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March 31, 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: In the Matter of Otter Tail Power Company's Application for Approval of the Annual Update to Environmental Cost Recovery Rider Charge, Rate Schedule 13.08 Case No. PU-16-_____

Dear Mr. Nitschke:

Enclosed are an original and seven (7) copies of Otter Tail Power Company's ("Otter Tail's") Application for Approval of its Annual Update to the Environmental Upgrades Cost Recovery ("ECR") Charge along with a check in the sum of \$10,000. This application is an annual filing which simply updates the ECR Charge and should not require the amount of time and expense required for an initial application for a tariff filed under NDCC §49-05-04.2.2. Otter Tail requests the fee be reduced to \$10,000 and is therefore submitting a filing fee of \$10,000 with this application. Otter Tail will be responsible for amounts incurred in excess of the initial filing fee of \$10,000 up to \$100,000 unless the Commission approves the fee reduction request.

This filing is being sent to you electronically and by U.S. mail.

Should you have any questions, please feel free to contact me at 218-739-8607 or pbeithon@otpc.com.

Very truly yours,

/s/ PETE BEITHON
Pete Beithon
Manager, Regulatory Recovery

jch
Enclosures
By electronic filing and US mail

**STATE OF NORTH DAKOTA
BEFORE THE
NORTH DAKOTA PUBLIC SERVICE COMMISSION**

Case No. PU-16-_____

In the Matter of Otter Tail Power
Company's Application for Approval
of the Annual Update to
Environmental Cost Recovery Rider Charge,
Rate Schedule 13.08

APPLICATION

I. INTRODUCTION

Otter Tail Power Company (Otter Tail) submits this Application to the North Dakota Public Service Commission (Commission) for approval of its annual update (Update) to the Environmental Cost Recovery Charge (ECRC) under Otter Tail's Environmental Cost Recovery Rider (ECR or Rider), Rate Schedule 13.08. This Update results in a decrease to the Revenue Requirement of approximately \$1.9 million, and a corresponding reduction in the rate from 9.193 percent to 7.904 percent.

On December 18, 2013, the Commission approved Otter Tail's ECR Rider Tariff and adjustment rate for the Big Stone generation plant's Air Quality Control System (AQCS) in Case Nos. PU-13-79, and PU-13-84. On July 15, 2014, the Commission approved Otter Tail's first update to the ECR in Case No. PU-14-142 and on June 17, 2015, the Commission approved Otter Tail's second update to the ECR in Case No. PU-15-131. Otter Tail is now filing its third update to the ECRC for actual and forecasted Big Stone AQCS and Hoot Lake Plant MATS project cost and revenue information through the recovery period of July 2016 through June 2017.¹

The AQCS project was placed in-service in December 2015. The project budget remains,

¹ On February 25, 2015, in case No PU-14-668, the Commission authorized recovery of reagent and allowance costs in the ECR Rider. Otter Tail had originally requested in that case recovery of reagent and allowance costs through the Fuel Clause Adjustment, but the Commission authorized recovery of such costs through the ECR to better align recovery of these costs with the related capital costs being recovered through this ECR. This approach better communicates to customers that these costs are being incurred to meet requirements of the Federal Environmental Protection Agency.

as reported in the last ECR update, at \$384 million. The initial budget for the AQCS project was \$489 million. The updated forecast cost and revenue information in this filing includes incremental operation and maintenance expenses which commenced with the commissioning of the AQCS in December of 2015, rather than October of 2015 as stated in the previous filing. The primary reason for the delayed in-service date was extended maintenance at the plant during the planned outage. As a result of the two month delay in placing the AQCS project in-service, the revenue requirement during the current collection period has dropped slightly due to the shift in the month in which depreciation begins.

This update includes the incorporation of two tax-related items identified since the last ECR annual update was approved. The first item relates to the proration of Accumulated Deferred Income Taxes (ADIT) in compliance with recent Private Letter Rulings issued by the Internal Revenue Service (IRS). The proration of ADIT is consistent with how ADIT was handled in Otter Tail's last Transmission Cost Recovery Rider update (Case No. PU-15-661) and in Otter Tail's current Renewable Resource Adjustment Rider (Open Case No. PU-16-14). The second item relates to Federal bonus tax depreciation that was passed by Congress on December 18, 2015 and applies to equipment placed into service starting in 2015. Because the AQCS project was deemed eligible for bonus tax depreciation for 2015, the benefit of that additional bonus tax depreciation is a significant contributor to the reduction in the revenue requirement and rate in this update. Both of these tax related items are discussed in greater detail in the Revenue Requirement Components and Tracker section of this update.

II. GENERAL FILING INFORMATION

Pursuant to § 69-02-02-04 of the Commission's Rules of Practice and Procedure, the following information is provided:

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

Otter Tail Power Company
215 South Cascade Street
P.O. Box 496
Fergus Falls, MN 56538-0496
Phone (218) 739-8200

B. Name, address, and telephone number of utility attorney

Bruce Gerhardson
Associate General Counsel
Otter Tail Power Company
215 South Cascade Street
P.O. Box 496
Fergus Falls, MN 56538-0496
Phone (218) 739-8475

C. Title of utility employee responsible for filing

Pete Beithon
Manager, Regulatory Recovery
Otter Tail Power Company
215 South Cascade Street
P.O. Box 496
Fergus Falls, MN 56538-0496
(218) 739-8607

D. The date of filing and the date changes will take effect

The date of this filing is March 31, 2016. Otter Tail proposes an effective date of July 1, 2016 for the updated rate.

E. Other requirements of North Dakota Rules Part 69-02-02-04

A certified copy of Otter Tail's Articles of Incorporation is on file with the Commission, as is an original certificate of good standing.

F. Customer Notification

Otter Tail will include a notice to North Dakota customers on April bills of the proposed change in rates for the ECR. Attachment 1 is a sample of the notice.

III. BACKGROUND

On December 18, 2013, the Commission approved Otter Tail's ECR tariff and rate in Case Nos. PU-13-79 and PU-13-84.² The December 18, 2013 Order, authorized implementation of an ECRC of 4.319 percent (applied to base rates) effective with bills rendered on and after January 1, 2014. On July 10, 2014, in Case No. PU-14-142, the Commission approved the first update to Otter Tail's ECRC, which adjusted the rate to 7.531 percent effective with bills rendered on and after August 1, 2014. On June 17, 2015, in Case No. PU-15-131, the Commission approved the second update to Otter Tail's ECRC, which adjusted the rate to 9.193

² PU-13-79 and PU-13-84, Findings of Fact, Conclusions of Law and Order.

percent with bills rendered on and after July 1, 2015.

Otter Tail now requests to update its ECRC to reflect actual costs incurred through February 2016 and projected costs through June 2017 pursuant to its Electric Rate Schedule 13.08.

As stated earlier, the updated forecast includes a total project budget amount of \$384 million (\$84 million Otter Tail North Dakota share) for the AQCS at Big Stone. The final accounting and settlement of costs for projects of this size can take several months to complete. Otter Tail expects that final settlement of costs will be completed over the next twelve months with those changes incorporated in Otter Tail's next annual update filed in 2017.

This update also includes AQCS operation and maintenance (O&M) expenses, which Otter Tail began incurring in December 2015. Approximately \$350,000 (Otter Tail North Dakota share) of O&M costs are included for the recovery period. In addition, actual capital costs of approximately \$7.0 million (\$2.8 million Otter Tail North Dakota share) for the Hoot Lake MATS project are included.

The projected revenue requirement (as found in Attachment 2) for the AQCS and Hoot Lake MATS projects, as allocated to North Dakota, is \$11,132,465 for the July 2016 to June 2017 recovery period. This update also includes a true-up for the projected *over recovery* of the current period's costs of (\$773,750) (including carrying cost credit) as of June 30, 2016. The net revenue requirement of \$10,358,715 is proposed to be recovered through the ECRC over the July 1, 2016 through June 30, 2017 collection period.

Statutory Requirements of the Rate Adjustment

NDCC §49-05-04.2.2 provides as follows:

2. Rate adjustments filed under the tariff must be accompanied by:

- a. A description and quantification of the costs and expenses incurred by the public utility to meet federal environmental mandates which are subject to recovery;*
- b. A schedule for implementation of the applicable projects;*
- c. Calculations to establish that the rate adjustment is consistent with the terms of the tariff; and*
- d. An application fee in the amount of one hundred thousand dollars. Upon request of the commission and with the approval of the emergency commission, the applicant shall pay such additional fees as are reasonably necessary for completion of the application*

process by the commission. The commission may waive or reduce the fee.

Sections IV to VIII of this Application (and related attachments) below provide the necessary information to meet the requirements of the Statutory Requirements identified in 2.a, 2.b, and 2.c above.

As indicated in the cover letter for this Application, since this is an annual filing which simply updates the ECRC, Otter Tail requests the fee be reduced to \$10,000 and is therefore submitting a filing fee of \$10,000 with this application. Otter Tail will be responsible for amounts incurred in excess of the initial filing fee of \$10,000 up to \$100,000 unless the Commission approves the fee reduction request.

