



June 3, 2014

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SOUTH DAKOTA PUBLIC
UTILITIES COMMISSION

Ms. Patricia Van Gerpen
Executive Director
South Dakota Public Utilities Commission
State Capitol Building
Pierre, South Dakota 57501

Subject: NorthWestern Energy-South Dakota Ten-year Biennial Plan

Dear Ms. Van Gerpen:

Pursuant to the rules of the South Dakota Public Utilities Commission Energy Facilities Plans ARSD 20:10:21, NorthWestern Energy-South Dakota, a Division of NorthWestern Corporation, hereby files its Ten-year plan. Ten copies of this Ten-year Plan are being filed with the Commission with enclosures. Should the Commission wish additional copies of the Plan or Notices of Filing to be supplied by NorthWestern, please inform us.

Very truly yours,

Dennis L. Wagner
Director-South Dakota
Production Operations
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O 605-353-7503
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cc: William Rhoads
Ray Brush
Bleau LaFave
Cory Huber

enclosure(s)

NORTHWESTERN ENERGY – SOUTH DAKOTA
Ten-year Plan
June 3, 2014

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Northwestern Energy, a Division of NorthWestern Corporation ("Northwestern") submits this "Ten-year Plan" pursuant to SDLC 49-41B. The plan follows the general format prescribed in ARSD 20:10:21.

20:10:21:04 Existing Energy Conversion Facilities-Internal Generation (Peaking Units)

BIG STONE PLANT

The Big Stone Plant is located near Big Stone City, Grant County, South Dakota. The Plant is a joint venture owned by Northwestern Energy, Otter Tail Power Company and Montana-Dakota Utilities Co. Northwestern's ownership and share of the output of the plant is 23.4% or 111,150 KW (MAPP accreditation). Otter Tail Power Company is, by contract, Operating agent for the three partners. The information requested in ARSD 20:10:21:04 is provided in Otter Tails' Ten-year Plan.

NEAL #4

The Neal #4 Plant is located near Sioux City, Woodbury County, Iowa. This plant is a joint venture owned by fourteen power suppliers. MidAmerican Energy Company is the principal owner and operating agent for the plant. NorthWestern's share of ownership and capacity entitlement is 8.681% (approximately 56,110 kilowatts). NorthWestern's portion of the plant is now accredited in MAPP at about 55 MW.

1. Location: Near Port Neal in Woodbury County, Iowa approximately 10 miles south of Sioux City, Iowa.
2. Type: Coal-fired, steam-driven turbine - generator.
3. Net Capacity: (Total Plant) 644,000 KW.
4. Water Source: Missouri River

Annual Use: 265,440 acre-feet
Annual Consumption: 299 acre-feet

5. Fuel Type and Source: Sub-Bituminous Coal from Cordero Rojo, Belle Ayr and Caballo in Wyoming.

Annual Fuel Consumption:

2,444,839 tons in 2003
2,840,121 tons in 2004
2,447,045 tons in 2005
2,748,751 tons in 2006
3,125,389 tons in 2007
2,686,512 tons in 2008
2,431,599 tons in 2009
2,986,479 tons in 2010
2,540,497 tons in 2011
2,594,676 tons in 2012
1,895,099 tons in 2013

6. Projected Date of removal from Service and Reason Therefore: The life expectancy of the plant is more than 30 years, which puts the projected removal from service date well beyond the range of this Ten-year-plan.

Coyote No. 1

NorthWestern Energy is one of four power suppliers participating in the Coyote electric generating plant in the vicinity of the lignite mines near Beulah, North Dakota. With a 10% share in the ownership of the plant, NorthWestern is entitled to 10% of the plant's net capacity, or 42,700 KW (MAPP accreditation). Otter Tail Power Company has a 35% share in the ownership of the plant and is, by contract, the operating agent for the owners. The information requested in ARSD 20:10:21:04 is provided in Otter Tail's Ten-year Plan.

