

**STATE OF SOUTH DAKOTA
BEFORE THE
SOUTH DAKOTA PUBLIC UTILITIES COMMISSION**

Docket No. EL12-___

In the Matter of Otter Tail Power
Company's Petition to Establish an
Environmental Quality Cost
Recovery Tariff

PETITION OF OTTER TAIL POWER COMPANY

I. INTRODUCTION

Otter Tail Power Company, ("OTP" or "Company"), hereby petitions the South Dakota Public Utilities Commission ("Commission") for approval of an Environmental Quality Cost Recovery Tariff ("Environmental Cost Recovery Rider"), pursuant to SDCL Chapter 49-34A, Sections 97 through 100, relating to approval of tariff mechanisms for automatic annual adjustment of charges for jurisdictional costs of new environmental measures. OTP also requests approval of an October 1, 2012 implementation of the tariff at which time the allocated jurisdictional costs of specified environmental measures already incurred and those planned to be made in 2012 and 2013 will commence recovery through the Environmental Cost Recovery Rider.

The purpose of filing this request, at this time, is to begin the recovery of OTP's share of the costs of the required environmental retrofit to the Big Stone, South Dakota generating station. Implementing cost recovery as the project is constructed will mitigate the magnitude and abruptness of rate increases at the time the retrofit is completed. OTP anticipates the rate impact of this request will be approximately 2 percent on average in the first year of the rider. Once construction is complete in 2016, OTP estimates the rate impact will be approximately 15 percent.

II. GENERAL FILING INFORMATION

A. Name, address, and telephone number of the utility making the filing.

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Phone (218) 739-8200



B. Name, address, and telephone number of the attorney for OTP.

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C. Title of utility employee responsible for filing.

Pete Beithon
Manager, Regulatory Recovery
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D. The date of filing and the date changes will take effect.

The date of this filing is March 30, 2012. OTP proposes that the tariff mechanism for the recovery of jurisdictional costs of new environmental projects go into effect as of October 1, 2012.

E. Statute controlling schedule for processing the filing.

ARSD Part 20:10:13:15 requires a 30-day notice to the Commission of a proposed change in a utility's tariff schedule, after which time the proposed changes take effect unless suspended. Because no determination of OTP's general revenue requirement is necessary, OTP requests an expedited and informal proceeding, including any variances that may be necessary.

Pursuant to ARSD 20:10:13:18, OTP will post a notice of proposed changes in each business office in OTP's affected electric service territory in South Dakota for at least 30 days before the change becomes effective. Pursuant to ARSD 20:10:13:19, OTP provides as Attachment 1 a proposed notice to be sent to customers with the first bill rendered when the rate is effective. OTP has also included Attachments 2 through 2c to comply with ARSD 20:10:13:26, which requires the Utility to report all rate schedule changes and customer impacts. OTP is also providing notice to its customers pursuant to SDCL Chapter 49-34A-12.

III. BACKGROUND

SB 118 passed by the South Dakota Legislature in 2007 (now incorporated as SDCL Chapter 49-34A, Sections 97 through 100) authorizes the Commission to approve a tariff mechanism for the automatic annual adjustment of charges for a public utility to recover the South Dakota jurisdictional portion of eligible investments in and expenses related to new environmental measures. The statute defines eligible new environmental measures as any environmental improvements required under the Clean Air Act, the Clean Water Act, or any other federal law or rule, or any state law or rule implementing a federal law or rule, or voluntary environmental measures designed to protect the environment.

IV. PROPOSED CHANGES

South Dakota Stat. §§49-34A-97 and 49-34A-98 read as follows:

SDCL 49-34A-97 - Notwithstanding any other provisions of this chapter, the commission may approve a tariff mechanism for the automatic annual adjustment of charges for the jurisdictional capital costs and operating expenses incurred by a public utility for environmental improvements to its existing electric generation facilities. For the purposes of §§49-34A-97 to 49-34A-100, inclusive, of this Act, environmental improvements include any requirements under the Clean Air Act, the Clean Water Act, or any other federal law or rule, or any state law or rule implementing a federal law or rule, or voluntary environmental measures designed to protect the environment.

SDCL 49-34A-98 - Upon filing of an application consistent with rules promulgated by the commission by any public utility providing electric service, the commission may approve, reject, or modify, after notice, hearing, and comment, a tariff that:

- (1) Allows the public utility to recover on a timely basis the costs and expenses net of revenues of environmental improvements described in § 49-34A-97;*

OTP proposes to implement a rate schedule (“Environmental Cost Recovery Rider”) for the recovery of investments and expenses associated with environmental measures that are determined by the Commission to be eligible for recovery under SDCL § 49-34A-97.

