July 31, 2014

Dr. Burl W. Haar<br>Executive Secretary<br>Minnesota Public Utilities Commission<br>$1217^{\text {th }}$ Place East, Suite 350<br>St. Paul, MN 55101-2147

## Re: In the Matter of Otter Tail Power Company's Petition for Approval of the Annual Rate Update to its Environmental Upgrades Cost Recovery Rider Rate, Rate Schedule 13.08 Docket No. E017/M-14- <br> Initial Filing

Dear Dr. Haar:
Otter Tail Power Company ("Otter Tail") hereby submits this Petition to the Minnesota Public Utilities Commission ("Commission") for approval of its annual update ("update") to the Environmental Upgrades Cost Recovery Rider Rate under Otter Tail’s Rate Schedule 13.08.

Otter Tail has electronically filed this document with the Commission. In compliance with Minn. Rule 7829.1300, subp. 2, Otter Tail is serving a copy of this filing on the Minnesota Department of Commerce- Division of Energy Resources and the Minnesota Office of Attorney General-Antitrust and Utilities Division. A Summary of the filing has been served on all persons on Otter Tail's general service list. A Certificate of Service is also enclosed.

If you have any questions regarding this filing, please contact me at 218-739-8607 or at pbeithon@otpco.com.

Sincerely,
/S/ PETE BEITHON
Pete Beithon, Manager
Regulatory Recovery
jce
Enclosures
By electronic filing
c: Service List

# STATE OF MINNESOTA <br> BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION 

In the Matter of Otter Tail Power Company’s
Docket No. E017/M-14-
Petition for Approval of the Annual Rate Update to its Environmental Upgrades Cost Recovery Rider, Rate Schedule 13.08

## SUMMARY OF FILING

Otter Tail Power Company ("Otter Tail") submits this Petition to the Minnesota Public Utilities Commission ("Commission") for approval of its annual update ("update") to the Environmental Upgrades Cost Recovery Rider ("ECR Rider") Rate under Otter Tail's Rate Schedule 13.08.

# STATE OF MINNESOTA <br> BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISION 

In the Matter of Otter Tail Power Company's
Docket No. E017/M-14- $\qquad$ Petition for Approval of the Annual Rate Update to its Environmental Upgrades Cost Recovery Rider, Rate Schedule 13.08

## PETITION

## I. INTRODUCTION

Otter Tail Power Company ("Otter Tail") submits this Petition to the Minnesota Public Utilities Commission ("Commission") for approval of its annual update ("update") to the Environmental Upgrades Cost Recovery Rider ("ECR Rider") Rate under Otter Tail's Rate Schedule 13.08.

On December 18, 2013, the Commission approved Otter Tail’s ECR Rider Tariff and adjustment rate for the Big Stone Plant’s Air Quality Control System ("AQCS") in Docket No. E017/M-13-648. The ECR Rider allows Otter Tail rate recovery for its share of costs for the AQCS project. Otter Tail is now filing its annual update to the ECR rate, which includes actual AQCS project cost and revenue information through May 2014 and updated forecast cost and revenue information through September 2015.

The updated forecast cost and revenue information includes a new project budget which is a decrease in the budgeted costs for the project of approximately five percent. The initial budget for the AQCS project was $\$ 491$ million. In the spring of 2013, that budget was decreased to $\$ 405$ million. The new budget decreases the project cost again, to $\$ 384$ million, an overall reduction from the initial budget of over 21 percent.

The proposed ECR Rider rate of 6.515 percent is an increase of 2.557 percent from the currently approved 3.958 percent. The percentage rate has been calculated based upon an expected annual recovery period of October 2014 through September 2015. The updated ECR rate has been calculated using the previously approved percent-of-bill rate design method.

The AQCS project is scheduled to be completed and in service in late 2015. The next update filed in 2015 for the period October 2015 through September 2016 is expected to increase the rate approximately three percent for a total of slightly less than ten percent (a decrease from the 12.5 percent expected at the time of last year’s filing). The estimate is inclusive of recovery for the total estimated capital expenditures and plant related operation and maintenance expenses that commence when the project goes into service.

## II. SUMMARY OF FILING

Pursuant to Minn. Rules 7829.1300, subp. 1, a one-paragraph summary of the filing accompanies this Petition.

## III. GENERAL FILING INFORMATION

Pursuant to Minn. Rules 7829.1300, subp. 3, the following information is provided.
A. Name, address, and telephone number of utility
(Minn. Rules 7829.1300, subp. 3(A))
Otter Tail Power Company
215 South Cascade Street
Fergus Falls, Minnesota 56538-0496
(218) 739-8200
B. Name, address, and telephone number of utility attorney
(Minn. Rules 7829-1300, subp. 3(B))
Bruce Gerhardson
Associate General Counsel
Otter Tail Power Company
215 South Cascade Street
Fergus Falls, Minnesota 56538-0496
(218) 739-8475
C. Date of filing and proposed effective date of rates
(Minn. Rules 7829.1300, subp. 3(C))

The date of the filing is July 31, 2014. Otter Tail proposes the updated rates to become effective October 1, 2014, or on the first day of the month following Commission approval, should its decision be thereafter.

## D. Statutes controlling schedule for processing the filing

(Minn. Rules 7829.1300, subp. 3(D))
This filing is a "miscellaneous tariff filing" as defined by the Commission's rules at Minn. Rules 7829.0100, subp. 11. No determination of Otter Tail’s overall revenue requirement is necessary (or required under the Statute). Minn. Rules 7829.1400, subps. 1 and 4 permit comments in response to a miscellaneous tariff filing to be filed within 30 days and reply comments to be filed no later than 10 days thereafter.

## E. Title of utility employee responsible for filing

(Minn. Rules 7829.1300, subp. 3(E))
Pete Beithon
Manager, Regulatory Services
Otter Tail Power Company
215 South Cascade Street
Fergus Falls, Minnesota 56538-0496
(218) 739-8607

## F. Service List

(Minn. Rules 7829.0700)
Otter Tail requests that the following persons be placed on the Commission's official service list for this matter and that any trade secret comments, requests, or information be provided to the following on behalf of Otter Tail:

Pete Beithon
Manager, Regulatory Recovery
Otter Tail Power Company
215 South Cascade Street
Fergus Falls, MN 56538-0496
(218) 739-8607
pbeithon@otpco.com

Bruce Gerhardson
Associate General Counsel
Otter Tail Power Company
215 South Cascade Street
Fergus Falls, MN 56538-0496
(218) 739-8475
bgerhardson@otpco.com

## G. Service on other parties

(Minn. Rules 7829.1300, subp. 2; Minn. Rules 7829.0600)
Otter Tail has served a copy of this Petition on the Division of Energy Resources of the Department of Commerce and the Residential Utilities Division of the Office of the Attorney General. A summary of the filing was served on all parties on the attached list.

## IV. DESCRIPTION AND PURPOSE OF FILING

## A. Background

On July 31, 2013, Otter Tail filed an ECR tariff and proposed rates in Docket No. E017/M-13-648 to recover the jurisdictional allocated costs incurred in complying with federal environmental mandates at the Big Stone generating station. On December 18, 2013, the Commission approved Otter Tail’s ECR tariff and rate. The Company implemented the approved ECR rate of 3.958 percent (applied to base rates) effective with bills rendered on and after January 1, 2014.

In this annual update, Otter Tail is requesting to update its ECR rate to reflect actual costs incurred through May 2014 and projected costs through September 2015. The updated forecast of project costs over this period is based on a new project budget of $\$ 384$ million. The original project budget was $\$ 491$ million (inclusive of $\$ 40$ million for a new baghouse and $\$ 2.1$ million for ACI system, which are excluded from the ECR Rider). That budget was reduced to $\$ 405$ million in March of 2013. The current budget has now been reduced to $\$ 384$ million, a 21.8 percent reduction from the original budget. ${ }^{1}$

As shown in Attachment 1, the Revenue Requirements Summary, the revenue requirement allocated to Minnesota, is $\$ 9,654,962$ with a projected under-recovery of the current period's costs of $\$ 553,628$ and a carrying charge (in this case a credit to customers) during the collection period of $\$ 6,308$ for a total revenue requirement of \$10,202,283 to be recovered through the ECR rate over the period October 1, 2014 through September 30, 2015. The proposed ECR Rider rate from this update is 6.515

[^0]percent, an increase of 2.557 percent from the currently approved 3.958 percent using the currently approved percent-of-bill rate design method, for the period of October 2014 through September 2015.