IV. Project Description

A. Big Stone Plant Air Quality Control System

Otter Tail operates the Big Stone Plant (Big Stone) near Big Stone City, South Dakota. Big Stone is co-owned by NorthWestern Corporation d/b/a NorthWestern Energy, Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc. (MDU), and Otter Tail. The Big Stone AQCS project is described in detail in Case Nos. PU-13-79 and PU-13-84, the cases in which the Commission approved the ECR for Otter Tail and MDU. Attachment 3 to this filing is the January 2016 quarterly project update filed in Case No. PU-11-165, Otter Tail's Advance Determination of Prudence (ADP) for the AQCS Project.

The Big Stone AQCS became operational in December 2015. Since that time, the plant has begun to incur additional necessary costs to operate and maintain the AQCS, the largest of those costs being the chemical reagents (lime, powdered activated carbon, and anhydrous ammonia) used to control emissions. The recovery of the chemical reagent costs (and emissions allowance costs for Hoot Lake Plant) was approved in Case No. PU-14-668 through the establishment of the Reagent and Emissions Allowance Adjustment (REAA) Rider Charge, as described in Section 13.08 of Otter Tail's Electric Rate Schedules. The costs of reagents and emissions allowances are currently being recovered monthly through the REAA. Therefore, *reagent and emissions allowance costs are not included in the ECRC calculation.* The ECRC is included on the same line of customers' bills as the reagent recovery (REAA Charge).

With the integration of the AQCS into plant operations and the use of reagents to reduce

emissions, the plant has seen an increase, as anticipated, in the volume of ash collected. As a result, increased labor is needed for both handling the new reagents as well as properly disposing of the additional ash. The plant has also incurred additional equipment-related costs associated with handling the reagents and disposing of the ash. These types of additional operation and maintenance costs were included in the initial analysis of the AQCS alternatives submitted in the ADP in Case Nos. PU-11-163 and PU-11-165.

B. Hoot Lake Plant MATS Project

Otter Tail Power has upgraded the existing Hoot Lake Units #2 and #3 electrostatic precipitators (ESP) to comply with the MATS. Compliance with MATS was required by April 16, 2015. Otter Tail reviewed various compliance options including retiring Hoot Lake in 2015 and replacing the generation (most likely with natural gas generation), refurbishing Hoot Lake to operate as a Coal Unit for long-term operation, or installing near-term required upgrades and planning for retirement in the 2020 timeframe. The total Hoot Lake MATS Project was originally estimated to be approximately \$10,000,000. However, at the time of completion the actual project cost was approximately \$7,000,000, including AFUDC (a 30 percent decrease from the estimate). The in-service date of the MATS equipment was October 2014.

V. Revenue Requirements Components and Tracker

A. Components of the Revenue Requirement Calculation

Attachments 2 and 4 show the revenue requirement calculation for the AQCS and MATS projects included in the ECR. The revenue requirement for each project included in the Rider includes several components as described below.

- *Rate base section.* This section provides details on the amount of plant in service, accumulated depreciation (if applicable), construction work in progress (CWIP), and accumulated deferred taxes.
- *CWIP.* NDCC §49-05-04.2 allows a current return on CWIP.
- *Expense section.* The expenses applicable to the project are listed here and include operating costs, property taxes, depreciation, and income taxes. It should be noted that the corporate income tax rate in North Dakota has decreased from 4.53 percent to 4.31 percent beginning in 2015.
- *Revenue requirements section.* This section shows the components of the revenue

requirements. Included are the above-mentioned expenses and return on rate base.

- *Return on investment (cost of capital)*. The return on investment utilizes the cost of capital approved in Otter Tail's most recent general rate case, Case No. PU-08-862.
- *Depreciation expense*. Depreciation expense is calculated using Otter Tail's latest composite depreciation rate.
- *Property taxes*. The property tax calculation is based on Otter Tail's composite tax rate for the jurisdiction in which the facilities are located and is calculated in accordance with the procedures specified by that state.
- *Operation and maintenance Expense*. Otter Tail tracks O&M costs specifically related to the AQCS and MATS projects.
- *Proration of ADIT*. Since the last filing, Otter Tail has become aware of an IRS rule interpretation related to the normalization of ADIT in a forward looking test year used for rate-making purposes. This matter was brought to light by a series of Private Letter Rulings issued by the IRS to a number of other utilities. IRS Regulation Section 1.167(l)(h)(6) provides that ratemaking procedures and adjustments must be consistent with normalization accounting. This section defines the procedures a company must use to normalize the impact on rate making if a company elects to use a forecast test year for rate making purposes. Specifically, this section stipulates that the monthly changes to the forecasted deferred federal tax balances, as calculated by the company, must be prorated prior to computing the average of beginning and ending balances for ADIT.

Otter Tail provides Attachment 5 to this filing in order to show the ADIT proration calculation impact on the revenue requirement for the recovery period. Accelerated depreciation is a significant benefit to ratepayers as ADIT amounts are credited against rate base amounts when establishing rates making adherence to this rule important to North Dakota customers. According to the rule, Otter Tail would risk losing its ability to take accelerated depreciation if it fails to comply with this rule.

B. Bonus Tax Depreciation

As noted earlier, in late 2015, Congress passed new Federal bonus tax depreciation legislation. The following table summarizes the time frames and bonus tax depreciation percentages approved by Congress on December 18, 2015. Equipment placed into service in

these years is eligible for bonus tax depreciation.

Year	Bonus % Approved
2015	50%
2016	50%
2017	50%
2018	40%
2019	30%

Otter Tail placed several large projects into service in 2015, including the Big Stone AQCS project, transmission projects, and other investments to its rate base. Due to the size of these investments, the use of bonus tax depreciation on these investments created a Tax Net Operating Loss (NOL) position for Otter Tail’s 2015 tax year. The impact of this NOL position is described later in this Application.

Accelerated Tax Depreciation increases ADIT and Reduces Rate Base

Bonus and other accelerated tax depreciation provisions reduce the amount of actual taxes paid when tax returns are filed. Ratepayers benefit when the payment of taxes can be deferred until future periods, and the mechanics of traditional ratemaking processes take this benefit into account. Typically, when the amount of depreciation expense for tax purposes is greater than the depreciation amount computed for book purposes, the difference is accounted for as ADIT. In traditional ratemaking, including Otter Tail’s riders, the ADIT balances are included as a credit in the determination of the overall rate base upon which a return is calculated. When the ADIT balances grow, as a result of accelerated depreciation, the net rate base amount drops. As of December 2015, total ADIT for the AQCS project was approximately \$37.6 million (Total Company Share) – a credit to rate base.

NOL Carryforward Position Creates Tax Asset to Offset Future Taxable Income

As noted above, because of the significant capital investment by Otter Tail in 2015, the impact of taking bonus depreciation created a Tax NOL for 2015. As a result, the portion of the unused tax depreciation which remains when taxable income is reduced to zero creates a Deferred Tax Asset (NOL carry forward) that can be used to offset future taxable income. Otter Tail has allocated the NOL to each project by dividing the project tax depreciation by the total Company tax depreciation and applying that percent to the total 2015 forecasted NOL. The 2015

allocated NOL applicable to the AQCS project is accounted for as a Deferred Tax Asset in the ECRC Rider, which increases rate base. The Deferred Tax Asset balance for the AQCS project at December 31, 2015 was approximately \$17.8 million (Total Company), as found in Attachment 4, line 5. In future periods, as the NOLs are applied against future taxable income, the Deferred Tax Asset balance will be reduced, lowering rate base and the associated revenue requirement.

Changes to Tax Depreciation Life

The AQCS is considered part of Big Stone, but has special features which may qualify it for a shorter tax life as the AQCS is considered pollution control equipment. Coal plants are typically depreciated for tax purposes using a 20 year MACRS convention. Certain pollution control equipment, however, may qualify for either a five year or seven year life depending on its attributes. In the last ECRC update, Otter Tail had used a seven year tax life in computing AQCS project tax depreciation. In that update, the estimated COD for the AQCS project was October of 2015.

As noted earlier, the actual COD for the project was December 2015. To maximize tax depreciation for 2015, Otter Tail deferred, for one year, its Section 169 election to take seven year MACRS tax depreciation because depreciation does not begin until one month after the COD, which in this case would have been January 2016. Instead, for 2015, Otter Tail elected 20 year MACRS, which allows for tax depreciation to be taken in the month of COD, thereby maximizing the amount of base tax depreciation (excluding bonus depreciation) taken in 2015. In this update, the tax depreciation rate was updated to the 20 year MACRS rate to be consistent with the actual tax depreciation rate elected as of 2015.

As noted above, some portions of the project may qualify for a seven year tax depreciation life. In order to appropriately determine how to classify the AQCS project for tax depreciation purposes (what portion may qualify for seven year life as opposed to 20 year life), Otter Tail has engaged Deloitte Tax Services (D&T) to complete an analysis on the various components of the AQCS project to determine the appropriate tax depreciation calculation to utilize on the project. This study is still on-going at the time of this filing, and is expected to be completed sometime in 2016. Based on the results of the study, Otter Tail expects to make an election to treat a portion of the AQCS project costs as tax qualified pollution control equipment for tax year 2016. It has yet to be determined what percentage of the AQCS project will quality

for the seven year tax life. Otter Tail proposes to include in its next update to the ECRC in 2017, the results of that study, and the application of a blended tax depreciation rate that reflects the portion of the project that will qualify for seven year depreciation, and the portion of the project that will be depreciated over 20 years. Any true-up applicable to the refinement and finalization of the tax depreciation amounts will be included in that update.

