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**PUBLIC DOCUMENT  
TRADE SECRET DATA EXCISED**

March 16, 2015

**VIA E-FILING**

Daniel P. Wolf  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, MN 55101-2147

Re: In the Matter of Minnesota Power's Rider  
for Boswell Unit 4 Emission Reduction  
(BEC4 Rider) and 2015 Factor  
Docket No. E015/M-14-990  
**Minnesota Power's Reply Comments**

Dear Mr. Wolf:

Minnesota Power's hereby electronically submits its Reply Comments, including revised exhibits A and B to its November 26, 2014 original Petition, in the above-referenced Docket.

Pursuant to the Commission's revised Procedures for Handling Trade Secret and Privileged Data in furtherance of the intent of Minn. Stat. § 13.37 and Minn. Rule 7829.0500, in its original Petition, Minnesota Power designated footnote 4 on Exhibit B-2, pages 9 and 10, as Trade Secret. Minnesota Power removed certain information from the footnote to prevent disclosure of cost data related to the power sale agreement with Basin Electric Power Cooperative.

The disclosure of this information would be materially harmful to Minnesota Power because it provides confidential business information to competitors and potential power sale counterparties to the detriment of customers. This is highly confidential information; Minnesota Power's competitors, as well as its potential suppliers, would gain a commercial advantage over Minnesota Power if this information were publicly available. Minnesota Power follows strict internal procedures to maintain the secrecy of this information in order to capitalize on the economic value of the information for Minnesota Power's customers. Public availability of this

Mr. Wolf  
March 16, 2015  
Page 2

information could economically harm Minnesota Power and its customers in terms of energy supply provision or acquisition. Minnesota Power and its customers would suffer in providing resources to its retail load.

Minnesota Power respectfully requests the opportunity to provide additional justification in the event of a challenge to the trade secret designation provided herein

Please contact me at the number or the email address provided if you have any questions.

Yours truly,

A handwritten signature in black ink that reads "Lori Hoyum". The signature is written in a cursive, flowing style.

Lori Hoyum

LH:sr  
cc: Service List

STATEMENT REGARDING JUSTIFICATION FOR EXCISING  
TRADE SECRET INFORMATION

Pursuant to the Commission's revised Procedures for Handling Trade Secret and Privileged Data in furtherance of the intent of Minn. Stat. § 13.37 and Minn. Rule 7829.0500, Minnesota Power has designated footnote 4 on Exhibit B-2, pages 9 and 10, as Trade Secret. Minnesota Power has removed certain information from the footnote to prevent disclosure of cost data related to the power sale agreement with Basin Power Electric Cooperative.

The disclosure of this information would be materially harmful to Minnesota Power because it provides confidential business information to competitors and potential power sale counterparties to the detriment of customers. This is highly confidential information; Minnesota Power's competitors, as well as its potential suppliers, would gain a commercial advantage over Minnesota Power if this information were publicly available. Minnesota Power follows strict internal procedures to maintain the secrecy of this information in order to capitalize on the economic value of the information for Minnesota Power's customers. Public availability of this information could economically harm Minnesota Power and its customers in terms of energy supply provision or acquisition. Minnesota Power and its customers would suffer in providing resources to its retail load.

Minnesota Power respectfully requests the opportunity to provide additional justification in the event of a challenge to the trade secret designation provided herein.

**STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION**

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In the Matter of Minnesota Power's Rider  
for Boswell Unit 4 Emission Reduction  
(BEC4 Rider) and 2015 Factor

Docket No. E015/M-14-990

**MINNESOTA POWER  
REPLY COMMENTS**

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**I. Introduction**

Minnesota Power files these Reply Comments in response to the Department of Commerce – Division of Energy Resources (“Department”) Initial Comments on February 25, 2015. Minnesota Power (or the “Company”) appreciates the time and work by the Department to develop Initial Comments that convey their viewpoints and analysis of Minnesota Power’s Petition seeking Minnesota Public Utilities Commission (“Commission”) approval to update cost recovery of investments, expenditures and costs related to the Boswell Energy Center Unit 4 (“BEC4”) mercury emission reduction project (“BEC4 Project”) through Minnesota Power’s Commission-approved Rider for Boswell Unit 4 Emission Reduction (“BEC4 Rider”).

On November 26, 2014, the Company submitted its Petition to the Commission seeking approval to update the Boswell 4 Plan Adjustment Factors. On December 17, 2014, the Department requested by email that Minnesota Power send an electronic copy of the entire Exhibit B in a Microsoft Excel executable format with all links and formulae intact. Minnesota Power provided the requested information. The Company received no other informal or formal inquiries related to the Petition or requested supporting data during the 90-day initial review period that concluded with the issuance of the Department’s Comments on February 25, 2015. It is the intention of Minnesota Power to submit the most complete, concise and accurate filing possible. When additional detail and/or clarification is required, the Company favors having the ability to respond to the inquiring party at the time the question arises through the information request process, or informal inquiry, in order to help facilitate an efficient regulatory review process, and minimize additional delay occurring due to subsequent response comments being filed. In the absence of that opportunity, Minnesota Power responds to the

Department's request to provide additional detail, clarification, confirmation, explanation, and identification of the items identified in their Initial Comments through these Reply Comments.

## II. Reply Comments

On page 13 of the Department's Initial Comments, the Department requests that Minnesota Power "provide in its Reply Comments the details, clarification, confirmation, explanation, and identification of:

- The differing 2010 base rate amounts for the operations and maintenance expense referenced herein;
- Justification of the proposed October 2015 date for beginning the monthly revenue requirement credit for retired equipment, including clarification as to what point the equipment that is currently in base rates will, or has, become no longer used or useful;
- The relevant information related to BEPC as requested herein; and
- The annual rate factor adjustment due to loss of a wholesale customer in 2014."

The Department goes on to state that if the loss of the wholesale customer results in the annual rate factor adjustment filing needing to be amended, Minnesota Power should file the updated annual rate factor filing in both a red-line and clean electronic version. The following are Minnesota Power's responses to the Department's recommendations.

### A. 2010 Base Rate Amounts

On December 20, 2013, Minnesota Power submitted its Petition to the Commission pursuant to Minn. Stat. § 216B.1692 seeking approval to update cost recovery of investments, expenditures and costs related to the BEC4 Project through Minnesota Power's Commission-approved BEC4 Rider (see Docket No. E015/M-13-1166). In response to the Department's Information Request No. 8, dated February 27, 2014, Minnesota Power stated that the 2010 base rate amount for the operation and maintenance ("O&M") expense associated with the part of the Plant to be retired is \$650,000. In Exhibit B-2, page 11 or 11, of the November 26, 2014 Petition (Docket No. E015/M-14-990), the Company stated that the 2010 base rate amount for the O&M expense associated with the part of the Plant to be retired is \$640,000.

The correct 2010 base rate amount for the O&M expense is \$650,000. The immaterial amount will have no impact on the billing factors included in this filing. Refer to Exhibit B-2, page 11 of 11, row C10, for the corrected O&M expense.

**B. Monthly Revenue Requirement Credit Start Date**

Based on the most current schedule information, Minnesota Power plans to begin the outage to tie in the duct work to the NID system on August 15, 2015. At that time, the BEC4 equipment that is currently in rate base will be taken out of service and retired. Therefore, Minnesota Power has updated the start date of the base rate revenue credit from October 2015 to August 15, 2015. Refer to Exhibit B-1, page 5 of 5, row E5.

The energy and capacity provided from BEC4, the largest generating resource in Minnesota Power's fleet, is an essential component of Minnesota Power's customers' supply. BEC4 generates a very large quantity of reliable energy at a reasonable cost 24 hours a day, 7 days a week, and is a baseload resource for the region's energy intensive requirements. For this reason, the Company strategically scheduled the required outage(s) for the BEC4 Project at the optimal time for customers in order to minimize its expected replacement energy costs and associated O&M costs. BEC4 has been, and will continue regular operations until final tie-in of the duct work to the new CDS (circulating dry scrubber) technology, referred to as the NID system, occurs during a single scheduled outage. Once BEC4 is started up after the outage, it will be operating on the NID system and tuning will begin.

Minnesota Power communicated in its BEC4 Mercury Emission Reduction Plan ("BEC4 Plan") Petition dated August 31, 2012, and subsequent associated cost recovery petition dated March 7, 2013 (see Docket No. E015/M-12-920), that an outage request had been submitted to MISO (Midcontinent Independent System Operator) for the period of October 3, 2015, through November 29, 2015 to perform the final tie-in. Through Minnesota Power's 2014 and 2015 BEC4 Factor petitions (Docket Nos. E015/M-13-1166 and E015/M-14-990), the Company communicated in *Table 1 - Project Implementation Activity Update* (page 7 and page 9, respectively) that checkout and commission for tuning related activities would occur during the period of April 2015 through October 2015, with final plant start-up and tuning to take place October 2015 through January 2016.

**C. Basin Electric Power Cooperative Sales Agreement**

The Department raised a number of questions regarding the Basin Electric Power Cooperative (“Basin”) power sales agreement. Minnesota Power provided information about this power sale agreement in its initial petition requesting approval of the BEC4 Plan dated August 31, 2012 in Docket No. E015/M-12-920. In that petition, Minnesota Power stated:

*As part of a power sales agreement to Basin Electric Power Cooperative (“Basin”), Minnesota Power is allowed to collect costs from Basin associated with new emission control additions to BEC4 over a specified period. Minnesota Power is passing the benefits of this agreement directly to customers through crediting the jurisdictional revenue requirements by Basin's specified share of the costs for a portion of the contract.*

Minnesota Power also noted in that same initial petition that this power sale agreement was for a 100 MW power sale that expired in 2020.

Overall, as noted in the instant Docket, the power sale to Basin provides significant benefits to Minnesota Power’s customers through allowing Minnesota Power to collect costs associated with emission controls over a specified period from Basin and Minnesota Power is passing those benefits directly to customers through the BEC4 Rider.

Turning to the Department’s specific questions, the power sale agreement is an off-system wholesale sale not under a Minnesota Power tariff or historically regulated by the Commission, though as part of general rate cases the Commission establishes an overall level for asset-based wholesale power sales and associated margins. In the Company’s 2009 retail rate case, asset-based margins from off-system sales such as the Basin sale were reflected as a revenue credit, which reduced the revenue from sales of electricity that would otherwise need to be collected from retail jurisdictional customers. In its 2013 Integrated Resource Plan filing,<sup>1</sup> Minnesota Power noted various wholesale power transactions where the Company stated:

*Basin Electric—100 MW: In October 2009, Minnesota Power entered into an agreement with Basin Electric Power Cooperative for a 100 MW Firm sale beginning May 1, 2010, and continuing through April 30, 2020. Minnesota Power is relying on 100 MW of BEC capacity and associated energy to support this transaction.*



See also, Minnesota Power's March 11, 2014 response to Department Information Request No. 25 in Docket No. E015/RP-13-53.

Finally, regarding the 10 MW threshold, Basin is not a firm wholesale customer of Minnesota Power, and therefore, is not included in the Company's jurisdictional allocation factor calculations. Minnesota Power's firm wholesale customer sales (to municipal customers and Superior Water Light & Power) are subject to regulation by the Federal Energy Regulatory Commission and are included in the Company's jurisdictional allocation factor calculations.

**D. Annual Rate Factor Adjustment Due to Wholesale Customer Loss**

Minnesota Power has revised the jurisdictional and class allocation factors from the Company's last rate case to reflect the loss of a wholesale customer, Dahlberg Light & Power ("Dahlberg"), effective January 1, 2014. The allocators were revised as follows in Exhibit B-5 on the pages indicated:

- The Dahlberg load, page 8, line 17, was subtracted from the system peak, page 7, column (a), to get the revised system peak, page 5, column (a);
- The Dahlberg load was zeroed out, page 6, line 17, to get the revised jurisdictional allocators, page 6, line 34;
- The revised jurisdictional allocators were then used to calculate the revised class allocation factors shown in rows 11 and 12 on page 3; and
- The revised allocators were normalized as shown on page 4.

The above adjustments due to the loss of Dahlberg as a wholesale customer were incorporated into Exhibits B-1 and B-2, where they resulted in very small increases to the proposed billing factors. The revised rate impacts are shown in Table 1.

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<sup>1</sup>Docket No. E015/RP-13-53, Appendix C, Part 2, page 27.

**Table 1--Estimated Customer Impact**

<b>Proposed Billing Factor Effective</b>	<b>6/1/2015</b>
<b>Retail Revenue Requirements</b>	\$22,911,148
<b>Rate Class Impacts 1/</b>	
<b>Residential</b>	
Average Current Rate (¢/kWh)	9.995
Increase (¢/kWh)	0.109
Increase (%)	1.09%
Average Impact (\$/month)	\$0.88
<b>General Service</b>	
Average Current Rate (¢/kWh)	9.990
Increase (¢/kWh)	0.109
Increase (%)	1.09%
Average Impact (\$/month)	\$3.03
<b>Large Light &amp; Power</b>	
Average Current Rate (¢/kWh)	8.081
Increase (¢/kWh)	0.109
Increase (%)	1.35%
Average Impact (\$/month)	\$248.48
<b>Large Power</b>	
Average Current Rate (¢/kWh)	5.740
Increase (demand + energy combined) (¢/kWh)	0.095
Increase (%)	1.65%
Average Impact (\$/month)	\$47,561
<b>Municipal Pumping</b>	
Average Current Rate (¢/kWh)	9.149
Increase (¢/kWh)	0.109
Increase (%)	1.19%
Average Impact (\$/month)	\$11.76
<b>Lighting</b>	
Average Current Rate (¢/kWh)	15.657
Increase (¢/kWh)	0.109
Increase (%)	0.70%
Average Impact (\$/month)	\$0.40

**Notes:**

1/ Average current rates are 2015 estimated rates based on Final 2010 TY General Rates in 2009 Rate Case (E015/GR-09-1151) without riders, adjusted to include current rider rates. Current rider rates include Renewable Resources Rider rates, Transmission Cost Recovery Rider rates, BEC4 Rider rates, Conservation Program Adjustment, and estimated 2015 Fuel and Purchased Energy Adjustment. Average \$/month impact based on 2015 budgeted billing units.

The red-lined and clean versions of Exhibit A show the revised 2015 Boswell 4 Plan Adjustment. Minnesota Power is providing Exhibits B-1 to B-6 in Microsoft Excel electronic format as requested.

**E. Trade Secret Designation**

Minnesota Power would also like to address the Department's comments specific to the designation of trade secret data. The Department recommended that Minnesota Power provide additional care and justification in its designation of trade secret data consistent with Commission rules. Minnesota Power inadvertently did not include its standard trade secret justification consistent with Commission rules and practices since the body of the petition did not contain any trade secret information. The trade secret justification is attached to these Reply Comments (see Exhibit C). Regarding the designation of pages within the exhibit, Minnesota Power did provide the proper [TRADE SECRET BEGINS and TRADE SECRET ENDS] or [TRADE SECRET DATA EXCISED] language within the spreadsheet consistent with Minn. Rules 7829.0500 and the labeling of each page in the exhibit is consistent with recent Commission practices by not just Minnesota Power, but other utilities. For example, in Xcel Energy's February 17, 2015 compliance filing in Docket No. E002/CN-12-1240 and E002/M-14-788, Xcel Energy labeled every page of its filing "PUBLIC DOCUMENT – TRADE SECRET DATA EXCISED" regardless of whether an individual page contained trade secret information. Minnesota Power will continue to strive to designate only information that is Trade Secret in accordance with Commission rules and practices.

### III. Conclusion

Minnesota Power appreciates the opportunity to provide reply comments and the revised 2015 Boswell 4 Plan Adjustment and associated exhibits, and looks forward to working with the Department throughout the remainder of the regulatory review process.

Dated: March 16, 2015

Respectfully Submitted,

A handwritten signature in black ink that reads "Lori Hoyum". The signature is written in a cursive, flowing style.

Lori Hoyum  
Policy Manager  
Minnesota Power  
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**MINNESOTA POWER**  
**ELECTRIC RATE BOOK - VOLUME I**

SECTION  V  PAGE NO.  93   
 REVISION  Original 1

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**RIDER FOR BOSWELL UNIT 4 EMISSION REDUCTION**

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Applicable to electric service under all Company's Retail Rate Schedules except Competitive Rate Schedules - Rate Codes 73 and 79. In addition, this Rider is applicable to service under Company's Rider for Large Power Interruptible Service and Rider for Large Power Incremental Production Service.

The following charges are applicable in addition to all charges for service being taken under Company's standard rate schedules:

<b>Rate Class</b>	<b>Boswell 4 Plan Adjustment</b>
-------------------	----------------------------------

Large Power	\$ <del>1.00</del> <del>0.60</del> per kW-month of Billing Demand
-------------	--

and

	<del>0.095</del> <del>0.057</del> ¢/kWh
--	---

All other applicable Retail Rate Customers	<del>0.265</del> <del>0.156</del> ¢/kWh
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Filing Date <u> February 26, 2013 </u>	MPUC Docket No. <u> E-015/M-13-1166 </u>
Effective Date <u> August 1, 2014 </u>	Order Date <u> July 2, 2014 </u>

Approved by:  Marcia A. Podratz   
**Marcia A. Podratz**  
 Director - Rates

**MINNESOTA POWER  
ELECTRIC RATE BOOK - VOLUME I**

**SECTION**  V  **PAGE NO.**  93   
**REVISION**  1

**RIDER FOR BOSWELL UNIT 4 EMISSION REDUCTION**

Applicable to electric service under all Company's Retail Rate Schedules except Competitive Rate Schedules - Rate Codes 73 and 79. In addition, this Rider is applicable to service under Company's Rider for Large Power Interruptible Service and Rider for Large Power Incremental Production Service.

The following charges are applicable in addition to all charges for service being taken under Company's standard rate schedules:

<b>Rate Class</b>	<b>Boswell 4 Plan Adjustment</b>
Large Power	\$1.00 per kW-month of Billing Demand
	and
	0.095¢/kWh
All other applicable Retail Rate Customers	0.265¢/kWh

**Filing Date** \_\_\_\_\_ **MPUC Docket No.** \_\_\_\_\_  
**Effective Date** \_\_\_\_\_ **Order Date** \_\_\_\_\_

**Approved by:**  Marcia A. Podratz   
**Marcia A. Podratz**  
**Director - Rates**

Minnesota Power  
BEC4 Rider: 2015 Factor Filing  
Summary: Revenue Requirements, Cost Allocation and Rate Design

	MN Jurisdictional Amounts Total
Projected Year End 2014 Tracker Balance 1/	\$ 5,790,370
2015 Net Revenue Requirements 2/	\$ 17,120,777
Total 2015 Factor Revenue Requirements	\$ 22,911,148

	Allocators 3/		
MN Jurisdictional & Class Revenue Requirements	100.00%	\$	22,911,148
Large Power	62.51%	\$	14,321,709
All Other Retail Classes	37.49%	\$	8,589,439

Billing Units /4

Large Power	kW - month	716,608
	kWh	6,037,136,000
All Other Retail Classes	kWh	3,245,508,000

Billing Factors /5

		<u>Proposed</u> <u>6/1/2015</u>
Large Power	\$/kW - month	1.00
	¢/kWh	0.095
All Other Retail Classes	¢/kWh	0.265

		<u>Current Rate</u>	<u>Proposed</u>	<u>Increase</u>
Large Power	(\$/kW - month)	0.60	1.00	0.400
	(¢/kWh)	0.057	0.095	0.038
All Other Classes	(¢/kWh)	0.156	0.265	0.109

Notes:

1/ Refer to Exhibit B-1, page 3 of 5, row G3.

