



August 31, 2016

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

VIA Electronic Filing

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

Dear Mr. Wolf:

Re: **Minnesota Rules 7825.2800 - 7825.2840**
Annual Reports Containing Fuel Information and Data

In compliance with the above rules, Minnesota Power hereby submits to the Commission the following reports and information:

- Attachment No. 1 Minnesota Power's Fuel and Energy Source Procurement and Energy Dispatching Policies Annual Report (MN Rule 7825.2800). (Docket No. E-015/M-05-277) In addition, Minnesota Power's additional information regarding its plans with respect to acquiring fuel and purchased energy as required in Docket No. E-015/M-05-277 dated December 20, 2006. Please note this document contains Trade Secret Data.
- Attachment No. 2 Independent Auditor's Report on Minnesota Power's Accounting for Automatic Adjustments during the period July 2015 through June 2016 (MN Rule 7825.2820).
- Attachment No. 3 Minnesota Power's Annual Report of Automatic Adjustment Charges for the period July 2015 through June 2016 (MN Rule 7825.2810). Included is a breakdown by energy type as required in Docket No. AA-04-1279 dated December 7, 2005.
- Attachment No. 4 Minnesota Power's Annual Five-Year Projection of Fuel Costs (MN Rule 7825.2830). Please note this document contains Trade Secret Data.
- Attachment No. 5 Minnesota Power's Notice of Availability of Reports (MN Rule 7825.2840).
- Attachment No. 6 Minnesota Power's Compliance Report on MISO Operations and Cost Impacts to Minnesota Power (Docket No. E-015/PA-01-539).

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- Attachment No. 7 Minnesota Power's List of Network Resources Designated to Serve Native Load (Docket No. E-015/M-05-277 dated December 20, 2006).
- Attachment No. 8 Minnesota Power's reporting matrix required under the MISO Day 2 Cost Order (Docket E-015/M-05-277 and Docket E-015/M-08-528).
- Attachment No. 9 Minnesota Power's monthly MISO Day 2 charges and allocation (Docket E, G-999/AA-07-1130).
- Attachment No. 10 Minnesota Power's Annual and Daily ASM charges and summary (Docket No. E-015/M-08-528 dated August 23, 2010).
- Attachment No. 11 Minnesota Power's ARR process and information. (Docket No. E-015/M-05-277). Please note this document contains Trade Secret Data.
- Attachment No. 12 Minnesota Power's generation facilities maintenance expenses (Docket No. E999/AA-06-1208 dated February 6, 2008).
- Attachment No. 13 Minnesota Power's transmission transformer inventory by size for 100 kV defined by low side transmission kV (Docket No. E-999/AA-07-1130 dated August 31, 2009). Please note this document contains Trade Secret Data.
- Attachment No. 14 Minnesota Power's Report Addressing the Purchase Power Agreement with Manitoba Hydro (Docket No. E015/M-10-961; dated March 11, 2011). Please note this document contains Trade Secret Data.
- Attachment No. 15 Minnesota Power's Offsetting Revenues and/or Compensation Received by Investor-Owned Utilities (IOUs) (Docket No. E-999/AA-10-884 dated April 6, 2012). Please note this document contains Trade Secret Data.
- Attachment No. 16 Handling of forced outages; the lessons learned, information sharing and a simple identification of forced outages with discussion on how such outages could have been avoided or alleviated. (Docket No. E-999/AA-10-884 dated April 6, 2012).

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- Attachment No. 17 A comparison and reconciliation of the MISO accredited value of their generators using MISO accredited UCAP values and integrated resource plan capacity ratings (Docket No. E-999/AA-10-884 dated April 6, 2012 and Docket No. E-999/AA-09-961 dated August 31, 2009). Please note this document contains Trade Secret Data.
- Attachment No. 18 Congestion Cost Analysis (Docket No. E-999/AA-11-792 dated August 16, 2013). Please note the access database is considered Trade Secret Data in its entirety and will be provided on cd separate from this filing.
- Attachment No. 19 Plant Outages Contingency Plans (Docket No. E-999/AA-08-995 dated March 15, 2010).
- Attachment No. 20 Wind Curtailment Report for Oliver I and Oliver II (Docket No. E-015/M-05-975 Dated December 20, 2005).
- Attachment No. 21 Wind Curtailment Report for Bison (Docket No. E015/M-11-234; Dated September 8, 2011 and Docket No. E015/M-11-626; Dated November 2, 2011).

Minnesota Power believes this filing comports with the Commission's Notice relating to Revised Procedures for Handling Trade Secret and Privileged Data, pursuant to Minn. Rule part 7829.0500. As required by the revised procedures, a statement providing the justification for excising the trade secret data is attached to this letter.

Sincerely,

/s/ Leann Oehlerking-Boes

Leann Oehlerking-Boes
Manager –
Energy Pricing & Billing

sr

Enc.

c: John Lindell (via U.S. Mail)
Service List

STATEMENT REGARDING JUSTIFICATION FOR EXCISING
TRADE SECRET INFORMATION

Minnesota Power has excised material from the Annual Report Containing Fuel Information and Data (Report) because the format of the Report requires Minnesota Power to compile and provide information regarding its methods, techniques and process for obtaining and managing fuel supply resources for its generating facilities, including fuel supply, contract terms and conditions, as well as fuel cost projections. This is highly confidential information: Minnesota Power's competitors, as well as its potential suppliers, would gain a commercial advantage over Minnesota Power if this information was publicly available. As a result of public availability, Minnesota Power and its customers would suffer from corruption of Minnesota Power's negotiating position. Minnesota Power follows strict internal procedures to maintain the secrecy of this information in order to capitalize on economic value of the information to Minnesota Power.

Minnesota Power believes that this statement justifies why the information excised from the attached Report should remain a trade secret under Minn. Stat. §13.37. Minnesota Power respectfully requests the opportunity to provide additional justification in the event of a challenge to the trade secret designation provided herein.

Date prepared: August 31, 2016

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**MINNESOTA POWER
SEPTEMBER 1, 2016**

**FUEL AND ENERGY SOURCE PROCUREMENT AND ENERGY DISPATCHING POLICIES ANNUAL
REPORT PURSUANT TO MINNESOTA RULE 7825.2800**

Fuel Source Procurement Policies

Summary of Fuel Contracts

Coal Contracts

- Kennecott Coal Sales LLC, an Oregon LLC (currently known as Rio Tinto Energy), Spring Creek Mine, Decker, Montana.

A 2002 Master Coal Purchase Agreement signed on [TRADE SECRET DATA HAS BEEN EXCISED] provides general terms and definitions governing purchases and sales of coal.

An agreement signed on [TRADE SECRET DATA HAS BEEN EXCISED] provides for purchases of a minimum of [TRADE SECRET DATA HAS BEEN EXCISED] tons of coal for the period of [TRADE SECRET DATA HAS BEEN EXCISED] through [TRADE SECRET DATA HAS BEEN EXCISED]. This agreement also provides for purchases of a minimum of [TRADE SECRET DATA HAS BEEN EXCISED] tons of coal annually for the period of [TRADE SECRET DATA HAS BEEN EXCISED] through [TRADE SECRET DATA HAS BEEN EXCISED].

An agreement signed on [TRADE SECRET DATA HAS BEEN EXCISED] provides for purchases of up to [TRADE SECRET DATA HAS BEEN EXCISED] tons of coal for the period of [TRADE SECRET DATA HAS BEEN EXCISED] through [TRADE SECRET DATA HAS BEEN EXCISED].

An agreement signed on [TRADE SECRET DATA HAS BEEN EXCISED] provides for purchases of up to [TRADE SECRET DATA HAS BEEN EXCISED] tons of coal for the period of [TRADE SECRET DATA HAS BEEN EXCISED] through [TRADE SECRET DATA HAS BEEN EXCISED].

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An agreement signed on [TRADE SECRET DATA HAS BEEN EXCISED] provides for purchases of a minimum of [TRADE SECRET DATA HAS BEEN EXCISED] tons of coal for the period of [TRADE SECRET DATA HAS BEEN EXCISED] through [TRADE SECRET DATA HAS BEEN EXCISED].

An agreement signed on [TRADE SECRET DATA HAS BEEN EXCISED] provides for purchases of up to [TRADE SECRET DATA HAS BEEN EXCISED] tons of coal for the period of [TRADE SECRET DATA HAS BEEN EXCISED] through [TRADE SECRET DATA HAS BEEN EXCISED].

- Kennecott Coal Sales LLC, an Oregon LLC (currently known as Rio Tinto Energy), Antelope Mine, Campbell and Converse Counties, Wyoming.

A 2002 Master Coal Purchase Agreement signed on [TRADE SECRET DATA HAS BEEN EXCISED] provides general terms and definitions governing purchases and sales of coal.

An agreement signed on [TRADE SECRET DATA HAS BEEN EXCISED] provides for purchases of up to [TRADE SECRET DATA HAS BEEN EXCISED] tons of coal for the period of [TRADE SECRET DATA HAS BEEN EXCISED] through [TRADE SECRET DATA HAS BEEN EXCISED].

An agreement signed on [TRADE SECRET DATA HAS BEEN EXCISED] provides for purchases of a minimum of [TRADE SECRET DATA HAS BEEN EXCISED] tons of coal for the period of [TRADE SECRET DATA HAS BEEN EXCISED] through [TRADE SECRET DATA HAS BEEN EXCISED].

- Arch Coal Sales, Black Thunder Mine, Wright, Wyoming

A 2010 Master Coal Purchase Agreement signed on [TRADE SECRET DATA HAS BEEN EXCISED] provides general terms and definitions governing purchases and sales of coal.

A 2012 Agreement provides for the supply of coal from [TRADE SECRET DATA HAS BEEN EXCISED] through [TRADE SECRET DATA HAS BEEN EXCISED] for a minimum of [TRADE SECRET DATA HAS BEEN EXCISED] tons of coal.

A 2013 Agreement provides for purchases of a minimum of [TRADE SECRET DATA HAS BEEN EXCISED] tons of coal for the period of [TRADE SECRET DATA HAS BEEN EXCISED] through [TRADE SECRET DATA HAS BEEN EXCISED]. This agreement also provides for purchases of a minimum of [TRADE SECRET DATA HAS BEEN EXCISED] tons of coal annually for the period of

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[TRADE SECRET DATA HAS BEEN EXCISED] through **[TRADE SECRET DATA HAS BEEN EXCISED]**.

A 2014 Agreement provides for the supply of coal for the period of **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]** for a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal.

A 2014 Agreement provides for the supply of coal for the period of **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]** for a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal.

A 2015 Agreement provides for the supply of coal for the period of **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]** for a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal.

A 2015 Agreement provides for the supply of coal for the period of **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]** for a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal.

- Peabody CoalSales, LLC., St. Louis, Missouri, North Antelope Rochelle Mine, Campbell and Converse Counties, Wyoming

A 2014 Agreement provides for the supply of coal from **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]** for a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal annually.

An amendment to a 2014 Agreement provides for the supply of coal from **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]** for a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal annually.

An amendment to a 2014 Agreement provides for the supply of coal from **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]** for a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal annually.

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An amendment to a 2014 Agreement provides for the supply of coal from **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]** for a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal annually.

- Decker Coal Company , Decker Mine, Decker, Montana

An Agreement signed on **[TRADE SECRET DATA HAS BEEN EXCISED]** provides for purchases of a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal and a maximum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal annually for the period of **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]**.

An Amendment to an Agreement signed on **[TRADE SECRET DATA HAS BEEN EXCISED]** provides for purchases of a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal and a maximum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal annually for the period of **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]**. In addition, the Amendment provides for an additional maximum purchase of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal from **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]** with a minimum purchase of **[TRADE SECRET DATA HAS BEEN EXCISED]** coal tons.

Biomass Contracts

Currently Minnesota Power purchases wood fuel under purchase orders with 35 separate suppliers for use at the Hibbard Renewable Energy Center and the Rapids Energy Center with varying expiration dates. In addition, MP contracts with two suppliers of ground railroad ties: Stella Jones and Ties2. The Stella Jones contract provides biomass to the Hibbard Renewable Energy Center from **[TRADE SECRET DATA HAS BEEN EXCISED]** for a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons and a maximum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons per year. The Ties2 contract provides biomass to the Hibbard Renewable Energy Center from **[TRADE SECRET DATA HAS BEEN EXCISED]** for a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons for the period of **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]**. This agreement also provides for purchases of a minimum of **[TRADE SECRET DATA HAS BEEN EXCISED]** tons and a maximum of **[TRADE SECRET DATA**

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HAS BEEN EXCISED] tons annually for the period of **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Rail Contracts

- Burlington Northern Santa Fe (currently known as BNSF Railway)

Boswell, Taconite Harbor, Hibbard, Rapids, and Laskin - A 2002 Agreement provides for the transportation of coal through **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Boswell, Taconite Harbor, Hibbard, and Rapids- A 2016 Agreement provides for the transportation of coal through **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Vessel Contract

- Midwest Energy Resources Company

Taconite Harbor - A 2014 Agreement provided for the transportation of not less than the minimum annual tonnage requirement which shall be the greater of **[TRADE SECRET DATA HAS BEEN EXCISED]** or **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal and not more than **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal for the period of **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]**. In addition, this agreement also provides for the transportation of not less than the minimum annual tonnage requirement which shall be the greater of **[TRADE SECRET DATA HAS BEEN EXCISED]** or **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal and not more than **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal for the period of **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Hibbard Renewable Energy Center - A 2014 Agreement with Midwest Energy Resources Company provided for the transportation of not less than **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal from **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]**. In addition, this agreement was also amended for the transportation of not less than **[TRADE SECRET DATA HAS BEEN EXCISED]** tons of coal from **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]**.

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Supplemental Fuels

Minnesota Power uses middle distillate fuel oil for start-up and flame stabilization at the Taconite Harbor Energy Center. The current procurement policy allows for the selection of **[TRADE SECRET DATA HAS BEEN EXCISED]** based upon price, past performance, resources and quality. Minnesota Power currently has an agreement with Best Oil from **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Minnesota Power also uses natural gas for start-up and flame stabilization at the Boswell and Laskin Stations, the TG5 unit at Sappi Station and for the unit at Blandin Paper. Minnesota Power will go out for bids on the Blandin, Boswell, and Sappi Stations. At the Laskin Station, gas is provided by rates established by the Minnesota Energy Resources and approved by the MPUC.

A 2015 Agreement with Northern Natural Gas signed on **[TRADE SECRET DATA HAS BEEN EXCISED]** provides Laskin with **[TRADE SECRET DATA HAS BEEN EXCISED]** from **[TRADE SECRET DATA HAS BEEN EXCISED]** through **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Fuel Cost Minimization Activities

Minnesota Power's fuel procurement practices are aimed at strategically minimizing our customers' current energy costs while complying with current environmental regulations and, simultaneously, taking action to assure cost-effective compliance with future environmental requirements. Attaining these objectives requires that purchases and sales of energy, applicable coal and rail contract provisions, current and projected emissions, mine plans of our suppliers, requirements of customers, fuel delivery schedules, fuel inventory, fuel and rail costs, etc., be continuously evaluated. Balancing these parameters requires superimposing long- and short-term planning objectives on near-term operations. Descriptions of these activities have been summarized above.

In addition, Minnesota Power uses a multi-discipline fuels procurement and strategy team to achieve fuel cost minimization and environmental compliance objectives. The team meets regularly to coordinate all activities related to fuel procurement. Objectives include:

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- Implement strategies for short- and long-term fuel procurement which provide a high-quality, reliable fuel supply to Minnesota Power facilities to achieve the lowest attainable electric rates.
- Optimize fuel costs and quality through developing, implementing and managing the short-term strategy for fuel scheduling and deliveries within operating and contract parameters.
- Environmental compliance planning efforts focus on the formulation, implementation and minimization of short- and long-term corporate strategies for fuel quality issues and the impact of fuel on plant performance and compliance with existing and emerging environmental regulations.

Energy Source Procurement and Dispatching Policies

Short Term Activities

The Midcontinent Independent System Operator (MISO) is a fully integrated regional transmission organization that operates a Day-Ahead Energy and Ancillary Services Market, a Real-Time Energy and Ancillary Services Market, and a Financial Transmission Rights (FTR) Market.

Minnesota Power's (MP) generation resources, load, and transmission assets are located within the MISO footprint and are part of the MISO market. The MISO markets are used to balance generation with load and to hedge congestion between generation and load. There are a variety of tools that MP uses to help with analysis and participation in the MISO market. Minnesota Power offers to sell energy and ancillary services sourced from their supply resources and bids to buy energy to serve load in the MISO market each day. MISO procures enough market ancillary service products to meet the needs of the entire footprint and MP is allocated their load ratio share of the costs to procure the needed ancillary services. If market clearing prices are above Minnesota Power's generator offer prices, MP generation will be selected to serve MP load. If market prices are below MP generator offers, other lower cost resources will be selected to serve MP load, and MP's generation will be backed down. MP also looks to buy energy in the short term bilateral market when there is an energy need and purchases can be made below expected MISO day-ahead costs.

Medium Term Activities

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Minnesota Power uses a medium term production cost model to determine their forward monthly energy position. Model inputs include forecasted customer loads, generator capabilities, contract energy purchases and sales, forward energy prices, planned generator outages, and forced and maintenance outage rates. Inputs are updated and the model is run at least monthly to determine MP's forward energy position.

Planned generator outages are usually known about a year or more in advance, so when outage dates are set and a significant energy deficit is identified, MP watches the wholesale market for least cost supply energy options and times bilateral purchases to keep short position within the volumetric limits outlined in MP's Power Marketing Risk Management Policy. If forward energy prices drop below forecasted spot market prices the entire short position could be covered with a bilateral purchase prior to the start of the outage. If lower cost energy is available in the areas that border the MISO north region, MP may choose to use bilateral purchases from those border areas to cover a generator outage.

Report of Independent Accountants

To Management of ALLETE, Inc.

We have performed the procedures enumerated below, which were agreed to by ALLETE, Inc. and Minnesota Power, an operating division of ALLETE, Inc. (together the "Company"), solely to assist the specified parties in evaluating compliance with rule 7825.2820 of the Rules of the Minnesota Public Utilities Commission (the "MPUC") Governing Automatic Adjustment Charges. The Company is responsible for Section A of Minnesota Power's Annual Report of Automatic Adjustment Charges for the period July 1, 2015 through June 30, 2016 found in Attachment No. 3 (Section A) of the Company's Annual Reports Containing Fuel Information and Data (the "Annual Report") pursuant to MPUC Rules 7825.2800 – 7825.2840. Management is responsible for the Company's compliance with those requirements. This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. The sufficiency of these procedures is solely the responsibility of those parties specified in this report. Consequently, we make no representation regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose. The procedures performed on Section A of the Company's Annual Report are summarized as follows:

- 1) For the months of November 2015, January 2016 and March 2016, we agreed the cost of fuel issued for consumption at the Company's generating stations included on Line 1 of Attachment No. 3 (Section A) of the Company's Annual Report to the Company's fuel ledger without exception. For the months of November 2015, January 2016 and March 2016, we agreed fuel purchases recorded in the Company's fuel ledger to supporting invoices for fuel purchases totaling \$13.1 million (95.88% coverage), \$10.5 million (99.75% coverage), and \$11.9 million (99.98% coverage), respectively, without exception. Additionally, we recomputed the average monthly cost of fuel consumed per ton by plant for the months of November 2015, January 2016, and March 2016 as determined from the Company's fuel ledger and compared such averages to the average monthly cost of fuel purchased per ton by plant as determined from the Company's fuel ledger for the respective month, noting the amounts varied by less than 5.0%, except as follows:

Plant Location	Average Monthly Cost of Fuel Consumed per Ton	Monthly Cost of Fuel Purchased per Ton	
January 2016			
Boswell Coal	\$ 27.17	\$ 36.94	*
March 2016			
Boswell Coal	\$ 31.31	\$ 36.43	*

- * Management explained this variance is primarily due to the new transportation contract prices with BNSF being higher under the new terms as compared to the previous contract. The new rail contract with BNSF began 1/1/2016. We have not performed any procedures over this variance and provide no assurance for management's explanations.

- 2) For the months of November 2015, January 2016 and March 2016, we agreed the cost of energy purchased included on Line 2 of Attachment No. 3 (Section A) of the Company's Annual Report to the Company's fuel ledger without exception. For the months of November 2015, January 2016, and March 2016, we selected, purchase transactions by purchased energy type (i.e. from a specific counterparty or MISO charge type) from the Company's fuel ledger representing aggregate purchases of \$8.5 million (74% coverage), \$8.6 million (73% coverage), and \$9.5 million (85% coverage), respectively. We agreed the selected purchase transaction amounts to supporting documentation, consisting of third party invoices, intercompany invoices, sales checkout reports, MISO Charge Types Excluding Asset Energy and Admin Charges Report, RE-Generation to Load LMP Difference Report or the MISO to MISO Report, noting no differences.
- 3) For purchase transactions selected in 2) above which were MISO Charges, (January 2016 and March 2016), we obtained the MISO Charge Types Excluding Asset Energy and Admin Charges Report and, selected, at a minimum, 16 MISO related charges for January 2016 and March 2016, respectively, and agreed them to the underlying invoices, noting no differences.
- 4) For the months of November 2015, January 2016, and March 2016, we agreed the total electric kilowatt hour sales on Line 6 of Attachment No. 3 (Section A) of the Company's Annual Report to the Company's billing register, as adjusted for unbilled amounts, for each respective month noting no differences.
- 5) For the months of November 2015, January 2016 and March 2016, we obtained schedules of the individual inter-system and interruptible power sales transactions comprising the total electric kilowatt hour sales on Line 7 of Attachment No. 3 (Section A) of the Company's Annual Report and tested the mathematical accuracy without exception. From the schedules, we selected individual inter-system and interruptible power sales transactions comprising 360.5 million kWh (79% coverage), 309.2 million kWh (73% coverage), and 324 million kWh (75% coverage) for the months of November 2015, January 2016, and March 2016, respectively and agreed the individual transaction amounts to supporting documentation consisting of the MISO EP Daily Sales Output Report or Company invoices noting no exceptions.

We were not engaged to and did not conduct an examination, the objective of which would be the expression of an opinion on Section A of Minnesota Power's Annual Report of Automatic Adjustment Charges for the period July 1, 2015 through June 30, 2016 found in Attachment No. 3 of the Company's Annual Report. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the information and use of ALLETE, Inc. and Minnesota Power, and is not intended to be and should not be used by anyone other than these specified parties.



August 31, 2016

Minnesota Power
MPUC Annual Report
Automatic Retail Fuel Adjustments and Recovery
July 2015 - June 2016

A. Summary - Automatic Adjustment Charges:

Line No.	Revenue/Accounting Month Cost of Fuel	May 2015	Jun 2015	Jul 2015	Aug 2015	Sep 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016
1	Company's Generating Stations (A/C 151)	\$11,423,019	\$10,090,425	\$10,850,053	\$7,442,177	\$6,579,591	\$6,697,717	\$9,874,010	\$10,921,211	\$12,003,833	\$11,489,531	\$10,800,425	\$8,904,541	\$11,718,966	\$12,579,670
2	Plus: Purchased Energy	9,495,602	10,168,512	11,168,964	16,667,947	16,244,000	17,027,580	11,537,137	11,007,043	11,651,187	10,072,446	11,171,858	11,096,247	11,383,445	12,076,333
2	Less: MISO Schedules 16 & 17 & 24	144,856	(62,786)	37,538	23,905	31,319	48,999	54,464	55,406	59,919	65,113	46,006	40,756	43,784	52,776
3	Less: Fuel Cost Recovered Through Inter-System Sales	7,974,580	7,742,676	8,082,373	6,659,616	7,304,300	8,591,829	8,805,610	8,656,978	7,946,649	7,043,672	8,285,703	7,004,384	8,130,459	10,189,840
4	Total Monthly Cost of Fuel	\$12,799,185	\$12,579,047	\$13,899,106	\$17,426,603	\$15,487,972	\$15,084,469	\$12,551,073	\$13,215,870	\$15,648,452	\$14,453,192	\$13,640,574	\$12,955,648	\$14,928,168	\$14,413,387
5	2-Month Total Cost of Fuel	\$28,573,108	\$25,378,232	\$26,478,153	\$31,325,709	\$32,914,575	\$30,572,441	\$27,635,542	\$25,766,943	\$28,864,322	\$30,101,644	\$28,093,766	\$26,596,222	\$27,883,816	\$29,341,555
KWh Sales															
6	Total Sales of Electricity	1,219,227,239	1,064,498,303	1,171,796,576	1,118,213,024	1,153,579,765	1,189,621,289	1,216,109,453	1,235,300,763	1,260,605,667	1,163,470,893	1,237,610,464	1,103,175,733	1,167,519,446	1,174,183,410
7	Less: Inter-System Sales	454,310,609	390,009,967	393,914,476	340,642,917	384,813,472	427,662,693	457,990,789	443,219,663	421,213,934	367,091,557	434,429,063	393,438,394	424,074,217	457,925,021
8	Total Monthly kWh Sales	764,916,630	674,488,336	777,882,100	777,570,107	768,766,293	761,958,596	758,118,665	792,081,100	839,391,733	796,379,336	803,181,401	709,737,339	743,445,229	716,258,389
9	2-Month Total kWh Sales	1,610,103,738	1,439,404,966	1,452,370,436	1,555,452,207	1,546,336,400	1,530,724,889	1,520,077,261	1,550,199,765	1,631,472,833	1,635,771,069	1,599,560,737	1,512,918,740	1,453,182,568	1,459,703,618
Fuel Adjustment Charge - Fuel Clause 16 (¢/kWh)															
10	2-Month Average Cost of Fuel (¢/kWh)	1.775	1.763	1.823	2.014	2.129	1.997	1.818	1.662	1.769	1.840	1.756	1.758		
11	Base Cost of Fuel (¢/kWh)	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018
12	Fuel Adjustment Charge (lines 10 - line 11) (¢/kWh)	0.757	0.745	0.805	0.996	1.111	0.979	0.800	0.644	0.751	0.822	0.738	0.740		
13	Applicable During Billing Month of:	Jul 2015	Aug 2015	Sep 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016		

2-Month Average Cost of Fuel by Energy Type (¢/kWh)													
	Billing Month:	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
14	Generation - Coal	0.782	1.013	1.094	1.083	0.997	0.773	0.768	0.880	0.941	1.031	0.951	0.744
15	Generation - Gas	0.016	0.019	0.018	0.017	0.019	0.019	0.017	0.017	0.016	0.016	0.014	0.012
16	Generation - BioFuel	0.016	0.027	0.025	0.017	0.019	0.020	0.018	0.017	0.016	0.016	0.014	0.012
17	Purchased Power - Coal	0.162	0.002	0.217	0.428	0.413	0.333	0.248	0.276	0.286	0.339	0.337	0.312
18	Purchased Power - Biomass	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	Purchased Power - Hydro	0.088	0.103	0.072	0.045	0.064	0.048	0.024	0.034	0.026	0.014	0.012	0.016
20	Purchased Power - Gas	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	Purchased Power - Wind	0.135	0.114	0.093	0.081	0.090	0.137	0.164	0.129	0.120	0.124	0.123	0.142
22	Purchased Power - Diesel	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	Purchased Power - Unknown	1.042	0.871	0.497	0.422	0.453	0.757	0.844	0.506	0.329	0.327	0.398	0.556
24	Total Two-Month Average Cost	2.240	2.149	2.018	2.094	2.056	2.086	2.085	1.859	1.735	1.867	1.849	1.794

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B. Summary - Revenue Collected From Retail Customers Through Fuel Adjustment Charges:

Line No.	Jul 2015	Aug 2015	Sep 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016
1	\$13,899,106	\$17,426,603	\$15,487,972	\$15,084,469	\$12,551,073	\$13,215,870	\$15,648,452	\$14,453,192	\$13,640,574	\$12,955,648	\$14,928,168	\$14,413,387
2	777,882,100	777,570,107	768,766,293	761,958,596	758,118,665	792,081,100	839,391,733	796,379,336	803,181,401	709,737,339	743,445,229	716,258,389
3	1.787	2.241	2.015	1.980	1.656	1.668	1.864	1.815	1.698	1.825	2.008	2.012
4	637,422,906	638,073,336	637,235,169	632,575,218	623,934,062	644,583,741	682,718,250	654,339,373	664,182,613	605,255,384	618,276,468	595,284,605
Retail Fuel Clause No. 16												
KWh Sales												
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
Fuel Cost Recovery (¢/KWh)												
8	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018	1.018
9	0.757	0.745	0.805	0.996	1.111	0.979	0.800	0.644	0.751	0.822	0.738	0.740
Fuel Cost Recovery (Total \$)												
10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Retail Fuel Clause -RESIDENTIAL												
KWh Sales												
13	73,825,075	81,412,514	78,109,469	67,598,574	76,158,158	88,688,337	110,884,121	107,647,033	96,705,471	86,204,841	73,347,379	69,343,832
Fuel Cost Recovery (¢/KWh)												
Class Cost Factor (RIDER FOR FUEL AND PURCHASED ENERGY ADJUSTMENT June 1, 2011)												
14	1.07076	1.07076	1.07076	1.07076	1.07076	1.07076	1.07076	1.07076	1.07076	1.07076	1.07076	1.07076
15	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
16	0.811	0.798	0.862	1.066	1.190	1.048	0.857	0.690	0.804	0.880	0.790	0.792
Fuel Cost Recovery (Total \$)												
17	\$804,693	\$887,396	\$851,393	\$736,824	\$830,124	\$966,703	\$1,208,637	\$1,173,353	\$1,054,090	\$939,633	\$799,486	\$755,848
18	\$598,721	\$649,672	\$673,304	\$720,601	\$906,282	\$929,454	\$950,277	\$742,765	\$777,512	\$758,603	\$579,444	\$549,203
19	\$1,403,415	\$1,537,068	\$1,524,697	\$1,457,425	\$1,736,406	\$1,896,157	\$2,158,914	\$1,916,117	\$1,831,602	\$1,698,235	\$1,378,931	\$1,305,051
Retail Fuel Clause -GENERAL SERVICE												
KWH SALES												
20	54,924,934	57,511,907	56,001,469	50,213,714	50,505,075	52,767,582	60,669,129	59,139,446	57,763,062	53,335,164	49,554,737	51,704,010
FUEL COST RECOVERY (¢/KWH)												
Class Cost Factor (RIDER FOR FUEL AND PURCHASED ENERGY ADJUSTMENT June 1, 2011)												
21	1.07093	1.07093	1.07093	1.07093	1.07093	1.07093	1.07093	1.07093	1.07093	1.07093	1.07093	1.07093
22	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
23	0.811	0.798	0.862	1.067	1.190	1.048	0.857	0.690	0.804	0.880	0.790	0.792
FUEL COST RECOVERY (\$)												
24	\$598,682	\$626,880	\$610,416	\$547,329	\$550,505	\$575,167	\$661,294	\$644,620	\$629,617	\$581,353	\$540,147	\$563,574
25	\$445,441	\$458,945	\$482,733	\$535,780	\$601,010	\$553,004	\$519,934	\$408,062	\$464,415	\$469,349	\$391,482	\$409,496
26	\$1,044,123	\$1,085,825	\$1,093,149	\$1,083,110	\$1,151,516	\$1,128,171	\$1,181,228	\$1,052,682	\$1,094,032	\$1,050,703	\$931,629	\$973,069

