroyed by fire in January 2019. The new gas-fired resource is expected to be online by the end of 2021.

### *Power Purchase Agreements*

NorthWestern entered into a Power Purchase Agreement (“PPA”) for 25 MWs of wind energy from the Titan I Wind Project located by Ree Heights, South Dakota. This wind farm went into commercial operation in December 2009.

NorthWestern entered into a PPA for 19.5 MWs of wind energy from the Oak Tree Wind Farm located by Clark, South Dakota. This wind farm went into commercial operation in December 2014.

NorthWestern entered into a PPA for 20 MWs of wind energy with CED Aurora County Wind, LLC, located by White Lake, South Dakota. This wind farm went into commercial operation in September 2018.

NorthWestern entered into a PPA for 20 MWs of wind energy with CED Brule County Wind, LLC, located by Kimball, South Dakota. This wind farm went into commercial operation in September 2018.