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OTTER TAIL POWER COMPANY

July 1, 2016

Mr. Darrell Nitschke
Director of Administration/Executive Secretary
North Dakota Public Service Commission
State Capitol
600 East Boulevard, Dept. 408
Bismarck, ND 58505-0408

RE: Otter Tail Power Company's Ten-Year Plan – June 2016

For your information, we have enclosed a copy of Otter Tail Power Company's Ten-Year Plan, public version, which has been filed with the South Dakota Public Utilities Commission.

Sincerely yours,

Nathan Jensen
Senior Resource Planner

nlo
Enclosure

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SOUTH DAKOTA

TEN-YEAR

BIENNIAL PLAN

Report RP16-__
Resource Planning Department
June 2016

By: Nathan Jensen

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INTRODUCTION

In accordance with the rules and regulations of the South Dakota Public Utilities Commission Energy Facility Plans ARSD 20:10:21, Otter Tail Power Company (Otter Tail or the Company), hereby files its Biennial Ten-Year Plan. This filing is structured to coincide sequentially with the Commission rules as defined in the Form for Plans, ARSD 20:10:21:25 Section 4 through Section 18, therefore, coincide with ARSD 20:10:21:04 to ARSD 20:10:21:18, respectively.

Notice of Filing of the plan is being sent to each of the state agencies and officers designated in Section 23 of the Energy Facility Plans.

SECTION 4 -- EXISTING ENERGY CONVERSION FACILITIES

A. Big Stone Plant

1. The Big Stone Plant is located in Grant County, South Dakota, approximately two miles west-northwest of Big Stone City, 1-3/4 miles from Big Stone Lake, and approximately two miles north of U.S. Highway 12. The site is in the central portion of Section 12, Township 121 N, Range 47 W.

2. The turbine-generator was built by Westinghouse and has a nameplate capacity of 414,590 kW at the generator terminals with inlet steam conditions of 2,400 psig, 1000 degrees F, a condenser pressure of 3.25 inches HgA, and 0% makeup.

3. Big Stone Unit #1 has a cruise rating of 475 MWs using the sub-bituminous coal. Net generation for the year 2014 was 2,692,593 MWh, and for 2015 was 1,498,688 MWh.

4. The Big Stone Plant appropriates its entire supply of water from Big Stone Lake. During calendar year 2014, 2,752 acre-feet of water was appropriated, and during 2015, acre-feet was appropriated.

5. The Big Stone Plant continued to burn sub-bituminous coal in 2014 and 2015. The amount of sub-bituminous coal burned in 2014 was 1,726,039 tons and 1,101,054 tons in 2015.

   Big Stone Plant burned alternative fuels from 1989 to 2009. Deliveries of alternative fuels peaked in the mid to late 90s. After a thorough review of the Big Stone Plant use of alternative fuels, the plant decided to end the program at the end of 2009. Several factors led Big Stone to this decision. Capital repairs were required for the handling facility, primarily new walking floors. Supplies of the various fuels have dwindled, with BSP being the outlet of last resort in many cases. Maintenance costs for routine upkeep remained consistent, even with a lower number of tons moving through the facility. Tire derived fuel continued to create problems in the fuel conditioners, resulting in higher than expected maintenance costs. Finally, new EPA requirements for combusting non-hazardous secondary materials made it difficult to determine which fuels can be burned. The plant intends to mothball the handling system. If other opportunities present themselves in the future, they will be evaluated.

   The owners of Big Stone Plant have approved the addition of environmental retrofits to the plant. The plan calls for selective catalytic reduction (SCR) to reduce emissions of nitrogen oxide and a dry-scrubber to reduce sulfur dioxide.

Also, the installation of Activated Carbon Injection (ACI) for the control of mercury emissions. Nitrogen dioxide, sulfur dioxide and mercury are expected to be reduced by 80 to 90 percent. Construction began in 2013 and the goal is to have the equipment operational in late 2015.

6. Otter Tail does not have a projected date of removal from service for the Big Stone unit.

7. An ethanol plant built adjacent to Big Stone Plant became operational in March 2003. Big Stone Plant provides steam, fire protection, and access to its rail line for transporting the ethanol.

8. Otter Tail has modeled Big Stone Plant emissions to evaluate the impact of plant emissions on Class I air quality areas under the US Environmental Protection Agency's Regional Haze Best Available Retrofit Technology rule. More information can be found under Section 12 of this report.

NOTE: Big Stone Plant is jointly owned by Otter Tail, Montana-Dakota Utilities Co., and Northwestern Public Service. Otter Tail serves as the operating agent for the unit.