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Retail Fuel Clause -LARGE LIGHT AND POWER

KWH SALES													
27	Retail kWh Sales Subject to Fuel Clause	124,469,688	130,058,501	126,651,959	120,642,582	113,299,351	120,572,375	121,382,639	118,783,758	118,037,746	112,488,465	105,589,167	112,019,485
FUEL COST RECOVERY (¢/KWH)													
Class Cost Factor (RIDER FOR FUEL AND PURCHASED ENERGY ADJUSTMENT Nov 2, 2009)													
28	ENERGY ADJUSTMENT Nov 2, 2009	1.00424	1.00424	1.00424	1.00424	1.00424	1.00424	1.00424	1.00424	1.00424	1.00424	1.00424	1.00424
29	Base Cost of Fuel (¢/kWh) (line 11, section A x line 28)	1.022	1.022	1.022	1.022	1.022	1.022	1.022	1.022	1.022	1.022	1.022	1.022
30	Fuel Adjustment Charge (¢/kWh)(line 12, section A x line 28)	0.760	0.748	0.808	1.000	1.116	0.983	0.803	0.647	0.754	0.825	0.741	0.743
FUEL COST RECOVERY (\$)													
31	Base Cost of Fuel (line 27 x line 29)	\$1,272,080	\$1,329,198	\$1,294,383	\$1,232,967	\$1,157,919	\$1,232,250	\$1,240,531	\$1,213,970	\$1,206,346	\$1,149,632	\$1,079,121	\$1,144,839
32	Fuel Adjustment Charge (line 27 x line 30)	\$945,970	\$972,838	\$1,023,348	\$1,206,426	\$1,264,421	\$1,185,226	\$974,703	\$768,531	\$890,005	\$928,030	\$782,416	\$832,305
33	Subtotal (line 31 + line 32)	\$2,218,050	\$2,302,035	\$2,317,731	\$2,439,393	\$2,422,340	\$2,417,476	\$2,215,233	\$1,982,501	\$2,096,350	\$2,077,662	\$1,861,537	\$1,977,144

Retail Fuel Clause -LARGE POWER

KWH SALES													
34	Retail kWh Sales Subject to Fuel Clause	381,368,564	366,193,841	373,726,137	391,253,909	380,800,606	379,367,137	386,034,037	365,584,135	388,502,770	350,216,790	387,127,192	359,760,169
FUEL COST RECOVERY (¢/KWH)													
Class Cost Factor (RIDER FOR FUEL AND PURCHASED ENERGY ADJUSTMENT Nov 2, 2009)													
35	ENERGY ADJUSTMENT Nov 2, 2009	0.97769	0.97769	0.97769	0.97769	0.97769	0.97769	0.97769	0.97769	0.97769	0.97769	0.97769	0.97769
36	Base Cost of Fuel (¢/kWh) (line 11, section A x line 35)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
37	Fuel Adjustment Charge (¢/kWh)(line 12, section A x line 35)	0.740	0.728	0.787	0.974	1.086	0.957	0.782	0.630	0.734	0.804	0.722	0.723
FUEL COST RECOVERY (\$)													
38	Base Cost of Fuel (line 34 x line 36)	\$3,794,617	\$3,643,629	\$3,718,575	\$3,892,976	\$3,788,966	\$3,774,703	\$3,841,039	\$3,637,562	\$3,865,603	\$3,484,657	\$3,851,916	\$3,579,614
39	Fuel Adjustment Charge (line 34 x line 37)	\$2,822,127	\$2,665,891	\$2,941,225	\$3,810,813	\$4,135,495	\$3,630,544	\$3,018,786	\$2,303,180	\$2,851,610	\$2,815,743	\$2,795,058	\$2,601,066
40	Subtotal (line 38 + line 39)	\$6,616,745	\$6,309,520	\$6,659,800	\$7,703,789	\$7,924,461	\$7,405,247	\$6,859,825	\$5,940,742	\$6,717,213	\$6,300,400	\$6,646,974	\$6,180,680

Retail Fuel Clause -MUNICIPAL PUMPING

KWH SALES													
41	Retail kWh Sales Subject to Fuel Clause	1,521,266	1,463,850	1,156,579	1,066,904	1,053,412	1,057,562	1,175,557	1,133,790	1,287,759	1,233,761	1,230,844	1,165,167
FUEL COST RECOVERY (¢/KWH)													
Class Cost Factor (RIDER FOR FUEL AND PURCHASED ENERGY ADJUSTMENT Nov 2, 2009)													
42	ENERGY ADJUSTMENT Nov 2, 2009	0.98103	0.98103	0.98103	0.98103	0.98103	0.98103	0.98103	0.98103	0.98103	0.98103	0.98103	0.98103
43	Base Cost of Fuel (¢/kWh) (line 11, section A x line 42)	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999
44	Fuel Adjustment Charge (¢/kWh)(line 12, section A x line 42)	0.743	0.731	0.790	0.977	1.090	0.960	0.785	0.632	0.737	0.806	0.724	0.726
FUEL COST RECOVERY (\$)													
45	Base Cost of Fuel (line 41 x line 43)	\$15,197	\$14,624	\$11,554	\$10,658	\$10,524	\$10,565	\$11,744	\$11,327	\$12,865	\$12,325	\$12,296	\$11,640
46	Fuel Adjustment Charge (line 41 x line 44)	\$11,303	\$10,701	\$9,137	\$10,424	\$11,482	\$10,153	\$9,228	\$7,166	\$9,491	\$9,944	\$8,911	\$8,459
47	Subtotal (line 45 + line 46)	\$26,500	\$25,325	\$20,691	\$21,082	\$22,006	\$20,718	\$20,972	\$18,492	\$22,355	\$22,269	\$21,207	\$20,099

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Retail Fuel Clause -LIGHTING

KWH SALES													
48	Retail kWh Sales Subject to Fuel Clause	1,313,379	1,432,723	1,589,556	1,799,535	2,117,460	2,130,748	2,572,767	2,051,211	1,885,805	1,776,363	1,427,149	1,291,942
FUEL COST RECOVERY (¢/KWH)													
Class Cost Factor (RIDER FOR FUEL AND PURCHASED ENERGY ADJUSTMENT Nov 2, 2009)													
49	ENERGY ADJUSTMENT Nov 2, 2009	0.74029	0.74029	0.74029	0.74029	0.74029	0.74029	0.74029	0.74029	0.74029	0.74029	0.74029	0.74029
50	Base Cost of Fuel (¢/kWh) (line 11, section A x line 49)	0.754	0.754	0.754	0.754	0.754	0.754	0.754	0.754	0.754	0.754	0.754	0.754
51	Fuel Adjustment Charge (¢/kWh)(line 12, section A x line 49)	0.560	0.552	0.596	0.737	0.822	0.725	0.592	0.477	0.556	0.609	0.546	0.548
FUEL COST RECOVERY (\$)													
52	Base Cost of Fuel (line 48 x line 50)	\$9,903	\$10,803	\$11,985	\$13,568	\$15,966	\$16,066	\$19,399	\$15,466	\$14,219	\$13,394	\$10,761	\$9,741
53	Fuel Adjustment Charge (line 48 x line 51)	\$7,355	\$7,909	\$9,474	\$13,263	\$17,406	\$15,448	\$15,231	\$9,784	\$10,485	\$10,818	\$7,792	\$7,080
54	Subtotal (line 52 + line 53)	\$17,258	\$18,711	\$21,459	\$26,831	\$33,371	\$31,514	\$34,629	\$25,250	\$24,704	\$24,212	\$18,553	\$16,821
Total Fuel Cost Recovery From Retail Sales:		Jul 2015	Aug 2015	Sep 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016
61	Base Cost of Fuel (line 10+line 17+ line 24+ line 31+ line 38+ line 45+ line 52 + line 58)	\$6,495,173	\$6,512,529	\$6,498,307	\$6,434,324	\$6,354,004	\$6,575,453	\$6,982,642	\$6,696,297	\$6,782,739	\$6,180,994	\$6,293,727	\$6,065,256
62	Fuel Adjustment Charge (line 11+ line 18+ line 25+ line 32+ line 39+ line 46+ line 53 + line 59)	\$4,830,918	\$4,765,955	\$5,139,220	\$6,297,306	\$6,936,096	\$6,323,828	\$5,488,159	\$4,239,487	\$5,003,518	\$4,992,487	\$4,565,104	\$4,407,609
63	Total Fuel Cost Recovery (line 12+ line 19+ line 26+ line 33+ line 40+ line 47+ line 54 + line 60)	\$11,326,090	\$11,278,484	\$11,637,526	\$12,731,631	\$13,290,099	\$12,899,282	\$12,470,801	\$10,935,785	\$11,786,257	\$11,173,481	\$10,858,831	\$10,472,864

C. Summary - Over (Under) Recovery From Automatic Adjustment Charges:

Line No.		Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	Total Retail Fuel Cost Recovery (line 63, section B)	\$11,326,090	\$11,278,484	\$11,637,526	\$12,731,631	\$13,290,099	\$12,899,282	\$12,470,801	\$10,935,785	\$11,786,257	\$11,173,481	\$10,858,831	\$10,472,864
2	Retail kWh Sales Subject to FAC (line 4, section B)	637,422,906	638,073,336	637,235,169	632,575,218	623,934,062	644,583,741	682,718,250	654,339,373	664,182,613	605,255,384	618,276,468	595,284,605
3	KWh Sales Under Competitive Rates / (line 6, section B)	0	0	0	0	0	0	0	0	0	0	0	0
4	Subtotal (line 2 + line 3)	637,422,906	638,073,336	637,235,169	632,575,218	623,934,062	644,583,741	682,718,250	654,339,373	664,182,613	605,255,384	618,276,468	595,284,605
5	Actual Monthly Cost of Fuel (¢/kWh) (line 3, section B)	1.787	2.241	2.015	1.980	1.656	1.668	1.864	1.815	1.698	1.825	2.008	2.012
6	Actual Monthly Cost of Fuel for Retail kWh (line 4 x line 5)	\$11,390,747	\$14,299,223	\$12,840,289	\$12,524,989	\$10,332,348	\$10,751,657	\$12,725,868	\$11,876,260	\$11,277,821	\$11,045,911	\$12,414,991	\$11,977,126
7	Total Over (Under) Recovery - Monthly (line 1- line 6)	(\$64,657)	(\$3,020,739)	(\$1,202,762)	\$206,641	\$2,957,751	\$2,147,625	(\$255,067)	(\$940,475)	\$508,436	\$127,571	(\$1,556,160)	(\$1,504,262)
8	Cumulative Over (Under) Recovery (Based on line 7)	(\$64,657)	(\$3,085,396)	(\$4,288,158)	(\$4,081,517)	(\$1,123,766)	\$1,023,859	\$768,792	(\$171,683)	\$336,753	\$464,324	(\$1,091,836)	(\$2,596,098)

NOTES:

Fuel Adjustment Clause 16 is applicable to all retail schedules except Competitive Rates, Industrial Economy, Excess Energy, Replacement Firm Power Service, Interruptible Power and Incremental Production Service. KWh Sales under Competitive Rate Schedules are not subject to the Fuel Clause but the Competitive Rate does recover the base cost of fuel.

Beginning Nov. 1, 2009 with final rates, the company began applying the Fuel Adjustment Clause based (Fuel and Purchased Energy Adjustment) on Class Cost Factors for each different rate class such as Residential, General Service, Large Light and Power, Large Power, Municipal Pumping and Lighting

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

Minnesota Power Five-Year Projection of Fuel Costs July 2016 - June 2021

Attached is Minnesota Power's five-year projection of fuel costs by source of power, which is based on data, generated by the Electric Financial Forecast. Forecast data beyond 2016 is available on an annual basis only.

Minnesota Power has five sources of power:

- Steam Generation at Company owned plants,
- Purchased Power from Square Butte under a Power Purchase Agreement,
- Purchased Power from MISO wholesale market and from other power suppliers,
- Hydro Power from Company owned generating plants (for which there is no energy cost), and
- Wind Generation from Company owned generating plants, and from other power suppliers
- By end of 2016 Solar Generation from Company owned generating plant and Community Solar Garden program.

The major assumptions in determining the fuel cost projections over the next five-are:

1. With the *EnergyForward* strategy Minnesota Power's steam generation will decrease in order to seek a sustainable balance of energy generation that is dependable, affordable and environmentally sound to best serve its customers as stated in the previous two integrated resource plans filed in 2013 and 2015. Per the approved 2013 Integrated Resource Plan in 2015 Minnesota Power ceased coal operation from its Taconite Harbor Unit 3 generator (75 MW) and converted its Laskin Energy Center to natural gas which is planned to run significantly less than its previous baseload operation as it serves as a peaking resource for customer power supply. Per the approved 2015 Integrated Resource Plan in fall of 2016 Taconite Harbor units 1 and 2 will be idled, be utilized for reliability of the bulk electric system as market conditions require through 2020, and cease coal-fired operation post 2020.

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

2. Total Steam generation costs attributed to coal are expected to **[TRADE SECRET DATA HAS BEEN EXCISED]** from 2016 to 2021.
3. Starting in June 2015 purchased generation from Square Butte declined to reflect MP's decreased share of the units total output of approximately 22%. After 2022, Minnesota Power's share of the output will continue to be reduced per the North Dakota Wind Project.
4. Minnesota Power continues to use wholesale market purchases and bilateral contracts to meet its energy requirements.
5. Minnesota Power has about 116 MW of Hydroelectric capability for its native load of customers. There is no fuel cost associated with this energy source. Hydro generation is projected to **[TRADE SECRET DATA HAS BEEN EXCISED]**.
6. Minnesota Power's load is expected to increase as idled large industrial customers return, additional large industrial customers begin or expand operation in our service territory and growth in our Resale customer class continues.
7. Minnesota Power has developed a robust, portfolio-based solar strategy consisting of three pillars of focus: the customer, community and utility to meet and integrate solar power supply. This strategy was submitted on June 1, 2015 as part of the Company's SES Report. Minnesota Power will add approximately 33 MW of solar powered generation to its portfolio to comply with the 2020 SES requirements. The 2015 Integrated Resource Plan includes Minnesota Power's strategy to comply with the SES. This filing contains the assumed solar generation from this strategy for the years 2017-2021. This includes the 10 MW Camp Ripley solar project with approximately 16,000 MWh annually and the a 1 MW Community Solar Garden projects with approximately 1,700 MWh annually. Both solar projects are expected to start generating electricing in forth quarter of 2016.

MINNESOTA POWER
 FIVE-YEAR PROJECTION OF FUEL COSTS
 JULY 2016 - JUNE 2021

MP GENERATION					PURCHASES				COSTS RECOVERED THRU SALES	TOTAL FUEL COST	TOTAL FAC SALES	AVERAGE FUEL COST												
STEAM GENERATION			WIND GEN	HYDRO	SQUARE BUTTE		MARKET																	
COAL COST \$(000)	OIL & OTHER COST \$(000)	TOTAL MWh	TOTAL MWh	TOTAL MWh	COST \$(000)	TOTAL MWh	COST \$(000)	TOTAL MWh	COST \$(000)	\$(000)	MWh	per MWh												
[TRADE SECRET DATA EXCISED]																								
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Notice of Availability of Reports

To: All Intervenors in Minnesota Power
Retail Rate Proceedings
Docket No. E-015/GR-09-1151

The Minnesota Public Utilities Commission requires Minnesota Power and other Minnesota public utilities to file various annual reports concerning utility operations with the Commission as specified in Minnesota Rules 7825.2800 to 7825.2840. The subject matter of the reports filed includes the following:

- a) Procurement policies for selecting fuel and energy purchased
- b) Independent auditor's report with regard to monthly fuel adjustments
- c) Charges made under automatic fuel adjustment clauses
- d) Five-year projection of fuel costs
- e) MISO Compliance Report and Cost Impacts
- f) List of Network Resources
- g) Matrix of Reporting Requirements for MISO Day 2 Cost and ASM Orders
- h) MISO Day 2/ASM monthly charges and allocations
- i) ASM Annual and Daily Charges Summary
- j) ARRs information and process
- k) Generation maintenance expenses
- l) Transformer inventory
- m) Report Addressing the Purchase Power Agreement with Manitoba Hydro
- n) Offsetting Revenues and/or Compensation Received by Investor-Owned Utilities
- o) Annual Identification of Forced Outages and Lessons Learned
- p) Comparison and Reconciliation of the MISO Accredited Value of Generators Using MISO Accredited UCAP Values and Integrated Resource Plan Capacity Ratings
- q) Congestion Analysis
- r) Plant Outages Contingency Plans
- s) Oliver County I and II Wind Curtailment Reporting
- t) Bison Curtailment Reporting

Minnesota Rule 7825.2840 requires Minnesota Power to provide this notice of availability of such reports to all Interveners in the previous two general rate cases. Copies of the above reports are available at Minnesota Power. Please note that certain information contained in these reports is considered trade secret and is unavailable to the public. Requests for public copies of this report should be forwarded to:

Minnesota Power
Leann Oehlerking-Boes
Manager - Energy Pricing & Billing
30 West Superior Street
Duluth, MN 55802

Certificate of Service

It is hereby certified that the foregoing Notice of Availability of Reports was served as so indicated to the parties on the attached service list.

Minnesota Power

By:

_____/s/ Leann Oehlerking-Boes

Leann Oehlerking-Boes
Manager – Energy Pricing & Billing

Dated: August 31, 2016

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

AFFIDAVIT OF SERVICE VIA
E-FILING AND
FIRST CLASS MAIL

Jodi Nash, of the City of Duluth, County of St. Louis, State of Minnesota, says that on the 31st day of August, 2016, she e-filed Minnesota Power’s Annual Reports Containing Fuel Information and Data on the Minnesota Public Utilities Commission via electronic filing. The remaining parties on the attached service list were served as requested.

/s/ Jodi Nash
Jodi Nash

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**Minnesota Power Compliance Report on
MISO Operations and Cost Impacts to Minnesota Power
Docket No. E-015/PA-01-539**

Background

On April 26, 2002, the Commission approved Minnesota Power's petition to transfer functional control of certain transmission facilities to the Midcontinent Independent System Operator, Inc. (MISO). In compliance to the Order (Docket No. E-015/PA-01-539), Minnesota Power is required to report the following information as part of its AAA report:

- Section 2, Item C, Part 3 (a):
The Schedule 10 administrative charges paid to the MISO under MISO tariff.
- Section 2, Item C, Part 3 (b):
Any amount of MISO administrative charge deferred by the MISO for later recovery.
- Section 2, Item C, Part 5 (c):
Each instance where the MISO directed MP to curtail MP's own generation, for reliability reasons, that resulted in an interruption of firm retail electric service to MP's retail customers in Minnesota.
- Section 2, Item C, Part 5 (d):
Each instance where the MISO directed the curtailment of a delivery of a firm purchased power supply that subsequently resulted in an interruption of firm retail electric service to MP's retail customers in Minnesota.
- Section 2, Item C, Part 8 (b):
Changes to MISO tariffs that may ultimately affect the rates of retail customers in Minnesota, and on MP's efforts to minimize MISO transmission service costs.
- Section 2, Item C, Part 8 (c):
An annual analysis of how the transfer of operational control to the MISO has affected MP's overall transmission costs and revenues and its overall energy costs for retail customers, including –
 - i. an analysis of how MISO membership has affected MP's ability to use its own generating sources when they are the least-cost power source; and
 - ii. MP's ability to access low-cost power on the wholesale market for its retail customers.
- Section 2, Item C, Part 8 (d):
Each instance where the MISO directed MP to redispatch MP's own generation for reliability reasons, including an explanation of financial impact on rates, if any, and the reason for the redispatch, if known.

**1. Section 2, Item C, Part 3 (a):
Schedule 10 Administrative Charges Paid by MP to MISO under
MISO Tariff**

Period	Invoiced Amount	Minnesota Jurisdictional Amount
July 2015	\$109,158.03	\$84,673.89
August 2015	\$155,840.27	\$102,885.29
September 2015	\$136,825.73	\$106,135.72
October 2015	\$146,663.16	\$113,766.61
November 2015	\$160,264.01	\$124,316.79
December 2015	\$189,569.30	\$147,048.90
January 2016	\$170,145.41	\$131,981.80
February 2016	\$159,257.26	\$123,535.86
March 2016	\$172,538.21	\$133,837.89
April 2016	\$172,067.34	\$133,472.64
May 2016	\$160,782.99	\$124,719.36
June 2016	\$145,970.60	\$113,229.39
Total	\$1,879,082.31	\$1,457,604.15

The total Schedule 10 charges billed by MISO for the reporting period represents a 5.78% decrease from the total Schedule 10 charges billed by MISO for the previous reporting period. This increase is attributable as follows: 1) Although Minnesota Power reported a 10.66% decrease in demand MWhs and 10.18% decrease in energy Mwhs, there was an increase in the average rate during the report period. 2) The average rate for demand MWhs increased by 5.13% and the average rate for energy MWhs increased by 5.02%.

The Minnesota Jurisdictional Amount in the above table was obtained using a Minnesota Jurisdictional percentage of 77.57% as approved in Minnesota Power's latest rate case.

**2. Section 2, Item C, Part 3(b):
MISO Administrative Charges Deferred by MISO for Later Recovery**

MISO deferred \$2,500,000 per month for the ten month period March through December, 2003 for a total of \$25,000,000 (Dockets ER02-111-002 and ER02-652-001), to be recovered monthly from Transmission Customers over a five-year period beginning Feb.1, 2008.

3. Section 2, Item C, Part 5 (c):

Each Instance Where MISO Directed MP to Curtail MP's Own Generation, for Reliability Reasons, that Resulted in an Interruption of Firm Retail Electric Service to MP's Retail Customers in Minnesota

There was no occurrence of said conditions during this reporting period.

- 4. Section 2, Item C, Part 5(d):
Each Instance where MISO Directed the Curtailment of a Delivery of a Firm Purchased Power Supply that subsequently resulted in an Interruption of Firm Retail Electric Service to MP's Retail Customers in Minnesota**

There was no occurrence of said conditions during this reporting period.

- 5. Section 2, Item C, Part 8 (b):
Changes to MISO Tariffs That May Ultimately Affect the Rates of Retail Customers in Minnesota, and on MP's Efforts to Minimize MISO Transmission Service Costs**

Minnesota Power continues to support ongoing efforts to minimize MISO transmission service costs. Minnesota Power representatives participate in the MISO Transmission Owners Committee and the Transmission Owners Tariff Working Group, which make decisions on certain rate and revenue distribution changes pursuant to the MISO Transmission Owners Agreement. These committees also monitor the MISO budget development process, as well as review year to date cost updates. Minnesota Power also has representatives closely monitoring the Market Sub-Committee and OATT Business Practices efforts. Minnesota Power knows of no tariff changes that may ultimately affect the rates of retail customers in Minnesota.

- 6. Section 2, Item C, Part 8 (c):
Annual Analysis of How the Transfer of Operational Control to the MISO Has Affected MP's Overall Transmission Costs and Revenues and Its Overall Energy Costs for Retail Customers, Including**
- i. An Analysis of How MISO Membership Has affected MP's Ability to Use Its Own Generating Sources When They Are the Least-Cost Power Source; and**
 - ii. MP's Ability to Access Low-Cost Power on the Wholesale Market for Its Retail Customers**

Prior to becoming a MISO member, Minnesota Power paid fees to MAPP (Regional Reliability and Regional Transmission), for use of the transmission systems under MAPP Schedule F Tariff. Currently, the majority of transmission transactions now take place under the MISO Tariff. MISO transmission charges include an administration fee (Schedule 10, similar to the fee collected by MAPP), network integration service, and point-to-point service charges. Minnesota Power also receives revenue from MISO for other MISO entities' utilization of the Minnesota Power transmission facilities. Considering the costs and revenues associated with the formation of the basic Day 1 RTO (Regional Transmission Organization), Minnesota Power's net difference in the fees, transmission revenues, and transmission expenses have increased slightly compared to pre-MISO.

Minnesota Power participates in the MISO Day-Ahead, Real-Time, and Ancillary Services Market, which commenced April 1, 2005. Minnesota Power's generation is dispatched in response to MISO market price signals. This has allowed Minnesota Power to use its generation resources to meet customer needs when Minnesota Power generation is the lowest cost resource, and to reduce its generation and purchase energy in the wholesale market when market energy is the lowest cost resource. As a result, the MISO market structure has allowed Minnesota Power to continue to make extensive use of the wholesale power market to secure low cost energy for its customers.

Other benefits of the MISO Market include increased purchase options, more transparent pricing, and the ability to purchase only the amount of energy needed each hour rather than buying energy blocks provided by a traditional bilateral market. All have provided savings for our retail customers. The benefits of MISO have more than offset the additional costs incurred to implement the market. In addition, the MISO market allows Minnesota Power and other MISO members' access to an expansive footprint consisting of a diverse set of generation and transmission resources, which, when coupled with appropriate rules and an independent market monitoring function, fosters a robust wholesale energy market.

- 7. Section 2, Item C, Part 8 (d):
Each Instance Where MISO Directed MP to Redispatch MP's Owned
Generation for Reliability Reasons, Including an Explanation of
Financial Impact on Rates, if any, and the Reason for the
Redispatch, if known.**

There was no occurrence of said conditions during this reporting period.

Minnesota Power
Network Resources Designated to Serve Native Load
(Docket No. E-015/M-05-277 dated December 20, 2008)

**Minnesota Power
Network Resources Designated to Serve Native Load**

<u>Steam Generation</u> (1)	<u>MW</u> (2)
Boswell Energy Center	
Unit No. 1	67.3
Unit No. 2	67.4
Unit No. 3	363.5
Unit No. 4	467.6
Taconite Harbor Energy Center	
Unit No. 1	76.6
Unit No. 2	77.0
Unit No. 3	-
Laskin Energy Center	
Unit No. 1	49.3
Unit No. 2	45.7
Hibbard Energy Center	
Unit No. 3/4	63.1
Cloquet Energy Center (TG5)	
	21.9
<u>Hydro Generation</u>	<u>MW</u> (2)
Thomson	73.1
Blanchard	11.3
Fond du Lac	13.0
Other Hydro	11.1
<u>Wind Generation</u>	<u>MW</u> (4)
Taconite Ridge	3.9
Bison	107.8
<u>Long Term Purchase</u>	<u>MW</u> (2)
Square Butte (3)	100.3
Oliver County 1	9.8
Oliver County 2	9.8
Wing River	-

- Notes:**
- (1) Steam Generation is also provided by MP Non-Regulated Units: Rapids Energy Center (29.3 MW). This unit is not included in MISO's definition of "Network Resources" because it is generation behind the meter at the customers' site.
 - (2) All quantities relate to MISO Planning Year 2016-2017 as these quantities are currently in effect. Values are comprised from the MISO Planning Year 2016-2017 List of GVTC Test Results as found in the Planning Year 2016-2017 unit list of capacity.
 - (3) Minnesota Power's share of Square Butte.
 - (4) All quantities relate to MISO Planning Year 2016-2017 as these quantities are currently in effect. Values are comprised from the MISO Planning Year 2016-2017 List of Capacity Credit Results as found in the Planning Year 2016-2017 unit list of capacity.

Minnesota Power
Additional Reporting Requirements Matrix
Outlined In Dockets
E-015/M-05-277
E-015/M-08-528

Order Establishing Accounting Treatment for MISO Day 2/ASM Costs
E-015/M-05-277

	Reporting Requirement	Requirement Satisfied in Reporting Document
I.	Summary of the ARR process and information	Annual AAA Filing, Attachment No. 11
J.	Generation Maintenance Expenses with a comparison to the maintenance budget filed in the utility's most recent rate case	Annual AAA Filing, Attachment No. 12

The Department of Commerce- Division of Energy Resources Recommendations for Reporting
Requirements for ASM Cost Recovery
E-015-M-08-528

	Reporting Requirement	Requirement Satisfied in Reporting Document
A.	<p>Not later than February 6, 2010, the utilities shall file a request to validate recovery to date and continue to recover ASM charges (credits and costs) including:</p> <ul style="list-style-type: none"> • Analysis of the costs and benefits of participation in ASM • Address the potential for double recovery of such costs <p>Upon request from any party, the utility shall submit their request for recovery with supporting analysis within 30 days of the request.</p>	Annual ASM Cost Benefit Filing completed and sent February 6, 2010
B.	<p>The utilities shall also provide quarterly reports addressing the costs and benefits resulting from their participation in ASM, beginning May 15, 2009. These reports will be submitted within 45 days after the end of the applicable calendar year.</p>	Quarterly Filings sent 5/15/09, 8/15/09 and 11/15/09
C.	<p>The Department of Commerce- Division of Energy Resources recommends that the following be included in their final ASM Report:</p> <ul style="list-style-type: none"> • A list of whether and when MISO charged each utility for deployment failure in 2009 • The amount of any such charge • The cause for deployment failure or deployment that was late • Why the utility should be allowed to recover any such deployment charges <p>Minnesota Power to follow up in reply comments regarding the following:</p> <p>CRDFC-</p> <ul style="list-style-type: none"> • what the causes were for the penalties • why they should be recovered from ratepayers • how MP intends to address in the future <p>Regarding Excessive/Deficient-</p> <ul style="list-style-type: none"> • explain the causes for the charge • why it should be recovered from ratepayers <p>The Department of Commerce- Division of Energy Resources recommends that the utility address whether the current Purchase Power Agreements (PPA) provide for compensation to the utility when the generation under the PPA does not show up due to an outage or other problem</p> <p>If so, the utility should indicate whether that compensation is given back to ratepayers via the FCA</p> <p>If not, utilities should:</p> <ul style="list-style-type: none"> • Explain why its appropriate for ratepayers to pay those penalties 	Response comments filed 7-28-10

The Department of Commerce- Division of Energy Resources Recommendations for Reporting
Requirements for ASM Cost Recovery
E-015-M-08-528

	Reporting Requirement	Requirement Satisfied in Reporting Document
D.	<p>The Department of Commerce- Division of Energy Resources recommends that ASM Cost Recovery Analysis be reviewed in future AAA Filings in the formats used by Xcel and Minnesota Power including the written narratives;</p> <p>Format suggested:</p> <ul style="list-style-type: none"> • Minnesota Power's February 5, 2010 Attachment 1 for annual basis • Xcel's February 5, 2010 Attachment A for daily activity of ASM and overall net savings created by ASM plus the addition of year end totals • Written narrative consistent with Xcel and Minnesota Power's 4th quarter ASM Report <p>January 2010- June 2010 on AAA report filed September 1, 2010</p> <p>July-2010- June 2011 on AAA report filed September 1, 2011</p>	Annual AAA Filing, Attachment No. 10

**Attachment 9 - Minnesota Power's Monthly MISO Day 2 Charges and Allocation
(Docket E, G-999/AA-07-1130).**

Description of the following categories shown in Attachment 9:

- 1) **FAC Retail** – Include sales MWh subject to the retail FAC allocation. Includes residential, commercial, industrial, seasonal firm loads that are allocated the retail fuel adjustment clause.
- 2) **FAC Resale** – Sales MWh subject to the resale FAC allocation. Includes municipal customers; for example; City of Nashwauk, City of Proctor, etc. that are allocated the resale fuel adjustment clause.
- 3) **MISO Non-Liquidation** – Asset based sales MWh from generation resources to MISO in the Day-Ahead or Real- Time markets.
- 4) **MISO – Liquidation** – Non- asset based MWh sales to MISO, the source of which was a purchase from another entity that was intended to serve customer load but was not needed because generation levels were higher than expected or loads were lower than expected.
- 5) **Others – Liquidation** – Non-asset based sales MWh to other entities (not MISO), the source of which was a purchase from another entity that was intended to serve customer load but was not needed because generation levels were higher than expected or loads were lower than expected.
- 6) **Others – Non-Liquidation** – Asset based sales MWh from generation resources to other entities (not MISO) and is not under a longer term contract. This group also includes retail non-firm sales that are not allocated fuel adjustment clause costs such as Large Power Interruptible and Large Power Incremental Productions Service Sales.
- 7) **Contract Sales** – Asset based sales MWh related to longer term contracts.