A. Big Stone Air Quality Control System.

OTP operates the Big Stone power plant (“Big Stone”) near Big Stone City, South Dakota. The Big Stone plant is co-owned by NorthWestern Corporation d/b/a NorthWestern

Energy, Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc., and Otter Tail Power Company. The Big Stone boiler was originally designed to burn lignite fuel and began operation in 1975. Designed by Babcock & Wilcox ("B&W"), the boiler is a Caroline-type balanced-draft pump-assisted radiant machine. In 1995, the boiler was converted to burn Powder River Basin ("PRB") fuel. With the conversion to PRB fuel, a simplified Separated Overfire Air ("SOFA") system was installed to reduce nitrogen oxide ("NO_x") emissions. The boiler also has a flue gas recirculation ("FGR") system to control main steam and reheat temperatures. From the boiler, flue gas travels to two air heaters. The unit currently has a conventional pulse-jet fabric filter for control of particulate emissions that will be replaced as part of this project. Ash is currently sent to a fly ash storage silo located directly south of the plant, where it is then trucked to a landfill. Flue gas from the fabric filter flows to four centrifugal-induced draft ("ID") fans. The ID fans discharge the flue gas to the chimney, which has two breech openings.

Pursuant to the South Dakota Department of Environmental and Natural Resources ("DENR") South Dakota Haze State Implementation Plan ("SD Haze SIP") OTP is required to install Air Quality Control System ("AQCS") equipment at its Big Stone Plant to reduce emissions of sulfur dioxide ("SO₂") and NO_x. The AQCS equipment is required based on a Best Available Retrofit Technology ("BART") determination adopted by the South Dakota DENR. The BART determination requires that the AQCS include flue gas desulfurization ("FGD") for SO₂ reduction, and selective catalytic reduction ("SCR") with SOFA for NO_x reduction. The BART determination did not include mercury reduction requirements; however, because it is expected that the U.S. Environmental Protection Agency's ("EPA") utility boiler Maximum Achievable Control Technology ("MACT") rule will require mercury reduction when the rule is finalized, activated carbon injection ("ACI") was also evaluated as part of the AQCS project. The implementing rules and the SD Haze SIP require that the Big Stone AQCS be installed as expeditiously as practicable but no later than five years from the EPA's approval of the SD Haze SIP. A copy of the relevant components of the SD Haze SIP is described in OTP's North Dakota Application for Advance Determination of Prudence ("ND ADP") which is included as Attachment 3 to this petition and described more fully below. OTP projects that the Big Stone AQCS operation and emissions compliance will be required as early as January 2016.

The ND ADP provides a complete description of the project and the analysis done by the owners of Big Stone to determine the appropriateness of the project. The following options were analyzed:

1. Implementing the Big Stone AQCS project, as Co-Owners have proposed.
2. Repowering Big Stone boiler with natural gas.
3. Retiring/Replacing Big Stone with a CCGT Plant.
4. Retiring/Replacing Big Stone with a CCGT Plant and purchased wind power.

The result of the Big Stone Co-Owners' analysis is that the AQCS project is the most economical option under all analyses in the Base Case. Additional sensitivities were also run to further analyze scenarios relating to capital cost, operations and maintenance ("O&M") costs, fuel cost, and CO₂ costs, based upon these analyses, the Big Stone Co-Owners have determined that the AQCS project is the preferred solution for addressing these new environmental requirements.

The total cost estimate for the AQCS project is \$490 million (2015 dollars). OTP's ownership share in the Big Stone Plant is 53.9%, and therefore OTP is responsible for 53.9% of the costs or \$264 million. OTP's South Dakota jurisdictional share of this cost responsibility is approximately 10% or \$26.4 million.

Project costs of over \$8 million (\$4.5 million OTP share) have been incurred as of December 31, 2011. The projection for 2012 project expenditures is an additional \$57.5 million (\$30.1 million OTP share) for a total of \$65.5 million (\$35 million OTP share). The projection for 2013 project expenditures is an additional \$159.5 million (\$86 million OTP share) for a total of \$225 million (\$121 million OTP share). This request covers the period of January 2012 (the beginning balance) through September 2013 for setting the first annual rate for the Rider.

