Debbra A. Davey Supervisor, Accounting

February 1, 2017

VIA ELECTRONIC FILING

Mr. Daniel P. Wolf, Executive Secretary
MN Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

RE: In the Matter of Minnesota Power's 2017 Remaining Life Depreciation Petition
Docket No. E015/D-17-____

Dear Mr. Wolf:

Minnesota Power hereby electronically submits its 2017 Remaining Life Depreciation Petition.

Please contact me at 218-355-3714 if you have any questions regarding this filing.

Sincerely,

/s/ Debbra A. Davey

Debbra A. Davey

jmn
Attachments
c: Service List

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of Minnesota Power's 2017 Remaining Life Depreciation Petition	Docket No. E015/D-17-___ 2017 REMAINING LIFE DEPRECIATION PETITION

SUMMARY

Pursuant to Minn. Stat. §§ 216B.08 and 216B.11, and Minn. Rules 7825.0600 and 7825.0700, Minnesota Power hereby petitions the Minnesota Public Utilities Commission (Commission) for approval of its Petition. This Petition establishes the 2017 remaining lives and salvage rates for all of Minnesota Power's production plant assets, along with certain general plant accounts. The remaining lives and salvage rates will be used to determine depreciation expense for these assets effective January 1, 2017.

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of Minnesota Power's 2017 Remaining Life Depreciation Petition	Docket No. E015/D-17-___ 2017 REMAINING LIFE DEPRECIATION PETITION

I. INTRODUCTION

Minnesota Power hereby petitions the Minnesota Public Utilities Commission (Commission) for approval of its 2017 Remaining Life Depreciation Petition (Petition). Minnesota Power is requesting that the remaining lives of all facilities be adjusted for one year's passage of time except for Boswell Energy Center (BEC). Minnesota Power requests that the remaining life of all portions of the BEC be consolidated into one remaining life and be extended until 2050.

Minnesota Power believes BEC should be treated as one unit for depreciation and should have one period for cost recovery because the units share critical infrastructure making them difficult to be separated and because the entire facility has been well maintained to extend operations to 2050. Furthermore, treating BEC as one unit for depreciation purposes will create certainty with regard to recovery of costs the company has invested in BEC on behalf of customers, while reducing customers' annual costs.

The primary driver behind the extension to 2050 is the BEC4 retrofit that, when combined with the BEC3 retrofit completed in 2009, justifies an extended life for the length of time the equipment may operate. To determine this time frame, Minnesota Power obtained an opinion from Burns & McDonnell that is included in Appendix C. Burns & McDonnell analyzed the status of each individual Boswell unit and concluded: "Industry experience has shown that with proper maintenance and investments into replacements and upgrades (environmental, performance, and otherwise), that similar coal fired facilities have achieved physical lives well past their originally planned lives. From our knowledge of the BEC facilities, we don't see any reason that the BEC facility is an outlier. Therefore, based upon industry experience, we see no technical reasons that

Boswell Energy Center could not physically be operated until 2050, with appropriate maintenance and investments into replacements and upgrades."[1] Minnesota Power seeks to properly account for BEC's expected accounting remaining life and to be in accordance with Minn. Stat. § 216B.11 to "fix proper and adequate rates and methods of depreciation" for BEC.

Minnesota Power is also asking the Commission to determine that it may consider the operational life for BEC as separate from the useful remaining life for cost recovery purposes. While Minnesota Power believes the proposed useful life of 2050 is the right cost recovery timeframe, the company also understands the thoughtfulness needed in evaluating such an extension given the uncertainty of potential future regulatory and environmental regulations. Overall, the company believes that BEC's remaining life for cost recovery purposes should be established so there is certainty for customers and for the company regarding costs as we enter a phase of retiring coal generation.

Minnesota Power's request for a remaining life for depreciation purposes that is different from the expected remaining life for economic purposes is not contrary to Generally Accepted Accounting Principles (GAAP). In Minnesota, utilities are required to follow the Federal Power Commission ("FPC") uniform system of accounts and all FPC orders, pronouncements, rules and regulations.[2] This body of pronouncements is generally referred to in the industry as FERC accounting. The FPC defines depreciation expense for FERC accounting purposes. It states that utilities must use a method of depreciation that allocates, in a systematic and rational manner, the service value of depreciable property over the service life of the property. It also states that the estimated useful service lives of depreciable property must be supported by engineering, economic, or other depreciation studies. Further, it states that utilities must use percentage rates of depreciation that are based on a method of depreciation that allocates in a systematic and rational manner the service value of depreciable property to the service life of the property. FERC accounting, not unlike GAAP for nonutility entities, depreciates the remaining balance of the asset over the estimated service life of the asset. But FERC

[1] *See* Appendix C, page 3.
[2] *See* Minn. R. 7825.0300, Subpart 2.

accounting does not consider the additional authority given to this Commission in establishing GAAP for depreciation expenses in Minnesota. In Minnesota, the Commission has additional methods, considerations, and authority to directly determine the annual depreciation expense in the annual Depreciation Certification for utility assets. The Commission, using standard FERC accounting for depreciation as a framework, can deviate from standard FERC accounting in determining the remaining service life or recovery period of an asset and thereby establishes GAAP for depreciation expense in Minnesota. The Commission can make this determination to deviate from standard FERC methods upon proper review of the appropriateness of a utility's proposal in the annual Depreciation Certification. In the annual Depreciation Certification rules,[3] utilities are required to file annually and the Commission considers and approves the specific rates by which utilities depreciate their assets. These depreciation amounts are used for more than just ratemaking purposes. The resulting depreciation expense is a component of the utility's financial statements, used in its other regulatory and external reports such as its filings with FERC and the Securities and Exchange Commission. The rules state that depreciation accounting is "a process of allocation not valuation."[4] Allocation is an important principle when considering the public interest in establishing the recoverable life of an asset for ratemaking purposes. Further, under the Methods for Depreciation Certification Studies in the Minnesota Rules,[5] "No specific methods are prescribed by the Commission in estimating service lives and salvage values."[6] Minnesota Power's proposal is within the methods and authority granted to the Commission to modify traditional FERC accounting for depreciation expense and is thereby allowable GAAP for utilities in Minnesota.

Minnesota Power filed a general rate case on November 2, 2016 (Docket No. E-015/GR-16-664) with a 2017 test year which reflects the BEC being consolidated into one remaining life and being extended until 2050. See Appendix C for more information and support for the request to extend the remaining life of all of BEC to 2050.

[3] *See* Minn. R. 7825.0600, Subp. 1.
[4] *See* Minn. R. 7825.0500, Subp. 7.
[5] Minn. R. 7825.0800.
[6] Minn. R. 7825.0800.

Minnesota Power proposes to adjust all estimated salvage rates by using one hundred percent decommissioning probabilities in the calculation of these rates. In the Matter of a Commission Inquiry into Decommissioning Policies Related to Depreciation (Docket No. E,G-999/CI-13-626), Minnesota Power was ordered to stopped using decommissioning probabilities starting in its next general rate case, or as of January 1, 2020, if it has not filed a general rate case by that date. Minnesota Power filed its 2016 rate case November 2, 2016 (Docket No. E-015/GR-16-664).

The proposed changes result in an estimated decrease to 2017 annual depreciation expense of $25,246,000.

II. BASIS FOR PREPARING THIS PETITION

On September 1, 2015, Minnesota Power filed its 2015 Integrated Resource Plan (2015 IRP) for the years 2015 to 2029 in Docket No. E015/RP-15-690. The Commission approved Minnesota Power's 2015 IRP on June 9, 2016. For purposes of this Petition, Minnesota Power is utilizing the information and forecast periods provided in the approved 2015 IRP. Minnesota Power will file its next IRP by February 1, 2018.

III. PROCEDURAL REQUIREMENTS

Pursuant to Minn. Rules 7825.3200, 7825.3500 and 7829.1300, subp. 3, Minnesota Power provides the following required information.

A. Name, Address and Telephone Number of Utility (Minn. Rules 7825.3500(A) and 7829.1300, subp. 3(A))

Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 722-2641

B. Name, Address and Telephone Number of Utility Attorney (Minn. Rules 7825.3500(A) and 7829.1300, subp. 3(B))

Christopher D. Anderson
Associate General Counsel
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 723-3961
canderson@allete.com

C. Date of Filing and Date Proposed Rates Take Effect (Minn. Rules 7825.3500(B) and 7829.1300, subp. 3(C))

This Petition is being filed on February 1, 2017. Minnesota Power respectfully requests that the Commission approve the Petition, with depreciation rates to become effective as of January 1, 2017.

D. Statute Controlling Schedule for Processing the Filing (Minn. Rules 7829.1300, subp. 3(D))

This Petition is made in accordance with Minn. Stat. § 216B.11 and prior Commission orders. No statutorily imposed time frame for a Commission decision applies to this filing. Minnesota Power requests that this Petition be processed in a timely manner to allow Commission approved depreciation rates to be incorporated into its current rate case (Docket No. E-015/GR-16-664).

E. Utility Employee Responsible for Filing (Minn. Rules 7825.3500(E) and 7829.1300, subp. 3(E))

Debbra A. Davey
Supervisor, Accounting
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 355-3714
ddavey@allete.com

F. Service List

Pursuant to Minn. Rules 7829.0700, Minnesota Power requests that the following persons be placed on the Commission's official service list for this matter:

Christopher D. Anderson
Associate General Counsel
Minnesota Power
30 West Superior Street
Duluth, MN 55802
canderson@allete.com

Debbra A. Davey
Supervisor, Accounting
Minnesota Power
30 West Superior Street
Duluth, MN 55802
ddavey@allete.com

G. Service on Other Parties

Pursuant to Minn. Stat. § 216.17, subd. 3 and Minn. Rules 7829.1300, subp. 2, Minnesota Power has eFiled this Petition with the Department of Commerce, Division of Energy Resources and served a copy on the Antitrust and Utilities Division of the Office of Attorney General. A summary of the filing prepared in accordance with Minn. Rules 7829.1300, subp. 1 is being served on all parties on Minnesota Power's general service list.

H. Summary of Filing

A one-paragraph summary accompanies this Petition pursuant to Minn. Rules 7829.1300, subp. 1.

IV. REMAINING LIFE ADJUSTMENTS

Minnesota Power has reviewed its remaining lives and salvage value estimates for thermal, hydroelectric and wind production facilities. Minnesota Power has determined that the remaining lives of all facilities should be adjusted for one year's passage of time except for BEC. As discussed in Section I. INTRODUCTION, Minnesota Power requests that the remaining life of all portions of the BEC be consolidated into one remaining life and be extended until 2050. Minnesota Power filed a general rate case on November 2, 2016 (Docket No. E-015/GR-16-664), with a 2017 test year which reflects the BEC being consolidated into one remaining life and being extended until 2050. See Appendix C for more information and support for the request to extend the remaining life of all of BEC to 2050. Minnesota Power proposes to adjust all estimated salvage rates by using one

hundred percent decommissioning probabilities in the calculation of these rates. In the Matter of a Commission Inquiry into Decommissioning Policies Related to Depreciation (Docket No. E,G-999/CI-13-626), Minnesota Power was ordered to stopped using decommissioning probabilities starting in its next general rate case, or as of January 1, 2020, if it has not filed a general rate case by that date. Minnesota Power filed its 2016 rate case November 2, 2016 (Docket No. E-015/GR-16-664).

For purposes of this Petition, Minnesota Power is utilizing the information and forecast periods provided in the 2015 IRP. Appendix C of the 2015 IRP specifically addresses Minnesota Power's fossil generation resources.

The following schedule indicates proposed remaining lives and salvage rates:

	Proposed Remaining Life (Years)	Proposed Salvage Rate
Thermal Production Plants		
Hibbard Renewable Energy Center	8.0	(2.11%)
Laskin Energy Center	14.0	(24.12%)
Boswell Energy Center		
Unit 1	34.0	(16.08%)
Unit 2	34.0	(18.06%)
Unit 3	34.0	(7.92%)
Unit 4	34.0	(7.42%)
Common	34.0	(3.95%)
Taconite Harbor Energy Center	10.0	(7.23%)
Hydroelectric Production Plants		
Prairie River HE Station	47.0	0
Thomson HE Station	47.0	0
Fond du Lac HE Station	47.0	0
Winton HE Station	47.0	0
Knife Falls HE Station	47.0	0
Scanlon HE Station	47.0	0
Little Falls HE Station	47.0	0
Blanchard HE Station	47.0	0
Sylvan HE Station	47.0	0
Pillager HE Station	47.0	0
Birch Lake Reservoir	47.0	0
Boulder Lake Reservoir	47.0	0

	Proposed Remaining Life (Years)	Proposed Salvage Rate
Hydraulic Production Plants (continued)		
Fish Lake Reservoir	47.0	0
Island Lake Reservoir	47.0	0
Rice Lake Reservoir	47.0	0
Whiteface Reservoir	47.0	0
Gauging Stations and White Iron Lake Reservoir	47.0	0
Other Production Plants		
Taconite Ridge I Wind	26.0	(0.31%)
Bison 1 Wind – Phase 1	28.0	(0.95%)
Bison 1 Wind – Phase 2	29.0	(0.93%)
Bison 2 Wind	30.0	(0.35%)
Bison 3 Wind	30.0	(0.42%)
Bison 4 Wind	32.0	0.03%
Community Solar Garden	24.0	0

As mentioned above, Minnesota Power used one hundred percent decommissioning probabilities to calculate the above salvage rates and to calculate the salvage rates used in its 2016 rate case with a 2017 test year filed November 2, 2016 (Docket No. E-015/GR-16-664).

Minnesota Power will continue to address the reconciliation between remaining lives and the latest approved Integrated Resource Plan (currently the 2015 IRP) in a reasonable and timely manner. Minnesota Power received approval of its 2015 IRP on June 9, 2015. As reconciliation issues are addressed, Minnesota Power will review its remaining lives, making any adjustment based on the factors known at that time.

Within the 2015 IRP, Minnesota Power recognized that a key factor in the latter portion of the long-term plan period will be the aging of its generation fleet and uncertainty of carbon and other environmental compliance policies. The following is a discussion of Minnesota Power's production facilities and the proposed remaining lives of these facilities.

Solar Production Facility

In September 2015, Minnesota Power filed a petition for approval of its Community Solar Garden Pilot Program (Docket No. E015/M-15-825). Minnesota Power received Commission approval with modifications on July 27, 2016. Minnesota Power is developing this 40 kW solar generation system as part of the company's Plan for meeting Minnesota's Solar Energy Standard (SES) by the year 2020. As reported in the 2015 SES Progress Report (Docket No. E015/M-16-342), Minnesota Power needs approximately 32 MW of solar energy to meet the SES by 2020, with 4 MW of the total needed to meet the Small Scale Carve Out. This Community Solar Garden Pilot Program project consisted of building a 40 kW solar generation system on company-owned property in Duluth, Minnesota and was placed in-service at the end of 2016. All production assets of the solar production facility have estimated remaining lives through 2041.

Hydroelectric Production Facilities

All of Minnesota Power's hydroelectric facilities hold Federal Energy Regulatory Commission (FERC) licenses and the facilities are being maintained in accordance with the terms of these licenses. The reservoirs, dams and gauging stations are expected to have a useful economic and operating life matching that of the hydro stations they support. All of Minnesota Power's hydroelectric production plant facilities have estimated remaining lives through 2063 which agree with the remaining lives in the 2015 IRP.

Wind Production Facilities

Taconite Ridge I Wind Energy Center, a 25 MW wind production facility with ten turbines, was placed in-service in June 2008 and has an estimating remaining life of 2043. Bison Phase 1, a 36.8 MW wind production facility with sixteen wind turbines, was placed in-service in November 2010 and has an estimated remaining life of 2045. Bison Phase 2, a 45.0 MW wind production facility with fifteen wind turbines, was placed in-service in December 2011 and has an estimated remaining life of 2046. Bison 2 and 3, which are each a 105 MW wind production facility with thirty-five wind turbines, were placed in-service on December 2012 and have estimated remaining lives through 2047. Bison 4, a 204.8 MW wind production facility with sixty-four wind turbines, was placed

in-service in December 2014 and has an estimated remaining life of 2049. These wind facilities are an integral part of the company's renewable plan for obtaining 25 percent of its electricity for its retail customers from renewable energy sources by the year 2025. Minn. Stat. § 216B.1691. The estimated remaining lives noted above of all production assets at these wind facilities agree with the remaining lives in the 2015 IRP.

Regulated Thermal Production Facilities

Minnesota Power's thermal units have remaining lives that agree with the remaining lives in the 2015 IRP, with the exception of BEC. As discussed in Section I. INTRODUCTION, Minnesota Power requests that the remaining life of all portions of the BEC be consolidated into one remaining life and be extended until 2050. Minnesota Power filed a general rate case on November 2, 2016 (Docket No. E-015/GR-16-664), with a 2017 test year which reflects the BEC being consolidated into one remaining life and being extended until 2050. See Appendix C for more information and support for the request to extend the remaining life of all of BEC to 2050.

The table below lists the proposed remaining lives of the facilities and the 2015 IRP remaining lives:

Thermal Production Plant	Proposed Remaining Life	2015 IRP Remaining Life
Hibbard Renewable Energy Center	2024	2024
Laskin Energy Center	2030	2030
Taconite Harbor Energy Center	2026	2026
Boswell Energy Center		
Unit 1 (see below)	2050	No later than 2022
Unit 2 (see below)	2050	No later than 2022
Unit 3	2050	2034
Unit 4	2050	2035
Common	2050	2030

Hibbard Renewable Energy Center (HREC)

HREC units 3 and 4, located at the M. L. Hibbard Facility, operate as peaking resources and have been providing a portion of Minnesota Power's spinning reserves since 2004. The proposed salvage rate for Hibbard decreased due to lower

decommissioning cost estimates primarily as a result of using a land fill that is closer and results in less disposal costs. The current remaining life of these units is estimated to extend to 2024 which agrees with the remaining life in the 2015 IRP.

Laskin Energy Center (Laskin)

Laskin units 1 and 2 are sister units – similar in design and intended operation. Laskin is treated as one unit and has one remaining life for purposes of computing annual depreciation accruals. Ongoing reinvestment has maintained the units in good overall condition. Minnesota Power completed the conversion of units 1 and 2 of its Laskin Energy Center to gas peaking generation facilities in June 2015. On June 20, 2016 the MPCA approved Minnesota Power's modified Laskin ash cell closure plan. The current remaining life of Laskin is estimated to extend to 2030 which agrees with the remaining life in the 2015 IRP.

Taconite Harbor Energy Center (THEC)

At THEC, units 1 and 2 have been fitted with Mobotec multi-emission control technology designed to reduce NO_X, SO_2 and mercury emissions and electrostatic precipitator upgrades to reduce particulate emissions. Minnesota Power treats THEC as one unit with one remaining life for purposes of computing annual depreciation accruals and proposes continuing to treat THEC in this manner. Minnesota Power identified that the investment in retrofit technology for THEC unit 3 is not in the best interest of its customers. To protect affordability for customers in the near term and further reduce emissions in the region, Minnesota Power ceased coal operation for THEC unit 3 in May 2015. Minnesota Power announced on July 9, 2015 the company's plan to cease coal operations at THEC units 1 and 2 in 2020 and economically idle THEC units 1 and 2 in the fall of 2016. Minnesota Power requests that the remaining net plant balances of all Taconite Harbor units be recovered over the current remaining life of the plant, which is 2026. The current remaining life of 2026 agrees with the remaining life in the 2015 IRP.

Boswell Energy Center (BEC)

For BEC, Minnesota Power is requesting that the life of all the BEC units – units 1 and 2 (BEC1&2), unit 3 (BEC3), unit 4 (BEC4) and BEC Common Facilities (BEC Common) – be consolidated into one remaining life and be extended until 2050. The extension request is based primarily on the significant multi-emission retrofit work done at BEC 3 (Docket No. E015/M-06-1501) and BEC 4 (Docket No. E015/M-12-920), and to reduce the annual costs of BEC for customers. Minnesota Power believes it is appropriate to combine all of BEC into one remaining life because the units share critical infrastructure making them difficult to be separated and because the entire facility has been well maintained to extend operations to 2050. Furthermore, treating BEC as one unit for depreciation purposes will create certainty with regard to recovery of costs the company has invested in BEC on behalf of customers, while reducing customers' annual costs. See Appendix C for more information and support for the request to extend the remaining life of all of BEC to 2050. The proposed remaining life for BEC to 2050 is beyond the remaining life of all the BEC facilities in the 2015 IRP.

BEC1&2 are sister boilers – similar in design and intended operation. Both units provide base load energy and ancillary services. The units operate with emission control equipment including low NOx burners and bag houses to control particulates and mercury emissions. Minnesota Power has installed additional NOx emission reduction control systems including Rotating Opposed Fired Air and selective non-catalytic reduction at BEC1&2. In September 2014 Minnesota Power reached a settlement with the Environmental Protection Agency (EPA) regarding Notice of Violations the company received in 2008 and 2011 and entered into a Consent Decree which was approved by the U.S. District Court for the District of Minnesota. Provisions of the Consent Decree require that, by no later than December 31, 2018, BEC1&2 must be retired, refueled, repowered, or emissions rerouted through existing emission control technology at BEC. The company was required to notify the EPA no later than December 31, 2016, whether it will retire, refuel, repower, or reroute BEC1&2. Minnesota Power’s 2015 IRP filed with the MPUC on September 1, 2015 outlined Minnesota Power’s preferred option to reroute emissions from BEC1&2 through existing emission control technology at BEC3. In the Commission Order for the 2015 IRP, the Commission stated that Minnesota

Power has not demonstrated at this time that its proposed investment in SO_2 reduction at BEC1&2 is reasonable. In addition, the Commission ordered Minnesota Power to retire BEC1&2 when sufficient energy and capacity are available, but no later than 2022. As a result of the Provision of the Consent Decree and the Commission not supporting Minnesota Power's preferred option to reroute emissions from BEC1&2 filed in the IRP, the current plan is to retire BEC1&2 in 2018.

BEC3 provides base load energy operating at a high load factor. BEC3 operates with the most mature, commercially available technology to significantly reduce emissions of mercury and well-established control technologies that have the ability to meet Best Available Control Technology performance standards to significantly reduce NO_X, SO_2 and PM.