20:10:21:04 Existing Energy Conversion Facilities – Internal Generation (Peaking Units)
1, 2 and 3

**NORTHWESTERN ENERGY - SD/NE
ELECTRIC PLANT CAPACITIES
AS OF DECEMBER 31, 2013**

LOCATION	SAP LOCATION	TYPE	FUEL	GENERATOR NAME PLATE RATING (KW)	2013 CAPABILITY			COMMERCIAL DATE
					SUMMER (5/13-10/13)	WINTER (11/12 - 4/13)	AT TIME OF PEAK	
<u>Aberdeen, SD*</u>								
Unit #1	2ABABN0040	Combustion Turbine	FO	28,800	20,520	28,000	20,520	1978
Unit #2	2ABABN0042	Combustion Turbine	NG/FO	82,235	52,000	60,000	52,000	2013
<u>Clark, SD**</u>								
Unit #1	2HUCLK0060	Diesel	FO	2,750	2,600	2,720	2,600	1970
<u>Faulton, SD**</u>								
Unit #1	2HUFLK0061	Diesel	FO	2,750	2,500	2,500	2,500	1969
<u>Huron, SD*</u>								
Unit #1	2HUHUR0064	Combustion Turbine	NG/FO	15,000	11,030	14,500	11,030	1961
Unit #2	2HUHUR0062	Combustion Turbine	NG/FO	42,925	43,700	49,000	43,700	1991/92
<u>Yankton, SD*</u>								
New Plt. #1	2YKYNK0080	Diesel	NG/FO	2,276	2,170	2,170	2,170	1974
New Plt. #2		Diesel	FO	2,750	2,750	2,750	2,750	1974
New Plt. #3		Diesel	NG/FO	6,500	6,500	6,500	6,500	1975
New Plt. #4		Diesel	FO	2,000	2,000	2,000	2,000	1963
<u>Mobile Unit**</u>								
Unit #2		Diesel	FO	1,750	1,750	1,750	1,750	1991
Unit #3		Diesel	FO	2,500	2,000	2,000	2,000	2009
* Manned less than 24 hours								
** Unmanned								
Emergency Use Only Engines - As of May 1, 2013, these engines were not retrofitted to meet the RICE/NESHAP compliance standards. Redfield is scheduled to be retired in 2014 and Highmore in 2015.								
<u>Highmore, SD**</u>								
Unit #1		Diesel	FO	675	560	600	560	1948
Unit #2	2HUHMR0063	Diesel	FO	1,360	1,250	1,330	1,250	1960
Unit #3		Diesel	FO	2,750	2,630	2,750	2,630	1970
<u>Redfield, SD**</u>								
Unit #1		Diesel	FO	1,360	1,300	1,320	1,300	1962
Unit #2	2HURED0065	Diesel	FO	1,360	1,300	1,320	1,300	1962
Unit #3		Diesel	FO	1,360	1,300	1,320	1,300	1962

Net Generation, Aggregate Total of Peaking Units

For 2010, 200 Mega Watt Hours
For 2011, 409 Mega Watt Hours
For 2012, 1,881 Mega Watt Hours
For 2013, 19,955 Mega Watt Hours

4. Water Source – city, water and wells**5. Fuel consumption for 2010**

(#2 Ruby-Red Ultra Low Sulfur – 15 PPM)
Fuel Oil – 57,601 gallons
Natural Gas – 24,147 MCF

Fuel consumption for 2011

(#2 Ruby-Red Ultra Low Sulfur – 15 PPM)
Fuel Oil – 103,435 gallons
Natural Gas – 17,783 MCF

Fuel consumption for 2012

(#2 Ruby-Red Ultra Low Sulfur – 15 PPM)
Fuel Oil – 65,069 gallons
Natural Gas – 44,354 MCF

Fuel consumption for 2013

(#2 Ruby-Red Ultra Low Sulfur – 15 PPM)
Fuel Oil – 252,142 gallons
Natural Gas – 201,686 MCF

6. Retirements:

Redfield, SD will retire in 2014 (3.9 MW's) Units #1, #2 and #3 (Diesel).

Highmore, SD will retire in 2015 (4.4 MW's) Units #1, #2 and #3 (Diesel).

No other units are being planned for retirement as known at this time in the near future.

20:10:21:05 Proposed Energy Conversion Facilities

1. NorthWestern has entered into a PPA agreement for 19 MW's of Wind Energy with Oak Tree at a Wind Farm located by Clark, South Dakota. The Wind Farm is expected to go into commercial operation by the end of 2014.
2. NorthWestern has entered into a PPA agreement for 80 MW's of Wind Energy with B&H Wind at a Wind Farm located south of Tripp, South Dakota. The Wind Farm is expected to go into commercial operation by the end of 2014.