2/ Refer to Exhibit B-1, page 5 of 5, row E8.

3/ Jurisdictional Power Supply Demand (D-01) allocator and Peak & Average (P&A) class allocators. Refer to Exhibit B-5, pages 2 and 4.

4/ 2015 Budget.

5/ The LP rate design is a demand rate adder (\$/kW-month) and an energy adder (¢/kWh). The LP allocated costs are to be split between demand and energy on the 2010 base rate demand and energy revenue split of approximately 60% demand and 40% energy per results of MP's most recent MPUC rate case (Docket No. E015/GR-09-1151). All other retail classes will have an energy adder (¢/kWh).

Minnesota Power  
BEC4 Rider  
2014 Revenue Requirements: Total Sum All Projects

Reply Comments  
Exhibit B-1  
Page 2 of 5

**2014 Revenue Requirements**

**Total Sum: All Projects**

Section	Line	Des-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Total Year Dec-14
<b>A</b>	<b>Book Basis of Property</b>														
	0 CWIP (net of contra AFUDC & internal costs) 1/	60,653,451	67,309,385	74,393,761	84,019,187	91,690,914	99,185,813	104,779,955	110,611,126	119,381,370	130,694,623	138,808,812	146,950,210	146,950,210	
	1 Plant in Service (net of contra AFUDC & Internal costs)	-	-	-	-	-	-	-	-	-	-	-	-	-	
	2 Total Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-	-	
	4 Total Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>B</b>	<b>Tax Basis of Property</b>														
	1 Plant in Service	-	-	-	-	-	-	-	-	-	-	-	-	-	
	2 Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-	-	
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	
	5 Total Tax Depreciation (including bonus)	-	-	-	-	-	-	-	-	-	-	-	-	-	
	6 Tax Book Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	
	7 Income Tax Rate	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	
	8 Accumulated Deferred Income Tax Liability	-	-	-	-	-	-	-	-	-	-	-	-	-	
	9 Deferred Tax Expense debit / (Credit)	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>C-1</b>	<b>Revenue Requirements - Consolidated NOL</b>														
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-	-	
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3 Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	-	
	4 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	-	
	5 Current Return on CWIP 1/	605,314	647,812	717,372	801,966	889,532	966,313	1,032,577	1,090,417	1,164,337	1,266,010	1,364,361	1,446,655	11,992,667	
	6 Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	-	
	7 After Tax Return on Equity	-	-	-	-	-	-	-	-	-	-	-	-	-	
	8 Income Tax Component	-	-	-	-	-	-	-	-	-	-	-	-	-	
	9 Interest Expense Component	-	-	-	-	-	-	-	-	-	-	-	-	-	
	10 Total Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	-	
	11 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	-	-	
	13 Property Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	
	14 Revenue Requirements	605,314	647,812	717,372	801,966	889,532	966,313	1,032,577	1,090,417	1,164,337	1,266,010	1,364,361	1,446,655	11,992,667	

1/ Refer to Exhibit B-3, page 2.





Minnesota Power  
BEC4 Rider  
2015 Revenue Requirements: Total Sum All Projects

**2015 Revenue Requirements**

**Total Sum: All Projects**

Section	Line	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Total Year Dec-15
<b>A</b>	<b>Book Basis of Property</b>														
	0 CWIP (net of contra AFUDC & Internal costs) 1/	154,344,870	160,233,939	166,016,010	174,758,568	181,160,534	187,305,068	195,665,965	204,009,530	210,640,161	215,194,261	218,440,562	2,362,033	2,362,033	
	1 Plant in Service (net of contra AFUDC & Internal costs)	-	-	-	-	-	-	-	-	-	-	-	234,166,221	234,166,221	
	2 Total Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	487,846	487,846	
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	233,678,375	233,678,375	
	4 Total Depreciation	-	-	-	-	-	-	-	-	-	-	-	487,846	487,846	
	5 Book Depreciation Rate														
<b>B</b>	<b>Tax Basis of Property</b>														
	1 Plant in Service	-	-	-	-	-	-	-	-	-	-	-	-	234,166,221	234,166,221
	2 Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	2,551,208	2,551,208
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-	231,615,014	231,615,014
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5 Total Tax Depreciation (including bonus)	-	-	-	-	-	-	-	-	-	-	-	-	2,551,208	2,551,208
	6 Accumulated Tax Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	2,551,208	2,551,208
	6 Tax Book Difference	-	-	-	-	-	-	-	-	-	-	-	-	2,063,361	2,063,361
	7 Income Tax Rate	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	8 Accumulated Deferred Income Tax Liability	-	-	-	-	-	-	-	-	-	-	-	-	853,613	853,613
	9 Deferred Tax Expense debit / (Credit)	-	-	-	-	-	-	-	-	-	-	-	-	853,613	853,613
	10 ADITA for NOL Carryforward	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>C-1</b>	<b>Revenue Requirements - Consolidated NOL</b>														
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-	233,678,375	233,678,375
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	-	(853,613)	(853,613)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3 Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	232,824,762	232,824,762
	4 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	116,412,381	116,412,381
	5 Current Return on CWIP 1/	1,525,306	1,592,555	1,651,640	1,725,171	1,801,840	1,865,357	1,938,791	2,023,359	2,099,166	2,155,787	2,195,276	1,117,813	21,692,063	
	6 Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7 After Tax Return on Equity	-	-	-	-	-	-	-	-	-	-	-	-	546,589	546,589
	8 Income Tax Component	-	-	-	-	-	-	-	-	-	-	-	-	385,680	385,680
	9 Interest Expense Component	-	-	-	-	-	-	-	-	-	-	-	-	246,406	246,406
	10 Total Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	1,178,675	1,178,675
	11 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	810,000	810,000	1,620,000
	12 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	-	487,846	487,846
	13 Property Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14 Revenue Requirements	1,525,306	1,592,555	1,651,640	1,725,171	1,801,840	1,865,357	1,938,791	2,023,359	2,099,166	2,155,787	3,005,276	3,594,335	24,978,585	

1/ Refer to Exhibit B-3, page 11.

Minnesota Power  
BEC4 Rider  
2015 Revenue Requirements: Total Sum All Projects

**2015 Revenue Requirements**

**Total Sum: All Projects**

Section	Line	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Total Year Dec-15
<b>C-2</b>	<b>Revenue Requirements - Stand Alone NOL</b>														
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-	233,678,375	233,678,375
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	-	(853,613)	(853,613)
	3 Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	232,824,762	232,824,762
	4 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	116,412,381	
	5 Current Return on CWIP /1	1,525,306	1,592,555	1,651,640	1,725,171	1,801,840	1,865,357	1,938,791	2,023,359	2,099,166	2,155,787	2,195,276	1,117,813	21,692,063	
	6 Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7 After Tax Return on Equity	-	-	-	-	-	-	-	-	-	-	-	-	546,589	546,589
	8 Income Tax Component	-	-	-	-	-	-	-	-	-	-	-	-	385,680	385,680
	9 Interest Expense Component	-	-	-	-	-	-	-	-	-	-	-	-	246,406	246,406
	10 Total Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-	1,178,675	1,178,675
	11 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	810,000	810,000	1,620,000
	12 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	-	487,846	487,846
	13 Property Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14 Revenue Requirements	1,525,306	1,592,555	1,651,640	1,725,171	1,801,840	1,865,357	1,938,791	2,023,359	2,099,166	2,155,787	3,005,276	3,594,335	24,978,585	
<b>D</b>	<b>Stand Alone Taxable Income or Loss (NOL)</b>														
	1 Revenue Requirements	1,525,306	1,592,555	1,651,640	1,725,171	1,801,840	1,865,357	1,938,791	2,023,359	2,099,166	2,155,787	3,005,276	3,594,335	24,978,585	
	2 Tax Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	2,551,208	2,551,208
	3 Property Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4 Interest Expense (including on CWIP) /1	318,871	332,929	345,281	360,653	376,681	389,959	405,311	422,990	438,838	450,675	458,930	480,089	4,781,208	
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	810,000	810,000	1,620,000
	6 Total Tax Deduction	318,871	332,929	345,281	360,653	376,681	389,959	405,311	422,990	438,838	450,675	1,268,930	3,841,296	8,952,415	
	7 Taxable Income (NOL)	1,206,436	1,259,626	1,306,359	1,364,518	1,425,159	1,475,398	1,533,480	1,600,369	1,660,328	1,705,112	1,736,346	(246,962)	16,026,169	
	8 Current tax expense	499,102	521,108	540,441	564,502	589,589	610,372	634,401	662,072	686,878	705,405	718,327	(102,168)	6,630,029	
	9 Taxable Income (NOL)	1,206,436	1,259,626	1,306,359	1,364,518	1,425,159	1,475,398	1,533,480	1,600,369	1,660,328	1,705,112	1,736,346	(246,962)	16,026,169	
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward	1,206,436	1,259,626	1,306,359	1,364,518	1,425,159	1,475,398	1,533,480	1,600,369	1,660,328	1,705,112	1,736,346	15,920,705	16,026,169	
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>E</b>	<b>Summary: Revenue Requirements</b>														
	1 Revenue Requirement: Consolidated	1,525,306	1,592,555	1,651,640	1,725,171	1,801,840	1,865,357	1,938,791	2,023,359	2,099,166	2,155,787	3,005,276	3,594,335	24,978,585	
	2 Revenue Requirement: Stand Alone	1,525,306	1,592,555	1,651,640	1,725,171	1,801,840	1,865,357	1,938,791	2,023,359	2,099,166	2,155,787	3,005,276	3,594,335	24,978,585	
	3 Revenue Requirement: Rider 2/	1,525,306	1,592,555	1,651,640	1,725,171	1,801,840	1,865,357	1,938,791	2,023,359	2,099,166	2,155,787	3,005,276	3,594,335	24,978,585	
	4 Revenue Credit for Basin's Share /3	-	-	-	-	(357,642)	(370,157)	(384,594)	(401,190)	(416,214)	(427,645)	(587,081)	(700,289)	(3,644,812)	
	5 BEC 4 Base Rate Revenue Credit 4/	-	-	-	-	-	-	-	(86,448)	(157,641)	(157,641)	(157,641)	(157,641)	(717,012)	
	6 Total Net Revenue Requirements	1,525,306	1,592,555	1,651,640	1,725,171	1,444,199	1,495,200	1,554,196	1,535,721	1,525,312	1,570,501	2,260,554	2,736,405	20,616,762	
	7 MN Jurisdictional Allocator /5	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	
	8 MN Jurisdictional Revenue Requirement	1,266,660	1,322,506	1,371,572	1,432,634	1,199,306	1,241,659	1,290,651	1,275,309	1,266,665	1,304,191	1,877,232	2,272,393	17,120,777	
<b>F</b>	<b>Monthly Entry</b>														
	1 Monthly Entry needed	1,266,660	1,322,506	1,371,572	1,432,634	1,199,306	1,241,659	1,290,651	1,275,309	1,266,665	1,304,191	1,877,232	2,272,393		
	2 Cumulative Year	1,266,660	2,589,166	3,960,737	5,393,371	6,592,678	7,834,337	9,124,988	10,400,297	11,666,961	12,971,153	14,848,385	17,120,777		
	3 Booked YTD	1,266,660	2,589,166	3,960,737	5,393,371	6,592,678	7,834,337	9,124,988	10,400,297	11,666,961	12,971,153	14,848,385	17,120,777		
	4 Entry Needed	1,266,660	1,322,506	1,371,572	1,432,634	1,199,306	1,241,659	1,290,651	1,275,309	1,266,665	1,304,191	1,877,232	2,272,393		

1/ Refer to Exhibit B-3, page 11.  
2/ Lesser of E1 or E2.  
3/ Refer to Exhibit B-2, page 4, row E4 plus page 8, row E4.  
4/ Refer to Exhibit B-2, page 11, row C14.  
5/ Refer to Exhibit B-5, page 3, line 11.

Minnesota Power  
BEC4 Rider  
Revenue Requirements: Boswell 4 Environmental Retrofit

BEC 4 Environmental Retrofit  
Project ID # 103698  
In Service 12/31/2015

Section	Line	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
<b>A</b>	<b>Book Basis of Property</b>												
	0 CWIP (net of contra AFUDC & internal costs) 1/	60,638,366	67,294,300	74,377,448	84,002,868	91,674,596	99,156,809	104,738,266	110,556,751	119,314,309	130,614,877	138,716,380	146,854,579
	1 Plant in Service (net of contra AFUDC & internal costs) 1/												
	2 Accumulated Depreciation 12/2015 Plant	-	-	-	-	-	-	-	-	-	-	-	-
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	4 Total Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Book Depreciation Rate (24 yrs remaining life 2012)												
<b>B</b>	<b>Tax Basis of Property</b>												
	1 Plant in Service	-	-	-	-	-	-	-	-	-	-	-	-
	2 Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	4 Bonus Depreciation												
	5 Net Depreciable 12/2015 Plant												
	6 Tax Depreciation Rate 12/2015 Plant 2/												
	7 Tax Depreciation 12/2015 Plant	-	-	-	-	-	-	-	-	-	-	-	-
	8 Tax Book Difference	-	-	-	-	-	-	-	-	-	-	-	-
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability												
	11 Deferred Tax Expense debit / (Credit)	-	-	-	-	-	-	-	-	-	-	-	-
<b>C-1</b>	<b>Revenue Requirements - Consolidated NOL</b>												
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	-
	3 Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	4 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	5 Current Return on CWIP 4/	605,162	647,659	717,213	801,800	889,367	966,084	1,032,219	1,089,931	1,153,722	1,265,267	1,363,489	1,445,703
	6 Return on Average Rate Base 4/												
	7 After Tax Return on Equity	-	-	-	-	-	-	-	-	-	-	-	-
	8 Income Tax Component	-	-	-	-	-	-	-	-	-	-	-	-
	9 Interest Expense Component	-	-	-	-	-	-	-	-	-	-	-	-
	10 Total Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	11 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	12 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Property Tax 5/	-	-	-	-	-	-	-	-	-	-	-	-
	14 Revenue Requirements	605,162	647,659	717,213	801,800	889,367	966,084	1,032,219	1,089,931	1,153,722	1,265,267	1,363,489	1,445,703

1/ Refer to Exhibit B-3.

2/ Refer to Exhibit B-6

3/ Minnesota Composite Income Tax Rate.

4/ Current Return on CWIP starts 10/1/13 (Avg. Monthly CWIP x ROR% / 12). Refer to Exhibit B-3 for CWIP calculations.

Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4 rate of return components.

Return on Average Rate Base starts 12/31/15 (Avg. Monthly Rate Base x ROR% / 12).

5/ Project assumed to qualify for 100% property tax pollution control exemption per Tax Department.

Minnesota Power  
BEC4 Rider  
Revenue Requirements: Boswell 4 Environmental Retrofit

BEC 4 Environmental Retrofit  
Project ID # 103698  
In Service 12/31/2015

Section	Line	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
<b>C-2</b>	<b>Revenue Requirements - Stand Alone NOL</b>												
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	-
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	5 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	6 Current Return on CWIP 4/	605,162	647,659	717,213	801,800	889,367	966,084	1,032,219	1,089,931	1,153,722	1,265,267	1,363,489	1,445,703
	7 Return on Average Rate Base 4/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	-	-	-	-	-	-	-	-	-	-	-	-
	9 Income Tax Component	-	-	-	-	-	-	-	-	-	-	-	-
	10 Interest Expense Component	-	-	-	-	-	-	-	-	-	-	-	-
	11 Total Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	-
	14 Property Tax 5/	-	-	-	-	-	-	-	-	-	-	-	-
	15 Revenue Requirements	605,162	647,659	717,213	801,800	889,367	966,084	1,032,219	1,089,931	1,153,722	1,265,267	1,363,489	1,445,703
<b>D</b>	<b>Stand Alone Taxable Income or Loss (NOL)</b>												
	1 Revenue Requirements	605,162	647,659	717,213	801,800	889,367	966,084	1,032,219	1,089,931	1,153,722	1,265,267	1,363,489	1,445,703
	2 Tax Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	3 Property Tax	-	-	-	-	-	-	-	-	-	-	-	-
	4 Interest Expense (including on CWIP) 4/	126,511	135,395	149,936	167,619	185,925	201,963	215,789	227,854	243,280	264,508	285,042	302,229
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	126,511	135,395	149,936	167,619	185,925	201,963	215,789	227,854	243,280	264,508	285,042	302,229
	7 Taxable Income (NOL)	478,650	512,264	567,277	634,181	703,442	764,121	816,430	862,077	920,442	1,000,758	1,078,447	1,143,474
	8 Current tax expense	198,018	211,923	234,683	262,361	291,014	316,117	337,757	356,641	380,787	414,014	446,154	475,055
	9 Taxable Income (NOL)	478,650	512,264	567,277	634,181	703,442	764,121	816,430	862,077	920,442	1,000,758	1,078,447	1,143,474
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	478,650	512,264	567,277	634,181	703,442	764,121	816,430	862,077	920,442	1,000,758	1,078,447	1,143,474
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
<b>E</b>	<b>Summary: Revenue Requirements</b>												
	1 Revenue Requirement: Consolidated	605,162	647,659	717,213	801,800	889,367	966,084	1,032,219	1,089,931	1,153,722	1,265,267	1,363,489	1,445,703
	2 Revenue Requirement: Stand Alone	605,162	647,659	717,213	801,800	889,367	966,084	1,032,219	1,089,931	1,153,722	1,265,267	1,363,489	1,445,703
	3 Revenue Requirement: Rider 7/	605,162	647,659	717,213	801,800	889,367	966,084	1,032,219	1,089,931	1,153,722	1,265,267	1,363,489	1,445,703
	4 Revenue Credit for Basin's Share 8/	-	-	-	-	-	-	-	-	-	-	-	-
	5 BEC 4 Base Rate Revenue Credit 9/	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Net Revenue Requirements	605,162	647,659	717,213	801,800	889,367	966,084	1,032,219	1,089,931	1,153,722	1,265,267	1,363,489	1,445,703
	7 MN Jurisdictional Allocator 10/	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043
	8 MN Net Jurisdictional Revenue Requirement	502,544	537,836	595,595	665,839	738,557	802,265	857,185	905,111	956,390	1,050,715	1,132,263	1,200,555

4/ Current Return on CWIP starts 10/1/13 (Avg. Monthly CWIP x ROR% / 12). Refer to Exhibit B-3 for CWIP calculations.

Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4 rate of return components.

Return on Average Rate Base starts 12/31/15 (Avg. Monthly Rate Base x ROR% / 12).

5/ Project assumed to qualify for 100% property tax pollution control exemption per Tax Department.

6/ For in-service year, any positive taxable income from return of CWIP is added to first month of taxable loss to establish the first month taxable income/loss.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-2, page 9, row C11.

9/ Refer to Exhibit B-2, page 11, row C14.

10/ Refer to Exhibit B-5, page 2 and 4.