BEC4 provides base load energy operating at a high load factor and is jointly-owned by Minnesota Power (80 percent) and WPPI Energy (20 percent). The unit operates with NO_X emission reduction control systems including low NO_X burners and selective non-catalytic reduction, along with a high efficiency turbine rotor. Minnesota Power completed the environmental retrofit project on BEC4 in December 2015 as a multi-pollutant solution for reducing mercury, particulate matter, sulfur dioxide, and other hazardous air pollutants being addressed by EPA regulations while also reducing plant wastewater contemplated for regulation under EPA's Effluent Limit Guidelines. Minnesota Power installed a semi-dry flue gas desulfurization system, fabric filter and powder activated carbon injection system to achieve compliance with the Minnesota Mercury Emission Reduction Act (MERA), the EPA Mercury and Air Toxics Rule, and other enacted or pending federal and state environmental rulemakings regulating air and water emissions and solid byproducts from coal-fired power plants. Through multi-pollutant control technology, Minnesota Power will cost-effectively achieve the mercury emission reduction required by MERA while positioning the facility for compliance with other regulatory programs over the long term.

As discussed above, Minnesota Power is requesting that the life of all the BEC units be extended until 2050 and the proposed remaining life for BEC to 2050 is beyond the remaining life of all the BEC facilities in the 2015 IRP.

General Plant Accounts 3900 and 3928

Minnesota Power has also reviewed its remaining lives and salvage value estimates for certain general plant accounts. These accounts include Account 3900-Structures and Improvements and Account 3928-Transportation Equipment/Fixed-Wing Aircraft.

Minnesota Power recommends no changes except for the passage of one year's time for Account 3900. In Account 3928 the company has one aircraft and for this account the company recommends changing the remaining life for the passage of one year's time. The estimated salvage value for the plane is approximately $500,000, so Minnesota Power proposes reducing the salvage value to 16.4% for Account 3928. The company is planning to retire the plane in the next year or so.

Acct. No.	Class of Utility Plant	Remaining Life (Years)	Net Salvage
3900	Structures & Improvements	20.0	0%
3928	Transportation Equipment Fixed-Wing Aircraft	1.0	16.4%

Appendices

Enclosed in Appendix A, please find depreciation schedules as required by Commission filing requirements, Minn. Rules 7825.0700, subp. 1: Plant in Service, Analysis of Depreciation Reserve, and Summary of Annual Depreciation Accruals. Enclosed in Appendix B is a schedule of supplemental depreciation expense recorded in prior years. Enclosed in Appendix C from Docket No. E015/GR-16-664, is the Direct Testimony of company witness Herb Minke at pages 14-24.

V. FUTURE ADDITIONS OR RETIREMENTS AFFECTING CURRENT CERTIFICATION

Subpart B of this section requires a list of any major future additions or retirements to the plant accounts that the utility believes may have a material effect on the current certification results. Minnesota Power does not have any major future additions or retirements to plant accounts that would materially impact the 2017 depreciation accruals.

Minnesota Power announced on July 9, 2015 the company's plan to cease coal operations at THEC 1 and 2 in 2020 and economically idle THEC 1 and 2 in the fall of 2016. Also, in the Commission Order for the 2015 IRP, Minnesota Power was ordered to retire BEC units 1 and 2 when sufficient energy and capacity are available, but no later than 2022. However, as discussed above, as a result of the Provision of the Consent Decree and the Commission not supporting Minnesota Power's preferred option to reroute emissions from BEC1&2 filed in the IRP, the current plan is to retire BEC1&2 in 2018. As discussed in Section I. INTRODUCTION, Minnesota Power requests that the remaining life of all portions of the BEC be consolidated into one remaining life and be extended until 2050. Minnesota Power filed a general rate case on November 2, 2016 (Docket No. E-015/GR-16-664), with a 2017 test year which reflects the BEC being consolidated into one remaining life and being extended until 2050. See Appendix C for more information and support for the request to extend the remaining life of all of BEC to 2050.

VI. CONCLUSION

Minnesota Power respectfully requests that the Commission approve the Petition. Minnesota Power also requests that this Petition be processed in a timely manner to allow Commission approved depreciation rates to be incorporated into its current rate case (Docket No. E-015/GR-16-664).

Minnesota Power is requesting that the remaining lives of all facilities be adjusted for one year's passage of time except for BEC. As discussed in Section I. INTRODUCTION, Minnesota Power requests that the remaining life of all portions of the BEC be consolidated into one remaining life and be extended until 2050. Minnesota Power filed a general rate case on November 2, 2016 (Docket No. E-015/GR-16-664), with a 2017 test year which reflects the BEC being consolidated into one remaining life and being extended until 2050. See Appendix C for more information and support for the request to extend the remaining life of all of BEC to 2050.

Minnesota Power proposes to adjust all estimate salvage rates by using one hundred percent decommissioning probabilities in the calculation of these rates. In the Matter of a Commission Inquiry into Decommissioning Policies Related to Depreciation

(Docket No. E,G-999/CI-13-626), Minnesota Power was ordered to stop using decommissioning probabilities starting in its next general rate case, or as of January 1, 2020, if it has not filed a general rate case by that date. Minnesota Power filed its 2016 rate case November 2, 2016 (Docket No. E-015/GR-16-664).

The proposed changes result in an estimated decrease to 2017 annual depreciation expense of $25,246,000.

Date: February 1, 2017

Respectfully submitted,

/s/ Debbra A. Davey

Debbra A. Davey
Supervisor, Accounting
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Duluth, MN 55802
(218) 355-3714
ddavey@allete.com

STATE OF MINNESOTA	)	AFFIDAVIT OF SERVICE VIA
	) ss	ELECTRONIC FILING
COUNTY OF ST. LOUIS	)	

Jodi Nash of the City of Duluth, County of St. Louis, State of Minnesota, says that on the 1st day of February, 2017, she served Minnesota Power's 2017 Remaining Life Petition on the Minnesota Public Utilities Commission and the Energy Resources Division of the Minnesota Department of Commerce via electronic filing. The persons on the attached service list were served as requested.

Jodi Nash

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	GEN_SL_Minnesota Power_Minnesota Power General Service List
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	Yes	GEN_SL_Minnesota Power_Minnesota Power General Service List
Emma	Fazio	emma.fazio@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	Yes	GEN_SL_Minnesota Power_Minnesota Power General Service List
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Lori	Hoyum	lhoyum@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List
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James D.	Larson	james.larson@avantenergy.com	Avant Energy Services	220 S 6th St Ste 1300 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	GEN_SL_Minnesota Power_Minnesota Power General Service List
Susan	Ludwig	sludwig@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List
Herbert	Minke	hminke@allete.com	Minnesota Power	30 W Superior St Duluth, MN 55802	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	Yes	GEN_SL_Minnesota Power_Minnesota Power General Service List
Andrew	Moratzka	apmoratzka@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List
Jennifer	Peterson	jjpeterson@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List
Susan	Romans	sromans@allete.com	Minnesota Power	30 West Superior Street Legal Dept Duulth, MN 55802	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List
Thomas	Scharff	thomas.scharff@newpagecorp.com	New Page Corporation	P.O. Box 8050 610 High Street Wisconsin Rapids, WI 544958050	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List
Ron	Spangler, Jr.	rlspangler@otpco.com	Otter Tail Power Company	215 So. Cascade St. PO Box 496 Fergus Falls, MN 565380496	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List
Eric	Swanson	eswanson@winthrop.com	Winthrop Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List
Karen	Turnboom	karen.turnboom@newpagecorp.com	NewPage Corporation	100 Central Avenue Duluth, MN 55807	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	No	GEN_SL_Minnesota Power_Minnesota Power General Service List

MINNESOTA POWER
PRODUCTION PLANT
COMPARISON OF PRESENT AND PROPOSED REMAINING LIVES
2017

	Depreciable Plant Balance 12/31/16	Depreciation Reserve 12/31/16	Current Rates Remaining Life (01/01/17)	Current Rates Salvage Value (01/01/17)	Current Rates 2017 Annual Accrual	Proposed Rates Remaining Life (01/01/17)	Proposed Rates Salvage Value (01/01/17)	Proposed Rates 2017 Annual Accrual	Effect of Rate Changes to 2017 Accrual
Steam Generation									
Hibbard SE Station:	93,461,883	53,764,885	8	-1.10%	5,090,635	8	-2.11%	5,208,630	117,995
Laskin Energy Center	86,433,501	57,409,356	14	-24.00%	3,554,870	14	-24.12%	3,562,279	7,409
Boswell Energy Center:	1,331,403,558	492,059,792			53,271,033			27,698,492	(25,572,541)
Unit No. 1	45,101,081	28,621,210	8	-7.90%	2,505,357	34	-16.08%	698,004	(1,807,353)
Unit No. 2	40,144,937	27,024,581	8	-9.99%	2,141,354	34	-18.06%	599,133	(1,542,221)
Unit No. 3	450,258,763	160,642,947	18	-5.85%	17,553,109	34	-7.92%	9,566,950	(7,986,159)
Unit No. 4	599,540,549	170,825,337	19	-3.69%	23,728,329	34	-7.42%	13,917,680	(9,810,649)
Common	196,358,228	104,945,717	13	-2.06%	7,342,884	34	-3.95%	2,916,725	(4,426,159)
Taconite Harbor Energy Center	141,989,417	58,135,869			9,174,365			9,375,727	201,362
Structure/Unit	136,980,992	53,127,444	10	-5.76%	9,174,365	10	-7.23%	9,375,727	201,362
Ash Ponds*	5,008,425	5,008,425	-	-5.76%	-	-	-7.23%	-	-
Total Steam Generation	1,653,288,359	661,369,902			71,090,903			45,845,128	(25,245,775)
Wind Generation									
Bison 1A	76,533,973	13,973,718	28	-0.95%	2,260,262	28	-0.95%	2,260,262	-
Bison 1B	73,258,168	8,603,654	29	-0.93%	2,252,959	29	-0.93%	2,252,959	-
Bison 2	150,269,187	18,712,866	30	-0.35%	4,402,742	30	-0.35%	4,402,742	-
Bison 3	149,415,160	17,326,319	30	-0.42%	4,423,879	30	-0.42%	4,423,879	-
Bison 4	325,257,649	19,188,481	32	0.03%	9,561,612	32	0.03%	9,561,612	-
Subtotal Bison	774,734,137	77,805,038			22,901,454			22,901,454	-
Taconite Ridge I Energy Center	47,824,453	5,289,179	26	-0.32%	1,641,858	26	-0.31%	1,641,674	(184)
Total Wind Generation	822,558,590	83,094,217			24,543,312			24,543,128	(184)
Hydroelectric Production Plants									
Birch Lake Reservoir	3,588,177	3,591	47	0.00%	76,268	47	0.00%	76,268	-
Blanchard HE Station	11,920,919	5,329,552	47	0.00%	140,242	47	0.00%	140,242	-
Boulder Lake Reservoir	519,530	323,837	47	0.00%	4,164	47	0.00%	4,164	-
Fish Lake Reservoir	945,803	245,397	47	0.00%	14,902	47	0.00%	14,902	-
Fond du Lac HE Station	18,094,873	3,732,563	47	0.00%	305,581	47	0.00%	305,581	-
Gauging Stations	125,451	63,673	47	0.00%	1,314	47	0.00%	1,314	-
Island Lake Reservoir	12,522,498	1,090,295	47	0.00%	243,238	47	0.00%	243,238	-
Knife Falls HE Station	3,556,172	1,832,171	47	0.00%	36,681	47	0.00%	36,681	-
Little Falls HE Station	8,947,421	4,249,205	47	0.00%	99,962	47	0.00%	99,962	-
Pillager HE Station	2,320,626	1,296,654	47	0.00%	21,787	47	0.00%	21,787	-
Prairie River HE Station	4,664,659	957,656	47	0.00%	78,872	47	0.00%	78,872	-
Rice Lake Reservoir	219,176	56,653	47	0.00%	3,458	47	0.00%	3,458	-
Scanlon HE Station	3,570,519	1,453,623	47	0.00%	45,040	47	0.00%	45,040	-
Sylvan HE Station	2,252,289	1,525,518	47	0.00%	15,463	47	0.00%	15,463	-
Thomson HE Station	100,189,337	4,298,901	47	0.00%	2,040,222	47	0.00%	2,040,222	-
White Iron Lake Reservoir	28,934	14,327	47	0.00%	311	47	0.00%	311	-
Whiteface Reservoir	1,295,371	605,391	47	0.00%	14,680	47	0.00%	14,680	-
Winton HE Station	5,161,797	2,548,327	47	0.00%	55,606	47	0.00%	55,606	-
Total Hydroelectric Production Plants	179,923,552	29,627,334			3,197,791			3,197,791	-
Total Generation	2,655,770,501	774,091,453			98,832,006			73,586,047	(25,245,959)

** The ash ponds have a 5 year life, as they are built and filled in on a 5-year cycle. New Ash Ponds with 5 year life added in 2010.*

Minnesota Power
Plant in Service - 2016
Steam Production

Facility and Plant Account		Beginning Balance	Current Additions	Current Retirements	Current Transfer/Adj	Ending Balance	Without Land
Boswell Common							
3100	Land & Land Rights, Fee	4,295,713.93	-	-	-	4,295,713.93	
3110	Structure & Improvements	21,633,808.91	1,928,379.24	(142,487.32)	-	23,419,700.83	
3111	Structure & Improvements, Pollution	16,206,047.90	4,415,941.17	-	-	20,621,989.07	
3120	Boiler Plant Equipment	56,572,988.20	1,769,738.22	(1,037,442.84)	340,028.56	57,645,312.14	
3121	Boiler Plant Equipment, Pollution	74,915,023.10	432,888.66	(226,822.65)	-	75,121,089.11	
3140	Turbogenerator Units	1,057,687.06	-	-	-	1,057,687.06	
3141	Turbogenerator Units, Pollution	221,745.34	-	-	-	221,745.34	
3150	Accessory Elec Equipment	10,811,852.94	(60,038.10)	-	-	10,751,814.84	
3151	Accessory Elec Equipment, Pollution	2,288,983.73	-	-	-	2,288,983.73	
3160	Misc Power Pit Eq	4,555,382.56	674,389.28	-	-	5,229,771.84	
3161	Misc Power Pit Eq, Pollution	133.76	-	-	-	133.76	
	Total	**192,559,367.43**	**9,161,298.47**	**(1,406,752.81)**	**340,028.56**	**200,653,941.65**	**196,358,227.72**
Boswell Unit 1							
3100	Land & Land Rights, Fee	59,858.35	-	-	-	59,858.35	
3110	Structure & Improvements	3,105,966.45	146,494.28	(131,849.93)	-	3,120,610.80	
3111	Structure & Improvements, Pollution	31,336.53	-	-	-	31,336.53	
3120	Boiler Plant Equipment	13,998,709.41	(23,001.65)	(235,601.66)	-	13,740,106.10	
3121	Boiler Plant Equipment, Pollution	12,737,831.14	43,523.67	(198,818.55)	-	12,582,536.26	
3140	Turbogenerator Units	8,731,570.95	(163,690.13)	(238,003.46)	-	8,329,877.36	
3141	Turbogenerator Units, Pollution	208,191.50	-	-	-	208,191.50	
3150	Accessory Elec Equipment	6,851,655.99	-	-	-	6,851,655.99	
3151	Accessory Elec Equipment, Pollution	236,766.85	-	-	-	236,766.85	
3160	Misc Power Pit Eq	-	-	-	-	-	
3161	Misc Power Pit Eq, Pollution	-	-	-	-	-	
	Total	**45,961,887.17**	**3,326.17**	**(804,273.60)**	**-**	**45,160,939.74**	**45,101,081.39**
Boswell Unit 2							
3100	Land & Land Rights, Fee	59,687.82	-	-	-	59,687.82	
3110	Structure & Improvements	1,810,150.01	598,243.71	(7,543.00)	-	2,400,850.72	
3111	Structure & Improvements, Pollution	1,039.83	-	-	-	1,039.83	
3120	Boiler Plant Equipment	12,817,337.71	636,294.91	-	-	13,453,632.62	
3121	Boiler Plant Equipment, Pollution	9,428,600.73	2,535,562.23	(473,176.10)	-	11,490,986.86	
3140	Turbogenerator Units	8,901,899.28	346,306.12	(471,441.82)	-	8,776,763.58	
3141	Turbogenerator Units, Pollution	53,247.44	-	-	-	53,247.44	
3150	Accessory Elec Equipment	3,298,684.42	669,731.17	-	-	3,968,415.59	
3151	Accessory Elec Equipment, Pollution	-	-	-	-	-	
3160	Misc Power Pit Eq	-	-	-	-	-	
3161	Misc Power Pit Eq, Pollution	-	-	-	-	-	
	Total	**36,370,647.24**	**4,786,138.14**	**(952,160.92)**	**-**	**40,204,624.46**	**40,144,936.64**
Boswell Unit 3							
3100	Land & Land Rights, Fee	3,104,623.53	-	-	-	3,104,623.53	
3110	Structure & Improvements	21,621,876.97	-	(84,434.55)	-	21,537,442.42	
3111	Structure & Improvements, Pollution	19,558,786.06	-	-	-	19,558,786.06	
3120	Boiler Plant Equipment	88,943,125.99	1,379,314.40	(459,785.82)	-	89,862,654.57	

Minnesota Power
Plant in Service - 2016
Steam Production

Facility and Plant Account			Beginning Balance	Current Additions	Current Retirements	Current Transfer/Adj	Ending Balance	Without Land
3121	Boiler Plant Equipment, Pollution		246,888,921.54	1,459,704.83	(8,935,038.41)	-	239,413,587.96	
3140	Turbogenerator Units		36,000,269.93	(80,919.76)	-	-	35,919,350.17	
3141	Turbogenerator Units, Pollution		5,365,311.28	-	(141,196.59)	-	5,224,114.69	
3150	Accessory Elec Equipment		35,329,746.93	267,428.46	(215,681.96)	-	35,381,493.43	
3151	Accessory Elec Equipment, Pollution		2,799,394.06	-	-	-	2,799,394.06	
3160	Misc Power Pit Eq		575,765.44	(13,825.35)	-	-	561,940.09	
3161	Misc Power Pit Eq, Pollution		-	-	-	-	-	
		Total	**460,187,821.73**	**3,011,702.58**	**(9,836,137.33)**	**-**	**453,363,386.98**	**450,258,763.45**
Boswell Unit 4								
3100	Land & Land Rights, Fee		355,534.09	-	-	-	355,534.09	
3110	Structure & Improvements		29,369,518.25	-	-	-	29,369,518.25	
3111	Structure & Improvements, Pollution		14,180,023.92	-	-	-	14,180,023.92	
3120	Boiler Plant Equipment		124,304,996.40	282,671.59	(2,759,982.08)	-	121,827,685.91	
3121	Boiler Plant Equipment, Pollution		295,691,914.64	4,017,635.59	(813,393.33)	-	298,896,156.90	
3140	Turbogenerator Units		58,270,653.68	(114,059.59)	(1,074,155.82)	-	57,082,438.27	
3141	Turbogenerator Units, Pollution		13,390,686.47	214,823.92	(205,101.21)	-	13,400,409.18	
3150	Accessory Elec Equipment		47,677,465.27	478,630.65	(2,039,218.36)	-	46,116,877.56	
3151	Accessory Elec Equipment, Pollution		18,727,483.09	-	(1,483,238.68)	-	17,244,244.41	
3160	Misc Power Pit Eq		997,163.23	(3,074.11)	-	-	994,089.12	
3161	Misc Power Pit Eq, Pollution		429,105.31	-	-	-	429,105.31	
		Total	**603,394,544.35**	**4,876,628.05**	**(8,375,089.48)**	**-**	**599,896,082.92**	**599,540,548.83**
Cloquet Energy Center								
3110	Structure & Improvements		1,112,885.18	-	(1,112,885.18)	-	-	
3120	Boiler Plant Equipment		1,401,448.87	-	(1,401,448.87)	-	-	
3140	Turbogenerator Units		5,195,756.43	(9,706.14)	(5,186,050.29)	-	-	
3141	Turbogenerator Units, Pollution		72,348.34	-	(72,348.34)	-	-	
3150	Accessory Elec Equipment		539,073.80	-	(539,073.80)	-	-	
		Total	**8,321,512.62**	**(9,706.14)**	**(8,311,806.48)**	**-**	**-**	**-**
Hibbard Renewable Energy Center								
3100	Land & Land Rights, Fee		30,716.52	-	-	-	30,716.52	
3110	Structure & Improvements		5,328,857.77	161,712.35	(29,843.81)	-	5,460,726.31	
3111	Structure & Improvements, Pollution		-	227,445.71	-	-	227,445.71	
3120	Boiler Plant Equipment		56,827,325.35	715,421.51	(1,350,874.04)	-	56,191,872.82	
3121	Boiler Plant Equipment, Pollution		12,129,585.28	3,478,398.17	-	-	15,607,983.45	
3140	Turbogenerator Units		10,320,264.51	(98,176.31)	-	-	10,222,088.20	
3141	Turbogenerator Units, Pollution		-	-	-	-	-	
3150	Accessory Elec Equipment		4,119,037.78	681,458.30	-	-	4,800,496.08	
3151	Accessory Elec Equipment, Pollution		-	-	-	-	-	
3160	Misc Power Pit Eq		916,822.70	(1,078.81)	-	35,526.41	951,270.30	
3161	Misc Power Pit Eq, Pollution		-	-	-	-	-	
		Total	**89,672,609.91**	**5,165,180.92**	**(1,380,717.85)**	**35,526.41**	**93,492,599.39**	**93,461,882.87**
Laskin Units 1 and 2								
3100	Land & Land Rights, Fee		253,164.48	-	-	-	253,164.48	
3110	Structure & Improvements		6,373,609.56	-	-	-	6,373,609.56	