Future Combustion Turbines

1. General anticipated location and reasons for such selection: The most likely locations will be inside our service territory connected to either the 34.5 or 115 kV voltage system. The sites will be chosen to maximize the cost-effective reliability of the system.
2. Probable type and nameplate capacity: Simple Cycle combustion Turbine, 60 MW nameplate capacity per unit.
3. Projected annual production in megawatthours: Annual system generation is expected to be 13,000 MWH.
4. Proposed water source and point of withdrawal, estimated maximum and rate of withdrawal, estimated maximum and annual use and consumption in acre feet: Water used for NOx control injection: City water supply preferred point of withdrawal undetermined, estimated maximum 7 acre-feet/year, annual use (normal) 3 acre feet/year, 0.2 acre-feet/day average rate of withdrawal (when running) 0.1 acre-feet/day, estimated maximum annual use and consumption 7 acre-feet/year.
5. Proposed fuel type and source, estimated maximum and annual consumption of fuel, and if known, proposed means for transporting fuel to the facility: Natural gas or Fuel Oil, maximum fuel consumption (13,000 MWH) 156,000 MMBtu Natural gas, Pipeline.
6. Proposed plans for waste disposal and monitoring of emissions and wastes, as known: Waste water to evaporation pond. Automated fuel flow data loggers will be required.
7. Description of anticipated associated facilities: Mitchell or Yankton, South Dakota.
8. Projected operating life from fuel source in this state: N/A.
9. Projected date of removal from service: Beyond the scope of the report.
10. Total estimated Capital: \$65 million.

20:10:21:06 Existing Transmission FacilitiesType 115 KV - AC

- a. Ellendale Substation about one mile west of Ellendale, North Dakota to "A" tap about two miles west of Aberdeen, South Dakota - 37.9 miles total. Approximately 33 miles of this line are in the State of South Dakota.

- b. "A" tap about two miles west of Aberdeen to the Seibrecht Substation about one mile south of Aberdeen - 7.5 miles.
- c. "A" tap about two miles west of Aberdeen to the Aberdeen City Substation in Aberdeen, South Dakota - 3.2 miles.
- d. Seibrecht Substation to the Western Area Power Administration's Groton Substation located south of Groton, South Dakota - 25.9 miles.
- e. Seibrecht Substation to Redfield Substation located in Redfield, South Dakota - 36.8 miles.
- f. Seibrecht Substation to Aberdeen Industrial Park Substation located in Aberdeen, South Dakota - 5.3 miles.
- g. Redfield Substation to Western Area Power Administration Huron Substation approximately one mile south of Broadland, South Dakota - 30.1 miles.
- h. Western Area Power Administration Broadland Substation to West Park Substation located near the northwest edge of Huron, South Dakota the original circuit - 9.1 miles.
- i. Western Area Power Administration Broadland Substation to West Park Substation second circuit - 10.3 miles.
- j. West Park Substation to Mitchell Substation located in Mitchell, South Dakota - 55 miles.
- k. Mitchell Substation to Northern States Power Company's Grant Substation located west of Sioux Falls - 47 miles. NorthWestern owns 23.3 miles of the line from Mitchell Substation to the Northern States Power Company's interconnection point at the McCook County line.
- l. Mitchell Substation to WAPA Letcher Jct. Sub located north of Mitchell – 14.43 miles.
- m. Mitchell Substation to the Tripp Junction Substation located 5.5 miles south of Tripp, South Dakota - 41.5 miles.
- n. Tripp Junction Substation to Menno Junction Substation located four miles north of Lesterville, South Dakota - 21.8 miles.
- o. Menno Junction Substation to WAPA Utica Jct. Sub located one mile north and one mile east of Lesterville – 3.3 miles.
- p. WAPA Utica Jct. Sub to Yankton Jct. Sub located four miles northwest of Yankton, SD – 15.9 miles.

Type 230 KV - AC

Big Stone Plant Substation near Big Stone City, South Dakota to Blair Substation near Gary, South Dakota - 33 miles. NorthWestern owns 18.2 miles of the line from the Big Stone Plant Substation south, with the Otter Tail Power Company owning the remainder of the line to the Blair Substation.