Minnesota Power  
BEC4 Rider  
Revenue Requirements: Boswell 4 Environmental Retrofit

Reply Comments  
Exhibit B-2  
Page 3 of 11

BEC 4 Environmental Retrofit  
Project ID # 103698  
In Service 12/31/2015

Section	Line	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
<b>A</b>	<b>Book Basis of Property</b>												
	0 CWIP (net of contra AFUDC & internal costs) 1/	154,212,688	160,029,535	165,703,952	174,231,737	180,221,170	186,006,730	193,666,693	201,913,716	208,451,126	212,933,005	216,115,324	
	1 Plant in Service (net of contra AFUDC & Internal costs) 1/												234,166,221
	2 Accumulated Depreciation 12/2015 Plant	-	-	-	-	-	-	-	-	-	-	-	487,846
	3 Net Plant												233,678,375
	4 Total Depreciation												487,846
	5 Book Depreciation Rate (24 yrs remaining life 2012)												0.42%
<b>B</b>	<b>Tax Basis of Property</b>												
	1 Plant in Service												234,166,221
	2 Accumulated Depreciation												2,551,208
	3 Net Plant												231,615,014
	4 Bonus Depreciation												
	5 Net Depreciable 12/2015 Plant												234,166,221
	6 Tax Depreciation Rate 12/2015 Plant 2/												1.069%
	7 Tax Depreciation 12/2015 Plant												2,551,208
	8 Tax Book Difference												2,063,361
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability												853,613
	11 Deferred Tax Expense debit / (Credit)												853,613
<b>C-1</b>	<b>Revenue Requirements - Consolidated NOL</b>												
	1 Net Plant												233,678,375
	2 Less: ADITL - Def Taxes												(853,613)
	3 Rate Base												232,824,762
	4 Average Rate Base												116,412,381
	5 Current Return on CWIP 4/	1,524,153	1,590,851	1,649,026	1,720,924	1,794,418	1,854,029	1,922,097	2,002,626	2,077,472	2,133,257	2,172,057	1,094,084
	6 Return on Average Rate Base 4/												
	7 After Tax Return on Equity												546,589
	8 Income Tax Component												385,680
	9 Interest Expense Component												246,406
	10 Total Return on Average Rate Base												1,178,675
	11 Operation & Maintenance Expense											770,000	770,000
	12 Depreciation Expense												487,846
	13 Property Tax 5/												
	14 Revenue Requirements	1,524,153	1,590,851	1,649,026	1,720,924	1,794,418	1,854,029	1,922,097	2,002,626	2,077,472	2,133,257	2,172,057	3,530,605

2/ Refer to Exhibit B-6

3/ Minnesota Composite Income Tax Rate.

4/ Current Return on CWIP starts 10/1/13 (Avg. Monthly CWIP x ROR% / 12). Refer to Exhibit B-3 for CWIP calculations.

Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4 rate of return components.

Return on Average Rate Base starts 12/31/15 (Avg. Monthly Rate Base x ROR% / 12).

5/ Project assumed to qualify for 100% property tax pollution control exemption per Tax Department.

Minnesota Power  
BEC4 Rider  
Revenue Requirements: Boswell 4 Environmental Retrofit

BEC 4 Environmental Retrofit  
Project ID # 103698  
In Service 12/31/2015

Section	Line	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
<b>C-2</b>	<b>Revenue Requirements - Stand Alone NOL</b>												
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	233,678,375
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	(853,613)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	-	-	-	-	-	-	-	-	-	-	-	232,824,762
	5 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	116,412,381
	6 Current Return on CWIP 4/	1,524,153	1,590,851	1,649,026	1,720,924	1,794,418	1,854,029	1,922,097	2,002,626	2,077,472	2,133,257	2,172,057	1,094,084
	7 Return on Average Rate Base 4/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	-	-	-	-	-	-	-	-	-	-	-	546,589
	9 Income Tax Component	-	-	-	-	-	-	-	-	-	-	-	385,680
	10 Interest Expense Component	-	-	-	-	-	-	-	-	-	-	-	246,406
	11 Total Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	1,178,675
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	770,000	770,000
	13 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	487,846
	14 Property Tax 5/	-	-	-	-	-	-	-	-	-	-	-	-
	15 Revenue Requirements	1,524,153	1,590,851	1,649,026	1,720,924	1,794,418	1,854,029	1,922,097	2,002,626	2,077,472	2,133,257	2,942,057	3,530,605
<b>D</b>	<b>Stand Alone Taxable Income or Loss (NOL)</b>												
	1 Revenue Requirements	1,524,153	1,590,851	1,649,026	1,720,924	1,794,418	1,854,029	1,922,097	2,002,626	2,077,472	2,133,257	2,942,057	3,530,605
	2 Tax Depreciation	-	-	-	-	-	-	-	-	-	-	-	2,551,208
	3 Property Tax	-	-	-	-	-	-	-	-	-	-	-	-
	4 Interest Expense (including on CWIP) 4/	318,630	332,573	344,735	359,765	375,129	387,591	401,821	418,656	434,303	445,965	454,076	475,128
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	770,000	770,000
	6 Total Tax Deduction	318,630	332,573	344,735	359,765	375,129	387,591	401,821	418,656	434,303	445,965	1,224,076	3,796,336
	7 Taxable Income (NOL)	1,205,524	1,258,278	1,304,291	1,361,159	1,419,289	1,466,438	1,520,276	1,583,970	1,643,169	1,687,292	1,717,981	(265,730)
	8 Current tax expense	498,725	520,550	539,585	563,112	587,160	606,665	628,938	655,288	679,779	698,033	710,729	(109,933)
	9 Taxable Income (NOL)	1,205,524	1,258,278	1,304,291	1,361,159	1,419,289	1,466,438	1,520,276	1,583,970	1,643,169	1,687,292	1,717,981	(265,730)
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	1,205,524	1,258,278	1,304,291	1,361,159	1,419,289	1,466,438	1,520,276	1,583,970	1,643,169	1,687,292	1,717,981	15,901,936
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
<b>E</b>	<b>Summary: Revenue Requirements</b>												
	1 Revenue Requirement: Consolidated	1,524,153	1,590,851	1,649,026	1,720,924	1,794,418	1,854,029	1,922,097	2,002,626	2,077,472	2,133,257	2,942,057	3,530,605
	2 Revenue Requirement: Stand Alone	1,524,153	1,590,851	1,649,026	1,720,924	1,794,418	1,854,029	1,922,097	2,002,626	2,077,472	2,133,257	2,942,057	3,530,605
	3 Revenue Requirement: Rider 7/	1,524,153	1,590,851	1,649,026	1,720,924	1,794,418	1,854,029	1,922,097	2,002,626	2,077,472	2,133,257	2,942,057	3,530,605
	4 Revenue Credit for Basin's Share 8/	-	-	-	-	(356,171)	(367,926)	(381,321)	(397,132)	(411,967)	(423,233)	(575,058)	(688,164)
	5 BEC 4 Base Rate Revenue Credit 9/	-	-	-	-	-	-	-	(86,448)	(157,641)	(157,641)	(157,641)	(157,641)
	6 Total Net Revenue Requirements	1,524,153	1,590,851	1,649,026	1,720,924	1,438,247	1,486,102	1,540,775	1,519,046	1,507,865	1,552,383	2,209,359	2,684,801
	7 MN Jurisdictional Allocator 10/	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043
	8 MN Net Jurisdictional Revenue Requirement	1,265,702	1,321,091	1,369,400	1,429,107	1,194,364	1,234,104	1,279,506	1,261,461	1,252,176	1,289,146	1,834,718	2,229,539

4/ Current Return on CWIP starts 10/1/13 (Avg. Monthly CWIP x ROR% / 12). Refer to Exhibit B-3 for CWIP calculations.

Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4 rate of return components.

Return on Average Rate Base starts 12/31/15 (Avg. Monthly Rate Base x ROR% / 12).

5/ Project assumed to qualify for 100% property tax pollution control exemption per Tax Department.

6/ For in-service year, any positive taxable income from return of CWIP is added to first month of taxable loss to establish the first month taxable income/loss.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-2, page 9, row C11.

9/ Refer to Exhibit B-2, page 11, row C14.

10/ Refer to Exhibit B-5, page 2 and 4.

Minnesota Power  
BEC4 Rider  
Revenue Requirements: Boswell Ash Pond Phase 1

Boswell Ash Pond Phase 1  
Project ID # 106072  
In Service 12/31/2016

Section	Line	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
<b>A</b>	<b>Book Basis of Property</b>												
	0 CWIP (net of contra AFUDC & internal costs) 1/	15,065	15,085	16,312	16,318	16,318	29,004	41,689	54,375	67,061	79,746	92,432	95,832
	1 Plant in Service (net of contra AFUDC & Internal costs) 1/	-	-	-	-	-	-	-	-	-	-	-	-
	2 Accumulated Depreciation 12/2016 Plant	-	-	-	-	-	-	-	-	-	-	-	-
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	4 Total Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Book Depreciation Rate (24 yrs remaining life 2012)												
<b>B</b>	<b>Tax Basis of Property</b>												
	1 Plant in Service	-	-	-	-	-	-	-	-	-	-	-	-
	2 Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 12/2016 Plant	-	-	-	-	-	-	-	-	-	-	-	-
	6 Tax Depreciation Rate 12/2016 Plant 2/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Total Tax Depreciation (including bonus)	-	-	-	-	-	-	-	-	-	-	-	-
	8 Tax Book Difference	-	-	-	-	-	-	-	-	-	-	-	-
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	-	-	-	-	-	-	-	-	-	-	-	-
	11 Deferred Tax Expense debit / (Credil)	-	-	-	-	-	-	-	-	-	-	-	-
<b>C-1</b>	<b>Revenue Requirements - Consolidated NOL</b>												
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	-
	3 Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	4 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	5 Current Return on CWIP 4/	153	153	159	165	165	229	358	486	615	743	872	952
	6 Return on Average Rate Base 4/	-	-	-	-	-	-	-	-	-	-	-	-
	7 After Tax Return on Equity	-	-	-	-	-	-	-	-	-	-	-	-
	8 Income Tax Component	-	-	-	-	-	-	-	-	-	-	-	-
	9 Interest Expense Component	-	-	-	-	-	-	-	-	-	-	-	-
	10 Total Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	11 Operation & Maintenance Expense 5/	-	-	-	-	-	-	-	-	-	-	-	-
	12 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Property Tax 6/	-	-	-	-	-	-	-	-	-	-	-	-
	14 Revenue Requirements	153	153	159	165	165	229	358	486	615	743	872	952

1/ Refer to Exhibit B-3.

2/ Refer to Exhibit B-6

3/ Minnesota Composite Income Tax Rate.

4/ Current Return on CWIP starts 10/1/13 (Avg. Monthly CWIP x ROR% / 12). Refer to Exhibit B-3 for CWIP calculations.

Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Return on Average Rate Base starts 12/31/16 (Avg. Monthly Rate Base x ROR% / 12).

5/ All O&M for Ash Pond projects included in Phase 1 project.

6/ Project assumed to qualify for 100% property tax pollution control exemption per Tax Department.



Minnesota Power  
BEC4 Rider  
Revenue Requirements: Boswell Ash Pond Phase 1

Boswell Ash Pond Phase 1  
Project ID # 106072  
In Service 12/31/2016

Section	Line	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
<b>C-2</b>	<b>Revenue Requirements - Stand Alone NOL</b>												
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	-
	3 Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	4 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	5 Current Return on CWIP 4/	153	153	159	165	165	229	358	486	615	743	872	952
	6 Return on Average Rate Base 4/	-	-	-	-	-	-	-	-	-	-	-	-
	7 After Tax Return on Equity	-	-	-	-	-	-	-	-	-	-	-	-
	8 Income Tax Component	-	-	-	-	-	-	-	-	-	-	-	-
	9 Interest Expense Component	-	-	-	-	-	-	-	-	-	-	-	-
	10 Total Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	11 Operation & Maintenance Expense 5/	-	-	-	-	-	-	-	-	-	-	-	-
	12 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Property Tax 6/	-	-	-	-	-	-	-	-	-	-	-	-
	14 Revenue Requirements	153	153	159	165	165	229	358	486	615	743	872	952
<b>D</b>	<b>Stand Alone Taxable Income or Loss (NOL)</b>												
	1 Revenue Requirements	153	153	159	165	165	229	358	486	615	743	872	952
	2 Tax Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	3 Property Tax	-	-	-	-	-	-	-	-	-	-	-	-
	4 Interest Expense (including on CWIP) 4/	32	32	33	35	35	48	75	102	129	155	182	199
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	32	32	33	35	35	48	75	102	129	155	182	199
	7 Taxable Income (NOL)	121	121	126	131	131	181	283	385	486	588	689	753
	8 Current tax expense	50	50	52	54	54	75	117	159	201	243	285	312
	9 Taxable Income (NOL)	121	121	126	131	131	181	283	385	486	588	689	753
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 7/	121	121	126	131	131	181	283	385	486	588	689	753
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
	13 Annual Fed Production Tax Credit (\$)												
	14 Utilized PTC 8/												
	15 ADITA for PTC												
<b>E</b>	<b>Summary: Revenue Requirements</b>												
	1 Revenue Requirement: Consolidated	153	153	159	165	165	229	358	486	615	743	872	952
	2 Revenue Requirement: Stand Alone	153	153	159	165	165	229	358	486	615	743	872	952
	3 Revenue Requirement: Rider 7/	153	153	159	165	165	229	358	486	615	743	872	952
	4 Revenue Credit for Basin's Share 8/	-	-	-	-	-	-	-	-	-	-	-	-
	5 Total Net Revenue Requirements	153	153	159	165	165	229	358	486	615	743	872	952
	6 MN Jurisdictional Allocator 9/	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043
	7 MN Net Jurisdictional Revenue Requirement	127	127	132	137	137	191	297	404	511	617	724	791

4/ Current Return on CWIP starts 10/1/13 (Avg. Monthly CWIP x ROR% / 12). Refer to Exhibit B-3 for CWIP calculations.

Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B.4.

Return on Average Rate Base starts 12/31/16 (Avg. Monthly Rate Base x ROR% / 12).

5/ All O&M for Ash Pond projects included in Phase 1 project.

6/ Project assumed to qualify for 100% property tax pollution control exemption per Tax Department.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-2, page 10, row C11.

9/ Refer to Exhibit B-5, pages 2 and 4.

Minnesota Power  
BEC4 Rider  
Revenue Requirements: Boswell Ash Pond Phase 1

Boswell Ash Pond Phase 1  
Project ID # 106072  
In Service 12/31/2016

Section	Line	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
<b>A</b>	<b>Book Basis of Property</b>												
	0 CWIP (net of contra AFUDC & internal costs) 1/	132,182	204,404	312,057	526,831	939,365	1,298,338	1,999,272	2,096,213	2,189,035	2,261,257	2,325,238	2,362,033
	1 Plant in Service (net of contra AFUDC & Internal costs) 1/	-	-	-	-	-	-	-	-	-	-	-	-
	2 Accumulated Depreciation 12/2016 Plant	-	-	-	-	-	-	-	-	-	-	-	-
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	4 Total Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Book Depreciation Rate (24 yrs remaining life 2012)												
<b>B</b>	<b>Tax Basis of Property</b>												
	1 Plant in Service	-	-	-	-	-	-	-	-	-	-	-	-
	2 Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 12/2016 Plant	-	-	-	-	-	-	-	-	-	-	-	-
	6 Tax Depreciation Rate 12/2016 Plant 2/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Total Tax Depreciation (including bonus)	-	-	-	-	-	-	-	-	-	-	-	-
	8 Tax Book Difference	-	-	-	-	-	-	-	-	-	-	-	-
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	-	-	-	-	-	-	-	-	-	-	-	-
	11 Deferred Tax Expense debit / (Credit)	-	-	-	-	-	-	-	-	-	-	-	-
<b>C-1</b>	<b>Revenue Requirements - Consolidated NOL</b>												
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	-
	3 Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	4 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	5 Current Return on CWIP 4/	1,153	1,704	2,615	4,247	7,423	11,328	16,694	20,733	21,694	22,530	23,219	23,729
	6 Return on Average Rate Base 4/	-	-	-	-	-	-	-	-	-	-	-	-
	7 After Tax Return on Equity	-	-	-	-	-	-	-	-	-	-	-	-
	8 Income Tax Component	-	-	-	-	-	-	-	-	-	-	-	-
	9 Interest Expense Component	-	-	-	-	-	-	-	-	-	-	-	-
	10 Total Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	11 Operation & Maintenance Expense 5/	-	-	-	-	-	-	-	-	-	-	40,000	40,000
	12 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Property Tax 6/	-	-	-	-	-	-	-	-	-	-	-	-
	14 Revenue Requirements	1,153	1,704	2,615	4,247	7,423	11,328	16,694	20,733	21,694	22,530	63,219	63,729

1/ Refer to Exhibit B-3.

2/ Refer to Exhibit B-6

3/ Minnesota Composite Income Tax Rate.

4/ Current Return on CWIP starts 10/1/13 (Avg. Monthly CWIP x ROR% / 12). Refer to Exhibit B-3 for CWIP calculations.

Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Return on Average Rate Base starts 12/31/16 (Avg. Monthly Rate Base x ROR% / 12)

5/ All O&M for Ash Pond projects included in Phase 1 project.

6/ Project assumed to qualify for 100% property tax pollution control exemption per Tax Department.

Minnesota Power  
BEC4 Rider  
Revenue Requirements: Boswell Ash Pond Phase 1

Boswell Ash Pond Phase 1  
Project ID # 106072  
In Service 12/31/2016

Section	Line	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
<b>C-2</b>	<b>Revenue Requirements - Stand Alone NOL</b>												
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	-
	3 Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	4 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	5 Current Return on CWIP 4/	1,153	1,704	2,615	4,247	7,423	11,328	16,694	20,733	21,694	22,530	23,219	23,729
	6 Return on Average Rate Base 4/	-	-	-	-	-	-	-	-	-	-	-	-
	7 After Tax Return on Equity	-	-	-	-	-	-	-	-	-	-	-	-
	8 Income Tax Component	-	-	-	-	-	-	-	-	-	-	-	-
	9 Interest Expense Component	-	-	-	-	-	-	-	-	-	-	-	-
	10 Total Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	11 Operation & Maintenance Expense 5/	-	-	-	-	-	-	-	-	-	-	40,000	40,000
	12 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Property Tax 6/	-	-	-	-	-	-	-	-	-	-	-	-
	14 Revenue Requirements	1,153	1,704	2,615	4,247	7,423	11,328	16,694	20,733	21,694	22,530	63,219	63,729
<b>D</b>	<b>Stand Alone Taxable Income or Loss (NOL)</b>												
	1 Revenue Requirements	1,153	1,704	2,615	4,247	7,423	11,328	16,694	20,733	21,694	22,530	63,219	63,729
	2 Tax Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	3 Property Tax	-	-	-	-	-	-	-	-	-	-	-	-
	4 Interest Expense (including on CWIP) 4/	241	356	547	888	1,552	2,368	3,490	4,334	4,535	4,710	4,854	4,961
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	40,000	40,000
	6 Total Tax Deduction	241	356	547	888	1,552	2,368	3,490	4,334	4,535	4,710	44,854	44,961
	7 Taxable income (NOL)	912	1,348	2,068	3,359	5,871	8,960	13,204	16,399	17,159	17,820	18,365	18,769
	8 Current tax expense	377	558	856	1,390	2,429	3,707	5,463	6,784	7,099	7,372	7,598	7,765
	9 Taxable income (NOL)	912	1,348	2,068	3,359	5,871	8,960	13,204	16,399	17,159	17,820	18,365	18,769
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable income after NOL carryforward 7/	912	1,348	2,068	3,359	5,871	8,960	13,204	16,399	17,159	17,820	18,365	18,769
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
	13 Annual Fed Production Tax Credit (\$)												
	14 Utilized PTC 8/												
	15 ADITA for PTC												
<b>E</b>	<b>Summary: Revenue Requirements</b>												
	1 Revenue Requirement: Consolidated	1,153	1,704	2,615	4,247	7,423	11,328	16,694	20,733	21,694	22,530	63,219	63,729
	2 Revenue Requirement: Stand Alone	1,153	1,704	2,615	4,247	7,423	11,328	16,694	20,733	21,694	22,530	63,219	63,729
	3 Revenue Requirement: Rider 7/	1,153	1,704	2,615	4,247	7,423	11,328	16,694	20,733	21,694	22,530	63,219	63,729
	4 Revenue Credit for Basin's Share 8/	-	-	-	-	(1,471)	(2,230)	(3,273)	(4,058)	(4,247)	(4,412)	(12,024)	(12,125)
	5 Total Net Revenue Requirements	1,153	1,704	2,615	4,247	5,952	9,098	13,421	16,675	17,447	18,118	51,195	51,604
	6 MN Jurisdictional Allocator 9/	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043	0.83043
	7 MN Net Jurisdictional Revenue Requirement	958	1,415	2,171	3,527	4,943	7,555	11,145	13,847	14,489	15,046	42,514	42,854

4/ Current Return on CWIP starts 10/1/13 (Avg. Monthly CWIP x ROR% / 12). Refer to Exhibit B-3 for CWIP calculations.

Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B.4.

Return on Average Rate Base starts 12/31/16 (Avg. Monthly Rate Base x ROR% / 12).

5/ All O&M for Ash Pond projects included in Phase 1 project.

6/ Project assumed to qualify for 100% property tax pollution control exemption per Tax Department.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-2, page 10, row C11.

9/ Refer to Exhibit B-5, pages 2 and 4.

**PUBLIC DOCUMENT**  
**TRADE SECRET DATA HAS BEEN EXCISED**

BEC 4 Environmental Retrofit<sup>1</sup> Basin  
Project ID # 103698  
In Service 12/31/2015

Minnesota Power  
BEC 4 Rider  
Basin's Revenue Requirements: Boswell 4 Environmental Retrofit

Reply Comments  
Exhibit B-2  
Page 9 of 11

Section	Line	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
<b>A</b>	<b>Book Basis of Property</b>												
	0 CWIP 1/	158,138,334	164,051,625	169,822,486	178,446,714	184,539,021	190,427,455	198,190,291	206,540,188	213,309,063	218,022,407	221,371,896	
	1 Plant in Service												239,589,963
	2 Accumulated Depreciation 12/2015 Plant	-	-	-	-	-	-	-	-	-	-	-	499,146
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	239,090,818
	4 Total Depreciation	-	-	-	-	-	-	-	-	-	-	-	499,146
	5 Book Depreciation Rate (24 yrs remaining life 2012)												0.42%
<b>B</b>	<b>Tax Basis of Property</b>												
	1 Plant in Service	-	-	-	-	-	-	-	-	-	-	-	239,589,963
	2 Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	2,610,298
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	236,979,665
	4 Bonus Depreciation												
	5 Net Depreciable 12/2015 Plant												239,589,963
	6 Tax Depreciation Rate 12/2015 Plant 2/												1.089%
	7 Tax Depreciation 12/2015 Plant	-	-	-	-	-	-	-	-	-	-	-	2,610,298
	8 Tax Book Difference	-	-	-	-	-	-	-	-	-	-	-	2,111,153
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	-	-	-	-	-	-	-	-	-	-	-	873,384
	11 Deferred Tax Expense debit / (Credit)	-	-	-	-	-	-	-	-	-	-	-	873,384
<b>C</b>	<b>Revenue Requirements - Basin 4/</b>												
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	239,090,818
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	(873,384)
	3 Rate Base	-	-	-	-	-	-	-	-	-	-	-	238,217,434
	4 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	119,108,717
	5 Current Return on CWIP	-	-	-	-	356,171	367,926	381,321	397,132	411,967	423,233	431,145	217,216
	6 Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	233,745
	7 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	143,913	143,913
	8 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	93,290
	9 Property Tax 5/	-	-	-	-	-	-	-	-	-	-	-	-
	10 Revenue Requirements - Basin	-	-	-	-	356,171	367,926	381,321	397,132	411,967	423,233	575,058	688,164
	11 Revenue Credit for Basin's Share	-	-	-	-	(356,171)	(367,926)	(381,321)	(397,132)	(411,967)	(423,233)	(575,058)	(688,164)

1/ Refer to Exhibit B-3, page 29-31.  
2/ Refer to Exhibit B-6.  
3/ Minnesota Composite Income Tax Rate.

**TRADE SECRET EXCISED**

5/ Project assumed to qualify for 100% property tax pollution control exemption per Tax Department.

**PUBLIC DOCUMENT  
TRADE SECRET DATA HAS BEEN EXCISED**

Minnesota Power  
BEC4 Rider  
Basin Revenue Requirements: Boswell Ash Pond Phase 1

Reply Comments  
Exhibit B-2  
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Boswell Ash Pond Phase 1; Basin  
Project ID # 106072  
In Service 12/31/2016

Section	Line	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
<b>A</b>	<b>Book Basis of Property</b>												
	0 CWIP 1/	144,077	217,584	326,524	542,583	956,403	1,316,662	2,018,882	2,117,109	2,211,217	2,284,724	2,349,992	2,388,072
	1 Plant in Service												
	2 Accumulated Depreciation 12/2016 Plant	-	-	-	-	-	-	-	-	-	-	-	-
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	4 Total Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Book Depreciation Rate (24 yrs remaining life 2012)												
<b>B</b>	<b>Tax Basis of Property</b>												
	1 Plant in Service	-	-	-	-	-	-	-	-	-	-	-	-
	2 Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	3 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	4 Bonus Depreciation												
	5 Net Depreciable 12/2016 Plant												
	6 Tax Depreciation Rate 12/2016 Plant 2/												
	7 Total Tax Depreciation (including bonus)	-	-	-	-	-	-	-	-	-	-	-	-
	8 Tax Book Difference												
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability												
	11 Deferred Tax Expense debit / (Credit)	-	-	-	-	-	-	-	-	-	-	-	-
	12 ADITA for NOL Carryforward												
	13 Carryforward utilized												
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
<b>C</b>	<b>Revenue Requirements - Basin 4/</b>												
	1 Net Plant	-	-	-	-	-	-	-	-	-	-	-	-
	2 Less: ADITL - Def Taxes	-	-	-	-	-	-	-	-	-	-	-	-
	3 Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	4 Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	5 Current Return on CWIP	-	-	-	-	1,471	2,230	3,273	4,058	4,247	4,412	4,548	4,649
	6 Return on Average Rate Base	-	-	-	-	-	-	-	-	-	-	-	-
	7 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	7,476	7,476
	8 Depreciation Expense	-	-	-	-	-	-	-	-	-	-	-	-
	9 Property Tax 5/	-	-	-	-	-	-	-	-	-	-	-	-
	10 Revenue Requirements - Basin	-	-	-	-	1,471	2,230	3,273	4,058	4,247	4,412	12,024	12,125
	11 Revenue Credit for Basin's Share	-	-	-	-	(1,471)	(2,230)	(3,273)	(4,058)	(4,247)	(4,412)	(12,024)	(12,125)

1/ Refer to Exhibit B-3, pages 29-31.

2/ Refer to Exhibit B-6.

3/ Minnesota Composite Income Tax Rate.

**TRADE SECRET EXCISED**

5/ Project assumed to qualify for 100% property tax pollution control exemption per Tax Department.

Minnesota Power  
BEC 4 Rider

Revenue Requirement Credit for Revenue Requirements in Base Rates Associated with Plant to be Retired

BEC 4 Environmental Retrofit: Base Rate Revenue Credit

Expected Property Retirement: August 15, 2015

Section	Line	2009	Base Rates 2010
<b>A</b>	<b>Book Basis of Property to be Retired</b>		
	1 Plant in Service	38,547,474	38,446,916
	2 Total Accumulated Depreciation	21,988,517	22,424,632
	3 Net Plant	16,558,958	16,022,285
	4 Depreciation Expense		436,115
<b>B</b>	<b>Tax Basis of Property of to be Retired</b>		
	1 Plant in Service	38,547,474	38,446,916
	2 Accumulated Depreciation	37,285,386	37,326,552
	3 Net Plant	1,262,088	1,120,364
	4 Total Tax Depreciation		41,166
	5 Tax Book Difference	15,296,869	14,901,920
	6 Income Tax Rate 1/	41.37%	41.37%
	7 Accumulated Deferred Income Tax Liability	6,328,315	6,164,924
	8 Deferred Tax Expense debt / (Credit)		(163,390)
<b>C</b>	<b>Revenue Requirements in Base Rates</b>		
	1 Net Plant	16,558,958	16,022,285
	2 Less: ADITL - Def Taxes	(6,328,315)	(6,164,924)
	3 Rate Base	10,230,643	9,857,360
	4 Average Rate Base		10,044,001
	5 Return on Average Rate Base 2/		
	6 After Tax Return on Equity		565,913
	7 Income Tax Component		399,315
	8 Interest Expense Component		255,118
	9 Total Return on Average Rate Base		1,220,346
	10 Operation & Maintenance Expense Associated with Plant to be Retired		650,000
	11 Depreciation Expense		436,115
	12 Property Tax 3/		-
	13 Revenue Requirements in Base Rates Associated with Property to be Retired		2,306,461
	14 Monthly Credit for Revenue Requirements in Base Rates		(192,205)
	15 MN Jurisdictional Allocator 4/		0.82017
	16 Monthly MN jurisdictional Credit for Revenue Requirements in Base Rates 5/		(157,641)

1/ Minnesota Composite Income Tax Rate.

2/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4 rate of return components.

3/ Property qualified for property tax pollution control exemption per Tax Department.

4/ Refer to Exhibit B-5, line 11

5/ This monthly revenue requirement credit is needed beginning with when the property is retired (expected August 15, 2015) until the retirement and BEC 4 Project are incorporated into base rates in a subsequent rate case.











Minnesota Power  
 BEC 4 Rider  
 Plant Additions, AFUDC and Return on CWIP

	Total Project	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19
<b>BEC 4 Environmental Retrofit</b>	<b>234,166,221</b>															
In Service 12/31/2015																
BOM																
CapEx	235,985,298															
Less Internal Cost	-5,020,297															
AFUDC	3,634,666															
Less AFUDC on Internal Cost	-403,445															
EOM																
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
<b>Total Return on CWIP</b>																
<b>BEC 4 Storm Water</b>	<b>5,372,401</b>															
In Service 9/30/2016																
BOM																
CapEx	5,372,401															
Less Internal Cost	0															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM																
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
<b>Total Return on CWIP</b>																
<b>BEC 4 Ash Phase 1</b>	<b>5,031,629</b>															
In Service 12/31/2016																
BOM																
CapEx	5,073,016															
Less Internal Cost	-41,470															
AFUDC	84															
Less AFUDC on Internal Cost	0															
EOM																
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
<b>Total Return on CWIP</b>																
<b>BEC 4 Ash Phase 2</b>	<b>823,997</b>															
In Service 12/31/2019																
BOM		53,666	107,333	160,999	214,666	268,332	321,998	375,665	429,331	482,998	536,664	590,330	643,997	658,997	673,997	688,997
CapEx	854,859	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	16,286	16,286	16,286	16,286
Less Internal Cost	-30,862	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286
AFUDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		107,333	160,999	214,666	266,332	321,998	375,665	429,331	482,998	536,664	590,330	643,997	658,997	673,997	688,997	703,997
Return on CWIP																
After Tax Return on Equity		378	630	882	1,134	1,386	1,638	1,890	2,142	2,394	2,646	2,898	3,059	3,129	3,200	3,270
Income Tax Component		267	444	622	800	978	1,156	1,333	1,511	1,689	1,867	2,045	2,158	2,208	2,258	2,308
Interest Expense Component		170	284	398	511	625	738	852	966	1,079	1,193	1,306	1,379	1,411	1,443	1,474
<b>Total Return on CWIP</b>		815	1,358	1,902	2,445	2,989	3,532	4,075	4,619	5,162	5,705	6,249	6,596	6,748	6,900	7,052

Minnesota Power  
BEC 4 Rider  
Plant Additions, AFUDC and Return on CWIP

	Total Project	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20
BEC 4 Environmental Retrofit In Service 12/31/2015	<b>234,166,221</b>																
3OM																	
CapEx	235,985,298																
Less Internal Cost	-5,020,297																
AFUDC	3,604,666																
Less AFUDC on Internal Cost	-403,445																
EOM																	
Return on CWIP																	
After Tax Return on Equity																	
Income Tax Component																	
Interest Expense Component																	
Total Return on CWIP																	
BEC 4 Storm Water	<b>5,372,401</b>																
In Service 9/30/2016																	
3OM																	
CapEx	5,372,401																
Less Internal Cost	0																
AFUDC	0																
Less AFUDC on Internal Cost	0																
EOM																	
Return on CWIP																	
After Tax Return on Equity																	
Income Tax Component																	
Interest Expense Component																	
Total Return on CWIP																	
BEC 4 Ash Phase 1	<b>5,031,629</b>																
In Service 12/31/2016																	
3OM																	
CapEx	5,073,016																
Less Internal Cost	-41,470																
AFUDC	84																
Less AFUDC on Internal Cost	0																
EOM																	
Return on CWIP																	
After Tax Return on Equity																	
Income Tax Component																	
Interest Expense Component																	
Total Return on CWIP																	
BEC 4 Ash Phase 2	<b>823,997</b>																
In Service 12/31/2019																	
3OM		703,997	718,997	733,997	748,997	763,997	778,997	793,997	808,997								
CapEx	854,859	16,286	16,286	16,286	16,286	16,286	16,286	16,286	16,286	16,286							
Less Internal Cost	-30,862	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286							
AFUDC	0	0	0	0	0	0	0	0	0	0							
Less AFUDC on Internal Cost	0	0	0	0	0	0	0	0	0	0							
EOM		718,997	733,997	748,997	763,997	778,997	793,997	808,997	823,997								
Return on CWIP																	
After Tax Return on Equity		3,341	3,411	3,482	3,552	3,622	3,693	3,763	3,833	3,903							
Income Tax Component		2,357	2,407	2,457	2,506	2,556	2,606	2,655	2,705	2,755							
Interest Expense Component		1,506	1,538	1,570	1,601	1,633	1,665	1,697	1,729	1,761							
Total Return on CWIP		7,204	7,356	7,508	7,660	7,811	7,963	8,115	8,267	8,419							

Minnesota Power  
BEC 4 Rider  
Plant Additions, AFUDC and Return on CWIP

	Total Project	to date Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14
<b>BEC 4 Ash Phase 3</b>	<b>1,378,067</b>																
In Service 12/31/2023																	
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	1,380,554																
Less Internal Cost	-2,487																
AFUDC	0																
Less AFUDC on Internal Cost	0																
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																	
After Tax Return on Equity																	
Income Tax Component																	
Interest Expense Component																	
Total Return on CWIP																	
<b>BEC 4 Ash Phase 4</b>	<b>3,228,882</b>																
In Service 12/31/2029																	
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,234,710																
Less Internal Cost	-5,828																
AFUDC	0																
Less AFUDC on Internal Cost	0																
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																	
After Tax Return on Equity																	
Income Tax Component																	
Interest Expense Component																	
Total Return on CWIP																	
<b>BEC 4 Ash Phase 5</b>	<b>3,941,852</b>																
In Service 12/31/2035																	
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,948,967																
Less Internal Cost	-7,115																
AFUDC	0																
Less AFUDC on Internal Cost	0																
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																	
After Tax Return on Equity																	
Income Tax Component																	
Interest Expense Component																	
Total Return on CWIP																	
<b>Total</b>	<b>253,943,048</b>																
BOM		0	21,039,943	23,516,640	26,181,110	30,213,705	33,332,452	34,498,171	36,725,554	40,701,839	44,263,914	48,736,841	53,347,000	58,914,810	60,653,451	67,309,385	74,393,761
CapEx	255,849,805	20,189,572	2,439,572	2,594,454	3,961,992	3,061,934	1,055,311	2,124,604	3,867,591	3,425,444	4,562,365	4,723,148	5,760,918	1,807,357	6,752,543	7,197,255	9,743,583
Less Internal Cost	-5,108,060	-923,580	-86,728	-67,342	-84,473	-117,140	-79,762	-95,645	-105,757	-97,437	-89,439	-112,989	-193,108	-66,716	-96,609	-112,879	-118,158
AFUDC	3,604,750	1,890,832	130,909	144,921	163,139	182,681	199,839	208,671	225,361	245,648	14,567	15,400	16,892	17,454	18,124	18,972	19,907
Less AFUDC on Internal Cost	-403,445	-116,881	-7,056	-7,563	-8,063	-8,727	-9,669	-10,247	-10,910	-11,580	-14,567	-15,400	-16,892	-17,454	-18,124	-18,972	-19,907
EOM		21,039,943	23,516,640	26,181,110	30,213,705	33,332,452	34,498,171	36,725,554	40,701,839	44,263,914	48,736,841	53,347,000	58,914,810	60,653,451	67,309,385	74,393,761	84,019,187
Return on CWIP																	
After Tax Return on Equity	17,557,522	0	0	0	0	0	0	0	0	0	218,332	239,656	263,551	280,703	300,411	332,668	371,897
Income Tax Component	12,388,804	0	0	0	0	0	0	0	0	0	154,058	169,104	185,964	198,068	211,974	234,735	262,415
Interest Expense Component	7,915,054	0	0	0	0	0	0	0	0	0	98,426	108,039	118,810	126,543	135,427	149,969	167,654
Total Return on CWIP	37,861,380	0	0	0	0	0	0	0	0	0	470,816	516,799	568,325	605,314	647,812	717,372	801,966

Minnesota Power  
 BEC 4 Rider  
 Plant Additions, AFUDC and Return on CWIP

	Total Project	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15
BEC 4 Ash Phase 3 In Service 12/31/2023	<b>1,378,067</b>															
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	1,380,554															
Less Internal Cost	-2,487															
AFUDC	0															
Less AFJDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>BEC 4 Ash Phase 4 In Service 12/31/2029</b>	<b>3,228,882</b>															
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,234,710															
Less Internal Cost	-5,828															
AFUDC	0															
Less AFJDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>BEC 4 Ash Phase 5 In Service 12/31/2035</b>	<b>3,941,852</b>															
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,948,967															
Less Internal Cost	-7,115															
AFUDC	0															
Less AFJDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>Total</b>	<b>253,943,048</b>															
BOM		84,019,187	91,690,914	99,185,813	104,779,955	110,611,126	119,381,370	130,694,623	138,808,812	146,950,210	154,344,870	160,233,939	166,016,010	174,758,568	181,160,534	187,305,068
CapEx	255,849,805	7,846,569	7,615,893	5,715,110	5,945,755	8,867,973	11,410,984	8,276,215	8,239,123	7,492,390	5,986,799	5,879,800	8,840,288	6,506,126	6,248,693	8,465,056
Less Internal Cost	-5,108,060	-174,841	-120,994	-120,969	-114,583	-97,730	-97,730	-162,026	-97,730	-97,730	-97,730	-67,730	-97,730	-104,160	-104,160	-104,160
AFUDC	3,604,750	21,082	22,939	23,234	24,178	0	0	0	0	0	0	0	0	0	0	0
Less AFJDC on Internal Cost	-403,445	-21,082	-22,939	-23,234	-24,178	0	0	0	0	0	0	0	0	0	0	0
EOM		91,690,914	99,185,813	104,779,955	110,611,126	119,381,370	130,694,623	138,808,812	146,950,210	154,344,870	160,233,939	166,016,010	174,758,568	181,160,534	187,305,068	195,665,965
Return on CWIP																
After Tax Return on Equity	17,557,522	412,504	448,110	478,839	505,651	539,940	587,089	632,697	670,860	707,333	738,518	765,918	800,017	835,571	865,025	899,079
Income Tax Component	12,388,804	291,068	316,192	337,874	356,801	380,988	414,257	446,439	473,367	499,103	521,108	540,441	564,502	589,589	610,372	634,401
Interest Expense Component	7,915,054	185,960	202,011	215,864	227,956	243,409	264,664	285,224	302,423	318,671	332,929	345,281	360,653	376,681	389,958	405,311
Total Return on CWIP	37,861,380	889,532	966,313	1,032,577	1,090,417	1,164,337	1,266,010	1,364,361	1,446,655	1,525,306	1,592,555	1,661,640	1,725,171	1,801,840	1,865,357	1,938,791