Day Ahead and Real-Time Energy costs assigned for categories 3-7 above:

Minnesota Power's Energy Pricing system assigns purchases and generation based on cost not category type. Minnesota Power assigns the highest cost generation or purchases to non-FCA sales first to help ensure that the FCA receives the lowest cost generation or purchases. Certain transactions do not follow this methodology. Output from our renewable resource generators and renewable energy contract purchases are dedicated to load to help meet our renewable mandate. Minnesota Power then determines the source of the FCA MWh by a separate analysis. A similar analysis is not done for non-FCA sales because there has not been a need to report the sources of non-FCA sales. The company does not have a system in place and has not seen the need to identify the sources of non-FCA sales. We are unable to identify what portion of Day Ahead and Real Time Energy was assigned to the other non-FCA categories.

As indicated as a footnote to the spreadsheet in our filing, Day Ahead Asset Energy, Real Time Asset Energy, Day Ahead Non-Asset Energy and Real Time Non-Asset Energy are not shown to be allocated to 3) MISO Non-Liquidation, 4) MISO Liquidation, 5) Others-Liquidation, and 7) Contract Sales as these amounts are not tracked separately by Minnesota Power's systems as discussed above.

MINNESOTA POWER		Account	July 2015		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																	
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	2,889,332.27										-				
5	Day Ahead Non-Asset Energy	55500-0027	(727,183.25)										-				
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	(714,898.06)										-				
	Excessive Energy Amount	55500-0066	50,916.77										-				
	Non-Excessive Energy Amount	55500-0069	(362,150.24)										-				
22	Real Time Non-Asset Energy	55500-0043	(154,735.39)										-				
Subtotal			981,282.10		637,423	1,173,184.47		140,459	257,528.30			1,430,712.76	33,194				
Day Ahead and Real Time Energy Loss																	
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	1,161,019.08			723,375.92	-		158,789.84		-	882,165.75		8,129.92			-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	375,870.72			237,324.77	-		52,095.68		-	289,420.45		1,428.73			-
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	(112,367.65)			-	(70,010.95)		-		(15,368.26)	(85,379.21)		-			(786.84)
14	Real Time Distribution of Losses	55500-0041	(356,616.88)			-	(225,167.90)		-		(49,427.10)	(274,595.00)		-			(1,355.54)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	(69.75)			-	(44.04)		-		(9.67)	(53.71)		-			(0.27)
Subtotal			1,067,835.52		637,423	960,700.69	637,423	(295,222.89)	140,459	210,885.52	140,459	(64,805.02)	811,558.29	33,194	9,558.65	33,194	(2,142.65)
Virtual Energy																	
12	Day Ahead Virtual Energy	55500-0030	-			-	-		-		-	-					
27	Real Time Virtual Energy	55500-0049	-			-	-		-		-	-					
Subtotal			-		637,423	-	637,423	-	140,459	-	140,459	-	-	33,194	-	33,194	-
Schedule 16 & 17 1/																	
4	Day Ahead Market Administration (Schedule 17)	55500-0020	120,444.71			76,048.79	-		16,693.64		-	92,742.43		457.82			-
19	Real Time Market Administration (Schedule 17)	55500-0036	11,022.67			6,959.71	-		1,527.74		-	8,487.46		41.90			-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	3,897.86			2,461.11	-		540.24		-	3,001.35		14.82			-
Subtotal			135,365.24		637,423	85,469.61	637,423	-	140,459	18,761.62	140,459	-	104,231.23	33,194	514.54	33,194	-

MINNESOTA POWER		Account	July 2015		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																	
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	(8,874.29)	-			(5,529.15)					(1,213.72)	(6,742.86)		-		(62.14)
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(49,180.55)	-			(30,642.07)					(6,726.31)	(37,368.37)		-		(344.38)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	(62,478.79)	-			(39,449.11)					(8,659.56)	(48,108.67)		-		(237.49)
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	(3,806.54)	-			(2,403.45)					(527.59)	(2,931.04)		-		(14.47)
	Auction Revenue Rights Transaction Amount	55500-0058	(192,548.92)	-			(121,575.39)					(26,687.28)	(148,262.67)		-		(731.90)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	282,534.72	178,392.42			-		39,159.31			-	217,551.73		1,073.95		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	12,122.28	7,654.01			-		1,680.15			-	9,334.16		46.08		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(49,299.42)	-			(31,127.65)					(6,832.90)	(37,960.55)		-		(187.39)
28	Financial Transmission Rights Hourly Allocation	55500-0032	54,426.02	34,364.59			-		7,543.45			-	41,908.04		206.88		-
30	Financial Transmission Rights Monthly Allocation	55500-0033	(5,913.21)	-			(3,733.60)					(819.57)	(4,553.17)		-		(22.48)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-	-			-		-			-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	2,673.52	1,688.06			-		370.55			-	2,058.61		10.16		-
	FTR Guarantee Uplift Amount	55500-0055	(2,673.52)	-			(1,688.06)					(370.55)	(2,058.61)		-		(10.16)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-	-			-		-			-	-		-		-
31	Financial Transmission Rights Transaction	55500-0034	-	-			-		-			-	-		-		-
Subtotal			(23,018.70)		637,423	222,099.08	637,423	(236,148.48)	140,459	48,753.46	140,459	(51,837.47)	(17,133.41)	33,194	1,337.07	33,194	(1,610.42)
RSG & Make Whole Payments																	
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	26,976.98			17,033.27		-				3,739.01		-			20,772.27
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	12.23			7.72		-				1.70		-			9.42
	Real Time Price Volatility Make Whole Payment	55500-0057	(20,993.53)			-		(13,255.31)				-		(2,909.70)			(16,165.02)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	52,362.44			33,061.64		-				7,257.43		-			40,319.08
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-			-		-				-		-			-
Subtotal			58,358.12		637,423	50,102.63	637,423	(13,255.31)	140,459	10,998.14	140,459	(2,909.70)	44,935.75	33,194	301.63	33,194	(79.80)
RNU & Misc Charges																	
20	Real Time Miscellaneous	55500-0042	(2,720.51)			-		(1,717.73)				(377.06)		(2,094.79)			(10.34)
21	Real Time Net Inadvertent Distribution	55500-0044	(5,236.66)			-		(3,306.43)				(725.80)		(4,032.23)			(19.91)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	65,545.46			41,385.40		-				9,084.60		-			50,470.00
26	Real Time Uninstructed Deviation	55500-0048	-			-		-				-		-			-
Subtotal			57,588.29		637,423	41,385.40	637,423	(5,024.16)	140,459	9,084.60	140,459	(1,102.86)	44,342.98	33,194	249.15	33,194	(30.25)

MINNESOTA POWER		Account	July 2015		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																	
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-										-				
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-										-				
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-										-				
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-										-				
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-										-				
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-										-				
Subtotal			-		637,423	-	637,423	-	140,459	-	140,459	-	-	33,194	-	33,194	-
ASM Charge Types (12 Other)																	
	Day Ahead Regulation Amount	55500-0062	(21,317.21)			-	(13,459.69)		-		(2,954.57)	(16,414.25)		-			(81.03)
	Day Ahead Spinning Reserve Amount	55500-0063	(19,673.53)			-	(12,421.87)		-		(2,726.75)	(15,148.62)		-			(74.78)
	Day Ahead Supplemental Reserve Amount	55500-0064	-			-	-		-		-	-		-			-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-			-	-		-		-	-		-			-
	Net Regulation Adjustment Amount	55500-0068	678.30			428.28	-		94.01		-	522.29		2.58			-
	Real Time Regulation Amount	55500-0070	(4,002.20)			-	(2,526.99)		-		(554.70)	(3,081.69)		-			(15.21)
	Regulation Reserve Cost Distribution Amount	55500-0071	16,085.89			10,156.63	-		2,229.50		-	12,386.14		61.14			-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	3,879.41			2,449.46	-		537.69		-	2,987.15		14.75			-
	Real Time Spinning Reserve Amount	55500-0072	(530.30)			-	(334.83)		-		(73.50)	(408.33)		-			(2.02)
	Spinning Reserve Cost Distribution Amount	55500-0073	29,337.11			18,523.45	-		4,066.12		-	22,589.57		111.51			-
	Real Time Supplemental Reserve Amount	55500-0074	-			-	-		-		-	-		-			-
	Supplemental Reserve Cost Distribution Amount	55500-0075	8,662.33			5,469.40	-		1,200.60		-	6,669.99		32.93			-
Subtotal			13,119.80		637,423	37,027.22	-	(28,743.37)	140,459	8,127.93	-	(6,309.52)	10,102.25	-	222.91	-	(173.04)
Grand Total			2,290,530.37		637,423	2,569,969.10	637,423	(578,394.21)	140,459	564,139.56	140,459	(126,964.58)	2,428,749.86	33,194	12,183.94	33,194	(4,036.15)

1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)
2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE
3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity
NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER		Account	July 2015		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue		
Day Ahead and Real Time Energy																				
Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050		2,889,332.27																	
Day Ahead Non-Asset Energy	55500-0027		(727,183.25)																	
Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050		(714,898.06)																	
Excessive Energy Amount	55500-0066		50,916.77																	
Non-Excessive Energy Amount	55500-0069		(362,150.24)																	
Real Time Non-Asset Energy	55500-0043		(154,735.39)																	
Subtotal			981,282.10	57,498			-				72,359				230,864					
Day Ahead and Real Time Energy Loss																				
Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050		1,161,019.08									17,722.53				253,000.88			-	
Day Ahead Financial Bilateral Transaction Loss	55500-0022		375,870.72									3,114.51				81,907.03			-	
Real Time Loss	4470-0000 or 55500-0000 or 55500-0050		(112,367.65)											(1,715.25)					(24,486.35)	
Real Time Distribution of Losses	55500-0041		(356,616.88)											(2,954.97)					(77,711.37)	
Real Time Financial Bilateral Transaction Loss	55500-0038		(69.75)											(0.58)					(15.20)	
Subtotal			1,067,835.52	57,498	-	57,498	-	-	-	-	72,359	20,837.03	72,359	(4,670.80)	230,864	334,907.91	230,864	(102,212.92)		
Virtual Energy																				
Day Ahead Virtual Energy	55500-0030		-																	
Real Time Virtual Energy	55500-0049		-																	
Subtotal			-	57,498	-	57,498	-	-	-	-	72,359	-	72,359	-	230,864	-	230,864	-		
Schedule 16 & 17 1/																				
Day Ahead Market Administration (Schedule 17)	55500-0020		120,444.71									998.02				26,246.44			-	
Real Time Market Administration (Schedule 17)	55500-0036		11,022.67									91.34				2,401.98			-	
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031		3,897.86									32.30				849.39			-	
Subtotal			135,365.24	57,498	-	57,498	-	-	-	-	72,359	1,121.65	72,359	-	230,864	29,497.81	230,864	-		

MINNESOTA POWER		Account	July 2015				MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue				
Congestion, FTRs & ARRs																						
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	(8,874.29)																				
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(49,180.55)																				
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	(62,478.79)																				
Real Time Financial Bilateral Transaction Congestion	55500-0037	(3,806.54)																				
Auction Revenue Rights Transaction Amount	55500-0058	(192,548.92)																				
Financial Transmission Rights Annual Transaction Amount	55500-0059	282,534.72									2,341.11				61,567.92							
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	12,122.28									100.45				2,641.60							
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(49,299.42)																				
Financial Transmission Rights Hourly Allocation	55500-0032	54,426.02									450.98				11,860.12							
Financial Transmission Rights Monthly Allocation	55500-0033	(5,913.21)																				
Financial Transmission Rights Yearly Allocation	55500-0035	-																				
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	2,673.52									22.15				582.59							
FTR Guarantee Uplift Amount	55500-0055	(2,673.52)																				
Financial Transmission Rights Monthly Transaction Amount	55500-0056	-																				
Financial Transmission Rights Transaction	55500-0034	-																				
Subtotal		(23,018.70)	57,498	-	57,498	-	-	-	-	-	72,359	2,914.69	72,359	(3,510.57)	230,864	76,652.24	230,864	(81,668.31)				
RSG & Make Whole Payments																						
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	26,976.98									223.53				5,878.63							
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	12.23									0.10				2.67							
Real Time Price Volatility Make Whole Payment	55500-0057	(20,993.53)																				
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	52,362.44									433.88				11,410.44							
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-																				
Subtotal		58,358.12	57,498	-	57,498	-	-	-	-	-	72,359	657.52	72,359	(173.95)	230,864	17,291.74	230,864	(4,574.76)				
RNU & Misc Charges																						
Real Time Miscellaneous	55500-0042	(2,720.51)																				
Real Time Net Inadvertent Distribution	55500-0044	(5,236.66)																				
Real Time Revenue Neutrality Uplift Amount	55500-0045	65,545.46									543.12				14,283.19							
Real Time Uninstructed Deviation	55500-0048	-																				
Subtotal		57,588.29	57,498	-	57,498	-	-	-	-	-	72,359	543.12	72,359	(65.93)	230,864	14,283.19	230,864	(1,733.97)				

MINNESOTA POWER

MISO MONTHLY ALLOCATION

Account Number	July 2015	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales					
		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue		
		Grandfathered Charge Types																	
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-																-	-
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-																-	-
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-																-	-
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-																-	-
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-																-	-
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-																-	-
Subtotal		-	57,498	-	57,498	-	-	-	-	-	72,359	-	72,359	-	230,864	-	230,864	-	-
ASM Charge Types (12 Other)																			
Day Ahead Regulation Amount	55500-0062	(21,317.21)									-		(176.64)		-				(4,645.29)
Day Ahead Spinning Reserve Amount	55500-0063	(19,673.53)									-		(163.02)		-				(4,287.11)
Day Ahead Supplemental Reserve Amount	55500-0064	-									-		-		-				-
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-									-		-		-				-
Net Regulation Adjustment Amount	55500-0068	678.30									5.62		-		147.81				-
Real Time Regulation Amount	55500-0070	(4,002.20)									-		(33.16)		-				(872.13)
Regulation Reserve Cost Distribution Amount	55500-0071	16,085.89									133.29		-		3,505.32				-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	3,879.41									32.15		-		845.37				-
Real Time Spinning Reserve Amount	55500-0072	(530.30)									-		(4.39)		-				(115.56)
Spinning Reserve Cost Distribution Amount	55500-0073	29,337.11									243.09		-		6,392.93				-
Real Time Supplemental Reserve Amount	55500-0074	-									-		-		-				-
Supplemental Reserve Cost Distribution Amount	55500-0075	8,662.33									71.78		-		1,887.63				-
Subtotal		13,119.80	-	-	-	-	-	-	-	-	485.92	-	(377.21)	-	12,779.07	-			(9,920.10)
Grand Total		2,290,530.37	57,498	-	57,498	-	-	-	-	-	72,359	26,559.93	72,359	(8,798.46)	230,864	485,411.96	230,864		(200,110.05)

MINNESOTA POWER		Account		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number	August 2015	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	2,634,114.82									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,337,746.99)									-				
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	4,770,718.76									-				
	Excessive Energy Amount	55500-0066	22,641.15									-				
	Non-Excessive Energy Amount	55500-0069	(328,453.79)									-				
22	Real Time Non-Asset Energy	55500-0043	(189,642.89)									-				
Subtotal			5,571,631.05	638,073	5,024,363.31			139,497	1,102,909.02			6,127,272.33	3,904			
Day Ahead and Real Time Energy Loss																
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	898,397.00		594,965.35		-		130,602.15		-	725,567.50		-		(3,284.49)
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	151,424.43		100,576.11		-		22,077.68		-	122,653.79		-		(582.32)
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	(21,647.10)		-		(14,335.84)		-		(3,146.89)	(17,482.73)		-		-
14	Real Time Distribution of Losses	55500-0041	(352,714.77)		-		(234,273.15)		-		(51,425.81)	(285,698.96)		-		-
16	Real Time Financial Bilateral Transaction Loss	55500-0038	15.75		10.46		-		2.30		-	12.76		-		(0.06)
Subtotal			675,475.31	638,073	695,551.91	638,073	(248,608.99)	139,497	152,682.13	139,497	(54,572.70)	545,052.35	3,904	-	3,904	(3,866.87)
Virtual Energy																
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-		-		-
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-		-		-
Subtotal			-	638,073	-	638,073	-	139,497	-	139,497	-	-	3,904	-	3,904	-
Schedule 16 & 17 1/																
4	Day Ahead Market Administration (Schedule 17)	55500-0020	104,284.01		69,265.44		-		15,204.61		-	84,470.05		-		(401.04)
19	Real Time Market Administration (Schedule 17)	55500-0036	8,610.04		5,718.79		-		1,255.34		-	6,974.13		-		(33.11)
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	5,089.07		3,380.16		-		741.99		-	4,122.15		-		(19.57)
Subtotal			117,983.12	638,073	78,364.39	638,073	-	139,497	17,201.94	139,497	-	95,566.33	3,904	-	3,904	(453.72)

MINNESOTA POWER		Account	August 2015		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																	
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	(26,382.33)	-			(17,471.75)					(3,835.26)	(21,307.02)		-		-
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(150,452.10)	-			(99,637.23)					(21,871.59)	(121,508.81)		-		-
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	32,536.07	21,610.46			-		4,743.76			-	26,354.22		-		(125.12)
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	859.54	570.91			-		125.32			-	696.23		-		(3.31)
	Auction Revenue Rights Transaction Amount	55500-0058	(192,548.92)	-			(127,890.99)		-			(28,073.63)	(155,964.63)		-		-
	Financial Transmission Rights Annual Transaction Amount	55500-0059	282,534.72	187,659.56			-		41,193.56			-	228,853.12		-		(1,086.52)
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	12,047.38	8,001.87			-		1,756.51			-	9,758.38		-		(46.33)
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(39,251.45)	-			(26,070.81)		-			(5,722.86)	(31,793.67)		-		-
28	Financial Transmission Rights Hourly Allocation	55500-0032	(7,976.83)	-			(5,298.21)		-			(1,163.02)	(6,461.23)		-		-
30	Financial Transmission Rights Monthly Allocation	55500-0033	(3,689.33)	-			(2,450.45)		-			(537.90)	(2,988.36)		-		-
32	Financial Transmission Rights Yearly Allocation	55500-0035	-	-			-		-			-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(1,552.66)	-			(1,031.28)		-			(226.38)	(1,257.65)		-		-
	FTR Guarantee Uplift Amount	55500-0055	1,552.66	1,031.28			-		226.38			-	1,257.65		-		(5.97)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	25,938.53	17,228.37			-		3,781.84			-	21,010.21		-		(99.75)
31	Financial Transmission Rights Transaction	55500-0034	-	-			-		-			-	-		-		-
Subtotal			(66,384.72)	638,073	236,102.44	638,073	(279,850.73)	139,497	51,827.37	139,497	(61,430.65)	(53,351.57)	3,904	-	3,904	(1,366.99)	
RSG & Make Whole Payments																	
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	26,155.19	17,372.28			-		3,813.43			-	21,185.70		-		(100.58)
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	-	-			-		-			-	-		-		-
	Real Time Price Volatility Make Whole Payment	55500-0057	(97,875.13)	-			(65,008.66)		-			(14,270.19)	(79,278.86)		-		-
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	36,012.61	23,919.58			-		5,250.64			-	29,170.21		-		(138.49)
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-	-			-		-			-	-		-		-
Subtotal			(35,707.33)	638,073	41,291.85	638,073	(65,008.66)	139,497	9,064.07	139,497	(14,270.19)	(28,922.94)	3,904	-	3,904	(239.07)	
RNU & Misc Charges																	
20	Real Time Miscellaneous	55500-0042	(272.36)	-			(180.90)		-			(39.71)	(220.61)		-		-
21	Real Time Net Inadvertent Distribution	55500-0044	(4,497.87)	-			(2,987.49)		-			(655.79)	(3,643.27)		-		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	100,744.95	66,914.80			-		14,688.61			-	81,603.41		-		(387.43)
26	Real Time Uninstructed Deviation	55500-0048	-	-			-		-			-	-		-		-
Subtotal			95,974.72	638,073	66,914.80	638,073	(3,168.39)	139,497	14,688.61	139,497	(695.50)	77,739.52	3,904	-	3,904	(387.43)	

MINNESOTA POWER		Account		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number	August 2015	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-									-				
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-									-				
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-									-				
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-									-				
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-									-				
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-									-				
Subtotal			-	638,073	-	638,073	-	139,497	-	139,497	-	-	3,904	-	3,904	-
ASM Charge Types (12 Other)																
	Day Ahead Regulation Amount	55500-0062	(17,401.19)		-		(11,557.87)		-		(2,537.09)	(14,094.96)		-		-
	Day Ahead Spinning Reserve Amount	55500-0063	(11,931.59)		-		(7,924.96)		-		(1,739.63)	(9,664.59)		-		-
	Day Ahead Supplemental Reserve Amount	55500-0064	(0.39)		-		(0.26)		-		(0.06)	(0.32)		-		-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	1,035.03		687.47		-		150.91		-	838.37		-		(3.98)
	Real Time Regulation Amount	55500-0070	2,522.72		1,675.59		-		367.81		-	2,043.40		-		(9.70)
	Regulation Reserve Cost Distribution Amount	55500-0071	18,004.34		11,958.48		-		2,625.03		-	14,583.52		-		(69.24)
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	2,011.21		1,335.85		-		293.23		-	1,629.08		-		(7.73)
	Real Time Spinning Reserve Amount	55500-0072	(707.37)		-		(469.84)		-		(103.13)	(572.97)		-		-
	Spinning Reserve Cost Distribution Amount	55500-0073	20,920.45		13,895.36		-		3,050.20		-	16,945.56		-		(80.45)
	Real Time Supplemental Reserve Amount	55500-0074	0.22		0.15		-		0.03		-	0.18		-		(0.00)
	Supplemental Reserve Cost Distribution Amount	55500-0075	11,002.18		7,307.65		-		1,604.12		-	8,911.77		-		(42.31)
Subtotal			25,455.61	638,073	36,860.54	-	(19,952.93)	139,497	8,091.34	-	(4,379.91)	20,619.04	-	-	-	(213.42)
Grand Total			6,384,427.77	638,073	6,179,449.25	638,073	(616,589.69)	139,497	1,356,464.47	139,497	(135,348.96)	6,783,975.07	3,904	-	3,904	(6,527.49)

1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)

2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE

3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity

NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER		Account	August 2015		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales					
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue		
Congestion, FTRs & ARRs																						
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050		(26,382.33)										1,208.00			-				(6,283.32)		
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050		(150,452.10)										6,888.96			-				(35,832.24)		
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		32,536.07										-			(1,441.94)			7,748.91	-		
Real Time Financial Bilateral Transaction Congestion	55500-0037		859.54										-			(38.09)			204.71	-		
Auction Revenue Rights Transaction Amount	55500-0058		(192,548.92)										9,273.89			-			-	(45,858.18)		
Financial Transmission Rights Annual Transaction Amount	55500-0059		282,534.72										-			(12,521.43)			67,289.54	-		
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		12,047.38										-			(533.92)			2,869.25	-		
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(39,251.45)										1,890.50			-			-	(9,348.27)		
Financial Transmission Rights Hourly Allocation	55500-0032		(7,976.83)										384.19			-			-	(1,899.79)		
Financial Transmission Rights Monthly Allocation	55500-0033		(3,689.33)										177.69			-			-	(878.66)		
Financial Transmission Rights Yearly Allocation	55500-0035		-										-			-			-	-		
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		(1,552.66)										74.78			-			-	(369.79)		
FTR Guarantee Uplift Amount	55500-0055		1,552.66										-			(68.81)			369.79	-		
Financial Transmission Rights Monthly Transaction Amount	55500-0056		25,938.53										-			(1,149.55)			6,177.62	-		
Financial Transmission Rights Transaction	55500-0034		-										-			-			-	-		
Subtotal			(66,384.72)		56,864		-	56,864		-		-	44,989		19,898.01	44,989	(15,753.74)		234,887	84,659.82	234,887	(100,470.26)
RSG & Make Whole Payments																						
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		26,155.19										-			(1,159.15)			6,229.22	-		
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		-										-			-			-	-		
Real Time Price Volatility Make Whole Payment	55500-0057		(97,875.13)										4,714.04			-			-	(23,310.31)		
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		36,012.61										-			(1,596.01)			8,576.90	-		
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-										-			-			-	-		
Subtotal			(35,707.33)		56,864		-	56,864		-		-	44,989		4,714.04	44,989	(2,755.16)		234,887	14,806.12	234,887	(23,310.31)
RNU & Misc Charges																						
Real Time Miscellaneous	55500-0042		(272.36)										13.12			-			-	(64.87)		
Real Time Net Inadvertent Distribution	55500-0044		(4,497.87)										216.63			-			-	(1,071.23)		
Real Time Revenue Neutrality Uplift Amount	55500-0045		100,744.95										-			(4,464.83)			23,993.80	-		
Real Time Uninstructed Deviation	55500-0048		-										-			-			-	-		
Subtotal			95,974.72		56,864		-	56,864		-		-	44,989		229.75	44,989	(4,464.83)		234,887	23,993.80	234,887	(1,136.10)

MINNESOTA POWER		Account	August 2015															
MISO MONTHLY ALLOCATION		Number	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																		
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-														-		-
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-														-		-
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-														-		-
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-														-		-
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-														-		-
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-														-		-
Subtotal		-	56,864	-	56,864	-	-	-	-	-	44,989	-	44,989	-	234,887	-	234,887	-
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(17,401.19)									838.11		-		-			(4,144.33)
Day Ahead Spinning Reserve Amount	55500-0063	(11,931.59)									574.67		-		-			(2,841.67)
Day Ahead Supplemental Reserve Amount	55500-0064	(0.39)									0.02		-		-			(0.09)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-									-		-		-			-
Net Regulation Adjustment Amount	55500-0068	1,035.03									-		(45.87)		246.51			-
Real Time Regulation Amount	55500-0070	2,522.72									-		(111.80)		600.82			-
Regulation Reserve Cost Distribution Amount	55500-0071	18,004.34									-		(797.92)		4,287.98			-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	2,011.21									-		(89.13)		479.00			-
Real Time Spinning Reserve Amount	55500-0072	(707.37)									34.07		-		-			(168.47)
Spinning Reserve Cost Distribution Amount	55500-0073	20,920.45									-		(927.16)		4,982.49			-
Real Time Supplemental Reserve Amount	55500-0074	0.22									-		(0.01)		0.05			-
Supplemental Reserve Cost Distribution Amount	55500-0075	11,002.18									-		(487.60)		2,620.32			-
Subtotal		25,455.61	-	-	-	-	-	-	-	-	1,446.87	-	(2,459.49)	-	13,217.17	-	(7,154.57)	
Grand Total		6,384,427.77	56,864	-	56,864	-	-	-	-	-	44,989	44,267.94	44,989	(75,225.22)	234,887	414,809.43	234,887	(221,230.68)

MINNESOTA POWER		Account	September 2015	FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	9,319,884.58								-					
5	Day Ahead Non-Asset Energy	55500-0027	(1,154,945.75)								-					
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	(4,875,448.09)								-					
	Excessive Energy Amount	55500-0066	53,507.89								-					
	Non-Excessive Energy Amount	55500-0069	(345,949.94)								-					
22	Real Time Non-Asset Energy	55500-0043	(133,439.16)								-					
Subtotal			2,863,609.53	637,235	3,439,015.87		131,531	704,376.74			4,143,392.62	5				
Day Ahead and Real Time Energy Loss																
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	296,720.60		186,555.95	-		38,210.25			-	224,766.20		0.40		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	(17,971.67)		-	(11,336.53)		-		(2,321.94)	(13,658.47)		-			(0.02)
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	(27,322.16)		-	(17,178.15)		-		(3,518.42)	(20,696.57)		-			(0.04)
14	Real Time Distribution of Losses	55500-0041	(147,037.53)		-	(92,751.27)		-		(18,997.25)	(111,748.52)		-			(0.18)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-	-		-		-	-		-			-
Subtotal			104,389.24	637,235	186,555.95	637,235	(121,265.95)	131,531	38,210.25	131,531	(24,837.61)	78,662.64	5	0.40	5	(0.24)
Virtual Energy																
12	Day Ahead Virtual Energy	55500-0030	-		-	-		-		-	-					
27	Real Time Virtual Energy	55500-0049	-		-	-		-		-	-					
Subtotal			-	637,235	-	637,235	-	131,531	-	131,531	-	-	5	-	5	-
Schedule 16 & 17 1/																
4	Day Ahead Market Administration (Schedule 17)	55500-0020	115,784.74		73,037.01	-		14,959.39			-	87,996.40		0.14		-
19	Real Time Market Administration (Schedule 17)	55500-0036	8,455.41		5,333.67	-		1,092.44			-	6,426.11		0.01		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,838.94		1,790.80	-		366.79			-	2,157.59		0.00		-
Subtotal			127,079.09	637,235	80,161.49	637,235	-	131,531	16,418.62	131,531	-	96,580.11	5	0.16	5	-