Minnesota Power
Plant in Service - 2016
Steam Production

Facility and Plant Account		Beginning Balance	Current Additions	Current Retirements	Current Transfer/Adj	Ending Balance	Without Land
3111	Structure & Improvements, Pollution	4,755,003.86	-	-	-	4,755,003.86	
3120	Boiler Plant Equipment	33,999,444.19	(130,350.97)	(267,560.03)	-	33,601,533.19	
3121	Boiler Plant Equipment, Pollution	23,043,592.41	(27,597.95)	-	-	23,015,994.46	
3140	Turbogenerator Units	11,001,101.97	-	-	-	11,001,101.97	
3141	Turbogenerator Units, Pollution	754,598.17	-	-	-	754,598.17	
3150	Accessory Elec Equipment	4,921,528.53	-	-	-	4,921,528.53	
3151	Accessory Elec Equipment, Pollution	628,544.24	-	-	-	628,544.24	
3160	Misc Power Pit Eq	1,363,551.64	-	-	-	1,363,551.64	
3161	Misc Power Pit Eq, Pollution	18,035.02	-	-	-	18,035.02	
	Total	**87,112,174.07**	**(157,948.92)**	**(267,560.03)**	**-**	**86,686,665.12**	**86,433,500.64**
Taconite Harbor							
3100	Land & Land Rights, Fee	143,350.45	-	-	-	143,350.45	
3110	Structure & Improvements	11,420,956.80	-	-	-	11,420,956.80	
3111	Structure & Improvements, Pollution	5,363,534.45	(1,060.35)	-	-	5,362,474.10	
3120	Boiler Plant Equipment	30,921,729.23	46,804.02	-	(340,028.56)	30,628,504.69	
3121	Boiler Plant Equipment, Pollution	65,358,225.38	(34,884.09)	-	-	65,323,341.29	
3140	Turbogenerator Units	12,788,584.65	(167,264.32)	-	-	12,621,320.33	
3141	Turbogenerator Units, Pollution	438,677.56	-	-	-	438,677.56	
3150	Accessory Elec Equipment	10,875,743.80	-	-	-	10,875,743.80	
3151	Accessory Elec Equipment, Pollution	4,225,162.79	-	-	-	4,225,162.79	
3160	Misc Power Pit Eq	1,135,105.33	-	-	(41,869.42)	1,093,235.91	
3161	Misc Power Pit Eq, Pollution	-	-	-	-	-	
	Total	**142,671,070.44**	**(156,404.74)**	**-**	**(381,897.98)**	**142,132,767.72**	**141,989,417.27**
	Grand Total	**1,666,251,634.96**	**26,680,214.53**	**(31,334,498.50)**	**(6,343.01)**	**1,661,591,007.98**	**1,653,288,358.81**
Summary for All Steam							
3100	Land & Land Rights, Fee	8,302,649.17	-	-	-	8,302,649.17	
3110	Structure & Improvements	101,777,629.90	2,834,829.58	(1,509,043.79)	-	103,103,415.69	
3111	Structure & Improvements, Pollution	60,095,772.55	4,642,326.53	-	-	64,738,099.08	
3120	Boiler Plant Equipment	419,787,105.35	4,676,892.03	(7,512,695.34)	-	416,951,302.04	
3121	Boiler Plant Equipment, Pollution	740,193,694.22	11,905,231.11	(10,647,249.04)	-	741,451,676.29	
3140	Turbogenerator Units	152,267,788.46	(287,510.13)	(6,969,651.39)	-	145,010,626.94	
3141	Turbogenerator Units, Pollution	20,504,806.10	214,823.92	(418,646.14)	-	20,300,983.88	
3150	Accessory Elec Equipment	124,424,789.46	2,037,210.48	(2,793,974.12)	-	123,668,025.82	
3151	Accessory Elec Equipment, Pollution	28,906,334.76	-	(1,483,238.68)	-	27,423,096.08	
3160	Misc Power Pit Eq	9,543,790.90	656,411.01	-	(6,343.01)	10,193,858.90	
3161	Misc Power Pit Eq, Pollution	447,274.09	-	-	-	447,274.09	
	Grand Total	**1,666,251,634.96**	**26,680,214.53**	**(31,334,498.50)**	**(6,343.01)**	**1,661,591,007.98**	**1,653,288,358.81**

Minnesota Power
Depreciation Reserve - 2016
Steam Production

Facility and Plant Account		Beginning Reserve	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve
Boswell Common								
3100	Land & Land Rights, Fee	-	-	-	-	-	-	-
3110	Structure & Improvements	12,735,578.26	707,057.78	(142,487.32)	(30,883.13)	-	16,767.00	13,286,032.59
3111	Structure & Improvements, Pollution	11,944,705.97	399,101.43	-	-	-	17,406.00	12,361,213.40
3120	Boiler Plant Equipment	29,311,175.11	2,089,446.07	(1,037,442.84)	(208,736.66)	-	127,403.12	30,281,844.80
3121	Boiler Plant Equipment, Pollution	34,356,398.56	3,024,435.36	(226,822.65)	(2,265.68)	-	38,889.00	37,190,634.59
3140	Turbogenerator Units	893,512.59	13,225.57	-	-	-	1,287.00	908,025.16
3141	Turbogenerator Units, Pollution	17,099.48	14,943.72	-	-	-	-	32,043.20
3150	Accessory Elec Equipment	5,513,788.01	393,818.68	-	-	-	7,344.00	5,914,950.69
3151	Accessory Elec Equipment, Pollution	1,967,455.63	26,206.06	-	-	-	2,871.00	1,996,532.69
3160	Misc Power Pit Eq	2,808,354.96	162,122.10	-	-	-	3,843.00	2,974,320.06
3161	Misc Power Pit Eq, Pollution	118.79	1.20	-	-	-	-	119.99
	Total	**99,548,187.36**	**6,830,357.97**	**(1,406,752.81)**	**(241,885.47)**	**-**	**215,810.12**	**104,945,717.17**
Boswell Unit 1								
3100	Land & Land Rights, Fee	-	-	-	-	-	-	-
3110	Structure & Improvements	2,393,472.51	119,781.44	(131,849.93)	(1,810.18)	-	3,618.00	2,383,211.84
3111	Structure & Improvements, Pollution	30,082.44	414.47	-	-	-	-	30,496.91
3120	Boiler Plant Equipment	9,260,248.89	648,253.85	(235,601.66)	(23,786.06)	-	12,654.00	9,661,769.02
3121	Boiler Plant Equipment, Pollution	5,919,892.58	869,240.23	(198,818.55)	(21,030.91)	-	6,597.00	6,575,880.35
3140	Turbogenerator Units	6,133,378.78	362,103.21	(238,003.46)	(181,073.73)	-	7,695.00	6,084,099.80
3141	Turbogenerator Units, Pollution	102,251.07	13,598.64	-	-	-	-	115,849.71
3150	Accessory Elec Equipment	3,183,987.17	467,468.25	-	-	-	2,736.00	3,654,191.42
3151	Accessory Elec Equipment, Pollution	100,759.68	17,190.12	-	-	-	-	117,949.80
3160	Misc Power Pit Eq	(2,518.31)	279.84	-	-	-	-	(2,238.47)
3161	Misc Power Pit Eq, Pollution	-	-	-	-	-	-	-
	Total	**27,121,554.81**	**2,498,330.05**	**(804,273.60)**	**(227,700.88)**	**-**	**33,300.00**	**28,621,210.38**
Boswell Unit 2								
3100	Land & Land Rights, Fee	-	-	-	-	-	-	-
3110	Structure & Improvements	1,563,160.40	50,312.54	(7,543.00)	(8,423.00)	-	2,439.00	1,599,945.94
3111	Structure & Improvements, Pollution	4,034.28	(321.04)	-	-	-	-	3,713.24
3120	Boiler Plant Equipment	10,302,427.31	422,678.40	-	-	-	395,591.89	11,120,697.60
3121	Boiler Plant Equipment, Pollution	4,359,841.94	684,702.80	(473,176.10)	(111,058.99)	-	4,257.00	4,464,566.65
3140	Turbogenerator Units	6,712,959.12	361,398.55	(471,441.82)	(114,241.70)	-	9,702.00	6,498,376.15
3141	Turbogenerator Units, Pollution	52,132.30	719.20	-	-	-	-	52,851.50
3150	Accessory Elec Equipment	2,995,330.07	72,950.12	-	-	-	216,759.01	3,285,039.20
3151	Accessory Elec Equipment, Pollution	-	-	-	-	-	-	-
3160	Misc Power Pit Eq	(685.79)	76.20	-	-	-	-	(609.59)
3161	Misc Power Pit Eq, Pollution	-	-	-	-	-	-	-
	Total	**25,989,199.63**	**1,592,516.77**	**(952,160.92)**	**(233,723.69)**	**-**	**628,748.90**	**27,024,580.69**
Boswell Unit 3								
3100	Land & Land Rights, Fee	-	-	-	-	-	-	-
3110	Structure & Improvements	9,055,904.56	727,279.74	(84,434.55)	(4,617.88)	-	15,210.00	9,709,341.87
3111	Structure & Improvements, Pollution	6,493,320.59	747,439.01	-	-	-	9,252.00	7,250,011.60

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Facility and Plant Account		Beginning Reserve	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve
3120	Boiler Plant Equipment	45,266,995.37	2,608,016.73	(459,785.82)	(121,914.92)	2,366.60	87,115.00	47,382,792.96
3121	Boiler Plant Equipment, Pollution	61,824,066.03	10,502,479.61	(8,935,038.41)	(273,943.73)	-	75,213.00	63,192,776.50
3140	Turbogenerator Units	16,918,046.01	1,113,613.43	-	-	-	29,772.00	18,061,431.44
3141	Turbogenerator Units, Pollution	2,162,876.66	184,682.14	(141,196.59)	(2,677.01)	-	3,519.00	2,207,204.20
3150	Accessory Elec Equipment	10,529,095.96	1,415,306.67	(215,681.96)	(10,367.56)	-	14,085.00	11,732,438.11
3151	Accessory Elec Equipment, Pollution	733,959.37	117,279.01	-	-	-	855.00	852,093.38
3160	Misc Power Pit Eq	235,547.59	18,922.72	-	-	-	387.00	254,857.31
3161	Misc Power Pit Eq, Pollution	-	-	-	-	-	-	-
	Total	**153,219,812.14**	**17,435,019.06**	**(9,836,137.33)**	**(413,521.10)**	**2,366.60**	**235,408.00**	**160,642,947.37**
Boswell Unit 4								
3100	Land & Land Rights, Fee	-	-	-	-	-	-	-
3110	Structure & Improvements	18,984,967.96	572,905.54	-	-	-	28,773.00	19,586,646.50
3111	Structure & Improvements, Pollution	9,749,998.17	250,095.70	-	(69,379.42)	-	16,488.00	9,947,202.45
3120	Boiler Plant Equipment	56,123,660.30	3,658,710.07	(2,759,982.08)	(1,309,307.33)	5,258.74	71,754.00	55,790,093.70
3121	Boiler Plant Equipment, Pollution	20,218,158.44	14,421,477.16	(813,393.33)	(79,051.14)	-	64,773.00	33,811,964.13
3140	Turbogenerator Units	16,298,127.25	2,209,055.70	(1,074,155.82)	(244,720.66)	-	17,703.00	17,206,009.47
3141	Turbogenerator Units, Pollution	4,606,623.73	471,093.31	(205,101.21)	(83,534.22)	-	5,634.00	4,794,715.61
3150	Accessory Elec Equipment	17,853,337.42	1,590,530.44	(2,039,218.36)	-	-	26,217.00	17,430,866.50
3151	Accessory Elec Equipment, Pollution	12,601,685.51	339,184.06	(1,483,238.68)	-	-	19,665.00	11,477,295.89
3160	Misc Power Pit Eq	401,469.53	31,468.50	-	-	-	513.00	433,451.03
3161	Misc Power Pit Eq, Pollution	341,384.93	5,166.54	-	-	-	540.00	347,091.47
	Total	**157,179,413.24**	**23,549,687.02**	**(8,375,089.48)**	**(1,785,992.77)**	**5,258.74**	**252,060.00**	**170,825,336.75**
Cloquet Energy Center								
3110	Structure & Improvements	944,154.45	168,730.73	(1,112,885.18)	-	-	-	-
3120	Boiler Plant Equipment	1,188,967.39	212,481.48	(1,401,448.87)	-	-	-	-
3140	Turbogenerator Units	4,262,966.50	923,083.79	(5,186,050.29)	-	-	-	-
3141	Turbogenerator Units, Pollution	61,379.20	10,969.14	(72,348.34)	-	-	-	-
3150	Accessory Elec Equipment	457,341.81	81,731.99	(539,073.80)	-	-	-	-
	Total	**6,914,809.35**	**1,396,997.13**	**(8,311,806.48)**	**-**	**-**	**-**	**-**
Hibbard Renewable Energy Center								
3100	Land & Land Rights, Fee	-	-	-	-	-	-	-
3110	Structure & Improvements	2,584,441.60	337,783.67	(29,843.81)	(165,774.61)	-	-	2,726,606.85
3111	Structure & Improvements, Pollution	(278.66)	12,497.15	-	-	-	-	12,218.49
3120	Boiler Plant Equipment	32,182,323.19	2,837,752.01	(1,350,874.04)	(60,777.66)	-	-	33,608,423.50
3121	Boiler Plant Equipment, Pollution	8,207,550.93	826,985.44	-	-	-	-	9,034,536.37
3140	Turbogenerator Units	5,496,317.21	537,991.64	-	-	-	-	6,034,308.85
3141	Turbogenerator Units, Pollution	-	-	-	-	-	-	-
3150	Accessory Elec Equipment	1,492,438.09	306,336.05	-	-	-	-	1,798,774.14
3151	Accessory Elec Equipment, Pollution	-	-	-	-	-	-	-
3160	Misc Power Pit Eq	485,544.34	49,241.41	-	-	-	15,231.22	550,016.97
3161	Misc Power Pit Eq, Pollution	-	-	-	-	-	-	-
	Total	**50,448,336.70**	**4,908,587.37**	**(1,380,717.85)**	**(226,552.27)**	**-**	**15,231.22**	**53,764,885.17**
Laskin Units 1 and 2								

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Facility and Plant Account		Beginning Reserve	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve
3100	Land & Land Rights, Fee	-	-	-	-	-	-	-
3110	Structure & Improvements	5,134,364.52	180,413.07	-	-	-	39,276.00	5,354,053.59
3111	Structure & Improvements, Pollution	2,553,281.37	220,336.26	-	-	-	15,039.00	2,788,656.63
3120	Boiler Plant Equipment	15,389,394.20	1,757,557.69	(267,560.03)	174,456.95	-	177,085.00	17,230,933.81
3121	Boiler Plant Equipment, Pollution	15,896,826.76	829,295.74	-	-	-	133,695.00	16,859,817.50
3140	Turbogenerator Units	8,822,848.88	314,093.10	-	-	-	65,988.00	9,202,929.98
3141	Turbogenerator Units, Pollution	665,796.45	17,478.31	-	-	-	5,139.00	688,413.76
3150	Accessory Elec Equipment	3,382,316.62	178,248.56	-	-	-	27,486.00	3,588,051.18
3151	Accessory Elec Equipment, Pollution	617,588.04	10,329.96	-	-	-	4,950.00	632,868.00
3160	Misc Power Pit Eq	990,535.04	45,812.79	-	-	-	7,857.00	1,044,204.83
3161	Misc Power Pit Eq, Pollution	19,224.51	202.08	-	-	-	-	19,426.59
	Total	**53,472,176.39**	**3,553,767.56**	**(267,560.03)**	**174,456.95**	**-**	**476,515.00**	**57,409,355.87**
Taconite Harbor								
3100	Land & Land Rights, Fee	-	-	-	-	-	-	-
3110	Structure & Improvements	4,623,694.26	677,804.60	-	-	-	(1,179.00)	5,300,319.86
3111	Structure & Improvements, Pollution	2,558,490.53	283,095.79	-	-	-	(513.00)	2,841,073.32
3120	Boiler Plant Equipment	6,722,588.46	2,370,169.16	-	-	-	(92,924.12)	8,999,833.50
3121	Boiler Plant Equipment, Pollution	27,478,909.33	3,758,284.84	-	-	-	(4,077.00)	31,233,117.17
3140	Turbogenerator Units	2,927,141.98	959,335.65	-	-	-	(855.00)	3,885,622.63
3141	Turbogenerator Units, Pollution	149,753.25	28,562.88	-	-	-	-	178,316.13
3150	Accessory Elec Equipment	2,448,740.85	823,100.85	-	-	-	(1,053.00)	3,270,788.70
3151	Accessory Elec Equipment, Pollution	1,582,059.71	262,458.63	-	-	-	(909.00)	1,843,609.34
3160	Misc Power Pit Eq	541,560.84	59,577.80	-	-	-	(17,950.66)	583,187.98
3161	Misc Power Pit Eq, Pollution	-	-	-	-	-	-	-
	Total	**49,032,939.21**	**9,222,390.20**	**-**	**-**	**-**	**(119,460.78)**	**58,135,868.63**
	Grand Total	**622,926,428.83**	**70,987,653.13**	**(31,334,498.50)**	**(2,954,919.23)**	**7,625.34**	**1,737,612.46**	**661,369,902.03**
Summary for All Steam								
3100	Land & Land Rights, Fee	-	-	-	-	-	-	-
3110	Structure & Improvements	58,019,738.52	3,542,069.11	(1,509,043.79)	(211,508.80)	-	104,904.00	59,946,159.04
3111	Structure & Improvements, Pollution	33,333,634.69	1,912,658.77	-	(69,379.42)	-	57,672.00	35,234,586.04
3120	Boiler Plant Equipment	205,747,780.22	16,605,065.46	(7,512,695.34)	(1,550,065.68)	7,625.34	778,678.89	214,076,388.89
3121	Boiler Plant Equipment, Pollution	178,261,644.57	34,916,901.18	(10,647,249.04)	(487,350.45)	-	319,347.00	202,363,293.26
3140	Turbogenerator Units	68,465,298.32	6,793,900.64	(6,969,651.39)	(540,036.09)	-	131,292.00	67,880,803.48
3141	Turbogenerator Units, Pollution	7,817,912.14	742,047.34	(418,646.14)	(86,211.23)	-	14,292.00	8,069,394.11
3150	Accessory Elec Equipment	47,856,376.00	5,329,491.61	(2,793,974.12)	(10,367.56)	-	293,574.01	50,675,099.94
3151	Accessory Elec Equipment, Pollution	17,603,507.94	772,647.84	(1,483,238.68)	-	-	27,432.00	16,920,349.10
3160	Misc Power Pit Eq	5,459,808.20	367,501.36	-	-	-	9,880.56	5,837,190.12
3161	Misc Power Pit Eq, Pollution	360,728.23	5,369.82	-	-	-	540.00	366,638.05
	Grand Total	**622,926,428.83**	**70,987,653.13**	**(31,334,498.50)**	**(2,954,919.23)**	**7,625.34**	**1,737,612.46**	**661,369,902.03**

Minnesota Power
Depreciation Reserve - 2016
Steam Production

Facility and Plant Account	Beginning Reserve	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve

Minnesota Power
Depreciation Expense - 2016
Steam Production

Facility and Plant Account		Beginning Plant Balances	Ending Plant Balances	Average Plant Balances	Beginning Reserve Balances	Salvage Rates	2016 Remaining Lives	2016 Provisions
Boswell Common								
3100	Land & Land Rights, Fee	4,295,713.93	4,295,713.93	4,295,713.93	-	(2.06)	14.0	-
3110	Structure & Improvements	21,633,808.91	23,419,700.83	22,526,754.87	12,735,578.26	(2.06)	14.0	707,057.78
3111	Structure & Improvements, Pollution	16,206,047.90	20,621,989.07	18,414,018.49	11,944,705.97	(2.06)	14.0	399,101.43
3120	Boiler Plant Equipment	56,572,988.20	57,645,312.14	57,109,150.17	29,311,175.11	(2.06)	14.0	2,089,446.07
3121	Boiler Plant Equipment, Pollution	74,915,023.10	75,121,089.11	75,018,056.11	34,356,398.56	(2.06)	14.0	3,024,435.36
3140	Turbogenerator Units	1,057,687.06	1,057,687.06	1,057,687.06	893,512.59	(2.06)	14.0	13,225.57
3141	Turbogenerator Units, Pollution	221,745.34	221,745.34	221,745.34	17,099.48	(2.06)	14.0	14,943.72
3150	Accessory Elec Equipment	10,811,852.94	10,751,814.84	10,781,833.89	5,513,788.01	(2.06)	14.0	393,818.68
3151	Accessory Elec Equipment, Pollution	2,288,983.73	2,288,983.73	2,288,983.73	1,967,455.63	(2.06)	14.0	26,206.06
3160	Misc Power Pit Eq	4,555,382.56	5,229,771.84	4,892,577.20	2,808,354.96	(2.06)	14.0	162,122.10
3161	Misc Power Pit Eq, Pollution	133.76	133.76	133.76	118.79	(2.06)	14.0	1.20
	Total	**192,559,367.43**	**200,653,941.65**	**196,606,654.54**	**99,548,187.36**			**6,830,357.97**
Boswell Unit 1								
3100	Land & Land Rights, Fee	59,858.35	59,858.35	59,858.35	-	(7.90)	9.0	-
3110	Structure & Improvements	3,105,966.45	3,120,610.80	3,113,288.63	2,393,472.51	(7.90)	9.0	119,781.44
3111	Structure & Improvements, Pollution	31,336.53	31,336.53	31,336.53	30,082.44	(7.90)	9.0	414.47
3120	Boiler Plant Equipment	13,998,709.41	13,740,106.10	13,869,407.76	9,260,248.89	(7.90)	9.0	648,253.85
3121	Boiler Plant Equipment, Pollution	12,737,831.14	12,582,536.26	12,660,183.70	5,919,892.58	(7.90)	9.0	869,240.23
3140	Turbogenerator Units	8,731,570.95	8,329,877.36	8,530,724.16	6,133,378.78	(7.90)	9.0	362,103.21
3141	Turbogenerator Units, Pollution	208,191.50	208,191.50	208,191.50	102,251.07	(7.90)	9.0	13,598.64
3150	Accessory Elec Equipment	6,851,655.99	6,851,655.99	6,851,655.99	3,183,987.17	(7.90)	9.0	467,468.25
3151	Accessory Elec Equipment, Pollution	236,766.85	236,766.85	236,766.85	100,759.68	(7.90)	9.0	17,190.12
3160	Misc Power Pit Eq	-	-	-	(2,518.31)	(7.90)	9.0	279.84
3161	Misc Power Pit Eq, Pollution	-	-	-	-	(7.90)	9.0	-
	Total	**45,961,887.17**	**45,160,939.74**	**45,561,413.46**	**27,121,554.81**			**2,498,330.05**
Boswell Unit 2								
3100	Land & Land Rights, Fee	59,687.82	59,687.82	59,687.82	-	(9.99)	9.0	-
3110	Structure & Improvements	1,810,150.01	2,400,850.72	2,105,500.37	1,563,160.40	(9.99)	9.0	50,312.54
3111	Structure & Improvements, Pollution	1,039.83	1,039.83	1,039.83	4,034.28	(9.99)	9.0	(321.04)
3120	Boiler Plant Equipment	12,817,337.71	13,453,632.62	13,135,485.17	10,302,427.31	(9.99)	9.0	422,678.40
3121	Boiler Plant Equipment, Pollution	9,428,600.73	11,490,986.86	10,459,793.80	4,359,841.94	(9.99)	9.0	684,702.80
3140	Turbogenerator Units	8,901,899.28	8,776,763.58	8,839,331.43	6,712,959.12	(9.99)	9.0	361,398.55
3141	Turbogenerator Units, Pollution	53,247.44	53,247.44	53,247.44	52,132.30	(9.99)	9.0	719.20
3150	Accessory Elec Equipment	3,298,684.42	3,968,415.59	3,633,550.01	2,995,330.07	(9.99)	9.0	72,950.12
3151	Accessory Elec Equipment, Pollution	-	-	-	-	(9.99)	9.0	-
3160	Misc Power Pit Eq	-	-	-	(685.79)	(9.99)	9.0	76.20
3161	Misc Power Pit Eq, Pollution	-	-	-	-	(9.99)	9.0	-
	Total	**36,370,647.24**	**40,204,624.46**	**38,287,635.85**	**25,989,199.63**			**1,592,516.77**
Boswell Unit 3								
3100	Land & Land Rights, Fee	3,104,623.53	3,104,623.53	3,104,623.53	-	(5.85)	19.0	-
3110	Structure & Improvements	21,621,876.97	21,537,442.42	21,579,659.70	9,055,904.56	(5.85)	19.0	727,279.74
3111	Structure & Improvements, Pollution	19,558,786.06	19,558,786.06	19,558,786.06	6,493,320.59	(5.85)	19.0	747,439.01
3120	Boiler Plant Equipment	88,943,125.99	89,862,654.57	89,402,890.28	45,266,995.37	(5.85)	19.0	2,608,016.73
3121	Boiler Plant Equipment, Pollution	246,888,921.54	239,413,587.96	243,151,254.75	61,824,066.03	(5.85)	19.0	10,502,479.61
3140	Turbogenerator Units	36,000,269.93	35,919,350.17	35,959,810.05	16,918,046.01	(5.85)	19.0	1,113,613.43
3141	Turbogenerator Units, Pollution	5,365,311.28	5,224,114.69	5,294,712.99	2,162,876.66	(5.85)	19.0	184,682.14
3150	Accessory Elec Equipment	35,329,746.93	35,381,493.43	35,355,620.18	10,529,095.96	(5.85)	19.0	1,415,306.67
3151	Accessory Elec Equipment, Pollution	2,799,394.06	2,799,394.06	2,799,394.06	733,959.37	(5.85)	19.0	117,279.01
3160	Misc Power Pit Eq	575,765.44	561,940.09	568,852.77	235,547.59	(5.85)	19.0	18,922.72
3161	Misc Power Pit Eq, Pollution	-	-	-	-	(5.85)	19.0	-
	Total	**460,187,821.73**	**453,363,386.98**	**456,775,604.36**	**153,219,812.14**			**17,435,019.06**