Projected Date of Removal

The projected removal date of these lines is beyond the period covered by this Plan.

20:10:21:07 Proposed Transmission Facilities

NorthWestern proposes two additional transmission at 115 KV during the period covered by this Plan.

Aberdeen Industrial Park Sub - Aberdeen City Sub

1. General anticipated location and reasons for such selection: The line is anticipated to be located on the north and east sides of Aberdeen, load growth in the industrial park area (and in the rest of Aberdeen) requires expansion of the existing 115 kV supply and reinforcement of the existing 34.5 kV subtransmission system.
2. Probable type and proposed transmission voltage: Single pole and horizontal post construction -- 115 kV.
3. Description of anticipated associated facilities: Bays for a Circuit Breaker and disconnects at the expanded Aberdeen City substation; circuit breaker and disconnects at the Aberdeen Industrial Park Substation.
4. Projected date of removal from service: Beyond the scope of this report.
5. Total estimated capital cost: Line \$2.0 million; associated substation facilities \$6.8 million.

Yankton East Plant – 115kV Sub

1. General anticipated location and reasons for such selection: The line will tap off the existing Utica Jct. – Yankton Jct. 115 KV line and run east and south around the north end of Yankton. Estimated length about 10 miles. Load growth in the Yankton area requires expansion of the existing 115 kV supply and reinforcement of the existing 34.5 kV subtransmission system.

2. Probable type and proposed transmission voltage: Single pole horizontal post construction -- 115 kV.
3. Description of anticipated associated facilities: Circuit Breakers and bay, 115/34.5 kV transformer, fuses and disconnects at the Yankton East Plant Substation.
4. Projected date of removal from service: Beyond the scope of this report.
5. Total estimated capital cost: Line \$4.8 million; associated substation facilities \$16.3 million.

20:10:21:08 Coordination of Plans

NorthWestern coordinates its plans with other utilities serving the region through joint ventures, as described in the Energy Conversion Facilities section, through joint transmission studies and through the MAPP regional models.

20:10:21:09 Single Regional Plans

In the future it is expected that a single regional plan will be developed by the Dakotas-Montana Power Suppliers Group.

20:10:21:10 Submission of Regional Plan

Montana-Dakota Utilities, Northern States Power, Otter Tail Power, Minnkota Power Cooperative, Minnesota Power and Northwestern Public Service formed the Dakotas-Montana Power Suppliers Group in 1979. The objective of the Group is to provide regional planning coordination to the respective State regulatory bodies.

20:10:21:11 Utility Relationships

NorthWestern is a participant in the Mid-Continent Area Power Pool (MAPP). All major transmission and generation planning performed by NorthWestern is coordinated on a regional basis through MAPP.

NorthWestern entered into a capacity agreement with Basis Electric Power Cooperative for the following years and amounts:

2012 – 5 MW
2013 – 11 MW
2014 – 15 MW
2015 – 19 MW

All four years of the agreement are for the summer months of April through September.

20:10:21:12 Efforts to Minimize Adverse Effects

NorthWestern complies with all laws and regulation governing Environmental Impact Statements, applications, permits, rules and procedures pertaining to energy conversion facilities and transmission facilities in attempts to identify, minimize or avoid all adverse effects.

20:10:21:13 Efforts Relating to Load Management

NorthWestern has several means available to assist in load control or reduction. Programs include customer load research, off Peak Irrigation rates, time of day commercial rates and a proposed Demand Side Management (DSM) program. The DSM program is intended to assist both residential and commercial customers as described below.

Residential DSM Programs

For the residential customer, NorthWestern's DSM program intends to utilize home energy audits and customer education strategies. The home energy audits may consist of a home visit by an energy audit professional. The in-home visits are followed up with the generation of a report regarding the recommendations for home energy efficiency improvements. Customer education to heighten awareness of energy efficiency can be accomplished through a number of opportunities including, but not limited to, the company's website, bill inserts, advertising campaigns, and through personal communication with our customers at area fairs, home shows, agriculture-related events, or weatherization events hosted in our local offices.