Overall Impacts of Bonus Depreciation to 2015 and 2016 Rider Revenue Requirements

The bonus tax depreciation taken on 2015 investments, including the AQCS project, has increased the ADIT balance in Otter Tail’s ECR riders, *and has reduced the rate base in the rider*. As a result, the rate is lower in this annual update than it would have been without the bonus tax depreciation.

While the updates to Otter Tail’s three rider mechanisms and the incorporation of the bonus tax depreciation will occur at different times over the next few months, the table below illustrates the estimated *incremental* impacts bonus tax depreciation will have on the revenue requirements of each of Otter Tail’s North Dakota riders for the calendar year 2015 and 2016 time-frames.

Recovery Mechanism	January - December 2015 Revenue Requirement			January - December 2016 Revenue Requirement		
	Without Bonus Depreciation	With Bonus Depreciation	Change 2015	Without Bonus Depreciation	With Bonus Depreciation	Change 2016
Renewable Rider	\$7,612,115	\$8,274,389	\$662,274	\$6,799,750	\$7,974,995	\$1,175,245
Environmental Rider ³	9,470,693	9,284,142	(\$186,551)	13,124,209	11,399,458	(1,724,751)
Transmission Rider ⁴	5,803,480	5,758,730	(\$44,750)	6,400,824	6,084,430	(316,394)
Total Projected Revenue Requirement	\$22,886,288	\$23,317,261	\$430,973	\$26,324,783	\$25,458,883	(\$865,900)

As illustrated in the table above, the bonus tax depreciation and the NOLs have a *cumulative net impact of decreasing the ECR, Transmission Rider and Renewable Rider revenue requirements by approximately (\$434,927) for 2015 and 2016* (An increase of \$430,973 in 2015

³ The Environment Rider impact in this table has been updated to reflect the final revenue requirements included in this Application, as compared to the estimated Environmental Rider amounts in the table Otter Tail provided in its Supplemental Filing dated February 26, 2016 in Otter Tail’s Annual Update to its Renewable Resource Rider (Case No. PU-16-14).

⁴ The Transmission Rider revenue requirements are based on the recoverable projects. The revenue requirements provided in the table do not include Southwest Power Pool nor Midcontinent Independent System Operator expenses and revenues because these Regional Transmission Organization components of the rider are not impacted by bonus depreciation.

and decrease of (\$865,900) in 2016). These amounts do not take into consideration any over or under collection balances, or prior period true-up amounts, but only quantify the impact on the calculation of the revenue requirement of bonus tax depreciation for the respective calendar year time periods. These impacts are being incorporated into the ECRC in this update; into the Renewable Resource Adjustment Rider in the currently open Case No. PU-16-14; and will be included in the next Transmission Cost Recovery rider update to be filed by September 1, 2016.

C. Tracker Balance

Otter Tail maintains a tracker account worksheet (Attachment 4) and accounting system to track and account for retail revenue requirements until all costs have been fully recovered or reflected in base rates as part of a general rate case. The tracker account information compares Otter Tail's North Dakota jurisdictional costs and the amount recovered through North Dakota retail revenue. The tracker account balance (either positive or negative) will accrue monthly carrying charges at a rate of 1/12 of Otter Tail'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 Otter Tail.

As noted above, the reagent costs are not included in these incremental costs. Eight additional employees are required to cover the additional work necessary to operate and maintain the AQCS system. Prior to the AQCS system, Big Stone had 72 employees. The North Dakota share of Otter Tail's share of the forecasted incremental costs for labor and materials during the collection period of July 2016 to June 2016 is approximately \$350,000.

MDU is not filing an update to their ECR rider at this time as they will be rolling the costs into their upcoming rate case. Otter Tail has not included a reconciliation of tracker costs with this filing as the timing will be different and the costs will not reconcile between the two partners due to the timing differences.

When annual updates to the ECR are filed, the tracker account is updated (trued-up) so that any over/under recovered amount at the end of the previous recovery period will be reflected in the Rider adjustment for the upcoming recovery period. This approach ensures that no under/over recovery occurs.

VI. RATE DESIGN

Otter Tail proposes the continuation of the percent-of-bill method. The rate design is simply the calculated revenue requirement from July 2016 through June 2017 divided by the total base revenue from North Dakota electric retail customers from July 2016 through June 2017. The rate design calculation is shown on Attachment 6.

VII. RATE IMPACT

The proposed update to the ECRC decreases the factor for all customers from 9.193 percent to 7.904 percent. The total July 2016 through June 2017 revenue requirement, as shown on line 5 in Attachment 2, is \$10,358,715. The proposed ECRC is calculated in Attachment 6.

The impact of the change in rate for a residential customer using 1,000 kWh is an approximately \$1.19 per month decrease. The following table shows the estimated rate increase over the previous rate by a residential customer using 1,000 kWh and a Large General Service customer using 400,000 kWh and 1,000 kW:

	Average kWh's per month	Total Current Bill	Total Proposed Bill	Percent Decrease
Residential	1,000	\$113.53	\$112.34	1.05%
Large General Service	400,000	\$34,700.23	\$34,341.37	1.03%

The above rate has been calculated based on an expected implementation date of July 1, 2016. Revenue Requirement calculations are based on July 2016 through June 2017 costs, assuming revenue collection occurs during the same period.

VIII. ENVIRONMENTAL COST RECOVERY RIDER RATE SCHEDULE

Otter Tail's revised Rate Schedule 13.08 is provided in Attachment 7 to this application, in both redline and clean versions.

IX. CONCLUSION

Otter Tail respectfully requests the Commission approve the updated Environmental Cost Recovery Charge effective July 1, 2016, based on the tracker activity and cost recovery for the Big Stone AQCS project and the Hoot Lake MATS project.

Date: March 31, 2016

Respectfully submitted:

OTTER TAIL POWER COMPANY

/s/ PETE BEITHON

Pete Beithon
Manager, Regulatory Recovery
215 South Cascade Street
P.O. Box 496
Fergus Falls, MN 56538-0496
Phone (218) 739-8607

Attachments

Attachment 1	Customer Notice
Attachment 2	Summary of Revenue Requirements
Attachment 3	January 13, 2016 Quarterly Report in Case No. PU-11-165
Attachment 4	Project Tracker
Attachment 5	ADIT Proration
Attachment 6	Rate Design Calculation
Attachment 7	Environmental Cost Recovery Rider, Electric Rate Schedule 13.08

Notice to our North Dakota customers

On March 31, 2016, we filed a request with the North Dakota Public Service Commission to change our Environmental Cost Recovery Rider rate for bills rendered on and after July 1, 2016. The proposed rate for all classes of service is 7.904 percent of base charges and credits, a decrease from the current rate of 9.193 percent.

The Environmental Cost Recovery Rider recovers the cost of projects at electrical generation plants that are required by the Environmental Protection Agency (EPA). To meet EPA regulations, we are required to build environmental-control systems at our Big Stone and Hoot Lake Plants at a total Otter Tail cost in excess of \$200 million. Even with the additional cost, these units remain the least cost option for generating electricity. The proposed rate reflects our North Dakota customers' share of these project costs.

The change is proposed only, and the new rate will not be effective until the Commission takes action.

For more information contact Otter Tail Power Company Customer Service at 800-257-4044 or place an inquiry from our website at www.otpc.com.

Summary of Revenue Requirements

Line No.	Revenue Requirements	2016 - 2017
1	AQCS	\$10,477,310
2	Hoot Lake Plant MATS	\$655,155
3	Carrying Cost	(19,761)
4	True-Up	<u>(753,989)</u>
5	Total	<u><u>\$10,358,715</u></u>

**BIG STONE PLANT
AIR QUALITY CONTROL SYSTEM PROJECT
QUARTERLY REPORT**

TO THE

NORTH DAKOTA PUBLIC SERVICE COMMISSION

FOR THE

PERIOD OCTOBER 1 THROUGH DECEMBER 31, 2015



January 13, 2016

Montana-Dakota Utilities Co. and Otter Tail Power Company submit this report on the Big Stone Plant Air Quality Control System (AQCS) Project in compliance with the North Dakota Public Service Commission May 9, 2012 Order in Cases No. PU-11-163 & PU-11-165, ordering paragraph 2.

This report describes progress made on the project during the period ending December 31, 2015. Specifically, in compliance with the above-referenced Order, this report includes information on the status of the United States Environmental Protection Agency (EPA) review of the South Dakota Regional Haze State Implementation Plan (SIP); it describes the types and amounts of costs incurred on the project to date; and it describes changed circumstances that are expected to affect the cost, schedule or installation of the AQCS Project.

Section I

Status of the United States Environmental Protection Agency's (EPA) review of the South Dakota Regional Haze State Implementation Plan (SIP)

On March 29, 2012, the Administrator for EPA Region 8 signed as a final rule the approval of South Dakota's Regional Haze SIP. The final rule was published in the *Federal Register* on April 26, 2012 and became effective on May 29, 2012.