Minnesota Power
Depreciation Expense - 2016
Steam Production

Facility and Plant Account			Beginning Plant Balances	Ending Plant Balances	Average Plant Balances	Beginning Reserve Balances	Salvage Rates	2016 Remaining Lives	2016 Provisions
Boswell Unit 4									
3100	Land & Land Rights, Fee		355,534.09	355,534.09	355,534.09	-	(3.69)	20.0	-
3110	Structure & Improvements		29,369,518.25	29,369,518.25	29,369,518.25	18,984,967.96	(3.69)	20.0	572,905.54
3111	Structure & Improvements, Pollution		14,180,023.92	14,180,023.92	14,180,023.92	9,749,998.17	(3.69)	20.0	250,095.70
3120	Boiler Plant Equipment		124,304,996.40	121,827,685.91	123,066,341.16	56,123,660.30	(3.69)	20.0	3,658,710.07
3121	Boiler Plant Equipment, Pollution		295,691,914.64	298,896,156.90	297,294,035.77	20,218,158.44	(3.69)	20.0	14,421,477.16
3140	Turbogenerator Units		58,270,653.68	57,082,438.27	57,676,545.98	16,298,127.25	(3.69)	20.0	2,209,055.70
3141	Turbogenerator Units, Pollution		13,390,686.47	13,400,409.18	13,395,547.83	4,606,623.73	(3.69)	20.0	471,093.31
3150	Accessory Elec Equipment		47,677,465.27	46,116,877.56	46,897,171.42	17,853,337.42	(3.69)	20.0	1,590,530.44
3151	Accessory Elec Equipment, Pollution		18,727,483.09	17,244,244.41	17,985,863.75	12,601,685.51	(3.69)	20.0	339,184.06
3160	Misc Power Pit Eq		997,163.23	994,089.12	995,626.18	401,469.53	(3.69)	20.0	31,468.50
3161	Misc Power Pit Eq, Pollution		429,105.31	429,105.31	429,105.31	341,384.93	(3.69)	20.0	5,166.54
		Total	**603,394,544.35**	**599,896,082.92**	**601,645,313.64**	**157,179,413.24**			**23,549,687.02**
Cloquet Energy Center									
3110	Structure & Improvements		1,112,885.18	-	556,442.59	944,154.45	0.00	1.0	168,730.73
3120	Boiler Plant Equipment		1,401,448.87	-	700,724.44	1,188,967.39	0.00	1.0	212,481.48
3140	Turbogenerator Units		5,195,756.43	-	2,597,878.22	4,262,966.50	0.00	1.0	923,083.79
3141	Turbogenerator Units, Pollution		72,348.34	-	36,174.17	61,379.20	0.00	1.0	10,969.14
3150	Accessory Elec Equipment		539,073.80	-	269,536.90	457,341.81	0.00	1.0	81,731.99
		Total	**8,321,512.62**	**-**	**4,160,756.31**	**6,914,809.35**			**1,396,997.13**
Hibbard Renewable Energy Center									
3100	Land & Land Rights, Fee		30,716.52	30,716.52	30,716.52	-	(1.10)	9.0	-
3110	Structure & Improvements		5,328,857.77	5,460,726.31	5,394,792.04	2,584,441.60	(1.10)	9.0	337,783.67
3111	Structure & Improvements, Pollution		-	227,445.71	113,722.86	(278.66)	(1.10)	9.0	12,497.15
3120	Boiler Plant Equipment		56,827,325.35	56,191,872.82	56,509,599.09	32,182,323.19	(1.10)	9.0	2,837,752.01
3121	Boiler Plant Equipment, Pollution		12,129,585.28	15,607,983.45	13,868,784.37	8,207,550.93	(1.10)	9.0	826,985.44
3140	Turbogenerator Units		10,320,264.51	10,222,088.20	10,271,176.36	5,496,317.21	(1.10)	9.0	537,991.64
3141	Turbogenerator Units, Pollution		-	-	-	-	(1.10)	9.0	-
3150	Accessory Elec Equipment		4,119,037.78	4,800,496.08	4,459,766.93	1,492,438.09	(1.10)	9.0	306,336.05
3151	Accessory Elec Equipment, Pollution		-	-	-	-	(1.10)	9.0	-
3160	Misc Power Pit Eq		916,822.70	951,270.30	934,046.50	485,544.34	(1.10)	9.0	49,241.41
3161	Misc Power Pit Eq, Pollution		-	-	-	-	(1.10)	9.0	-
		Total	**89,672,609.91**	**93,492,599.39**	**91,582,604.65**	**50,448,336.70**			**4,908,587.37**
Laskin Units 1 and 2									
3100	Land & Land Rights, Fee		253,164.48	253,164.48	253,164.48	-	(24.00)	15.0	-
3110	Structure & Improvements		6,373,609.56	6,373,609.56	6,373,609.56	5,134,364.52	(24.00)	15.0	180,413.07
3111	Structure & Improvements, Pollution		4,755,003.86	4,755,003.86	4,755,003.86	2,553,281.37	(24.00)	15.0	220,336.26
3120	Boiler Plant Equipment		33,999,444.19	33,601,533.19	33,800,488.69	15,389,394.20	(24.00)	15.0	1,757,557.69
3121	Boiler Plant Equipment, Pollution		23,043,592.41	23,015,994.46	23,029,793.44	15,896,826.76	(24.00)	15.0	829,295.74
3140	Turbogenerator Units		11,001,101.97	11,001,101.97	11,001,101.97	8,822,848.88	(24.00)	15.0	314,093.10
3141	Turbogenerator Units, Pollution		754,598.17	754,598.17	754,598.17	665,796.45	(24.00)	15.0	17,478.31
3150	Accessory Elec Equipment		4,921,528.53	4,921,528.53	4,921,528.53	3,382,316.62	(24.00)	15.0	178,248.56
3151	Accessory Elec Equipment, Pollution		628,544.24	628,544.24	628,544.24	617,588.04	(24.00)	15.0	10,329.96
3160	Misc Power Pit Eq		1,363,551.64	1,363,551.64	1,363,551.64	990,535.04	(24.00)	15.0	45,812.79
3161	Misc Power Pit Eq, Pollution		18,035.02	18,035.02	18,035.02	19,224.51	(24.00)	15.0	202.08
		Total	**87,112,174.07**	**86,686,665.12**	**86,899,419.60**	**53,472,176.39**			**3,553,767.56**
Taconite Harbor									
3100	Land & Land Rights, Fee		143,350.45	143,350.45	143,350.45	-	(5.76)	11.0	-
3110	Structure & Improvements		11,420,956.80	11,420,956.80	11,420,956.80	4,623,694.26	(5.76)	11.0	677,804.60
3111	Structure & Improvements, Pollution		5,363,534.45	5,362,474.10	5,363,004.28	2,558,490.53	(5.76)	11.0	283,095.79
3120	Boiler Plant Equipment		30,921,729.23	30,628,504.69	30,775,116.96	6,722,588.46	(5.76)	11.0	2,370,169.16
3121	Boiler Plant Equipment, Pollution		65,358,225.38	65,323,341.29	65,340,783.34	27,478,909.33	(5.76)	11.0	3,758,284.84

Minnesota Power
Depreciation Expense - 2016
Steam Production

Facility and Plant Account		Beginning Plant Balances	Ending Plant Balances	Average Plant Balances	Beginning Reserve Balances	Salvage Rates	2016 Remaining Lives	2016 Provisions
3140	Turbogenerator Units	12,788,584.65	12,621,320.33	12,704,952.49	2,927,141.98	(5.76)	11.0	959,335.65
3141	Turbogenerator Units, Pollution	438,677.56	438,677.56	438,677.56	149,753.25	(5.76)	11.0	28,562.88
3150	Accessory Elec Equipment	10,875,743.80	10,875,743.80	10,875,743.80	2,448,740.85	(5.76)	11.0	823,100.85
3151	Accessory Elec Equipment, Pollution	4,225,162.79	4,225,162.79	4,225,162.79	1,582,059.71	(5.76)	11.0	262,458.63
3160	Misc Power Pit Eq	1,135,105.33	1,093,235.91	1,114,170.62	541,560.84	(5.76)	11.0	59,577.80
3161	Misc Power Pit Eq, Pollution	-	-	-	-	(5.76)	11.0	-
	Total	**142,671,070.44**	**142,132,767.72**	**142,401,919.08**	**49,032,939.21**			**9,222,390.20**
	Grand Total	**1,666,251,634.96**	**1,661,591,007.98**	**1,663,921,321.47**	**622,926,428.83**			**70,987,653.13**
Summary for All Steam								
3100	Land & Land Rights, Fee	8,302,649.17	8,302,649.17	8,302,649.17	-			-
3110	Structure & Improvements	101,777,629.90	103,103,415.69	102,440,522.80	58,019,738.52			3,542,069.11
3111	Structure & Improvements, Pollution	60,095,772.55	64,738,099.08	62,416,935.82	33,333,634.69			1,912,658.77
3120	Boiler Plant Equipment	419,787,105.35	416,951,302.04	418,369,203.70	205,747,780.22			16,605,065.46
3121	Boiler Plant Equipment, Pollution	740,193,694.22	741,451,676.29	740,822,685.26	178,261,644.57			34,916,901.18
3140	Turbogenerator Units	152,267,788.46	145,010,626.94	148,639,207.70	68,465,298.32			6,793,900.64
3141	Turbogenerator Units, Pollution	20,504,806.10	20,300,983.88	20,402,894.99	7,817,912.14			742,047.34
3150	Accessory Elec Equipment	124,424,789.46	123,668,025.82	124,046,407.64	47,856,376.00			5,329,491.61
3151	Accessory Elec Equipment, Pollution	28,906,334.76	27,423,096.08	28,164,715.42	17,603,507.94			772,647.84
3160	Misc Power Pit Eq	9,543,790.90	10,193,858.90	9,868,824.90	5,459,808.20			367,501.36
3161	Misc Power Pit Eq, Pollution	447,274.09	447,274.09	447,274.09	360,728.23			5,369.82
	Grand Total	**1,666,251,634.96**	**1,661,591,007.98**	**1,663,921,321.47**	**622,926,428.83**			**70,987,653.13**

Minnesota Power
Plant in Service - 2016
Hydro Production

Facility and Plant Account		Beginning Balance	Current Additions	Current Retirements	Current Transfer/Adj	Ending Balance	Without Land
BIRCH LAKE RESERVOIR - PROJECT 469							
3300	Land & Land Rights, Fee	1,556.25	-	-	-	1,556.25	
3305	Land & Land Rights, Easements	232.79	-	-	-	232.79	
3307	Land & Land Rights-Recr, Easem	381.50	-	-	-	381.50	
3312	Structure & Improvements, Recr	14,922.38	-	-	-	14,922.38	
3320	Reservoirs, Dams & Waterways	3,318,236.29	239,286.94	(13,018.64)	-	3,544,504.59	
3322	Reservoirs, Dams & Water, Recr	1,176.00	-	-	-	1,176.00	
3340	Accessory Electric Equipment	27,573.67	-	-	-	27,573.67	
	Total	**3,364,078.88**	**239,286.94**	**(13,018.64)**	**-**	**3,590,347.18**	**3,588,176.64**
BLANCHARD HE STATION - PROJECT 346							
3300	Land & Land Rights, Fee	56,631.61	-	-	-	56,631.61	
3302	Land & Land Rights-Recr, Fee	2,018.12	-	-	-	2,018.12	
3305	Land & Land Rights, Easements	75,807.00	-	-	-	75,807.00	
3310	Structure & Improvements	843,297.84	82,968.79	-	-	926,266.63	
3312	Structure & Improvements, Recr	83,759.38	-	-	-	83,759.38	
3320	Reservoirs, Dams & Waterways	4,610,444.15	147,015.06	(93,494.75)	-	4,663,964.46	
3330	Water Wheels, Turbines & Gen	4,132,055.52	(65,685.17)	-	-	4,066,370.35	
3340	Accessory Electric Equipment	1,974,930.43	-	-	-	1,974,930.43	
3350	Miscellaneous Power Plant Equi	151,631.93	53,995.91	-	-	205,627.84	
	Total	**11,930,575.98**	**218,294.59**	**(93,494.75)**	**-**	**12,055,375.82**	**11,920,919.09**
BOULDER LAKE RESERVOIR - PROJECT 23							
3300	Land & Land Rights, Fee	82,749.91	-	-	-	82,749.91	
3302	Land & Land Rights-Recr, Fee	130.73	-	-	-	130.73	
3305	Land & Land Rights, Easements	3,682.00	-	-	-	3,682.00	
3310	Structure & Improvements	3,142.11	-	-	-	3,142.11	
3312	Structure & Improvements, Recr	290,715.46	-	-	-	290,715.46	
3320	Reservoirs, Dams & Waterways	191,288.68	-	-	-	191,288.68	
3322	Reservoirs, Dams & Water, Recr	1,745.39	-	-	-	1,745.39	
3340	Accessory Electric Equipment	20,039.76	-	-	-	20,039.76	
3360	Roads, Railroads And Bridges	12,598.51	-	-	-	12,598.51	
	Total	**606,092.55**	**-**	**-**	**-**	**606,092.55**	**519,529.91**
CLOQUET AND ST LOUIS RVR GAG'G STA							
3300	Land & Land Rights, Fee	2,068.21	-	-	-	2,068.21	
3320	Reservoirs, Dams & Waterways	69,586.38	-	-	-	69,586.38	
3340	Accessory Electric Equipment	55,864.48	-	-	-	55,864.48	
	Total	**127,519.07**	**-**	**-**	**-**	**127,519.07**	**125,450.86**
FISH LAKE RESERVOIR - PROJECT 2360							
3300	Land & Land Rights, Fee	43,203.60	-	-	-	43,203.60	
3302	Land & Land Rights-Recr, Fee	86.24	-	-	-	86.24	
3305	Land & Land Rights, Easements	19,193.38	-	-	-	19,193.38	
3312	Structure & Improvements, Recr	43,537.22	-	-	-	43,537.22	
3320	Reservoirs, Dams & Waterways	881,122.70	-	-	-	881,122.70	
3322	Reservoirs, Dams & Water, Recr	2,278.05	-	-	-	2,278.05	

Minnesota Power
Plant in Service - 2016
Hydro Production

Facility and Plant Account		Beginning Balance	Current Additions	Current Retirements	Current Transfer/Adj	Ending Balance	Without Land
3340	Accessory Electric Equipment	18,864.63	-	-	-	18,864.63	
	Total	**1,008,285.82**	**-**	**-**	**-**	**1,008,285.82**	**945,802.60**
FOND DU LAC HE STA PROJECT 2360							
3300	Land & Land Rights, Fee	874,753.53	-	-	-	874,753.53	
3310	Structure & Improvements	828,352.56	-	-	-	828,352.56	
3312	Structure & Improvements, Recr	24,973.68	-	-	-	24,973.68	
3320	Reservoirs, Dams & Waterways	10,566,858.11	20,661.12	-	-	10,587,519.23	
3330	Water Wheels, Turbines & Gen	4,818,468.80	(73,695.40)	-	-	4,744,773.40	
3340	Accessory Electric Equipment	1,465,885.98	-	-	-	1,465,885.98	
3350	Miscellaneous Power Plant Equi	104,120.79	29,514.58	-	-	133,635.37	
3360	Roads, Railroads And Bridges	323,986.34	(14,253.18)	-	-	309,733.16	
	Total	**19,007,399.79**	**(37,772.88)**	**-**	**-**	**18,969,626.91**	**18,094,873.38**
ISLAND LAKE RESERVOIR - PROJECT 236							
3300	Land & Land Rights, Fee	245,752.63	-	-	-	245,752.63	
3301	Land & Land Rights-Fish, Fee	588.76	-	-	-	588.76	
3302	Land & Land Rights-Recr, Fee	1,831.33	-	-	-	1,831.33	
3305	Land & Land Rights, Easements	70,314.04	-	-	-	70,314.04	
3307	Land & Land Rights-Recr, Easem	500.00	-	-	-	500.00	
3310	Structure & Improvements	26,447.12	25,040.49	-	-	51,487.61	
3312	Structure & Improvements, Recr	374,891.34	711,457.54	-	-	1,086,348.88	
3320	Reservoirs, Dams & Waterways	1,049,850.09	10,278,487.35	-	-	11,328,337.44	
3322	Reservoirs, Dams & Water, Recr	5,448.42	-	-	-	5,448.42	
3350	Miscellaneous Power Plant Equi	47,879.44	-	-	-	47,879.44	
3360	Roads, Railroads And Bridges	2,996.41	-	-	-	2,996.41	
	Total	**1,826,499.58**	**11,014,985.38**	**-**	**-**	**12,841,484.96**	**12,522,498.20**
KNIFE FALLS HE STATION - PROJECT 23							
3300	Land & Land Rights, Fee	3,779.70	-	-	-	3,779.70	
3305	Land & Land Rights, Easements	34,453.54	-	-	-	34,453.54	
3310	Structure & Improvements	231,511.94	-	-	-	231,511.94	
3312	Structure & Improvements, Recr	2,759.52	-	-	-	2,759.52	
3320	Reservoirs, Dams & Waterways	2,058,204.85	(142.31)	-	-	2,058,062.54	
3330	Water Wheels, Turbines & Gen	290,616.45	-	-	-	290,616.45	
3340	Accessory Electric Equipment	903,730.37	-	-	-	903,730.37	
3350	Miscellaneous Power Plant Equi	38,893.16	30,141.14	-	-	69,034.30	
3360	Roads, Railroads And Bridges	457.30	-	-	-	457.30	
	Total	**3,564,406.83**	**29,998.83**	**-**	**-**	**3,594,405.66**	**3,556,172.42**
LITTLE FALLS HE STATION - PROJECT 2							
3300	Land & Land Rights, Fee	182,693.08	-	-	-	182,693.08	
3305	Land & Land Rights, Easements	21,429.84	-	-	-	21,429.84	
3310	Structure & Improvements	1,010,336.72	158,955.65	(2,081.81)	-	1,167,210.56	
3312	Structure & Improvements, Recr	6,042.41	-	-	-	6,042.41	
3320	Reservoirs, Dams & Waterways	2,712,872.06	719,012.43	-	-	3,431,884.49	
3330	Water Wheels, Turbines & Gen	3,272,720.36	-	-	-	3,272,720.36	