B. Lake Preston Peaking Plant

1. The Lake Preston Peaking Plant is located in the city of Lake Preston, South Dakota, west of the intersection of 4th Street NW and Preston Street.
2. The generating unit consists of a G.E. frame 5 fuel oil fired combustion turbine connected to an electrical generator with a rated capacity of 23.95 MW at 59 degrees F. ambient temperature.

3. In 2014, the unit had net generation of 749 MWh, and 171 MWh in 2015.

4. Water source does not apply for this unit.

5. In 2014, 110,513 gallons of #2 fuel oil were consumed and in 2015, 7,160 gallons were consumed.

6. Otter Tail does not have a projected date of removal for this unit.

SECTION 5 -- PROPOSED ENERGY CONVERSION FACILITIES

The Company's 2016-2031 Integrated Resource Plan includes the addition of the following resources:

1. A 100 MW Utility Scale wind farm in 2018. The location is yet to be determined.

2. A 100 MW Utility Scale wind farm in 2020. The location is yet to be determined.

3. A 30MW Utility Scale solar farm. The location is yet to be determined.

4. A 248 MW Frame Natural Gas CT located **[PROTECTED DATA BEGINS... ...PROTECTED DATA ENDS]**

SECTION 6 -- EXISTING TRANSMISSION FACILITIES

Otter Tail currently owns five high-voltage transmission line sections in South Dakota described as follows:

1. A section of the Canby – Toronto 115 kV line starting from a point on the South Dakota line in Section 34, Township 114, Range 47, to a substation one mile west of Toronto, a distance of 13.1 miles, all in Deuel County. This is a wood-pole, H-frame line. No date has been projected for the removal of this line.

2. A section of the Big Stone – Gary 230 kV line starting from a point 0.76 miles north of County Road #18 in Section 4, Township 118, Range 47, to a 230 kV substation four miles north of Gary in Section 16, Township 116, Range 47, a distance of 14.96 miles, 5.76 miles in Grant County and 9.2 miles in Deuel County. This is a wood-pole, H-frame line. No date has been projected for the removal of this line.

3. A section of the Big Stone – Hankinson 230 kV line starting at a point on the South Dakota line in Section 26, Township 129, Range 50, to a point 0.3 miles north of the Roberts County Highway #23 in Section 11, Township 127, Range 50, a distance of 22.62 miles, all in Roberts County. This is a wood-pole, H-frame line. No date has been projected for the removal of this line.

4. A 115 kV line from Toronto to Hetland starting at the Toronto Substation in Section 24, Township 113, Range 49 (approximately 1 mile west of Toronto) and continuing generally south and west terminating at the Hetland Substation in Section 28, Township 111, Range 53 (approximately 1 mile east and 1 mile north of Hetland), a total

distance of 38.8 miles, with about 3 miles in Deuel County, 32 miles in Brookings County, and 4 miles in Kingsbury County. This is a single pole line composed of both wood and steel structures. No date has been projected for the removal of this line.

5. A percentage of the CAPX2020 Brookings County – Hampton 345 kV line starting on the South Dakota line in Section 34, Township 112, Range 47, and continuing generally south and then west terminating at the Brookings County Substation in Section 25, Township 111, Range 48, a total distance of 10.75 miles, all in Brookings County. This is a single pole line composed of steel structures. No date has been projected for the removal of this line.

SECTION 7 -- PROPOSED TRANSMISSION FACILITIES

Northeastern South Dakota Transmission Enhancements

The joint transmission system in northeastern South Dakota and west central Minnesota is in need of upgrades due to load growth in the region. The transmission system in this area serves Otter Tail Power Company, Central Power Electric Cooperative, Great River Energy, and East River Electric Power Cooperative customers. The 41.6 kV system serving customers in this area is supported by the following sources: 115 kV transformer at Summit (owned by Western Area Power Administration), a 230 kV transformer at Browns Valley (owned by Otter Tail Power Company), a 230 kV transformer at Hankinson (owned by Central Power Electric Cooperative), and a 115 kV transformer at Graceville (owned by Great River Energy). Load in this area has grown to a level which requires upgrades in this area. Through joint planning efforts among the load serving entities in this area, the preferred transmission plan for supporting the increased load in this area consists of the following projects:

- Replace Summit 115/41.6 kV transformer (increase size from 8 MVA to 25 MVA)
- Install a new 115/69/41.6 kV substation in Roberts County, South Dakota
- Install a new 69/41.6 kV substation near Grenville, South Dakota

The three steps in this transmission plan will be completed in sequence as listed above since each project will "set the table" for the next. Otter Tail and WAPA reached an agreememt to replace the transformer at Summit which was energized in August of 2015. Additionally, the Roberts County 115/69/41.6 kV substation is expected to be located near Claire City, South Dakota and have joint ownership between WAPA, EREPC, and Otter Tail. The Grenville substation will be a joint project between Otter Tail and EREPC and will signal completion of the three step plan. This transmission plan will require close coordination between WAPA, Otter Tail, and EREPC to ensure appropriate timing for load serving enhancements in this region.