Minnesota Power  
BEC 4 Rider  
Plant Additions, AFUDC and Return on CWIP

	Total Project	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16
<b>BEC 4 Ash Phase 3</b>	<b>1,378,067</b>															
In Service 12/31/2023																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	1,380,554															
Less Internal Cost	-2,487															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>BEC 4 Ash Phase 4</b>	<b>3,228,882</b>															
In Service 12/31/2029																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,234,710															
Less Internal Cost	-5,828															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>BEC 4 Ash Phase 5</b>	<b>3,941,852</b>															
In Service 12/31/2035																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,948,967															
Less Internal Cost	-7,115															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>Total</b>	<b>253,943,048</b>															
BOM		195,665,965	204,009,930	210,640,161	215,194,261	218,440,562	236,528,254	236,750,720	236,973,187	237,195,653	237,418,120	238,408,072	239,398,024	240,387,976	241,377,929	243,902,852
CapEx	255,849,805	8,448,125	6,862,983	4,786,852	3,414,756	18,256,148	223,752	223,752	223,752	223,752	991,238	991,238	991,238	991,238	2,526,210	223,752
Less Internal Cost	-5,108,060	-104,160	-232,752	-232,752	-169,456	-168,456	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286
AFUDC	3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		204,009,930	210,640,161	215,194,261	218,440,562	236,528,254	236,750,720	236,973,187	237,195,653	237,418,120	238,408,072	239,398,024	240,387,976	241,377,929	243,902,852	244,125,319
Return on CWIP																
After Tax Return on Equity	17,557,522	938,296	973,450	999,707	1,018,019	518,365	11,813	12,657	13,702	14,746	17,593	22,241	26,889	31,537	27,176	21,014
Income Tax Component	12,368,804	662,073	686,878	705,405	718,327	365,765	8,194	8,931	9,668	10,405	12,414	15,693	18,973	22,253	19,176	14,827
Interest Expense Component	7,915,054	422,990	438,838	450,675	459,930	233,683	5,235	5,706	6,177	6,648	7,931	10,026	12,122	14,217	12,251	9,473
Total Return on CWIP	37,861,380	2,023,359	2,099,166	2,155,787	2,195,276	1,117,813	25,042	27,294	29,547	31,799	37,937	47,960	57,984	68,007	58,603	45,314





Minnesota Power  
 BEC 4 Rider  
 Plant Additions, AFUDC and Return on CWIP

	Total Project	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19
<b>BEC 4 Ash Phase 3</b>	<b>1,378,067</b>															
In Service 12/31/2023																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	1,380,554															
Less Internal Cost	-2,487															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>BEC 4 Ash Phase 4</b>	<b>3,228,882</b>															
In Service 12/31/2029																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,234,710															
Less Internal Cost	-5,828															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>BEC 4 Ash Phase 5</b>	<b>3,941,852</b>															
In Service 12/31/2035																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,948,967															
Less Internal Cost	-7,115															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>Total</b>	<b>253,943,048</b>															
BOM		244,623,918	244,677,584	244,731,251	244,784,917	244,838,584	244,892,250	244,945,916	244,999,583	245,053,249	245,106,916	245,160,582	245,214,248	245,229,248	245,244,248	245,259,248
CapEx	255,849,805	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	16,286	16,286	16,286	16,286
Less Internal Cost	-5,108,060	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286	-1,286
AFUDC	3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		244,677,584	244,731,251	244,784,917	244,838,584	244,892,250	244,945,916	244,999,583	245,053,249	245,106,916	245,160,582	245,214,248	245,229,248	245,244,248	245,259,248	245,274,248
Return on CWIP																
After Tax Return on Equity	17,557,522	378	630	882	1,134	1,386	1,638	1,890	2,142	2,394	2,646	2,898	3,059	3,129	3,200	3,270
Income Tax Component	12,388,804	267	444	622	800	978	1,156	1,333	1,511	1,689	1,867	2,045	2,158	2,208	2,258	2,308
Interest Expense Component	7,915,054	170	284	398	511	625	738	852	966	1,079	1,193	1,306	1,379	1,411	1,443	1,474
Total Return on CWIP	37,861,380	815	1,358	1,902	2,445	2,989	3,532	4,075	4,619	5,162	5,705	6,249	6,596	6,748	6,900	7,052





Minnesota Power  
BEC 4 Rider  
Plant Additions, AFUDC and Return on CWIP

	Total Project	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23
<b>BEC 4 Ash Phase 3</b>	<b>1,378,067</b>															
In Service 12/31/2023																
BOM		0	0	4,261	8,521	12,782	17,042	21,303	25,563	29,824	34,084	38,345	42,605	46,866	51,126	161,705
CapEx	1,380,554		4,268	4,268	4,268	4,268	4,268	4,268	4,268	4,268	4,268	4,268	4,268	4,268	110,778	110,778
Less Internal Cost	-2,487		-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-200	-200
AFUDC	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	4,261	8,521	12,782	17,042	21,303	25,563	29,824	34,084	38,345	42,605	46,866	51,126	161,705	272,283
Return on CWIP																
After Tax Return on Equity			10	30	50	70	90	110	130	150	170	190	210	230	500	1,019
Income Tax Component			7	21	35	49	64	78	92	106	120	134	148	162	353	719
Interest Expense Component			5	14	23	32	41	50	59	68	77	86	95	104	225	459
Total Return on CWIP			22	65	108	151	194	237	280	324	367	410	453	496	1,077	2,197
<b>BEC 4 Ash Phase 4</b>	<b>3,228,882</b>															
In Service 12/31/2029																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,234,710															
Less Internal Cost	-5,823															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>BEC 4 Ash Phase 5</b>	<b>3,941,852</b>															
In Service 12/31/2035																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,948,967															
Less Internal Cost	-7,115															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>Total</b>	<b>253,943,043</b>															
BOM		245,394,248	245,394,248	245,398,509	245,402,770	245,407,030	245,411,291	245,415,551	245,419,812	245,424,072	245,428,333	245,432,593	245,436,854	245,441,114	245,445,375	245,555,953
CapEx	255,849,805	0	4,268	4,268	4,268	4,268	4,268	4,268	4,268	4,268	4,268	4,268	4,268	4,268	110,778	110,778
Less Internal Cost	-5,108,060	0	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-200	-200
AFUDC	3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		245,394,248	245,398,509	245,402,770	245,407,030	245,411,291	245,415,551	245,419,812	245,424,072	245,428,333	245,432,593	245,436,854	245,441,114	245,445,375	245,555,953	245,666,531
Return on CWIP																
After Tax Return on Equity	17,557,522	0	10	30	50	70	90	110	130	150	170	190	210	230	500	1,019
Income Tax Component	12,388,804	0	7	21	35	49	64	78	92	106	120	134	148	162	353	719
Interest Expense Component	7,915,054	0	5	14	23	32	41	50	59	68	77	86	95	104	225	459
Total Return on CWIP	37,861,380	0	22	65	108	151	194	237	280	324	367	410	453	496	1,077	2,197

Minnesota Power  
BEC 4 Rider  
Plant Additions, AFUDC and Return on CWIP

	Total Project	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23 In-Service 12/31/2023	Jan-24	Feb-24	Mar-24	Apr-24	May-24
<b>BEC 4 Ash Phase 3</b>	<b>1,378,067</b>															
In Service 12/31/2023																
BOM		272,283	382,861	493,440	604,018	714,596	825,175	935,753	1,046,331	1,156,910	1,267,488					
CapEx	1,380,554	110,778	110,778	110,778	110,778	110,778	110,778	110,778	110,778	110,778	110,778					
Less Internal Cost	-2,487	-200	-200	-200	-200	-200	-200	-200	-200	-200	-200					
AFUDC	0	0	0	0	0	0	0	0	0	0	0					
Less AFUDC on Internal Cost	0	0	0	0	0	0	0	0	0	0	0					
EOM		382,861	493,440	604,018	714,596	825,175	935,753	1,046,331	1,156,910	1,267,488	1,378,067					
Return on CWIP																
After Tax Return on Equity		1,538	2,057	2,576	3,096	3,615	4,134	-4,653	5,172	5,692	2,976					
Income Tax Component		1,085	1,452	1,818	2,184	2,551	2,917	-3,283	3,550	4,016	2,100					
Interest Expense Component		693	927	1,161	1,396	1,630	1,864	2,098	2,332	2,566	1,341					
Total Return on CWIP		3,317	4,436	5,556	6,675	7,795	8,915	10,034	11,154	12,274	6,417					
<b>BEC 4 Ash Phase 4</b>	<b>3,228,882</b>															
In Service 12/31/2029																
BOM		0	0	0	0	0	0	0	0	0	0	0	4,655	9,310	13,965	18,620
CapEx	3,254,710											4,663	4,663	4,663	4,663	4,663
Less Internal Cost	-5,828											-8	-8	-8	-8	-8
AFUDC	0											0	0	0	0	0
Less AFUDC on Internal Cost	0											0	0	0	0	0
EOM		0	0	0	0	0	0	0	0	0	0	4,655	9,310	13,965	18,620	23,275
Return on CWIP																
After Tax Return on Equity												11	33	55	76	98
Income Tax Component												8	23	39	54	69
Interest Expense Component												5	15	25	34	44
Total Return on CWIP												24	71	118	165	212
<b>BEC 4 Ash Phase 5</b>	<b>3,941,852</b>															
In Service 12/31/2035																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,948,967															
Less Internal Cost	-7,115															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>Total</b>	<b>253,943,048</b>															
BOM		245,666,531	245,777,110	245,887,688	245,998,267	246,108,845	246,219,423	246,330,002	246,440,580	246,551,158	246,661,737	246,772,315	246,776,970	246,781,625	246,786,280	246,790,935
CapEx	255,849,805	110,778	110,778	110,778	110,778	110,778	110,778	110,778	110,778	110,778	110,778	4,663	4,663	4,663	4,663	4,663
Less Internal Cost	-5,108,060	-200	-200	-200	-200	-200	-200	-200	-200	-200	-200	-8	-8	-8	-8	-8
AFUDC	3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		245,777,110	245,887,688	245,998,267	246,108,845	246,219,423	246,330,002	246,440,580	246,551,158	246,661,737	246,772,315	246,776,970	246,781,625	246,786,280	246,790,935	246,795,590
Return on CWIP																
After Tax Return on Equity	17,557,522	1,538	2,057	2,576	3,096	3,615	4,134	4,653	5,172	5,692	2,976	11	33	55	76	98
Income Tax Component	12,388,804	1,085	1,452	1,818	2,184	2,551	2,917	3,283	3,550	4,016	2,100	8	23	39	54	69
Interest Expense Component	7,915,054	693	927	1,161	1,396	1,630	1,864	2,098	2,332	2,566	1,341	5	15	25	34	44
Total Return on CWIP	37,861,380	3,317	4,436	5,556	6,675	7,795	8,915	10,034	11,154	12,274	6,417	24	71	118	165	212

Minnesota Power  
BEC 4 Rider  
Plant Additions, AFUDC and Return on CWIP

	Total Project	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25
<b>BEC 4 Ash Phase 3</b>	<b>1,378,067</b>																
In Service 12/31/2023																	
BOM																	
CapEx	1,380,554																
Less Internal Cost	-2,487																
AFUDC	0																
Less AFUDC on Internal Cost	0																
EOM																	
Return on CWIP																	
After Tax Return on Equity																	
Income Tax Component																	
Interest Expense Component																	
Total Return on CWIP																	
<b>BEC 4 Ash Phase 4</b>	<b>3,228,882</b>																
In Service 12/31/2029																	
BOM		23,275	27,930	32,535	37,240	41,895	46,550	51,205	55,860	94,687	133,514	172,342	211,169	249,996	288,823	327,651	366,478
CapEx	3,234,710	4,663	4,663	4,663	4,663	4,663	4,663	4,663	38,897	38,897	38,897	38,897	38,897	38,897	38,897	38,897	38,897
Less Internal Cost	-5,828	-8	-8	-8	-8	-8	-8	-8	-70	-70	-70	-70	-70	-70	-70	-70	-70
AFUDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		27,930	32,585	37,240	41,895	46,550	51,205	55,860	94,687	133,514	172,342	211,169	249,996	288,823	327,651	366,478	405,305
Return on CWIP																	
After Tax Return on Equity		120	142	154	186	208	229	251	353	536	718	900	1,083	1,265	1,447	1,630	1,812
Income Tax Component		85	100	116	131	147	162	177	249	378	507	635	764	893	1,021	1,150	1,278
Interest Expense Component		54	64	74	84	94	103	113	159	242	324	406	488	570	652	735	817
Total Return on CWIP		259	306	353	401	448	495	542	762	1,155	1,548	1,942	2,335	2,728	3,121	3,514	3,907
<b>BEC 4 Ash Phase 5</b>	<b>3,941,852</b>																
In Service 12/31/2035																	
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,948,967																
Less Internal Cost	-7,115																
AFUDC	0																
Less AFUDC on Internal Cost	0																
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																	
After Tax Return on Equity																	
Income Tax Component																	
Interest Expense Component																	
Total Return on CWIP																	
<b>Total</b>	<b>253,943,048</b>																
BOM		246,795,590	246,800,245	246,804,930	246,809,555	246,814,210	246,818,865	246,823,520	246,828,175	246,867,002	246,905,829	246,944,657	246,983,484	247,022,311	247,061,138	247,099,966	247,138,793
CapEx	255,849,805	4,663	4,663	4,663	4,663	4,663	4,663	4,663	38,897	38,897	38,897	38,897	38,897	38,897	38,897	38,897	38,897
Less Internal Cost	-5,108,060	-8	-8	-8	-8	-8	-8	-8	-70	-70	-70	-70	-70	-70	-70	-70	-70
AFUDC	3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		246,800,245	246,804,900	246,809,555	246,814,210	246,818,865	246,823,520	246,828,175	246,867,002	246,905,829	246,944,657	246,983,484	247,022,311	247,061,138	247,099,966	247,138,793	247,177,620
Return on CWIP																	
After Tax Return on Equity	17,557,522	120	142	154	186	208	229	251	353	536	718	900	1,083	1,265	1,447	1,630	1,812
Income Tax Component	12,388,804	85	100	116	131	147	162	177	249	378	507	635	764	893	1,021	1,150	1,278
Interest Expense Component	7,915,054	54	64	74	84	94	103	113	159	242	324	406	488	570	652	735	817
Total Return on CWIP	37,861,380	259	306	353	401	448	495	542	762	1,155	1,548	1,942	2,335	2,728	3,121	3,514	3,907

Minnesota Power  
BEC 4 Rider  
Plant Additions, AFUDC and Return on CWIP

	Total Project	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27
<b>BEC 4 Ash Phase 3 In Service 12/31/2023</b>	<b>1,378,067</b>																
BOM																	
CapEx	1,380,554																
Less Internal Cost	-2,487																
AFUDC	0																
Less AFUDC on Internal Cost	0																
EOM																	
Return on CWIP																	
After Tax Return on Equity																	
Income Tax Component																	
Interest Expense Component																	
<b>Total Return on CWIP</b>																	
<b>BEC 4 Ash Phase 4 In Service 12/31/2029</b>	<b>3,228,882</b>																
BOM		405,305	444,133	482,960	521,787	526,792	531,797	536,802	541,806	546,811	551,816	556,821	561,825	566,830	571,835	576,840	581,844
CapEx	3,234,710	38,897	38,897	38,897	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	127,609
Less Internal Cost	-5,828	-70	-70	-70	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-230
AFUDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		-444,133	-482,960	-521,787	-526,792	-531,797	-536,802	-541,806	-546,811	-551,816	-556,821	-561,825	-566,830	-571,835	-576,840	-581,844	-709,224
Return on CWIP																	
After Tax Return on Equity		1,994	2,176	2,359	2,462	2,485	2,509	2,532	2,556	2,579	2,603	2,626	2,650	2,673	2,697	2,720	3,031
Income Tax Component		1,407	1,536	1,664	1,737	1,754	1,770	1,787	1,803	1,820	1,836	1,853	1,870	1,886	1,903	1,919	2,139
Interest Expense Component		899	981	1,063	1,110	1,120	1,131	1,142	1,152	1,163	1,173	1,184	1,194	1,205	1,216	1,226	1,366
<b>Total Return on CWIP</b>		<b>4,300</b>	<b>4,693</b>	<b>5,087</b>	<b>5,308</b>	<b>5,359</b>	<b>5,410</b>	<b>5,460</b>	<b>5,511</b>	<b>5,562</b>	<b>5,612</b>	<b>5,663</b>	<b>5,714</b>	<b>5,764</b>	<b>5,815</b>	<b>5,866</b>	<b>6,536</b>
<b>BEC 4 Ash Phase 5 In Service 12/31/2035</b>	<b>3,941,852</b>																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,948,967																
Less Internal Cost	-7,115																
AFUDC	0																
Less AFUDC on Internal Cost	0																
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																	
After Tax Return on Equity																	
Income Tax Component																	
Interest Expense Component																	
<b>Total Return on CWIP</b>																	
<b>Total</b>	<b>253,943,048</b>																
BOM		247,177,620	247,216,448	247,255,275	247,294,102	247,299,107	247,304,112	247,309,117	247,314,121	247,319,126	247,324,131	247,329,136	247,334,140	247,339,145	247,344,150	247,349,155	247,354,160
CapEx	255,849,805	38,897	38,897	38,897	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	127,609
Less Internal Cost	-5,108,060	-70	-70	-70	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-230
AFUDC	3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		247,216,448	247,255,275	247,294,102	247,299,107	247,304,112	247,309,117	247,314,121	247,319,126	247,324,131	247,329,136	247,334,140	247,339,145	247,344,150	247,349,155	247,354,160	247,481,539
Return on CWIP																	
After Tax Return on Equity	17,557,522	1,994	2,176	2,359	2,462	2,485	2,509	2,532	2,556	2,579	2,603	2,626	2,650	2,673	2,697	2,720	3,031
Income Tax Component	12,388,804	1,407	1,536	1,664	1,737	1,754	1,770	1,787	1,803	1,820	1,836	1,853	1,870	1,886	1,903	1,919	2,139
Interest Expense Component	7,915,054	899	981	1,063	1,110	1,120	1,131	1,142	1,152	1,163	1,173	1,184	1,194	1,205	1,216	1,226	1,366
<b>Total Return on CWIP</b>	<b>37,861,380</b>	<b>4,300</b>	<b>4,693</b>	<b>5,087</b>	<b>5,308</b>	<b>5,359</b>	<b>5,410</b>	<b>5,460</b>	<b>5,511</b>	<b>5,562</b>	<b>5,612</b>	<b>5,663</b>	<b>5,714</b>	<b>5,764</b>	<b>5,815</b>	<b>5,866</b>	<b>6,536</b>