MINNESOTA POWER		Account	September 2015	FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	201,107.97	126,441.81		-		25,897.72			-	152,339.53		0.27		-
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	45,173.20	28,401.57		-		5,817.19			-	34,218.76		0.06		-
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	43,126.55	27,204.23		-		5,571.95			-	32,776.18		0.05		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-	-		-		-			-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(36,337.04)	-		(22,921.40)		-			(4,694.75)	(27,616.15)		-		(0.05)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	45,231.37	28,531.95		-		5,843.89			-	34,375.84		0.06		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	13,727.31	8,659.19		-		1,773.57			-	10,432.76		0.02		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(143,245.31)	-		(90,359.14)		-			(18,507.29)	(108,866.44)		-		(0.18)
28	Financial Transmission Rights Hourly Allocation	55500-0032	45,233.15	28,533.07		-		5,844.12			-	34,377.19		0.06		-
30	Financial Transmission Rights Monthly Allocation	55500-0033	(5,463.22)	-		(3,446.20)		-			(705.85)	(4,152.05)		-		(0.01)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-	-		-		-			-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	262.11	165.34		-		33.86			-	199.20		0.00		-
	FTR Guarantee Uplift Amount	55500-0055	(262.11)	-		(165.34)		-			(33.86)	(199.20)		-		(0.00)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-	-		-		-			-	-		-		-
31	Financial Transmission Rights Transaction	55500-0034	-	-		-		-			-	-		-		-
Subtotal			208,553.99	637,235	247,937.15	637,235	(116,892.08)	131,531	50,782.31	131,531	(23,941.75)	157,885.62	5	0.51	5	(0.23)
RSG & Make Whole Payments																
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	24,772.95	15,626.78		-		3,200.67			-	18,827.44		0.03		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	-	-		-		-			-	-		-		-
	Real Time Price Volatility Make Whole Payment	55500-0057	(14,396.06)	-		(9,081.03)		-			(1,859.97)	(10,941.01)		-		(0.02)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	46,687.30	29,450.35		-		6,032.00			-	35,482.35		0.06		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-	-		-		-			-	-		-		-
Subtotal			57,064.19	637,235	45,077.13	637,235	(9,081.03)	131,531	9,232.66	131,531	(1,859.97)	43,368.78	5	0.09	5	(0.02)
RNU & Misc Charges																
20	Real Time Miscellaneous	55500-0042	3,870.83	2,441.72		-		500.11			-	2,941.83		0.00		-
21	Real Time Net Inadvertent Distribution	55500-0044	1,772.77	1,118.26		-		229.04			-	1,347.31		0.00		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	112,085.56	70,703.57		-		14,481.45			-	85,185.03		0.14		-
26	Real Time Uninstructed Deviation	55500-0048	-	-		-		-			-	-		-		-
Subtotal			117,729.16	637,235	74,263.55	637,235	-	131,531	15,210.61	131,531	-	89,474.16	5	0.15	5	-

MINNESOTA POWER		Account	September 2015	FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-								-					
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-								-					
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-								-					
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-								-					
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-								-					
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-								-					
Subtotal			-	637,235	-	637,235	-	131,531	-	131,531	-	-	5	-	5	-
ASM Charge Types (12 Other)																
	Day Ahead Regulation Amount	55500-0062	(32,522.34)	-		(20,515.09)		-		(4,201.89)	(24,716.98)		-			(0.04)
	Day Ahead Spinning Reserve Amount	55500-0063	(12,041.02)	-		(7,595.48)		-		(1,555.70)	(9,151.18)		-			(0.01)
	Day Ahead Supplemental Reserve Amount	55500-0064	0.09	0.06		-		0.01		-	0.07		0.00			-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-	-		-		-		-	-		-			-
	Net Regulation Adjustment Amount	55500-0068	1,013.42	639.27		-		130.93		-	770.20		0.00			-
	Real Time Regulation Amount	55500-0070	7,014.56	4,424.78		-		906.28		-	5,331.07		0.01			-
	Regulation Reserve Cost Distribution Amount	55500-0071	18,176.61	11,465.81		-		2,348.42		-	13,814.22		0.02			-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	3,173.48	2,001.83		-		410.01		-	2,411.84		0.00			-
	Real Time Spinning Reserve Amount	55500-0072	1,483.22	935.62		-		191.63		-	1,127.25		0.00			-
	Spinning Reserve Cost Distribution Amount	55500-0073	20,648.65	13,025.17		-		2,667.81		-	15,692.97		0.03			-
	Real Time Supplemental Reserve Amount	55500-0074	(0.05)	-		(0.03)		-		(0.01)	(0.04)		-			(0.00)
	Supplemental Reserve Cost Distribution Amount	55500-0075	14,914.99	9,408.38		-		1,927.02		-	11,335.39		0.02			-
Subtotal			21,861.61	637,235	41,900.90	-	(28,110.60)	131,531	8,582.11	-	(5,757.59)	16,614.82	-	0.08	-	(0.06)
Grand Total			3,500,286.81	637,235	4,114,912.04	637,235	(275,349.67)	131,531	842,813.31	131,531	(56,396.92)	4,625,978.75	5	1.39	5	(0.54)

1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)

2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE

3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity

NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER		Account	September 2015		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue		
Day Ahead and Real Time Energy																				
Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050		9,319,884.58																	
Day Ahead Non-Asset Energy	55500-0027		(1,154,945.75)																	
Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050		(4,875,448.09)																	
Excessive Energy Amount	55500-0066		53,507.89																	
Non-Excessive Energy Amount	55500-0069		(345,949.94)																	
Real Time Non-Asset Energy	55500-0043		(133,439.16)																	
Subtotal			2,863,609.53	62,395			-				107,625				214,790					
Day Ahead and Real Time Energy Loss																				
Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050		296,720.60									9,515.50		-		62,438.50			-	
Day Ahead Financial Bilateral Transaction Loss	55500-0022		(17,971.67)									-		(531.43)		-			(3,781.75)	
Real Time Loss	4470-0000 or 55500-0000 or 55500-0050		(27,322.16)									-		(876.19)		-			(5,749.36)	
Real Time Distribution of Losses	55500-0041		(147,037.53)									-		(4,347.92)		-			(30,940.90)	
Real Time Financial Bilateral Transaction Loss	55500-0038		-									-		-		-			-	
Subtotal			104,389.24	62,395	-	62,395	-	-	-	-	107,625	9,515.50	107,625	(5,755.54)	214,790	62,438.50	214,790	(40,472.02)		
Virtual Energy																				
Day Ahead Virtual Energy	55500-0030		-																	
Real Time Virtual Energy	55500-0049		-																	
Subtotal			-	62,395	-	62,395	-	-	-	-	107,625	-	107,625	-	214,790	-	214,790	-		
Schedule 16 & 17 1/																				
Day Ahead Market Administration (Schedule 17)	55500-0020		115,784.74									3,423.77		-		24,364.42			-	
Real Time Market Administration (Schedule 17)	55500-0036		8,455.41									250.03		-		1,779.26			-	
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031		2,838.94									83.95		-		597.39			-	
Subtotal			127,079.09	62,395	-	62,395	-	-	-	-	107,625	3,757.75	107,625	-	214,790	26,741.08	214,790	-		

MINNESOTA POWER		Account	September 2015		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue		
Congestion, FTRs & ARRs																				
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050		201,107.97								6,449.31					42,318.87				
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050		45,173.20								1,448.65					9,505.73				
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		43,126.55								1,275.26					9,075.06				
Real Time Financial Bilateral Transaction Congestion	55500-0037		-								-					-				
Auction Revenue Rights Transaction Amount	55500-0058		(36,337.04)								-			(1,074.49)		-			(7,646.35)	
Financial Transmission Rights Annual Transaction Amount	55500-0059		45,231.37								1,337.50					9,517.97				
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		13,727.31								405.92					2,888.62				
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(143,245.31)								-			(4,235.79)		-			(30,142.91)	
Financial Transmission Rights Hourly Allocation	55500-0032		45,233.15								1,337.55					9,518.35				
Financial Transmission Rights Monthly Allocation	55500-0033		(5,463.22)								-			(161.55)		-			(1,149.62)	
Financial Transmission Rights Yearly Allocation	55500-0035		-								-			-		-			-	
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		262.11								7.75					55.16				
FTR Guarantee Uplift Amount	55500-0055		(262.11)								-			(7.75)		-			(55.16)	
Financial Transmission Rights Monthly Transaction Amount	55500-0056		-								-			-		-			-	
Financial Transmission Rights Transaction	55500-0034		-								-			-		-			-	
Subtotal			208,553.99	62,395	-	62,395	-	-	-	-	107,625	12,261.94	107,625	(5,479.58)	214,790	82,879.76	214,790	(38,994.04)		
RSG & Make Whole Payments																				
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		24,772.95								732.54					5,212.94				
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		-								-					-				
Real Time Price Volatility Make Whole Payment	55500-0057		(14,396.06)								-			(425.69)		-			(3,029.34)	
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		46,687.30								1,380.55					9,824.34				
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-								-					-				
Subtotal			57,064.19	62,395	-	62,395	-	-	-	-	107,625	2,113.09	107,625	(425.69)	214,790	15,037.28	214,790	(3,029.34)		
RNU & Misc Charges																				
Real Time Miscellaneous	55500-0042		3,870.83								114.46					814.53				
Real Time Net Inadvertent Distribution	55500-0044		1,772.77								52.42					373.04				
Real Time Revenue Neutrality Uplift Amount	55500-0045		112,085.56								3,314.39					23,586.01				
Real Time Uninstructed Deviation	55500-0048		-								-					-				
Subtotal			117,729.16	62,395	-	62,395	-	-	-	-	107,625	3,481.27	107,625	-	214,790	24,773.58	214,790	-		

MINNESOTA POWER

MISO MONTHLY ALLOCATION

Account Number	September 2015	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
		Grandfathered Charge Types															
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-													-		-
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-													-		-
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-													-		-
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-													-		-
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-													-		-
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-													-		-
Subtotal		-	62,395	-	62,395	-	-	-	-	107,625	-	107,625	-	214,790	-	214,790	-
ASM Charge Types (12 Other)																	
Day Ahead Regulation Amount	55500-0062	(32,522.34)									-		(961.69)		-		(6,843.63)
Day Ahead Spinning Reserve Amount	55500-0063	(12,041.02)									-		(356.05)		-		(2,533.78)
Day Ahead Supplemental Reserve Amount	55500-0064	0.09									0.00		-		0.02		-
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-									-		-		-		-
Net Regulation Adjustment Amount	55500-0068	1,013.42									29.97		-		213.25		-
Real Time Regulation Amount	55500-0070	7,014.56									207.42		-		1,476.06		-
Regulation Reserve Cost Distribution Amount	55500-0071	18,176.61									537.49		-		3,824.88		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	3,173.48									93.84		-		667.79		-
Real Time Spinning Reserve Amount	55500-0072	1,483.22									43.86		-		312.11		-
Spinning Reserve Cost Distribution Amount	55500-0073	20,648.65									610.58		-		4,345.07		-
Real Time Supplemental Reserve Amount	55500-0074	(0.05)									-		(0.00)		-		(0.01)
Supplemental Reserve Cost Distribution Amount	55500-0075	14,914.99									441.04		-		3,138.54		-
Subtotal		21,861.61	-	-	-	-	-	-	-	-	1,964.20	-	(1,317.75)	-	13,977.72	-	(9,377.42)
Grand Total		3,500,286.81	62,395	-	62,395	-	-	-	-	107,625	33,093.74	107,625	(12,978.56)	214,790	225,847.92	214,790	(91,872.81)

MINNESOTA POWER		Account	October 2015	FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	2,386,666.17								-					
5	Day Ahead Non-Asset Energy	55500-0027	(923,791.96)								-					
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	(378,413.76)								-					
	Excessive Energy Amount	55500-0066	23,774.65								-					
	Non-Excessive Energy Amount	55500-0069	(420,014.34)								-					
22	Real Time Non-Asset Energy	55500-0043	(62,123.36)								-					
Subtotal			626,097.41	632,575	1,815,463.87		129,383	371,842.00			2,187,305.87	395				
Day Ahead and Real Time Energy Loss																
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	669,697.87		419,643.24	-		85,951.02			-	505,594.26		72.64		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	(68,587.99)		-	(42,696.02)		-		(8,744.97)	(51,440.99)		-			(8.58)
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	8,109.49		5,081.53	-		1,040.80			-	6,122.33		0.88		-
14	Real Time Distribution of Losses	55500-0041	(170,000.32)		-	(105,825.20)		-		(21,675.04)	(127,500.24)		-			(21.26)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-	-		-		-	-		-			-
Subtotal			439,219.04	632,575	424,724.77	632,575	(148,521.22)	129,383	86,991.82	129,383	(30,420.01)	332,775.36	395	73.52	395	(29.83)
Virtual Energy																
12	Day Ahead Virtual Energy	55500-0030	-		-	-		-		-	-					
27	Real Time Virtual Energy	55500-0049	-		-	-		-		-	-					
Subtotal			-	632,575	-	632,575	-	129,383	-	129,383	-	-	395	-	395	-
Schedule 16 & 17 1/																
4	Day Ahead Market Administration (Schedule 17)	55500-0020	130,075.18		80,971.80	-		16,584.59			-	97,556.39		16.26		-
19	Real Time Market Administration (Schedule 17)	55500-0036	9,197.63		5,725.52	-		1,172.70			-	6,898.22		1.15		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,554.76		1,590.34	-		325.73			-	1,916.07		0.32		-
Subtotal			141,827.57	632,575	88,287.66	632,575	-	129,383	18,083.02	129,383	-	106,370.68	395	17.73	395	-

MINNESOTA POWER		Account	October 2015		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation				
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue	
Congestion, FTRs & ARRs																		
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	12,993.88			8,142.17		-		1,667.67		-	9,809.84		1.41		-	
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(49,987.82)			-		(31,323.16)		-		(6,415.59)	(37,738.74)		-		(5.42)	
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	(141,945.22)			-		(88,360.90)		-		(18,098.02)	(106,458.92)		-		(17.75)	
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-			-		-		-		-	-		-		-	
	Auction Revenue Rights Transaction Amount	55500-0058	(36,337.04)			-		(22,619.81)		-		(4,632.97)	(27,252.78)		-		(4.54)	
	Financial Transmission Rights Annual Transaction Amount	55500-0059	45,231.37			28,156.53		-		5,767.00		-	33,923.53		5.66		-	
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	13,877.11			8,638.50		-		1,769.33		-	10,407.83		1.74		-	
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(147,905.35)			-		(92,071.08)		-		(18,857.93)	(110,929.01)		-		(18.49)	
28	Financial Transmission Rights Hourly Allocation	55500-0032	416.08			259.01		-		53.05		-	312.06		0.05		-	
30	Financial Transmission Rights Monthly Allocation	55500-0033	(5,168.82)			-		(3,217.59)		-		(659.02)	(3,876.62)		-		(0.65)	
32	Financial Transmission Rights Yearly Allocation	55500-0035	-			-		-		-		-	-		-		-	
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	1,168.37			727.31		-		148.97		-	876.28		0.15		-	
	FTR Guarantee Uplift Amount	55500-0055	(1,168.37)			-		(727.31)		-		(148.97)	(876.28)		-		(0.15)	
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-			-		-		-		-	-		-		-	
31	Financial Transmission Rights Transaction	55500-0034	-			-		-		-		-	-		-		-	
Subtotal			(308,825.81)		632,575	45,923.52	632,575	(238,319.84)		129,383	9,406.02	129,383	(48,812.50)	(231,802.80)	395	9.00	395	(47.00)
RSG & Make Whole Payments																		
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	36,394.71			22,655.71		-		4,640.33		-	27,296.03		4.55		-	
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(0.08)			-		(0.05)		-		(0.01)	(0.06)		-		(0.00)	
	Real Time Price Volatility Make Whole Payment	55500-0057	(16,568.14)			-		(10,313.67)		-		(2,112.44)	(12,426.11)		-		(2.07)	
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	24,668.55			15,356.17		-		3,145.24		-	18,501.41		3.08		-	
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-			-		-		-		-	-		-		-	
Subtotal			44,495.04		632,575	38,011.88	632,575	(10,313.72)		129,383	7,785.57	129,383	(2,112.45)	33,371.28	395	7.63	395	(2.07)
RNU & Misc Charges																		
20	Real Time Miscellaneous	55500-0042	(10,270.35)			-		(6,393.29)		-		(1,309.47)	(7,702.76)		-		(1.28)	
21	Real Time Net Inadvertent Distribution	55500-0044	(3,708.53)			-		(2,308.56)		-		(472.84)	(2,781.40)		-		(0.46)	
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	83,133.22			51,750.43		-		10,599.49		-	62,349.92		10.39		-	
26	Real Time Uninstructed Deviation	55500-0048	-			-		-		-		-	-		-		-	
Subtotal			69,154.34		632,575	51,750.43	632,575	(8,701.85)		129,383	10,599.49	129,383	(1,782.31)	51,865.76	395	10.39	395	(1.75)

MINNESOTA POWER		Account		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number	October 2015	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-									-				
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-									-				
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-									-				
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-									-				
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-									-				
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-									-				
Subtotal			-	632,575	-	632,575	-	129,383	-	129,383	-	-	395	-	395	-
ASM Charge Types (12 Other)																
	Day Ahead Regulation Amount	55500-0062	(23,534.15)		-		(14,650.01)		-		(3,000.60)	(17,650.61)		-		(2.94)
	Day Ahead Spinning Reserve Amount	55500-0063	(18,487.96)		-		(11,508.76)		-		(2,357.21)	(13,865.97)		-		(2.31)
	Day Ahead Supplemental Reserve Amount	55500-0064	-		-		-		-		-	-		-		-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	(461.53)		-		(287.30)		-		(58.85)	(346.15)		-		(0.06)
	Real Time Regulation Amount	55500-0070	2,129.23		1,325.45		-		271.48		-	1,596.92		0.27		-
	Regulation Reserve Cost Distribution Amount	55500-0071	21,573.22		13,429.33		-		2,750.59		-	16,179.92		2.70		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	2,882.42		1,794.31		-		367.51		-	2,161.82		0.36		-
	Real Time Spinning Reserve Amount	55500-0072	1,538.89		957.96		-		196.21		-	1,154.17		0.19		-
	Spinning Reserve Cost Distribution Amount	55500-0073	26,056.18		16,219.97		-		3,322.16		-	19,542.14		3.26		-
	Real Time Supplemental Reserve Amount	55500-0074	(34.11)		-		(21.23)		-		(4.35)	(25.58)		-		(0.00)
	Supplemental Reserve Cost Distribution Amount	55500-0075	17,386.73		10,823.24		-		2,216.81		-	13,040.05		2.17		-
Subtotal			29,048.92	632,575	44,550.25	-	(26,467.30)	129,383	9,124.75	-	(5,421.01)	21,786.69	-	8.95	-	(5.32)
Grand Total			1,041,016.51	632,575	2,508,712.38	632,575	(432,323.94)	129,383	513,832.66	129,383	(88,548.28)	2,501,672.83	395	127.23	395	(85.96)

1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)

2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE

3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity

NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER		Account	October 2015		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue		
Day Ahead and Real Time Energy																				
Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050		2,386,666.17																	
Day Ahead Non-Asset Energy	55500-0027		(923,791.96)																	
Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050		(378,413.76)																	
Excessive Energy Amount	55500-0066		23,774.65																	
Non-Excessive Energy Amount	55500-0069		(420,014.34)																	
Real Time Non-Asset Energy	55500-0043		(62,123.36)																	
Subtotal			626,097.41	83,309							118,003							225,956		
Day Ahead and Real Time Energy Loss																				
Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050		669,697.87									21,675.97				142,354.99				
Day Ahead Financial Bilateral Transaction Loss	55500-0022		(68,587.99)											(2,558.95)					(14,579.47)	
Real Time Loss	4470-0000 or 55500-0000 or 55500-0050		8,109.49									262.48				1,723.80				
Real Time Distribution of Losses	55500-0041		(170,000.32)											(6,342.54)					(36,136.29)	
Real Time Financial Bilateral Transaction Loss	55500-0038		-																	
Subtotal			439,219.04	83,309		83,309						118,003	21,938.45	118,003	(8,901.49)	225,956	144,078.79	225,956	(50,715.76)	
Virtual Energy																				
Day Ahead Virtual Energy	55500-0030		-																	
Real Time Virtual Energy	55500-0049		-																	
Subtotal			-	83,309		83,309						118,003	-	118,003	-	225,956	-	225,956	-	
Schedule 16 & 17 1/																				
Day Ahead Market Administration (Schedule 17)	55500-0020		130,075.18									4,852.97				27,649.56				
Real Time Market Administration (Schedule 17)	55500-0036		9,197.63									343.15				1,955.10				
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031		2,554.76									95.32				543.06				
Subtotal			141,827.57	83,309		83,309						118,003	5,291.44	118,003	-	225,956	30,147.72	225,956	-	

MINNESOTA POWER		Account	October 2015		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales								
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue							
Congestion, FTRs & ARR																									
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050		12,993.88								420.57					2,762.06									
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050		(49,987.82)											(1,617.95)					(10,625.71)						
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		(141,945.22)											(5,295.83)					(30,172.73)						
Real Time Financial Bilateral Transaction Congestion	55500-0037		-											-					-						
Auction Revenue Rights Transaction Amount	55500-0058		(36,337.04)											(1,355.70)					(7,724.02)						
Financial Transmission Rights Annual Transaction Amount	55500-0059		45,231.37								1,687.54			-		9,614.65			-						
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		13,877.11								517.74			-		2,949.80			-						
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(147,905.35)											(5,518.20)					(31,439.65)						
Financial Transmission Rights Hourly Allocation	55500-0032		416.08								15.52			-		88.44			-						
Financial Transmission Rights Monthly Allocation	55500-0033		(5,168.82)											(192.84)					(1,098.72)						
Financial Transmission Rights Yearly Allocation	55500-0035		-											-					-						
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		1,168.37								43.59			-		248.36			-						
FTR Guarantee Uplift Amount	55500-0055		(1,168.37)											(43.59)					(248.36)						
Financial Transmission Rights Monthly Transaction Amount	55500-0056		-											-					-						
Financial Transmission Rights Transaction	55500-0034		-											-					-						
Subtotal			(308,825.81)		83,309		-	83,309		-		-		-		118,003		2,684.96	118,003	(14,024.11)	225,956		15,663.31	225,956	(81,309.17)
RSG & Make Whole Payments																									
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		36,394.71									1,357.85		-		7,736.28			-						
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		(0.08)											(0.00)					(0.02)						
Real Time Price Volatility Make Whole Payment	55500-0057		(16,568.14)											(618.14)					(3,521.82)						
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		24,668.55								920.36			-		5,243.69			-						
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-											-					-						
Subtotal			44,495.04		83,309		-	83,309		-		-		-		118,003		2,278.21	118,003	(618.14)	225,956		12,979.97	225,956	(3,521.84)
RNU & Misc Charges																									
Real Time Miscellaneous	55500-0042		(10,270.35)											(383.18)					(2,183.13)						
Real Time Net Inadvertent Distribution	55500-0044		(3,708.53)											(138.36)					(788.31)						
Real Time Revenue Neutrality Uplift Amount	55500-0045		83,133.22								3,101.62			-		17,671.30			-						
Real Time Uninstructed Deviation	55500-0048		-											-					-						
Subtotal			69,154.34		83,309		-	83,309		-		-		-		118,003		3,101.62	118,003	(521.54)	225,956		17,671.30	225,956	(2,971.43)

MINNESOTA POWER		Account	October 2015				MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue				
Grandfathered Charge Types																						
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-																				
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-																				
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-																				
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-																				
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-																				
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-																				
Subtotal		-	83,309	-	83,309	-	-	-	-	-	118,003	-	118,003	-	225,956	-	225,956	-				
ASM Charge Types (12 Other)																						
Day Ahead Regulation Amount	55500-0062	(23,534.15)																				
Day Ahead Spinning Reserve Amount	55500-0063	(18,487.96)																				
Day Ahead Supplemental Reserve Amount	55500-0064	-																				
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-																				
Net Regulation Adjustment Amount	55500-0068	(461.53)																				
Real Time Regulation Amount	55500-0070	2,129.23																				
Regulation Reserve Cost Distribution Amount	55500-0071	21,573.22																				
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	2,882.42																				
Real Time Spinning Reserve Amount	55500-0072	1,538.89																				
Spinning Reserve Cost Distribution Amount	55500-0073	26,056.18																				
Real Time Supplemental Reserve Amount	55500-0074	(34.11)																				
Supplemental Reserve Cost Distribution Amount	55500-0075	17,386.73																				
Subtotal		29,048.92	-	-	-	-	-	-	-	-	2,670.08	-	(1,586.29)	-	15,212.64	-	(9,037.83)					
Grand Total		1,041,016.51	83,309	-	83,309	-	-	-	-	-	118,003	37,964.76	118,003	(25,651.57)	225,956	235,753.72	225,956	(147,556.04)				

MINNESOTA POWER		Account	November 2015	FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	2,608,471.87								-					
5	Day Ahead Non-Asset Energy	55500-0027	(1,467,584.25)								-					
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	(1,665,234.94)								-					
	Excessive Energy Amount	55500-0066	26,877.45								-					
	Non-Excessive Energy Amount	55500-0069	(441,239.76)								-					
22	Real Time Non-Asset Energy	55500-0043	(95,325.83)								-					
Subtotal			(1,034,035.46)	623,934	727,608.33		134,185	159,718.90			887,327.23	33,615				
Day Ahead and Real Time Energy Loss																
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	498,475.84		304,116.86	-		66,757.36			-	370,874.22		5,307.82		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	266,091.97		161,464.61	-		35,443.45			-	196,908.06		3,107.38		-
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	7,879.93		4,807.49	-		1,055.30			-	5,862.80		83.91		-
14	Real Time Distribution of Losses	55500-0041	(272,216.29)		-	(165,180.84)		-		(36,259.21)	(201,440.05)		-		(3,178.90)	
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-	-		-		-	-		-		-	
Subtotal			500,231.45	623,934	470,388.96	623,934	(165,180.84)	134,185	103,256.11	134,185	(36,259.21)	372,205.02	33,615	8,499.11	33,615	(3,178.90)
Virtual Energy																
12	Day Ahead Virtual Energy	55500-0030	-		-	-		-		-	-					
27	Real Time Virtual Energy	55500-0049	-		-	-		-		-	-					
Subtotal			-	623,934	-	623,934	-	134,185	-	134,185	-	-	33,615	-	33,615	-
Schedule 16 & 17 1/																
4	Day Ahead Market Administration (Schedule 17)	55500-0020	142,908.74		86,717.02	-		19,035.44			-	105,752.47		1,668.87		-
19	Real Time Market Administration (Schedule 17)	55500-0036	13,741.68		8,338.45	-		1,830.39			-	10,168.84		160.47		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,210.43		1,341.29	-		294.43			-	1,635.72		25.81		-
Subtotal			158,860.85	623,934	96,396.76	623,934	-	134,185	21,160.27	134,185	-	117,557.03	33,615	1,855.15	33,615	-

MINNESOTA POWER		Account	November 2015		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																	
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	(54,218.22)	-			(33,078.19)				(7,261.07)	(40,339.25)			-		(577.32)
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(95,502.04)	-			(58,265.17)				(12,789.92)	(71,055.09)			-		(1,016.92)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	864,551.19	524,609.66			-		115,158.22		-	639,767.88		10,096.09			-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-	-			-		-		-	-		-			-
	Auction Revenue Rights Transaction Amount	55500-0058	(36,337.04)	-			(22,049.32)		-		(4,840.09)	(26,889.41)		-			(424.34)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	45,231.37	27,446.40			-		6,024.82		-	33,471.21		528.20			-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	13,877.11	8,420.63			-		1,848.43		-	10,269.06		162.05			-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(147,905.33)	-			(89,748.95)		-		(19,700.99)	(109,449.94)		-			(1,727.22)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(53,919.14)	-			(32,718.13)		-		(7,182.03)	(39,900.16)		-			(629.66)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(1,995.97)	-			(1,211.15)		-		(265.86)	(1,477.02)		-			(23.31)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-	-			-		-		-	-		-			-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(20,542.59)	-			(12,465.24)		-		(2,736.27)	(15,201.52)		-			(239.89)
	FTR Guarantee Uplift Amount	55500-0055	20,425.89	12,394.43			-		2,720.73		-	15,115.16		238.53			-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	50,665.59	30,743.88			-		6,748.66		-	37,492.54		591.66			-
31	Financial Transmission Rights Transaction	55500-0034	-	-			-		-		-	-		-			-
Subtotal			584,330.81	623,934	603,615.00	623,934	(249,536.16)	134,185	132,500.85	134,185	(54,776.23)	431,803.46	33,615	11,616.55	33,615	(4,638.65)	
RSG & Make Whole Payments																	
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	6,147.29	3,730.18			-		818.82		-	4,548.99		71.79			-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(110.48)	-			(67.04)		-		(14.72)	(81.76)		-			(1.29)
	Real Time Price Volatility Make Whole Payment	55500-0057	(23,176.79)	-			(14,063.68)		-		(3,087.15)	(17,150.82)		-			(270.65)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	9,973.41	6,051.87			-		1,328.46		-	7,380.32		116.47			-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-	-			-		-		-	-		-			-
Subtotal			(7,166.57)	623,934	9,782.04	623,934	(14,130.72)	134,185	2,147.28	134,185	(3,101.86)	(5,303.26)	33,615	188.26	33,615	(271.95)	
RNU & Misc Charges																	
20	Real Time Miscellaneous	55500-0042	1,014.99	615.90			-		135.20		-	751.09		11.85			-
21	Real Time Net Inadvertent Distribution	55500-0044	(21,144.41)	-			(12,830.43)		-		(2,816.44)	(15,646.86)		-			(246.92)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	159,556.48	96,818.87			-		21,252.92		-	118,071.80		1,863.28			-
26	Real Time Uninstructed Deviation	55500-0048	-	-			-		-		-	-		-			-
Subtotal			139,427.06	623,934	97,434.77	623,934	(12,830.43)	134,185	21,388.12	134,185	(2,816.44)	103,176.02	33,615	1,875.13	33,615	(246.92)	

MINNESOTA POWER		Account	November 2015	FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-								-					
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-								-					
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-								-					
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-								-					
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-								-					
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-								-					
Subtotal			-	623,934	-	623,934	-	134,185	-	134,185	-	-	33,615	-	33,615	
ASM Charge Types (12 Other)																
	Day Ahead Regulation Amount	55500-0062	(14,203.96)		-	(8,618.96)		-		(1,891.97)	(10,510.93)		-		(165.87)	
	Day Ahead Spinning Reserve Amount	55500-0063	(15,087.97)		-	(9,155.38)		-		(2,009.72)	(11,165.10)		-		(176.19)	
	Day Ahead Supplemental Reserve Amount	55500-0064	-		-	-		-		-	-		-		-	
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-	-		-		-	-		-		-	
	Net Regulation Adjustment Amount	55500-0068	(446.46)		-	(270.91)		-		(59.47)	(330.38)		-		(5.21)	
	Real Time Regulation Amount	55500-0070	3,200.86		1,942.28	-		426.35		-	2,368.64		37.38		-	
	Regulation Reserve Cost Distribution Amount	55500-0071	17,432.35		10,577.95	-		2,321.99		-	12,899.94		203.57		-	
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	2,494.39		1,513.60	-		332.25		-	1,845.85		29.13		-	
	Real Time Spinning Reserve Amount	55500-0072	1,306.36		792.70	-		174.01		-	966.71		15.26		-	
	Spinning Reserve Cost Distribution Amount	55500-0073	18,414.25		11,173.77	-		2,452.78		-	13,626.55		215.04		-	
	Real Time Supplemental Reserve Amount	55500-0074	-		-	-		-		-	-		-		-	
	Supplemental Reserve Cost Distribution Amount	55500-0075	10,951.33		6,645.27	-		1,458.72		-	8,103.98		127.89		-	
Subtotal			24,061.15	623,934	32,645.56	-	(18,045.26)	134,185	7,166.10	-	(3,961.15)	17,805.25	-	628.26	-	(347.28)
Grand Total			365,709.30	623,934	2,037,871.42	623,934	(459,723.41)	134,185	447,337.63	134,185	(100,914.89)	1,924,570.76	33,615	24,662.46	33,615	(8,683.70)