The Roberts County substation and Grenville substation are currently included within Appendix B of the MISO Transmission Expansion Planning (MTEP) efforts. Once agreements are reached

with neighboring utilities it is anticipated that the remaining projects will move into Appendix A for MISO Board of Director approval. Details for the Summit transformer are included in MTEP as project 3660, facility 6821 with details of the Roberts County project being included under MTEP project 3659, facility 6820. The Grenville project can be found within MTEP under project 3661, facility's 6822 and 6823.

Ellendale – Big Stone South (Big Stone) – Brookings 345 kV Project

As part of the 2011 MISO Transmission Expansion Plan (MTEP11) approval, the MISO Board of Directors endorsed a portfolio of transmission projects across the MISO footprint called the Multi-Value Projects (MVPs). The MVPs have been identified and recommended to meet public policy requirements within the MISO states through 2026.

The MVP portfolio approved by the MISO Board of Directors includes 18 distinct transmission projects across MISO, with OTP being involved in three of these projects, namely: Brookings – Hampton 345 kV line (as described in the CapX section), Big Stone – Ellendale 345 kV line, and Big Stone – Brookings 345 kV line. The MTEP11 report included a total portfolio cost of these 18 MVPs of approximately $5.2 Billion.

As mentioned above, two 345 kV projects approved in the 2011 MISO Transmission Expansion Plan (MTEP11) connect in the vicinity of Big Stone, South Dakota, namely Big Stone South – Ellendale 345 kV and Big Stone South – Brookings 345 kV. To facilitate the development of these two MVPs, it is necessary to develop a new 345 kV switchyard near Big Stone. After a review of the existing Big Stone 230/115 kV substation, it has become evident that physical limitations at the site will not allow for an adequate expansion for these future 345 kV terminations and transformers. Therefore, OTP is planning to build a new "Big Stone South" substation approximately 1.5 miles south of the existing Big Stone substation. The new Big Stone South substation and the existing Big Stone substation (i.e. "Big Stone Plant") are planning to be connected by two 230 kV lines to electrically connect the Big Stone Plant substation to the Big Stone South substation. The Big Stone South substation is planning to include two new 345/230 kV transformers and adequate space for the new 345 kV terminals into and out of the Big Stone area with room for future expansion. The existing Big Stone Plant substation will also require minor modifications to accommodate the additional 230 kV terminations for the new 230 kV lines down to the Big Stone South substation. The new 345 kV lines into and out of the Big Stone area (Ellendale and Brookings) will terminate at the new Big Stone South substation. This configuration was included within the models that were used by MISO in studying the MVPs during MTEP11.