## B. 2014 ECR Rider Revenue Requirement Calculations

Our 2014 Environmental Upgrades Revenue Requirements Calculations
(Attachment 2) includes calculations for the AQCS project. The revenue requirement for the project included in the Rider includes several components described below.

- Rate base section. Lines 1-22 of the tracker provide details on the amount of:
o Plant in service. (When applicable)
o Accumulated Depreciation. (When applicable)
o Construction Work in Progress. ("CWIP"). Minn. Stat. §216B. 1692 allows a current return on CWIP
o Allowance for Funds Used During Construction. (" AFUDC"). Earned return prior to rate implementation
o Baghouse Exclusion. Removal of costs associated with the baghouse and ACI construction.
o Accumulated Deferred Taxes. (When Applicable)
o Average Rate Base. This amount is based on a 13-month average calculation
o Return on Rate Base. The return on investment utilizes the cost of capital approved in Otter Tail's most recent general rate case which is 8.61 percent.
o Available for Return. This amount is the equity portion of the Return on Rate base.
- Expense section. The expenses applicable to the project are listed on lines 2537 and include operation costs, property taxes, depreciation and income taxes.
o O\&M Expenses. Otter Tail will track O\&M costs specifically related to the AQCS project.
o Property taxes. The property tax calculation is based on Otter Tail's composite tax rate for South Dakota, the jurisdiction where Big Stone is located and will be calculated in accordance with the procedures specified by each state.
o Depreciation Expense. Depreciation expense is calculated using Otter Tail's latest composite depreciation rate.
o Income Tax Expense. Total income tax expense is based on the combined federal and MN tax rate.
- Revenue requirement section. Lines 41-53 show the components of the revenue requirements calculation. Included are the items computed from the sections previously mentioned, including expenses and return on rate base.
o Jurisdictional allocator. Otter Tail applied jurisdictional allocators E1 and D1 as determined by the Commission in Otter Tail's most recent general rate case.
- Baghouse and ACI exclusion. The Commission's ADP approval did not include the new baghouse portion of the AQCS project or the ACI system that is being added to comply with the MATS rule. The baghouse was not part of the ADP approval because the Commission determined it to be beyond the scope of the ADP statute, not because it was found imprudent. The ACI system was not included in Otter Tail’s ADP request, because it did not fit within the scope of the ADP statute. The construction of the baghouse is expected to cost $\$ 38$ million in the revised budget (total project). The construction of the ACI system equipment is expected to cost approximately \$2 million in the revised budget (total project). To remove these costs, a portion of the monthly CWIP balance, and AFUDC through 2013, is removed in the same ratio as the cost of the baghouse and ACI as compared to the total AQCS project cost. The ratio is found by dividing the total projected cost of the baghouse and ACI by the total projected cost of the AQCS project (inclusive of the baghouse and ACI). The ratio is approximately 10.40 percent and this amount is removed from the project costs to arrive at the AQCS costs excluding the baghouse and ACI. The AFUDC calculation does not exclude the baghouse directly. Rather, the baghouse exclusion is calculated in the CWIP calculation section (Attachment 2, pages 1-3, lines 13 and 14). Within that section, the baghouse portion of each month's CWIP and AFUDC amounts are removed from the totals.

Corrections to the Tracker: Otter Tail has made corrections to the tracker that has the impact of reducing revenue requirements by approximately $\$ 164,000$.

The first set of corrections was discussed in Otter Tail's October 18, 2013 filing in Docket E017/M-13-648. At that time (the Department of Commerce's September 30, 2013 Comments, page 12) the corrections were determined to be small enough $(\$ 7,461)$ in impact to be corrected in this subsequent filing.

The second correction was discovered while preparing this filing. Otter Tail determined the CWIP balance dollar amounts contained a retention account. In this updated filing, Otter Tail has excluded any amounts from the CWIP balance that are related to retention accounts, going back to the date the amounts were first included. The
impact of this correction, along with any carrying charge credit is a reduction in revenue requirements of approximately $\$ 180,000$.

The third correction was also discovered in preparing this filing. Otter Tail found the monthly calculated annual AFUDC rate instead of the monthly true-up AFUDC rate (calculated to achieve the annual AFUDC rate) was used each month in the calculation. Attachment 6 shows the monthly AFUDC rate calculations. On the first page of the monthly AFUDC calculation, the annual rate is calculated (highlighted in gray). The rate is calculated each month to adjust for changing actual plus forecast: short-term, debt balances and construction work in progress (CWIP) balances for the remainder of the year. A true-up AFUDC rate is then calculated each month and applied to achieve the annual rate. In the initial filing, Otter Tail incorrectly used the annual rate from each month in the calculations instead of the appropriate monthly rate needed to achieve the forecast annual rate. The correct AFUDC rate for use in the calculation is highlighted in gray on the second page of each month's AFUDC calculation (in the section labeled "Year-to-date AFUDC loaded CWIP") on Attachment 6. Otter Tail has gone back to the start of the project and included any adjustments and recalculated AFUDC for each month. The net impact of applying the appropriate rates is an approximate increase $\$ 8,500$ in revenue requirements. The application of the appropriate rates is reflected in Attachment 2, page 1 of 3 , line 11 . The monthly rate applied is rounded to four decimal places for accuracy.

The corrections discussed above of approximately $\$ 164,000$ along with replacing forecast costs with actual costs (a decrease in revenue requirements of approximately $\$ 136,000$ ) result in a decreased revenue requirement of approximately $\$ 300,000$ from the amounts in Docket E017/M-13-648.

## C. Tracker Balance

Otter Tail maintains a tracker account worksheet and accounting system to track and account for retail revenue requirements associated with the project compared to the actual collections received through the billing and collections received under the Rider's approved rates. Project costs will remain in the tracker until all costs have either been
fully recovered within the Rider, or the costs have been moved into rate base and reflected in base rates as part of a general rate case. The tracker account information compares Otter Tail's Minnesota jurisdictional costs and the amount recovered through Minnesota retail revenue. The tracker balance (either positive of 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 the benefit of Otter Tail. The Order in Docket E017/M-13-648 states: "Approved OTP’s overall proposed tracker recovery method, including a monthly 1/12 rate of return charged on any under or over recovery balance."

The rate approved in Docket E017/M-13-648 was based on an assumed implementation date of October 1, 2013 but the rate actually became effective January 1, 2014, this delay resulted in an under collection (after all corrections and updates) of $\$ 553,628$ as the approved rate was designed using 12 months of revenues and the collection period is only nine months.

Otter Tail will continue making annual filings to revise the Environmental Cost Recovery rates to reflect updated revenue requirements and additional new environmental measure projects which qualify for ECR Rider recovery, if any. When submitting annual filings, the tracker account is updated so that any over/under recovered amount at the end of the previous year will be reflected in the Rider adjustment for the upcoming year. This approach ensures that no under/over recovery occurs. The tracker balance detail is included in Attachment 3.

## D. Rate Design

Otter Tail proposes to continue use of the "percent of bill" method to allocate costs to classes. This method appropriately matches the rate design with other baseload plant rate base and operating expenses by applying the percent to only base rates. The customer's rate charges in the bill are an appropriate reflection of energy and demand components in base rates and therefore, the percent of bill method provides a fair and suitably representative rate design for cost responsibility among and within classes.

Furthermore, this method is also simple to administer. The rate design is shown on Attachment 4.

## E. Revenue Requirements, Rate Application and Impact

Otter Tail proposes that the Rider continue to be applicable to electric service under all of Otter Tail's retail rate schedules as defined in Rate Schedule 13.08 (Attachment 5). The charge will continue to be included as part of the Resource Adjustment line on customers' bills.

The total 2014 revenue requirement, as shown on line 4 in Attachment 1 is $\$ 10,202,283$. The proposed rate is calculated in Attachment 4, based on the method defined in the Cost Recovery Factor section of Rate Schedule 13.08 (Attachment 5).