1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)

2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE

3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity

NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER		Account	November 2015		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales										
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue									
Day Ahead and Real Time Energy																											
Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050		2,608,471.87																								
Day Ahead Non-Asset Energy	55500-0027		(1,467,584.25)																								
Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050		(1,665,234.94)																								
Excessive Energy Amount	55500-0066		26,877.45																								
Non-Excessive Energy Amount	55500-0069		(441,239.76)																								
Real Time Non-Asset Energy	55500-0043		(95,325.83)																								
Subtotal			(1,034,035.46)		99,324				-				97,498					227,553									
Day Ahead and Real Time Energy Loss																											
Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050		498,475.84									15,395.00				106,898.80			-								
Day Ahead Financial Bilateral Transaction Loss	55500-0022		266,091.97									9,012.76				57,063.77			-								
Real Time Loss	4470-0000 or 55500-0000 or 55500-0050		7,879.93									243.36				1,689.86			-								
Real Time Distribution of Losses	55500-0041		(272,216.29)									-		(9,220.20)		-			(58,377.14)								
Real Time Financial Bilateral Transaction Loss	55500-0038		-									-		-		-			-								
Subtotal			500,231.45		99,324		-	99,324		-		-		-		97,498		24,651.13	97,498	(9,220.20)	227,553		165,652.43		227,553		(58,377.14)
Virtual Energy																											
Day Ahead Virtual Energy	55500-0030		-																								
Real Time Virtual Energy	55500-0049		-																								
Subtotal			-		99,324		-	99,324		-		-		-		97,498		-	97,498		-		227,553		-		227,553
Schedule 16 & 17 1/																											
Day Ahead Market Administration (Schedule 17)	55500-0020		142,908.74									4,840.44				30,646.97			-								
Real Time Market Administration (Schedule 17)	55500-0036		13,741.68									465.44				2,946.92			-								
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031		2,210.43									74.87				474.03			-								
Subtotal			158,860.85		99,324		-	99,324		-		-		-		97,498		5,380.75	97,498		-		227,553		34,067.92		227,553

MINNESOTA POWER		Account	November 2015		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																				
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050		(54,218.22)																	
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050		(95,502.04)																	
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		864,551.19										29,283.08					185,404.13		
Real Time Financial Bilateral Transaction Congestion	55500-0037		-																	
Auction Revenue Rights Transaction Amount	55500-0058		(36,337.04)																	
Financial Transmission Rights Annual Transaction Amount	55500-0059		45,231.37										1,532.02					9,699.93		
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		13,877.11										470.03					2,975.96		
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(147,905.33)																	
Financial Transmission Rights Hourly Allocation	55500-0032		(53,919.14)																	
Financial Transmission Rights Monthly Allocation	55500-0033		(1,995.97)																	
Financial Transmission Rights Yearly Allocation	55500-0035		-																	
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		(20,542.59)																	
FTR Guarantee Uplift Amount	55500-0055		20,425.89										691.84					4,380.36		
Financial Transmission Rights Monthly Transaction Amount	55500-0056		50,665.59										1,716.09					10,865.30		
Financial Transmission Rights Transaction	55500-0034		-																	
Subtotal			584,330.81		99,324		-	99,324		-		-	97,498	33,693.07	97,498	(13,454.12)	227,553	213,325.68	227,553	(88,015.18)
RSG & Make Whole Payments																				
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		6,147.29											208.21				1,318.29		
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		(110.48)																	
Real Time Price Volatility Make Whole Payment	55500-0057		(23,176.79)																	
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		9,973.41										337.81					2,138.81		
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-																	
Subtotal			(7,166.57)		99,324		-	99,324		-		-	97,498	546.02	97,498	(788.76)	227,553	3,457.11	227,553	(4,993.99)
RNU & Misc Charges																				
Real Time Miscellaneous	55500-0042		1,014.99											34.38				217.67		
Real Time Net Inadvertent Distribution	55500-0044		(21,144.41)																	
Real Time Revenue Neutrality Uplift Amount	55500-0045		159,556.48										5,404.31					34,217.10		
Real Time Uninstructed Deviation	55500-0048		-																	
Subtotal			139,427.06		99,324		-	99,324		-		-	97,498	5,438.69	97,498	(716.18)	227,553	34,434.76	227,553	(4,534.45)

MINNESOTA POWER		Account	November 2015		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																				
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-																		
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-																		
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-																		
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-																		
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-																		
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-																		
Subtotal		-	99,324	-	99,324	-							97,498	-	97,498	-	227,553	-	227,553	-
ASM Charge Types (12 Other)																				
Day Ahead Regulation Amount	55500-0062	(14,203.96)																		
Day Ahead Spinning Reserve Amount	55500-0063	(15,087.97)																		
Day Ahead Supplemental Reserve Amount	55500-0064	-																		
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-																		
Net Regulation Adjustment Amount	55500-0068	(446.46)																		
Real Time Regulation Amount	55500-0070	3,200.86																		
Regulation Reserve Cost Distribution Amount	55500-0071	17,432.35																		
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	2,494.39																		
Real Time Spinning Reserve Amount	55500-0072	1,306.36																		
Spinning Reserve Cost Distribution Amount	55500-0073	18,414.25																		
Real Time Supplemental Reserve Amount	55500-0074	-																		
Supplemental Reserve Cost Distribution Amount	55500-0075	10,951.33																		
Subtotal		24,061.15	-	-	-	-							-	1,822.24	-	(1,007.26)	-	11,537.38	-	(6,377.44)
Grand Total		365,709.30	99,324	-	99,324	-							97,498	71,531.90	97,498	(25,186.52)	227,553	462,475.27	227,553	(162,298.18)

MINNESOTA POWER		Account	December 2015	FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	(644,595.21)								-					
5	Day Ahead Non-Asset Energy	55500-0027	(1,078,813.12)								-					
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	956,433.07								-					
	Excessive Energy Amount	55500-0066	14,360.27								-					
	Non-Excessive Energy Amount	55500-0069	(100,222.18)								-					
22	Real Time Non-Asset Energy	55500-0043	(22,498.34)								-					
Subtotal			(875,335.52)	644,584	767,925.48		147,497	180,130.67			948,056.14	40,033				
Day Ahead and Real Time Energy Loss																
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	530,086.93		320,676.61	-		75,220.44			-	395,897.05		6,452.87		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	169,924.39		103,229.07	-		24,214.23			-	127,443.29		1,853.79		-
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	33,681.43		20,375.62	-		4,779.47			-	25,155.08		410.01		-
14	Real Time Distribution of Losses	55500-0041	(221,195.23)		-	(134,376.10)		-		(31,520.32)	(165,896.42)		-		(2,413.13)	
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-	-		-		-	-		-		-	
Subtotal			512,497.52	644,584	444,281.30	644,584	(134,376.10)	147,497	104,214.13	147,497	(31,520.32)	382,599.01	40,033	8,716.68	40,033	(2,413.13)
Virtual Energy																
12	Day Ahead Virtual Energy	55500-0030	-		-	-		-		-	-					
27	Real Time Virtual Energy	55500-0049	-		-	-		-		-	-					
Subtotal			-	644,584	-	644,584	-	147,497	-	147,497	-	-	40,033	-	40,033	-
Schedule 16 & 17 1/																
4	Day Ahead Market Administration (Schedule 17)	55500-0020	145,117.36		88,158.80	-		20,679.22			-	108,838.02		1,583.16		-
19	Real Time Market Administration (Schedule 17)	55500-0036	9,259.40		5,625.09	-		1,319.46			-	6,944.55		101.02		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	4,430.52		2,691.54	-		631.35			-	3,322.89		48.33		-
Subtotal			158,807.28	644,584	96,475.42	644,584	-	147,497	22,630.04	147,497	-	119,105.46	40,033	1,732.51	40,033	-

MINNESOTA POWER		Account	December 2015	FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARR																
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	296,828.60	179,566.76		-		42,120.60			-	221,687.35		3,613.37		-
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(83,143.76)	-		(50,297.90)		-		(11,798.27)	(62,096.17)		-			(1,012.13)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	130,079.05	79,023.02		-		18,536.26			-	97,559.29		1,419.10		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-	-		-		-		-	-		-			-
	Auction Revenue Rights Transaction Amount	55500-0058	(139,596.70)	-		(84,805.00)		-		(19,892.53)	(104,697.53)		-			(1,522.93)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	155,288.21	94,337.59		-		22,128.57			-	116,466.16		1,694.12		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	12,062.02	7,327.68		-		1,718.84			-	9,046.52		131.59		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(76,048.60)	-		(46,199.52)		-		(10,836.93)	(57,036.45)		-			(829.65)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(166,506.95)	-		(101,152.97)		-		(23,727.24)	(124,880.21)		-			(1,816.51)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(5,918.60)	-		(3,595.55)		-		(843.40)	(4,438.95)		-			(64.57)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-	-		-		-		-	-		-			-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(7,655.94)	-		(4,650.98)		-		(1,090.97)	(5,741.96)		-			(83.52)
	FTR Guarantee Uplift Amount	55500-0055	4,693.55	2,851.33		-		668.83			-	3,520.16		51.20		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	213,331.70	129,599.01		-		30,399.77			-	159,998.78		2,327.34		-
31	Financial Transmission Rights Transaction	55500-0034	-	-		-		-		-	-		-			-
	Subtotal		333,412.58	644,584	492,705.38	644,584	(290,701.92)	147,497	115,572.87	147,497	(68,189.34)	249,386.99	40,033	9,236.71	40,033	(5,329.31)
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	8,691.26	5,279.94		-		1,238.50			-	6,518.45		94.82		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(50.29)	-		(30.55)		-		(7.17)	(37.72)		-			(0.55)
	Real Time Price Volatility Make Whole Payment	55500-0057	(14,523.23)	-		(8,822.86)		-		(2,069.56)	(10,892.42)		-			(158.44)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	12,449.81	7,563.26		-		1,774.10			-	9,337.36		135.82		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-	-		-		-		-	-		-			-
	Subtotal		6,567.55	644,584	12,843.20	644,584	(8,853.41)	147,497	3,012.60	147,497	(2,076.73)	4,925.66	40,033	230.64	40,033	(158.99)
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	7,437.74	4,518.43		-		1,059.88			-	5,578.31		81.14		-
21	Real Time Net Inadvertent Distribution	55500-0044	(8,294.09)	-		(5,038.66)		-		(1,181.91)	(6,220.57)		-			(90.48)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	141,735.21	86,104.14		-		20,197.27			-	106,301.41		1,546.26		-
26	Real Time Uninstructed Deviation	55500-0048	-	-		-		-		-	-		-			-
	Subtotal		140,878.86	644,584	90,622.57	644,584	(5,038.66)	147,497	21,257.15	147,497	(1,181.91)	105,659.15	40,033	1,627.40	40,033	(90.48)

MINNESOTA POWER		Account	December 2015		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																	
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-										-				
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-										-				
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-										-				
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-										-				
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-										-				
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-										-				
Subtotal			-		644,584	-	644,584	-	147,497	-	147,497	-	-	40,033	-	40,033	-
ASM Charge Types (12 Other)																	
	Day Ahead Regulation Amount	55500-0062	(18,405.99)			-	(11,181.64)			-	(2,622.85)	(13,804.49)		-			(200.80)
	Day Ahead Spinning Reserve Amount	55500-0063	(16,641.08)			-	(10,109.46)			-	(2,371.35)	(12,480.81)		-			(181.55)
	Day Ahead Supplemental Reserve Amount	55500-0064	-			-	-			-	-	-		-			-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-			-	-			-	-	-		-			-
	Net Regulation Adjustment Amount	55500-0068	(260.78)			-	(158.42)			-	(37.16)	(195.59)		-			(2.84)
	Real Time Regulation Amount	55500-0070	3,258.04			1,979.26	-			464.27	-	2,443.53		35.54			-
	Regulation Reserve Cost Distribution Amount	55500-0071	15,396.33			9,353.27	-			2,193.98	-	11,547.25		167.97			-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	1,826.44			1,109.56	-			260.27	-	1,369.83		19.93			-
	Real Time Spinning Reserve Amount	55500-0072	2,173.54			1,320.43	-			309.73	-	1,630.16		23.71			-
	Spinning Reserve Cost Distribution Amount	55500-0073	17,633.66			10,712.45	-			2,512.80	-	13,225.25		192.37			-
	Real Time Supplemental Reserve Amount	55500-0074	-			-	-			-	-	-		-			-
	Supplemental Reserve Cost Distribution Amount	55500-0075	9,178.85			5,576.15	-			1,307.99	-	6,884.14		100.14			-
Subtotal			14,159.01		644,584	30,051.12	-	(21,449.52)	147,497	7,049.03	-	(5,031.37)	10,619.26	-	539.66	-	(385.19)
Grand Total			290,987.29		644,584	1,934,904.46	644,584	(460,419.62)	147,497	453,866.48	147,497	(107,999.66)	1,820,351.66	40,033	22,083.60	40,033	(8,377.10)

1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)

2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE

3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity

NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER		Account	December 2015		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue		
Day Ahead and Real Time Energy																				
Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	(644,595.21)																		
Day Ahead Non-Asset Energy	55500-0027	(1,078,813.12)																		
Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	956,433.07																		
Excessive Energy Amount	55500-0066	14,360.27																		
Non-Excessive Energy Amount	55500-0069	(100,222.18)																		
Real Time Non-Asset Energy	55500-0043	(22,498.34)																		
Subtotal		(875,335.52)	70,722								97,887								234,578	
Day Ahead and Real Time Energy Loss																				
Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	530,086.93										15,778.42				111,958.58				
Day Ahead Financial Bilateral Transaction Loss	55500-0022	169,924.39										4,532.84				36,094.46				
Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	33,681.43										1,002.55				7,113.79				
Real Time Distribution of Losses	55500-0041	(221,195.23)												(5,900.53)					(46,985.15)	
Real Time Financial Bilateral Transaction Loss	55500-0038	-																		
Subtotal		512,497.52	70,722			-	70,722					97,887	21,313.82	97,887	(5,900.53)	234,578	155,166.83	234,578	(46,985.15)	
Virtual Energy																				
Day Ahead Virtual Energy	55500-0030	-																		
Real Time Virtual Energy	55500-0049	-																		
Subtotal		-	70,722			-	70,722					97,887	-	97,887	-	234,578	-	234,578	-	
Schedule 16 & 17 1/																				
Day Ahead Market Administration (Schedule 17)	55500-0020	145,117.36										3,871.10				30,825.08				
Real Time Market Administration (Schedule 17)	55500-0036	9,259.40										247.00				1,966.83				
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	4,430.52										118.19				941.11				
Subtotal		158,807.28	70,722			-	70,722					97,887	4,236.29	97,887	-	234,578	33,733.03	234,578	-	

MINNESOTA POWER		Account	December 2015		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue		
Congestion, FTRs & ARRs																				
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050		296,828.60									8,835.32		-		62,692.56		-		
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050		(83,143.76)									-		(2,474.83)		-		(17,560.62)		
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		130,079.05									3,469.94		-		27,630.72		-		
Real Time Financial Bilateral Transaction Congestion	55500-0037		-									-		-		-		-		
Auction Revenue Rights Transaction Amount	55500-0058		(139,596.70)									-		(3,723.83)		-		(29,652.41)		
Financial Transmission Rights Annual Transaction Amount	55500-0059		155,288.21									4,142.41		-		32,985.52		-		
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		12,062.02									321.76		-		2,562.15		-		
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(76,048.60)									-		(2,028.65)		-		(16,153.85)		
Financial Transmission Rights Hourly Allocation	55500-0032		(166,506.95)									-		(4,441.68)		-		(35,368.55)		
Financial Transmission Rights Monthly Allocation	55500-0033		(5,918.60)									-		(157.88)		-		(1,257.20)		
Financial Transmission Rights Yearly Allocation	55500-0035		-									-		-		-		-		
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		(7,655.94)									-		(204.23)		-		(1,626.24)		
FTR Guarantee Uplift Amount	55500-0055		4,693.55									125.20		-		996.98		-		
Financial Transmission Rights Monthly Transaction Amount	55500-0056		213,331.70									5,690.76		-		45,314.82		-		
Financial Transmission Rights Transaction	55500-0034		-									-		-		-		-		
Subtotal			333,412.58	70,722	-	70,722	-	-	-	-	97,887	22,585.40	97,887	(13,031.10)	234,578	172,182.76	234,578	(101,618.87)		
RSG & Make Whole Payments																				
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		8,691.26									231.84		-		1,846.15		-		
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		(50.29)									-		(1.34)		-		(10.68)		
Real Time Price Volatility Make Whole Payment	55500-0057		(14,523.23)									-		(387.42)		-		(3,084.95)		
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		12,449.81									332.11		-		2,644.52		-		
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-									-		-		-		-		
Subtotal			6,567.55	70,722	-	70,722	-	-	-	-	97,887	563.95	97,887	(388.76)	234,578	4,490.68	234,578	(3,095.63)		
RNU & Misc Charges																				
Real Time Miscellaneous	55500-0042		7,437.74									198.41		-		1,579.89		-		
Real Time Net Inadvertent Distribution	55500-0044		(8,294.09)									-		(221.25)		-		(1,761.79)		
Real Time Revenue Neutrality Uplift Amount	55500-0045		141,735.21									3,780.88		-		30,106.66		-		
Real Time Uninstructed Deviation	55500-0048		-									-		-		-		-		
Subtotal			140,878.86	70,722	-	70,722	-	-	-	-	97,887	3,979.29	97,887	(221.25)	234,578	31,686.55	234,578	(1,761.79)		

MINNESOTA POWER

MISO MONTHLY ALLOCATION

Account Number	December 2015	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
		Grandfathered Charge Types															
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-															
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-															
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-															
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-															
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-															
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-															
Subtotal		-	70,722	-	70,722	-	-	-	-	97,887	-	97,887	-	234,578	-	234,578	-
ASM Charge Types (12 Other)																	
Day Ahead Regulation Amount	55500-0062	(18,405.99)															
Day Ahead Spinning Reserve Amount	55500-0063	(16,641.08)															
Day Ahead Supplemental Reserve Amount	55500-0064	-															
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-															
Net Regulation Adjustment Amount	55500-0068	(260.78)															
Real Time Regulation Amount	55500-0070	3,258.04								86.91				692.06			
Regulation Reserve Cost Distribution Amount	55500-0071	15,396.33								410.71				3,270.41			
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	1,826.44								48.72				387.96			
Real Time Spinning Reserve Amount	55500-0072	2,173.54								57.98				461.69			
Spinning Reserve Cost Distribution Amount	55500-0073	17,633.66								470.39				3,745.65			
Real Time Supplemental Reserve Amount	55500-0074	-								-				-			
Supplemental Reserve Cost Distribution Amount	55500-0075	9,178.85								244.85				1,949.72			
Subtotal		14,159.01	-	-	-	-	-	-	-	1,319.56	-	(941.86)	-	10,507.50	-	(7,499.91)	
Grand Total		290,987.29	70,722	-	70,722	-	-	-	-	97,887	53,998.30	97,887	(20,483.50)	234,578	407,767.35	234,578	(160,961.36)

MINNESOTA POWER		Account	January 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																	
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	2,964,756.75										-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,181,360.50)										-				
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	(56,387.52)										-				
	Excessive Energy Amount	55500-0066	15,621.59										-				
	Non-Excessive Energy Amount	55500-0069	(97,541.28)										-				
22	Real Time Non-Asset Energy	55500-0043	(105,654.35)										-				
Subtotal			1,539,434.70		682,718	2,063,875.27		156,673	484,118.89			2,547,994.16	24,598				
Day Ahead and Real Time Energy Loss																	
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	595,441.54			366,288.94	-		85,919.63		-	452,208.56		3,354.31			-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	263,973.12			162,501.85	-		38,117.72		-	200,619.57		1,460.48			-
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	(51,131.04)			-	(31,453.52)		-		(7,377.99)	(38,831.51)		-			(288.04)
14	Real Time Distribution of Losses	55500-0041	(387,175.58)			-	(238,345.29)		-		(55,908.15)	(294,253.44)		-			(2,142.12)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-			-	-		-		-	-		-			-
Subtotal			421,108.04		682,718	528,790.79	682,718	(269,798.81)	156,673	124,037.35	156,673	(63,286.14)	319,743.18	24,598	4,814.79	24,598	(2,430.16)
Virtual Energy																	
12	Day Ahead Virtual Energy	55500-0030	-			-	-		-		-	-					
27	Real Time Virtual Energy	55500-0049	-			-	-		-		-	-					
Subtotal			-		682,718	-	682,718	-	156,673	-	156,673	-	-	24,598	-	24,598	-
Schedule 16 & 17 1/																	
4	Day Ahead Market Administration (Schedule 17)	55500-0020	155,840.16			95,935.20	-		22,503.32		-	118,438.52		862.22			-
19	Real Time Market Administration (Schedule 17)	55500-0036	9,309.23			5,730.76	-		1,344.25		-	7,075.01		51.51			-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	4,478.38			2,756.89	-		646.68		-	3,403.57		24.78			-
Subtotal			169,627.77		682,718	104,422.86	682,718	-	156,673	24,494.25	156,673	-	128,917.11	24,598	938.50	24,598	-

MINNESOTA POWER		Account	January 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																	
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	367,030.71			225,780.84		-		52,960.94		-	278,741.77		2,067.60		-
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(23,292.21)			-		(14,328.33)		-		(3,360.97)	(17,689.29)		-		(131.21)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	(72,725.41)			-		(44,769.76)		-		(10,501.55)	(55,271.31)		-		(402.37)
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-			-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(139,596.70)			-		(85,935.73)		-		(20,157.76)	(106,093.49)		-		(772.35)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	155,288.21			95,595.42		-		22,423.62		-	118,019.04		859.16		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	12,062.02			7,425.38		-		1,741.76		-	9,167.14		66.74		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(76,290.95)			-		(46,964.71)		-		(11,016.41)	(57,981.12)		-		(422.09)
28	Financial Transmission Rights Hourly Allocation	55500-0032	22,492.41			13,846.33		-		3,247.90		-	17,094.23		124.44		-
30	Financial Transmission Rights Monthly Allocation	55500-0033	(10,715.92)			-		(6,596.72)		-		(1,547.38)	(8,144.10)		-		(59.29)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-			-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	8,763.16			5,394.60		-		1,265.40		-	6,660.00		48.48		-
	FTR Guarantee Uplift Amount	55500-0055	(8,793.40)			-		(5,413.22)		-		(1,269.77)	(6,682.98)		-		(48.65)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	109,350.61			67,316.24		-		15,790.23		-	83,106.46		605.00		-
31	Financial Transmission Rights Transaction	55500-0034	-			-		-		-		-	-		-		-
Subtotal			343,572.53		682,718	415,358.80	682,718	(204,008.46)	156,673	97,429.84	156,673	(47,853.84)	260,926.35	24,598	3,771.43	24,598	(1,835.96)
RSG & Make Whole Payments																	
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	24,011.03			14,781.19		-		3,467.19		-	18,248.38		132.85		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(3.96)			-		(2.44)		-		(0.57)	(3.01)		-		(0.02)
	Real Time Price Volatility Make Whole Payment	55500-0057	(7,222.79)			-		(4,446.35)		-		(1,042.97)	(5,489.32)		-		(39.96)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	11,002.39			6,773.07		-		1,588.75		-	8,361.82		60.87		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-			-		-		-		-	-		-		-
Subtotal			27,786.67		682,718	21,554.26	682,718	(4,448.79)	156,673	5,055.94	156,673	(1,043.54)	21,117.87	24,598	193.72	24,598	(39.98)
RNU & Misc Charges																	
20	Real Time Miscellaneous	55500-0042	271,660.60			167,234.27		-		39,227.79		-	206,462.06		1,503.01		-
21	Real Time Net Inadvertent Distribution	55500-0044	(44,684.07)			-		(27,507.51)		-		(6,452.38)	(33,959.89)		-		(247.22)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	180,666.77			111,218.46		-		26,088.28		-	137,306.75		999.57		-
26	Real Time Uninstructed Deviation	55500-0048	-			-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	-			-		-		-		-	-		-		-
34	Real Time Ramp Capability Amount	55500-0080	-			-		-		-		-	-		-		-
Subtotal			407,643.30		682,718	278,452.73	682,718	(27,507.51)	156,673	65,316.07	156,673	(6,452.38)	309,808.91	24,598	2,502.59	24,598	(247.22)

MINNESOTA POWER		Account		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number	January 2016	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-									-				
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-									-				
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-									-				
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-									-				
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-									-				
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-									-				
Subtotal			-	682,718	-	682,718	-	156,673	-	156,673	-	-	24,598	-	24,598	-
ASM Charge Types (12 Other)																
	Day Ahead Regulation Amount	55500-0062	(25,809.80)		-		(15,888.51)		-		(3,726.94)	(19,615.45)		-		(142.80)
	Day Ahead Spinning Reserve Amount	55500-0063	(24,149.75)		-		(14,866.59)		-		(3,487.22)	(18,353.81)		-		(133.61)
	Day Ahead Supplemental Reserve Amount	55500-0064	-		-		-		-		-	-		-		-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	114.79		70.66		-		16.58		-	87.24		0.64		-
	Real Time Regulation Amount	55500-0070	4,964.90		3,056.39		-		716.93		-	3,773.32		27.47		-
	Regulation Reserve Cost Distribution Amount	55500-0071	15,279.56		9,406.10		-		2,206.37		-	11,612.47		84.54		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	2,517.65		1,549.87		-		363.55		-	1,913.41		13.93		-
	Real Time Spinning Reserve Amount	55500-0072	(6,178.45)		-		(3,803.45)		-		(892.17)	(4,695.62)		-		(34.18)
	Spinning Reserve Cost Distribution Amount	55500-0073	18,350.01		11,296.27		-		2,649.74		-	13,946.01		101.52		-
	Real Time Supplemental Reserve Amount	55500-0074	(29.76)		-		(18.32)		-		(4.30)	(22.62)		-		(0.16)
	Supplemental Reserve Cost Distribution Amount	55500-0075	7,908.35		4,868.38		-		1,141.97		-	6,010.35		43.75		-
Subtotal			(7,032.50)	682,718	30,247.67	-	(34,576.87)	156,673	7,095.13	-	(8,110.62)	(5,344.70)	-	271.85	-	(310.76)
Grand Total			2,902,140.51	682,718	3,442,702.38	682,718	(540,340.45)	156,673	807,547.47	156,673	(126,746.52)	3,583,162.88	24,598	12,492.88	24,598	(4,864.09)

1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)

2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE

3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity

NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER		Account	January 2016		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																				
Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050		2,964,756.75																	
Day Ahead Non-Asset Energy	55500-0027		(1,181,360.50)																	
Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050		(56,387.52)																	
Excessive Energy Amount	55500-0066		15,621.59																	
Non-Excessive Energy Amount	55500-0069		(97,541.28)																	
Real Time Non-Asset Energy	55500-0043		(105,654.35)																	
Subtotal			1,539,434.70	46,564									109,651						240,401	
Day Ahead and Real Time Energy Loss																				
Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050		595,441.54											14,952.42					124,926.25	
Day Ahead Financial Bilateral Transaction Loss	55500-0022		263,973.12											6,510.35					55,382.72	
Real Time Loss	4470-0000 or 55500-0000 or 55500-0050		(51,131.04)																	(10,727.52)
Real Time Distribution of Losses	55500-0041		(387,175.58)																	(81,231.14)
Real Time Financial Bilateral Transaction Loss	55500-0038		-																	-
Subtotal			421,108.04	46,564			-	46,564						109,651	21,462.77	109,651			(10,832.86)	240,401
Virtual Energy																				
Day Ahead Virtual Energy	55500-0030		-																	
Real Time Virtual Energy	55500-0049		-																	
Subtotal			-	46,564			-	46,564						109,651	-	109,651			240,401	-
Schedule 16 & 17 1/																				
Day Ahead Market Administration (Schedule 17)	55500-0020		155,840.16											3,843.47					32,695.95	
Real Time Market Administration (Schedule 17)	55500-0036		9,309.23											229.59					1,953.12	
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031		4,478.38											110.45					939.58	
Subtotal			169,627.77	46,564			-	46,564						109,651	4,183.52	109,651			240,401	35,588.65

MINNESOTA POWER		Account	January 2016				MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales						
MISO MONTHLY ALLOCATION		Number	Mwh		Cost	Mwh		Revenue	Mwh		Cost	Mwh		Revenue	Mwh		Cost	Mwh		Revenue					
Congestion, FTRs & ARR																									
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050		367,030.71														9,216.68				77,004.66				
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050		(23,292.21)																						(4,886.81)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		(72,725.41)																						(15,258.11)
Real Time Financial Bilateral Transaction Congestion	55500-0037		-																						-
Auction Revenue Rights Transaction Amount	55500-0058		(139,596.70)																						(29,288.00)
Financial Transmission Rights Annual Transaction Amount	55500-0059		155,288.21																						-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		12,062.02																						-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(76,290.95)																						(16,006.18)
Financial Transmission Rights Hourly Allocation	55500-0032		22,492.41																						-
Financial Transmission Rights Monthly Allocation	55500-0033		(10,715.92)																						(2,248.25)
Financial Transmission Rights Yearly Allocation	55500-0035		-																						-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		8,763.16																						-
FTR Guarantee Uplift Amount	55500-0055		(8,793.40)																						(1,844.89)
Financial Transmission Rights Monthly Transaction Amount	55500-0056		109,350.61																						-
Financial Transmission Rights Transaction	55500-0034		-																						-
Subtotal			343,572.53	46,564	-	46,564	-	-	-	-	-	-	-	-	-	-	109,651	16,811.79	109,651	(8,184.10)	240,401	141,615.26	240,401	(69,532.24)	
RSG & Make Whole Payments																									
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		24,011.03																						-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		(3.96)																						(0.83)
Real Time Price Volatility Make Whole Payment	55500-0057		(7,222.79)																						(1,515.37)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		11,002.39																						-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-																						-
Subtotal			27,786.67	46,564	-	46,564	-	-	-	-	-	-	-	-	-	-	109,651	863.53	109,651	(178.23)	240,401	7,345.97	240,401	(1,516.20)	
RNU & Misc Charges																									
Real Time Miscellaneous	55500-0042		271,660.60																						-
Real Time Net Inadvertent Distribution	55500-0044		(44,684.07)																						(9,374.91)
Real Time Revenue Neutrality Uplift Amount	55500-0045		180,666.77																						-
Real Time Uninstructed Deviation	55500-0048		-																						-
Day Ahead Ramp Capability Amount	55500-0079		-																						-
Real Time Ramp Capability Amount	55500-0080		-																						-
Subtotal			407,643.30	46,564	-	46,564	-	-	-	-	-	-	-	-	-	-	109,651	11,155.71	109,651	(1,102.04)	240,401	94,900.27	240,401	(9,374.91)	