Minnesota Power
Plant in Service - 2016
Hydro Production

Facility and Plant Account		Beginning Balance	Current Additions	Current Retirements	Current Transfer/Adj	Ending Balance	Without Land
3340	Accessory Electric Equipment	799,011.11	-	-	-	799,011.11	
3350	Miscellaneous Power Plant Equi	270,552.23	-	-	-	270,552.23	
	Total	**8,275,657.81**	**877,968.08**	**(2,081.81)**	**-**	**9,151,544.08**	**8,947,421.16**
MISC OPERATING LANDS							
3300	Land & Land Rights, Fee	64,603.84	-	-	-	64,603.84	
3305	Land & Land Rights, Easements	503,338.43	-	-	-	503,338.43	
	Total	**567,942.27**	**-**	**-**	**-**	**567,942.27**	**-**
PILLAGER HE STATION - PROJECT 2663							
3300	Land & Land Rights, Fee	61,067.17	-	-	-	61,067.17	
3305	Land & Land Rights, Easements	68,003.91	-	-	-	68,003.91	
3310	Structure & Improvements	151,986.84	-	-	-	151,986.84	
3312	Structure & Improvements, Recr	12,789.11	-	-	-	12,789.11	
3320	Reservoirs, Dams & Waterways	1,549,297.94	106,774.07	-	-	1,656,072.01	
3330	Water Wheels, Turbines & Gen	219,148.56	-	-	-	219,148.56	
3340	Accessory Electric Equipment	266,171.82	-	-	-	266,171.82	
3350	Miscellaneous Power Plant Equi	12,960.27	-	-	-	12,960.27	
3360	Roads, Railroads And Bridges	1,497.48	-	-	-	1,497.48	
	Total	**2,342,923.10**	**106,774.07**	**-**	**-**	**2,449,697.17**	**2,320,626.09**
PRAIRIE RIVER HE STATION - MINOR PR							
3300	Land & Land Rights, Fee	1,031.76	-	-	-	1,031.76	
3310	Structure & Improvements	3,612,628.90	(1,755,126.05)	(6,247.93)	-	1,851,254.92	
3312	Structure & Improvements, Recr	6,098.46	-	-	-	6,098.46	
3320	Reservoirs, Dams & Waterways	959,420.36	35,115.61	(700.00)	-	993,835.97	
3330	Water Wheels, Turbines & Gen	417,908.55	573,989.40	(129,316.22)	-	862,581.73	
3340	Accessory Electric Equipment	405.94	891,069.16	(12.00)	-	891,463.10	
3350	Miscellaneous Power Plant Equi	-	59,425.40	-	-	59,425.40	
	Total	**4,997,493.97**	**(195,526.48)**	**(136,276.15)**	**-**	**4,665,691.34**	**4,664,659.58**
RICE LAKE RESERVOIR - PROJECT 2360							
3300	Land & Land Rights, Fee	13,319.62	-	-	-	13,319.62	
3305	Land & Land Rights, Easements	6,359.61	-	-	-	6,359.61	
3312	Structure & Improvements, Recr	28,927.23	-	-	-	28,927.23	
3320	Reservoirs, Dams & Waterways	171,979.48	-	-	-	171,979.48	
3340	Accessory Electric Equipment	18,269.12	-	-	-	18,269.12	
	Total	**238,855.06**	**-**	**-**	**-**	**238,855.06**	**219,175.83**
SCANLON HE STATION - PROJECT 2360							
3300	Land & Land Rights, Fee	16,283.77	-	-	-	16,283.77	
3305	Land & Land Rights, Easements	500.00	-	-	-	500.00	
3310	Structure & Improvements	204,251.14	-	-	-	204,251.14	
3312	Structure & Improvements, Recr	100,152.33	-	-	-	100,152.33	
3320	Reservoirs, Dams & Waterways	1,365,052.46	773,089.36	(8,423.16)	-	2,129,718.66	
3330	Water Wheels, Turbines & Gen	247,600.94	-	-	-	247,600.94	
3340	Accessory Electric Equipment	834,074.72	-	-	-	834,074.72	
3350	Miscellaneous Power Plant Equi	37,548.82	-	-	-	37,548.82	

Minnesota Power
Plant in Service - 2016
Hydro Production

Facility and Plant Account		Beginning Balance	Current Additions	Current Retirements	Current Transfer/Adj	Ending Balance	Without Land
3360	Roads, Railroads And Bridges	17,171.99	-	-	-	17,171.99	
	Total	**2,822,636.17**	**773,089.36**	**(8,423.16)**	**-**	**3,587,302.37**	**3,570,518.60**
SYLVAN HE STATION - PROJECT NO 2454							
3300	Land & Land Rights, Fee	103,210.35	-	-	-	103,210.35	
3305	Land & Land Rights, Easements	17,118.86	-	-	-	17,118.86	
3310	Structure & Improvements	313,620.63	-	-	-	313,620.63	
3312	Structure & Improvements, Recr	36,001.73	-	-	-	36,001.73	
3320	Reservoirs, Dams & Waterways	1,481,483.13	-	-	-	1,481,483.13	
3330	Water Wheels, Turbines & Gen	222,259.37	-	-	-	222,259.37	
3340	Accessory Electric Equipment	177,557.69	-	-	-	177,557.69	
3350	Miscellaneous Power Plant Equi	19,391.61	-	-	-	19,391.61	
3360	Roads, Railroads And Bridges	1,974.52	-	-	-	1,974.52	
	Total	**2,372,617.89**	**-**	**-**	**-**	**2,372,617.89**	**2,252,288.68**
THOMSON HE STATION - PROJECT 2360							
3300	Land & Land Rights, Fee	332,449.65	-	-	-	332,449.65	
3305	Land & Land Rights, Easements	394.59	-	-	-	394.59	
3310	Structure & Improvements	4,372,019.58	3,628,110.62	(128,753.05)	-	7,871,377.15	
3312	Structure & Improvements, Recr	52,627.95	-	-	-	52,627.95	
3320	Reservoirs, Dams & Waterways	65,667,805.16	(1,597,061.31)	(229,012.89)	-	63,841,730.96	
3322	Reservoirs, Dams & Water, Recr	305.38	-	-	-	305.38	
3330	Water Wheels, Turbines & Gen	19,893,902.27	(1,834,649.05)	(443,920.94)	-	17,615,332.28	
3340	Accessory Electric Equipment	15,095,640.92	(3,918,265.85)	(1,297,477.51)	-	9,879,897.56	
3350	Miscellaneous Power Plant Equi	612,608.95	240,848.33	(21,825.22)	6,343.01	837,975.07	
3360	Roads, Railroads And Bridges	51,408.16	38,682.20	-	-	90,090.36	
	Total	**106,079,162.61**	**(3,442,335.06)**	**(2,120,989.61)**	**6,343.01**	**100,522,180.95**	**100,189,336.71**
WHITE IRON LAKE RESERVOIR - PROJECT							
3305	Land & Land Rights, Easements	349.88	-	-	-	349.88	
3320	Reservoirs, Dams & Waterways	6,141.88	-	-	-	6,141.88	
3340	Accessory Electric Equipment	22,792.48	-	-	-	22,792.48	
	Total	**29,284.24**	**-**	**-**	**-**	**29,284.24**	**28,934.36**
WHITEFACE RESERVOIR - PROJECT 2360							
3300	Land & Land Rights, Fee	43,073.87	-	-	-	43,073.87	
3305	Land & Land Rights, Easements	94,923.20	-	-	-	94,923.20	
3312	Structure & Improvements, Recr	34,312.69	-	-	-	34,312.69	
3320	Reservoirs, Dams & Waterways	1,172,280.39	74,331.44	-	-	1,246,611.83	
3340	Accessory Electric Equipment	14,446.85	-	-	-	14,446.85	
	Total	**1,359,037.00**	**74,331.44**	**-**	**-**	**1,433,368.44**	**1,295,371.37**
WINTON HE STATION - PROJECT 469							
3300	Land & Land Rights, Fee	106,603.64	-	-	-	106,603.64	
3302	Land & Land Rights-Recr, Fee	1,797.73	-	-	-	1,797.73	
3305	Land & Land Rights, Easements	210,170.75	-	-	-	210,170.75	
3310	Structure & Improvements	483,747.14	-	-	-	483,747.14	
3312	Structure & Improvements, Recr	155,301.29	-	-	-	155,301.29	

Minnesota Power
Plant in Service - 2016
Hydro Production

Facility and Plant Account		Beginning Balance	Current Additions	Current Retirements	Current Transfer/Adj	Ending Balance	Without Land
3320	Reservoirs, Dams & Waterways	1,938,936.94	-	-	-	1,938,936.94	
3330	Water Wheels, Turbines & Gen	551,521.16	137.43	(12,418.08)	-	539,240.51	
3340	Accessory Electric Equipment	1,971,608.07	(9,766.11)	-	-	1,961,841.96	
3350	Miscellaneous Power Plant Equi	82,729.13	-	-	-	82,729.13	
	Total	**5,502,415.85**	**(9,628.68)**	**(12,418.08)**	**-**	**5,480,369.09**	**5,161,796.97**
	Grand Total	**176,022,884.47**	**9,649,465.59**	**(2,386,702.20)**	**6,343.01**	**183,291,990.87**	**179,923,552.45**
Summary for All Hydro							
3300	Land & Land Rights, Fee	2,234,832.19	-	-	-	2,234,832.19	
3301	Land & Land Rights-Fish, Fee	588.76	-	-	-	588.76	
3302	Land & Land Rights-Recr, Fee	5,864.15	-	-	-	5,864.15	
3305	Land & Land Rights, Easements	1,126,271.82	-	-	-	1,126,271.82	
3307	Land & Land Rights-Recr, Easem	881.50	-	-	-	881.50	
3310	Structure & Improvements	12,081,342.52	2,139,949.50	(137,082.79)	-	14,084,209.23	
3312	Structure & Improvements, Recr	1,267,812.18	711,457.54	-	-	1,979,269.72	
3320	Reservoirs, Dams & Waterways	99,770,861.05	10,796,569.76	(344,649.44)	-	110,222,781.37	
3322	Reservoirs, Dams & Water, Recr	10,953.24	-	-	-	10,953.24	
3330	Water Wheels, Turbines & Gen	34,066,201.98	(1,399,902.79)	(585,655.24)	-	32,080,643.95	
3340	Accessory Electric Equipment	23,666,868.04	(3,036,962.80)	(1,297,489.51)	-	19,332,415.73	
3350	Miscellaneous Power Plant Equi	1,378,316.33	413,925.36	(21,825.22)	6,343.01	1,776,759.48	
3360	Roads, Railroads And Bridges	412,090.71	24,429.02	-	-	436,519.73	
	Grand Total	**176,022,884.47**	**9,649,465.59**	**(2,386,702.20)**	**6,343.01**	**183,291,990.87**	**179,923,552.45**

Minnesota Power
Depreciation Reserve - 2016
Hydro Production

Facility and Plant Account		Beginning Reserve	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve
BIRCH LAKE RESERVOIR - PROJECT 469								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3307	Land & Land Rights-Recr, Easem	-	-	-	-	-	-	-
3312	Structure & Improvements, Recr	6,893.55	167.28	-	-	-	-	7,060.83
3320	Reservoirs, Dams & Waterways	236,097.95	73,983.57	(13,018.64)	(329,282.65)	-	-	(32,219.77)
3322	Reservoirs, Dams & Water, Recr	1,176.00	-	-	-	-	-	1,176.00
3340	Accessory Electric Equipment	27,573.67	-	-	-	-	-	27,573.67
	Total	**271,741.17**	**74,150.85**	**(13,018.64)**	**(329,282.65)**	**-**	**-**	**3,590.73**
BLANCHARD HE STATION - PROJECT 346								
3300	Land & Land Rights, Fee	1.52	-	-	-	-	-	1.52
3302	Land & Land Rights-Recr, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3310	Structure & Improvements	437,961.05	9,787.96	-	-	-	-	447,749.01
3312	Structure & Improvements, Recr	49,030.71	723.48	-	-	-	-	49,754.19
3320	Reservoirs, Dams & Waterways	1,675,478.39	69,464.00	(93,494.75)	(312,884.39)	-	-	1,338,563.25
3330	Water Wheels, Turbines & Gen	2,065,833.83	41,966.92	-	-	-	-	2,107,800.75
3340	Accessory Electric Equipment	1,280,746.60	14,462.16	-	-	-	-	1,295,208.76
3350	Miscellaneous Power Plant Equi	88,165.25	2,309.01	-	-	-	-	90,474.26
	Total	**5,597,217.35**	**138,713.53**	**(93,494.75)**	**(312,884.39)**	**-**	**-**	**5,329,551.74**
BOULDER LAKE RESERVOIR - PROJECT 23								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3302	Land & Land Rights-Recr, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3310	Structure & Improvements	2,076.89	22.20	-	-	-	-	2,099.09
3312	Structure & Improvements, Recr	130,770.61	3,332.16	-	-	-	-	134,102.77
3320	Reservoirs, Dams & Waterways	167,856.84	488.16	-	-	-	-	168,345.00
3322	Reservoirs, Dams & Water, Recr	1,312.03	9.00	-	-	-	-	1,321.03
3340	Accessory Electric Equipment	11,108.88	186.06	-	-	-	-	11,294.94
3360	Roads, Railroads And Bridges	6,547.63	126.06	-	-	-	-	6,673.69
	Total	**319,672.88**	**4,163.64**	**-**	**-**	**-**	**-**	**323,836.52**
CLOQUET AND ST LOUIS RVR GAG'G STA								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3320	Reservoirs, Dams & Waterways	35,608.45	707.88	-	-	-	-	36,316.33
3340	Accessory Electric Equipment	26,750.14	606.60	-	-	-	-	27,356.74
	Total	**62,358.59**	**1,314.48**	**-**	**-**	**-**	**-**	**63,673.07**
FISH LAKE RESERVOIR - PROJECT 2360								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3302	Land & Land Rights-Recr, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3312	Structure & Improvements, Recr	8,305.46	734.04	-	-	-	-	9,039.50
3320	Reservoirs, Dams & Waterways	210,893.41	13,963.08	-	-	-	-	224,856.49
3322	Reservoirs, Dams & Water, Recr	1,629.25	13.56	-	-	-	-	1,642.81

Minnesota Power
Depreciation Reserve - 2016
Hydro Production

Facility and Plant Account		Beginning Reserve	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve
3340	Accessory Electric Equipment	9,666.31	191.64	-	-	-	-	9,857.95
	Total	**230,494.43**	**14,902.32**	**-**	**-**	**-**	**-**	**245,396.75**
FOND DU LAC HE STA PROJECT 2360								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3310	Structure & Improvements	497,564.43	7,398.54	-	-	-	-	504,962.97
3312	Structure & Improvements, Recr	15,643.88	194.40	-	-	-	-	15,838.28
3320	Reservoirs, Dams & Waterways	2,417,397.75	163,525.90	-	88,851.80	-	-	2,669,775.45
3330	Water Wheels, Turbines & Gen	32,168.73	98,825.52	-	-	-	-	130,994.25
3340	Accessory Electric Equipment	341,799.67	23,418.48	-	-	-	-	365,218.15
3350	Miscellaneous Power Plant Equi	21,746.65	2,255.58	-	-	-	-	24,002.23
3360	Roads, Railroads And Bridges	15,617.19	6,154.44	-	-	-	-	21,771.63
	Total	**3,341,938.30**	**301,772.86**	**-**	**88,851.80**	**-**	**-**	**3,732,562.96**
ISLAND LAKE RESERVOIR - PROJECT 236								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3301	Land & Land Rights-Fish, Fee	-	-	-	-	-	-	-
3302	Land & Land Rights-Recr, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3307	Land & Land Rights-Recr, Easem	-	-	-	-	-	-	-
3310	Structure & Improvements	17,025.63	218.48	-	-	-	-	17,244.11
3312	Structure & Improvements, Recr	257,528.97	12,997.96	-	-	-	-	270,526.93
3320	Reservoirs, Dams & Waterways	761,816.98	33,075.17	-	-	-	-	794,892.15
3322	Reservoirs, Dams & Water, Recr	4,116.18	27.72	-	-	-	-	4,143.90
3350	Miscellaneous Power Plant Equi	329.67	990.60	-	-	-	-	1,320.27
3360	Roads, Railroads And Bridges	2,150.01	17.64	-	-	-	-	2,167.65
	Total	**1,042,967.44**	**47,327.57**	**-**	**-**	**-**	**-**	**1,090,295.01**
KNIFE FALLS HE STATION - PROJECT 23								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3310	Structure & Improvements	152,401.86	1,648.08	-	-	-	-	154,049.94
3312	Structure & Improvements, Recr	1,985.49	16.08	-	-	-	-	2,001.57
3320	Reservoirs, Dams & Waterways	762,343.82	26,996.99	-	-	-	-	789,340.81
3330	Water Wheels, Turbines & Gen	132,783.14	3,288.24	-	-	-	-	136,071.38
3340	Accessory Electric Equipment	733,353.81	3,549.52	-	-	-	-	736,903.33
3350	Miscellaneous Power Plant Equi	12,262.54	1,105.67	-	-	-	-	13,368.21
3360	Roads, Railroads And Bridges	435.72	0.48	-	-	-	-	436.20
	Total	**1,795,566.38**	**36,605.06**	**-**	**-**	**-**	**-**	**1,832,171.44**
LITTLE FALLS HE STATION - PROJECT 2								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3310	Structure & Improvements	630,925.89	11,209.34	(2,081.81)	(7,499.06)	-	-	632,554.36
3312	Structure & Improvements, Recr	4,078.89	40.92	-	-	-	-	4,119.81
3320	Reservoirs, Dams & Waterways	1,446,407.36	30,751.08	-	-	-	-	1,477,158.44
3330	Water Wheels, Turbines & Gen	1,218,747.52	42,791.14	-	-	-	-	1,261,538.66

Minnesota Power
Depreciation Reserve - 2016
Hydro Production

Facility and Plant Account		Beginning Reserve	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve
3340	Accessory Electric Equipment	715,388.25	1,742.12	-	-	-	-	717,130.37
3350	Miscellaneous Power Plant Equi	154,281.27	2,422.32	-	-	-	-	156,703.59
	Total	**4,169,829.18**	**88,956.92**	**(2,081.81)**	**(7,499.06)**	**-**	**-**	**4,249,205.23**
MISC OPERATING LANDS								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
	Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**
PILLAGER HE STATION - PROJECT 2663								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3310	Structure & Improvements	82,402.45	1,449.60	-	-	-	-	83,852.05
3312	Structure & Improvements, Recr	9,049.73	77.88	-	-	-	-	9,127.61
3320	Reservoirs, Dams & Waterways	772,527.21	17,768.61	-	-	-	-	790,295.82
3330	Water Wheels, Turbines & Gen	210,418.24	181.92	-	-	-	-	210,600.16
3340	Accessory Electric Equipment	187,062.11	1,648.08	-	-	-	-	188,710.19
3350	Miscellaneous Power Plant Equi	12,576.84	8.04	-	-	-	-	12,584.88
3360	Roads, Railroads And Bridges	1,483.35	0.24	-	-	-	-	1,483.59
	Total	**1,275,519.93**	**21,134.37**	**-**	**-**	**-**	**-**	**1,296,654.30**
PRAIRIE RIVER HE STATION - MINOR PR								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3310	Structure & Improvements	410,143.94	40,924.06	(6,247.93)	1,137.81	-	-	445,957.88
3312	Structure & Improvements, Recr	4,864.37	25.68	-	-	-	-	4,890.05
3320	Reservoirs, Dams & Waterways	394,968.33	12,278.84	(700.00)	127.47	-	-	406,674.64
3330	Water Wheels, Turbines & Gen	190,083.70	12,918.43	(129,316.22)	23,549.50	-	-	97,235.41
3340	Accessory Electric Equipment	(10,749.46)	13,462.60	(12.00)	(64.55)	-	-	2,636.59
3350	Miscellaneous Power Plant Equi	(634.11)	895.46	-	-	-	-	261.35
	Total	**988,676.77**	**80,505.07**	**(136,276.15)**	**24,750.23**	**-**	**-**	**957,655.92**
RICE LAKE RESERVOIR - PROJECT 2360								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3312	Structure & Improvements, Recr	2,243.09	555.96	-	-	-	-	2,799.05
3320	Reservoirs, Dams & Waterways	41,588.81	2,716.44	-	-	-	-	44,305.25
3340	Accessory Electric Equipment	9,363.20	185.52	-	-	-	-	9,548.72
	Total	**53,195.10**	**3,457.92**	**-**	**-**	**-**	**-**	**56,653.02**
SCANLON HE STATION - PROJECT 2360								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3310	Structure & Improvements	115,797.33	1,842.84	-	-	-	-	117,640.17
3312	Structure & Improvements, Recr	44,896.69	1,151.16	-	-	-	-	46,047.85
3320	Reservoirs, Dams & Waterways	542,774.18	22,591.34	(8,423.16)	(111,367.62)	-	-	445,574.74
3330	Water Wheels, Turbines & Gen	171,259.16	1,590.48	-	-	-	-	172,849.64
3340	Accessory Electric Equipment	642,306.88	3,995.16	-	-	-	-	646,302.04
3350	Miscellaneous Power Plant Equi	10,826.98	556.68	-	-	-	-	11,383.66

Minnesota Power
Depreciation Reserve - 2016
Hydro Production

Facility and Plant Account		Beginning Reserve	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve
3360	Roads, Railroads And Bridges	13,753.41	71.24	-	-	-	-	13,824.65
	Total	**1,541,614.63**	**31,798.90**	**(8,423.16)**	**(111,367.62)**	**-**	**-**	**1,453,622.75**
SYLVAN HE STATION - PROJECT NO 2454								
3300	Land & Land Rights, Fee	(17,606.15)	-	-	-	-	-	(17,606.15)
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3310	Structure & Improvements	183,599.17	2,708.76	-	-	-	-	186,307.93
3312	Structure & Improvements, Recr	25,514.45	218.52	-	-	-	-	25,732.97
3320	Reservoirs, Dams & Waterways	924,526.20	11,603.28	-	-	-	-	936,129.48
3330	Water Wheels, Turbines & Gen	213,694.49	178.44	-	-	-	-	213,872.93
3340	Accessory Electric Equipment	162,810.65	307.20	-	-	-	-	163,117.85
3350	Miscellaneous Power Plant Equi	15,916.65	72.36	-	-	-	-	15,989.01
3360	Roads, Railroads And Bridges	1,974.52	-	-	-	-	-	1,974.52
	Total	**1,510,429.98**	**15,088.56**	**-**	**-**	**-**	**-**	**1,525,518.54**
THOMSON HE STATION - PROJECT 2360								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3310	Structure & Improvements	1,097,730.50	131,696.10	(128,753.05)	(360,699.40)	-	-	739,974.15
3312	Structure & Improvements, Recr	24,990.34	575.76	-	-	-	-	25,566.10
3320	Reservoirs, Dams & Waterways	5,685,031.35	1,331,599.28	(229,012.89)	(7,178,130.24)	4,006.54	-	(386,505.96)
3322	Reservoirs, Dams & Water, Recr	226.99	1.68	-	-	-	-	228.67
3330	Water Wheels, Turbines & Gen	1,453,902.18	307,918.26	(443,920.94)	2,590,499.29	19,810.05	-	3,928,208.84
3340	Accessory Electric Equipment	1,146,566.46	233,769.23	(1,297,477.51)	(434,417.94)	172,854.90	-	(178,704.86)
3350	Miscellaneous Power Plant Equi	183,859.06	11,616.47	(21,825.22)	(43,106.60)	17,563.54	2,719.44	150,826.69
3360	Roads, Railroads And Bridges	17,969.64	1,337.35	-	-	-	-	19,306.99
	Total	**9,610,276.52**	**2,018,514.13**	**(2,120,989.61)**	**(5,425,854.89)**	**214,235.03**	**2,719.44**	**4,298,900.62**
WHITE IRON LAKE RESERVOIR - PROJECT								
3305	Land & Land Rights, Easements	63.61	-	-	-	-	-	63.61
3320	Reservoirs, Dams & Waterways	2,961.60	66.24	-	-	-	-	3,027.84
3340	Accessory Electric Equipment	10,989.74	245.88	-	-	-	-	11,235.62
	Total	**14,014.95**	**312.12**	**-**	**-**	**-**	**-**	**14,327.07**
WHITEFACE RESERVOIR - PROJECT 2360								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3312	Structure & Improvements, Recr	24,615.16	202.08	-	-	-	-	24,817.24
3320	Reservoirs, Dams & Waterways	560,834.90	13,969.72	-	-	-	-	574,804.62
3340	Accessory Electric Equipment	5,584.67	184.56	-	-	-	-	5,769.23
	Total	**591,034.73**	**14,356.36**	**-**	**-**	**-**	**-**	**605,391.09**
WINTON HE STATION - PROJECT 469								
3300	Land & Land Rights, Fee	-	-	-	-	-	-	-
3302	Land & Land Rights-Recr, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	-	-	-	-	-	-	-
3310	Structure & Improvements	317,831.47	3,456.48	-	-	-	-	321,287.95
3312	Structure & Improvements, Recr	72,029.80	1,734.84	-	-	-	-	73,764.64