The estimated increase for a residential customer using $1,000 \mathrm{kWh}$ will be $2.38 \%$ or $\$ 2.31$ per month. The following table shows the estimated rate increase over the previous rate by individual rates:

|  | Average kWh’s per month | Total Current Bill | Total Proposed Bill | Percent Increase |
| :---: | :---: | :---: | :---: | :---: |
| Residential (101 Rate) | 1,000 | \$97.21 | \$99.52 | 2.38\% |
| Commercial (404 Rate) | 1,000 | \$100.24 | \$102.63 | 2.38\% |
| Commercial (603 Rate) | 400,000 | \$28,314.43 | \$28,982.07 | 2.36\% |

The above rate has been calculated based on an expected implementation date of October 1, 2014. Revenue Requirement calculations are based on October 2014 through September 2015 costs, assuming revenue collection occurs October 2014 through September 2015. If the effective date is significantly later than October 1, 2014, Otter Tail requests the option to recalculate the rate in order to recover all approved costs over the remainder of the proposed recovery period.

## F. Customer notification and billing

Otter Tail plans to provide notice to customers regarding the 2014 Environmental Upgrades Rider reflected in their monthly electric bills. The following is our proposed language, to be included as a notice on customers' bills during the month that the 2014 Rider is implemented:
"Starting this month, the Environmental Cost Recovery Rider has been updated on your bill which recovers costs associated with new environmental controls, which reduce particulate matter and other pollutants, being installed at Otter Tail Power's Big Stone Power Plant. Questions? Contact us at 800-257-4044."

Consistent with past practice, Otter Tail is prepared to work with the Department of Commerce and Commission Staff regarding our proposed customer notice.

## V. ENVIRONMENTAL COST RECOVERY RIDER RATE SCHEDULE

Otter Tail’s updated rate schedule Section 13.08 is provided in Attachment 5 to this Petition in both redline and clean versions.

## VI. CONCLUSION

Otter Tail respectfully requests the Commission approve the 2014 Update to its Environmental Upgrades Cost Recovery Rider effective October 1, 2014, as explained in this Petition.

Date: July 31, 2014

Respectfully submitted:

## OTTER TAIL POWERCOMPANY

By: /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

# OTTER TAIL POWER COMPANY ENVIRONMENTAL COST RECOVERY RIDER FILING ATTACHMENTS 

Attachment 1 Revenue Requirements Summary<br>Attachment 2 Revenue Requirements Calculations<br>Attachment 3 Environmental Cost Recovery Rider Tracker Report<br>Attachment 4 Rate Design<br>Attachment 5 Environmental Cost Recovery Rider, Rate Schedule 13.08<br>a. Redline<br>b. Clean<br>Attachment 6 Monthly AFUDC rate calculations

Otter Tail Power Company
Environmental Cost Recovery Rider
Docket No. E017/M-14-

## Summary of Revenue Requirements

| Line |  |  |
| ---: | :--- | ---: |
| No. | Revenue Requirements | 2014-2015 |
| 1 | Air Quality Control System | $\$ 9,654,962$ |
| 2 | Carrying Cost | $(6,308)$ |
| 3 | True Up | 553,628 |
| 4 | Total | $\$ 10,202,283$ |

## Iter Tail Power Company <br> Environmental Cost Recovery Rider Revenue Requirement Calc



## otter Taii Power Company <br> Environmental Cost Recovery Rider Revenue Requirement Calc



## tuer Tail Power Company <br> Environmental Cost Recovery Rider Revenue Requirement Calc



\section*{| Oter Tail Power Company |
| :--- |
| Environmenal Cost Recovery Rider Tracker | <br> }


|   <br> Line TRACKER SUMMARY <br> No． Requirements Compared to Billed： | ${ }^{\text {January }}$ Actual | $\substack{\text { February } \\ \text { Actual }}$ | $\xrightarrow[\substack{\text { March } \\ \text { Actual }}]{\text { and }}$ | ${ }_{\text {Aperal }}^{\text {Aprual }}$ | $\frac{2013}{\text { Ancy }} \text { Actave }$ | $\underbrace{\text { Jot }}_{\substack{\text { Junee } \\ \text { Actual }}}$ | ${ }_{\substack{\text { ductya } \\ \text { Actual }}}$ |  | Sentememer | $\underbrace{\text { at }}_{\substack{\text { Ocober } \\ \text { Actual }}}$ | November | $2013$ | ${ }_{\substack{\text { January } \\ \text { Actua }}}$ | $\substack{\text { Fencrary } \\ \text { Actual }}$ | ${ }_{\text {March }}^{\substack{\text { Mactua } \\ \text { Actua }}}$ | ${ }_{\substack{\text { Apiril } \\ \text { Actua }}}^{\text {ata }}$ | $\underbrace{\text { 20，}}_{\substack{\text { May } \\ \text { Acual }}}$ | $\xrightarrow{\text { Junee }}$ |  | $\xrightarrow{\text { Pugust }}$ Proiected | Seprember | colilection |
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## Iter Tail Power Company <br> Environmental Cospmany Recoery Rider Tracker oocket No. Eol1MM-14.



| MMARY | $\frac{\text { Oct } 2014 \cdot}{\text { Sept } 2015}$ |
| :---: | :---: |
| Revenue Requirements | 99,654,962 |
| Carrying Charge | (6,308 |
| 2014 True Up | 553,6 |
| Total Revenue Requirement | \$10,202,283 |
| Oct 2014 - Sept 2015 projected sales in mWh Average Rate | 50.0043 |

Otter Tail Power Company
Environmental Cost Recovery Rider
Docket No. E017/M-14- $\qquad$

Rate Design
Minnesota Revenue Requirements
\$10,202,283

| Percent of Revenue |  |
| :--- | ---: |
| Forecasted Retail Sales, all classes (Oct 2014 - Sept 2015) | $\$ 156,589,216$ |
| 12 Month Revenue Requirement | $\$ 10,202,283$ |
| Percentage of revenue rate | $6.515 \%$ |

## ENVIRONMENTAL COST RECOVERY RIDER

| DESCRIPTION | RATE <br> CODE |
| :--- | :--- |
| Environmental Cost Recovery Rider | $31-570$ |

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 is applicable to electric service under all of 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).

COST RECOVERY FACTOR: There shall be included on each Minnesota Customer's monthly bill an Environmental Cost Recovery ("ECR") charge based on the applicable cost recovery 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). The Environmental Cost Recovery Charge will not apply to any Mandatory Riders or sales tax and any local assessments as provided in the General Rules and Regulations for the Company’s electric service. The Environmental Cost Recovery charge will be included in the Resource Adjustment line item on the Customer's bill.

The Environmental Cost Recovery Factor is 6.51543 .958 percent.
DETERMINATION OF ECR ADJUSTMENT FACTOR: An ECR Adjustment Factor shall be determined by dividing the forecasted balance of the ECR Tracker account by the forecasted retail revenue for the upcoming year (or such other period as may be approved by the Minnesota Public Utilities Commission ("Commission")). The ECR Adjustment Factor shall be rounded to the nearest $0.001 \%$. The ECR Adjustment Factor may be adjusted annually (or other approved periods) with approval of the Commission.

Recoverable Environmental Measures Costs shall be the annual revenue requirements associated with environmental measures eligible for recovery under MN Statute 216B. 1692 that are determined by the Commission to be eligible for recovery under this ECR Rider. A standard model will be used to calculate the total forecasted revenue requirements for eligible measures for the designated period. All costs appropriately charged to the ECR Tracker account shall be eligible for recovery through this Rider, and all revenues recovered from the ECR Adjustment shall be credited to the ECR Tracker account.

[^1]Thomas R. Brause
Vice President, Administration

EFFECTIVE with bills rendered
on and after
January October 1, $2014 \underline{5}$
in Minnesota

## ENVIRONMENTAL COST RECOVERY RIDER

| DESCRIPTION | RATE <br> CODE |
| :--- | :--- |
| Environmental Cost Recovery Rider | $31-570$ |

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

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COST RECOVERY FACTOR: There shall be included on each Minnesota Customer's monthly bill an Environmental Cost Recovery ("ECR") charge based on the applicable cost recovery 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). The Environmental Cost Recovery Charge will not apply to any Mandatory Riders or sales tax and any local assessments as provided in the General Rules and Regulations for the Company’s electric service. The Environmental Cost Recovery charge will be included in the Resource Adjustment line item on the Customer's bill.