The Commission has approved similar Environmental Riders for Xcel energy and Black Hills Power, in Dockets EL07-026 and EL11-001, respectively. The Commission's approval for Xcel Energy also included Rider recovery for an AQCS project at Xcel Energy's King Plant, which is similar in many respects to the Big Stone AQCS project.¹

1. Advance Determination of Prudence granted in Minnesota.

Attachment 4 is the January 23, 2012 Order issued by the Minnesota Public Utilities Commission in Docket No. E017/M-10-1082, in which the Minnesota Commission approved OTP's request for an Advance Determination of Prudence for the Big Stone AQCS project based

¹ Differences from the King Plant project include that the Big Stone project does not have additional balance-of-plant work like the King Plant project and the Big Stone project involves a cyclone boiler which requires more work to the boiler for the retrofit.

upon Minnesota law. While OTP understands that the South Dakota Commission will make its own independent determination as to the reasonability of OTP's request in this docket, OTP believes the Minnesota Commission's Order and the record from that proceeding may be instructive in this matter. The Order was based on an extensive record which the Commission described as follows:

The ALJ held two days of evidentiary hearings, reviewed the testimony of some 14 expert witnesses, and examined over 100 exhibits. After the hearings he received initial and reply briefs and proposed findings of fact from all parties. He also received public comments from some 45 individuals, municipalities, and organizations. He formulated 305 findings of fact and conclusions, made findings on all material issues, and made recommendations based on those findings and conclusions.

Based upon that Record, the Minnesota Commission ordered, in relevant part, as follows:

"ORDER

1. The Commission finds that the proposed Big Stone air quality control system project satisfies the conditions required under Minn. Stat. § 216B.1695 for a public utility to petition the Commission for an advance determination of prudence.

2. The Commission finds that the Company has met the requirements of Minn. Stat. § 216B.1695 and has demonstrated the prudence and reasonableness of the proposed Big Stone air quality control system project, as modified to eliminate the baghouse component. The Commission grants the petition for an advance determination of prudence for the project, as modified."

The remainder of the Record of this Minnesota Commission proceeding can be found at <https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=eDocketsResult&userType=public>, or copies of any filings made in the proceeding can be provided upon request.

2. Advance Determination of Prudence pending in North Dakota.

Attachment 3 is OTP's application and related updates for an Advance Determination of Prudence for the Big Stone AQCS project under North Dakota law in North Dakota Public Service Commission Case No. PU-11-165. As was stated above with respect to the Minnesota proceeding, OTP understands that the South Dakota Commission will make its

own independent determination as to the reasonability of OTP's request in this docket, but OTP believes this North Dakota application may be instructive in this matter.

The remainder of the Record of this North Dakota Commission proceeding can be found at: http://www.psc.nd.gov/database/docket_view_list.php?s_dept=PU&s_year_case=11&s_seq_num=165&s_company_name=Otter+Tail+Power+Company or copies of any filings made in the proceeding can be provided upon request.

B. Components of the Revenue Requirement calculation.

Attachment 5 shows the revenue requirement calculation for the AQCS environmental project included in the Environmental Cost Recovery Rider. The revenue requirement for the project included in the Environmental Cost Recovery Rider includes several components as described below.

- *Rate base section.* This section provides details on the amount of plant in service, accumulated depreciation, construction work in progress ("CWIP") (if applicable), accumulated deferred taxes, and includes a 13-month average rate base calculation.
- *CWIP.* SDCL §49-34A-25.2 allows a current return on CWIP.
- *Expense section.* The expenses applicable to a project will be listed here and include operating costs, property taxes, depreciation, and, income taxes.
- *Revenue requirements section.* This section will show the components of the revenue requirements. Included are the items computed from the sections previously mentioned, including expenses and return on rate base.
- *Return on investment (cost of capital).* The return on investment will utilize the cost of capital determined in the most recent approved general rate case.
- *Depreciation expense.* Depreciation expense will be calculated using OTP's latest composite depreciation rate.
- *Property taxes.* The property tax calculation will be based on OTP's composite tax rate for the jurisdiction in which the transmission facilities are located, and will be calculated in accordance with the procedures specified by that state.
- *O&M Expense.* OTP will set up environmental O&M accounting projects to track O&M costs specifically related to each project included in the Rider.

C. Tracker Balance.

OTP maintains a tracker account worksheet and accounting system to track and account for retail revenue requirements until all costs have been fully recovered or reflected in base rates as the result of a general rate case. The tracker account information compares OTP's South Dakota jurisdictional costs and the amount recovered through South Dakota retail revenue. The tracker account balance (either positive or negative) will accrue monthly carrying charges at a rate of 1/12 of OTP's cost of capital times the tracker balance. Carrying charges on a negative tracker balance will accrue to the benefit of retail customers and carrying charges on a positive tracker balance will accrue to OTP.

OTP anticipates making annual filings to revise the Environmental Cost Recovery rates to reflect updated revenue requirements and additional new environmental measure projects, if any. When submitting annual filings, the tracker account will be updated so that any over/under recovered amount at the end of the previous year will be reflected in the Environmental Cost Recovery Rider adjustment for the upcoming year. This approach ensures that no under/over recovery occurs. The tracker balance detail is included in Attachment 6.