MINNESOTA POWER

MISO MONTHLY ALLOCATION

Account Number	January 2016	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
		Grandfathered Charge Types															
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-															
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-															
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-															
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-															
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-															
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-															
Subtotal		-	46,564	-	46,564	-	-	-	-	109,651	-	109,651	-	240,401	-	240,401	-
ASM Charge Types (12 Other)																	
Day Ahead Regulation Amount	55500-0062	(25,809.80)										(636.54)					(5,415.01)
Day Ahead Spinning Reserve Amount	55500-0063	(24,149.75)										(595.60)					(5,066.72)
Day Ahead Supplemental Reserve Amount	55500-0064	-										-					-
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-					-
Net Regulation Adjustment Amount	55500-0068	114.79										2.83				24.08	-
Real Time Regulation Amount	55500-0070	4,964.90										122.45				1,041.66	-
Regulation Reserve Cost Distribution Amount	55500-0071	15,279.56										376.84				3,205.72	-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	2,517.65										62.09				528.21	-
Real Time Spinning Reserve Amount	55500-0072	(6,178.45)										-				-	(1,296.27)
Spinning Reserve Cost Distribution Amount	55500-0073	18,350.01										452.56				3,849.91	-
Real Time Supplemental Reserve Amount	55500-0074	(29.76)										-				-	(6.24)
Supplemental Reserve Cost Distribution Amount	55500-0075	7,908.35										195.04				1,659.21	-
Subtotal		(7,032.50)	-	-	-	-	-	-	-	-	1,211.82	-	(1,385.26)	-	10,308.79	-	(11,784.24)
Grand Total		2,902,140.51	46,564	-	46,564	-	-	-	-	109,651	55,689.13	109,651	(21,682.49)	240,401	470,067.91	240,401	(184,166.25)

MINNESOTA POWER		Account	February 2016	FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	2,575,576.15								-					
5	Day Ahead Non-Asset Energy	55500-0027	(961,040.16)								-					
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	118,556.92								-					
	Excessive Energy Amount	55500-0066	18,212.11								-					
	Non-Excessive Energy Amount	55500-0069	(108,063.95)								-					
22	Real Time Non-Asset Energy	55500-0043	(156,061.66)								-					
Subtotal			1,487,179.41	654,339	1,826,802.55		142,040	401,005.44			2,227,807.99	15,490				
Day Ahead and Real Time Energy Loss																
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	835,378.97		516,956.89	-		113,478.34			-	630,435.23		5,352.74		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	249,665.76		153,544.44	-		33,704.88			-	187,249.32		1,752.84		-
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	(57,474.76)		-	(35,567.06)		-		(7,807.40)	(43,374.46)		-			(368.27)
14	Real Time Distribution of Losses	55500-0041	(386,092.72)		-	(237,447.02)		-		(52,122.52)	(289,569.54)		-			(2,710.65)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-	-		-		-	-		-			-
Subtotal			641,477.25	654,339	670,501.33	654,339	(273,014.08)	142,040	147,183.22	142,040	(59,929.92)	484,740.55	15,490	7,105.58	15,490	(3,078.92)
Virtual Energy																
12	Day Ahead Virtual Energy	55500-0030	-		-	-		-		-	-					
27	Real Time Virtual Energy	55500-0049	-		-	-		-		-	-					
Subtotal			-	654,339	-	654,339	-	142,040	-	142,040	-	-	15,490	-	15,490	-
Schedule 16 & 17 1/																
4	Day Ahead Market Administration (Schedule 17)	55500-0020	155,257.81		95,483.55	-		20,959.80			-	116,443.36		1,090.02		-
19	Real Time Market Administration (Schedule 17)	55500-0036	12,346.36		7,593.01	-		1,666.76			-	9,259.77		86.68		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	5,312.20		3,267.00	-		717.15			-	3,984.15		37.30		-
Subtotal			172,916.37	654,339	106,343.57	654,339	-	142,040	23,343.71	142,040	-	129,687.28	15,490	1,214.00	15,490	-

MINNESOTA POWER		Account	February 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation									
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue						
Congestion, FTRs & ARRs																							
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	8,411.11			5,205.04		-		1,142.57		-	6,347.61		53.89		-						
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(46,237.33)			-		(28,613.01)		-		(6,280.90)	(34,893.92)		-		(296.27)						
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	151,753.81			93,328.59		-		20,486.76		-	113,815.36		1,065.42		-						
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-			-		-		-		-	-		-		-						
	Auction Revenue Rights Transaction Amount	55500-0058	(139,596.70)			-		(85,851.97)		-		(18,845.55)	(104,697.53)		-		(980.07)						
	Financial Transmission Rights Annual Transaction Amount	55500-0059	155,288.21			95,502.25		-		20,963.91		-	116,466.16		1,090.24		-						
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	12,062.02			7,418.14		-		1,628.37		-	9,046.52		84.68		-						
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(76,290.95)			-		(46,918.93)		-		(10,299.28)	(57,218.21)		-		(535.62)						
28	Financial Transmission Rights Hourly Allocation	55500-0032	(57,608.09)			-		(35,428.98)		-		(7,777.09)	(43,206.07)		-		(404.45)						
30	Financial Transmission Rights Monthly Allocation	55500-0033	(2,319.45)			-		(1,426.46)		-		(313.13)	(1,739.59)		-		(16.28)						
32	Financial Transmission Rights Yearly Allocation	55500-0035	-			-		-		-		-	-		-		-						
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(383.21)			-		(235.67)		-		(51.73)	(287.41)		-		(2.69)						
	FTR Guarantee Uplift Amount	55500-0055	383.39			235.78		-		51.76		-	287.54		2.69		-						
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	139,071.89			85,529.21		-		18,774.71		-	104,303.92		976.39		-						
31	Financial Transmission Rights Transaction	55500-0034	-			-		-		-		-	-		-		-						
Subtotal			144,534.70		654,339	287,219.02		654,339		(198,475.03)		142,040	63,048.08		142,040		(43,567.69)	108,224.39	15,490	3,273.31		15,490	(2,235.38)
RSG & Make Whole Payments																							
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	10,949.91			6,734.19		-		1,478.24		-	8,212.43		76.88		-						
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	1.20			0.74		-		0.16		-	0.90		0.01		-						
	Real Time Price Volatility Make Whole Payment	55500-0057	(37,149.17)			-		(22,846.74)		-		(5,015.14)	(27,861.88)		-		(260.81)						
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	3,447.18			2,120.02		-		465.37		-	2,585.39		24.20		-						
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-			-		-		-		-	-		-		-						
Subtotal			(22,750.88)		654,339	8,854.95		654,339		(22,846.74)		142,040	1,943.77		142,040		(5,015.14)	(17,063.16)	15,490	101.09		15,490	(260.81)
RNU & Misc Charges																							
20	Real Time Miscellaneous	55500-0042	27,155.96			16,700.92		-		3,666.05		-	20,366.97		190.65		-						
21	Real Time Net Inadvertent Distribution	55500-0044	46,990.99			28,899.46		-		6,343.78		-	35,243.24		329.91		-						
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	54,645.20			33,606.80		-		7,377.10		-	40,983.90		383.65		-						
26	Real Time Uninstructed Deviation	55500-0048	-			-		-		-		-	-		-		-						
33	Day Ahead Ramp Capability Amount	55500-0079	-			-		-		-		-	-		-		-						
34	Real Time Ramp Capability Amount	55500-0080	-			-		-		-		-	-		-		-						
Subtotal			128,792.15		654,339	79,207.17		654,339		-		142,040	17,386.94		142,040		-	96,594.11	15,490	904.21		15,490	-

MINNESOTA POWER		Account	February 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																	
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-										-				
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-										-				
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-										-				
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-										-				
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-										-				
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-										-				
Subtotal			-		654,339	-	654,339	-	142,040	-	142,040	-	-	15,490	-	15,490	-
ASM Charge Types (12 Other)																	
	Day Ahead Regulation Amount	55500-0062	(11,897.45)			-	(7,316.93)		-		(1,606.16)	(8,923.09)		-			(83.53)
	Day Ahead Spinning Reserve Amount	55500-0063	(14,985.07)			-	(9,215.82)		-		(2,022.98)	(11,238.80)		-			(105.21)
	Day Ahead Supplemental Reserve Amount	55500-0064	-			-	-		-		-	-		-			-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-			-	-		-		-	-		-			-
	Net Regulation Adjustment Amount	55500-0068	(223.27)			-	(137.31)		-		(30.14)	(167.45)		-			(1.57)
	Real Time Regulation Amount	55500-0070	(1,246.73)			-	(766.74)		-		(168.31)	(935.05)		-			(8.75)
	Regulation Reserve Cost Distribution Amount	55500-0071	14,488.12			8,910.19	-		1,955.90		-	10,866.09		101.72			-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	2,506.74			1,541.65	-		338.41		-	1,880.06		17.60			-
	Real Time Spinning Reserve Amount	55500-0072	(5,051.40)			-	(3,106.61)		-		(681.94)	(3,788.55)		-			(35.46)
	Spinning Reserve Cost Distribution Amount	55500-0073	13,652.77			8,396.45	-		1,843.12		-	10,239.58		95.85			-
	Real Time Supplemental Reserve Amount	55500-0074	(594.53)			-	(365.64)		-		(80.26)	(445.90)		-			(4.17)
	Supplemental Reserve Cost Distribution Amount	55500-0075	5,941.57			3,654.07	-		802.11		-	4,456.18		41.71			-
Subtotal			2,590.75		654,339	22,502.36	-	(20,909.05)	142,040	4,939.54	-	(4,589.79)	1,943.06	-	256.88	-	(238.69)
Grand Total			2,554,739.75		654,339	3,001,430.95	654,339	(515,244.89)	142,040	658,850.70	142,040	(113,102.54)	3,031,934.22	15,490	12,855.08	15,490	(5,813.81)

- 1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)
- 2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE
- 3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity

NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER		Account	February 2016		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales				
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	
Day Ahead and Real Time Energy																					
Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050		2,575,576.15																		
Day Ahead Non-Asset Energy	55500-0027		(961,040.16)																		
Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050		118,556.92																		
Excessive Energy Amount	55500-0066		18,212.11																		
Non-Excessive Energy Amount	55500-0069		(108,063.95)																		
Real Time Non-Asset Energy	55500-0043		(156,061.66)																		
Subtotal			1,487,179.41	42,005				-				102,479					207,118				
Day Ahead and Real Time Energy Loss																					
Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050		835,378.97											35,412.95		-		164,178.04		-	
Day Ahead Financial Bilateral Transaction Loss	55500-0022		249,665.76											11,596.49		-		49,067.11		-	
Real Time Loss	4470-0000 or 55500-0000 or 55500-0050		(57,474.76)											-		(2,436.44)		-		(11,295.58)	
Real Time Distribution of Losses	55500-0041		(386,092.72)											-		(17,933.26)		-		(75,879.27)	
Real Time Financial Bilateral Transaction Loss	55500-0038		-											-		-		-		-	
Subtotal			641,477.25	42,005		-	42,005	-					102,479	47,009.44	102,479	(20,369.70)		207,118	213,245.16	207,118	(87,174.85)
Virtual Energy																					
Day Ahead Virtual Energy	55500-0030		-																		
Real Time Virtual Energy	55500-0049		-																		
Subtotal			-	42,005		-	42,005	-					102,479	-	102,479	-		207,118	-	207,118	-
Schedule 16 & 17 1/																					
Day Ahead Market Administration (Schedule 17)	55500-0020		155,257.81											7,211.42		-		30,513.01		-	
Real Time Market Administration (Schedule 17)	55500-0036		12,346.36											573.46		-		2,426.45		-	
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031		5,312.20											246.74		-		1,044.01		-	
Subtotal			172,916.37	42,005		-	42,005	-					102,479	8,031.63	102,479	-		207,118	33,983.46	207,118	-

MINNESOTA POWER		Account	February 2016		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue		
Congestion, FTRs & ARRs																				
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050		8,411.11								356.56				1,653.05					
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050		(46,237.33)											(1,960.07)					(9,087.08)	
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		151,753.81								7,048.67				29,824.36					
Real Time Financial Bilateral Transaction Congestion	55500-0037		-																	
Auction Revenue Rights Transaction Amount	55500-0058		(139,596.70)											(6,484.00)					(27,435.11)	
Financial Transmission Rights Annual Transaction Amount	55500-0059		155,288.21								7,212.84				30,518.98					
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		12,062.02								560.26				2,370.56					
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(76,290.95)											(3,543.57)					(14,993.55)	
Financial Transmission Rights Hourly Allocation	55500-0032		(57,608.09)											(2,675.78)					(11,321.79)	
Financial Transmission Rights Monthly Allocation	55500-0033		(2,319.45)											(107.73)					(455.84)	
Financial Transmission Rights Yearly Allocation	55500-0035		-																	
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		(383.21)											(17.80)					(75.31)	
FTR Guarantee Uplift Amount	55500-0055		383.39								17.81				75.35					
Financial Transmission Rights Monthly Transaction Amount	55500-0056		139,071.89								6,459.62				27,331.97					
Financial Transmission Rights Transaction	55500-0034		-																	
Subtotal			144,534.70	42,005	-	42,005	-	-	-	-	102,479	21,655.75	102,479	(14,788.95)	207,118	91,774.27	207,118	(63,368.69)		
RSG & Make Whole Payments																				
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		10,949.91								508.60				2,152.00					
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		1.20								0.06				0.24					
Real Time Price Volatility Make Whole Payment	55500-0057		(37,149.17)											(1,725.51)					(7,300.97)	
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		3,447.18								160.11				677.48					
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-																	
Subtotal			(22,750.88)	42,005	-	42,005	-	-	-	-	102,479	668.77	102,479	(1,725.51)	207,118	2,829.71	207,118	(7,300.97)		
RNU & Misc Charges																				
Real Time Miscellaneous	55500-0042		27,155.96								1,261.34				5,336.99					
Real Time Net Inadvertent Distribution	55500-0044		46,990.99								2,182.64				9,235.20					
Real Time Revenue Neutrality Uplift Amount	55500-0045		54,645.20								2,538.16				10,739.49					
Real Time Uninstructed Deviation	55500-0048		-																	
Day Ahead Ramp Capability Amount	55500-0079		-																	
Real Time Ramp Capability Amount	55500-0080		-																	
Subtotal			128,792.15	42,005	-	42,005	-	-	-	-	102,479	5,982.15	102,479	-	207,118	25,311.68	207,118	-		

MINNESOTA POWER

MISO MONTHLY ALLOCATION

Account Number	February 2016	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales									
		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue						
		Grandfathered Charge Types																					
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-																					
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-																					
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-																					
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-																					
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-																					
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-																					
Subtotal		-	42,005	-	42,005	-		-		-		-		102,479	-	102,479	-		207,118	-	207,118	-	
ASM Charge Types (12 Other)																							
Day Ahead Regulation Amount	55500-0062	(11,897.45)																					
Day Ahead Spinning Reserve Amount	55500-0063	(14,985.07)																					
Day Ahead Supplemental Reserve Amount	55500-0064	-																					
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-																					
Net Regulation Adjustment Amount	55500-0068	(223.27)																					
Real Time Regulation Amount	55500-0070	(1,246.73)																					
Regulation Reserve Cost Distribution Amount	55500-0071	14,488.12																					
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	2,506.74																					
Real Time Spinning Reserve Amount	55500-0072	(5,051.40)																					
Spinning Reserve Cost Distribution Amount	55500-0073	13,652.77																					
Real Time Supplemental Reserve Amount	55500-0074	(594.53)																					
Supplemental Reserve Cost Distribution Amount	55500-0075	5,941.57																					
Subtotal		2,590.75	-	-	-	-		-		-		-		1,699.50	-	(1,579.16)	-		7,190.92	-	(6,681.76)		
Grand Total		2,554,739.75	42,005	-	42,005	-		-		-		-		102,479	85,047.23	102,479	(38,463.32)		207,118	374,335.20	207,118	(164,526.27)	

MINNESOTA POWER		Account	March 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																	
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	2,340,561.25										-				
5	Day Ahead Non-Asset Energy	55500-0027	(739,819.24)										-				
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	(106,485.52)										-				
	Excessive Energy Amount	55500-0066	33,055.72										-				
	Non-Excessive Energy Amount	55500-0069	(734,140.16)										-				
22	Real Time Non-Asset Energy	55500-0043	(32,280.13)										-				
Subtotal			760,891.93		664,183	1,530,831.77		138,999	313,543.86			1,844,375.63	21,796				
Day Ahead and Real Time Energy Loss																	
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	823,444.73			503,960.02	-		103,220.73		-	607,180.74		6,058.09			-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	281,874.20			173,127.13	-		35,459.77		-	208,586.91		1,971.76			-
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	19,943.09			12,205.46	-		2,499.91		-	14,705.37		146.72			-
14	Real Time Distribution of Losses	55500-0041	(46,683.61)			-	(28,673.07)		-		(5,872.80)	(34,545.87)		-			(326.56)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-			-	-		-		-	-		-			-
Subtotal			1,078,578.40		664,183	689,292.61	664,183	(28,673.07)	138,999	141,180.41	138,999	(5,872.80)	795,927.15	21,796	8,176.57	21,796	(326.56)
Virtual Energy																	
12	Day Ahead Virtual Energy	55500-0030	-			-	-		-		-	-					
27	Real Time Virtual Energy	55500-0049	-			-	-		-		-	-					
Subtotal			-		664,183	-	664,183	-	138,999	-	138,999	-	-	21,796	-	21,796	-
Schedule 16 & 17 1/																	
4	Day Ahead Market Administration (Schedule 17)	55500-0020	131,902.42			81,014.47	-		16,593.32		-	97,607.79		922.68			-
19	Real Time Market Administration (Schedule 17)	55500-0036	12,600.96			7,739.51	-		1,585.20		-	9,324.71		88.15			-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	4,575.70			2,810.39	-		575.62		-	3,386.02		32.01			-
Subtotal			149,079.08		664,183	91,564.37	664,183	-	138,999	18,754.15	138,999	-	110,318.52	21,796	1,042.84	21,796	-

MINNESOTA POWER		Account	March 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																	
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	72,968.94			44,658.04		-		9,146.83		-	53,804.87		536.83		-
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(98,900.97)			-		(60,528.82)		-		(12,397.47)	(72,926.29)		-		(727.62)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	702,329.01			431,370.48		-		88,352.99		-	519,723.47		4,912.92		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-			-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(197,345.61)			-		(121,209.67)		-		(24,826.08)	(146,035.75)		-		(1,380.47)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	347,239.42			213,274.45		-		43,682.72		-	256,957.17		2,429.00		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	5,670.46			3,482.80		-		713.34		-	4,196.14		39.67		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(81,479.64)			-		(50,044.79)		-		(10,250.14)	(60,294.93)		-		(569.97)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(263,903.96)			-		(162,089.81)		-		(33,199.12)	(195,288.93)		-		(1,846.06)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(3,645.15)			-		(2,238.85)		-		(458.56)	(2,697.41)		-		(25.50)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-			-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(12,616.77)			-		(7,749.22)		-		(1,587.19)	(9,336.41)		-		(88.26)
	FTR Guarantee Uplift Amount	55500-0055	12,616.28			7,748.92		-		1,587.13		-	9,336.05		88.25		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-			-		-		-		-	-		-		-
31	Financial Transmission Rights Transaction	55500-0034	-			-		-		-		-	-		-		-
Subtotal			482,932.01		664,183	700,534.69	664,183	(403,861.17)	138,999	143,483.01	138,999	(82,718.55)	357,437.97	21,796	8,006.68	21,796	(4,637.86)
RSG & Make Whole Payments																	
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	20,036.77			12,306.58		-		2,520.63		-	14,827.21		140.16		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(7.75)			-		(4.76)		-		(0.97)	(5.74)		-		(0.05)
	Real Time Price Volatility Make Whole Payment	55500-0057	(36,039.43)			-		(22,135.42)		-		(4,533.76)	(26,669.18)		-		(252.10)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	6,454.38			3,964.28		-		811.96		-	4,776.24		45.15		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-			-		-		-		-	-		-		-
Subtotal			(9,556.03)		664,183	16,270.86	664,183	(22,140.18)	138,999	3,332.59	138,999	(4,534.74)	(7,071.46)	21,796	185.31	21,796	(252.16)
RNU & Misc Charges																	
20	Real Time Miscellaneous	55500-0042	22,695.19			13,939.39		-		2,855.05		-	16,794.44		158.76		-
21	Real Time Net Inadvertent Distribution	55500-0044	206,684.65			126,945.71		-		26,000.93		-	152,946.64		1,445.80		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	(95,604.95)			-		(58,720.56)		-		(12,027.10)	(70,747.66)		-		(668.77)
26	Real Time Uninstructed Deviation	55500-0048	-			-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	-			-		-		-		-	-		-		-
34	Real Time Ramp Capability Amount	55500-0080	-			-		-		-		-	-		-		-
Subtotal			133,774.89		664,183	140,885.10	664,183	(58,720.56)	138,999	28,855.98	138,999	(12,027.10)	98,993.42	21,796	1,604.55	21,796	(668.77)

MINNESOTA POWER		Account	March 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																	
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-										-				
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-										-				
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-										-				
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-										-				
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-										-				
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-										-				
Subtotal			-		664,183	-	664,183	-	138,999	-	138,999	-	-	21,796	-	21,796	-
ASM Charge Types (12 Other)																	
	Day Ahead Regulation Amount	55500-0062	(25,941.04)			-	(15,932.99)			-	(3,263.38)	(19,196.37)			-		(181.46)
	Day Ahead Spinning Reserve Amount	55500-0063	(35,548.90)			-	(21,834.13)			-	(4,472.05)	(26,306.19)			-		(248.67)
	Day Ahead Supplemental Reserve Amount	55500-0064	(11.63)			-	(7.14)			-	(1.46)	(8.61)			-		(0.08)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-			-	-			-	-	-			-		-
	Net Regulation Adjustment Amount	55500-0068	(1,350.63)			-	(829.56)			-	(169.91)	(999.47)			-		(9.45)
	Real Time Regulation Amount	55500-0070	(6,965.63)			-	(4,278.29)			-	(876.28)	(5,154.57)			-		(48.73)
	Regulation Reserve Cost Distribution Amount	55500-0071	14,312.15			8,790.52	-			1,800.47	-	10,590.99			100.12		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	13,488.64			8,284.72	-			1,696.87	-	9,981.59			94.36		-
	Real Time Spinning Reserve Amount	55500-0072	(13,287.99)			-	(8,161.48)			-	(1,671.63)	(9,833.11)			-		(92.95)
	Spinning Reserve Cost Distribution Amount	55500-0073	19,535.64			11,998.79	-			2,457.58	-	14,456.37			136.66		-
	Real Time Supplemental Reserve Amount	55500-0074	149.94			92.09	-			18.86	-	110.96			1.05		-
	Supplemental Reserve Cost Distribution Amount	55500-0075	7,371.23			4,527.41	-			927.30	-	5,454.71			51.56		-
Subtotal			(28,248.22)		664,183	33,693.54	-	(51,043.59)	138,999	6,901.09	-	(10,454.71)	(20,903.68)	-	383.74	-	(581.34)
Grand Total			2,567,452.06		664,183	3,203,072.94	664,183	(564,438.58)	138,999	656,051.08	138,999	(115,607.90)	3,179,077.54	21,796	19,399.69	21,796	(6,466.69)

1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)
2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE
3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity
NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER

MISO MONTHLY ALLOCATION

Day Ahead and Real Time Energy

Account Number	March 2016	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	2,340,561.25															
Day Ahead Non-Asset Energy	55500-0027	(739,819.24)															
Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	(106,485.52)															
Excessive Energy Amount	55500-0066	33,055.72															
Non-Excessive Energy Amount	55500-0069	(734,140.16)															
Real Time Non-Asset Energy	55500-0043	(32,280.13)															
Subtotal		760,891.93	67,168			-				110,870							234,595

Day Ahead and Real Time Energy Loss

Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	823,444.73									30,815.83				179,390.06			-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	281,874.20									10,029.81				61,285.72			-
Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	19,943.09									746.33				4,344.67			-
Real Time Distribution of Losses	55500-0041	(46,683.61)									-		(1,661.12)		-			(10,150.05)
Real Time Financial Bilateral Transaction Loss	55500-0038	-									-				-			-
Subtotal		1,078,578.40	67,168	-	67,168	-	-	-	-	110,870	41,591.98	110,870	(1,661.12)	234,595	245,020.44	234,595	(10,150.05)	

Virtual Energy

Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		-	67,168	-	67,168	-	-	-	-	110,870	-	110,870	-	234,595	-	234,595	-	

Schedule 16 & 17 1/

Day Ahead Market Administration (Schedule 17)	55500-0020	131,902.42									4,693.43				28,678.52			-
Real Time Market Administration (Schedule 17)	55500-0036	12,600.96									448.37				2,739.73			-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	4,575.70									162.82				994.86			-
Subtotal		149,079.08	67,168	-	67,168	-	-	-	-	110,870	5,304.62	110,870	-	234,595	32,413.11	234,595	-	

MINNESOTA POWER		Account	March 2016		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales					
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue				
Congestion, FTRs & ARRs																						
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050		72,968.94								2,730.72			-		15,896.52			-			
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050		(98,900.97)								-			(3,701.18)		-			(21,545.89)			
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		702,329.01								24,990.68			-		152,701.94			-			
Real Time Financial Bilateral Transaction Congestion	55500-0037		-								-			-		-			-			
Auction Revenue Rights Transaction Amount	55500-0058		(197,345.61)								-			(7,022.07)		-			(42,907.32)			
Financial Transmission Rights Annual Transaction Amount	55500-0059		347,239.42								12,355.68			-		75,497.57			-			
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		5,670.46								201.77			-		1,232.88			-			
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(81,479.64)								-			(2,899.26)		-			(17,715.49)			
Financial Transmission Rights Hourly Allocation	55500-0032		(263,903.96)								-			(9,390.39)		-			(57,378.59)			
Financial Transmission Rights Monthly Allocation	55500-0033		(3,645.15)								-			(129.70)		-			(792.54)			
Financial Transmission Rights Yearly Allocation	55500-0035		-								-			-		-			-			
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		(12,616.77)								-			(448.94)		-			(2,743.17)			
FTR Guarantee Uplift Amount	55500-0055		12,616.28								448.92			-		2,743.06			-			
Financial Transmission Rights Monthly Transaction Amount	55500-0056		-								-			-		-			-			
Financial Transmission Rights Transaction	55500-0034		-								-			-		-			-			
Subtotal			482,932.01		67,168		-	67,168		-	-	-	-	-	110,870	40,727.77	110,870	(23,591.53)	234,595	248,071.97	234,595	(143,082.99)
RSG & Make Whole Payments																						
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		20,036.77								712.96			-		4,356.44			-			
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		(7.75)								-			(0.28)		-			(1.69)			
Real Time Price Volatility Make Whole Payment	55500-0057		(36,039.43)								-			(1,282.38)		-			(7,835.77)			
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		6,454.38								229.66			-		1,403.33			-			
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-								-			-		-			-			
Subtotal			(9,556.03)		67,168		-	67,168		-	-	-	-	-	110,870	942.62	110,870	(1,282.65)	234,595	5,759.76	234,595	(7,837.46)
RNU & Misc Charges																						
Real Time Miscellaneous	55500-0042		22,695.19								807.55			-		4,934.44			-			
Real Time Net Inadvertent Distribution	55500-0044		206,684.65								7,354.37			-		44,937.84			-			
Real Time Revenue Neutrality Uplift Amount	55500-0045		(95,604.95)								-			(3,401.87)		-			(20,786.64)			
Real Time Uninstructed Deviation	55500-0048		-								-			-		-			-			
Day Ahead Ramp Capability Amount	55500-0079		-								-			-		-			-			
Real Time Ramp Capability Amount	55500-0080		-								-			-		-			-			
Subtotal			133,774.89		67,168		-	67,168		-	-	-	-	-	110,870	8,161.93	110,870	(3,401.87)	234,595	49,872.28	234,595	(20,786.64)

MINNESOTA POWER

MISO MONTHLY ALLOCATION

Account Number	March 2016	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales									
		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue						
		Grandfathered Charge Types																					
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-																					
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-																					
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-																					
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-																					
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-																					
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-																					
Subtotal		-	67,168	-	67,168	-		-		-		-		110,870	-	110,870	-		234,595	-	234,595	-	
ASM Charge Types (12 Other)																							
Day Ahead Regulation Amount	55500-0062	(25,941.04)																					
Day Ahead Spinning Reserve Amount	55500-0063	(35,548.90)																					
Day Ahead Supplemental Reserve Amount	55500-0064	(11.63)																					
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-																					
Net Regulation Adjustment Amount	55500-0068	(1,350.63)																					
Real Time Regulation Amount	55500-0070	(6,965.63)																					
Regulation Reserve Cost Distribution Amount	55500-0071	14,312.15																					
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	13,488.64																					
Real Time Spinning Reserve Amount	55500-0072	(13,287.99)																					
Spinning Reserve Cost Distribution Amount	55500-0073	19,535.64																					
Real Time Supplemental Reserve Amount	55500-0074	149.94																					
Supplemental Reserve Cost Distribution Amount	55500-0075	7,371.23																					
Subtotal		(28,248.22)	-		-			-		-			-		1,951.98		(2,957.12)			11,927.26		(18,069.05)	
Grand Total		2,567,452.06	67,168		67,168									110,870	98,680.90	110,870	(32,894.30)		234,595	593,064.82	234,595	(199,926.20)	