The Environmental Cost Recovery Factor is 6.515 percent.
DETERMINATION OF ECR ADJUSTMENT FACTOR: An ECR Adjustment Factor shall be determined by dividing the forecasted balance of the ECR Tracker account by the forecasted retail revenue for the upcoming year (or such other period as may be approved by the Minnesota Public Utilities Commission ("Commission")). The ECR Adjustment Factor shall be rounded to the nearest $0.001 \%$. The ECR Adjustment Factor may be adjusted annually (or other approved periods) with approval of the Commission.

Recoverable Environmental Measures Costs shall be the annual revenue requirements associated with environmental measures eligible for recovery under MN Statute 216B. 1692 that are determined by the Commission to be eligible for recovery under this ECR Rider. A standard model will be used to calculate the total forecasted revenue requirements for eligible measures for the designated period. All costs appropriately charged to the ECR Tracker account shall be eligible for recovery through this Rider, and all revenues recovered from the ECR Adjustment shall be credited to the ECR Tracker account.

Thomas R. Brause
Vice President, Administration

## COMPUTATION OF AFUDC RATE BY ORDER NO. 561 FOR THE YEAR 2011




## Formulas:

Semi-annual compounding $=(6.25 \div 2)+((100+(6.25 \div 2)) \times .0625) \div 2=6.35 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
$A e=$ Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
D=Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
$\mathrm{c}=$ Common equity cost rate
W=Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

## BY ORDER NO. 561

FOR THE YEAR 2012

|  |  | ount | Capitalization Ratio (2) |  | Cost Rates (3) | $\frac{S \div W}{(4)}$ | Weighted Cost Rates for Gross AFUDC Rate (5) | Net-of-Tax Factor $\qquad$ <br> (6) | Weighted Cost Rates for Net-ofTax Rates <br> (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted Average Short-term Debt |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Balance "S" | \$ | 4,593 |  | s | 1.94\% $\times$ | $0.07083=$ | 0.14\% (C) |  |  |
|  |  |  |  |  |  | 1-(S/W) |  |  |  |
| Long-Term Debt |  |  |  |  |  |  |  |  |  |
| Beginning of Year"D" |  | 95,000 | 49.72\% | $\times d$ | 5.67\% $\times$ | $0.92917=$ | 2.62\% (C) |  |  |
| Preferred Stock |  |  |  |  |  |  |  |  |  |
| Beginning of Year"P" |  | - | 0.00\% | $\times p$ | 0.00\% $\times$ | 0.92917 = | 0.00\% (D) |  |  |
| Common Equity |  |  |  |  |  |  |  |  |  |
| Beginning of Year"C" |  | 40,594 | 50.28\% | $\times \mathrm{C}$ | 10.75\% $\times$ | $0.92917=$ | 5.02\% (D) |  |  |
| Total Capitalization |  | 35,594 | 100.0\% |  |  |  |  |  |  |
| AFUDC Rate: |  |  |  |  |  |  | 7.77\% (B) |  |  |
| Compounded on semi-annual basis |  |  |  |  |  |  | 7.92\% |  |  |
| Maximum (+.25\%) |  |  |  |  |  |  | 8.17\% |  |  |
| RATE TO USE |  |  |  |  |  |  | 7.92\% (A) |  |  |
| Margin to apply to equity "other" portion |  |  |  |  |  |  | 0.00\% (D) |  |  |
| Margin to apply to debt "borrowed" portion |  |  |  |  |  | (A) - (B) | 0.15\% (C) | Ratio |  |
| AFUDC Debt |  |  |  |  |  | sum of (C) | 2.90\% | 37\% |  |
| AFUDC Equity |  |  |  |  |  | sum of (D) | 5.02\% | 63\% |  |
|  |  |  |  |  |  |  | $\underline{\underline{7.92 \%}}$ | 100\% |  |
| Average of 13 monthly balances: |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Account 107 CWIP | \$ | 64,843 |  |  |  | AFUDC Actu | ally Capitalized \$ |  |  |
| Account 120.1 |  | - |  |  |  | AFUDC Amo | unt by Order 561 |  |  |
| Total "W" | \$ | 64,843 |  |  |  | Differenc |  | \$ |  |

## Formulas:

Semi-annual compounding $=(7.77 \div 2)+((100+(7.77 \div 2)) \times .0777) \div 2=7.92 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
$A e=$ Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
D=Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
$\mathrm{c}=$ Common equity cost rate
W=Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

## BY ORDER NO. 561

FOR THE YEAR 2013

|  |  | $\begin{aligned} & \text { ount } \\ & 00, \mathrm{~s}) \end{aligned}$ | Capitalization Ratio (2) |  | Cost <br> Rates <br> (3) | $\frac{S \div W}{(4)}$ | Weighted Cost Rates for Gross AFUDC Rate (5) | Net-of-Tax Factor $\qquad$ <br> (6) | Weighted Cost Rates for Net-ofTax Rates (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted Average |  |  |  |  |  |  |  |  |  |
| Short-term Debt |  |  |  |  |  |  |  |  |  |
| Balance "S" | \$ | 18,249 |  | s | 2.00\% $\times$ | $0.13796=$ | 0.28\% (C) |  |  |
|  |  |  |  |  |  | 1-(S/W) |  |  |  |
| Long-Term Debt |  |  |  |  |  |  |  |  |  |
| Beginning of Year"D" |  | 635,000 | 48.02\% | $\times \mathrm{d}$ | 5.67\% $\times$ | $0.86204=$ | 2.35\% (C) |  |  |
| Preferred Stock |  |  |  |  |  |  |  |  |  |
| Beginning of Year"P" |  | - | 0.00\% | $\times p$ | 0.00\% $\times$ | $0.86204=$ | 0.00\% (D) |  |  |
| Common Equity |  |  |  |  |  |  |  |  |  |
| Beginning of Year"C" |  | 242,478 | 51.98\% | $\times \mathrm{C}$ | 10.75\% $\times$ | $0.86204=$ | 4.82\% (D) |  |  |
| Total Capitalization |  | ,877,478 | 100.0\% |  |  |  |  |  |  |
| AFUDC Rate: |  |  |  |  |  |  | 7.44\% (B) |  |  |
| Compounded on semi-annual basis |  |  |  |  |  |  | 7.58\% |  |  |
| Maximum (+.25\%) |  |  |  |  |  |  | 7.83\% |  |  |
| RATE TO USE |  |  |  |  |  |  | 7.58\% (A) |  |  |
| Margin to apply to equity "other" portion |  |  |  |  |  |  | 0.00\% (D) |  |  |
| Margin to apply to debt "borrowed" portion |  |  |  |  |  | (A) - (B) | 0.14\% (C) | Ratio |  |
| AFUDC Debt |  |  |  |  |  | sum of (C) | 2.76\% | 36\% |  |
| AFUDC Equity |  |  |  |  |  | sum of (D) | 4.82\% | 64\% |  |
|  |  |  |  |  |  |  | $\underline{\underline{7.58 \%}}$ | 100\% |  |
| Average of 13 monthly balances: |  |  |  |  |  |  |  |  |  |
| Account 107 CWIP | \$ | 132,276 |  |  |  | AFUDC Actua | ally Capitalized \$ |  |  |
| Account 120.1 |  | - |  |  |  | AFUDC Amo | unt by Order 561 |  |  |
| Total "W" | \$ | 132,276 |  |  |  | Differenc |  | \$ |  |

## Formulas:

Semi-annual compounding $=(7.44 \div 2)+((100+(7.44 \div 2)) \times .0744) \div 2=7.58 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
$A e=$ Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
D=Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
C=Common equity.
$\mathrm{c}=$ Common equity cost rate
W=Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