Minnesota Power
Depreciation Reserve - 2016
Hydro Production

Facility and Plant Account		Beginning Reserve	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve
3320	Reservoirs, Dams & Waterways	1,096,576.07	17,549.16	-	-	-	-	1,114,125.23
3330	Water Wheels, Turbines & Gen	317,628.28	5,529.46	(12,418.08)	(34,238.96)	-	-	276,500.70
3340	Accessory Electric Equipment	580,178.24	28,979.51	-	-	-	-	609,157.75
3350	Miscellaneous Power Plant Equi	154,996.52	(1,505.64)	-	-	-	-	153,490.88
	Total	**2,539,240.38**	**55,743.81**	**(12,418.08)**	**(34,238.96)**	**-**	**-**	**2,548,327.15**
	Grand Total	**34,955,788.71**	**2,948,818.47**	**(2,386,702.20)**	**(6,107,525.54)**	**214,235.03**	**2,719.44**	**29,627,333.91**
Summary for All Hydro								
3300	Land & Land Rights, Fee	(17,604.63)	-	-	-	-	-	(17,604.63)
3301	Land & Land Rights-Fish, Fee	-	-	-	-	-	-	-
3302	Land & Land Rights-Recr, Fee	-	-	-	-	-	-	-
3305	Land & Land Rights, Easements	63.61	-	-	-	-	-	63.61
3307	Land & Land Rights-Recr, Easem	-	-	-	-	-	-	-
3310	Structure & Improvements	3,945,460.61	212,362.44	(137,082.79)	(367,060.65)	-	-	3,653,679.61
3312	Structure & Improvements, Recr	682,441.19	22,748.20	-	-	-	-	705,189.39
3320	Reservoirs, Dams & Waterways	17,735,689.60	1,843,098.74	(344,649.44)	(7,842,685.63)	4,006.54	-	11,395,459.81
3322	Reservoirs, Dams & Water, Recr	8,460.45	51.96	-	-	-	-	8,512.41
3330	Water Wheels, Turbines & Gen	6,006,519.27	515,188.81	(585,655.24)	2,579,809.83	19,810.05	-	8,535,672.72
3340	Accessory Electric Equipment	5,880,499.82	326,934.32	(1,297,489.51)	(434,482.49)	172,854.90	-	4,648,317.04
3350	Miscellaneous Power Plant Equi	654,327.32	20,726.55	(21,825.22)	(43,106.60)	17,563.54	2,719.44	630,405.03
3360	Roads, Railroads And Bridges	59,931.47	7,707.45	-	-	-	-	67,638.92
	Grand Total	**34,955,788.71**	**2,948,818.47**	**(2,386,702.20)**	**(6,107,525.54)**	**214,235.03**	**2,719.44**	**29,627,333.91**

Minnesota Power
Depreciation Expense - 2016
Hydro Production

Facility and Plant Account		Beginning Plant Balances	Ending Plant Balances	Average Plant Balances	Beginning Reserve Balances	2016 Remaining Lives	2016 Provisions
BIRCH LAKE RESERVOIR - PROJECT 469							
3300	Land & Land Rights, Fee	1,556.25	1,556.25	1,556.25	-	48.0	-
3305	Land & Land Rights, Easements	232.79	232.79	232.79	-	48.0	-
3307	Land & Land Rights-Recr, Easem	381.50	381.50	381.50	-	48.0	-
3312	Structure & Improvements, Recr	14,922.38	14,922.38	14,922.38	6,893.55	48.0	167.28
3320	Reservoirs, Dams & Waterways	3,318,236.29	3,544,504.59	3,431,370.44	236,097.95	48.0	73,983.57
3322	Reservoirs, Dams & Water, Recr	1,176.00	1,176.00	1,176.00	1,176.00	48.0	-
3340	Accessory Electric Equipment	27,573.67	27,573.67	27,573.67	27,573.67	48.0	-
	Total	**3,364,078.88**	**3,590,347.18**	**3,477,213.03**	**271,741.17**		**74,150.85**
BLANCHARD HE STATION - PROJECT 346							
3300	Land & Land Rights, Fee	56,631.61	56,631.61	56,631.61	1.52	48.0	-
3302	Land & Land Rights-Recr, Fee	2,018.12	2,018.12	2,018.12	-	48.0	-
3305	Land & Land Rights, Easements	75,807.00	75,807.00	75,807.00	-	48.0	-
3310	Structure & Improvements	843,297.84	926,266.63	884,782.24	437,961.05	48.0	9,787.96
3312	Structure & Improvements, Recr	83,759.38	83,759.38	83,759.38	49,030.71	48.0	723.48
3320	Reservoirs, Dams & Waterways	4,610,444.15	4,663,964.46	4,637,204.31	1,675,478.39	48.0	69,464.00
3330	Water Wheels, Turbines & Gen	4,132,055.52	4,066,370.35	4,099,212.94	2,065,833.83	48.0	41,966.92
3340	Accessory Electric Equipment	1,974,930.43	1,974,930.43	1,974,930.43	1,280,746.60	48.0	14,462.16
3350	Miscellaneous Power Plant Equi	151,631.93	205,627.84	178,629.89	88,165.25	48.0	2,309.01
	Total	**11,930,575.98**	**12,055,375.82**	**11,992,975.90**	**5,597,217.35**		**138,713.53**
BOULDER LAKE RESERVOIR - PROJECT 23							
3300	Land & Land Rights, Fee	82,749.91	82,749.91	82,749.91	-	48.0	-
3302	Land & Land Rights-Recr, Fee	130.73	130.73	130.73	-	48.0	-
3305	Land & Land Rights, Easements	3,682.00	3,682.00	3,682.00	-	48.0	-
3310	Structure & Improvements	3,142.11	3,142.11	3,142.11	2,076.89	48.0	22.20
3312	Structure & Improvements, Recr	290,715.46	290,715.46	290,715.46	130,770.61	48.0	3,332.16
3320	Reservoirs, Dams & Waterways	191,288.68	191,288.68	191,288.68	167,856.84	48.0	488.16
3322	Reservoirs, Dams & Water, Recr	1,745.39	1,745.39	1,745.39	1,312.03	48.0	9.00
3340	Accessory Electric Equipment	20,039.76	20,039.76	20,039.76	11,108.88	48.0	186.06
3360	Roads, Railroads And Bridges	12,598.51	12,598.51	12,598.51	6,547.63	48.0	126.06
	Total	**606,092.55**	**606,092.55**	**606,092.55**	**319,672.88**		**4,163.64**
CLOQUET AND ST LOUIS RVR GAG'G STA							
3300	Land & Land Rights, Fee	2,068.21	2,068.21	2,068.21	-	48.0	-
3320	Reservoirs, Dams & Waterways	69,586.38	69,586.38	69,586.38	35,608.45	48.0	707.88
3340	Accessory Electric Equipment	55,864.48	55,864.48	55,864.48	26,750.14	48.0	606.60
	Total	**127,519.07**	**127,519.07**	**127,519.07**	**62,358.59**		**1,314.48**
FISH LAKE RESERVOIR - PROJECT 2360							
3300	Land & Land Rights, Fee	43,203.60	43,203.60	43,203.60	-	48.0	-
3302	Land & Land Rights-Recr, Fee	86.24	86.24	86.24	-	48.0	-
3305	Land & Land Rights, Easements	19,193.38	19,193.38	19,193.38	-	48.0	-
3312	Structure & Improvements, Recr	43,537.22	43,537.22	43,537.22	8,305.46	48.0	734.04
3320	Reservoirs, Dams & Waterways	881,122.70	881,122.70	881,122.70	210,893.41	48.0	13,963.08
3322	Reservoirs, Dams & Water, Recr	2,278.05	2,278.05	2,278.05	1,629.25	48.0	13.56
3340	Accessory Electric Equipment	18,864.63	18,864.63	18,864.63	9,666.31	48.0	191.64
	Total	**1,008,285.82**	**1,008,285.82**	**1,008,285.82**	**230,494.43**		**14,902.32**

Minnesota Power
Depreciation Expense - 2016
Hydro Production

Facility and Plant Account		Beginning Plant Balances	Ending Plant Balances	Average Plant Balances	Beginning Reserve Balances	2016 Remaining Lives	2016 Provisions
FOND DU LAC HE STA PROJECT 2360							
3300	Land & Land Rights, Fee	874,753.53	874,753.53	874,753.53	-	48.0	-
3310	Structure & Improvements	828,352.56	828,352.56	828,352.56	497,564.43	48.0	7,398.54
3312	Structure & Improvements, Recr	24,973.68	24,973.68	24,973.68	15,643.88	48.0	194.40
3320	Reservoirs, Dams & Waterways	10,566,858.11	10,587,519.23	10,577,188.67	2,417,397.75	48.0	163,525.90
3330	Water Wheels, Turbines & Gen	4,818,468.80	4,744,773.40	4,781,621.10	32,168.73	48.0	98,825.52
3340	Accessory Electric Equipment	1,465,885.98	1,465,885.98	1,465,885.98	341,799.67	48.0	23,418.48
3350	Miscellaneous Power Plant Equi	104,120.79	133,635.37	118,878.08	21,746.65	48.0	2,255.58
3360	Roads, Railroads And Bridges	323,986.34	309,733.16	316,859.75	15,617.19	48.0	6,154.44
	Total	**19,007,399.79**	**18,969,626.91**	**18,988,513.35**	**3,341,938.30**		**301,772.86**
ISLAND LAKE RESERVOIR - PROJECT 236							
3300	Land & Land Rights, Fee	245,752.63	245,752.63	245,752.63	-	48.0	-
3301	Land & Land Rights-Fish, Fee	588.76	588.76	588.76	-	48.0	-
3302	Land & Land Rights-Recr, Fee	1,831.33	1,831.33	1,831.33	-	48.0	-
3305	Land & Land Rights, Easements	70,314.04	70,314.04	70,314.04	-	48.0	-
3307	Land & Land Rights-Recr, Easem	500.00	500.00	500.00	-	48.0	-
3310	Structure & Improvements	26,447.12	51,487.61	38,967.37	17,025.63	48.0	218.48
3312	Structure & Improvements, Recr	374,891.34	1,086,348.88	730,620.11	257,528.97	48.0	12,997.96
3320	Reservoirs, Dams & Waterways	1,049,850.09	11,328,337.44	6,189,093.77	761,816.98	48.0	33,075.17
3322	Reservoirs, Dams & Water, Recr	5,448.42	5,448.42	5,448.42	4,116.18	48.0	27.72
3350	Miscellaneous Power Plant Equi	47,879.44	47,879.44	47,879.44	329.67	48.0	990.60
3360	Roads, Railroads And Bridges	2,996.41	2,996.41	2,996.41	2,150.01	48.0	17.64
	Total	**1,826,499.58**	**12,841,484.96**	**7,333,992.27**	**1,042,967.44**		**47,327.57**
KNIFE FALLS HE STATION - PROJECT 23							
3300	Land & Land Rights, Fee	3,779.70	3,779.70	3,779.70	-	48.0	-
3305	Land & Land Rights, Easements	34,453.54	34,453.54	34,453.54	-	48.0	-
3310	Structure & Improvements	231,511.94	231,511.94	231,511.94	152,401.86	48.0	1,648.08
3312	Structure & Improvements, Recr	2,759.52	2,759.52	2,759.52	1,985.49	48.0	16.08
3320	Reservoirs, Dams & Waterways	2,058,204.85	2,058,062.54	2,058,133.70	762,343.82	48.0	26,996.99
3330	Water Wheels, Turbines & Gen	290,616.45	290,616.45	290,616.45	132,783.14	48.0	3,288.24
3340	Accessory Electric Equipment	903,730.37	903,730.37	903,730.37	733,353.81	48.0	3,549.52
3350	Miscellaneous Power Plant Equi	38,893.16	69,034.30	53,963.73	12,262.54	48.0	1,105.67
3360	Roads, Railroads And Bridges	457.30	457.30	457.30	435.72	48.0	0.48
	Total	**3,564,406.83**	**3,594,405.66**	**3,579,406.25**	**1,795,566.38**		**36,605.06**
LITTLE FALLS HE STATION - PROJECT 2							
3300	Land & Land Rights, Fee	182,693.08	182,693.08	182,693.08	-	48.0	-
3305	Land & Land Rights, Easements	21,429.84	21,429.84	21,429.84	-	48.0	-
3310	Structure & Improvements	1,010,336.72	1,167,210.56	1,088,773.64	630,925.89	48.0	11,209.34
3312	Structure & Improvements, Recr	6,042.41	6,042.41	6,042.41	4,078.89	48.0	40.92
3320	Reservoirs, Dams & Waterways	2,712,872.06	3,431,884.49	3,072,378.28	1,446,407.36	48.0	30,751.08
3330	Water Wheels, Turbines & Gen	3,272,720.36	3,272,720.36	3,272,720.36	1,218,747.52	48.0	42,791.14
3340	Accessory Electric Equipment	799,011.11	799,011.11	799,011.11	715,388.25	48.0	1,742.12
3350	Miscellaneous Power Plant Equi	270,552.23	270,552.23	270,552.23	154,281.27	48.0	2,422.32
	Total	**8,275,657.81**	**9,151,544.08**	**8,713,600.95**	**4,169,829.18**		**88,956.92**
MISC OPERATING LANDS - ST LOUIS RIV							

Minnesota Power
Depreciation Expense - 2016
Hydro Production

Facility and Plant Account		Beginning Plant Balances	Ending Plant Balances	Average Plant Balances	Beginning Reserve Balances	2016 Remaining Lives	2016 Provisions
3300	Land & Land Rights, Fee	64,603.84	64,603.84	64,603.84	-	48.0	-
3305	Land & Land Rights, Easements	503,338.43	503,338.43	503,338.43	-	48.0	-
	Total	**567,942.27**	**567,942.27**	**567,942.27**	**-**		**-**
PILLAGER HE STATION - PROJECT 2663							
3300	Land & Land Rights, Fee	61,067.17	61,067.17	61,067.17	-	48.0	-
3305	Land & Land Rights, Easements	68,003.91	68,003.91	68,003.91	-	48.0	-
3310	Structure & Improvements	151,986.84	151,986.84	151,986.84	82,402.45	48.0	1,449.60
3312	Structure & Improvements, Recr	12,789.11	12,789.11	12,789.11	9,049.73	48.0	77.88
3320	Reservoirs, Dams & Waterways	1,549,297.94	1,656,072.01	1,602,684.98	772,527.21	48.0	17,768.61
3330	Water Wheels, Turbines & Gen	219,148.56	219,148.56	219,148.56	210,418.24	48.0	181.92
3340	Accessory Electric Equipment	266,171.82	266,171.82	266,171.82	187,062.11	48.0	1,648.08
3350	Miscellaneous Power Plant Equi	12,960.27	12,960.27	12,960.27	12,576.84	48.0	8.04
3360	Roads, Railroads And Bridges	1,497.48	1,497.48	1,497.48	1,483.35	48.0	0.24
	Total	**2,342,923.10**	**2,449,697.17**	**2,396,310.14**	**1,275,519.93**		**21,134.37**
PRAIRIE RIVER HE STATION - MINOR PR							
3300	Land & Land Rights, Fee	1,031.76	1,031.76	1,031.76	-	48.0	-
3310	Structure & Improvements	3,612,628.90	1,851,254.92	2,731,941.91	410,143.94	48.0	40,924.06
3312	Structure & Improvements, Recr	6,098.46	6,098.46	6,098.46	4,864.37	48.0	25.68
3320	Reservoirs, Dams & Waterways	959,420.36	993,835.97	976,628.17	394,968.33	48.0	12,278.84
3330	Water Wheels, Turbines & Gen	417,908.55	862,581.73	640,245.14	190,083.70	48.0	12,918.43
3340	Accessory Electric Equipment	405.94	891,463.10	445,934.52	(10,749.46)	48.0	13,462.60
3350	Miscellaneous Power Plant Equi	-	59,425.40	29,712.70	(634.11)	48.0	895.46
	Total	**4,997,493.97**	**4,665,691.34**	**4,831,592.66**	**988,676.77**		**80,505.07**
RICE LAKE RESERVOIR - PROJECT 2360							
3300	Land & Land Rights, Fee	13,319.62	13,319.62	13,319.62	-	48.0	-
3305	Land & Land Rights, Easements	6,359.61	6,359.61	6,359.61	-	48.0	-
3312	Structure & Improvements, Recr	28,927.23	28,927.23	28,927.23	2,243.09	48.0	555.96
3320	Reservoirs, Dams & Waterways	171,979.48	171,979.48	171,979.48	41,588.81	48.0	2,716.44
3340	Accessory Electric Equipment	18,269.12	18,269.12	18,269.12	9,363.20	48.0	185.52
	Total	**238,855.06**	**238,855.06**	**238,855.06**	**53,195.10**		**3,457.92**
SCANLON HE STATION - PROJECT 2360							
3300	Land & Land Rights, Fee	16,283.77	16,283.77	16,283.77	-	48.0	-
3305	Land & Land Rights, Easements	500.00	500.00	500.00	-	48.0	-
3310	Structure & Improvements	204,251.14	204,251.14	204,251.14	115,797.33	48.0	1,842.84
3312	Structure & Improvements, Recr	100,152.33	100,152.33	100,152.33	44,896.69	48.0	1,151.16
3320	Reservoirs, Dams & Waterways	1,365,052.46	2,129,718.66	1,747,385.56	542,774.18	48.0	22,591.34
3330	Water Wheels, Turbines & Gen	247,600.94	247,600.94	247,600.94	171,259.16	48.0	1,590.48
3340	Accessory Electric Equipment	834,074.72	834,074.72	834,074.72	642,306.88	48.0	3,995.16
3350	Miscellaneous Power Plant Equi	37,548.82	37,548.82	37,548.82	10,826.98	48.0	556.68
3360	Roads, Railroads And Bridges	17,171.99	17,171.99	17,171.99	13,753.41	48.0	71.24
	Total	**2,822,636.17**	**3,587,302.37**	**3,204,969.27**	**1,541,614.63**		**31,798.90**
SYLVAN HE STATION - PROJECT NO 2454							
3300	Land & Land Rights, Fee	103,210.35	103,210.35	103,210.35	(17,606.15)	48.0	-
3305	Land & Land Rights, Easements	17,118.86	17,118.86	17,118.86	-	48.0	-
3310	Structure & Improvements	313,620.63	313,620.63	313,620.63	183,599.17	48.0	2,708.76

Minnesota Power
Depreciation Expense - 2016
Hydro Production

Facility and Plant Account		Beginning Plant Balances	Ending Plant Balances	Average Plant Balances	Beginning Reserve Balances	2016 Remaining Lives	2016 Provisions
3312	Structure & Improvements, Recr	36,001.73	36,001.73	36,001.73	25,514.45	48.0	218.52
3320	Reservoirs, Dams & Waterways	1,481,483.13	1,481,483.13	1,481,483.13	924,526.20	48.0	11,603.28
3330	Water Wheels, Turbines & Gen	222,259.37	222,259.37	222,259.37	213,694.49	48.0	178.44
3340	Accessory Electric Equipment	177,557.69	177,557.69	177,557.69	162,810.65	48.0	307.20
3350	Miscellaneous Power Plant Equi	19,391.61	19,391.61	19,391.61	15,916.65	48.0	72.36
3360	Roads, Railroads And Bridges	1,974.52	1,974.52	1,974.52	1,974.52	48.0	-
	Total	**2,372,617.89**	**2,372,617.89**	**2,372,617.89**	**1,510,429.98**		**15,088.56**
THOMSON HE STATION - PROJECT 2360							
3300	Land & Land Rights, Fee	332,449.65	332,449.65	332,449.65	-	48.0	-
3305	Land & Land Rights, Easements	394.59	394.59	394.59	-	48.0	-
3310	Structure & Improvements	4,372,019.58	7,871,377.15	6,121,698.37	1,097,730.50	48.0	131,696.10
3312	Structure & Improvements, Recr	52,627.95	52,627.95	52,627.95	24,990.34	48.0	575.76
3320	Reservoirs, Dams & Waterways	65,667,805.16	63,841,730.96	64,754,768.06	5,685,031.35	48.0	1,331,599.28
3322	Reservoirs, Dams & Water, Recr	305.38	305.38	305.38	226.99	48.0	1.68
3330	Water Wheels, Turbines & Gen	19,893,902.27	17,615,332.28	18,754,617.28	1,453,902.18	48.0	307,918.26
3340	Accessory Electric Equipment	15,095,640.92	9,879,897.56	12,487,769.24	1,146,566.46	48.0	233,769.23
3350	Miscellaneous Power Plant Equi	612,608.95	837,975.07	725,292.01	183,859.06	48.0	11,616.47
3360	Roads, Railroads And Bridges	51,408.16	90,090.36	70,749.26	17,969.64	48.0	1,337.35
	Total	**106,079,162.61**	**100,522,180.95**	**103,300,671.78**	**9,610,276.52**		**2,018,514.13**
WHITE IRON LAKE RESERVOIR - PROJECT							
3305	Land & Land Rights, Easements	349.88	349.88	349.88	63.61	48.0	-
3320	Reservoirs, Dams & Waterways	6,141.88	6,141.88	6,141.88	2,961.60	48.0	66.24
3340	Accessory Electric Equipment	22,792.48	22,792.48	22,792.48	10,989.74	48.0	245.88
	Total	**29,284.24**	**29,284.24**	**29,284.24**	**14,014.95**		**312.12**
WHITEFACE RESERVOIR - PROJECT 2360							
3300	Land & Land Rights, Fee	43,073.87	43,073.87	43,073.87	-	48.0	-
3305	Land & Land Rights, Easements	94,923.20	94,923.20	94,923.20	-	48.0	-
3312	Structure & Improvements, Recr	34,312.69	34,312.69	34,312.69	24,615.16	48.0	202.08
3320	Reservoirs, Dams & Waterways	1,172,280.39	1,246,611.83	1,209,446.11	560,834.90	48.0	13,969.72
3340	Accessory Electric Equipment	14,446.85	14,446.85	14,446.85	5,584.67	48.0	184.56
	Total	**1,359,037.00**	**1,433,368.44**	**1,396,202.72**	**591,034.73**		**14,356.36**
WINTON HE STATION - PROJECT 469							
3300	Land & Land Rights, Fee	106,603.64	106,603.64	106,603.64	-	48.0	-
3302	Land & Land Rights-Recr, Fee	1,797.73	1,797.73	1,797.73	-	48.0	-
3305	Land & Land Rights, Easements	210,170.75	210,170.75	210,170.75	-	48.0	-
3310	Structure & Improvements	483,747.14	483,747.14	483,747.14	317,831.47	48.0	3,456.48
3312	Structure & Improvements, Recr	155,301.29	155,301.29	155,301.29	72,029.80	48.0	1,734.84
3320	Reservoirs, Dams & Waterways	1,938,936.94	1,938,936.94	1,938,936.94	1,096,576.07	48.0	17,549.16
3330	Water Wheels, Turbines & Gen	551,521.16	539,240.51	545,380.84	317,628.28	48.0	5,529.46
3340	Accessory Electric Equipment	1,971,608.07	1,961,841.96	1,966,725.02	580,178.24	48.0	28,979.51
3350	Miscellaneous Power Plant Equi	82,729.13	82,729.13	82,729.13	154,996.52	48.0	(1,505.64)
	Total	**5,502,415.85**	**5,480,369.09**	**5,491,392.47**	**2,539,240.38**	48.0	**55,743.81**
	Grand Total	**176,022,884.47**	**183,291,990.87**	**179,657,437.67**	**34,955,788.71**		**2,948,818.47**