MINNESOTA POWER		Account	April 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																	
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	2,152,941.59										-				
5	Day Ahead Non-Asset Energy	55500-0027	(720,820.36)										-				
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	(268,236.24)										-				
	Excessive Energy Amount	55500-0066	60,254.39										-				
	Non-Excessive Energy Amount	55500-0069	320,840.70										-				
22	Real Time Non-Asset Energy	55500-0043	(76,839.05)										-				
Subtotal			1,468,141.03		605,255	1,872,051.76		104,482	330,362.08			2,202,413.84	17,868				
Day Ahead and Real Time Energy Loss																	
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	864,718.52			542,930.82	-		95,811.32		-	638,742.15		4,124.74			-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	305,122.84			191,922.27	-		33,868.64		-	225,790.90		1,395.86			-
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	(18,560.47)			-	(11,653.56)		-		(2,056.51)	(13,710.07)		-			(88.53)
14	Real Time Distribution of Losses	55500-0041	(132,867.84)			-	(83,573.87)		-		(14,748.33)	(98,322.20)		-			(607.84)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-			-	-		-		-	-		-			-
Subtotal			1,018,413.05		605,255	734,853.09	605,255	(95,227.43)	104,482	129,679.96	104,482	(16,804.84)	752,500.77	17,868	5,520.60	17,868	(696.37)
Virtual Energy																	
12	Day Ahead Virtual Energy	55500-0030	-			-	-		-		-	-					
27	Real Time Virtual Energy	55500-0049	-			-	-		-		-	-					
Subtotal			-		605,255	-	605,255	-	104,482	-	104,482	-	-	17,868	-	17,868	-
Schedule 16 & 17 1/																	
4	Day Ahead Market Administration (Schedule 17)	55500-0020	126,118.27			79,328.39	-		13,999.13		-	93,327.52		576.96			-
19	Real Time Market Administration (Schedule 17)	55500-0036	11,050.10			6,950.51	-		1,226.56		-	8,177.07		50.55			-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	6,075.69			3,821.61	-		674.40		-	4,496.01		27.79			-
Subtotal			143,244.06		605,255	90,100.51	605,255	-	104,482	15,900.09	104,482	-	106,000.60	17,868	655.30	17,868	-

MINNESOTA POWER		Account	April 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation						
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue			
Congestion, FTRs & ARRs																				
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	(6,075.97)	-			(3,814.92)					(673.22)	(4,488.14)		-		(28.98)			
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(95,992.06)	-			(60,270.53)					(10,635.98)	(70,906.51)		-		(457.89)			
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	618,164.15		388,825.25		-		68,616.22			-	457,441.47		2,827.94		-			
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-			-	-		-		-			
	Auction Revenue Rights Transaction Amount	55500-0058	(197,345.61)		-		(124,130.39)		-			(21,905.36)	(146,035.75)		-		(902.80)			
	Financial Transmission Rights Annual Transaction Amount	55500-0059	347,239.42		218,413.60		-		38,543.58			-	256,957.17		1,588.53		-			
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	5,670.46		3,566.72		-		629.42			-	4,196.14		25.94		-			
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(80,596.31)		-		(50,695.08)		-			(8,946.19)	(59,641.27)		-		(368.71)			
28	Financial Transmission Rights Hourly Allocation	55500-0032	(213,581.45)		-		(134,342.73)		-			(23,707.54)	(158,050.27)		-		(977.08)			
30	Financial Transmission Rights Monthly Allocation	55500-0033	(17,979.42)		-		(11,309.06)		-			(1,995.72)	(13,304.77)		-		(82.25)			
32	Financial Transmission Rights Yearly Allocation	55500-0035	(20,143.25)		-		(12,670.10)		-			(2,235.90)	(14,906.01)		-		(92.15)			
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	9,598.07		6,037.19		-		1,065.39			-	7,102.57		43.91		-			
	FTR Guarantee Uplift Amount	55500-0055	(5,624.34)		-		(3,537.71)		-			(624.30)	(4,162.01)		-		(25.73)			
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	34,191.62		21,506.53		-		3,795.27			-	25,301.80		156.42		-			
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-			-	-		-		-			
Subtotal			377,525.31		605,255		638,349.28		605,255		(400,770.52)	104,482	112,649.87	104,482	(70,724.21)	279,504.42	17,868	4,642.74	17,868	(2,935.59)
RSG & Make Whole Payments																				
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	16,042.66		10,090.83		-		1,780.74			-	11,871.57		73.39		-			
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(46.95)		-		(29.53)		-			(5.21)	(34.74)		-		(0.21)			
	Real Time Price Volatility Make Whole Payment	55500-0057	(20,287.41)		-		(12,760.78)		-			(2,251.90)	(15,012.68)		-		(92.81)			
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	48,997.72		30,819.57		-		5,438.75			-	36,258.31		224.15		-			
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-		-		-		-			-	-		-		-			
Subtotal			44,706.02		605,255		40,910.40		605,255		(12,790.31)	104,482	7,219.48	104,482	(2,257.11)	33,082.45	17,868	297.54	17,868	(93.02)
RNU & Misc Charges																				
20	Real Time Miscellaneous	55500-0042	31,577.45		19,862.22		-		3,505.10			-	23,367.31		144.46		-			
21	Real Time Net Inadvertent Distribution	55500-0044	33,906.25		21,327.03		-		3,763.59			-	25,090.63		155.11		-			
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	8,490.40		5,340.46		-		942.43			-	6,282.90		38.84		-			
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-			-	-		-		-			
33	Day Ahead Ramp Capability Amount	55500-0079	-		-		-		-			-	-		-		-			
34	Real Time Ramp Capability Amount	55500-0080	-		-		-		-			-	-		-		-			
Subtotal			73,974.10		605,255		46,529.71		605,255		-	104,482	8,211.13	104,482	-	54,740.83	17,868	338.41	17,868	-

MINNESOTA POWER		Account	April 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																	
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-										-				
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-										-				
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-										-				
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-										-				
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-										-				
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-										-				
Subtotal			-		605,255	-	605,255	-	104,482	-	104,482	-	-	17,868	-	17,868	-
ASM Charge Types (12 Other)																	
	Day Ahead Regulation Amount	55500-0062	(23,364.48)			-	(14,696.26)			-	(2,593.46)	(17,289.72)			-		(106.89)
	Day Ahead Spinning Reserve Amount	55500-0063	(28,873.92)			-	(18,161.70)			-	(3,205.01)	(21,366.70)			-		(132.09)
	Day Ahead Supplemental Reserve Amount	55500-0064	(66.11)			-	(41.58)			-	(7.34)	(48.92)			-		(0.30)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-			-	-			-	-	-			-		-
	Net Regulation Adjustment Amount	55500-0068	154.81			97.38	-			17.18	-	114.56			0.71		-
	Real Time Regulation Amount	55500-0070	5,855.06			3,682.83	-			649.91	-	4,332.74			26.79		-
	Regulation Reserve Cost Distribution Amount	55500-0071	19,946.63			12,546.43	-			2,214.08	-	14,760.51			91.25		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	9,097.87			5,722.56	-			1,009.86	-	6,732.42			41.62		-
	Real Time Spinning Reserve Amount	55500-0072	(5,921.12)			-	(3,724.38)			-	(657.24)	(4,381.63)			-		(27.09)
	Spinning Reserve Cost Distribution Amount	55500-0073	25,962.54			16,330.44	-			2,881.84	-	19,212.28			118.77		-
	Real Time Supplemental Reserve Amount	55500-0074	24.46			15.39	-			2.72	-	18.10			0.11		-
	Supplemental Reserve Cost Distribution Amount	55500-0075	8,110.89			5,101.75	-			900.31	-	6,002.06			37.11		-
Subtotal			10,926.63		605,255	43,496.77	-	(36,623.92)	104,482	7,675.90	-	(6,463.04)	8,085.71	-	316.35	-	(266.37)
Grand Total			3,136,930.20		605,255	3,466,291.53	605,255	(545,412.19)	104,482	611,698.51	104,482	(96,249.21)	3,436,328.63	17,868	11,770.95	17,868	(3,991.35)

- 1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)
- 2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE
- 3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity

NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER		Account	April 2016	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																			
Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050		2,152,941.59																
Day Ahead Non-Asset Energy	55500-0027		(720,820.36)																
Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050		(268,236.24)																
Excessive Energy Amount	55500-0066		60,254.39																
Non-Excessive Energy Amount	55500-0069		320,840.70																
Real Time Non-Asset Energy	55500-0043		(76,839.05)																
Subtotal			1,468,141.03	51,811			-				95,801				227,959				
Day Ahead and Real Time Energy Loss																			
Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050		864,718.52								22,115.60				199,736.03				-
Day Ahead Financial Bilateral Transaction Loss	55500-0022		305,122.84								7,484.16				70,451.92				-
Real Time Loss	4470-0000 or 55500-0000 or 55500-0050		(18,560.47)								-			(474.69)					(4,287.17)
Real Time Distribution of Losses	55500-0041		(132,867.84)								-			(3,259.03)					(30,678.77)
Real Time Financial Bilateral Transaction Loss	55500-0038		-								-			-					-
Subtotal			1,018,413.05	51,811	-	51,811	-	-	-	-	95,801	29,599.76	95,801	(3,733.72)	227,959	270,187.95	227,959		(34,965.94)
Virtual Energy																			
Day Ahead Virtual Energy	55500-0030		-																
Real Time Virtual Energy	55500-0049		-																
Subtotal			-	51,811	-	51,811	-	-	-	-	95,801	-	95,801	-	227,959	-	227,959		-
Schedule 16 & 17 1/																			
Day Ahead Market Administration (Schedule 17)	55500-0020		126,118.27								3,093.47				29,120.32				-
Real Time Market Administration (Schedule 17)	55500-0036		11,050.10								271.04				2,551.43				-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031		6,075.69								149.03				1,402.86				-
Subtotal			143,244.06	51,811	-	51,811	-	-	-	-	95,801	3,513.54	95,801	-	227,959	33,074.61	227,959		-

MINNESOTA POWER		Account	April 2016		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales						
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue			
Congestion, FTRs & ARRs																							
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050		(6,075.97)													(155.40)				(1,403.45)			
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050		(95,992.06)													(2,455.04)				(22,172.62)			
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		618,164.15													15,162.56			142,732.18	-			
Real Time Financial Bilateral Transaction Congestion	55500-0037		-													-			-	-			
Auction Revenue Rights Transaction Amount	55500-0058		(197,345.61)													-			-	(45,566.49)			
Financial Transmission Rights Annual Transaction Amount	55500-0059		347,239.42													8,517.21			80,176.50	-			
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		5,670.46													139.09			1,309.29	-			
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(80,596.31)													-			-	(18,609.44)			
Financial Transmission Rights Hourly Allocation	55500-0032		(213,581.45)													-			-	(49,315.29)			
Financial Transmission Rights Monthly Allocation	55500-0033		(17,979.42)													-			-	(4,151.39)			
Financial Transmission Rights Yearly Allocation	55500-0035		(20,143.25)													-			-	(4,651.01)			
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		9,598.07													235.42			2,216.16	-			
FTR Guarantee Uplift Amount	55500-0055		(5,624.34)													-			-	(1,298.64)			
Financial Transmission Rights Monthly Transaction Amount	55500-0056		34,191.62													838.66			7,894.74	-			
Financial Transmission Rights Transaction	55500-0034		-													-			-	-			
Subtotal			377,525.31		51,811		-	51,811		-		-		95,801		24,892.95		95,801	(15,739.75)	227,959	234,328.88	227,959	(147,168.34)
RSG & Make Whole Payments																							
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		16,042.66													393.50			3,704.20	-			
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		(46.95)													-			-	(10.84)			
Real Time Price Volatility Make Whole Payment	55500-0057		(20,287.41)													-			-	(4,684.30)			
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		48,997.72													1,201.83			11,313.42	-			
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-													-			-	-			
Subtotal			44,706.02		51,811		-	51,811		-		-		95,801		1,595.33		95,801	(498.77)	227,959	15,017.62	227,959	(4,695.14)
RNU & Misc Charges																							
Real Time Miscellaneous	55500-0042		31,577.45													774.54			7,291.14	-			
Real Time Net Inadvertent Distribution	55500-0044		33,906.25													831.66			7,828.85	-			
Real Time Revenue Neutrality Uplift Amount	55500-0045		8,490.40													208.26			1,960.41	-			
Real Time Uninstructed Deviation	55500-0048		-													-			-	-			
Day Ahead Ramp Capability Amount	55500-0079		-													-			-	-			
Real Time Ramp Capability Amount	55500-0080		-													-			-	-			
Subtotal			73,974.10		51,811		-	51,811		-		-		95,801		1,814.46		95,801	-	227,959	17,080.39	227,959	-

MINNESOTA POWER		Account	April 2016		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue		
Grandfathered Charge Types																				
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-																		
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-																		
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-																		
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-																		
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-																		
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-																		
Subtotal		-	51,811	-	51,811	-	-	-	-	-	95,801	-	95,801	-	227,959	-	227,959	-		
ASM Charge Types (12 Other)																				
Day Ahead Regulation Amount	55500-0062	(23,364.48)																		
Day Ahead Spinning Reserve Amount	55500-0063	(28,873.92)																		
Day Ahead Supplemental Reserve Amount	55500-0064	(66.11)																		
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-																		
Net Regulation Adjustment Amount	55500-0068	154.81																		
Real Time Regulation Amount	55500-0070	5,855.06																		
Regulation Reserve Cost Distribution Amount	55500-0071	19,946.63																		
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	9,097.87																		
Real Time Spinning Reserve Amount	55500-0072	(5,921.12)																		
Spinning Reserve Cost Distribution Amount	55500-0073	25,962.54																		
Real Time Supplemental Reserve Amount	55500-0074	24.46																		
Supplemental Reserve Cost Distribution Amount	55500-0075	8,110.89																		
Subtotal		10,926.63	-	-	-	-	-	-	-	-	1,696.19	-	(1,428.18)	-	15,967.04	-	(13,444.12)			
Grand Total		3,136,930.20	51,811	-	51,811	-	-	-	-	-	95,801	63,112.24	95,801	(21,400.42)	227,959	585,656.49	227,959	(200,273.54)		

MINNESOTA POWER		Account		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number	May 2016	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	968,253.22									-				
5	Day Ahead Non-Asset Energy	55500-0027	(578,783.06)									-				
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	34,405.29									-				
	Excessive Energy Amount	55500-0066	17,191.54									-				
	Non-Excessive Energy Amount	55500-0069	118,198.47									-				
22	Real Time Non-Asset Energy	55500-0043	6,092.73									-				
Subtotal			565,358.19	618,276	1,587,931.83			125,169	325,239.05			1,913,170.88	40,391			
Day Ahead and Real Time Energy Loss																
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	827,144.04		497,898.47		-		101,979.21		-	599,877.68		12,539.61		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	366,157.88		221,855.06		-		45,440.19		-	267,295.25		5,026.74		-
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	2,460.49		1,481.09		-		303.36		-	1,784.45		37.30		-
14	Real Time Distribution of Losses	55500-0041	(138,639.85)		-		(84,001.89)		-		(17,205.21)	(101,207.09)		-		(1,903.30)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
Subtotal			1,057,122.56	618,276	721,234.62	618,276	(84,001.89)	125,169	147,722.75	125,169	(17,205.21)	767,750.29	40,391	17,603.66	40,391	(1,903.30)
Virtual Energy																
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-		-		-
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-		-		-
Subtotal			-	618,276	-	618,276	-	125,169	-	125,169	-	-	40,391	-	40,391	-
Schedule 16 & 17 1/																
4	Day Ahead Market Administration (Schedule 17)	55500-0020	134,538.69		81,516.99		-		16,696.25		-	98,213.24		1,846.99		-
19	Real Time Market Administration (Schedule 17)	55500-0036	9,419.67		5,707.38		-		1,168.98		-	6,876.36		129.32		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	4,910.09		2,975.02		-		609.34		-	3,584.37		67.41		-
Subtotal			148,868.45	618,276	90,199.39	618,276	-	125,169	18,474.57	125,169	-	108,673.97	40,391	2,043.72	40,391	-

MINNESOTA POWER		Account	May 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																	
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	674,629.58			406,092.56		-		83,175.58		-	489,268.14		10,227.47		-
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(45,753.68)			-		(27,541.38)		-		(5,641.01)	(33,182.39)		-		(693.63)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	600,275.62			363,707.00		-		74,494.20		-	438,201.20		8,240.79		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-			-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(197,345.61)			-		(119,571.71)		-		(24,490.59)	(144,062.30)		-		(2,709.23)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	347,239.42			210,392.36		-		43,092.41		-	253,484.78		4,767.02		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	5,670.46			3,435.73		-		703.70		-	4,139.44		77.85		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(80,984.94)			-		(49,068.78)		-		(10,050.23)	(59,119.01)		-		(1,111.79)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(92,785.06)			-		(56,218.47)		-		(11,514.63)	(67,733.09)		-		(1,273.79)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(23,896.52)			-		(14,478.90)		-		(2,965.56)	(17,444.46)		-		(328.06)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-			-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(8,251.53)			-		(4,999.60)		-		(1,024.01)	(6,023.62)		-		(113.28)
	FTR Guarantee Uplift Amount	55500-0055	7,880.91			4,775.04		-		978.02		-	5,753.06		108.19		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	14,254.16			8,636.60		-		1,768.94		-	10,405.54		195.69		-
31	Financial Transmission Rights Transaction	55500-0034	-			-		-		-		-	-		-		-
Subtotal			1,200,932.80		618,276	997,039.29	618,276	(271,878.83)	125,169	204,212.87	125,169	(55,686.03)	873,687.30	40,391	23,617.01	40,391	(6,229.77)
RSG & Make Whole Payments																	
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	16,017.33			9,704.90		-		1,987.75		-	11,692.65		219.89		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(28.85)			-		(17.48)		-		(3.58)	(21.06)		-		(0.40)
	Real Time Price Volatility Make Whole Payment	55500-0057	(67,234.07)			-		(40,737.12)		-		(8,343.75)	(49,080.87)		-		(923.01)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	17,294.64			10,478.82		-		2,146.26		-	12,625.09		237.43		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-			-		-		-		-	-		-		-
Subtotal			(33,950.95)		618,276	20,183.72	618,276	(40,754.60)	125,169	4,134.02	125,169	(8,347.33)	(24,784.19)	40,391	457.32	40,391	(923.41)
RNU & Misc Charges																	
20	Real Time Miscellaneous	55500-0042	17,281.64			10,470.95		-		2,144.65		-	12,615.60		237.25		-
21	Real Time Net Inadvertent Distribution	55500-0044	(142,959.06)			-		(86,618.89)		-		(17,741.22)	(104,360.11)		-		(1,962.59)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	251,454.01			152,355.98		-		31,205.44		-	183,561.43		3,452.05		-
26	Real Time Uninstructed Deviation	55500-0048	-			-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(199.43)			-		(120.83)		-		(24.75)	(145.58)		-		(2.74)
34	Real Time Ramp Capability Amount	55500-0080	241.80			146.51		-		30.01		-	176.51		3.32		-
Subtotal			125,818.96		618,276	162,973.44	618,276	(86,739.73)	125,169	33,380.10	125,169	(17,765.97)	91,847.84	40,391	3,692.62	40,391	(1,965.33)

MINNESOTA POWER		Account	May 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																	
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-										-				
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-										-				
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-										-				
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-										-				
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-										-				
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-										-				
Subtotal			-		618,276	-	618,276	-	125,169	-	125,169	-	-	40,391	-	40,391	-
ASM Charge Types (12 Other)																	
	Day Ahead Regulation Amount	55500-0062	(37,438.20)			-	(22,683.81)		-		(4,646.08)	(27,329.89)		-			(513.96)
	Day Ahead Spinning Reserve Amount	55500-0063	(46,101.55)			-	(27,932.93)		-		(5,721.20)	(33,654.13)		-			(632.90)
	Day Ahead Supplemental Reserve Amount	55500-0064	16.04			9.72	-		1.99		-	11.71		0.22			-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-			-	-		-		-	-		-			-
	Net Regulation Adjustment Amount	55500-0068	96.37			58.39	-		11.96		-	70.35		1.32			-
	Real Time Regulation Amount	55500-0070	9,105.79			5,517.20	-		1,130.03		-	6,647.23		125.01			-
	Regulation Reserve Cost Distribution Amount	55500-0071	24,318.21			14,734.40	-		3,017.89		-	17,752.29		333.85			-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	4,842.22			2,933.90	-		600.92		-	3,534.82		66.48			-
	Real Time Spinning Reserve Amount	55500-0072	1,250.66			757.77	-		155.21		-	912.98		17.17			-
	Spinning Reserve Cost Distribution Amount	55500-0073	27,242.50			16,506.23	-		3,380.79		-	19,887.03		373.99			-
	Real Time Supplemental Reserve Amount	55500-0074	(25.98)			-	(15.74)		-		(3.22)	(18.97)		-			(0.36)
	Supplemental Reserve Cost Distribution Amount	55500-0075	8,674.81			5,256.07	-		1,076.54		-	6,332.61		119.09			-
Subtotal			(8,019.13)		618,276	45,773.68	-	(50,632.48)	125,169	9,375.33	-	(10,370.51)	(5,853.96)	-	1,037.13	-	(1,147.22)
Grand Total			3,056,130.88		618,276	3,625,335.98	618,276	(534,007.53)	125,169	742,538.69	125,169	(109,375.04)	3,724,492.11	40,391	48,451.45	40,391	(12,169.03)

1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)

2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE

3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity

NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER		Account	May 2016	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																			
Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050		968,253.22																
Day Ahead Non-Asset Energy	55500-0027		(578,783.06)																
Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050		34,405.29																
Excessive Energy Amount	55500-0066		17,191.54																
Non-Excessive Energy Amount	55500-0069		118,198.47																
Real Time Non-Asset Energy	55500-0043		6,092.73																
Subtotal			565,358.19	57,746			-				93,899				232,038				
Day Ahead and Real Time Energy Loss																			
Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050		827,144.04									29,151.32				185,575.43			
Day Ahead Financial Bilateral Transaction Loss	55500-0022		366,157.88									11,685.86				82,150.03			
Real Time Loss	4470-0000 or 55500-0000 or 55500-0050		2,460.49									86.72				552.03			
Real Time Distribution of Losses	55500-0041		(138,639.85)											(4,424.66)					(31,104.80)
Real Time Financial Bilateral Transaction Loss	55500-0038		-																
Subtotal			1,057,122.56	57,746		-	57,746	-				93,899	40,923.89	93,899	(4,424.66)	232,038	268,277.48	232,038	(31,104.80)
Virtual Energy																			
Day Ahead Virtual Energy	55500-0030		-																
Real Time Virtual Energy	55500-0049		-																
Subtotal			-	57,746		-	57,746	-				93,899	-	93,899	-	232,038	-	232,038	-
Schedule 16 & 17 1/																			
Day Ahead Market Administration (Schedule 17)	55500-0020		134,538.69									4,293.78				30,184.68			
Real Time Market Administration (Schedule 17)	55500-0036		9,419.67									300.63				2,113.37			
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031		4,910.09									156.70				1,101.61			
Subtotal			148,868.45	57,746		-	57,746	-				93,899	4,751.11	93,899	-	232,038	33,399.66	232,038	-

MINNESOTA POWER		Account	MAY 2016		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales					
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue		
Congestion, FTRs & ARRs																						
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050		674,629.58										23,776.20			-		151,357.76		-		
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050		(45,753.68)										-			(1,612.51)		-		(10,265.15)		
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		600,275.62										19,157.68			-		134,675.94		-		
Real Time Financial Bilateral Transaction Congestion	55500-0037		-										-			-		-		-		
Auction Revenue Rights Transaction Amount	55500-0058		(197,345.61)										-			(6,298.25)		-		(44,275.84)		
Financial Transmission Rights Annual Transaction Amount	55500-0059		347,239.42										11,082.08			-		77,905.54		-		
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		5,670.46										180.97			-		1,272.21		-		
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(80,984.94)										-			(2,584.62)		-		(18,169.53)		
Financial Transmission Rights Hourly Allocation	55500-0032		(92,785.06)										-			(2,961.22)		-		(20,816.96)		
Financial Transmission Rights Monthly Allocation	55500-0033		(23,896.52)										-			(762.65)		-		(5,361.35)		
Financial Transmission Rights Yearly Allocation	55500-0035		-										-			-		-		-		
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		(8,251.53)										-			(263.35)		-		(1,851.29)		
FTR Guarantee Uplift Amount	55500-0055		7,880.91										251.52			-		1,768.14		-		
Financial Transmission Rights Monthly Transaction Amount	55500-0056		14,254.16										454.92			-		3,198.02		-		
Financial Transmission Rights Transaction	55500-0034		-										-			-		-		-		
Subtotal			1,200,932.80		57,746		-	57,746		-		-	93,899		54,903.37		93,899	(14,482.60)	232,038	370,177.61	232,038	(100,740.11)
RSG & Make Whole Payments																						
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		16,017.33										511.19			-		3,593.60		-		
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		(28.85)										-			(0.92)		-		(6.47)		
Real Time Price Volatility Make Whole Payment	55500-0057		(67,234.07)										-			(2,145.76)		-		(15,084.42)		
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		17,294.64										551.96			-		3,880.17		-		
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-										-			-		-		-		
Subtotal			(33,950.95)		57,746		-	57,746		-		-	93,899		1,063.15		93,899	(2,146.68)	232,038	7,473.77	232,038	(15,090.90)
RNU & Misc Charges																						
Real Time Miscellaneous	55500-0042		17,281.64										551.54			-		3,877.25		-		
Real Time Net Inadvertent Distribution	55500-0044		(142,959.06)										-			(4,562.51)		-		(32,073.84)		
Real Time Revenue Neutrality Uplift Amount	55500-0045		251,454.01										8,025.11			-		56,415.43		-		
Real Time Uninstructed Deviation	55500-0048		-										-			-		-		-		
Day Ahead Ramp Capability Amount	55500-0079		(199.43)										-			(6.36)		-		(44.74)		
Real Time Ramp Capability Amount	55500-0080		241.80										7.72			-		54.25		-		
Subtotal			125,818.96		57,746		-	57,746		-		-	93,899		8,584.36		93,899	(4,568.88)	232,038	60,346.93	232,038	(32,118.59)

MINNESOTA POWER		Account	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	Mwh		Cost		Mwh		Revenue		Mwh		Cost		Mwh		Revenue	
		May 2016																
Grandfathered Charge Types			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-																
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-																
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-																
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-																
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-																
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-																
Subtotal		-	57,746	-	57,746	-	-	-	-	-	93,899	-	93,899	-	232,038	-	232,038	-
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(37,438.20)									-		(1,194.83)		-			(8,399.52)
Day Ahead Spinning Reserve Amount	55500-0063	(46,101.55)									-		(1,471.32)		-			(10,343.20)
Day Ahead Supplemental Reserve Amount	55500-0064	16.04									0.51		-		3.60			-
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-									-		-		-			-
Net Regulation Adjustment Amount	55500-0068	96.37									3.08		-		21.62			-
Real Time Regulation Amount	55500-0070	9,105.79									290.61		-		2,042.95			-
Regulation Reserve Cost Distribution Amount	55500-0071	24,318.21									776.11		-		5,455.96			-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	4,842.22									154.54		-		1,086.39			-
Real Time Spinning Reserve Amount	55500-0072	1,250.66									39.91		-		280.59			-
Spinning Reserve Cost Distribution Amount	55500-0073	27,242.50									869.44		-		6,112.04			-
Real Time Supplemental Reserve Amount	55500-0074	(25.98)									-		(0.83)		-			(5.83)
Supplemental Reserve Cost Distribution Amount	55500-0075	8,674.81									276.85		-		1,946.25			-
Subtotal		(8,019.13)	-	-	-	-	-	-	-	-	2,411.06	-	(2,666.98)	-	16,949.40	-	(18,748.54)	
Grand Total		3,056,130.88	57,746	-	57,746	-	-	-	-	-	93,899	112,636.94	93,899	(28,289.80)	232,038	756,624.84	232,038	(197,802.94)

MINNESOTA POWER		Account		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number	June 2016	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	583,773.56									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,172,071.74)									-				
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	337,628.19									-				
	Excessive Energy Amount	55500-0066	25,136.55									-				
	Non-Excessive Energy Amount	55500-0069	154,834.32									-				
22	Real Time Non-Asset Energy	55500-0043	(4,525.89)									-				
Subtotal			(75,225.01)	595,285	1,442,645.57			125,788	295,481.62			1,738,127.19	51,852			
Day Ahead and Real Time Energy Loss																
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	940,787.09		543,460.92		-		111,311.27		-	654,772.19		28,182.89		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	405,641.17		235,677.52		-		48,271.30		-	283,948.82		11,659.49		-
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	43,597.08		25,184.56		-		5,158.28		-	30,342.84		1,306.03		-
14	Real Time Distribution of Losses	55500-0041	(96,337.23)		-		(55,971.93)		-		(11,464.13)	(67,436.06)		-		(2,769.06)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
Subtotal			1,293,688.11	595,285	804,323.00	595,285	(55,971.93)	125,788	164,740.86	125,788	(11,464.13)	901,627.80	51,852	41,148.40	51,852	(2,769.06)
Virtual Energy																
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-		-		-
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-		-		-
Subtotal			-	595,285	-	595,285	-	125,788	-	125,788	-	-	51,852	-	51,852	-
Schedule 16 & 17 1/																
4	Day Ahead Market Administration (Schedule 17)	55500-0020	125,516.64		72,925.17		-		14,936.48		-	87,861.65		3,607.77		-
19	Real Time Market Administration (Schedule 17)	55500-0036	12,110.15		7,036.00		-		1,441.11		-	8,477.11		348.09		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	4,931.18		2,865.02		-		586.81		-	3,451.83		141.74		-
Subtotal			142,557.97	595,285	82,826.18	595,285	-	125,788	16,964.40	125,788	-	99,790.58	51,852	4,097.59	51,852	-

MINNESOTA POWER		Account	June 2016		FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation								
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue					
Congestion, FTRs & ARRs																						
1b	Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050	481,629.12			278,220.87		-		56,985.00		-	335,205.87		14,428.03		-					
13b	Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050	(87,028.24)			-		(50,273.28)		-		(10,296.94)	(60,570.21)		-		(2,607.08)					
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	319,268.06			185,494.74		-		37,992.90		-	223,487.64		9,176.84		-					
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-			-		-		-		-	-		-		-					
	Auction Revenue Rights Transaction Amount	55500-0058	(137,413.20)			-		(79,837.07)		-		(16,352.17)	(96,189.24)		-		(3,949.72)					
	Financial Transmission Rights Annual Transaction Amount	55500-0059	222,562.34			129,308.72		-		26,484.92		-	155,793.64		6,397.19		-					
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	13,639.76			7,924.70		-		1,623.13		-	9,547.83		392.05		-					
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(56,899.89)			-		(33,058.84)		-		(6,771.09)	(39,829.92)		-		(1,635.49)					
28	Financial Transmission Rights Hourly Allocation	55500-0032	(264,048.33)			-		(153,412.08)		-		(31,421.75)	(184,833.83)		-		(7,589.64)					
30	Financial Transmission Rights Monthly Allocation	55500-0033	(20,757.74)			-		(12,060.25)		-		(2,470.17)	(14,530.42)		-		(596.65)					
32	Financial Transmission Rights Yearly Allocation	55500-0035	-			-		-		-		-	-		-		-					
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(1,866.43)			-		(1,084.40)		-		(222.11)	(1,306.50)		-		(53.65)					
	FTR Guarantee Uplift Amount	55500-0055	1,675.95			973.73		-		199.44		-	1,173.17		48.17		-					
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	159,889.15			92,895.60		-		19,026.81		-	111,922.41		4,595.75		-					
31	Financial Transmission Rights Transaction	55500-0034	-			-		-		-		-	-		-		-					
Subtotal			630,650.55		595,285	694,818.36		595,285		(329,725.90)		125,788	142,312.19		125,788		(67,534.22)	439,870.43	51,852	35,038.03	51,852	(16,432.22)
RSG & Make Whole Payments																						
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	18,951.09			11,010.58		-		2,255.18		-	13,265.76		544.72		-					
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(2,338.14)			-		(1,358.46)		-		(278.24)	(1,636.70)		-		(67.21)					
	Real Time Price Volatility Make Whole Payment	55500-0057	(33,612.78)			-		(19,529.03)		-		(3,999.92)	(23,528.95)		-		(966.14)					
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	93,065.52			54,071.07		-		11,074.80		-	65,145.86		2,675.02		-					
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-			-		-		-		-	-		-		-					
Subtotal			76,065.69		595,285	65,081.65		595,285		(20,887.48)		125,788	13,329.98		125,788		(4,278.16)	53,245.98	51,852	3,219.73	51,852	(1,033.35)
RNU & Misc Charges																						
20	Real Time Miscellaneous	55500-0042	19,965.63			11,600.03		-		2,375.91		-	13,975.94		573.88		-					
21	Real Time Net Inadvertent Distribution	55500-0044	82,713.58			48,056.59		-		9,842.92		-	57,899.51		2,377.47		-					
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	(24,540.28)			-		(14,257.90)		-		(2,920.29)	(17,178.20)		-		(705.37)					
26	Real Time Uninstructed Deviation	55500-0048	-			-		-		-		-	-		-		-					
33	Day Ahead Ramp Capability Amount	55500-0079	(1,546.22)			-		(898.35)		-		(184.00)	(1,082.35)		-		(44.44)					
34	Real Time Ramp Capability Amount	55500-0080	(77.39)			-		(44.96)		-		(9.21)	(54.17)		-		(2.22)					
Subtotal			76,515.32		595,285	59,656.62		595,285		(15,201.22)		125,788	12,218.83		125,788		(3,113.50)	53,560.72	51,852	2,951.35	51,852	(752.04)