## BY ORDER NO. 561

FOR THE YEAR 2013

|  |  | $\begin{aligned} & \text { ount } \\ & 00, \mathrm{~s}) \end{aligned}$ | Capitalization Ratio (2) |  | Cost <br> Rates <br> (3) | $\frac{S \div W}{(4)}$ | Weighted Cost Rates for Gross AFUDC Rate <br> (5) | Net-of-Tax Factor $\qquad$ <br> (6) | Weighted Cost Rates for Net-ofTax Rates (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted Average |  |  |  |  |  |  |  |  |  |
| Short-term Debt |  |  |  |  |  |  |  |  |  |
| Balance "S" | \$ | 19,007 |  | s | 2.00\% $\times$ | $0.14375=$ | 0.29\% (C) |  |  |
|  |  |  |  |  |  | 1-(S/W) |  |  |  |
| Long-Term Debt |  |  |  |  |  |  |  |  |  |
| Beginning of Year"D" |  | 635,000 | 48.02\% | $\times \mathrm{d}$ | 5.67\% $\times$ | $0.85625=$ | 2.33\% (C) |  |  |
| Preferred Stock |  |  |  |  |  |  |  |  |  |
| Beginning of Year"P" |  | - | 0.00\% | $\times p$ | 0.00\% $\times$ | $0.85625=$ | 0.00\% (D) |  |  |
| Common Equity |  |  |  |  |  |  |  |  |  |
| Beginning of Year"C" |  | 342,478 | 51.98\% | $\times \mathrm{C}$ | 10.75\% $\times$ | $0.85625=$ | 4.78\% (D) |  |  |
| Total Capitalization |  | 977,478 | 100.0\% |  |  |  |  |  |  |
| AFUDC Rate: |  |  |  |  |  |  | 7.39\% (B) |  |  |
| Compounded on semi-annual basis |  |  |  |  |  |  | 7.53\% |  |  |
| Maximum (+.25\%) |  |  |  |  |  |  | 7.78\% |  |  |
| RATE TO USE |  |  |  |  |  |  | 7.53\% (A) |  |  |
| Margin to apply to equity "other" portion |  |  |  |  |  |  | 0.00\% (D) |  |  |
| Margin to apply to debt "borrowed" portion |  |  |  |  |  | (A) - (B) | 0.14\% (C) | Ratio |  |
| AFUDC Debt |  |  |  |  |  | sum of (C) | 2.75\% | 37\% |  |
| AFUDC Equity |  |  |  |  |  | sum of (D) | 4.78\% | 63\% |  |
|  |  |  |  |  |  |  | 7.53\% | 100\% |  |
| Average of 13 monthly balances: |  |  |  |  |  |  |  |  |  |
| Account 107 CWIP | \$ | 132,222 |  |  |  | AFUDC Actua | ually Capitalized \$ |  |  |
| Account 120.1 |  | - |  |  |  | AFUDC Amo | unt by Order 561 |  |  |
| Total "W" | \$ | 132,222 |  |  |  | Differenc |  | \$ |  |

## Formulas:

Semi-annual compounding $=(7.39 \div 2)+((100+(7.39 \div 2)) \times .0739) \div 2=7.53 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
$A e=$ Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
D=Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
C=Common equity.
$\mathrm{c}=$ Common equity cost rate
W=Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

## BY ORDER NO. 561

FOR THE YEAR 2013

|  |  | $\begin{aligned} & \text { ount } \\ & \frac{0, \mathrm{~s})}{1)} \end{aligned}$ | Capitali- <br> zation <br> Ratio <br> (2) |  | Cost <br> Rates <br> (3) | $\frac{S \div W}{(4)}$ | Weighted Cost Rates for Gross AFUDC Rate (5) | Net-of-Tax Factor $\qquad$ <br> (6) | Weighted Cost Rates for Net-ofTax Rates (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted Average Short-term Debt |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Balance "S" | \$ | 16,500 |  | s | 2.00\% $\times$ | $0.13646=$ | 0.27\% (C) |  |  |
|  |  |  |  |  |  | 1-(S/W) |  |  |  |
| Long-Term Debt |  |  |  |  |  |  |  |  |  |
| Beginning of Year"D" |  | ,635,000 | 48.02\% | $\times \mathrm{d}$ | 5.67\% $\times$ | $0.86354=$ | 2.35\% (C) |  |  |
| Preferred Stock |  |  |  |  |  |  |  |  |  |
| Beginning of Year"P" |  | - | 0.00\% | $\times p$ | 0.00\% $\times$ | $0.86354=$ | 0.00\% (D) |  |  |
| Common Equity |  |  |  |  |  |  |  |  |  |
| Beginning of Year"C" |  | 342,478 | 51.98\% | $\times \mathrm{C}$ | 10.75\% $\times$ | $0.86354=$ | 4.83\% (D) |  |  |
| Total Capitalization |  | 977,478 | 100.0\% |  |  |  |  |  |  |
| AFUDC Rate: |  |  |  |  |  |  | 7.45\% (B) |  |  |
| Compounded on semi-annual basis |  |  |  |  |  |  | 7.58\% |  |  |
| Maximum (+.25\%) |  |  |  |  |  |  | 7.83\% |  |  |
| RATE TO USE |  |  |  |  |  |  | 7.58\% (A) |  |  |
| Margin to apply to equity "other" portion |  |  |  |  |  |  | 0.00\% (D) |  |  |
| Margin to apply to debt "borrowed" portion |  |  |  |  |  | (A) - (B) | 0.13\% (C) | Ratio |  |
| AFUDC Debt |  |  |  |  |  | sum of (C) | 2.75\% | 36\% |  |
| AFUDC Equity |  |  |  |  |  | sum of (D) | 4.83\% | 64\% |  |
|  |  |  |  |  |  |  | $\underline{\underline{7.58 \%}}$ | 100\% |  |
| Average of 13 monthly balances: |  |  |  |  |  |  |  |  |  |
| Account 107 CWIP | \$ | 120,917 |  |  |  | AFUDC Actu | ally Capitalized \$ |  |  |
| Account 120.1 |  |  |  |  |  | AFUDC Amo | unt by Order 561 |  |  |
| Total "W" | \$ | 120,917 |  |  |  | Differenc |  | \$ |  |

## Formulas:

Semi-annual compounding $=(7.45 \div 2)+((100+(7.45 \div 2)) \times .0745) \div 2=7.58 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
$A e=$ Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
D=Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
$\mathrm{c}=$ Common equity cost rate
W=Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

BY ORDER NO. 561
FOR THE YEAR 2013

|  |  | $\begin{aligned} & \text { ount } \\ & \frac{10, s)}{1)} \end{aligned}$ | Capitalization Ratio (2) |  | Cost <br> Rates <br> (3) | $\frac{S \div W}{(4)}$ | Weighted Cost Rates for Gross AFUDC Rate (5) | Net-of-Tax Factor $\qquad$ <br> (6) | Weighted Cost Rates for Net-ofTax Rates (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted Average |  |  |  |  |  |  |  |  |  |
| Short-term Debt |  |  |  |  |  |  |  |  |  |
| Balance "S" | \$ | 27,162 |  | s | 2.00\% $\times$ | $0.22571=$ | 0.45\% (C) |  |  |
|  |  |  |  |  |  | 1-(S/W) |  |  |  |
| Long-Term Debt |  |  |  |  |  |  |  |  |  |
| Beginning of Year"D" |  | 635,000 | 48.02\% | $\times \mathrm{d}$ | 5.67\% $\times$ | $0.77429=$ | 2.11\% (C) |  |  |
| Preferred Stock |  |  |  |  |  |  |  |  |  |
| Beginning of Year"P" |  | - | 0.00\% | $\times p$ | 0.00\% $\times$ | $0.77429=$ | 0.00\% (D) |  |  |
| Common Equity |  |  |  |  |  |  |  |  |  |
| Beginning of Year"C" |  | 342,478 | 51.98\% | $\times \mathrm{C}$ | 10.75\% $\times$ | $0.77429=$ | 4.33\% (D) |  |  |
| Total Capitalization |  | 977,478 | 100.0\% |  |  |  |  |  |  |
| AFUDC Rate: |  |  |  |  |  |  | 6.88\% (B) |  |  |
| Compounded on semi-annual basis |  |  |  |  |  |  | 7.00\% |  |  |
| Maximum (+.25\%) |  |  |  |  |  |  | 7.25\% |  |  |
| RATE TO USE |  |  |  |  |  |  | 7.00\% (A) |  |  |
| Margin to apply to equity "other" portion |  |  |  |  |  |  | 0.00\% (D) |  |  |
| Margin to apply to debt "borrowed" portion |  |  |  |  |  | (A) - (B) | 0.12\% (C) | Ratio |  |
| AFUDC Debt |  |  |  |  |  | sum of (C) | 2.68\% | 38\% |  |
| AFUDC Equity |  |  |  |  |  | sum of (D) | 4.33\% | 62\% |  |
|  |  |  |  |  |  |  | $\underline{\underline{7.00 \%}}$ | 100\% |  |
| Average of 13 monthly balances: |  |  |  |  |  |  |  |  |  |
| Account 107 CWIP | \$ | 120,339 |  |  |  | AFUDC Actu | ally Capitalized \$ |  |  |
| Account 120.1 |  | - |  |  |  | AFUDC Amo | unt by Order 561 |  |  |
| Total "W" | \$ | 120,339 |  |  |  | Differen |  | \$ |  |