Minnesota Power
Depreciation Expense - 2016
Hydro Production

Facility and Plant Account		Beginning Plant Balances	Ending Plant Balances	Average Plant Balances	Beginning Reserve Balances	2016 Remaining Lives	2016 Provisions
Summary for All Hydro							
3300	Land & Land Rights, Fee	2,234,832.19	2,234,832.19	2,234,832.19	(17,604.63)		-
3301	Land & Land Rights-Fish, Fee	588.76	588.76	588.76	-		-
3302	Land & Land Rights-Recr, Fee	5,864.15	5,864.15	5,864.15	-		-
3305	Land & Land Rights, Easements	1,126,271.82	1,126,271.82	1,126,271.82	63.61		-
3307	Land & Land Rights-Recr, Easem	881.50	881.50	881.50	-		-
3310	Structure & Improvements	12,081,342.52	14,084,209.23	13,082,775.88	3,945,460.61		212,362.44
3312	Structure & Improvements, Recr	1,267,812.18	1,979,269.72	1,623,540.95	682,441.19		22,748.20
3320	Reservoirs, Dams & Waterways	99,770,861.05	110,222,781.37	104,996,821.21	17,735,689.60		1,843,098.74
3322	Reservoirs, Dams & Water, Recr	10,953.24	10,953.24	10,953.24	8,460.45		51.96
3330	Water Wheels, Turbines & Gen	34,066,201.98	32,080,643.95	33,073,422.97	6,006,519.27		515,188.81
3340	Accessory Electric Equipment	23,666,868.04	19,332,415.73	21,499,641.89	5,880,499.82		326,934.32
3350	Miscellaneous Power Plant Equi	1,378,316.33	1,776,759.48	1,577,537.91	654,327.32		20,726.55
3360	Roads, Railroads And Bridges	412,090.71	436,519.73	424,305.22	59,931.47		7,707.45
	Grand Total	**176,022,884.47**	**183,291,990.87**	**179,657,437.67**	**34,955,788.71**		**2,948,818.47**

Minnesota Power
Plant in Service - 2016
Wind Production

Facility and Plant Account		Beginning Balance	Current Additions	Current Retirements	Current Transfer/Adj	Ending Balance	Without Land
Bison 1A Wind							
3400 Land and Land Rights		-	-	-	-	-	
3410 Structures and Improvements		7,471,983.68	-	-	-	7,471,983.68	
3440 Generators		67,724,389.03	46,811.89	-	-	67,771,200.92	
3450 Accessory Electric Equipment		652,477.19	-	-	-	652,477.19	
3460 Misc Power Plant Equipment		638,311.28	-	-	-	638,311.28	
	Total	**76,487,161.18**	**46,811.89**	**-**	**-**	**76,533,973.07**	**76,533,973.07**
Bison 1B Wind							
3400 Land and Land Rights		380,982.94	-	-	-	380,982.94	
3410 Structures and Improvements		4,038,502.21	-	-	-	4,038,502.21	
3440 Generators		64,990,031.86	-	-	-	64,990,031.86	
3450 Accessory Electric Equipment		4,211,765.27	-	-	-	4,211,765.27	
3460 Misc Power Plant Equipment		17,868.66	-	-	-	17,868.66	
	Total	**73,639,150.94**	**-**	**-**	**-**	**73,639,150.94**	**73,258,168.00**
Bison 2 Wind							
3400 Land and Land Rights		267,122.03	-	-	-	267,122.03	
3410 Structures and Improvements		9,664,236.74	-	-	-	9,664,236.74	
3440 Generators		124,521,645.05	-	-	-	124,521,645.05	
3450 Accessory Electric Equipment		13,834,046.10	-	-	-	13,834,046.10	
3460 Misc Power Plant Equipment		2,249,258.65	-	-	-	2,249,258.65	
	Total	**150,536,308.57**	**-**	**-**	**-**	**150,536,308.57**	**150,269,186.54**
Bison 3 Wind							
3400 Land and Land Rights		191,651.62	-	-	-	191,651.62	
3410 Structures and Improvements		9,232,069.53	(539.13)	-	-	9,231,530.40	
3440 Generators		125,328,048.77	(6,531.98)	-	-	125,321,516.79	
3450 Accessory Electric Equipment		14,862,268.71	(155.79)	-	-	14,862,112.92	
	Total	**149,614,038.63**	**(7,226.90)**	**-**	**-**	**149,606,811.73**	**149,415,160.11**
Bison 4 Wind							
3400 Land and Land Rights		642,091.10	61.18	-	-	642,152.28	
3410 Structures and Improvements		15,897,232.94	1,286.54	-	-	15,898,519.48	
3440 Generators		294,043,871.12	16,417.96	-	-	294,060,289.08	
3450 Accessory Electric Equipment		15,297,382.05	1,458.34	-	-	15,298,840.39	
	Total	**325,880,577.21**	**19,224.02**	**-**	**-**	**325,899,801.23**	**325,257,648.95**
Tac Ridge Wind							
3410 Structures and Improvements		4,440,383.38	1,797,165.67	-	-	6,237,549.05	
3440 Generators		41,556,824.77	730,137.63	(1,810,502.65)	-	40,476,459.75	
3450 Accessory Electric Equipment		798,645.88	-	-	-	798,645.88	
3460 Misc Power Plant Equipment		279,782.48	32,016.13	-	-	311,798.61	
	Total	**47,075,636.51**	**2,559,319.43**	**(1,810,502.65)**	**-**	**47,824,453.29**	**47,824,453.29**
	Grand Total	**823,232,873.04**	**2,618,128.44**	**(1,810,502.65)**	**-**	**824,040,498.83**	**822,558,589.96**
Summary for All Wind							
3400 Land and Land Rights		1,481,847.69	61.18	-	-	1,481,908.87	

Minnesota Power
Plant in Service - 2016
Wind Production

Facility and Plant Account	Beginning Balance	Current Additions	Current Retirements	Current Transfer/Adj	Ending Balance	Without Land
3410 Structures and Improvements	50,744,408.48	1,797,913.08	-	-	52,542,321.56	
3440 Generators	718,164,810.60	786,835.50	(1,810,502.65)	-	717,141,143.45	
3450 Accessory Electric Equipment	49,656,585.20	1,302.55	-	-	49,657,887.75	
3460 Misc Power Plant Equipment	3,185,221.07	32,016.13	-	-	3,217,237.20	
Grand Total	**823,232,873.04**	**2,618,128.44**	**(1,810,502.65)**	**-**	**824,040,498.83**	**822,558,589.96**

Minnesota Power
Depreciation Reserve - 2016
Wind Production

Facility and Plant Account		Beginning Reserve	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve
Bison 1A Wind								
3400 Land and Land Rights		-	-	-	-	-	-	-
3410 Structures and Improvements		781,966.63	225,994.45	-	-	-	-	1,007,961.08
3440 Generators		10,912,406.51	1,920,716.92	-	-	-	-	12,833,123.43
3450 Accessory Electric Equipment		31,010.84	19,116.72	-	-	-	-	50,127.56
3460 Misc Power Plant Equipment		63,335.27	19,171.08	-	-	-	-	82,506.35
	Total	**11,788,719.25**	**2,184,999.17**	**-**	**-**	**-**	**-**	**13,973,718.42**
Bison 1B Wind								
3400 Land and Land Rights		-	-	-	-	-	-	-
3410 Structures and Improvements		322,692.03	121,076.40	-	-	-	-	443,768.43
3440 Generators		5,771,770.58	1,929,763.50	-	-	-	-	7,701,534.08
3450 Accessory Electric Equipment		329,651.77	126,492.96	-	-	-	-	456,144.73
3460 Misc Power Plant Equipment		1,678.96	527.64	-	-	-	-	2,206.60
	Total	**6,425,793.34**	**2,177,860.50**	**-**	**-**	**-**	**-**	**8,603,653.84**
Bison 2 Wind								
3400 Land and Land Rights		-	-	-	-	-	-	-
3410 Structures and Improvements		1,237,611.51	264,389.04	-	-	-	-	1,502,000.55
3440 Generators		11,784,769.32	3,536,646.82	-	-	-	-	15,321,416.14
3450 Accessory Electric Equipment		1,347,786.72	391,708.69	-	-	-	-	1,739,495.41
3460 Misc Power Plant Equipment		81,980.08	67,973.52	-	-	-	-	149,953.60
	Total	**14,452,147.63**	**4,260,718.07**	**-**	**-**	**-**	**-**	**18,712,865.70**
Bison 3 Wind								
3400 Land and Land Rights		-	-	-	-	-	-	-
3410 Structures and Improvements		864,457.61	262,683.35	-	-	-	-	1,127,140.96
3440 Generators		10,941,634.82	3,590,828.05	-	-	-	-	14,532,462.87
3450 Accessory Electric Equipment		1,239,043.33	427,671.79	-	-	-	-	1,666,715.12
	Total	**13,045,135.76**	**4,281,183.19**	**-**	**-**	**-**	**-**	**17,326,318.95**
Bison 4 Wind								
3400 Land and Land Rights		-	-	-	-	-	-	-
3410 Structures and Improvements		200,304.81	461,564.08	-	-	-	-	661,868.89
3440 Generators		9,550,621.83	8,365,236.14	-	-	-	-	17,915,857.97
3450 Accessory Electric Equipment		165,808.84	444,945.20	-	-	-	-	610,754.04
	Total	**9,916,735.48**	**9,271,745.42**	**-**	**-**	**-**	**-**	**19,188,480.90**
Tac Ridge Wind								
3410 Structures and Improvements		814,991.14	150,370.47	-	-	-	-	965,361.61
3440 Generators		4,809,499.48	1,357,848.01	(1,810,502.65)	(255,404.34)	-	-	4,101,440.50
3450 Accessory Electric Equipment		165,792.37	25,197.00	-	-	-	-	190,989.37
3460 Misc Power Plant Equipment		21,357.02	10,030.65	-	-	-	-	31,387.67
	Total	**5,811,640.01**	**1,543,446.13**	**(1,810,502.65)**	**(255,404.34)**	**-**	**-**	**5,289,179.15**
	Grand Total	**61,440,171.47**	**23,719,952.48**	**(1,810,502.65)**	**(255,404.34)**	**-**	**-**	**83,094,216.96**

Minnesota Power
Depreciation Reserve - 2016
Wind Production

Facility and Plant Account	Beginning Reserve	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve
Summary for All Wind							
3400 Land and Land Rights	-	-	-	-	-	-	-
3410 Structures and Improvements	4,222,023.73	1,486,077.79	-	-	-	-	5,708,101.52
3440 Generators	53,770,702.54	20,701,039.44	(1,810,502.65)	(255,404.34)	-	-	72,405,834.99
3450 Accessory Electric Equipment	3,279,093.87	1,435,132.36	-	-	-	-	4,714,226.23
3460 Misc Power Plant Equipment	168,351.33	97,702.89	-	-	-	-	266,054.22
Grand Total	**61,440,171.47**	**23,719,952.48**	**(1,810,502.65)**	**(255,404.34)**	**-**	**-**	**83,094,216.96**

Minnesota Power
Depreciation Expense - 2016
Wind Production

Facility and Plant Account		Beginning Plant Balances	Ending Plant Balances	Average Plant Balances	Beginning Reserve Balances	Salvage Rates	2016 Remaining Lives	2016 Provisions
Bison 1A Wind								
3400 Land and Land Rights		-	-	-	-	(0.95)	29.0	-
3410 Structures and Improvements		7,471,983.68	7,471,983.68	7,471,983.68	781,966.63	(0.95)	29.0	225,994.45
3440 Generators		67,724,389.03	67,771,200.92	67,747,794.98	10,912,406.51	(0.95)	29.0	1,920,716.92
3450 Accessory Electric Equipment		652,477.19	652,477.19	652,477.19	31,010.84	(0.95)	29.0	19,116.72
3460 Misc Power Plant Equipment		638,311.28	638,311.28	638,311.28	63,335.27	(0.95)	29.0	19,171.08
	Total	**76,487,161.18**	**76,533,973.07**	**76,510,567.13**	**11,788,719.25**			**2,184,999.17**
Bison 1B Wind								
3400 Land and Land Rights		380,982.94	380,982.94	380,982.94	-	(0.93)	30.0	-
3410 Structures and Improvements		4,038,502.21	4,038,502.21	4,038,502.21	322,692.03	(0.93)	30.0	121,076.40
3440 Generators		64,990,031.86	64,990,031.86	64,990,031.86	5,771,770.58	(0.93)	30.0	1,929,763.50
3450 Accessory Electric Equipment		4,211,765.27	4,211,765.27	4,211,765.27	329,651.77	(0.93)	30.0	126,492.96
3460 Misc Power Plant Equipment		17,868.66	17,868.66	17,868.66	1,678.96	(0.93)	30.0	527.64
	Total	**73,639,150.94**	**73,639,150.94**	**73,639,150.94**	**6,425,793.34**			**2,177,860.50**
Bison 2 Wind								
3400 Land and Land Rights		267,122.03	267,122.03	267,122.03	-	(0.35)	31.0	-
3410 Structures and Improvements		9,664,236.74	9,664,236.74	9,664,236.74	1,237,611.51	(0.35)	31.0	264,389.04
3440 Generators		124,521,645.05	124,521,645.05	124,521,645.05	11,784,769.32	(0.35)	31.0	3,536,646.82
3450 Accessory Electric Equipment		13,834,046.10	13,834,046.10	13,834,046.10	1,347,786.72	(0.35)	31.0	391,708.69
3460 Misc Power Plant Equipment		2,249,258.65	2,249,258.65	2,249,258.65	81,980.08	(0.35)	31.0	67,973.52
	Total	**150,536,308.57**	**150,536,308.57**	**150,536,308.57**	**14,452,147.63**			**4,260,718.07**
Bison 3 Wind								
3400 Land and Land Rights		191,651.62	191,651.62	191,651.62	-	(0.42)	31.0	-
3410 Structures and Improvements		9,232,069.53	9,231,530.40	9,231,799.97	864,457.61	(0.42)	31.0	262,683.35
3440 Generators		125,328,048.77	125,321,516.79	125,324,782.78	10,941,634.82	(0.42)	31.0	3,590,828.05
3450 Accessory Electric Equipment		14,862,268.71	14,862,112.92	14,862,190.82	1,239,043.33	(0.42)	31.0	427,671.79
	Total	**149,614,038.63**	**149,606,811.73**	**149,610,425.18**	**13,045,135.76**			**4,281,183.19**
Bison 4 Wind								
3400 Land and Land Rights		642,091.10	642,152.28	642,121.69	-	0.03	33.0	-
3410 Structures and Improvements		15,897,232.94	15,898,519.48	15,897,876.21	200,304.81	0.03	33.0	461,564.08
3440 Generators		294,043,871.12	294,060,289.08	294,052,080.10	9,550,621.83	0.03	33.0	8,365,236.14
3450 Accessory Electric Equipment		15,297,382.05	15,298,840.39	15,298,111.22	165,808.84	0.03	33.0	444,945.20
	Total	**325,880,577.21**	**325,899,801.23**	**325,890,189.22**	**9,916,735.48**			**9,271,745.42**
Tac Ridge Wind								
3410 Structures and Improvements		4,440,383.38	6,237,549.05	5,338,966.22	814,991.14	(0.32)	27.0	150,370.47
3440 Generators		41,556,824.77	40,476,459.75	41,016,642.26	4,809,499.48	(0.32)	27.0	1,357,848.01
3450 Accessory Electric Equipment		798,645.88	798,645.88	798,645.88	165,792.37	(0.32)	27.0	25,197.00
3460 Misc Power Plant Equipment		279,782.48	311,798.61	295,790.55	21,357.02	(0.32)	27.0	10,030.65
	Total	**47,075,636.51**	**47,824,453.29**	**47,450,044.90**	**5,811,640.01**			**1,543,446.13**
	Grand Total	**823,232,873.04**	**824,040,498.83**	**823,636,685.94**	**61,440,171.47**			**23,719,952.48**
Summary for All Wind								
3400 Land and Land Rights		1,481,847.69	1,481,908.87	1,481,878.28	-			-
3410 Structures and Improvements		50,744,408.48	52,542,321.56	51,643,365.02	4,222,023.73			1,486,077.79
3440 Generators		718,164,810.60	717,141,143.45	717,652,977.03	53,770,702.54			20,701,039.44
3450 Accessory Electric Equipment		49,656,585.20	49,657,887.75	49,657,236.48	3,279,093.87			1,435,132.36
3460 Misc Power Plant Equipment		3,185,221.07	3,217,237.20	3,201,229.14	168,351.33			97,702.89
	Grand Total	**823,232,873.04**	**824,040,498.83**	**823,636,685.94**	**61,440,171.47**			**23,719,952.48**

MINNESOTA POWER
STRUCTURE AND AIRCRAFT
2016

PLANT IN SERVICE

Plant Account		Beginning Plant Balance	Current Additions	Current Retirements	Current Transfers	Current Adjustments	Ending Plant Balance
3900	Structures and Improvements	58,686,602.29	1,737,412.14	(248,799.54)	-	-	60,175,214.89
3928	Aircraft -Fixed Wing	3,034,142.63	-	-	-	-	3,034,142.63

DEPRECIATION RESERVE SUMMARY

Plant		Beginning Reserve Balance	Provision	Retirements	Cost of Removal	Salvage and Other Credits	Transfers and Adjustments	Ending Reserve
3900	Structures and Improvements	29,617,837.85	1,824,484.19	(342,572.08)	(31,988.44)	-	-	31,067,761.52
3928	Aircraft -Fixed Wing	721,271.69	946,103.86	-	-	-	-	1,667,375.55

DEPRECIATION EXPENSE CALCULATION

Plant		Beginning Plant Balance	Ending Plant Balance	Average Plant Balance	Beginning Reserve Balance	Salvage Rate	2015 Remaining Life	Provision
3900	Structures and Improvements	58,686,602.29	60,175,214.89	59,430,909.00	29,617,837.85		21.0	1,824,484.19
3928	Aircraft -Fixed Wing	3,034,142.63	3,034,142.63	3,034,143.00	721,271.69	16.4%	2.0	946,103.86

MINNESOTA POWER
By Year and Total Impact of Increase in Annual Accrual 2008-2012 Due to Using Gross Salvage Rates

	2013	2014	2015	2016	Total
Steam Generation					
Laskin Energy Center	147,000	588,000	588,000	441,000	1,764,000
Boswell					
Unit No. 1	11,100	44,400	44,400	33,300	133,200
Unit No. 2	12,300	49,200	49,200	36,900	147,600
Unit No. 3	77,400	309,600	309,600	232,200	928,800
Unit No. 4	86,700	346,800	346,800	260,100	1,040,400
Common	42,000	168,000	168,000	126,000	504,000
Taconite Harbor Energy Center					
Structure/Unit	(4,200)	(16,800)	(16,800)	(12,600)	(50,400)
Ash Ponds	300	1,200	1,200	900	3,600
Total	**372,600**	**1,490,400**	**1,490,400**	**1,117,800**	**4,471,200**

Schedule as requested in the Comments of the Minnesota Department of Commerce, Division of Energy Resources for Docket No. E-015/D-16-797 Minnesota Power's 2016 Remaining Life Depreciation Petition.

In the Matter of the Application of Minnesota Power for Authority to Increase Electric Service Rates in Minnesota,
Docket No. E015/GR-16-664

VOLUME III

Direct Testimony in Support of Change in Rates

David J. McMillan
Rate Case Overview

Patrick L. Cutshall
Capital Structure, Cost of Capital, and Retirement Plan Accounting

Robert B. Hevert
Return on Equity

Herbert G Minke, III
Regulatory Accounting

Steven W. Morris
Budgeting, Cost Allocations, and Expenses

Joshua J. Skelton
Generation

Christopher E. Fleege
Transmission & Distribution

Nicole R. Johnson
Employee Compensation and Benefits

Julie I. Pierce
Sales Forecast and Asset-Based Wholesale Energy Margins

Michael A. Perala
Large Power Customer Demand and Forecasting

Leann S. Oehlerking-Boes
Fuel Clause Adjustment

Jamie L. Jago
Tax Matters

Stewart J. Shimmin
Jurisdictional Costs and Class Cost of Service Study

Tina S. Koecher
Customer Solutions

Marcia A. Podratz
Revenue Requirements, Rate Design, and Annual Rate Review Mechanism

Before the Minnesota Public Utilities Commission

State of Minnesota

In the Matter of the Application of Minnesota Power
For Authority to Increase Rates for Electric Utility
Service in Minnesota

Docket No. E015/GR-16-664

Exhibit _____

REGULATORY ACCOUNTING

November 2, 2016

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excluding these costs from current cost recovery mechanisms, since the issuance of the Commission's Order in that docket, all internalized costs have been backed out or reduced from the total asset costs in calculating revenue requirements.