Section II

Types and amounts of Project cost actually incurred

Actual construction on the project was completed last quarter. During this past quarter activity has centered around the commissioning and testing of all the systems. Only minor problems have been identified, and are being rectified. Reliable operation has been achieved and the systems were declared commercially operational on December 29, 2015. Performance tests have been run on the systems and equipment vendors are all meeting their guarantees for environmental performance. There are several operational guarantees that are still being addressed, including long-term reliability/availability, noise levels, and reagent consumption. These will be monitored and assessed, and any problems will be resolved over the coming months. Also, the demolition of the old baghouse, ID fans, and ash silo has started, and will likely continue into the second quarter of 2016.

Other activity this past quarter has centered around closeout of contracts, establishing units of property, and transferring responsibility to plant operations.

Costs incurred through December 31, 2015, can be broken down into the following general categories:

Category	Costs Through December 31, 2015
Equipment/Material Procurement:	\$105.7M
Construction:	\$211.4M
Engineering/Field Engineering Support:	\$24.4M
Owners Cost:	\$14.8M
Total:	\$356.3M

(Project costs identified do not include individual company costs.)

Equipment and Material Procurement: All owner-procured material for the project, such as the flue-gas desulfurization system equipment, selective catalytic reduction catalyst, induced draft fans and their motors, transformers, structural steel, ductwork, ammonia handling equipment and the Distributed Control System.

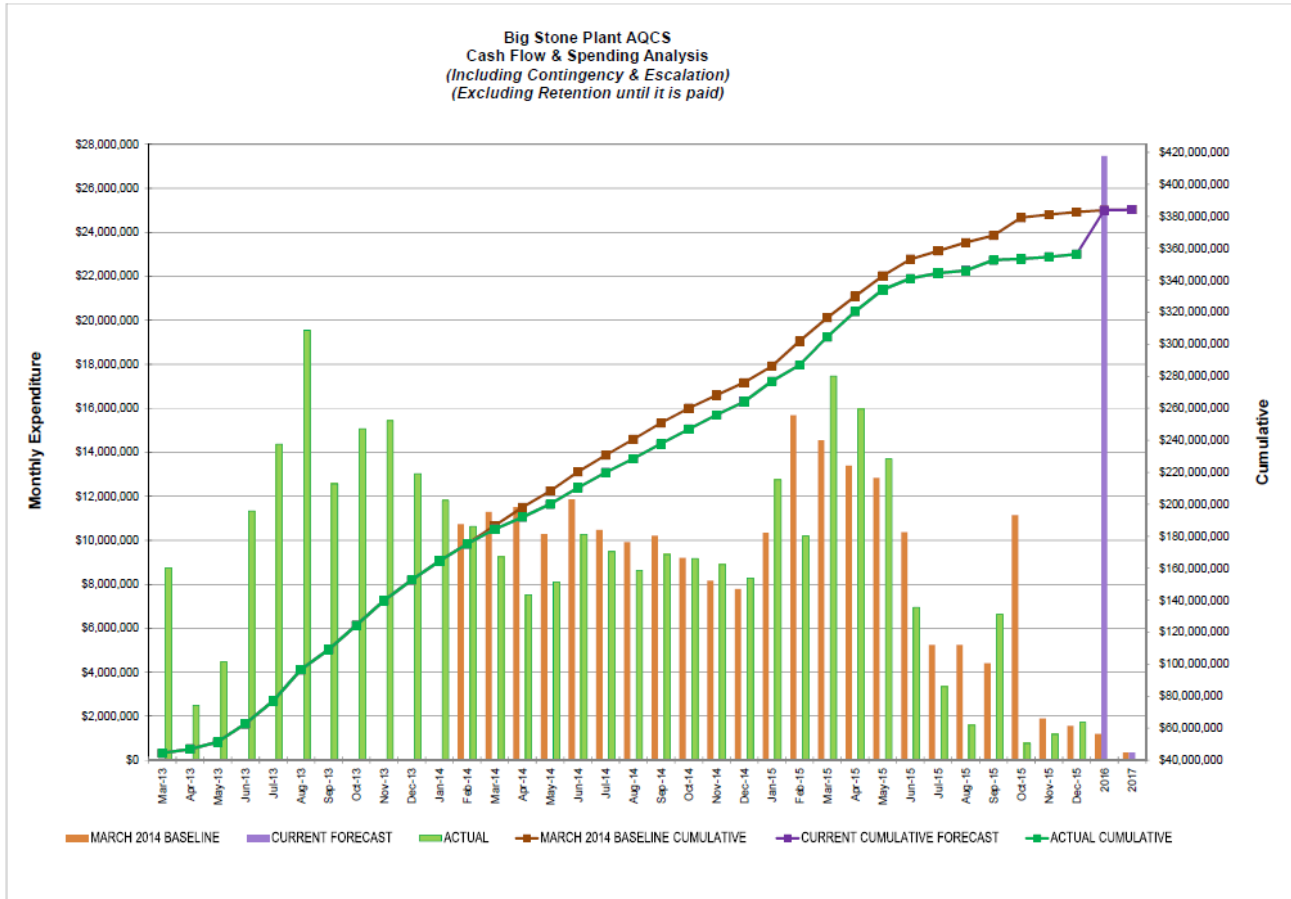
Construction: Payments made to Graycor (the General Work Contractor), site preparation work, testing work, surveying work and work to remove equipment that is no longer needed or which needs to be moved.

Engineering and Field Engineering Support: Engineering and procurement work done by Sargent & Lundy (Project engineer) and engineering field support for construction and commissioning.

Owners Cost: Items such as labor for project development and construction management, and such things as insurance, legal costs, permitting, office space and equipment; also spare parts and consumables used during testing and commissioning.

As described in previous quarterly reports, the project budget was reviewed in early 2013 and then again in early 2014. Following both reviews the projected project budget was reduced. The original project budget was \$491M; it was reduced in 2013 to \$405M and again reduced to \$384M in 2014.

Actual project cash flow and spending through December 31, 2015 and forecast through project completion, is illustrated on the following graph:



The following photographs illustrate various construction activities on the project during the quarter.

2015-10-07 Veit mobilized and beginning Demo work – ID Fan motors being removed



2015-10-21 Demo photos





2015-10-29 More demo photos



2015-10-29 Performance testing taking place



2015-11-04 Demo work



2015-11-19 Hydrator modifications



2015-12-03 Demo work ongoing



Safety is very important to us. To construct the project over 2.3 million man hours were invested with only one lost time incident and an OSHA rate of approximately 0.88. This is an accomplishment of which we are very proud.

Section III

Any changed circumstances that will affect cost or project installation

The EPA has issued the Mercury and Air Toxic Standards (MATS) rule, also known as the utility Maximum Achievable Control Technology (MACT) rules, which require control of hazardous air pollutants. While the final rule has been issued, on June 29, 2015 the U.S. Supreme Court held that EPA must consider cost, including cost of compliance, before deciding whether Regulation is appropriate and necessary. On December 15, 2015 the U.S. Court of Appeals for the District of Columbia Circuit ruled that the MATS rule should be remanded to EPA without vacatur in order to address the Supreme Court decision. The D.C. Circuit noted that EPA has represented it is on track to issue a final finding by April 15, 2016. Therefore, the MATS rule remains in effect while the rule is remanded for further proceedings. The rule as issued requires the Big Stone Plant to reduce mercury emissions, which can be controlled by adding Activated Carbon Injection (ACI) to the project. The estimated cost to add ACI as a standalone project was \$5M. Because of the synergies of installing the system at the same time as the AQCS, the owners installed the ACI system as part of the scope of the AQCS Project. The final installed cost of the ACI system was \$3.8M and this cost is included in the incurred cost table above.

Construction is now 100 percent complete. There is always the possibility that some unknown problem will arise, but with three months of successful testing and operations behind us the odds are getting lower all the time.

Summary

The Project was declared commercially operational on December 29, 2015, completing six years of effort. Testing of the systems and demolition of obsolete facilities will continue, but there is nothing foreseen that will keep the project from coming in at, or under budget.