## Formulas:

Semi-annual compounding $=(6.88 \div 2)+((100+(6.88 \div 2)) \times .0688) \div 2=7.00 \%$
$A i=s(S / W)+\{d[D /(D+P+C)] \times(1-S / W)\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
$\mathrm{Ae}=$ Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
$D=$ Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
c=Common equity cost rate
$\mathrm{W}=$ Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

BY ORDER NO. 561
FOR THE YEAR 2013


## Formulas:

Semi-annual compounding $=(6.87 \div 2)+((100+(6.87 \div 2)) \times .0687) \div 2=6.99 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
$\mathrm{Ae}=$ Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
$D=$ Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
c=Common equity cost rate
$\mathrm{W}=$ Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

## BY ORDER NO. 561

FOR THE YEAR 2013


## Formulas:

Semi-annual compounding $=(7.16 \div 2)+((100+(7.16 \div 2)) \times .0716) \div 2=7.29 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
Ae=Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
$D=$ Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
$\mathrm{c}=$ Common equity cost rate
$\mathrm{W}=$ Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

## BY ORDER NO. 561

FOR THE YEAR 2013

|  |  | $\begin{aligned} & 10 \text { ount } \\ & 00, \mathrm{~s}) \end{aligned}$ | Capitalization Ratio (2) |  | Cost <br> Rates <br> (3) | $\frac{S \div W}{(4)}$ | Weighted Cost Rates for Gross AFUDC Rate (5) | Net-of-Tax Factor $\qquad$ <br> (6) | Weighted Cost Rates for Net-ofTax Rates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted Average |  |  |  |  |  |  |  |  |  |
| Short-term Debt |  |  |  |  |  |  |  |  |  |
| Balance "S" | \$ | 18,102 |  | s | 1.93\% $\times$ | $0.15573=$ | 0.30\% (C) |  |  |
|  |  |  |  |  |  | 1-(S/W) |  |  |  |
| Long-Term Debt |  |  |  |  |  |  |  |  |  |
| Beginning of Year"D" |  | 635,000 | 48.02\% | $\times d$ | 5.67\% $\times$ | $0.84427=$ | 2.30\% (C) |  |  |
| Preferred Stock |  |  |  |  |  |  |  |  |  |
| Beginning of Year"P" |  | - | 0.00\% | $\times p$ | 0.00\% $\times$ | $0.84427=$ | 0.00\% (D) |  |  |
| Common Equity |  |  |  |  |  |  |  |  |  |
| Beginning of Year"C" |  | 342,478 | 51.98\% | $\times \mathrm{C}$ | 10.75\% $\times$ | $0.84427=$ | 4.72\% (D) |  |  |
| Total Capitalization |  | 977,478 | 100.0\% |  |  |  |  |  |  |
| AFUDC Rate: |  |  |  |  |  |  | 7.32\% (B) |  |  |
| Compounded on semi-annual basis |  |  |  |  |  |  | 7.45\% |  |  |
| Maximum (+.25\%) |  |  |  |  |  |  | 7.70\% |  |  |
| RATE TO USE |  |  |  |  |  |  | 7.45\% (A) |  |  |
| Margin to apply to equity "other" portion |  |  |  |  |  |  | 0.00\% (D) |  |  |
| Margin to apply to debt "borrowed" portion |  |  |  |  |  | (A) - (B) | 0.13\% (C) | Ratio |  |
| AFUDC Debt |  |  |  |  |  | sum of (C) | 2.73\% | 37\% |  |
| AFUDC Equity |  |  |  |  |  | sum of (D) | 4.72\% | 63\% |  |
|  |  |  |  |  |  |  | 7.45\% | 100\% |  |
| Average of 13monthly balances: |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Account 107 CWIP | \$ | 116,242 |  |  |  | AFUDC Act | ally Capitalized \$ |  |  |
| Account 120.1 |  | - |  |  |  | AFUDC Am | unt by Order 561 |  |  |
| Total "W" | \$ | 116,242 |  |  |  | Differen |  | \$ |  |

## Formulas:

Semi-annual compounding $=(7.32 \div 2)+((100+(7.32 \div 2)) \times .0732) \div 2=7.45 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
Ae=Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
$D=$ Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
$\mathrm{c}=$ Common equity cost rate
$\mathrm{W}=$ Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

 BY ORDER NO. 561FOR THE YEAR 2013

|  |  | (1) | Capitalization Ratio (2) |  | Cost <br> Rates <br> (3) | $\frac{S \div W}{(4)}$ | Weighted Cost Rates for Gross AFUDC Rate (5) | Net-of-Tax Factor $\qquad$ <br> (6) | Weighted Cost Rates for Net-ofTax Rates (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted Average |  |  |  |  |  |  |  |  |  |
| Short-term Debt |  |  |  |  |  |  |  |  |  |
| Balance "S" | \$ | 17,705 |  | S | 1.93\% $\times$ | $0.15440=$ | 0.30\% (C) |  |  |
|  |  |  |  |  |  | 1-(S/W) |  |  |  |
| Long-Term Debt |  |  |  |  |  |  |  |  |  |
| Beginning of Year"D" |  | 635,000 | 48.02\% | $\times d$ | 5.67\% $\times$ | $0.84560=$ | 2.30\% (C) |  |  |
| Preferred Stock |  |  |  |  |  |  |  |  |  |
| Beginning of Year"P" |  | - | 0.00\% | $\times p$ | 0.00\% $\times$ | $0.84560=$ | 0.00\% (D) |  |  |
| Common Equity |  |  |  |  |  |  |  |  |  |
| Beginning of Year"C" |  | 342,478 | 51.98\% | $\times \mathrm{C}$ | 10.75\% $\times$ | $0.84560=$ | 4.73\% (D) |  |  |
| Total Capitalization |  | 977,478 | 100.0\% |  |  |  |  |  |  |
| AFUDC Rate: |  |  |  |  |  |  | 7.33\% (B) |  |  |
| Compounded on semi-annual basis |  |  |  |  |  |  | 7.46\% |  |  |
| Maximum (+.25\%) |  |  |  |  |  |  | 7.71\% |  |  |
| RATE TO USE |  |  |  |  |  |  | 7.46\% (A) |  |  |
| Margin to apply to equity "other" portion |  |  |  |  |  |  | 0.00\% (D) |  |  |
| Margin to apply to debt "borrowed" portion |  |  |  |  |  | (A) - (B) | 0.13\% (C) | Ratio |  |
| AFUDC Debt |  |  |  |  |  | sum of (C) | 2.73\% | 37\% |  |
| AFUDC Equity |  |  |  |  |  | sum of (D) | 4.73\% | 63\% |  |
|  |  |  |  |  |  |  | 7.46\% | 100\% |  |
| Average of 13 monthly balances: |  |  |  |  |  |  |  |  |  |
| Account 107 CWIP | \$ | 114,668 |  |  |  | AFUDC Actu | ally Capitalized \$ |  |  |
| Account 120.1 |  | - |  |  |  | AFUDC Am | unt by Order 561 |  |  |
| Total "W" | \$ | 114,668 |  |  |  | Differen |  | \$ |  |

## Formulas:

Semi-annual compounding $=(7.33 \div 2)+((100+(7.33 \div 2)) \times .0733) \div 2=7.46 \%$
$A i=s(S / W)+\{d[D /(D+P+C)] \times(1-S / W)\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
$\mathrm{Ae}=$ Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
$D=$ Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
c=Common equity cost rate
$\mathrm{W}=$ Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