Minnesota Power  
 BEC 4 Rider  
 Plant Additions, AFUDC and Return on CWIP

	Total Project	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27	Jan-28	Feb-28	Mar-28	Apr-28
BEC 4 Ash Phase 3 In Service 12/31/2023	<b>1,378,067</b>															
BOM																
CapEx	1,380,554															
Less Internal Cost	-2,487															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM																
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>BEC 4 Ash Phase 4 In Service 12/31/2029</b>	<b>3,228,882</b>															
BOM		709,224	836,603	963,983	1,091,362	1,218,741	1,346,121	1,473,500	1,600,880	1,726,259	1,855,638	1,983,018	2,110,397	2,183,451	2,256,504	2,329,557
CapEx	3,234,710	127,609	127,609	127,609	127,609	127,609	127,609	127,609	127,609	127,609	127,609	127,609	73,185	73,185	73,185	73,185
Less Internal Cost	-5,828	-230	-230	-230	-230	-230	-230	-230	-230	-230	-230	-230	-132	-132	-132	-132
AFUDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		836,603	963,983	1,091,362	1,218,741	1,346,121	1,473,500	1,600,880	1,726,259	1,855,638	1,983,018	2,110,397	2,183,451	2,256,504	2,329,557	2,402,611
Return on CWIP																
After Tax Return on Equity		3,629	4,227	4,825	5,423	6,021	6,619	7,218	7,816	8,414	9,012	9,610	10,080	10,423	10,766	11,109
Income Tax Component		2,561	2,983	3,405	3,827	4,249	4,671	5,093	5,515	5,937	6,359	6,781	7,113	7,355	7,597	7,839
Interest Expense Component		1,636	1,906	2,175	2,445	2,714	2,984	3,254	3,523	3,793	4,063	4,332	4,544	4,699	4,854	5,008
Total Return on CWIP		7,826	9,115	10,405	11,695	12,985	14,274	15,564	16,854	18,143	19,433	20,723	21,738	22,477	23,217	23,957
<b>BEC 4 Ash Phase 5 In Service 12/31/2035</b>	<b>3,941,852</b>															
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,948,967															
Less Internal Cost	-7,115															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>Total</b>	<b>253,943,048</b>															
BOM		247,481,539	247,608,918	247,736,298	247,863,677	247,991,056	248,118,436	248,245,815	248,373,195	248,500,574	248,627,953	248,755,333	248,882,712	248,955,766	249,028,819	249,101,872
CapEx	255,849,805	127,609	127,609	127,609	127,609	127,609	127,609	127,609	127,609	127,609	127,609	127,609	73,185	73,185	73,185	73,185
Less Internal Cost	-5,108,060	-230	-230	-230	-230	-230	-230	-230	-230	-230	-230	-230	-132	-132	-132	-132
AFUDC	3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		247,608,918	247,736,298	247,863,677	247,991,056	248,118,436	248,245,815	248,373,195	248,500,574	248,627,953	248,755,333	248,882,712	248,955,766	249,028,819	249,101,872	249,174,926
Return on CWIP																
After Tax Return on Equity	17,557,522	3,629	4,227	4,825	5,423	6,021	6,619	7,218	7,816	8,414	9,012	9,610	10,080	10,423	10,766	11,109
Income Tax Component	12,388,804	2,561	2,983	3,405	3,827	4,249	4,671	5,093	5,515	5,937	6,359	6,781	7,113	7,355	7,597	7,839
Interest Expense Component	7,915,054	1,636	1,906	2,175	2,445	2,714	2,984	3,254	3,523	3,793	4,063	4,332	4,544	4,699	4,854	5,008
Total Return on CWIP	37,861,380	7,826	9,115	10,405	11,695	12,985	14,274	15,564	16,854	18,143	19,433	20,723	21,738	22,477	23,217	23,957



Minnesota Power  
BEC 4 Rider  
Plant Additions, AFUDC and Return on CWIP

	Total Project	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29
<b>BEC 4 Ash Phase 3</b>	<b>1,378,067</b>															
In Service 12/31/2023																
BOM																
CapEx	1,380,554															
Less Internal Cost	-2,487															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM																
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>BEC 4 Ash Phase 4</b>	<b>3,228,882</b>															
In Service 12/31/2029																
BOM		2,402,611	2,475,664	2,548,718	2,621,771	2,694,825	2,767,878	2,840,932	2,913,985	2,987,039	3,007,192	3,027,346	3,047,499	3,067,653	3,087,807	3,107,960
CapEx	3,234,710	73,185	73,185	73,185	73,185	73,185	73,185	73,185	73,185	20,190	20,190	20,190	20,190	20,190	20,190	20,190
Less Internal Cost	-5,628	-132	-132	-132	-132	-132	-132	-132	-132	-36	-36	-36	-36	-36	-36	-36
AFUDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		2,475,664	2,548,718	2,621,771	2,694,825	2,767,878	2,840,932	2,913,985	2,987,039	3,007,192	3,027,346	3,047,499	3,067,653	3,087,807	3,107,960	3,128,114
Return on CWIP																
After Tax Return on Equity		11,452	11,795	12,138	12,481	12,824	13,167	13,510	13,853	14,072	14,167	14,262	14,356	14,451	14,545	14,640
Income Tax Component		8,081	8,323	8,565	8,807	9,049	9,291	9,533	9,775	9,930	9,996	10,063	10,130	10,197	10,263	10,330
Interest Expense Component		5,163	5,317	5,472	5,627	5,781	5,936	6,091	6,245	6,344	6,387	6,429	6,472	6,515	6,557	6,600
Total Return on CWIP		24,696	25,436	26,176	26,915	27,655	28,395	29,134	29,874	30,346	30,550	30,754	30,958	31,162	31,366	31,570
<b>BEC 4 Ash Phase 5</b>	<b>3,941,852</b>															
In Service 12/31/2035																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	3,948,667															
Less Internal Cost	-7,115															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>Total</b>	<b>253,943,048</b>															
BOM		249,174,926	249,247,979	249,321,033	249,394,086	249,467,140	249,540,193	249,613,247	249,686,300	249,759,354	249,779,507	249,799,661	249,819,814	249,839,968	249,860,122	249,880,275
CapEx	255,849,805	73,185	73,185	73,185	73,185	73,185	73,185	73,185	73,185	20,190	20,190	20,190	20,190	20,190	20,190	20,190
Less Internal Cost	-5,108,060	-132	-132	-132	-132	-132	-132	-132	-132	-36	-36	-36	-36	-36	-36	-36
AFUDC	3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		249,247,979	249,321,033	249,394,086	249,467,140	249,540,193	249,613,247	249,686,300	249,759,354	249,779,507	249,799,661	249,819,814	249,839,968	249,860,122	249,880,275	249,900,429
Return on CWIP																
After Tax Return on Equity	17,557,522	11,452	11,795	12,138	12,481	12,824	13,167	13,510	13,853	14,072	14,167	14,262	14,356	14,451	14,545	14,640
Income Tax Component	12,388,604	8,081	8,323	8,565	8,807	9,049	9,291	9,533	9,775	9,930	9,996	10,063	10,130	10,197	10,263	10,330
Interest Expense Component	7,915,054	5,163	5,317	5,472	5,627	5,781	5,936	6,091	6,245	6,344	6,387	6,429	6,472	6,515	6,557	6,600
Total Return on CWIP	37,861,380	24,696	25,436	26,176	26,915	27,655	28,395	29,134	29,874	30,346	30,550	30,754	30,958	31,162	31,366	31,570

Minnesota Power  
 BEC 4 Rider  
 Plant Additions, AFUDC and Return on CWIP

Total Project	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29	Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30
<b>BEC 4 Ash Phase 3</b>	<b>1,378,067</b>														
In Service 12/31/2023															
BOM															
CapEx	1,380,554														
Less Internal Cost	-2,467														
AFUDC	0														
Less AFUDC on Internal Cost	0														
EOM															
Return on CWIP															
After Tax Return on Equity															
Income Tax Component															
Interest Expense Component															
<b>Total Return on CWIP</b>															
<b>BEC 4 Ash Phase 4</b>	<b>3,228,882</b>														
In Service 12/31/2029															
BOM		3,128,114	3,148,267	3,168,421	3,188,575										
CapEx	3,234,710	20,190	20,190	20,190	20,190	20,190	20,190								
Less Internal Cost	-5,828	-36	-36	-36	-36	-36	-36								
AFUDC	0	0	0	0	0	0	0								
Less AFUDC on Internal Cost	0	0	0	0	0	0	0								
EOM		3,148,267	3,168,421	3,188,575	3,208,728	3,228,882									
Return on CWIP															
After Tax Return on Equity		14,735	14,829	14,924	15,019	111									
Income Tax Component		10,397	10,464	10,531	10,597	79									
Interest Expense Component		6,643	6,685	6,728	6,770	50									
<b>Total Return on CWIP</b>		31,774	31,978	32,182	32,386	240									
<b>BEC 4 Ash Phase 5</b>	<b>3,941,852</b>														
In Service 12/31/2035															
BOM		0	0	0	0	0	0	5,716	11,431	17,147	22,863	28,578	34,294	40,010	45,725
CapEx	3,948,967							5,726	5,726	5,726	5,726	5,726	5,726	5,726	5,726
Less Internal Cost	-7,115							-10	-10	-10	-10	-10	-10	-10	-10
AFUDC	0							0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	0							0	0	0	0	0	0	0	0
EOM		0	0	0	0	0	0	5,716	11,431	17,147	22,863	28,578	34,294	40,010	45,725
Return on CWIP															
After Tax Return on Equity								13	40	67	94	121	148	174	201
Income Tax Component								9	28	47	66	85	104	123	142
Interest Expense Component								6	18	30	42	54	67	79	91
<b>Total Return on CWIP</b>								29	87	145	203	260	318	376	434
<b>Total</b>	<b>253,943,048</b>														
BOM		249,900,429	249,920,582	249,940,736	249,960,890	249,981,043	250,001,197	250,006,912	250,012,628	250,018,344	250,024,060	250,029,775	250,035,491	250,041,207	250,046,922
CapEx	255,849,805	20,190	20,190	20,190	20,190	20,190	20,190	5,726	5,726	5,726	5,726	5,726	5,726	5,726	5,726
Less Internal Cost	-5,108,060	-36	-36	-36	-36	-36	-36	-10	-10	-10	-10	-10	-10	-10	-10
AFUDC	3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		249,920,582	249,940,736	249,960,890	249,981,043	250,001,197	250,006,912	250,012,628	250,018,344	250,024,060	250,029,775	250,035,491	250,041,207	250,046,922	250,052,638
Return on CWIP															
After Tax Return on Equity	17,557,522	14,735	14,829	14,924	15,019	111	13	40	67	94	121	148	174	201	228
Income Tax Component	12,388,804	10,397	10,464	10,531	10,597	79	9	28	47	66	85	104	123	142	161
Interest Expense Component	7,915,054	6,643	6,685	6,728	6,770	50	6	18	30	42	54	67	79	91	103
<b>Total Return on CWIP</b>	37,861,380	31,774	31,978	32,182	32,386	240	29	87	145	203	260	318	376	434	492

Minnesota Power  
BEC 4 Rider  
Plant Additions, AFUDC and Return on CWIP

	Total Project	Nov-30	Dec-30	Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31	Jan-32
BEC 4 Ash Phase 3 In Service 12/31/2023	<b>1,378,067</b>															
BOM																
CapEx	1,380,554															
Less Internal Cost	-2,487															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM																
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>BEC 4 Ash Phase 4 In Service 12/31/2029</b>	<b>3,228,882</b>															
BOM																
CapEx	3,234,710															
Less Internal Cost	-5,828															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM																
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
Total Return on CWIP																
<b>BEC 4 Ash Phase 5 In Service 12/31/2035</b>	<b>3,941,852</b>															
BOM		57,157	62,873	68,588	191,837	315,085	438,334	561,582	684,831	308,080	931,328	1,054,577	1,177,825	1,301,074	1,424,322	1,547,571
CapEx	3,948,967	5,726	5,726	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471
Less Internal Cost	-7,115	-10	-10	-222	-222	-222	-222	-222	-222	-222	-222	-222	-222	-222	-222	-222
AFUDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		62,873	68,588	191,837	315,085	438,334	561,582	684,831	808,080	931,328	1,054,577	1,177,825	1,301,074	1,424,322	1,547,571	1,547,571
Return on CWIP																
After Tax Return on Equity		282	309	611	1,190	1,769	2,347	2,926	3,505	4,084	4,662	5,241	5,820	6,398	6,977	7,266
Income Tax Component		199	218	431	840	1,248	1,656	2,065	2,473	2,881	3,290	3,698	4,106	4,515	4,923	5,127
Interest Expense Component		127	139	276	536	797	1,058	1,319	1,580	1,841	2,102	2,363	2,624	2,884	3,145	3,276
Total Return on CWIP		608	666	1,318	2,566	3,814	5,062	6,310	7,558	8,806	10,054	11,302	12,549	13,797	15,045	15,669
<b>Total</b>	<b>253,943,048</b>															
BOM		250,058,354	250,064,069	250,069,785	250,193,034	250,316,282	250,439,531	250,562,779	250,686,028	250,809,276	250,932,525	251,055,774	251,179,022	251,302,271	251,425,519	251,548,768
CapEx	255,849,805	5,726	5,726	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471	123,471
Less Internal Cost	-5,108,060	-10	-10	-222	-222	-222	-222	-222	-222	-222	-222	-222	-222	-222	-222	-222
AFUDC	3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		250,064,069	250,069,785	250,193,034	250,316,282	250,439,531	250,562,779	250,686,028	250,809,276	250,932,525	251,055,774	251,179,022	251,302,271	251,425,519	251,548,768	251,548,768
Return on CWIP																
After Tax Return on Equity	17,557,522	282	309	611	1,190	1,769	2,347	2,926	3,505	4,084	4,662	5,241	5,820	6,398	6,977	7,266
Income Tax Component	12,388,804	199	218	431	840	1,248	1,656	2,065	2,473	2,881	3,290	3,698	4,106	4,515	4,923	5,127
Interest Expense Component	7,915,054	127	139	276	536	797	1,058	1,319	1,580	1,841	2,102	2,363	2,624	2,884	3,145	3,276
Total Return on CWIP	37,861,380	608	666	1,318	2,566	3,814	5,062	6,310	7,558	8,806	10,054	11,302	12,549	13,797	15,045	15,669



Minnesota Power  
BEC 4 Rider  
Plant Additions, AFUDC and Return on CWIP

Total Project	May-33	Jun-33	Jul-33	Aug-33	Sep-33	Oct-33	Nov-33	Dec-33	Jan-34	Feb-34	Mar-34	Apr-34	May-34	Jun-34	Jul-34	
<b>BEC 4 Ash Phase 3</b>	<b>1,378,067</b>															
In Service 12/31/2023																
BOM																
CapEx	1,380,554															
Less Internal Cost	-2,487															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM																
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
<b>Total Return on CWIP</b>																
<b>BEC 4 Ash Phase 4</b>	<b>3,228,882</b>															
In Service 12/31/2029																
BOM																
CapEx	3,234,710															
Less Internal Cost	-5,828															
AFUDC	0															
Less AFUDC on Internal Cost	0															
EOM																
Return on CWIP																
After Tax Return on Equity																
Income Tax Component																
Interest Expense Component																
<b>Total Return on CWIP</b>																
<b>BEC 4 Ash Phase 5</b>	<b>3,941,852</b>															
In Service 12/31/2035																
BOM		1,547,571	1,547,571	1,547,571	1,547,571	1,547,571	1,547,571	1,547,571	1,547,571	1,547,571	1,553,221	1,558,871	1,564,521	1,570,171	1,575,821	1,581,471
CapEx	3,948,967	0	0	0	0	0	0	0	0	0	5,660	5,660	5,660	5,660	5,660	5,660
Less Internal Cost	-7,115	0	0	0	0	0	0	0	0	0	-10	-10	-10	-10	-10	-10
AFUDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		1,547,571	1,547,571	1,547,571	1,547,571	1,547,571	1,547,571	1,547,571	1,547,571	1,553,221	1,558,871	1,564,521	1,570,171	1,575,821	1,581,471	1,587,121
Return on CWIP																
After Tax Return on Equity		7,266	7,266	7,266	7,266	7,266	7,266	7,266	7,266	7,280	7,306	7,333	7,359	7,386	7,412	7,439
Income Tax Component		5,127	5,127	5,127	5,127	5,127	5,127	5,127	5,127	5,137	5,155	5,174	5,193	5,211	5,230	5,249
Interest Expense Component		3,276	3,276	3,276	3,276	3,276	3,276	3,276	3,276	3,282	3,294	3,306	3,318	3,330	3,341	3,353
<b>Total Return on CWIP</b>		15,669	15,669	15,669	15,669	15,669	15,669	15,669	15,669	15,698	15,755	15,812	15,869	15,927	15,984	16,041
<b>Total</b>	<b>253,943,048</b>															
BOM		251,548,768	251,548,768	251,548,768	251,548,768	251,548,768	251,548,768	251,548,768	251,548,768	251,548,768	251,554,418	251,560,068	251,565,718	251,571,368	251,577,018	251,582,668
CapEx	255,849,805	0	0	0	0	0	0	0	0	0	5,660	5,660	5,660	5,660	5,660	5,660
Less Internal Cost	-5,108,060	0	0	0	0	0	0	0	0	0	-10	-10	-10	-10	-10	-10
AFUDC	-3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		251,548,768	251,548,768	251,548,768	251,548,768	251,548,768	251,548,768	251,548,768	251,548,768	251,554,418	251,560,068	251,565,718	251,571,368	251,577,018	251,582,668	251,588,318
Return on CWIP																
After Tax Return on Equity	17,557,522	7,266	7,266	7,266	7,266	7,266	7,266	7,266	7,266	7,280	7,306	7,333	7,359	7,386	7,412	7,439
Income Tax Component	12,388,804	5,127	5,127	5,127	5,127	5,127	5,127	5,127	5,127	5,137	5,155	5,174	5,193	5,211	5,230	5,249
Interest Expense Component	7,915,054	3,276	3,276	3,276	3,276	3,276	3,276	3,276	3,276	3,282	3,294	3,306	3,318	3,330	3,341	3,353
<b>Total Return on CWIP</b>	37,861,380	15,669	15,669	15,669	15,669	15,669	15,669	15,669	15,669	15,698	15,755	15,812	15,869	15,927	15,984	16,041