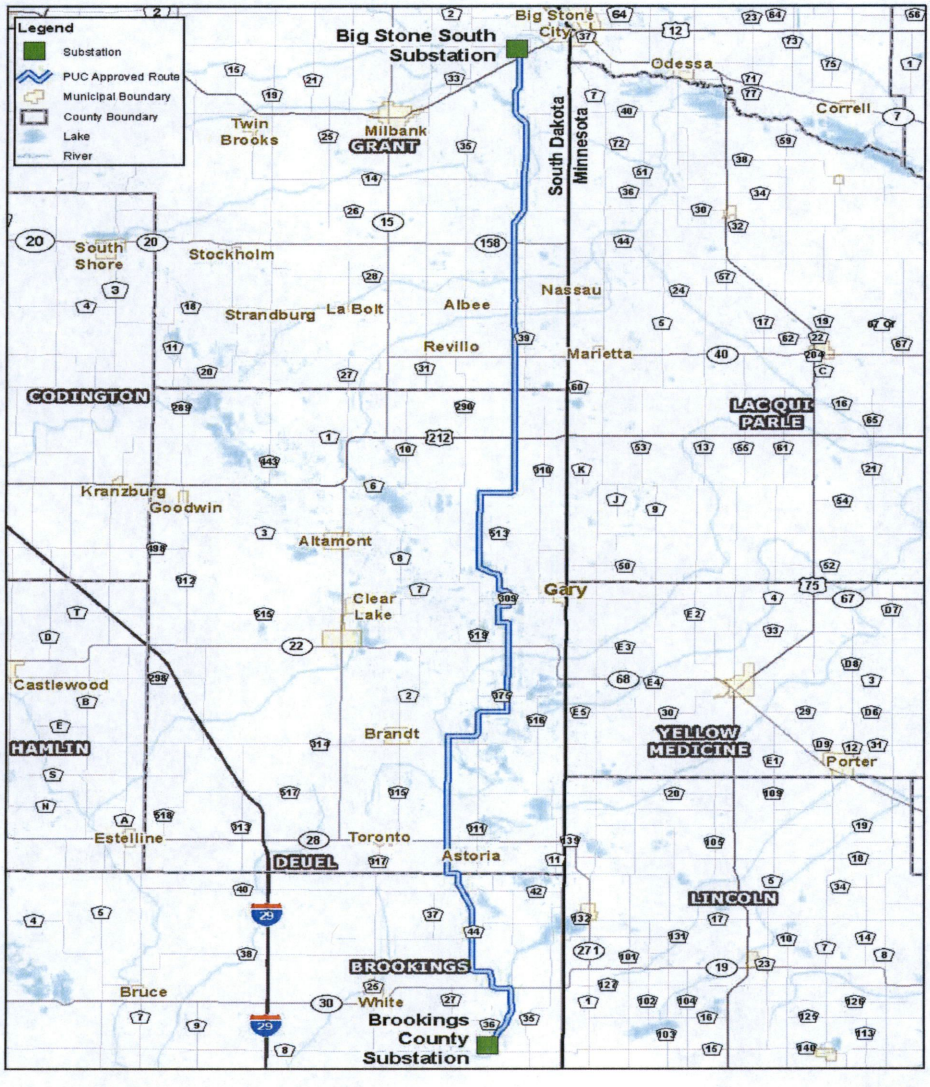
The MVPs being developed in the Big Stone area include three distinct projects, which are Big Stone Plant – Big Stone South 230 kV, Big Stone South – Ellendale 345 kV, and Big Stone South – Brookings 345 kV. The Big Stone Plant – Big Stone South 230 kV portion of the

project is viewed as the first critical development in the Big Stone area in order to develop the new 345 kV lines that emanate from Big Stone.

Otter Tail and Xcel Energy (XCEL) are joint owners on the new 345 kV MVP transmission project that will run from Big Stone South to Brookings. This project will be approximately 70 miles long and Otter Tail will be a fifty percent owner in this project. Major components of the project will involve the 345 kV line itself, as well as a new termination at the Big Stone South substation and the Brookings County substation. The in service date for this project is currently scheduled for the fall season of 2017. The Big Stone South – Brookings 345 kV project will help deliver low cost generation resources from western MISO to other parts of the MISO footprint. Therefore, this project is scheduled to be completed after the Brookings – Hampton 345 kV project.

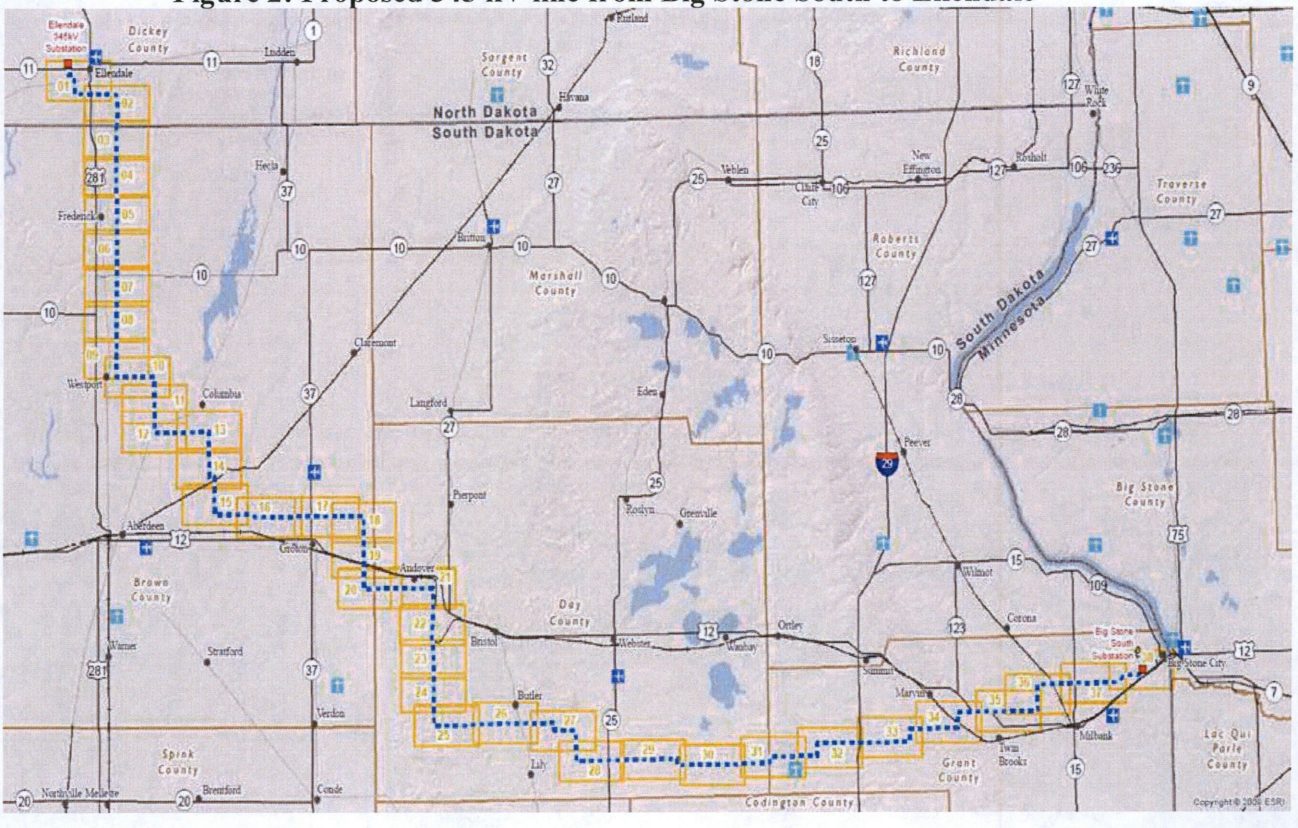
The 2011 MISO Transmission Expansion Plan (MTEP11) included details about this project by referencing the project under number 2221.