 BY ORDER NO. 561FOR THE YEAR 2013

|  |  | $\begin{aligned} & 10 \text { ount } \\ & 00, \mathrm{~s}) \end{aligned}$ | Capitalization Ratio (2) |  | Cost <br> Rates <br> (3) | $\frac{S \div W}{(4)}$ | Weighted Cost Rates for Gross AFUDC Rate (5) | Net-of-Tax Factor $\qquad$ <br> (6) | Weighted Cost Rates for Net-ofTax Rates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted Average |  |  |  |  |  |  |  |  |  |
| Short-term Debt |  |  |  |  |  |  |  |  |  |
| Balance "S" | \$ | 19,453 |  | s | 1.93\% $\times$ | $0.17087=$ | 0.33\% (C) |  |  |
|  |  |  |  |  |  | 1-(S/W) |  |  |  |
| Long-Term Debt |  |  |  |  |  |  |  |  |  |
| Beginning of Year"D" |  | 635,000 | 48.02\% | $\times d$ | 5.67\% $\times$ | $0.82913=$ | 2.26\% (C) |  |  |
| Preferred Stock |  |  |  |  |  |  |  |  |  |
| Beginning of Year"P" |  | - | 0.00\% | $\times p$ | 0.00\% $\times$ | $0.82913=$ | 0.00\% (D) |  |  |
| Common Equity |  |  |  |  |  |  |  |  |  |
| Beginning of Year"C" |  | 342,478 | 51.98\% | $\times \mathrm{C}$ | 10.75\% $\times$ | $0.82913=$ | 4.63\% (D) |  |  |
| Total Capitalization |  | 977,478 | 100.0\% |  |  |  |  |  |  |
| AFUDC Rate: |  |  |  |  |  |  | 7.22\% (B) |  |  |
| Compounded on semi-annual basis |  |  |  |  |  |  | 7.35\% |  |  |
| Maximum (+.25\%) |  |  |  |  |  |  | 7.60\% |  |  |
| RATE TO USE |  |  |  |  |  |  | 7.35\% (A) |  |  |
| Margin to apply to equity "other" portion |  |  |  |  |  |  | 0.00\% (D) |  |  |
| Margin to apply to debt "borrowed" portion |  |  |  |  |  | (A) - (B) | 0.13\% (C) | Ratio |  |
| AFUDC Debt |  |  |  |  |  | sum of (C) | 2.72\% | 37\% |  |
| AFUDC Equity |  |  |  |  |  | sum of (D) | 4.63\% | 63\% |  |
|  |  |  |  |  |  |  | 7.35\% | 100\% |  |
| Average of 13 |  |  |  |  |  |  |  |  |  |
| Account 107 CWIP | \$ | 113,845 |  |  |  | AFUDC Act | ally Capitalized \$ |  |  |
| Account 120.1 |  | - |  |  |  | AFUDC Am | unt by Order 561 |  |  |
| Total "W" | \$ | 113,845 |  |  |  | Differen |  | \$ |  |

## Formulas:

Semi-annual compounding $=(7.22 \div 2)+((100+(7.22 \div 2)) \times .0722) \div 2=7.35 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
$\mathrm{Ai}=$ Rate for gross allowance for borrowed funds used during construction
Ae=Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
$D=$ Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
c=Common equity cost rate
$\mathrm{W}=$ Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

## BY ORDER NO. 561

FOR THE YEAR 2013


## Formulas:

Semi-annual compounding $=(7.39 \div 2)+((100+(7.39 \div 2)) \times .0739) \div 2=7.53 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
Ae=Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
$D=$ Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
$\mathrm{c}=$ Common equity cost rate
$\mathrm{W}=$ Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

## BY ORDER NO. 561

FOR THE YEAR 2013

|  |  | $\begin{aligned} & 10 \text { ount } \\ & 00, \mathrm{~s}) \end{aligned}$ | Capitalization Ratio (2) |  | Cost <br> Rates <br> (3) | $\frac{S \div W}{(4)}$ | Weighted Cost Rates for Gross AFUDC Rate (5) | Net-of-Tax Factor $\qquad$ <br> (6) | Weighted Cost Rates for Net-ofTax Rates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted Average |  |  |  |  |  |  |  |  |  |
| Short-term Debt |  |  |  |  |  |  |  |  |  |
| Balance "S" | \$ | 16,051 |  | s | 1.93\% $\times$ | $0.13726=$ | 0.26\% (C) |  |  |
|  |  |  |  |  |  | 1-(S/W) |  |  |  |
| Long-Term Debt |  |  |  |  |  |  |  |  |  |
| Beginning of Year"D" |  | 635,000 | 48.02\% | $\times d$ | 5.67\% $\times$ | $0.86274=$ | 2.35\% (C) |  |  |
| Preferred Stock |  |  |  |  |  |  |  |  |  |
| Beginning of Year"P" |  | - | 0.00\% | $\times p$ | 0.00\% $\times$ | $0.86274=$ | 0.00\% (D) |  |  |
| Common Equity |  |  |  |  |  |  |  |  |  |
| Beginning of Year"C" |  | 342,478 | 51.98\% | $\times \mathrm{C}$ | 10.75\% $\times$ | $0.86274=$ | 4.82\% (D) |  |  |
| Total Capitalization |  | 977,478 | 100.0\% |  |  |  |  |  |  |
| AFUDC Rate: |  |  |  |  |  |  | 7.43\% (B) |  |  |
| Compounded on semi-annual basis |  |  |  |  |  |  | 7.57\% |  |  |
| Maximum (+.25\%) |  |  |  |  |  |  | 7.82\% |  |  |
| RATE TO USE |  |  |  |  |  |  | 7.57\% (A) |  |  |
| Margin to apply to equity "other" portion |  |  |  |  |  |  | 0.00\% (D) |  |  |
| Margin to apply to debt "borrowed" portion |  |  |  |  |  | (A) - (B) | 0.14\% (C) | Ratio |  |
| AFUDC Debt |  |  |  |  |  | sum of (C) | 2.75\% | 36\% |  |
| AFUDC Equity |  |  |  |  |  | sum of (D) | 4.82\% | 64\% |  |
|  |  |  |  |  |  |  | 7.57\% | 100\% |  |
| Average of 13 |  |  |  |  |  |  |  |  |  |
| Account 107 CWIP | \$ | 116,937 |  |  |  | AFUDC Act | ally Capitalized \$ |  |  |
| Account 120.1 |  | - |  |  |  | AFUDC Am | unt by Order 561 |  |  |
| Total "W" | \$ | 116,937 |  |  |  | Differen |  | \$ |  |

## Formulas:

Semi-annual compounding $=(7.43 \div 2)+((100+(7.43 \div 2)) \times .0743) \div 2=7.57 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
Ai=Rate for gross allowance for borrowed funds used during construction
Ae=Rate for allowance for other funds used during construction.
$S=A v e r a g e ~ s h o r t-t e r m ~ d e b t . ~$
$\mathrm{s}=$ Short-term debt interest rate.
$\mathrm{D}=$ Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
$\mathrm{c}=$ Common equity cost rate
$\mathrm{W}=$ Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## COMPUTATION OF AFUDC RATE