Commercial DSM Programs

DSM for commercial customers includes rebates for equipment and efficient lighting products. There are several lighting programs available to commercial customers to encourage reduction of lighting load. Future programs may include an electric motor program, Demand Response program and customer initiated programs that promote conservation and renewable energy resources.

Customer Load Research

If the customer requests ways to control their demand NorthWestern will temporarily install load research metering to monitor their usage patterns. After several weeks of monitoring, data is provided to the customer. A report showing intervals as small as 15 minutes is provided to the customer. The usage patterns are discussed with the customer as well as possible causes.

Irrigation

Time of use rates are available to irrigation customers. Customers are given a low cost rate to run their systems over-night as opposed to daytime operation. In addition, NorthWestern has the ability to curtail usage during the day if customers choose to run on excessively hot days. The rate design and curtailment ability help the Company control its demand.

Time of use rate

Similar to the Irrigation rates, an on-peak / off-peak rate is available to commercial customers who can limit their use to mostly off-peak time periods.

Reduction of use and peak demand will help lower the customer's bill, in addition to lowering company peaks. By reducing the company peaks, generation construction can be reduced or delayed. This in turn reduces or delays future rate increases to customers.

20:10:21:14 List of Reports

Not applicable.

20:10:21:15 Changes in Status of Facilities

Any changes in status of the energy conversion facilities should be described by the Project Managers in their Ten-year plans.

20:10:21:16 Projected Electric Demand

The projected annual peak demand for our total system, which is entirely in-state, is shown below.

<u>Year</u>	<u>Demand (MW)</u>	<u>Increase (Pct.)</u>	<u>Increase (MW)</u>
2014	330		
2015	334	1.0	4
2016	338	1.0	4
2017	342	1.0	4
2018	346	1.0	4
2019	350	1.0	4
2020	354	1.0	4
2021	358	1.0	4
2022	362	1.0	4
2023	366	1.0	4
2024	370	1.0	4

These projections are based upon historical trends of peak loads and reflect expected demand during times when weather patterns result in a peak design day condition of 100° Fahrenheit throughout NorthWestern's service territory

20:10:21:17 Changes in Electric Energy

The projected energy requirements by volume (MWH) and the percentage increase for each year are shown below.

<u>Year</u>	<u>Annual Energy (MWH)</u>	<u>Increase (Pct.)</u>
2013 Actual	1,564,096	
2014	1,620,200	3.6
2015	1,696,500	4.7
2016	1,713,500	1.0
2017	1,730,600	1.0
2018	1,747,900	1.0
2019	1,765,400	1.0
2020	1,783,000	1.0
2021	1,800,900	1.0
2022	1,818,900	1.0
2023	1,837,100	1.0
2024	1,855,400	1.0

20:10:21:18 Map of Service Area

(See attached map)

20:10:21:19 Individual Utility Plans

This Ten-year Plan is submitted by NorthWestern Energy, a division of NorthWestern Corporation. If additional information or clarification is required, contact:

Dennis L. Wagner
 Director-South Dakota
 Production Operations
 NorthWestern Energy
 600 Market St. W.
 Huron, South Dakota 57350-1500

Telephone: 605-353-7503

NOTICE OF FILING

Please take notice that on June 3, 2014 NorthWestern Energy-South Dakota, a Division of NorthWestern Corporation filed a Biennial Ten-year Plan with the South Dakota Public Utilities Commission pursuant to the rules of the South Dakota Public Utilities Commission Energy Facilities Plans ARSD 20:10:21. Notice of the filing of this plan is given as required by section 23 to the following designated governmental agencies or bodies:

1. aeronautics Commission;
2. agriculture Department;
3. attorney General;
4. commerce and Consumer affairs department;
5. cultural preservation office;
6. economic and tourism development department;
7. education and cultural affairs department;
8. energy policy office;
9. engineer, state;
10. environmental protection department;
11. game, fish and parks department;
12. geologist, state;
13. Governor;
14. health department;
15. indian affairs commission;
16. labor department;
17. legislative research council;
18. natural resource development department;
19. planning bureau;
20. public safety department
21. school and public lands; and
22. transportation department.

NORTHWESTERN ENERGY

A handwritten signature in black ink, appearing to read "D-L Wagner", with a long horizontal flourish extending to the right.

Dennis L. Wagner, Director-South Dakota
Production Operations