Q. How is Minnesota Power proposing to recover these costs in this rate review?

A. Minnesota Power is adding the costs excluded in its 2017 cost recovery riders back as an adjustment to this rate review. In developing the capital budget for 2017, internal operations and maintenance ("O&M") costs were added to the assets included in the current cost recovery riders in accordance with normal Federal Energy Regulatory Commission ("FERC") asset accounting. As such, they are not included in the O&M in this test year. As they will be excluded from the 2017 current cost recovery filings, they need to be added back to O&M in this rate review or they would not be recovered, either in this rate review or in any current cost recovery riders.

Q. Since Minnesota Power has yet to file all of its current cost recovery riders for 2017, how will the Company reconcile and establish the validity of this adjustment?

A. The adjustment is shown in Volume IV, Schedule A-6, column 34. Minnesota Power is filing its 2017 RRR coincident with this rate review and will file its remaining 2017 current cost recovery riders – the TCR Rider and the BEC4 Rider – in early 2017. After these additional riders are filed, Minnesota Power will supplement the record in this rate review with substantiation of the amounts included as adjustments in this general rate review.

III. BOSWELL UNITS REMAINING LIVES

Q. What is Minnesota Power seeking with respect to Boswell Energy Center's remaining life in this proceeding?

A. In Docket No. E015/M-15-988, Minnesota Power petitioned the Commission for approval to consolidate and modify the Boswell Energy Center ("BEC") remaining life to 2050 and utilize the BEC4 Rider to pass back a portion of the benefits to customers ("BEC Remaining Life Petition"). On September 23, 2016, this Petition was withdrawn

by the Commission at Minnesota Power's request, so that the BEC remaining life issue could instead be considered in this rate case. Minnesota Power is now requesting that the life of all BEC Units – Boswell Units 1 and 2 ("BEC1&2"), Unit 3 ("BEC3"), Unit 4 ("BEC4") and Boswell Energy Center Common Facilities ("Common Facilities") – be consolidated into one remaining life and be extended until 2050. The extension request is based primarily on the significant multi-emission retrofit work done at BEC3 (Docket No. E015/M-06-1501) and BEC4 (Docket No. E015/M-12-920) and to reduce the annual costs of BEC for customers. To be clear, this request relates to establishing the remaining useful life for cost recovery purposes, and is not meant to change the operational life or lives of BEC.

Q. Is Minnesota Power's current request the same as the request made in the BEC Remaining Life Petition?

A. Partly. In its BEC Remaining Life Petition, Minnesota Power requested that the life of all BEC units be consolidated into one remaining life and be extended until 2050. This part of the request is the same. However, we also requested permission to modify our existing BEC4 Rider in order to capture the expense savings for customers related to BEC4's reduced depreciation costs. Further, we did not propose a method for capturing and returning expense savings to customers for BEC units other than BEC4. This part of the request has changed.

Q. Please describe how this request has changed now that Minnesota Power is asking for the life consolidation and extension in this general rate case.

A. Minnesota Power now proposes that the entire benefit of this life extension be applied to base rates in this rate case, reducing the revenue requirement by $22.7 million and ensuring all savings are captured in a simple way. See Exhibit___(HGM), Schedule 8 for more detail. We are no longer requesting to modify the BEC4 Rider. Minnesota Power is also asking the Commission to determine that it may consider the operational life for BEC as separate from the useful remaining life for cost recovery purposes. While Minnesota Power believes the proposed useful life of 2050 is the right cost recovery

timeframe, the Company also understands the thoughtfulness needed in evaluating such an extension given the uncertainty of potential future regulatory and environmental regulations. Overall, we believe that BEC's remaining life for cost recovery purposes should be established so there is certainty for customers and for the Company regarding costs as we enter a phase of retiring coal generation. I provide additional support for our proposal to extend BEC's useful life to 2050 below.

Q. What is the background of Boswell Energy Center (BEC)?

A. As explained by Company witness Mr. Skelton, BEC is Minnesota Power's largest thermal facility, with four units and a capacity of over 1,000 MW. The facility is located in Cohasset, Minnesota, just west of Grand Rapids. All four units are fueled by low-mercury, low-sulfur Powder River Basin coal from Wyoming and Montana. BEC employs about 200 full-time Minnesota Power employees, and has historically provided nearly half of the energy that Minnesota Power generated to meet customer requirements. Substantial investments have been made at the facility for environmental and efficiency related improvements since 2007, with the largest investment being the environmental retrofit of BEC4, which is now complete. The environmental retrofit of BEC4 and a major environmental upgrade at BEC3 are the primary drivers behind the ability of BEC to be able to operate until 2050. A detailed description of individual units is included in Exhibit ___ (HGM), Schedule 9.

Q. What is the current remaining life for BEC units?

A. In its most recently approved Remaining Life Depreciation filing (Docket No. E015/D-15-711), the Commission approved remaining lives for BEC as shown in Table 1 below. Currently, BEC units each have separate remaining lives except for BEC1&2, which are combined and share one remaining life. The remaining life for the Common Facilities is based on an average of the remaining lives of Boswell Units 1, 2, 3 and 4. Historically, Common Facilities remaining life has been adjusted when other BEC units have been adjusted.

On September 30, 2016, we submitted a 2016 Remaining Life Depreciation filing (Docket No. E015/D-16-797), which also requested remaining lives for units consistent with Table 1. However, we also noted in that filing that we intended to seek a common, 2050 remaining life for all BEC units in our 2017 Remaining Life Depreciation filing and in this general rate filing.

Table 1

Unit	*Current Approved Remaining Life*
BEC1&2	2024
BEC3	2034
BEC4	2035
Common Facilities	2030

Finally, I note that on October 19, 2016, the Company announced its plans to close BEC1&2 at the end of 2018. The effect of this announcement is discussed in more detail below.

Q. Why should all BEC units be combined into one remaining life?

A. Minnesota Power believes BEC should be treated as one unit for depreciation and should have one period for cost recovery. Boswell Energy Center was built in stages over the course of many years and has been developed and retrofitted in different stages with distinct remaining lives for each unit, with the Common Facilities remaining life based on an average of the remaining lives of Boswell Units 1, 2, 3 and 4. However, Minnesota Power believes it is appropriate to combine all of BEC, not just the Common Facilities, into one remaining life because the units share critical infrastructure making them difficult to be separated and because the entire facility has been well maintained to extend operations to 2050. Furthermore, treating BEC as one unit for depreciation purposes will create certainty with regard to recovery of costs the Company has invested in BEC on behalf of customers, while reducing customers' annual costs.

Q. Please explain how the BEC units share critical infrastructure.

A. A retirement scenario for BEC1&2 conducted for the 2015 Integrated Resource Plan ("IRP") showed facility-wide impacts due to the operational integration of the overall BEC facility. The Boswell units are not stand-alone, making it difficult for them to be separated. They share unit-critical electrical, water and heating infrastructure, ancillary services and fuel handling with the rest of the facility. Specifically, BEC1&2 provide support to BEC3 and BEC4 during black-start procedures, ongoing operations, and during critical system restoration activities for Minnesota Power. BEC1&2 provide compressed air, service water and intake cooling water to the larger BEC facility. The electrical and communication infrastructure of BEC1&2 is also closely intertwined with BEC3.

When BEC1&2 are retired at the end of 2018, a new system restoration plan will need to be developed by the Company for the region, adding costs to the remaining BEC facility for common equipment, such as station heating, and services that would be needed for power production to continue.

Q. Why is Minnesota Power requesting the consolidated BEC remaining life be extended to 2050?

A. The primary driver behind this extension is the BEC4 retrofit that, when combined with the BEC3 retrofit completed in 2009, justifies an extended life for the length of time the equipment may operate. To determine this time frame, Minnesota Power obtained an opinion from Burns & McDonnell that is attached as Exhibit ___ (HGM) Schedule 10. Burns & McDonnell analyzed the status of each individual Boswell unit and concluded:

> "Industry experience has shown that with proper maintenance and investments into replacements and upgrades (environmental, performance, and otherwise), that similar coal fired facilities have achieved physical lives well past their originally planned lives. From our knowledge of the BEC facilities, we don't see any reason that the BEC facility is an outlier. Therefore, based upon industry experience, we see no technical reasons

that Boswell Energy Center could not physically be operated until 2050, with appropriate maintenance and investments into replacements and upgrades."[4]

Minnesota Power recognizes that there are several current and future environmental regulations that may significantly impact the BEC future operations and ultimate operating life. Burns & McDonnell properly qualified its opinion for the same reason and stated: "This opinion does not consider limitations due to future environmental regulations, nor does it consider the economics of such operation, which we understand are being addressed by Minnesota Power."[5] However, Minnesota Power seeks to properly account for BEC's expected accounting remaining life and to be in accordance with Minn. Stat. § 216B.11 to "fix proper and adequate rates and methods of depreciation" for BEC.

Q. Explain why treating BEC as one unit and establishing cost recovery will be good for customers and for Minnesota Power.

A. Given the uncertainty of potential future regulatory and environmental regulations, the future operational lives of BEC3 and BEC4 and the full impact of the BEC1&2 closure are not yet certain. We think it is much better for customers to face a firmly established path for cost recovery of these assets rather than face the impacts of many decisions along the way, which could significantly alter costs from year to year. Additionally, with a certain path established for cost recovery, the Company will be in a better position to respond to outcomes of these environmental regulations, which may have significant impacts on the future operations of BEC units.

[4] Exhibit ____ (HGM), Schedule 10, page 3.
[5] Exhibit ____ (HGM), Schedule 10, page 3.

Q. Are there other reasons why extending the BEC remaining life is beneficial to customers?

A. Yes. Extending the BEC life to 2050 will result in cost savings for customers of $22.7 million annually, as incorporated into this general rate proceeding. Extending the life will also provide stable cost recovery for assets that face an uncertain future, thereby reducing the potential volatility of rates. Because of potential carbon and other environmental regulations, some coal units, including those at BEC, will be forced to retire before the end of their operational lives. This will mean customers will eventually pay for a new generation resource at the same time they are paying for the retired coal resource – essentially paying for two resources at the same time. Extending the BEC life to 2050 of these concurrent costs will help to minimize the impact on customer bills by stretching the cost recovery over a longer period of time.

Q. Does the 2015 IRP Order requiring Minnesota Power to close BEC1&2 in 2022 or the recent announcement that Minnesota Power intends to close BEC1&2 at the end of 2018 change the Company's request?

A. No. Minnesota Power believes, even with the 2015 IRP outcome and the recent end of 2018 closure announcement, that the unrecovered balance of BEC1&2 should be recovered over a period until 2050. Consolidating remaining lives and extending the recovery through 2050 will help minimize impacts to customers.

Q. Is Minnesota Power's request for a remaining life for depreciation purposes that is different from the expected remaining life for economic purposes contrary to Generally Accepted Accounting Principles ("GAAP")?

A. No. In Minnesota, utilities are required to follow the Federal Power Commission ("FPC") uniform system of accounts and all FPC orders, pronouncements, rules and regulations.[6] This body of pronouncements is generally referred to in the industry as FERC accounting. The FPC defines depreciation expense for FERC accounting purposes. It states that utilities must use a method of depreciation that allocates, in a systematic and

[6] *See* Minn. R. 7825.0300, Subpart 2.

rational manner, the service value of depreciable property over the service life of the property. It also states that the estimated useful service lives of depreciable property must be supported by engineering, economic, or other depreciation studies. Further, it states that utilities must use percentage rates of depreciation that are based on a method of depreciation that allocates in a systematic and rational manner the service value of depreciable property to the service life of the property.

FERC accounting, not unlike GAAP for nonutility entities, depreciates the remaining balance of the asset over the estimated service life of the asset. But FERC accounting does not consider the additional authority given to this Commission in establishing GAAP for depreciation expenses in Minnesota.

In Minnesota, the Commission has additional methods, considerations, and authority to directly determine the annual depreciation expense in the annual Depreciation Certification for utility assets. The Commission, using standard FERC accounting for depreciation as a framework, can deviate from standard FERC accounting in determining the remaining service life or recovery period of an asset and thereby establishes GAAP for depreciation expense in Minnesota. The Commission can make this determination to deviate from standard FERC methods upon proper review of the appropriateness of a utility's proposal in the annual Depreciation Certification.

In the annual Depreciation Certification rules,[7] utilities are required to file annually and the Commission considers and approves the specific rates by which utilities depreciate their assets. These depreciation amounts are used for more than just ratemaking purposes. The resulting depreciation expense is a component of the utility's financial statements, used in its other regulatory and external reports such as its filings with FERC and the Securities and Exchange Commission. The rules state that depreciation accounting is "a process of allocation not valuation."[8] Allocation is an important

[7] *See* Minn. R. 7825.0600, Subp. 1.
[8] *See* Minn. R. 7825.0500, Subp. 7.

principle when considering the public interest in establishing the recoverable life of an asset for ratemaking purposes. Further, under the Methods for Depreciation Certification Studies in the Minnesota Rules,[9] "No specific methods are prescribed by the Commission in estimating service lives and salvage values."[10] Minnesota Power's proposal is within the methods and authority granted to the Commission to modify traditional FERC accounting for depreciation expense and is thereby allowable GAAP for utilities in Minnesota.

Q. Please summarize why the Commission should use its authority to allow Minnesota Power to extend remaining life for BEC units, including BEC1&2, to 2050.

A. Minnesota Power is proactively choosing to cease operations at BEC1&2 in order to prepare for energy policy changes that will require reductions in carbon emissions. We believe this is in customers' interests. Additionally, the Company is attempting to minimize the impact on customer bills by extending the remaining life for cost recovery purposes. Given that the Commission has the authority to allow the recovery of remaining undepreciated plant balances, and that the Company is actively working to meet Minnesota's energy policy goals with respect to reducing carbon emissions, we believe the current proposal warrants approval, including with respect to BEC1&2.

Further, due to this proactive approach, the Company should be treated in the same manner as if it were required to terminate operations before the end of a facility's current remaining useful life. Minn. Stat. § 216B.16, subd. 6 states that if the Commission orders a generating facility to terminate its operations before the end of the facility's physical life in order to comply with a specific state or federal energy statute or policy, the Commission may allow the public utility to recover any positive net book value of the facility as determined by the Commission. Minnesota Power's 2050 remaining life proposal is consistent with this statute and applicable Commission determinations.

[9] Minn. R. 7825.0800.
[10] Minn. R. 7825.0800.

Q. How would Minnesota Power account for BEC1&2 if it were required to terminate operations before the facility's current remaining useful life?

A. The Company would follow FERC accounting for normal retirements in this situation. This includes following the Electric Plant Instructions included in the Uniform System of Accounts Prescribed for Public Utilities and Licensees Subject to the Provisions of the Federal Power Act, 18 C.F.R. Part 101, specifically Part 10 of the Electric Plant Instructions, entitled Additions and Retirements of Electric Plant, Subparts B(2) and D–F.

Under FERC accounting for normal retirements – if, for example, we assumed BEC1&2 was to be retired on December 31, 2018 – as of December 31, 2015 an entry would be made to:

Debit Account 10810 Accumulated Provision for Depreciation for approximately $82 million (the original installed cost of the assets)

Credit to Account 10110 Electric Plant in Service for approximately $82 million (the original installed cost of the assets)

After the entry, the balance in Electric Plant in Service would be zero and the debit balance in Accumulated Provision for Depreciation would be approximately $29 million. This $29 million is the undepreciated portion of the retired assets. Minnesota Power would depreciate this amount over the original useful life of 2024.

In addition, FERC allows for recovery of stranded costs under 18 C.F.R. Part 101, specifically in the Balance Sheet Chart of Accounts, Account 182.2(C), entitled Unrecovered Plant and Regulatory Study Costs, which discusses how to account for unrecovered costs of plant facilities that have been prematurely retired.

Q. How would this example work if the Commission granted Minnesota Power's request to consolidate BEC units into one remaining life and extend the life until 2050?

A. If the BEC facility were treated for accounting and recovery purposes as one unit with a life of 2050, the unrecovered balances of BEC1&2 would be accounted for as described in the example above, but recovered over a period until 2050.

Q. What are the customer savings from the Minnesota Power proposal?

A. Extending the remaining life of all BEC units would result in a savings of $22.7 million in the 2017 test year. All benefits to customers due to extending the remaining life for BEC units have been incorporated into the Company's revenue requirements calculation, as described by Ms. Podratz.

IV. ENERGY-INTENSIVE TRADE EXPOSED ("EITE") FILING

Q. What is the EITE filing?

A. On November 13, 2015, Minnesota Power submitted its Petition to Ensure Competitive Electric Rates for EITE Customers in Docket No. E015/M-15-984. The Petition included a request for approval of two separate proposals: (1) an EITE Customer Rider to provide an energy charge credit to EITE-eligible customers who meet specified criteria, and (2) an EITE Current Cost Recovery Rider to allow Minnesota Power to recover from non-EITE customers the costs of providing the rate credit to EITE customers.

On March 23, 2016, the Commission issued its Order Denying Petition without Prejudice, finding that Minnesota Power had not met its evidentiary burden to show the proposed rates would confer a net benefit on the utility or the state.

On June 30, 2016, Minnesota Power submitted its revised Petition seeking (1) approval of an EITE Rate Rider that would provide specified customers, eligible under the EITE statute, an Energy Charge Credit based upon each customer's site peak electric usage and

BURNS McDONNELL

November 3, 2015

Mr. Tom Coughlin

Minnesota Power
30 West Superior Street
Duluth, MN 55802-2093

Re: Boswell Energy Center Remaining Operating Life

Dear Mr. Coughlin:

Burns & McDonnell, based upon their knowledge of the plant and their general knowledge of the coal fired industry, was requested to render an opinion regarding the potential end of physical life of the operating units at Minnesota Power's Boswell Energy Center (BEC) located in Cohasset, Minnesota. Specifically, Minnesota Power is considering operating Unit 1 through 4 at BEC to the year 2050. Following is a description, including recent upgrades and modifications, for each of the units at BEC.

BEC UNITS 1 AND 2

Both Boswell Units 1 and 2 are pulverized coal-fired Riley-Stoker (now Babcock Power) Wall-Fired Steam Generators. Units 1 and 2 were commissioned in 1958 and 1960 respectively. Units 1 and 2 are rated at approximately 69 MW (net) and 75 MW (gross) each. Units 1 and 2 currently employ low NO_x burners for NO_x control, and a fabric filter (aka baghouse) for particulate control. No SO_2 control is currently employed for Units 1 and 2. Units 1, 2 and 3 share a common flue chimney.

Unit 1 reheat section was replaced in 2011. Unit 2 has not undergone any significant boiler replacements in recent years. Turbine overhauls are performed on a 7 year rotation for both units.

BEC UNIT 3

Boswell Unit 3 is a pulverized coal-fired Combustion Engineering (now Alstom) Tangentially-Fired Steam Generator commissioned in 1973. Unit 3 is rated at approximately 357 MW (net) and 387 MW (gross).

In 2009 the following major equipment was installed to reduce emissions of SO_2, Particulate Matter (Fly Ash), NOx and Mercury:

- Low NOx Burners (LNBs) and separated Overfire Air (SOFA) System
- Selective Catalytic Reduction (SCR) System
- Wet Limestone Forced Oxidized Flue Gas Desulfurization (FGD) System
- Fabric Filter (Baghouse)
- Centrifugal Induced Draft Fans with Variable Frequency Drives (VFDs)

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- Flue Gas Ductwork to new air pollution control equipment
- Activated Carbon Injection System
- Fly Ash Handling System
- Fly Ash Conditioning System for on-site disposal

Additional work performed in 2009 included the following:

- Surface area additions to primary and finishing SH sections
- Coal pipe hanger replacement.
- FW #4 heater replacement.
- Turbine HP/IP rotor replacement.

Turbine overhauls are performed on a 7 year rotation.

BEC UNIT 4

Boswell Unit 4 is a pulverized coal-fired Combustion Engineering Tangentially-Fired Steam Generator commissioned in 1980. Unit 4 is rated at 652 MW (gross) and 584 MW Net. Unit 4 currently employs a wet venturi scrubber for particulate control, and a spray tower absorber (wet scrubber) using fly ash reagent for SO_2 control. A small portion of the flue gas (2 to 5 percent) bypasses the venturi scrubber and spray tower absorber. This bypass stream is treated by a dry electrostatic precipitatior (ESP) for particulate control before being blended with the remainder of the flue gas, where it acts to reheat the flue gas exiting the venturi scrubber and spray tower absorber.

The following major boiler and turbine work was performed in 2010:

- Surface area additions to the primary and finishing SH sections of the boiler
- Replacement of boiler coutant bottom section
- Installation of a Low NOx Firing System, OFA, burners.
- Coal pipe hanger replacement
- Gas igniters and warm up guns
- Complete replacement of turbine HP/IP/LP/LP rotor
- Sootblower additions
- Condenser re-tubed
- FW heaters #1, #2 replaced

Minnesota Power is currently in construction on a project to retrofit air pollution control equipment to Boswell Unit 4. The Project consists of installing a new semi-dry flash dryer

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Mr. Tom Coughlin
Minnesota Power
November 3, 2015
Page 3

absorber (Alstom NID) scrubber followed by a new pulse-jet fabric filter for SO2 and particulate matter control respectively to treat the entire flue gas stream. An activated carbon injection system will be installed upstream of the NID scrubber for mercury control. The existing venturi scrubbers, spray tower absorbers, and hot-side ESP will no longer be used. The flue gas bypass used to reheat the flue gas will no longer be used. The fly ash from the boiler, as well as the scrubber waste byproduct and activated carbon, will be collected in the fabric filter. A portion of the collected waste product will be recycled back to the NID scrubber to improve reagent (lime) usage rates. A portion of the collected waste product will be collected in bins for disposal. The tie-in outage for the project is scheduled for the fall of 2015. The boiler nose section, and all SH division panels, are scheduled for replacement at this time as well.

Summary Level Opinion

Industry experience has shown that with proper maintenance and investments into replacements and upgrades (environmental, performance, and otherwise), that similar coal fired facilities have achieved physical lives well past their originally planned lives. From our knowledge of the BEC facilities, we don't see any reason that the BEC facility is an outlier. Therefore, based upon industry experience, we see no technical reasons that Boswell Energy Center could not physically be operated until 2050, with appropriate maintenance and investments into replacements and upgrades.

This opinion does not consider limitations due to future environmental regulations, nor does it consider the economics of such operation, which we understand are being addressed by Minnesota Power.

Sincerely,

David W. Hendry

David W. Hendry, P.E.
Project Manager