Otter Tail Power Company
Environmental Cost Recovery Rider Tracker
North Dakota

Line No.	TRACKER SUMMARY Requirements Compared to Billed:	2013												2014						Collection Period
		January Actual	February Actual	March Actual	April Actual	May Actual	June Actual	July Actual	August Actual	September Actual	October Actual	November Actual	December Actual	January Actual	February Actual	March Actual	April Actual	May Actual	June Actual	
1	Revenue Requirements	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	476,475	476,475	476,475	476,475	476,475	476,475	5,072,332	
	Air Quality Control System																			
	Hoot Lake Plant MATS Project																			
2	Total Revenue Requirements	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	476,475	476,475	476,475	476,475	476,475	476,475	5,072,332	
3	Billed (forecast kWh x adj factor)												638,868	599,883	542,833	499,604	424,392	425,397	3,130,976	
4																				
5	Difference	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	184,457	(162,393)	(123,408)	(66,357)	(23,129)	52,083	51,078	1,941,356	
6	Carrying Charge		1,324	2,658	4,002	5,355	6,718	8,090	9,473	10,865	12,268	13,680	16,536	15,488	14,713	14,343	14,280	14,756		
7	Cummulative Difference (True-Up)	184,457	370,238	557,353	745,812	935,623	1,126,798	1,319,345	1,513,275	1,708,597	1,905,321	2,103,458	2,303,018	2,157,160	2,049,240	1,997,596	1,988,810	2,055,174	2,121,008	
8																				
9	Carrying Charge Calculation	1,324	2,658	4,002	5,355	6,718	8,090	9,473	10,865	12,268	13,680	15,103	16,536	15,488	14,713	14,343	14,280	14,756	15,229	
10	Cumulative Carrying Charge	1,324	3,983	7,984	13,339	20,057	28,147	37,620	48,486	60,753	74,433	89,536	106,072	121,560	136,274	150,616	164,896	179,652	194,881	
11	Carrying cost	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	
12																				
13																				
14	Forecasted Revenue																			

Approved in Case Numbers PU-13-79 & PU-13-84

SUMMARY	Jan 2013 -
	March 2014
Revenue requirements	\$4,247,862
Carrying Charge	60,611
Total Return on CWIP	\$4,308,473
July 2013 - Mar 2014 projected sales in mWh	1,394,198
Average Rate	\$0.00309

Otter Tail Power Company
Environmental Cost Recovery Rider Tracker
North Dakota

Line No.	TRACKER SUMMARY Requirements Compared to Billed:	2014						2015						Collection Period
		July Actual	August Actual	September Actual	October Actual	November Actual	December Actual	January Actual	February Actual	March Actual	April Actual	May Actual	June Actual	
1	Revenue Requirements													
	Air Quality Control System	476,475	476,475	476,475	476,475	476,475	476,475	717,173	717,173	717,173	717,173	717,173	717,173	7,161,891
	Hoot Lake Plant MATS Project			50,632	50,632	50,632	50,632	55,453	55,453	55,453	55,453	55,453	55,453	535,245
	Total Revenue Requirements	476,475	476,475	527,107	527,107	527,107	527,107	772,626	772,626	772,626	772,626	772,626	772,626	7,697,136
2														
3	Billed (forecast kWh x adj factor)	428,204	745,723	765,290	708,801	792,935	925,255	1,014,866	960,037	921,639	784,179	659,141	693,092	9,399,161
4														
5	Difference	48,271	(269,248)	(238,182)	(181,694)	(265,828)	(398,148)	(242,240)	(187,411)	(149,013)	(11,553)	113,485	79,534	(1,702,026)
6	Carrying Charge	15,229	15,685	13,864	12,254	11,037	9,208	6,415	4,722	3,410	2,365	2,299	3,130	99,616
7	Cumulative Difference (True-Up)	2,184,508	1,930,945	1,706,626	1,537,186	1,282,396	893,456	657,631	474,942	329,339	320,150	435,934	518,598	
8														
9	Carrying Charge Calculation	15,685	13,864	12,254	11,037	9,208	6,415	4,722	3,410	2,365	2,299	3,130	3,724	
10	Cumulative Carrying Charge	210,565	224,430	236,683	247,720	256,928	263,343	268,064	271,474	273,839	276,138	279,268	282,991	
11	Carrying cost	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	
12														
13														
14	Forecasted Revenue								199,880	176,988	160,410	132,981	125,996	796,255

Approved in Case Number PU-14-142

SUMMARY		July 2014 - June 2015
Revenue requirements		\$7,507,342
Carrying Charge		85,081
2012-2013 True Up		2,287,457
Total Return on CWIP		\$9,879,880
Jul 2014 - Jun 2015 projected sales in mWh		1,847,855
Average Rate		\$0.00535

Otter Tail Power Company
Environmental Cost Recovery Rider Tracker
North Dakota

Line No.	TRACKER SUMMARY Requirements Compared to Billed:	2015						2016						Collection Period
		July Actual	August Actual	September Actual	October Actual	November Actual	December Actual	January Actual	February Actual	March Projected	April Projected	May Projected	June Projected	
1	Revenue Requirements	717,173	717,173	717,173	717,173	717,173	719,398	873,457	892,898	893,090	893,090	895,533	895,972	9,649,306
	Air Quality Control System	55,453	55,453	56,907	58,437	58,437	58,437	56,400	56,400	56,400	56,400	56,400	56,400	681,519
	Hoot Lake Plant MATS Project	772,626	772,626	774,080	775,610	775,610	777,835	929,856	949,298	949,490	949,490	951,932	952,371	10,330,825
2	Total Revenue Requirements													
3	Billed (forecast kWh x adj factor)	919,903	950,263	926,995	836,896	870,852	989,948	1,166,949	1,096,483	1,065,166	1,014,774	880,598	862,021	11,580,848
4														
5	Difference	(147,277)	(177,637)	(152,915)	(61,286)	(95,242)	(212,114)	(237,093)	(147,185)	(115,676)	(65,284)	71,335	90,350	(1,250,023)
6	Carrying Charge	3,724	2,693	1,437	349	(88)	(773)	(2,301)	(4,020)	(5,106)	(5,973)	(6,485)	(6,019)	(22,564)
7	Cumulative Difference (True-Up)	375,044	200,100	48,622	(12,315)	(107,645)	(320,532)	(559,926)	(711,131)	(831,913)	(903,170)	(838,320)	(753,989)	
8														
9	Carrying Charge Calculation	2,693	1,437	349	(88)	(773)	(2,301)	(4,020)	(5,106)	(5,973)	(6,485)	(6,019)	(5,414)	
10	Cumulative Carrying Charge	285,684	287,121	287,470	287,381	286,609	284,307	(6,322)	(11,428)	(17,401)	(23,885)	(29,905)	(35,318)	
11	Carrying cost	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	
12														
13														
14	Forecasted Revenue	10,041,632	10,376,691	10,123,561	9,144,211	9,517,049	10,817,018	12,752,347	11,984,678	11,587,269	11,039,094	9,579,468	9,377,389	126,340,408

Approved in Case Number PU-15-131

SUMMARY		Jul 2015 - Jun 2016
Revenue requirements		\$11,936,305
Carrying Charge		(15,054)
2014 True Up		327,575
Total Return on CWIP		\$12,248,826
July 2015 - June 2016 projected revenue		133,247,286
Percent of Bill		9.193%

Otter Tail Power Company
Environmental Cost Recovery Rider Tracker
North Dakota

Line No.	TRACKER SUMMARY Requirements Compared to Billed:	2016						2017						Collection Period
		July Projected	August Projected	September Projected	October Projected	November Projected	December Projected	January Projected	February Projected	March Projected	April Projected	May Projected	June Projected	
1	Revenue Requirements	896,281	896,344	896,374	896,385	896,436	896,803	849,748	849,760	849,795	849,795	849,795	849,795	10,477,310
	Air Quality Control System	56,400	56,400	56,400	56,400	56,400	56,400	52,793	52,793	52,793	52,793	52,793	52,793	655,155
	Hoot Lake Plant MATS Project	952,681	952,744	952,774	952,784	952,836	953,203	902,541	902,553	902,588	902,588	902,588	902,588	11,132,465
2	Total Revenue Requirements													
3	Billed (forecast kWh x adj factor)	766,722	789,206	800,728	747,133	844,591	911,865	1,040,721	1,027,961	955,516	910,815	788,612	774,845	10,358,715
4														
5	Difference	185,958	163,537	152,046	205,652	108,245	41,338	(138,181)	(125,408)	(52,928)	(8,227)	113,976	127,743	773,750
6	Carrying Charge	(5,414)	(4,117)	(2,973)	(1,902)	(439)	335	634	(354)	(1,257)	(1,646)	(1,717)	(911)	(19,761)
7	Cumulative Difference (True-Up)	(573,445)	(414,025)	(264,951)	(61,202)	46,603	88,276	(49,271)	(175,033)	(229,218)	(239,091)	(126,832)	(0)	
8														
9	Carrying Charge Calculation	(4,117)	(2,973)	(1,902)	(439)	335	634	(354)	(1,257)	(1,646)	(1,717)	(911)	(0)	
10	Cumulative Carrying Charge	(39,435)	(42,408)	(44,310)	(44,750)	(44,415)	(43,781)	280	(977)	(2,622)	(4,339)	(5,250)	(5,250)	
11	Carrying cost	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	8.62%	
12														
13														
14	Forecasted Revenue	9,700,380	9,984,836	10,130,610	9,452,534	10,685,548	11,536,689	13,166,944	13,005,504	12,088,947	11,523,402	9,977,317	9,803,146	131,055,857

SUMMARY		Jul 2016 - Jun 2017
Revenue requirements		\$11,132,465
Carrying Charge		(19,761)
2016 True Up		(753,989)
Total Return on CWIP		\$10,358,715
Jul 2016 - Jun 2017 projected revenue		131,055,857
Average Rate		7.904%