BY ORDER NO. 561
FOR THE YEAR 2013

|  |  | ( 0 ount | Capitalization Ratio (2) |  | Cost <br> Rates <br> (3) | $\frac{S \div W}{(4)}$ | Weighted Cost Rates for Gross AFUDC Rate (5) | Net-of-Tax Factor $\qquad$ <br> (6) | Weighted Cost Rates for Net-ofTax Rates (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Weighted Average |  |  |  |  |  |  |  |  |  |
| Short-term Debt |  |  |  |  |  |  |  |  |  |
| Balance "S" | \$ | 15,752 |  | s | 1.93\% $\times$ | $0.13552=$ | 0.26\% (C) |  |  |
|  |  |  |  |  |  | 1-(S/W) |  |  |  |
| Long-Term Debt |  |  |  |  |  |  |  |  |  |
| Beginning of Year"D" |  | 635,000 | 48.02\% | $\times \mathrm{d}$ | 5.67\% $\times$ | $0.86448=$ | 2.35\% (C) |  |  |
| Preferred Stock |  |  |  |  |  |  |  |  |  |
| Beginning of Year"P" |  | - | 0.00\% | $\times p$ | 0.00\% $\times$ | $0.86448=$ | 0.00\% (D) |  |  |
| Common Equity |  |  |  |  |  |  |  |  |  |
| Beginning of Year"C" |  | 342,478 | 51.98\% | $\times \mathrm{C}$ | 10.75\% $\times$ | $0.86448=$ | 4.83\% (D) |  |  |
| Total Capitalization |  | 977,478 | 100.0\% |  |  |  |  |  |  |
| AFUDC Rate: |  |  |  |  |  |  | 7.44\% (B) |  |  |
| Compounded on semi-annual basis |  |  |  |  |  |  | 7.58\% |  |  |
| Maximum (+.25\%) |  |  |  |  |  |  | 7.83\% |  |  |
| RATE TO USE |  |  |  |  |  |  | 7.58\% (A) |  |  |
| Margin to apply to equity "other" portion |  |  |  |  |  |  | 0.00\% (D) |  |  |
| Margin to apply to debt "borrowed" portion |  |  |  |  |  | (A) - (B) | 0.14\% (C) | Ratio |  |
| AFUDC Debt |  |  |  |  |  | sum of (C) | 2.75\% | 36\% |  |
| AFUDC Equity |  |  |  |  |  | sum of (D) | 4.83\% | 64\% |  |
|  |  |  |  |  |  |  | 7.58\% | 100\% |  |
| Average of 13 monthly balances: |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Account 107 CWIP | \$ | 116,238 |  |  |  | AFUDC Actu | ually Capitalized \$ |  |  |
| Account 120.1 |  | - |  |  |  | AFUDC Am | unt by Order 561 |  |  |
| Total "W" | \$ | 116,238 |  |  |  | Differen |  | \$ |  |

## Formulas:

Semi-annual compounding $=(7.44 \div 2)+((100+(7.44 \div 2)) \times .0744) \div 2=7.58 \%$
$\mathrm{Ai}=\mathrm{s}(\mathrm{S} / \mathrm{W})+\{\mathrm{d}[\mathrm{D} /(\mathrm{D}+\mathrm{P}+\mathrm{C})] \times(1-\mathrm{S} / \mathrm{W})\}$
$A e=(1-S / W) \times\{p[P /(D+P+C)]+c[C /(D+P+C)]\}$
$\mathrm{Ai}=$ Rate for gross allowance for borrowed funds used during construction
Ae=Rate for allowance for other funds used during construction.
$\mathrm{S}=$ Average short-term debt.
$\mathrm{s}=$ Short-term debt interest rate.
$D=$ Long-term debt.
$\mathrm{d}=$ Long-term debt interest rate.
$\mathrm{P}=$ Preferred stock.
$\mathrm{p}=$ Preferred stock cost rate
$\mathrm{C}=$ Common equity.
c=Common equity cost rate
$\mathrm{W}=$ Average balance in construction work in progress plus nuclear fuel in process of refinement, conversion, enrichment, and fabrication.


## CERTIFICATE OF SERVICE

RE: In the Matter of Otter Tail Power Company's Petition for Approval of the Annual Rate Update to its Environmental Upgrades Cost Recovery Rider Rate, Rate Schedule 13.08
Docket No. E017/M-14-
I, Jana Emery, hereby certify that I have this day served a copy of the following, or a summary thereof, on Dr. Burl W. Haar and Sharon Ferguson by e-filing, and to all other persons on the attached service list by electronic service or by First Class mail.

## Otter Tail Power Company

Initial Filing
Dated this 31st day of July, 2014
/s/ JANA EMERY
Jana Emery
Regulatory Filing Coordinator
Otter Tail Power Company
215 South Cascade Street
Fergus Falls MN 56537
(218) 739-8879

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Christopher | Anderson | canderson@allete.com | Minnesota Power | 30 W Superior St <br> Duluth, <br> MN <br> 558022191 | Electronic Service | No | GEN SL_Otter Tail Power Company_General Service List - Tariff Filing |
| Michael | Bradley | mike.bradley@lawmoss.co m | Moss \& Barnett | Suite 4800 90 S 7th St Minneapolis, MN 55402-4129 | Electronic Service | No | GEN_SL_Otter Tail Power Company_General Service List - Tariff Filing |
| Gary | Chesnut | gchesnut@agp.com | AG Processing Inc. a cooperative | 12700 West Dodge Road PO Box 2047 <br> Omaha, <br> NE <br> 681032047 | Electronic Service | No | GEN_SL_Otter Tail Power Company_General Service List - Tariff Filing |
| James C. | Erickson | jericksonkbc@gmail.com | Kelly Bay Consulting | 17 Quechee St <br> Superior, <br> WI <br> 54880-4421 | Electronic Service | No | GEN SL_Otter Tail Power Company_General Service List - Tariff Filing |
| Sharon | Ferguson | sharon.ferguson@state.mn .us | Department of Commerce | 85 7th Place E Ste 500 <br> Saint Paul, <br> MN <br> 551012198 | Electronic Service | No | GEN SL Otter Tail Power Company_General Service List - Tariff Filing |
| Bruce | Gerhardson | bgerhardson@otpco.com | Otter Tail Power Company | PO Box 496 215 S Cascade St Fergus Falls, MN 565380496 | Electronic Service | No | GEN_SL_Otter Tail Power Company_General Service List - Tariff Filing |
| Burl W. | Haar | burl.haar@state.mn.us | Public Utilities Commission | Suite 350 121 7th Place East St. Paul, MN 551012147 | Electronic Service | No | GEN SL Otter Tail Power Company_General Service List - Tariff Filing |
| Shane | Henriksen | shane.henriksen@enbridge .com | Enbridge Energy Company, Inc. | 1409 Hammond Ave FL 2 <br> Superior, <br> WI <br> 54880 | Electronic Service | No | GEN_SL_Otter Tail Power Company_General Service List - Tariff Filing |
| Douglas | Larson | dlarson@dakotaelectric.co m | Dakota Electric Association | 4300 220th St W <br> Farmington, MN 55024 | Electronic Service | No | GEN_SL_Otter Tail Power Company_General Service List - Tariff Filing |
| James D. | Larson | james.larson@avantenergy .com | Avant Energy Services | 220 S 6th St Ste 1300 <br> Minneapolis, <br> MN <br> 55402 | Electronic Service | No | GEN SL Otter Tail Power Company_General Service List - Tariff Filing |
| John | Lindell | agorud.ect@ag.state.mn.us | Office of the Attorney General-RUD | 1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130 | Electronic Service | No | GEN SL_Otter Tail Power Company_General Service List - Tariff Filing |


| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Kavita | Maini | kmaini@wi.rr.com | KM Energy Consulting LLC | 961 N Lost Woods Rd Oconomowoc, WI 53066 | Electronic Service | No | GEN_SL_Otter Tail Power Company_General Service List - Tariff Filing |
| Andrew | Moratzka | apmoratzka@stoel.com | Stoel Rives LLP | 33 South Sixth Street Suite 4200 Minneapolis, MN 55402 | Electronic Service | No | GEN SL Otter Tail Power Company_General Service List - Tariff Filing |
| Debra | Opatz | dopatz@otpco.com | Otter Tail Power Company | 215 South Cascade Street <br> Fergus Falls, MN <br> 56537 | Electronic Service | No | GEN_SL_Otter Tail Power Company_General Service List - Tariff Filing |
| David G. | Prazak | dprazak@otpco.com | Otter Tail Power Company | P.O. Box 496 215 South Cascade Street Fergus Falls, MN 565380496 | Electronic Service | No | GEN_SL_Otter Tail Power Company_General Service List - Tariff Filing |
| Larry L. | Schedin | Larry@LLSResources.com | LLS Resources, LLC | 12 S 6th St Ste 1137 <br> Minneapolis, <br> MN <br> 55402 | Electronic Service | No | GEN SL Otter Tail Power Company_General Service List - Tariff Filing |
| Stuart | Tommerdahl | stommerdahl@otpco.com | Otter Tail Power Company | 215 S Cascade St PO Box 496 Fergus Falls, MN 56537 | Electronic Service | No | GEN SL_Otter Tail Power Company_General Service List - Tariff Filing |


[^0]:    ${ }^{1}$ The most recent Quarterly Report on the AQCS Project progress can be found in the Advance Determination of Prudence Docket No. E017/M-10-1082.

[^1]:    MINNESOTA PUBLIC
    UTILITIES COMMISSION
    Approved: $\qquad$ December 18, 2013
    Docket No. E017/ M-14-__13-648