Minnesota Power  
 BEC 4 Rider  
 Plant Additions, AFUDC and Return on CWIP

Total Project	Aug-34	Sep-34	Oct-34	Nov-34	Dec-34	Jan-35	Feb-35	Mar-35	Apr-35	May-35	Jun-35	Jul-35	Aug-35	Sep-35	Oct-35
<b>BEC 4 Ash Phase 3</b>	<b>1,378,067</b>														
In Service 12/31/2023															
BOM															
CapEx	1,380,554														
Less Internal Cost	-2,487														
AFUDC	0														
Less AFUDC on Internal Cost	0														
EOM															
Return on CWIP															
After Tax Return on Equity															
Income Tax Component															
Interest Expense Component															
Total Return on CWIP															
<b>BEC 4 Ash Phase 4</b>	<b>3,228,882</b>														
In Service 12/31/2029															
BOM															
CapEx	3,234,710														
Less Internal Cost	-5,828														
AFUDC	0														
Less AFUDC on Internal Cost	0														
EOM															
Return on CWIP															
After Tax Return on Equity															
Income Tax Component															
Interest Expense Component															
Total Return on CWIP															
<b>BEC 4 Ash Phase 5</b>	<b>3,941,852</b>														
In Service 12/31/2035															
BOM	1,587,121	1,592,771	1,598,421	1,604,071	1,609,721	1,615,371	1,809,244	2,003,118	2,196,991	2,390,864	2,584,738	2,778,611	2,972,485	3,166,358	3,360,231
CapEx	3,948,967	5,660	5,660	5,660	5,660	5,660	194,223	194,223	194,223	194,223	194,223	194,223	194,223	194,223	194,223
Less Internal Cost	-7,115	-10	-10	-10	-10	-10	-350	-350	-350	-350	-350	-350	-350	-350	-350
AFUDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM	1,592,771	1,598,421	1,604,071	1,609,721	1,615,371	1,809,244	2,003,118	2,196,991	2,390,864	2,584,738	2,778,611	2,972,485	3,166,358	3,360,231	3,554,105
Return on CWIP															
After Tax Return on Equity	7,465	7,492	7,518	7,545	7,571	8,040	8,950	9,860	10,771	11,681	12,591	13,502	14,412	15,322	16,232
Income Tax Component	5,268	5,286	5,305	5,324	5,342	5,673	6,315	6,958	7,600	8,242	8,885	9,527	10,169	10,811	11,454
Interest Expense Component	3,365	3,377	3,389	3,401	3,413	3,624	4,035	4,445	4,855	5,266	5,676	6,087	6,497	6,907	7,318
Total Return on CWIP	16,098	16,155	16,213	16,270	16,327	17,337	19,300	21,263	23,226	25,189	27,152	29,115	31,078	33,041	35,004
<b>Total</b>	<b>253,943,048</b>														
BOM	251,588,318	251,593,968	251,599,618	251,605,268	251,610,918	251,616,568	251,810,441	252,004,314	252,198,188	252,392,061	252,585,935	252,779,808	252,973,681	253,167,555	253,361,428
CapEx	255,849,805	5,660	5,660	5,660	5,660	5,660	194,223	194,223	194,223	194,223	194,223	194,223	194,223	194,223	194,223
Less Internal Cost	-5,108,060	-10	-10	-10	-10	-10	-350	-350	-350	-350	-350	-350	-350	-350	-350
AFUDC	3,604,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-403,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM	251,593,968	251,599,618	251,605,268	251,610,918	251,616,568	251,810,441	252,004,314	252,198,188	252,392,061	252,585,935	252,779,808	252,973,681	253,167,555	253,361,428	253,555,302
Return on CWIP															
After Tax Return on Equity	17,557,522	7,465	7,492	7,518	7,545	7,571	8,040	8,950	9,860	10,771	11,681	12,591	13,502	14,412	15,322
Income Tax Component	12,388,804	5,268	5,286	5,305	5,324	5,342	5,673	6,315	6,958	7,600	8,242	8,885	9,527	10,169	10,811
Interest Expense Component	7,915,054	3,365	3,377	3,389	3,401	3,413	3,624	4,035	4,445	4,855	5,266	5,676	6,087	6,497	6,907
Total Return on CWIP	37,861,380	16,098	16,155	16,213	16,270	16,327	17,337	19,300	21,263	23,226	25,189	27,152	29,115	31,078	33,041

Minnesota Power  
BEC 4 Rider  
Plant Additions, AFUDC and Return on CWIP

	Total Project	Nov-35	Dec-35
BEC 4 Ash Phase 3 In Service 12/31/2023	<b>1,378,067</b>		
BOM			
CapEx	1,380,554		
Less Internal Cost	-2,487		
AFUDC	0		
Less AFUDC on Internal Cost	0		
EOM			
Return on CWIP			
After Tax Return on Equity			
Income Tax Component			
Interest Expense Component			
Total Return on CWIP			
BEC 4 Ash Phase 4 In Service 12/31/2029	<b>3,228,882</b>		
BOM			
CapEx	3,234,710		
Less Internal Cost	-5,828		
AFUDC	0		
Less AFUDC on Internal Cost	0		
EOM			
Return on CWIP			
After Tax Return on Equity			
Income Tax Component			
Interest Expense Component			
Total Return on CWIP			
BEC 4 Ash Phase 5 In Service 12/31/2035	<b>3,941,852</b>		<u>In-Service</u> 12/31/2035
BOM		3,554,105	3,747,978
CapEx	3,948,967	194,223	194,223
Less Internal Cost	-7,115	-350	-350
AFUDC	0	0	0
Less AFUDC on Internal Cost	0	0	0
EOM		3,747,978	3,941,852
Return on CWIP			
After Tax Return on Equity		17,143	8,799
Income Tax Component		12,096	6,209
Interest Expense Component		<u>7,728</u>	<u>3,967</u>
Total Return on CWIP		36,967	18,974
<b>Total</b>	<b>253,943,048</b>		
BOM		253,555,302	253,749,175
CapEx	255,849,805	194,223	194,223
Less Internal Cost	-5,108,060	-350	-350
AFUDC	3,604,750	0	0
Less AFUDC on Internal Cost	-403,445	0	0
EOM		253,749,175	253,943,048
Return on CWIP			
After Tax Return on Equity	17,557,522	17,143	8,799
Income Tax Component	12,388,804	12,096	6,209
Interest Expense Component	7,915,054	7,728	3,967
Total Return on CWIP	37,861,380	36,967	18,974

Minnesota Power  
BEC4 Rider  
Plant Additions, AFUDC and Return on CWIP for Basin's Share

	Total Project	to date Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14
<b>BEC 4 Environmental Retrofit In Service 12/31/2015</b>	<b>239,589,963</b>																
BOM		0	22,080,404	24,650,462	27,389,835	31,514,963	34,759,576	36,011,448	38,344,703	42,437,297	46,108,367	50,684,738	55,419,850	61,190,666	63,015,477	69,786,144	77,001,143
CapEx	235,985,296	20,189,572	2,439,150	2,594,454	3,961,992	3,061,934	1,052,045	2,124,604	3,867,255	3,425,444	4,561,805	4,719,711	5,753,924	1,807,357	6,752,543	7,196,027	9,743,271
Less Internal Cost 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AFUDC	3,604,666	1,890,832	130,908	144,919	163,136	182,679	199,828	208,650	225,340	245,626	14,567	15,400	16,892	17,454	18,124	18,972	19,907
EOM		22,080,404	24,650,462	27,389,835	31,514,963	34,759,576	36,011,448	38,344,703	42,437,297	46,108,367	50,684,738	55,419,850	61,190,666	63,015,477	69,786,144	77,001,143	86,764,321
<b>Basin's Return on CWIP</b>																	
<b>BEC 4 Storm Water In Service 9/30/2016</b>	<b>5,372,401</b>																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	5,372,401	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less Internal Cost 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AFUDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Basin's Return on CWIP</b>																	
<b>BEC 4 Ash Phase 1 In Service 12/31/2016</b>	<b>5,073,100</b>																
BOM		0	0	423	426	428	430	3,708	3,728	4,086	4,108	4,669	8,105	15,099	15,099	15,099	16,327
CapEx	5,073,016	0	422	0	0	0	3,266	0	336	0	560	3,436	6,994	0	0	1,228	312
Less Internal Cost 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AFUDC	84	0	1	2	2	2	11	20	21	22	0	0	0	0	0	0	0
EOM		0	423	426	428	430	3,708	3,728	4,086	4,108	4,669	8,105	15,099	15,099	15,099	16,327	16,639
<b>Basin's Return on CWIP</b>																	
<b>BEC 4 Ash Phase 2 In Service 12/31/2019</b>	<b>854,859</b>																
BOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CapEx	854,859	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less Internal Cost 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AFUDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Basin's Return on CWIP</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:  
1/ Internal costs and AFUDC on internal costs are not excluded for Basin calculations.









Minnesota Power  
BEC4 Rider  
Plant Additions, AFUDC and Return on CWIP for Basin's Share

	Total Project	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19
BEC 4 Environmental Retrofit In Service 12/31/2015	<b>239,589,963</b>															
BOM																
CapEx	235,985,298															
Less Internal Cost 1/	0															
AFUDC	3,604,666															
EOM																
Basin's Return on CWIP																
BEC 4 Storm Water In Service 9/30/2016	<b>5,372,401</b>															
BOM																
CapEx	5,372,401															
Less Internal Cost 1/	0															
AFUDC	0															
EOM																
Basin's Return on CWIP																
BEC 4 Ash Phase 1 In Service 12/31/2016	<b>5,073,100</b>															
BOM																
CapEx	5,073,016															
Less Internal Cost 1/	0															
AFUDC	84															
EOM																
Basin's Return on CWIP																
BEC 4 Ash Phase 2 In Service 12/31/2019	<b>854,859</b>															
BOM		54,952	109,905	164,857	219,809	274,762	329,714	384,666	439,619	494,571	549,523	604,476	659,428	675,714	692,000	708,286
CapEx	854,859	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	54,952	16,286	16,286	16,286	16,286
Less Internal Cost 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AFUDC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		109,905	164,857	219,809	274,762	329,714	384,666	439,619	494,571	549,523	604,476	659,428	675,714	692,000	708,286	724,572
Basin's Return on CWIP		162	270	377	485	593	701	809	917	1,024	1,132	1,240	1,310	1,342	1,374	1,406

Minnesota Power  
BEC4 Rider  
Plant Additions, AFUDC and Return on CWIP for Basin's Share

	Total Project	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20
BEC 4 Environmental Retrofit In Service 12/31/2015	<b>239,589,963</b>									
BOM										
CapEx	235,985,298									
Less Internal Cost 1/	0									
AFUDC	3,604,666									
EOM										
Basin's Return on CWIP										
BEC 4 Storm Water In Service 9/30/2016	<b>5,372,401</b>									
BOM										
CapEx	5,372,401									
Less Internal Cost 1/	0									
AFUDC	0									
EOM										
Basin's Return on CWIP										
BEC 4 Ash Phase 1 In Service 12/31/2016	<b>5,073,100</b>									
BOM										
CapEx	5,073,016									
Less Internal Cost 1/	0									
AFUDC	84									
EOM										
Basin's Return on CWIP										
BEC 4 Ash Phase 2 In Service 12/31/2019	<b>854,859</b>									<u>In-Service</u> 12/31/2019
BOM		724,572	740,857	757,143	773,429	789,715	806,001	822,287	838,573	
CapEx	854,859	16,286	16,286	16,286	16,286	16,286	16,286	16,286	16,286	
Less Internal Cost 1/	0	0	0	0	0	0	0	0	0	
AFUDC	0	0	0	0	0	0	0	0	0	
EOM		740,857	757,143	773,429	789,715	806,001	822,287	838,573	854,859	
Basin's Return on CWIP		1,438	1,470	1,502	1,534	1,566	1,598	1,630	1,662	

MPUC Docket E015/GR-09-1151  
Rate of Return / Cost of Capital Summary  
(thousands of dollars)  
Commission Decision (9/29/2010)

Average for 13 months Ended 12/31/10						
	Amount	% of Total	Component Cost	Weighted Cost	Pre-tax Rate	After-Tax Rate
Long Term Debt	\$ 696,677	45.71%	5.56%	2.540%	2.540%	1.490%
Common Equity	\$ 827,534	54.29%	10.38%	5.640%	9.610%	5.640%
	<u>\$ 1,524,211</u>	<u>100.00%</u>		<u>8.180%</u>	<u>12.150%</u>	<u>7.130%</u>
			Federal & State Income Tax Rate			41.37%
			Pretax "Gross-up" Factor			1.70560
			After Tax Return on Equity			5.6343% 1/
			Income Tax Component			3.9757% 2/
			Interest Expense Component			2.5400%
			Pre-tax Return			<u>12.1500%</u>

1/ Rounding forced to equity.

2/ Shown here as a component of the pretax rate of return. Can also be computed as 70.56% gross up on After Tax Return on Equity.

Minnesota Power  
 BEC 4 Rider  
 2010 Rate Case Allocators

Demand Responsibility of Power Supply Cost Based on Peak & Average Methodology: D-01 & D-02  
 Test Year 2010 Rebuttal Customer Budget  
 Revised from original work paper AF-3, page 14  
 MP Exhibit (SJS) Rebuttal Schedule 2, page 9 of 15  
 Docket No. E-015/GR-09-1151

		Total Retail	Residential	General Service	Large Light & Power	Large Power	Municipal Pumping	Lighting
1	Annual Energy (E-01 with losses)	8,973,590	1,164,063	645,945	1,311,171	5,768,410	61,116	22,885
2	Average Demand	1,024,382	132,884	73,738	149,677	658,494	6,977	2,612
3	Percent	100.000	12.972	7.198	14.611	64.282	0.681	0.255
4	Annual CP Demand (loss adjusted)	1,267,035	214,342	116,138	224,399	697,256	9,334	5,567
5	Percent	100.000	16.917	9.166	17.711	55.031	0.737	0.439
6	Annual Load Factor (Line 2 / Line 4)	0.80849						
7	1.0 - Load Factor	0.19151						
8	Average Factor (Line 3 x Line 6 total)	80.849	10.488	5.820	11.813	51.971	0.551	0.206
9	Peak Factor (Line 5 x Line 7 total)	19.151	3.240	1.755	3.392	10.539	0.141	0.084
10	Composite Factor - D-01 (Line 8 + Line 9)	100.000	13.728	7.575	15.205	62.510	0.692	0.290
11	Power Supply Production - D-01 Adjusted for Jurisdictional Split <span style="border: 1px solid black; padding: 2px;">(Line 10 x .82017)</span>	82.017	11.259	6.213	12.471	51.269	0.568	0.237
12	Power Supply Transmission - D-02 Adjusted for Jurisdictional Split <span style="border: 1px solid black; padding: 2px;">(Line 10 x .77570)</span>	77.570	10.649	5.876	11.795	48.489	0.537	0.224

Notes:

Residential, General Service, Large Light and Power and Municipal Pumping CP demands per customer from load research multiplied by budgeted number of customers and adjusted for losses. Large Power CP demand based on 2008 CP adjusted for losses and ratio of 2008 to Test Year average demand. Large Light and Power and Large Power loads normalized to reflect three customers that moved from Large Power to Large Light and Power. Lighting CP is average load based on Test Year budgeted total energy and 4,200 burning hours and adjusted for losses.

Minnesota Power  
BEC 4 Environmental Rider: 2015 Factor Filing  
Allocation Factors for 2013 Only

	D-01 Rate Case	Normalized
MN Jurisdiction	0.82017	1.0000
Residential	0.11259	0.1373
General Service	0.06213	0.0758
Large Light & Power	0.12471	0.1521
Large Power	0.51269	0.6251
Municipal Pumping	0.00568	0.0069
Lighting	0.00237	0.0029

The D-01 allocators from MP's 2009 MPUC rate case Docket No. E-015/GR-09-1151.  
Because the revenue tracker amounts are 100% MN Jurisdictional, the factor are normalized to  
obtain class allocations.



Minnesota Power  
BEC 4 Rider  
Revised Rate Case Allocators

Reply Comments  
Exhibit B-5  
Page 3 of 8

Demand Responsibility of Power Supply Cost Based on Peak & Average Methodology: D-01 & D-02  
Revised to Reflect Loss of Dahlberg in 2014  
For Use in BEC 4 Rider Starting 1/1/2014

		Total Retail	Residential	General Service	Large Light & Power	Large Power	Municipal Pumping	Lighting
1	Annual Energy (E-01 with losses)	8,973,590	1,164,063	645,945	1,311,171	5,768,410	61,116	22,885
2	Average Demand	1,024,382	132,884	73,738	149,677	658,494	6,977	2,612
3	Percent	100.000	12.972	7.198	14.611	64.282	0.681	0.255
4	Annual CP Demand (loss adjusted)	1,267,035	214,342	116,138	224,399	697,256	9,334	5,567
5	Percent	100.000	16.917	9.166	17.711	55.031	0.737	0.439
6	Annual Load Factor (Line 2 / Line 4)	0.80849						
7	1.0 - Load Factor	0.19151						
8	Average Factor (Line 3 x Line 6 total)	80.849	10.488	5.820	11.813	51.971	0.551	0.206
9	Peak Factor (Line 5 x Line 7 total)	19.151	3.240	1.755	3.392	10.539	0.141	0.084
10	Composite Factor - D-01 (Line 8 + Line 9)	100.000	13.728	7.575	15.205	62.510	0.692	0.290
11	Power Supply Production - D-01 Adjusted for Jurisdictional Split (Line 10 x .83043)	83.043	11.400	6.291	12.627	51.910	0.575	0.240
12	Power Supply Transmission - D-02 Adjusted for Jurisdictional Split (Line 10 x .78556)	78.556	10.784	5.951	11.944	49.105	0.544	0.228

Notes:

Residential, General Service, Large Light and Power and Municipal Pumping CP demands per customer from load research multiplied by budgeted number of customers and adjusted for losses. Large Power CP demand based on 2008 CP adjusted for losses and ratio of 2008 to Test Year average demand. Large Light and Power and Large Power loads normalized to reflect three customers that moved from Large Power to Large Light and Power. Lighting CP is average load based on Test Year budgeted total energy and 4,200 burning hours and adjusted for losses.

Minnesota Power  
BEC 4 Environmental Rider: 2015 Factor Filing  
Revised Allocation Factors for Use Starting 1/1/2014

	D-01 Revised /1	Normalized
MN Jurisdiction	0.83043	1.0000
Residential	0.11400	0.1373
General Service	0.06291	0.0758
Large Light & Power	0.12627	0.1521
Large Power	0.51910	0.6251
Municipal Pumping	0.00575	0.0069
Lighting	0.00240	0.0029

1/ See Exhibit B-5, page 3, row 11.

Because the revenue tracker amounts are 100% MN Jurisdictional, the factor are normalized to obtain class allocations.

Minnesota Power  
BEC 4 Rider

Adjusted System Net Load Peaks - Forecast & Normalized (MW)  
Revised to Reflect Loss of Dahlberg in 2014  
For Use in BEC 4 Rider Starting 1/1/2014

System Peak	Forecast	Normalized			Wheeling						Transmission Peak
	Expected System Net Load Peak (a)	Dual Fuel (b)	Large Power Interruptible (c)	Production Peak (d)	Staples (e)	Wadena (f)	Subtotal (g)	Losses (h)	Silver Bay (i)	Total (j)	
Jan	1367.839	25.000	192.466	1,150.373	4.027	12.830	16.857	0.249	42.000	59.106	1,155.848
Feb	1355.239	24.772	193.174	1,137.293	3.935	12.022	15.957	0.236	41.000	57.193	1,141.465
Mar	1304.739	23.860	192.394	1,088.485	3.537	11.297	14.834	0.220	41.000	56.054	1,093.793
Apr	1384.507	25.301	192.910	1,166.296	3.185	10.185	13.370	0.198	41.000	54.568	1,166.490
May	1449.361	4.637	192.345	1,252.379	3.047	9.624	12.671	0.188	41.000	53.859	1,247.851
Jun	1541.085	4.927	192.623	1,343.535	3.875	11.190	15.065	0.223	41.000	56.288	1,337.187
Jul	1564.066	5.000	192.854	1,366.212	3.844	11.051	14.895	0.220	43.000	58.115	1,360.634
Aug	1552.582	4.964	192.597	1,355.021	3.852	11.039	14.891	0.220	43.000	58.111	1,349.961
Sep	1524.054	4.873	191.697	1,327.484	3.662	10.507	14.169	0.210	41.000	55.379	1,320.975
Oct	1533.982	4.905	191.703	1,337.374	3.032	8.607	11.639	0.172	41.000	52.811	1,327.836
Nov	1567.539	25.608	191.363	1,350.568	3.673	12.018	15.691	0.232	41.000	56.923	1,344.527
Dec	1559.473	28.462	191.636	1,339.375	3.793	11.052	14.845	0.220	42.000	57.065	1,333.997
Avg	1,475.372	15.192	192.314	1,267.866	3.622	10.952	14.574	0.216	41.500	56.289	1,265.047

Notes:

Production Peak (d) = (a) - (b) - (c).