Otter Tail Power Company
Environmental Cost Recovery Rider Tracker
North Dakota

Line No.	Year>>	2016 Actual January	2016 Actual February	2016 Projected March	2016 Projected April	2016 Projected May	2016 Projected June	2016 Projected July	2016 Projected August	2016 Projected September	2016 Projected October	2016 Projected November	2016 Projected December	2016 Projected Total	
RATE BASE															
1	Plant Balance	191,686,300	191,876,187	191,937,827	194,290,736	194,724,683	195,030,501	195,092,706	195,122,803	195,132,957	195,183,740	195,546,761	195,556,737	195,556,737	
2	Accumulated Depreciation	(479,994)	(960,296)	(1,441,074)	(1,922,006)	(2,408,834)	(2,896,749)	(3,385,431)	(3,874,268)	(4,363,181)	(4,852,119)	(5,341,184)	(5,831,159)	(5,831,159)	
3	Net Plant in Service	191,206,306	190,915,891	190,496,753	192,368,730	192,315,849	192,133,752	191,707,275	191,248,535	190,769,776	190,331,621	190,205,577	189,725,578	189,725,578	
4	CWIP	0	0	0	0	0	0	0	0	0	0	0	0	0	
5	Deferred Tax Asset	17,769,693	17,769,693	17,769,693	17,769,693	17,769,693	17,769,693	17,769,693	17,769,693	17,769,693	17,769,693	17,769,693	17,769,693	17,769,693	
6	Reversal of Deferred Tax Asset	(1,034,171)	(2,068,342)	(3,102,513)	(4,136,684)	(5,170,855)	(6,205,026)	(7,239,197)	(8,273,368)	(9,307,539)	(10,341,710)	(11,375,881)	(12,410,052)	(12,410,052)	
7	ADIT Proration Factor	1.000000	1.000000	0.756164	0.673973	0.589041	0.506849	0.421918	0.336986	0.254795	0.169863	0.087671	0.002740		
8	Accumulated Deferred Income Taxes Federal & State	(37,666,326)	(37,767,834)	(37,847,271)	(37,919,289)	(37,982,269)	(38,037,805)	(38,085,778)	(38,126,327)	(38,159,710)	(38,185,696)	(38,204,519)	(38,215,914)	(38,215,914)	
9	Ending Rate Base	170,275,502	168,849,408	167,316,662	168,082,450	166,932,418	165,660,614	164,151,993	162,618,533	161,072,221	159,573,908	158,394,869	156,869,305	156,869,305	
10															
11	Average Rate Base	13,727,990	13,727,990	13,727,990	13,727,990	13,727,990	13,727,990	13,727,990	13,727,990	13,727,990	13,727,990	13,727,990	13,727,990	13,727,990	
12															
13	Return on Rate Base	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	
14															
15	Available for Return (equity portion of rate base)	786,535	786,535	786,535	786,535	786,535	786,535	786,535	786,535	786,535	786,535	786,535	786,535	786,535	
16															
17	EXPENSES														
18	O&M and Depreciation														
19	Operating Costs	22,911	70,764	70,764	70,764	70,764	70,764	70,764	70,764	70,764	70,764	70,764	70,764	801,313	
20	Property Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	
21	Book Depreciation	479,994	480,302	480,778	480,932	486,828	487,915	488,681	488,837	488,913	488,938	489,065	489,975	5,831,159	
22	Total O&M and Depreciation Expense	502,905	551,066	551,542	551,696	557,592	558,679	559,445	559,601	559,676	559,702	559,829	560,739	6,632,472	
23															
24	Income before Taxes														
25	Available for Return (from above)	786,535	786,535	786,535	786,535	786,535	786,535	786,535	786,535	786,535	786,535	786,535	786,535	9,438,423	
26	Taxable Income (grossed up)	1,264,557	1,264,557	1,264,557	1,264,557	1,264,557	1,264,557	1,264,557	1,264,557	1,264,557	1,264,557	1,264,557	1,264,557	15,174,679	
27															
28	Income Taxes														
29	Current and Def Income Taxes	478,021	478,021	478,021	478,021	478,021	478,021	478,021	478,021	478,021	478,021	478,021	478,021	5,736,256	
30	Total Income Tax Expense	478,021	478,021	478,021	478,021	478,021	478,021	478,021	478,021	478,021	478,021	478,021	478,021	5,736,256	
31															
32															
33	REVENUE REQUIREMENTS														
34	Expenses	980,927	1,029,087	1,029,563	1,029,717	1,035,613	1,036,700	1,037,467	1,037,622	1,037,698	1,037,723	1,037,851	1,038,760	12,368,728	
35	Return on Rate Base	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	1,182,799	14,193,582	
36	Subtotal Revenue Requirements	2,163,725	2,211,886	2,212,361	2,212,516	2,218,411	2,219,499	2,220,265	2,220,421	2,220,496	2,220,522	2,220,649	2,221,559	26,562,310	
37	Adjustments														
38	Total Revenue Requirements	2,163,725	2,211,886	2,212,361	2,212,516	2,218,411	2,219,499	2,220,265	2,220,421	2,220,496	2,220,522	2,220,649	2,221,559	26,562,310	
39															
40	Base Demand Factor	66.87%	1,446,838	1,479,042	1,479,360	1,479,463	1,483,406	1,484,133	1,484,645	1,484,749	1,484,800	1,484,817	1,484,902	17,761,665	
41	Peak Demand Factor	33.13%	716,887	732,844	733,052	735,052	735,052	735,366	735,620	735,620	735,697	735,705	735,747	8,800,645	
42															
43	North Dakota share - E1 factor	39.7309%	574,842	587,637	587,763	587,763	589,370	589,659	589,863	589,904	589,924	589,931	589,965	7,056,828	
44	North Dakota share - D1 factor	41.6544%	298,615	305,262	305,327	305,327	306,162	306,312	306,418	306,440	306,450	306,454	306,471	3,665,836	
45	ND Revenue Requirements		873,457	892,898	893,090	893,090	895,533	895,972	896,281	896,344	896,374	896,385	896,436	10,722,664	
46															
47															
48	Total North Dakota Share		873,457	892,898	893,090	893,090	895,533	895,972	896,281	896,344	896,374	896,385	896,436	10,722,664	
SUPPORTING INFORMATION / DATA															
1															
2															
3	ND Cap Structure with allowed ROE per order.														
4	Capital Structure														
5	Debt														
6	Preferred equity														
7	Common equity														
8	Total														
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20	Deferred Tax														
21	Book depreciation	479,994	480,302	480,778	480,932	486,828	487,915	488,681	488,837	488,913	488,938	489,065	489,975	5,831,159	
22	Tax depreciation-Federal	748,831	748,831	748,831	748,831	748,831	748,831	748,831	748,831	748,831	748,831	748,831	748,831	8,985,969	
23	Tax depreciation-State	748,831	748,831	748,831	748,831	748,831	748,831	748,831	748,831	748,831	748,831	748,831	748,831	8,985,969	
24	Federal deferred income taxes	(90,037)	(89,934)	(89,775)	(89,723)	(87,749)	(87,385)	(87,128)	(87,076)	(87,050)	(87,042)	(86,999)	(86,695)	(1,056,593)	
25	State deferred income taxes	(11,587)	(11,574)	(11,553)	(11,546)	(11,292)	(11,245)	(11,212)	(11,206)	(11,202)	(11,201)	(11,196)	(11,157)	(135,972)	