V. RATE DESIGN

OTP's proposed rate design is simply the calculated revenue requirement from January 2012 through September 2013 divided by the total forecast kWh to South Dakota electric retail customers from October 2012 to September 2013. The rate design calculation is shown on Attachment 7.

VI. RATE APPLICATION AND IMPACT

OTP proposes that the Environmental Cost Recovery Rider should be applicable to electric service under all of OTP's retail rate schedules. The charge will be included as part of the Fuel Adjustment line on customers' bills. The proposed rate is as follows:

| | <u>\$ / kWh</u> |
|---------------|-----------------|
| All Customers | \$ 0.00176 |

The following table shows the estimated rate impact by retail customer class.

| Approved SD Rates Based on 2009 Test Year Billing Determinants | | | |
|---|------------|--|----------|
| Rate Class Impacts ⁽¹⁾ | | Rate Class Impacts ⁽¹⁾ | |
| Residential | | Outdoor Lighting | |
| Average Rate (¢/kWh) | 8.662 | Average Rate (¢/kWh) | 13.707 |
| Increase % | 2.03% | Increase % | 1.28% |
| Average Impact (\$/month) | \$20.03 | Average Impact (\$/month) | \$339.84 |
| Farm | | Municipal Pumping | |
| Average Rate (¢/kWh) | 8.069 | Average Rate (¢/kWh) | 6.098 |
| Increase % | 2.18% | Increase % | 2.88% |
| Average Impact (\$/month) | \$34.21 | Average Impact (\$/month) | \$55.86 |
| General Service | | Water Heating, Controlled | |
| Average Rate (¢/kWh) | 7.996 | Average Rate (¢/kWh) | 6.706 |
| Increase % | 2.20% | Increase % | 0.03% |
| Average Impact (\$/month) | \$60.16 | Average Impact (\$/month) | \$0.05 |
| Large General Service | | Interruptible Load | |
| Average Rate (¢/kWh) | 5.581 | Average Rate (¢/kWh) | 4.103 |
| Increase % | 3.15% | Increase % | 4.29% |
| Average Impact (\$/month) | \$6,622.06 | Average Impact (\$/month) | \$43.89 |
| Irrigation | | Deferred Load | |
| Average Rate (¢/kWh) | 6.696 | Average Rate (¢/kWh) | 4.414 |
| Increase % | 2.63% | Increase % | 3.98% |
| Average Impact (\$/month) | \$48.87 | Average Impact (\$/month) | \$53.78 |

(1) Average rate calculation is from SD Docket No. EL10-011. Rate impacts are calculated from base rates, including Cost of Energy

The above rate has been calculated based on an expected implementation date of October 1, 2012. Revenue Requirement calculations are based on January 2012 through September 2013 costs, assuming revenue collection occurs October 2012 through September 2013. If the effective date is significantly later than October 1, 2012, OTP requests the option to recalculate the Environmental Cost Recovery rate in order to recover all approved costs in the remainder of 2013.

VII. ENVIRONMENTAL COST RECOVERY RIDER RATE SCHEDULE

OTP's proposed Environmental Cost Recovery Rider, Rate Schedule 13.07 is Attachment 2a to this petition.

VIII. REVISIONS TO OTHER RATE SCHEDULES

Redline and proposed final versions of OTP's Rate Schedules Index (Attachment 2b) and Mandatory Riders – Applicability Matrix, Rate Schedule 13.00 (Attachment 2c), showing the addition of the Environmental Cost Recovery Rider are included with this petition.

IX. CONCLUSION

For the foregoing reasons, OTP respectfully requests approval to implement the rate schedule with Rate Designation 13.06 effective as of October 1, 2012.

Date: March 30, 2012

Respectfully submitted,
OTTER TAIL POWER COMPANY

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Attachments

| | |
|---------------|---|
| Attachment 1 | Customer Notice |
| Attachment 2a | Environmental Cost Recovery Rider |
| Attachment 2b | Electric Service – South Dakota – Index (Redline and Final) |
| Attachment 2c | Mandatory Riders – Applicability Matrix (Redline and Final) |
| Attachment 3 | Otter Tail Power Company’s Application, Revised filing and Informational filing for Advance Determination of Prudence in North Dakota |
| Attachment 4 | Minnesota Order Granting Advance Determination of Prudence and Setting Reporting Requirements |
| Attachment 5 | Air Quality Control System Project Revenue Requirement Calculation |
| Attachment 6 | Tracker Balance |
| Attachment 7 | Rate Design |