Figure 1: Proposed 345 kV line from Brookings to Big Stone South



Lastly, Otter Tail is working collaboratively with MDU to develop the new 345 kV MVP transmission project from Big Stone South to Ellendale. The major facilities of this project include the terminations and substation modifications at Big Stone South and Ellendale, as well as the 345 kV line itself, which is expected to be around 165 miles long. Otter Tail will also be a fifty percent owner in this project. The MTEP11 included details about this project under reference number 2220. The anticipated in service date for this project is during the fourth quarter of 2019.

Figure 2: Proposed 345 kV line from Big Stone South to Ellendale



Big Stone Area Generation Interconnection Projects

Otter Tail continues to see a lot of activity within South Dakota related to increased interests in new wind generation development, large load expansions related to the ag-processing industry and energy transport industry (oil pipelines). As these projects are further developed, it is possible that additional transmission will be required. Further study will be required to determine the optimum transmission plan and will be coordinated through local and regional transmission planning processes.

Approval of Multi-Value Projects and updated NERC Reliability Standards have resulted in substantial changes in the assumptions that are used in the on-going interconnection studies at MISO. Otter Tail will continue to monitor these study efforts at MISO in order to determine the optimal transmission plan for new interconnection projects.

SECTION 8 -- COORDINATION OF PLANS

Otter Tail conducts transmission planning in a coordinated environment involving neighboring utilities, load serving entities, state regulatory commissions and members of the public to collaborate in the planning process.

Regional Coordination through the MISO Process

As a transmission-owning member of MISO, Otter Tail participates in various transmission planning efforts, the most significant of which is the annual MISO Transmission Expansion Planning ("MTEP") process. The MTEP process involves a variety of planning analyses to determine the performance of the transmission system for a wide variety of conditions. Through the MTEP process, MISO, with input from various stakeholders, evaluates the system for both reliability and economic needs.

Local planning of Otter Tail facilities less than 100 kV is primarily coordinated on a subregional level. Otter Tail's locally planned projects are then reviewed by MISO and may become part of the MTEP. Developing local transmission plans at a subregional level and rolling them up to MISO provides for regional coordination of local transmission plans, which leads to transmission projects being built in a coordinated manner to address the transmission needs of the larger region. This coordination for identifying new transmission projects also augments the larger region by providing for a transmission plan that maximizes the benefits of the new projects and, in many cases, reduces the number of new transmission projects that are needed than if transmission planning was done solely on an individual basis. Regional coordination of local transmission plans also results in study efficiencies by keeping a broader group of utilities, states, and stakeholders informed through the transmission planning process.