Otter Tail Power Company
Environmental Cost Recovery Rider Tracker
North Dakota

Line No.	Year>>	2014 Actual January	2014 Actual February	2014 Actual March	2014 Actual April	2014 Actual May	2014 Actual June	2014 Actual July	2014 Actual August	2014 Actual September	2014 Actual October	2014 Actual November	2014 Actual December	2014 Actual Total
RATE BASE														
1	Plant Balance	0	0	0	0	0	0	0	6,185,550	6,185,550	6,185,550	6,185,550	6,185,550	6,185,550
2	Accumulated Depreciation	0	0	0	0	0	0	0	(80,332)	(160,663)	(240,995)	(321,327)	(401,660)	(481,992)
3	Net Plant in Service	0	0	0	0	0	0	0	6,185,550	6,105,218	6,024,887	5,944,555	5,864,223	5,864,223
4	CWIP	2,760,674	2,878,262	3,031,600	4,223,242	4,709,606	6,150,731	6,342,963	(291,803)	(291,803)	(291,803)	(291,803)	(291,803)	(291,803)
5	ADIT Pro-Rated													
6	Accumulated Deferred Income Taxes Federal & State	0	0	0	0	0	0	0	(243,509)	(456,537)	(669,564)	(882,592)	(1,095,620)	(1,095,620)
7	Ending Rate Base	2,760,674	2,878,262	3,031,600	4,223,242	4,709,606	6,150,731	6,342,963	5,650,238	5,356,879	5,063,520	4,770,160	4,476,801	4,476,801
8														
9	Average Rate Base	372,089	372,089	372,089	372,089	372,089	372,089	372,089	372,089	372,089	372,089	372,089	372,089	4,465,073
10														
11	Return on Rate Base	32,059	32,059	32,059	32,059	32,059	32,059	32,059	32,059	32,059	32,059	32,059	32,059	384,709
12														
13	Available for Return (equity portion of rate base)	21,319	21,319	21,319	21,319	21,319	21,319	21,319	21,319	21,319	21,319	21,319	21,319	255,823
14														
EXPENSES														
16	O&M and Depreciation													
17	Operating Costs	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Property Tax	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Book Depreciation	0	0	0	0	0	0	0	0	80,332	80,332	80,332	80,332	321,327
20	Total O&M and Depreciation Expense	0	0	0	0	0	0	0	0	80,332	80,332	80,332	80,332	321,327
21														
22	Income before Taxes													
23	Available for Return (from above)	21,319	21,319	21,319	21,319	21,319	21,319	21,319	21,319	21,319	21,319	21,319	21,319	255,823
24	Taxable Income (grossed up)	34,354	34,354	34,354	34,354	34,354	34,354	34,354	34,354	34,354	34,354	34,354	34,354	412,249
25														
26	Income Taxes													
27	Current and Def Income Taxes	13,035	13,035	13,035	13,035	13,035	13,035	13,035	13,035	13,035	13,035	13,035	13,035	156,426
28	Total Income Tax Expense	13,035	13,035	13,035	13,035	13,035	13,035	13,035	13,035	13,035	13,035	13,035	13,035	156,426
29														
30														
REVENUE REQUIREMENTS														
32	Expenses	13,035	13,035	13,035	13,035	13,035	13,035	13,035	13,035	93,367	93,367	93,367	93,367	477,753
33	Return on Rate Base	32,059	32,059	32,059	32,059	32,059	32,059	32,059	32,059	32,059	32,059	32,059	32,059	384,709
34	Subtotal Revenue Requirements	45,095	45,095	45,095	45,095	45,095	45,095	45,095	45,095	125,426	125,426	125,426	125,426	862,462
35	Adjustments													
36	Total Revenue Requirements	45,095	45,095	45,095	45,095	45,095	45,095	45,095	45,095	125,426	125,426	125,426	125,426	862,462
37														
38	Base Demand Factor	66.87%	30,154	30,154	30,154	30,154	30,154	30,154	30,154	83,870	83,870	83,870	83,870	576,710
39	Peak Demand Factor	33.13%	14,941	14,941	14,941	14,941	14,941	14,941	14,941	41,556	41,556	41,556	41,556	285,752
40														
41	North Dakota share - E1 factor	39.7309%	11,980	11,980	11,980	11,980	11,980	11,980	11,980	33,322	33,322	33,322	33,322	229,132
42	North Dakota share - D1 factor	41.6544%	6,223	6,223	6,223	6,223	6,223	6,223	6,223	17,310	17,310	17,310	17,310	119,028
43	ND Revenue Requirements		18,204	18,204	18,204	18,204	18,204	18,204	18,204	50,632	50,632	50,632	50,632	348,160
44														
45														
46	Total North Dakota Share		18,204	18,204	18,204	18,204	18,204	18,204	18,204	50,632	50,632	50,632	50,632	348,160
SUPPORTING INFORMATION / DATA														
1														
2														
3	ND Cap Structure with allowed ROE per order.													
4	Capital Structure													
5	Debt		43.11%			6.30%			2.72%					0.00%
6	Preferred equity		3.60%			4.75%			0.17%					
7	Common equity		53.30%			10.75%			5.73%					
8	Total		100.00%						8.62%	Overall Return				
9														
10	Project life (years)		Book		Tax									
11			7		20-year MACRS									
12														
13														
14	Statutory Tax Rate		37.94%		Federal	33.41%		State	4.53%					
15	Tax conversion factor		1.61146											
16	Base Demand Factor		66.87%											
17	Peak Demand Factor		33.13%											
18	ND share - E1 factor		39.7309%											
19	ND share - D1 factor		41.6544%											
20	Deferred Tax													
21	Book depreciation	0	0	0	0	0	0	0	0	80,332	80,332	80,332	80,332	321,327
22	Tax depreciation-Federal	0	0	0	0	0	0	0	641,751	641,751	641,751	641,751	641,751	3,208,754
23	Tax depreciation-State	0	0	0	0	0	0	0	641,751	641,751	641,751	641,751	641,751	3,208,754
24	Federal deferred income taxes	35.00%	0	0	0	0	0	0	(214,438)	(187,595)	(187,595)	(187,595)	(187,595)	(964,819)
25	State deferred income taxes		0	0	0	0	0	0	(29,071)	(25,432)	(25,432)	(25,432)	(25,432)	(130,800)

Otter Tail Power Company
Environmental Cost Recovery Rider Tracker
North Dakota

Line No.	Year>>	2015 Actual January	2015 Actual February	2015 Actual March	2015 Actual April	2015 Actual May	2015 Actual June	2015 Actual July	2015 Actual August	2015 Actual September	2015 Actual October	2015 Actual November	2015 Actual December	2015 Actual Total
RATE BASE														
1	Plant Balance	6,185,550	6,185,550	6,185,550	6,185,550	6,185,550	6,185,550	6,185,550	6,462,990	6,754,729	6,754,729	6,754,729	6,754,729	6,754,729
2	Accumulated Depreciation	(401,659)	(481,990)	(562,322)	(642,654)	(722,986)	(803,317)	(883,649)	(963,981)	(1,047,916)	(1,135,639)	(1,223,363)	(1,311,087)	(1,311,087)
3	Net Plant in Service	5,783,891	5,703,560	5,623,228	5,542,896	5,462,564	5,382,233	5,301,901	5,499,009	5,706,813	5,619,090	5,531,366	5,443,642	5,443,642
4	CWIP	(290,755)	(176,973)	(104,584)	648,492	665,970	633,241	633,849	0	0	0	0	0	0
5	ADIT Pro-Rated													
6	Accumulated Deferred Income Taxes Federal & State	(1,081,587)	(1,067,555)	(1,053,523)	(1,039,491)	(1,025,458)	(1,011,426)	(997,394)	(983,361)	(967,967)	(951,141)	(934,314)	(917,488)	(917,488)
7	Ending Rate Base	4,411,549	4,459,031	4,465,121	5,151,897	5,103,076	5,004,048	4,938,356	4,515,648	4,738,846	4,667,949	4,597,052	4,526,155	4,526,155
8														
9	Average Rate Base	391,382	391,382	391,382	391,382	391,382	391,382	391,382	391,382	391,382	391,382	391,382	391,382	4,696,579
10														
11	Return on Rate Base	33,721	33,721	33,721	33,721	33,721	33,721	33,721	33,721	33,721	33,721	33,721	33,721	404,656
12														
13	Available for Return (equity portion of rate base)	22,424	22,424	22,424	22,424	22,424	22,424	22,424	22,424	22,424	22,424	22,424	22,424	269,087
14														
EXPENSES														
16	O&M and Depreciation													
17	Operating Costs	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Property Tax	9,686	9,686	9,686	9,686	9,686	9,686	9,686	9,686	9,686	9,686	9,686	9,686	116,226
19	Book Depreciation	80,332	80,332	80,332	80,332	80,332	80,332	80,332	80,332	83,935	87,724	87,724	87,724	989,760
20	Total O&M and Depreciation Expense	90,017	90,017	90,017	90,017	90,017	90,017	90,017	90,017	93,620	97,409	97,409	97,409	1,105,986
21														
22	Income before Taxes													
23	Available for Return (from above)	22,424	22,424	22,424	22,424	22,424	22,424	22,424	22,424	22,424	22,424	22,424	22,424	269,087
24	Taxable Income (grossed up)	36,052	36,052	36,052	36,052	36,052	36,052	36,052	36,052	36,052	36,052	36,052	36,052	432,626
25														
26	Income Taxes													
27	Current and Def Income Taxes	13,628	13,628	13,628	13,628	13,628	13,628	13,628	13,628	13,628	13,628	13,628	13,628	163,539
28	Total Income Tax Expense	13,628	13,628	13,628	13,628	13,628	13,628	13,628	13,628	13,628	13,628	13,628	13,628	163,539
29														
30														
REVENUE REQUIREMENTS														
32	Expenses	103,646	103,646	103,646	103,646	103,646	103,646	103,646	103,646	107,249	111,037	111,037	111,037	1,269,525
33	Return on Rate Base	33,721	33,721	33,721	33,721	33,721	33,721	33,721	33,721	33,721	33,721	33,721	33,721	404,656
34	Subtotal Revenue Requirements	137,367	137,367	137,367	137,367	137,367	137,367	137,367	137,367	140,970	144,759	144,759	144,759	1,674,181
35	Adjustments													
36	Total Revenue Requirements	137,367	137,367	137,367	137,367	137,367	137,367	137,367	137,367	140,970	144,759	144,759	144,759	1,674,181
37														
38	Base Demand Factor	66.87%	91,854	91,854	91,854	91,854	91,854	91,854	91,854	94,264	96,797	96,797	96,797	1,119,490
39	Peak Demand Factor	33.13%	45,512	45,512	45,512	45,512	45,512	45,512	45,512	46,706	47,962	47,962	47,962	554,691
40														
41	North Dakota share - E1 factor	39.7309%	36,495	36,495	36,495	36,495	36,495	36,495	36,495	37,452	38,458	38,458	38,458	444,783
42	North Dakota share - D1 factor	41.6544%	18,958	18,958	18,958	18,958	18,958	18,958	18,958	19,455	19,978	19,978	19,978	231,053
43	ND Revenue Requirements		55,453	55,453	55,453	55,453	55,453	55,453	55,453	56,907	58,437	58,437	58,437	675,837
44														
45														
46	Total North Dakota Share		55,453	55,453	55,453	55,453	55,453	55,453	55,453	56,907	58,437	58,437	58,437	675,837