Subtotal (g) = (e) + (f).

Losses (h) = (g) x Distribution Bulk Delivery loss.

Total (j) = (g) + (h) + (i).

Transmission Peak (k) = ((d) / (1 + transmission loss)) + (j).

Demand loss factors:

Dist. Bulk Delivery (%) @ 1.48

Transmission (%) @ 4.89

Minnesota Power  
BEC 4 Rider

Reply Comments  
Exhibit B-5  
Page 6 of 8

Demand Responsibility for Power Supply Costs Based on 12-Month Average CP Demands (MW)  
Revised to Reflect Loss of Dahlberg in 2014  
For Use in BEC 4 Rider Starting 1/1/2014

Line (No)	Lowest Level of Allocation (kV)	Demand at Meter (a)	Lowest Level of Allocation		Power Supply Transmission		Power Supply Production		
			Losses to Meter Point (b)	Demand at LLA (c)	Losses on Dist Bulk Del (d)	Demand at Trans (e)	Losses on Trans Sys (f)	Demand at Prod (g)	
Group A - Full Requirement Customers									
1	Buhl	23	1,219	0.000	1,219	0.018	1,237	0.000	1,237
2	Gilbert	23	1,819	0.000	1,819	0.027	1,845	0.000	1,845
3	Keewatin	23	0,978	0.000	0,978	0.014	0,993	0.000	0,993
4	Mountain Iron	23	2,101	0.000	2,101	0.031	2,132	0.000	2,132
5	Nashwauk	23	2,305	0.000	2,305	0.034	2,340	0.000	2,340
6	Pierz	34	1,538	0.065	1,603	0.024	1,627	0.000	1,627
7	Randall	34	0,851	0.036	0,888	0.013	0,901	0.000	0,901
8	Biwabik	46	1,119	0.000	1,119	0.017	1,135	0.000	1,135
9	Ely	46	6,112	0.000	6,112	0.090	6,202	0.000	6,202
10	Aitkin	PST	5,872	0.000	5,872	0.000	5,872	0.000	5,872
11	Brainerd	PST	37,896	0.000	37,896	0.000	37,896	0.000	37,896
12	Grand Rapids	PST	25,729	0.000	25,729	0.000	25,729	0.000	25,729
13	Hibbing	PST	17,976	0.000	17,976	0.000	17,976	0.000	17,976
14	Proctor	PST	3,911	0.166	4,077	0.000	4,077	0.000	4,077
15	Two Harbors	PST	4,604	0.196	4,800	0.000	4,800	0.000	4,800
16	Virginia	PST	15,635	0.000	15,635	0.000	15,635	0.000	15,635
17	Dahlberg	PST	0,000	0.000	0,000	0.000	0,000	0.000	0,000
18	Group A - Total		129,664	0.463	130,128	0.269	130,396	0.000	130,396
19	- Demand Responsibility (%)						10.308		10.285
Group B - Private Utilities									
20	Superior Water, Light & Power Company	PST	84,588	0.000	84,588	0.000	84,588	0.000	84,588
21	Group B - Total		84,588	0.000	84,588	0.000	84,588	0.000	84,588
22	- Demand Responsibility (%)						6.687		6.672
Group C - Transmission and Distribution Wheeling Service									
23	Staples	34	3,622	0.000	3,622	0.054	3,675		
24	Wadena	34	10,952	0.000	10,952	0.162	11,114		
25	Group C - Total		14,574	0.000	14,574	0.216	14,789		
26	- Demand Responsibility (%)						1.169		
Group D - Wheeling Service									
27	Silver Bay Power Corp.	PST	41,500	0.000	41,500	0.000	41,500		
28	Group D - Total		41,500	0.000	41,500	0.000	41,500		
29	- Demand Responsibility (%)						3.281		
Group E - Distribution Wheeling Service									
30	Great River Energy	23, 34, 46	0	0	0	0	0		
31	Group E - Total		0	0	0	0	0		
32	- Demand Responsibility (%)						0.000		
Other									
33	Other - Total						993,773		1,052,881
34	- Demand Responsibility (%)						78.556		83.043
Total System									
35	System - Total						1,265,047		1,267,866
36	- Demand Responsibility (%)						100.000 (D-02)		100.000 (D-01)

Notes: DTRAN DPROD

Demand at LLA (c) = (a) + (b).  
Demand at Trans (e) = (c) + (d).  
Demand at Prod (g) = (e) + (f).

Demand loss factors:

- Secondary (%) @ 0.68
- Line Transf (%) @ 1.69
- Primary (%) @ 3.93
- Distribution Subs (%) @ 0.33
- Dist Bulk Delivery (%) @ 1.48
- Transmission (%) @ 4.89

Transmission losses supplied through MISO and not allocated here.

Group A & B rebuttal demands estimated based on ratio of intital filing demands to energy and rebuttal energy.

Minnesota Power  
BEC 4 Rider

System Net Load Peaks  
Adjusted System Net Load Peaks - Forecast & Normalized (MW)  
Test Year 2010 Rebuttal Customer Budget  
Revised from original work paper, AF-3, page 2.  
MP Exhibit (SJS) Rebuttal Schedule 3, page 2 of 15  
Docket No. E-015/GR-09-1151

System Peak	Forecast	Normalized			Wheeling						
	Expected System Net Load Peak (a)	Dual Fuel (b)	Large Power Interruptible (c)	Production Peak (d)	Staples (e)	Wadena (f)	Subtotal (g)	Losses (h)	Silver Bay (i)	Total (j)	Transmission Peak (k)
Jan	1383.700	25.000	192.466	1,166.234	4.027	12.830	16.857	0.249	42.000	59.106	1,170.970
Feb	1371.100	24.772	193.174	1,153.154	3.935	12.022	15.957	0.236	41.000	57.193	1,156.587
Mar	1320.600	23.860	192.394	1,104.346	3.537	11.297	14.834	0.220	41.000	56.054	1,108.915
Apr	1400.368	25.301	192.910	1,182.157	3.185	10.185	13.370	0.198	41.000	54.568	1,181.612
May	1465.222	4.637	192.345	1,268.240	3.047	9.624	12.671	0.188	41.000	53.859	1,262.973
Jun	1556.946	4.927	192.623	1,359.396	3.875	11.190	15.065	0.223	41.000	56.288	1,352.309
Jul	1579.927	5.000	192.854	1,382.073	3.844	11.051	14.895	0.220	43.000	58.115	1,375.756
Aug	1568.443	4.964	192.597	1,370.882	3.852	11.039	14.891	0.220	43.000	58.111	1,365.082
Sep	1539.915	4.873	191.697	1,343.345	3.662	10.507	14.169	0.210	41.000	55.379	1,336.097
Oct	1549.843	4.905	191.703	1,353.235	3.032	8.607	11.639	0.172	41.000	52.811	1,342.958
Nov	1583.400	25.608	191.363	1,366.429	3.673	12.018	15.691	0.232	41.000	56.923	1,359.649
Dec	1575.334	28.462	191.636	1,355.236	3.793	11.052	14.845	0.220	42.000	57.065	1,349.119
Avg	1,491.233	15.192	192.314	1,283.727	3.622	10.952	14.574	0.216	41.500	56.289	1,280.169

Notes:

Production Peak (d) = (a) - (b) - (c).

Subtotal (g) = (e) + (f).

Losses (h) = (g) x Distribution Bulk Delivery loss.

Total (j) = (g) + (h) + (i).

Transmission Peak (k) = ((d) / (1 + transmission loss)) + (j).

Demand loss factors:

Dist. Bulk Delivery (%) @	1.48
Transmission (%) @	4.89

Minnesota Power  
BEC 4 Rider

Demand Responsibility for Power Supply Costs Based on 12-Month Average CP Demands (MW)  
Test Year 2010 Rebuttal Customer Budget  
Revised from original work paper, AF-3, page 3.  
MP Exhibit (SJS) Rebuttal Schedule 3, page 3 of 15  
Docket No. E-015/GR-09-1151

Line (No)	Lowest Level of Allocation (kV)	Demand at Meter (a)	Lowest Level of Allocation		Power Supply Transmission		Power Supply Production		
			Losses to Meter Point (b)	Demand at LLA (c)	Losses on Dist Bulk Del (d)	Demand at Trans (e)	Losses on Trans Sys (f)	Demand at Prod (g)	
<b>Group A - Full Requirement Customers</b>									
1	Buhl	23	1,219	0.000	1,219	0.018	1,237	0.000	1,237
2	Gilbert	23	1,819	0.000	1,819	0.027	1,845	0.000	1,845
3	Keewatin	23	0,978	0.000	0,978	0.014	0,993	0.000	0,993
4	Mountain Iron	23	2,101	0.000	2,101	0.031	2,132	0.000	2,132
5	Nashwauk	23	2,305	0.000	2,305	0.034	2,340	0.000	2,340
6	Pierz	34	1,538	0.085	1,603	0.024	1,627	0.000	1,627
7	Randall	34	0,851	0.036	0,888	0.013	0,901	0.000	0,901
8	Biwabik	46	1,119	0.000	1,119	0.017	1,135	0.000	1,135
9	Ely	46	6,112	0.000	6,112	0.090	6,202	0.000	6,202
10	Aitkin	PST	5,872	0.000	5,872	0.000	5,872	0.000	5,872
11	Brainerd	PST	37,896	0.000	37,896	0.000	37,896	0.000	37,896
12	Grand Rapids	PST	25,729	0.000	25,729	0.000	25,729	0.000	25,729
13	Hibbing	PST	17,976	0.000	17,976	0.000	17,976	0.000	17,976
14	Proctor	PST	3,911	0.166	4,077	0.000	4,077	0.000	4,077
15	Two Harbors	PST	4,604	0.196	4,800	0.000	4,800	0.000	4,800
16	Virginia	PST	15,635	0.000	15,635	0.000	15,635	0.000	15,635
17	Dahlberg	PST	15,861	0.000	15,861	0.000	15,861	0.000	15,861
18	Group A - Total		145,526	0.463	145,989	0.269	146,258	0.000	146,258
19	- Demand Responsibility (%)						11.425		11.393
<b>Group B - Private Utilities</b>									
20	Superior Water, Light & Power Company	PST	84,588	0.000	84,588	0.000	84,588	0.000	84,588
21	Group B - Total		84,588	0.000	84,588	0.000	84,588	0.000	84,588
22	- Demand Responsibility (%)						6.608		6.589
<b>Group C - Transmission and Distribution Wheeling Service</b>									
23	Staples	34	3,622	0.000	3,622	0.054	3,675		
24	Wadena	34	10,952	0.000	10,952	0.162	11,114		
25	Group C - Total		14,574	0.000	14,574	0.216	14,789		
26	- Demand Responsibility (%)						1.155		
<b>Group D - Wheeling Service</b>									
27	Silver Bay Power Corp.	PST	41,500	0.000	41,500	0.000	41,500		
28	Group D - Total		41,500	0.000	41,500	0.000	41,500		
29	- Demand Responsibility (%)						3.242		
<b>Group E - Distribution Wheeling Service</b>									
30	Great River Energy	23, 34, 46	0	0	0	0	0		
31	Group E - Total		0	0	0	0	0		
32	- Demand Responsibility (%)						0.000		
<b>Other</b>									
33	Other - Total						993.033		1,052.881
34	- Demand Responsibility (%)						77.570		82.017
<b>Total System</b>									
35	System - Total						1,280.169		1,283.727
36	- Demand Responsibility (%)						100.000 (D-02)		100.000 (D-01)

Notes:

Demand at LLA (c) = (a) + (b).  
Demand at Trans (e) = (c) + (d).  
Demand at Prod (g) = (e) + (f).

Demand loss factors:

- Secondary (%) @ 0.68
- Line Transf (%) @ 1.69
- Primary (%) @ 3.93
- Distribution Subs (%) @ 0.33
- Dist Bulk Delivery (%) @ 1.48
- Transmission (%) @ 4.89

Transmission losses supplied through MISO and not allocated here.

Group A & B rebuttal demands estimated based on ratio of initial filing demands to energy and rebuttal energy.

DTRAN

DPROD

**BEC4 Environmental Retrofit Project**

	20 yr PUP 40%	Pollution Control 60%	Weighted Average
	Weighting 1/	Weighting 2/	
Year 1	0.938%	1.1905%	1.0895%
Year 2	7.430%	14.2857%	11.5434%
Year 3	6.872%	14.2857%	11.3202%
Year 4	6.357%	14.2857%	11.1142%
Year 5	5.880%	14.2857%	10.9234%
Year 6	5.439%	14.2857%	10.7470%
Year 7	5.031%	14.2857%	10.5838%
Year 8	4.654%	13.095%	9.7187%
Year 9	4.458%	0.000%	1.7832%
Year 10	4.458%	0.000%	1.7832%
Year 11	4.458%	0.000%	1.7832%
Year 12	4.458%	0.000%	1.7832%
Year 13	4.458%	0.000%	1.7832%
Year 14	4.458%	0.000%	1.7832%
Year 15	4.458%	0.000%	1.7832%
Year 16	4.458%	0.000%	1.7832%
Year 17	4.458%	0.000%	1.7832%
Year 18	4.459%	0.000%	1.7836%
Year 19	4.458%	0.000%	1.7832%
Year 20	4.459%	0.000%	1.7836%
Year 21	3.901%	0.000%	1.5604%
	<u>100.000%</u>	<u>100.000%</u>	<u>100.000%</u>

**Boswell Ash Pond Projects**

	20 yr PUP 40%	Pollution Control 60%	Weighted Average
	Weighting 3/	Weighting 4/	
Year 1	3.750%	1.1905%	2.2143%
Year 2	7.219%	14.2857%	11.4590%
Year 3	6.677%	14.2857%	11.2422%
Year 4	6.177%	14.2857%	11.0422%
Year 5	5.713%	14.2857%	10.8566%
Year 6	5.285%	14.2857%	10.6854%
Year 7	4.888%	14.2857%	10.5266%
Year 8	4.522%	13.095%	9.6659%
Year 9	4.462%	0.000%	1.7848%
Year 10	4.461%	0.000%	1.7844%
Year 11	4.462%	0.000%	1.7848%
Year 12	4.461%	0.000%	1.7844%
Year 13	4.462%	0.000%	1.7848%
Year 14	4.461%	0.000%	1.7844%
Year 15	4.462%	0.000%	1.7848%
Year 16	4.461%	0.000%	1.7844%
Year 17	4.462%	0.000%	1.7848%
Year 18	4.461%	0.000%	1.7844%
Year 19	4.462%	0.000%	1.7848%
Year 20	4.461%	0.000%	1.7844%
Year 21	2.231%	0.000%	0.8924%
	<u>100.000%</u>	<u>100.000%</u>	<u>100.000%</u>

Weighting allocation per Internal Revenue Code Regulation 1.169-4.

1/ 40% weighting is 20 year PUP tax table, mid 4th quarter

2/ 60% weighting of pollution control portion is 84 month straight line.

Plant in-service in December, so one month depreciation taken in first year and eleven months taken in final year.

Weighting allocation per Internal Revenue Code Regulation 1.169-4.

3/ 40% weighting is 20 year PUP tax table, half-year

4/ 60% weighting of pollution control portion is 84 month straight

line. Plant in-service in December, so one month depreciation taken in first year and eleven months taken in final year.

**Boswell Storm Water Project**

	20 yr PUP 40%	Pollution Control 60%	Weighted Average
	Weighting 5/	Weighting 6/	
Year 1	3.750%	4.7619%	4.3571%
Year 2	7.219%	14.2857%	11.4590%
Year 3	6.677%	14.2857%	11.2422%
Year 4	6.177%	14.2857%	11.0422%
Year 5	5.713%	14.2857%	10.8566%
Year 6	5.285%	14.2857%	10.6854%
Year 7	4.888%	14.2857%	10.5266%
Year 8	4.522%	9.524%	7.5231%
Year 9	4.462%	0.000%	1.7848%
Year 10	4.461%	0.000%	1.7844%
Year 11	4.462%	0.000%	1.7848%
Year 12	4.461%	0.000%	1.7844%
Year 13	4.462%	0.000%	1.7848%
Year 14	4.461%	0.000%	1.7844%
Year 15	4.462%	0.000%	1.7848%
Year 16	4.461%	0.000%	1.7844%
Year 17	4.462%	0.000%	1.7848%
Year 18	4.461%	0.000%	1.7844%
Year 19	4.462%	0.000%	1.7848%
Year 20	4.461%	0.000%	1.7844%
Year 21	2.231%	0.000%	0.8924%
	<u>100.000%</u>	<u>100.000%</u>	<u>100.000%</u>

Weighting allocation per Internal Revenue Code Regulation 1.169-4.

5/ 40% weighting is 20 year PUP tax table, half-year

6/ 60% weighting of pollution control portion is 84 month straight line.

Plant in-service in September, so four month depreciation taken in first year and eight months taken in final year.

STATEMENT REGARDING JUSTIFICATION FOR EXCISING  
TRADE SECRET INFORMATION

Pursuant to the Commission's revised Procedures for Handling Trade Secret and Privileged Data in furtherance of the intent of Minn. Stat. § 13.37 and Minn. Rule 7829.0500, Minnesota Power has designated footnote 4 on Exhibit B-2, pages 9 and 10, as Trade Secret. Minnesota Power has removed certain information from the footnote to prevent disclosure of cost data related to the power sale agreement with Basin Power Electric Cooperative.

The disclosure of this information would be materially harmful to Minnesota Power because it provides confidential business information to competitors and potential power sale counterparties to the detriment of customers. This is highly confidential information; Minnesota Power's competitors, as well as its potential suppliers, would gain a commercial advantage over Minnesota Power if this information were publicly available. Minnesota Power follows strict internal procedures to maintain the secrecy of this information in order to capitalize on the economic value of the information for Minnesota Power's customers. Public availability of this information could economically harm Minnesota Power and its customers in terms of energy supply provision or acquisition. Minnesota Power and its customers would suffer in providing resources to its retail load.

Minnesota Power respectfully requests the opportunity to provide additional justification in the event of a challenge to the trade secret designation provided herein.



STATE OF MINNESOTA     )  
  ) ss  
COUNTY OF ST. LOUIS     )

AFFIDAVIT OF SERVICE VIA  
ELECTRONIC FILING

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Susan Romans of the City of Duluth, County of St. Louis, State of Minnesota, says that on the 16<sup>th</sup> day of March, 2015 she served Minnesota Power's Reply Comments in Docket. No. E015/M-14-990 to the Minnesota Public Utilities Commission via electronic filing. The persons on the attached General Service List were served as requested.



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