During the course of the MTEP process, MISO seeks opportunities to coordinate or consolidate, where possible, individually defined transmission projects into more comprehensive cost-effective developments. MISO coordinates with Transmission Owners and considers the input from various stakeholder groups (through Subregional Planning Meetings, Planning Subcommittee Meetings, and Planning Advisory Committee Meetings) to develop expansion plans to meet the needs of the transmission system. This multi-party collaborative process allows for all projects with regional and inter-regional impacts to be analyzed for their combined effects on the transmission system. Moreover, this collaborative process is designed to ensure the most efficient and cost-effective transmission expansion is developed, while giving consideration to the inputs from all stakeholders.

Additionally, subregional, state, and non-MISO coordination is necessary because the Otter Tail transmission system is highly interconnected with neighboring non-MISO transmission owners. The Otter Tail transmission system is nearly the farthest, most western border of the MISO

footprint; therefore, it is interconnected with several transmission-owning utilities that are not members of the MISO.

Regional Coordination with non-MISO Transmission Owners

Otter Tail participates in the CapX 2020 (Capacity Expansion by 2020) effort, which is a joint initiative of transmission-owning electric utilities in Minnesota and the surrounding region created on the basis of expanding the electric transmission grid to ensure electric reliability for several years into the future. The CapX 2020 utilities (including cooperatives, municipal utilities and investor-owned utilities) collaboratively assess the current transmission system and plan for the necessary future transmission infrastructure investments. This collaborative process and the planning studies performed as part of this effort are coordinated with the MISO.

In addition to the CapX 2020 effort, Otter Tail also has Integrated Transmission Agreements (ITA) with Minnkota Power Cooperative and Great River Energy. These agreements provide for joint use of transmission facilities in common areas of service and require that the utilities jointly plan and coordinate additional facilities required for the common service area. Furthermore, Otter Tail has agreements for joint use of transmission and interconnection with Xcel Energy (formerly Northern States Power), East River Electric Cooperative, Montana-Dakota Utilities Co., Manitoba Hydro, Northwestern Energy, and Western Area Power Administration. These agreements were all precipitated through joint studies and coordination of facilities required to provide high reliability of service at the minimum cost. Facilities proposed and committed through this local process become part of the MTEP and are also coordinated with the MAPP.

Summary of Regional Coordination

As discussed above, Otter Tail coordinates extensively with its neighboring utilities to share system plans and identify system enhancements through MISO and through local participation in coordinated transmission planning (such as CapX 2020 and the ITAs). Otter Tail's participation in the MISO study process provides coordinated planning for the entire 15-state MISO footprint while participation in various working groups and committees provides for coordinated planning on a subregional basis, which includes both utilities that are MISO members and utilities that are not MISO members.

SECTION 9 -- SINGLE REGIONAL PLANS

The proposed facilities mentioned in Section 7 comprise a part of the MISO Transmission Expansion Plan.

SECTION 10 -- SUBMISSION OF REGIONAL PLAN

MISO compiles a MTEP report on an annual basis. The regional planning process within MISO concludes with a final report that is ultimately approved by the MISO Board of Directors. Currently, MTEP14 is underway with MTEP13 being the last approved report available on the MISO website for public viewing at:

https://www.misoenergy.org/PLANNING/TRANSMISSIONEXPANSIONPLANNING/Pages/MTEP13.aspx

SECTION 11 -- UTILITY RELATIONSHIPS

Refer to Section 8 for a listing of the coordinated efforts in which Otter Tail is involved.

As mentioned previously, Otter Tail has Integrated Transmission Agreements (ITA) with several utilities. These agreements provide for joint use of transmission facilities in common areas of service. These agreements require joint studies and coordination of facility additions to provide high reliability of service at the minimum cost. Otter Tail has interconnections and transmission agreements in South Dakota with the following utilities: Northwestern Energy, Montana-Dakota Utilities Co., East River Electric Cooperative, Missouri River Energy Services, and Western Area Power Administration.

SECTION 12 -- EFFORTS TO MINIMIZE ADVERSE EFFECTS

On June 15, 2005, the United States Environmental Protection Agency (EPA) signed the Regional Haze Best Available Retrofit Technology (BART) rule. The rule requires emissions reductions from designated sources that are deemed to contribute to visibility impairment in Class I air quality areas. Modeling was conducted in accordance with a protocol approved by the South Dakota Department of Environment and Natural Resources (DENR). The modeling indicated that the Big Stone Plant contributed to visibility impairment and was consequently required to install BART controls.