Line No.	SUPPORTING INFORMATION / DATA														
1	ND Cap Structure with allowed ROE per order.														
2	Capital Structure	Ratio		Cost		WA Cost		Property tax							1.88%
3	Debt	43.11%		6.30%		2.72%		2015 composite rate							
4	Preferred equity	3.60%		4.75%		0.17%									
5	Common equity	53.30%		10.75%		5.73%									
6	Total	100.00%				8.62%		Overall Return							
7															
8															
9															
10	Project life (years)	Book		Tax											
11		7		20-year MACRS											
12															
13				Federal		State									
14	Statutory Tax Rate	37.80%		33.49%		4.31%									
15	Tax conversion factor	1.60776													
16	Base Demand Factor	66.87%													
17	Peak Demand Factor	33.13%													
18	ND share - E1 factor	39.7309%													
19	ND share - D1 factor	41.6544%													
20	Deferred Tax														
21	Book depreciation	80,332	80,332	80,332	80,332	80,332	80,332	80,332	80,332	83,935	87,724	87,724	87,724	989,760	
22	Tax depreciation-Federal	43,211	43,211	43,211	43,211	43,211	43,211	43,211	43,211	43,211	43,211	43,211	43,211	518,529	
23	Tax depreciation-State	43,211	43,211	43,211	43,211	43,211	43,211	43,211	43,211	43,211	43,211	43,211	43,211	518,529	
24	Federal deferred income taxes	35.00%	12,432	12,432	12,432	12,432	12,432	12,432	12,432	13,639	14,908	14,908	14,908	157,822	
25	State deferred income taxes		1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,755	1,919	1,919	1,919	20,310	

ADIT Proration

	A	B	C	D
1		Tax Conversion Factor	1.5385	
2		Gross Up of Equity %	8.81%	
3		Equity %	5.73%	
4		Gross Up Factor	3.09%	

		Annual	Monthly
7	Debt Return %	2.72%	0.23%
		0.17%	0.01%
8	Equity Return %	5.73%	0.48%
9	Rate of Return	8.62%	0.72%
10	Tax RR on Equity Return	3.09%	0.26%
11	Rate Base Rev Req Gross Up Factor	11.70%	0.98%
12	Monthly Gross Up Factor (D11) Multiplied by ND Factors		0.39%

July 2016 - June 2017 Recovery Period				
Month	Original ADIT Balance - All Projects	ADIT Prorate Balance - All Projects	Difference due to ADIT Proration (B - A)	Revenue Requirement Impact C * D12
17 Jul-16	(\$39,001,870)	(\$38,868,492)	\$133,379	\$525
18 Aug-16	(39,074,143)	(38,898,310)	175,833	692
19 Sep-16	(39,146,388)	(38,922,856)	223,532	880
20 Oct-16	(39,218,622)	(38,941,963)	276,660	1,089
21 Nov-16	(39,290,809)	(38,955,800)	335,009	1,319
22 Dec-16	(39,362,652)	(38,964,166)	398,486	1,569
23 Jan-17	(39,357,641)	(38,959,520)	398,121	1,567
24 Feb-17	(39,352,618)	(38,955,205)	397,414	1,564
25 Mar-17	(39,347,563)	(38,951,242)	396,322	1,560
26 Apr-17	(39,342,508)	(38,947,647)	394,862	1,554
27 May-17	(39,337,453)	(38,944,432)	393,021	1,547
28 Jun-17	(\$39,332,398)	(\$38,941,586)	\$390,812	\$1,538
29	Total Revenue Requirement Impact			\$15,404

ND Revenue Requirement Adjustment	\$15,404
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North Dakota Revenue Requirements

\$10,358,715

Forecasted Retail Sales, all classes (July 2016 - June 2017)	\$131,055,857
Revenue Requirement	\$10,358,715
Percentage of Revenue Rate	7.904%

ATTACHMENT 7
ENVIRONMENTAL COST RECOVERY RIDER
(Section 13.08)



ENVIRONMENTAL COST RECOVERY RIDER

DESCRIPTION	RATE CODE
All Service – Environmental Cost Recovery	50-570
All Service – Reagent and Allowance Cost Recovery	50-572

RULES AND REGULATIONS: Terms and conditions of this electric rate schedule and the General Rules and Regulations govern use of this rider.

APPLICATION OF RIDER: This rider consists of two separate charges; the Environmental Cost Recovery (“ECR”) Rider Charge and the Reagents and Emissions Allowance Adjustment (“REAA”) Rider Charge. This rider is applicable to electric service under all of the Company’s retail rate schedules in Sections 9, 10, 11, 12, 13.05, and 14, except for Section 14.09 (**TailWinds**) and Section 14.11 (Released Energy Access Program Rider).

ENVIRONMENTAL COST RECOVERY CHARGE: There shall be included on each North Dakota Customer’s monthly bill an Environmental Cost Recovery (“ECR”) Charge, based on the applicable ECR Factor multiplied by the Customer’s monthly bill. The Customer’s monthly bill shall be based on all applicable charges and credits under the Company’s retail rate schedules in Sections 9, 10, 11, 12 and 14, except for Section 14.09 (**TailWinds**) and Section 14.11 (Released Energy Access Program Rider). The ECR Factor will not apply to any Mandatory Riders, except Section 13.05 (Economic Development Cost Removal Rider). The ECR charge will be included as part of the charge reflected on the Customer’s bill on the line labeled “EPA Req Environmental Cst.”

Environmental Cost Recovery Factor - ~~7.9049~~.193 percent

R

DETERMINATION OF ECR FACTOR: The ECR Factor shall be determined by dividing the forecasted *balance of the ECR Tracker account* by the *forecasted retail revenues subject to the ECR Factor*. The forecasted ECR Tracker balance and retail revenues shall be based on the forecast for the appropriate 12 month period (or such other period as may be approved by the Commission). The ECR Factor shall be rounded to the nearest 0.001 percent.

The *balance of the ECR Tracker account* for determination of the ECR Factor shall include annual revenue requirements and any true-up balance described as follows:

NORTH DAKOTA PUBLIC SERVICE COMMISSION
 Case No. PU-~~15-13116-~~
 Approved by Order dated: ~~June-17, 2015~~

EFFECTIVE with bills rendered on and after July 1, ~~2015~~2016, in North Dakota

 APPROVED: Thomas R. Brause
 Vice President, Administration

ENVIRONMENTAL COST RECOVERY RIDER

DESCRIPTION	RATE CODE
All Service – Environmental Cost Recovery	50-570
All Service – Reagent and Allowance Cost Recovery	50-572

RULES AND REGULATIONS: Terms and conditions of this electric rate schedule and the General Rules and Regulations govern use of this rider.

APPLICATION OF RIDER: This rider consists of two separate charges; the Environmental Cost Recovery (“ECR”) Rider Charge and the Reagents and Emissions Allowance Adjustment (“REAA”) Rider Charge. This rider is applicable to electric service under all of the Company’s retail rate schedules in Sections 9, 10, 11, 12, 13.05, and 14, except for Section 14.09 (**TailWinds**) and Section 14.11 (Released Energy Access Program Rider).

ENVIRONMENTAL COST RECOVERY CHARGE: There shall be included on each North Dakota Customer’s monthly bill an Environmental Cost Recovery (“ECR”) Charge, based on the applicable ECR Factor multiplied by the Customer’s monthly bill. The Customer’s monthly bill shall be based on all applicable charges and credits under the Company’s retail rate schedules in Sections 9, 10, 11, 12 and 14, except for Section 14.09 (**TailWinds**) and Section 14.11 (Released Energy Access Program Rider). The ECR Factor will not apply to any Mandatory Riders, except Section 13.05 (Economic Development Cost Removal Rider). The ECR charge will be included as part of the charge reflected on the Customer’s bill on the line labeled “EPA Req Environmental Cst.”

Environmental Cost Recovery Factor - 7.904 percent

R

DETERMINATION OF ECR FACTOR: The ECR Factor shall be determined by dividing the forecasted *balance of the ECR Tracker account* by the *forecasted retail revenues subject to the ECR Factor*. The forecasted ECR Tracker balance and retail revenues shall be based on the forecast for the appropriate 12 month period (or such other period as may be approved by the Commission). The ECR Factor shall be rounded to the nearest 0.001 percent.

The *balance of the ECR Tracker account* for determination of the ECR Factor shall include annual revenue requirements and any true-up balance described as follows:

NORTH DAKOTA PUBLIC
SERVICE COMMISSION
Case No. PU-16-
Approved by Order dated:

EFFECTIVE with bills rendered on
and after July 1, 2016, in North Dakota

APPROVED: Thomas R. Brause
Vice President, Administration