Based on the South Dakota DENR's BART determination and the final South Dakota Regional Haze State Implementation Plan (SIP) approved by the EPA, during a 2015 outage Big Stone installed Selective Catalytic Reduction (SCR) and separated over-fire air to reduce NOx emissions, dry flue gas desulfurization to reduce SO_2 emissions, and a new baghouse for particulate matter control. With the addition of activated carbon injection for mercury control, the AQCS project will also achieved compliance with EPA's Mercury and Air Toxics Standards

(MATS) rule. Big Stone received a one year compliance extension with MATS from the DENR such that the MATS compliance date for Big Stone was April 16, 2016. Construction of the facilities required began in March 2013. The current project cost is estimated to be approximately $384 million (Otter Tail's share would be $207 million). The AQCS project was declared commercial on December 29, 2015.

Condenser cooling at Big Stone is accomplished by using a 340-acre closed-cycle cooling pond. Use of such a pond eliminates any potential problems created by plant thermal discharges to public bodies of water.

In 1980, construction was completed on the $13.5 million Big Stone Plant wastewater management project, including a brine concentrator. The purpose of the brine concentrator is to remove the accumulated dissolved solids from water recycled in the closed-cycle cooling pond by a process similar to that employed in a distillery. Benefits of the brine concentrator include reduced handling of plant wastewater and improved cooling pond water quality.

Dikes surround oil storage tanks and larger chemical storage facilities to prevent contamination of large areas of soil or water should rupture of a storage tank occur. All underground petroleum storage tanks have been removed and replaced where necessary with above ground storage tanks. All above ground tanks are in compliance with existing requirements of the DENR.

Otter Tail will continue to cooperate with the South Dakota Public Utilities Commission and the DENR in an effort to site and operate future power plants and transmission lines in an environmentally acceptable manner, contingent with the needs of a reliable supply of electrical energy.

Social and Economic Effects

Social and economic effects are very closely related. In fact, they are often referred to as "socioeconomic" effects. Because of their close relationship, the socioeconomic effects will be discussed jointly.

From experience gained in past construction projects, such as Big Stone Plant and Coyote Station located near Beulah, North Dakota, Otter Tail has been made aware of the socioeconomic effects of large construction projects. Pre-construction and post-construction socioeconomic monitoring was conducted in the vicinity of Big Stone in order to evaluate the effect of a large construction force on such things as the business community, housing, and essential services such as hospital and dental care. This type of monitoring was also employed in conjunction with the construction of Coyote Station. Socioeconomic effects were evaluated as part of the Big Stone II Energy

Conversion Facility Site Permit application process. Otter Tail agreed to implement the recommendations of the Local Review Committee if construction of Big Stone II had proceeded.

In order to aid the economy in the area of construction, it has been Otter Tail's policy to utilize the local labor force and local contractors as much as possible. Local contractors also provide essential services during plant operations.

Health Effects

Various governmental regulations, including, for example, primary and secondary ambient air quality standards and water quality standards, have been promulgated to protect the public health and welfare. Otter Tail will comply with these regulations. In addition, Otter Tail contributes to organizations, such as the Edison Electric Institute, which work to identify potential health and environmental problems as they relate to the electric utility industry.

Public Safety

Otter Tail is very concerned about public safety. All readily accessible substations and major plant sites are fenced to prevent unescorted access by the public who might be unfamiliar with electric energy or associated generation facilities.

In addition, Otter Tail complies with all applicable construction codes for the construction of electrical transmission lines and generation facilities.

Otter Tail also inspects its facilities periodically to help safeguard against failures of vital components and prevent any unnecessary exposure to the general public. Included in the inspections are electric transmission lines, circuit breakers, capacitors, and transformers.

Historic or Aesthetic Preservation Effects

Aesthetic effects have been considered in the design of transmission lines and power plants and will be considered in the design of future facilities. Transmission line routing considerations include visual effect on surrounding terrain. The design of Big Stone Plant included the choice of a color scheme that would blend with the surrounding countryside.

SECTION 13 -- EFFORTS RELATING TO LOAD MANAGEMENT

The main objective of the Otter Tail's "Load Management System" is to turn off a variety of selected customer loads at times when our system is experiencing peak or near peak loads. This

system has allowed Otter Tail to delay the need for the addition of new generating facilities and to permit the power system to be more efficiently operated.

Otter Tail began the development of a load management program and control system in September of 1975. The Company investigated and tested several control systems and, in 1980, started the installation of the FM Radio Load Management System. In 1992, the new PC Based Automated Control System was completed. Over a 4-year period from 2003 to the summer of 2007, Otter Tail replaced all of our load management equipment. This included over 40,000 radio receivers on customers' premises along, with software and hardware to allow the secondary use of the office to truck and truck to truck voice radio system for load management transmissions.

The update of the radio load management system was necessary since our existing system was based on over 20-year old technology, and thus difficult to find replacement receivers. We had also experienced a continued reduction in the overall effectiveness of the system, thus a reduction in the total megawatts of controlled load.

The load management system replacement has improved the amount of controllable load and thus given us the confidence in the system needed to accredit this load modifying resource with MISO as of June 1, 2010.

Winter season manageable loads are in several categories and can reach as high as 130 MW. These tariffs include electric water heaters, thermal storage, RDCs (residential demand controllers), general service time of use, small dual fuel heating systems, and large dual fuel (industrial and bulk interruptible loads).

The radio load management system also has the capability of interrupting as high as 33 MW of summer peak load. These summer loads consists primarily of water heaters, irrigation, the large dual fuel industrials and residential air conditioning.

Total installations of the load management system include 42,283 radio receivers on the Otter Tail system with 4,151 of these radio receivers located on our customers' premises in the state of South Dakota.

Otter Tail has registered its load management system with the MISO as a Demand Response Resource. The MISO has certified Otter Tail's load management system at 32.3 MW during the summer season.

SECTION 14 -- LIST OF REPORTS

Otter Tail is not aware of any reports or studies filed or proposed to be filed with federal or other state agencies relating to proposed energy conversion or transmission facilities other than those required for the transmission projects noted above in Section 7.

SECTION 15 -- CHANGES IN STATUS AT FACILITIES

There is no change in the Big Stone Plant status. The unit continues to be operated as a base-loaded unit for Otter Tail system load. Lake Preston continues to be operated during peak demands and line stability conditions.

SECTION 16 -- PROJECTED ELECTRIC DEMAND

For the 2015 winter season, Otter Tail had an unmanaged system peak of 917 MW on January 5, 2015 for the hour ending at 11 a.m. The projected unmanaged winter season demand for the Otter Tail system is shown in Table 1. Winter data reflects the MISO planning year in which the winter season begins in November of the listed year and extends through April of the following year.

Table 1: Projected Unmanaged Winter Season Peak Demand1 for Otter Tail System

Year	Unmanaged Peaks (MW)
2016	931
2017	946
2018	963
2019	967
2020	966
2021	981
2022	999
2023	1016
2024	1034
2025	1041

[1] Peak values are prior to new conservation program impacts.

Table 2 on the next page shows the projected unmanaged winter season peak demand for the South Dakota portion of Otter Tail's system. Again, in Table 2, winter data reflects the MISO planning year in which the winter season begins in November of the listed year and extends through April of the following year.

Because the South Dakota portion of the Otter Tail system demand is not metered, Table 2 unmanaged peak demand was estimated by applying the ratio of projected South Dakota energy sales and projected system energy sales to projected system peak demand.

Table 2: Projected Unmanaged Winter Season Peak Demand1 for SD Portion of Otter Tail System

Year	Unmanaged Peaks (MW)
2016	77.9
2017	79.7
2018	82.0
2019	81.0
2020	80.6
2021	81.8
2022	83.3
2023	84.7
2024	86.2
2025	86.8

[1] Peak values are prior to new conservation program impacts.

Otter Tail has registered its load management system with the MISO as a Demand Response Resource. The MISO has certified Otter Tail's load management system for 32.3 MW during the summer season.

As a company, Otter Tail will continue to use a combination of load management and purchase agreements with other utilities to meet any future deficits. Otter Tail also continues to study and assess the potential for future additions to its generation resources.

Further detailed information may be obtained from Otter Tail's Resource Plan documents that are filed with the Minnesota Public Utilities Commission. The Company's current Resource Plan was filed June 1, 2016.

SECTION 17 -- CHANGES IN ELECTRIC ENERGY

The projected increase of winter season unmanaged peak demand for Otter Tail's system and South Dakota is shown in Table 3.

Table 3: Projected Increase of Winter Season Unmanaged Peak Demand[1] for Otter Tail System and South Dakota Portion

Year	System Load Increase (MW)	System Percent Increase (Decrease)	South Dakota Load Increase (Decrease) (MW)	South Dakota Percent Increase (Decrease)
2017	15	1.6%	1.8	2.3%
2018	17	1.8%	2.3	2.9%
2019	4	0.4%	(1.0)	(1.2%)
2020	-1	(0.1%)	(0.4)	(0.5%)
2021	15	1.6%	1.2	1.5%
2022	18	1.8%	1.5	1.8%
2023	17	1.7%	1.4	1.7%
2024	18	1.7%	1.5	1.8%
2025	7	0.7%	0.6	0.7%

[1] Load values are prior to new conservation program impacts.

SECTION 18 -- MAP OF SERVICE AREA

A map of the Otter Tail service area is shown in Figure 2 below.

Figure 3: Otter Tail Service Area