MINNESOTA POWER		Account	June 2016	FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
MISO MONTHLY ALLOCATION		Number		Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-								-					
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-								-					
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-								-					
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-								-					
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-								-					
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-								-					
Subtotal			-	595,285	-	595,285	-	125,788	-	125,788	-	-	51,852	-	51,852	-
ASM Charge Types (12 Other)																
	Day Ahead Regulation Amount	55500-0062	(22,023.07)		-	(12,795.40)		-		(2,620.75)	(15,416.15)		-		(633.02)	
	Day Ahead Spinning Reserve Amount	55500-0063	(43,422.01)		-	(25,228.19)		-		(5,167.22)	(30,395.41)		-		(1,248.09)	
	Day Ahead Supplemental Reserve Amount	55500-0064	-		-	-		-		-	-		-		-	
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-	-		-		-	-		-		-	
	Net Regulation Adjustment Amount	55500-0068	309.02		179.54	-		36.77		-	216.31		8.88		-	
	Real Time Regulation Amount	55500-0070	(6,619.66)		-	(3,846.02)		-		(787.74)	(4,633.76)		-		(190.27)	
	Regulation Reserve Cost Distribution Amount	55500-0071	15,877.03		9,224.55	-		1,889.37		-	11,113.92		456.36		-	
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	8,733.17		5,073.97	-		1,039.25		-	6,113.22		251.02		-	
	Real Time Spinning Reserve Amount	55500-0072	801.68		465.78	-		95.40		-	561.18		23.04		-	
	Spinning Reserve Cost Distribution Amount	55500-0073	25,174.45		14,626.36	-		2,995.76		-	17,622.12		723.60		-	
	Real Time Supplemental Reserve Amount	55500-0074	4.52		2.63	-		0.54		-	3.16		0.13		-	
	Supplemental Reserve Cost Distribution Amount	55500-0075	6,347.17		3,687.71	-		755.31		-	4,443.02		182.44		-	
Subtotal			(14,817.70)	595,285	33,260.53	-	(41,869.61)	125,788	6,812.40	-	(8,575.70)	(10,372.39)	-	1,645.47	-	(2,071.38)
Grand Total			2,129,434.93	595,285	3,182,611.91	595,285	(463,656.15)	125,788	651,860.27	125,788	(94,965.72)	3,275,850.31	51,852	88,100.58	51,852	(23,058.05)

1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FPE)

2/ Accounts 55500-0051 through 55500-0053 are not recovered through the FPE

3/ Accounts 55500-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity

NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FPE

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER		Account	June 2016		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																				
Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050		583,773.56																	
Day Ahead Non-Asset Energy	55500-0027		(1,172,071.74)																	
Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050		337,628.19																	
Excessive Energy Amount	55500-0066		25,136.55																	
Non-Excessive Energy Amount	55500-0069		154,834.32																	
Real Time Non-Asset Energy	55500-0043		(4,525.89)																	
Subtotal			(75,225.01)		66,785								119,794							214,680
Day Ahead and Real Time Energy Loss																				
Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050		940,787.09											65,111.40					192,720.61	
Day Ahead Financial Bilateral Transaction Loss	55500-0022		405,641.17											26,937.11					83,095.75	
Real Time Loss	4470-0000 or 55500-0000 or 55500-0050		43,597.08											3,017.33					8,930.88	
Real Time Distribution of Losses	55500-0041		(96,337.23)																	(19,734.72)
Real Time Financial Bilateral Transaction Loss	55500-0038		-																	-
Subtotal			1,293,688.11		66,785		-	66,785		-		-		119,794		95,065.84		119,794		(6,397.39)
Virtual Energy																				
Day Ahead Virtual Energy	55500-0030		-																	
Real Time Virtual Energy	55500-0049		-																	
Subtotal			-		66,785		-	66,785		-		-		119,794		-		119,794		-
Schedule 16 & 17 1/																				
Day Ahead Market Administration (Schedule 17)	55500-0020		125,516.64											8,335.09					25,712.13	
Real Time Market Administration (Schedule 17)	55500-0036		12,110.15											804.19					2,480.77	
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031		4,931.18											327.46					1,010.15	
Subtotal			142,557.97		66,785		-	66,785		-		-		119,794		9,466.74		119,794		-

MINNESOTA POWER		Account	June 2016		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales									
MISO MONTHLY ALLOCATION		Number	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue								
Congestion, FTRs & ARRs																										
Day Ahead Congestion	4470-0000 or 55500-0000 or 55500-0050		481,629.12									33,333.31		-		98,661.92		-								
Real Time Congestion	4470-0000 or 55500-0000 or 55500-0050		(87,028.24)									-		(6,023.18)		-		(17,827.77)								
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		319,268.06									21,201.39		-		65,402.19		-								
Real Time Financial Bilateral Transaction Congestion	55500-0037		-									-		-		-		-								
Auction Revenue Rights Transaction Amount	55500-0058		(137,413.20)									-		(9,125.10)		-		(28,149.15)								
Financial Transmission Rights Annual Transaction Amount	55500-0059		222,562.34									14,779.53		-		45,591.98		-								
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		13,639.76									905.77		-		2,794.11		-								
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(56,899.89)									-		(3,778.51)		-		(11,655.96)								
Financial Transmission Rights Hourly Allocation	55500-0032		(264,048.33)									-		(17,534.46)		-		(54,090.40)								
Financial Transmission Rights Monthly Allocation	55500-0033		(20,757.74)									-		(1,378.44)		-		(4,252.23)								
Financial Transmission Rights Yearly Allocation	55500-0035		-									-		-		-		-								
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		(1,866.43)									-		(123.94)		-		(382.34)								
FTR Guarantee Uplift Amount	55500-0055		1,675.95									111.29		-		343.32		-								
Financial Transmission Rights Monthly Transaction Amount	55500-0056		159,889.15									10,617.64		-		32,753.36		-								
Financial Transmission Rights Transaction	55500-0034		-									-		-		-		-								
Subtotal			630,650.55		66,785		-	66,785		-		119,794		80,948.93		119,794		(37,963.63)		214,680		245,546.87		214,680		(116,357.86)
RSG & Make Whole Payments																										
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		18,951.09									1,258.47		-		3,882.14		-								
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		(2,338.14)									-		(155.27)		-		(478.97)								
Real Time Price Volatility Make Whole Payment	55500-0057		(33,612.78)									-		(2,232.10)		-		(6,885.59)								
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		93,065.52									6,180.13		-		19,064.51		-								
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-									-		-		-		-								
Subtotal			76,065.69		66,785		-	66,785		-		119,794		7,438.60		119,794		(2,387.37)		214,680		22,946.65		214,680		(7,364.56)
RNU & Misc Charges																										
Real Time Miscellaneous	55500-0042		19,965.63									1,325.84		-		4,089.97		-								
Real Time Net Inadvertent Distribution	55500-0044		82,713.58									5,492.70		-		16,943.91		-								
Real Time Revenue Neutrality Uplift Amount	55500-0045		(24,540.28)									-		(1,629.63)		-		(5,027.09)								
Real Time Uninstructed Deviation	55500-0048		-									-		-		-		-								
Day Ahead Ramp Capability Amount	55500-0079		(1,546.22)									-		(102.68)		-		(316.74)								
Real Time Ramp Capability Amount	55500-0080		(77.39)									-		(5.14)		-		(15.85)								
Subtotal			76,515.32		66,785		-	66,785		-		119,794		6,818.54		119,794		(1,737.45)		214,680		21,033.88		214,680		(5,359.68)

MINNESOTA POWER		Account	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION		Number	June 2016															
			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Grandfathered Charge Types																		
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-																
Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-																
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-																
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-																
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-																
Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-																
Subtotal		-	66,785	-	66,785	-	-	-	-	-	119,794	-	119,794	-	214,680	-	214,680	-
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(22,023.07)																
Day Ahead Spinning Reserve Amount	55500-0063	(43,422.01)																
Day Ahead Supplemental Reserve Amount	55500-0064	-																
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-																
Net Regulation Adjustment Amount	55500-0068	309.02																
Real Time Regulation Amount	55500-0070	(6,619.66)																
Regulation Reserve Cost Distribution Amount	55500-0071	15,877.03																
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	8,733.17																
Real Time Spinning Reserve Amount	55500-0072	801.68																
Spinning Reserve Cost Distribution Amount	55500-0073	25,174.45																
Real Time Supplemental Reserve Amount	55500-0074	4.52																
Supplemental Reserve Cost Distribution Amount	55500-0075	6,347.17																
Subtotal		(14,817.70)	-	-	-	-	-	-	-	-	3,801.56	-	(4,785.55)	-	11,727.08	-	(14,762.49)	
Grand Total		2,129,434.93	66,785	-	66,785	-	-	-	-	-	119,794	203,540.21	119,794	(53,271.38)	214,680	615,204.77	214,680	(163,579.31)

MINNESOTA POWER MISO MONTHLY ALLOCATION		Account Number	July 2015- June 2016	FPE Retail				FAC Resale				Subtotal FAC	MISO Non-Liquidation			
				Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Day Ahead and Real Time Energy																
1a	Day Ahead Asset Energy	4470-0000 or 55500-0000 or 55500-0050	30,779,737.03									-				
5	Day Ahead Non-Asset Energy	55500-0027	(12,043,960.38)									-				
13a	Real Time Asset Energy	4470-0000 or 55500-0000 or 55500-0050	(1,847,361.89)									-				
	Excessive Energy Amount	55500-0066	361,550.08									-				
	Non-Excessive Energy Amount	55500-0069	(2,343,902.15)									-				
22	Real Time Non-Asset Energy	55500-0043	(1,027,033.32)									-				
Subtotal			13,879,029.37	7,633,880	23,271,700			1,615,703	4,926,257			28,197,956.63	283,140			
Day Ahead and Real Time Energy Loss																
1c	Day Ahead Loss	4470-0000 or 55500-0000 or 55500-0050	8,941,312.20		5,520,829.99		-		1,167,251.56		-	6,688,081.55		79,576.04		(3,284.49)
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	2,749,186.82		1,741,222.83		(54,032.55)		368,693.54		(11,066.91)	2,044,816.90		29,657.07		(590.92)
13c	Real Time Loss	4470-0000 or 55500-0000 or 55500-0050	(172,831.66)		69,135.75		(180,199.08)		14,837.12		(39,275.47)	(135,501.68)		1,984.85		(1,531.72)
14	Real Time Distribution of Losses	55500-0041	(2,707,577.85)		-		(1,685,587.54)		-		(366,625.87)	(2,052,213.41)		-		(17,428.53)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	(54.00)		10.46		(44.04)		2.30		(9.67)	(40.95)		-		(0.33)
Subtotal			8,810,035.51	7,633,880	7,331,199.03	7,633,880	(1,919,863.21)	1,615,703	1,550,784.51	1,615,703	(416,977.91)	6,545,142.42	283,140	111,217.96	283,140	(22,835.99)
Virtual Energy																
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
Subtotal			-	7,633,880	-	7,633,880	-	1,615,703	-	1,615,703	-	-	283,140	-	283,140	-
Schedule 16 & 17 1/																
4	Day Ahead Market Administration (Schedule 17)	55500-0020	1,587,788.73		980,402.64		-		208,845.19		-	1,189,247.83		12,632.90		(401.04)
19	Real Time Market Administration (Schedule 17)	55500-0036	127,123.30		78,458.41		-		16,630.94		-	95,089.35		1,058.83		(33.11)
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	51,304.82		31,751.18		-		6,710.53		-	38,461.71		420.31		(19.57)
Subtotal			1,766,216.85	7,633,880	1,090,612.22	7,633,880	-	1,615,703	232,186.67	1,615,703	-	1,322,798.89	283,140	14,112.04	283,140	(453.72)

MINNESOTA POWER MISO MONTHLY ALLOCATION		Account Number	July 2015- June 2016	FPE Retail				FAC Resale				Subtotal FAC	MISO Non-Liquidation			
				Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																
1b	Day Ahead Congestion	4470-0000 or 55500-0000	2,020,049.10		1,274,108.08		(59,894.01)		273,096.91		(12,983.26)	1,474,327.71		30,928.87		(668.45)
13b	Real Time Congestion	4470-0000 or 55500-0000	(780,297.57)		28,401.57		(511,720.87)		5,817.19		(108,214.93)	(585,717.04)		0.06		(7,292.54)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	3,184,934.09		2,115,173.43		(172,579.77)		433,953.27		(37,259.13)	2,339,287.81		37,739.15		(782.73)
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	(2,947.00)		570.91		(2,403.45)		125.32		(527.59)	(2,234.81)		-		(17.77)
	Auction Revenue Rights Transaction Amount	55500-0058	(1,642,349.09)		-		(1,018,398.44)		-		(215,398.77)	(1,233,797.21)		-		(13,378.39)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	2,430,908.78		1,507,011.24		-		315,308.31		-	1,822,319.55		20,433.12		(1,086.52)
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	132,488.39		81,955.34		-		17,586.55		-	99,541.90		1,028.40		(46.33)
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(1,056,198.14)		-		(652,328.30)		-		(137,792.24)	(790,120.54)		-		(7,406.60)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(997,762.15)		77,003.00		(680,661.38)		16,688.52		(139,692.42)	(726,662.28)		331.43		(14,537.17)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(107,463.35)		-		(65,764.78)		-		(13,582.12)	(79,346.91)		-		(1,219.04)
32	Financial Transmission Rights Yearly Allocation	55500-0035	(20,143.25)		-		(12,670.10)		-		(2,235.90)	(14,906.01)		-		(92.15)
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(30,403.90)		14,012.50		(32,216.40)		2,884.17		(6,938.67)	(22,258.40)		102.70		(581.29)
	FTR Guarantee Uplift Amount	55500-0055	30,706.89		30,010.51		(11,531.64)		6,432.28		(2,447.45)	22,463.71		537.04		(90.66)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	746,693.25		453,455.43		-		100,086.21		-	553,541.64		9,448.25		(99.75)
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
Subtotal			3,908,216.05	7,633,880	5,581,702.01	7,633,880	(3,220,169.14)	1,615,703	1,171,978.73	1,615,703	(677,072.47)	2,856,439.13	283,140	100,549.04	283,140	(47,299.38)
RSG & Make Whole Payments																
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	235,147.17		146,326.43		-		30,940.47		-	177,266.90		1,461.61		(100.58)
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(2,573.07)		8.46		(1,510.31)		1.86		(310.47)	(1,810.46)		0.05		(69.73)
	Real Time Price Volatility Make Whole Payment	55500-0057	(389,078.53)		-		(243,000.65)		-		(51,496.46)	(294,497.11)		-		(3,045.83)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	362,415.95		223,629.69		-		46,313.75		-	269,943.44		3,721.29		(138.49)
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-		-		-		-		-	-		-		-
Subtotal			205,911.52	7,633,880	369,964.58	7,633,880	(244,510.96)	1,615,703	77,256.08	1,615,703	(51,806.92)	150,902.77	283,140	5,182.95	283,140	(3,354.63)
RNU & Misc Charges																
20	Real Time Miscellaneous	55500-0042	389,396.81		247,383.80		(8,291.92)		55,469.74		(1,726.24)	292,835.38		2,901.01		(11.63)
21	Real Time Net Inadvertent Distribution	55500-0044	141,543.55		226,347.06		(140,597.97)		46,180.26		(30,046.37)	101,882.98		4,308.29		(2,567.59)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	1,037,912.03		716,198.92		(72,978.46)		155,917.61		(14,947.40)	784,190.67		8,543.33		(1,761.57)
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(1,745.65)		-		(1,019.19)		-		(208.75)	(1,227.94)		-		(47.18)
34	Real Time Ramp Capability Amount	55500-0080	164.41		146.51		(44.96)		30.01		(9.21)	122.34		3.32		(2.22)
Subtotal			1,567,271.15	7,633,880	1,190,076.28	7,633,880	(222,932.51)	1,615,703	257,597.62	1,615,703	(46,937.97)	1,177,803.43	283,140	15,755.95	283,140	(4,390.19)
Grandfathered Charge Types																
6	Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023	-		-		-		-		-	-		-		-
7	Day Ahead Losses Rebate on Carve-Out Grandfathered	55500-0024	-		-		-		-		-	-		-		-
8	Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025	-		-		-		-		-	-		-		-
9	Day Ahead Losses Rebate on Option B Grandfathered	55500-0026	-		-		-		-		-	-		-		-
17	Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040	-		-		-		-		-	-		-		-
18	Real Time Congestion Rebate on Carve-Out Grandfathered	55500-0039	-		-		-		-		-	-		-		-
Subtotal			-	7,633,880	-	7,633,880	-	1,615,703	-	1,615,703	-	-	283,140	-	283,140	-

**MINNESOTA POWER
MISO MONTHLY ALLOCATION**

	Account Number	July 2015- June 2016	FPE Retail				FAC Resale				Subtotal FAC	MISO Non-Liquidation				
			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Cost/(Revenue)	Mwh	Cost	Mwh	Revenue	
ASM Charge Types (12 Other)																
Day Ahead Regulation Amount	55500-0062	(273,858.88)		-		(169,297.16)		-		(35,665.73)	(204,962.88)		-		(2,112.34)	
Day Ahead Spinning Reserve Amount	55500-0063	(286,944.35)		-		(175,955.25)		-		(36,836.05)	(212,791.30)		-		(2,935.42)	
Day Ahead Supplemental Reserve Amount	55500-0064	(62.00)		9.78		(48.99)		2.00		(8.86)	(46.07)		0.22		(0.38)	
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-	
Net Regulation Adjustment Amount	55500-0068	659.07		2,160.98		(1,683.51)		458.35		(355.53)	580.30		14.13		(23.11)	
Real Time Regulation Amount	55500-0070	19,216.94		23,603.79		(11,418.04)		4,933.07		(2,387.03)	14,731.78		252.46		(272.66)	
Regulation Reserve Cost Distribution Amount	55500-0071	210,890.44		130,553.67		-		27,553.57		-	158,107.24		1,603.23		(69.24)	
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	57,453.64		35,311.27		-		7,249.82		-	42,561.09		549.17		(7.73)	
Real Time Spinning Reserve Amount	55500-0072	(23,122.28)		5,230.25		(19,600.60)		1,122.18		(4,079.61)	(17,327.78)		79.37		(191.70)	
Spinning Reserve Cost Distribution Amount	55500-0073	262,928.21		162,704.70		-		34,280.71		-	196,985.42		2,072.61		(80.45)	
Real Time Supplemental Reserve Amount	55500-0074	(505.29)		110.25		(420.96)		22.15		(92.14)	(380.70)		1.29		(4.70)	
Supplemental Reserve Cost Distribution Amount	55500-0075	116,450.43		72,325.45		-		15,318.79		-	87,644.24		738.81		(42.31)	
Subtotal		83,105.93		7,633,880	432,010.14	7,633,880	(378,424.50)	1,615,703	90,940.64	1,615,703	(79,424.94)	65,101.34	283,140	5,311.29	283,140	(5,740.06)
Grand Total		30,219,786.38		7,633,880	39,267,264.33	7,633,880	(5,985,900.32)	1,615,703	8,307,000.82	1,615,703	(1,272,220.22)	40,316,144.61	283,140	252,129.22	283,140	(84,073.97)

1/ All Administration Charges reflected in the Retail column are now in the base cost of fuel (not recovered in the FAC)

2/ Accounts 5551-0051 through 5551-0053 are not recovered through the FAC

3/ Accounts 5551-0076 are not recovered through FPE for Resource Adequacy since it relates to capacity

NOTE:

DA and RT Asset Energy amounts have been reduced by the generation to load LMP differences (RE) which are then shown in the Day Ahead Loss, Real Time Loss, Day Ahead Congestion and Real Time Congestion lines

Other Asset Backed Sales includes liquidation sales which are not assessed MISO charges as all margins from liquidation sales are allocated to the FAC

DA and RT Asset Energy and DA and RT Non-Asset Energy is not allocated to MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, Others-Non-Liquidation and Contract sales as these amounts are not tracked separately by Minnesota Power's systems

MINNESOTA POWER MISO MONTHLY ALLOCATION		Account Number	July 2015- June 2016	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales				
				Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	
Day Ahead and Real Time Energy																				
Day Ahead Asset Energy		4470-0000 or 55500-0000 or 55500-0050	30,779,737.03																	
Day Ahead Non-Asset Energy		55500-0027	(12,043,960.38)																	
Real Time Asset Energy		4470-0000 or 55500-0000 or 55500-0050	(1,847,361.89)																	
Excessive Energy Amount		55500-0066	361,550.08																	
Non-Excessive Energy Amount		55500-0069	(2,343,902.15)																	
Real Time Non-Asset Energy		55500-0043	(1,027,033.32)																	
Subtotal			13,879,029.37	762,190				-				1,170,855				2,725,417				
Day Ahead and Real Time Energy Loss																				
Day Ahead Loss		4470-0000 or 55500-0000 or 55500-0050	8,941,312.20		-		-		-		-		277,646.93		(37,851.65)		1,937,143.80		-	
Day Ahead Financial Bilateral Transaction Loss		55500-0022	2,749,186.82		-		-		-		-		90,903.89		(9,801.23)		612,562.33		(18,361.23)	
Real Time Loss		4470-0000 or 55500-0000 or 55500-0050	(172,831.66)		-		-		-		-		6,349.96		(6,786.55)		24,355.02		(61,701.53)	
Real Time Distribution of Losses		55500-0041	(2,707,577.85)		-		-		-		-		16,988.08		(71,990.50)		-		(582,933.49)	
Real Time Financial Bilateral Transaction Loss		55500-0038	(54.00)		-		-		-		-		-		(1.28)		3.75		(15.20)	
Subtotal			8,810,035.51	762,190	-	762,190	-	-	-	-	-	-	1,170,855	391,888.87	1,170,855	(126,431.20)	2,725,417	2,574,064.91	2,725,417	(663,011.45)
Virtual Energy																				
Day Ahead Virtual Energy		55500-0030	-																	
Real Time Virtual Energy		55500-0049	-																	
Subtotal			-	762,190	-	762,190	-	-	-	-	-	-	1,170,855	-	1,170,855	-	2,725,417	-	2,725,417	-
Schedule 16 & 17 1/																				
Day Ahead Market Administration (Schedule 17)		55500-0020	1,587,788.73		-		-		-		-		49,456.97		(4,621.68)		341,473.74		-	
Real Time Market Administration (Schedule 17)		55500-0036	127,123.30		-		-		-		-		4,024.25		(381.58)		27,365.56		-	
Financial Transmission Rights Market Administration (Schedule 16)		55500-0031	51,304.82		-		-		-		-		1,557.82		(225.54)		11,110.09		-	
Subtotal			1,766,216.85	762,190	-	762,190	-	-	-	-	-	-	1,170,855	55,039.04	1,170,855	(5,228.80)	2,725,417	379,949.40	2,725,417	-

MINNESOTA POWER MISO MONTHLY ALLOCATION		Account Number	July 2015- June 2016	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales				
				Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	
Congestion, FTRs & ARRs																				
Day Ahead Congestion	4470-0000 or 55500-0000		2,020,049.10		-		-		-		-		86,326.67		(1,965.34)		452,347.39		(21,247.76)	
Real Time Congestion	4470-0000 or 55500-0000		(780,297.57)		-		-		-		-		8,337.61		(24,129.89)		9,505.73		(181,001.50)	
Day Ahead Financial Bilateral Transaction Congestion	55500-0021		3,184,934.09		-		-		-		-		121,589.27		(9,049.10)		755,195.44		(59,045.76)	
Real Time Financial Bilateral Transaction Congestion	55500-0037		(2,947.00)		-		-		-		-		-		(69.63)		204.71		(829.49)	
Auction Revenue Rights Transaction Amount	55500-0058		(1,642,349.09)		-		-		-		-		9,273.89		(46,193.10)		-		(358,254.27)	
Financial Transmission Rights Annual Transaction Amount	55500-0059		2,430,908.78		-		-		-		-		68,817.79		(12,521.43)		532,946.26		-	
Auction Revenue Rights Infeasible Uplift Amount	55500-0060		132,488.39		-		-		-		-		4,101.23		(533.92)		28,397.11		-	
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061		(1,056,198.14)		-		-		-		-		1,890.50		(33,865.21)		-		(226,696.29)	
Financial Transmission Rights Hourly Allocation	55500-0032		(997,762.15)		-		-		-		-		2,742.98		(44,068.62)		26,185.92		(241,754.41)	
Financial Transmission Rights Monthly Allocation	55500-0033		(107,463.35)		-		-		-		-		177.69		(3,712.70)		-		(23,362.40)	
Financial Transmission Rights Yearly Allocation	55500-0035		(20,143.25)		-		-		-		-		-		(494.08)		-		(4,651.01)	
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054		(30,403.90)		-		-		-		-		599.83		(1,754.05)		4,940.82		(11,453.51)	
FTR Guarantee Uplift Amount	55500-0055		30,706.89		-		-		-		-		1,646.58		(497.13)		10,676.99		(4,029.64)	
Financial Transmission Rights Monthly Transaction Amount	55500-0056		746,693.25		-		-		-		-		28,474.59		(1,149.55)		156,478.06		-	
Financial Transmission Rights Transaction	55500-0034		-		-		-		-		-		-		-		-		-	
Subtotal			3,908,216.05	762,190	-	762,190	-	-	-	-	-	-	1,170,855	333,978.63	1,170,855	(180,003.75)	2,725,417	1,976,878.44	2,725,417	(1,132,326.05)
RSG & Make Whole Payments																				
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028		235,147.17		-		-		-		-		6,730.89		(1,159.15)		50,947.50		-	
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029		(2,573.07)		-		-		-		-		0.16		(162.80)		2.90		(533.19)	
Real Time Price Volatility Make Whole Payment	55500-0057		(389,078.53)		-		-		-		-		4,714.04		(10,451.72)		-		(85,797.91)	
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046		362,415.95		-		-		-		-		11,999.76		(1,596.01)		78,485.97		-	
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047		-		-		-		-		-		-		-		-		-	
Subtotal			205,911.52	762,190	-	762,190	-	-	-	-	-	-	1,170,855	23,444.84	1,170,855	(13,369.68)	2,725,417	129,436.38	2,725,417	(86,331.10)
RNU & Misc Charges																				
Real Time Miscellaneous	55500-0042		389,396.81		-		-		-		-		11,781.13		(405.72)		85,137.46		(2,840.83)	
Real Time Net Inadvertent Distribution	55500-0044		141,543.55		-		-		-		-		16,130.43		(6,783.73)		79,318.83		(50,745.66)	
Real Time Revenue Neutrality Uplift Amount	55500-0045		1,037,912.03		-		-		-		-		31,371.61		(9,496.33)		250,878.06		(25,813.73)	
Real Time Uninstructed Deviation	55500-0048		-		-		-		-		-		-		-		-		-	
Day Ahead Ramp Capability Amount	55500-0079		(1,745.65)		-		-		-		-		-		(109.04)		-		(361.49)	
Real Time Ramp Capability Amount	55500-0080		164.41		-		-		-		-		7.72		(5.14)		54.25		(15.85)	
Subtotal			1,567,271.15	762,190	-	762,190	-	-	-	-	-	-	1,170,855	59,290.89	1,170,855	(16,799.97)	2,725,417	415,388.60	2,725,417	(79,777.56)
Grandfathered Charge Types																				
Day Ahead Congestion Rebate on Carve-Out Grandfathered	55500-0023		-		-		-		-		-		-		-		-		-	
Day Ahead Losses Rebate on Carve- Out Grandfathered	55500-0024		-		-		-		-		-		-		-		-		-	
Day Ahead Congestion Rebate on Option B Grandfathered	55500-0025		-		-		-		-		-		-		-		-		-	
Day Ahead Losses Rebate on Option B Grandfathered	55500-0026		-		-		-		-		-		-		-		-		-	
Real Time Losses Rebate on Carve-Out Grandfathered	55500-0040		-		-		-		-		-		-		-		-		-	
Real Time Congestion Rebate on Carve- Out Grandfathered	55500-0039		-		-		-		-		-		-		-		-		-	
Subtotal			-	762,190	-	762,190	-	-	-	-	-	-	1,170,855	-	1,170,855	-	2,725,417	-	2,725,417	-

**MINNESOTA POWER
MISO MONTHLY ALLOCATION**

	Account Number	July 2015- June 2016	MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
			Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(273,858.88)	-	-	-	-	-	-	-	838.11	-	-	(8,331.06)	-	-	-	(59,290.70)	
Day Ahead Spinning Reserve Amount	55500-0063	(286,944.35)	-	-	-	-	-	-	-	574.67	-	-	(9,783.39)	-	-	-	(62,008.91)	
Day Ahead Supplemental Reserve Amount	55500-0064	(62.00)	-	-	-	-	-	-	-	0.53	-	-	(2.04)	3.62	-	-	(17.89)	
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Regulation Adjustment Amount	55500-0068	659.07	-	-	-	-	-	-	-	65.81	-	-	(143.60)	752.32	-	-	(586.78)	
Real Time Regulation Amount	55500-0070	19,216.94	-	-	-	-	-	-	-	1,038.86	-	-	(890.32)	8,344.49	-	-	(3,987.67)	
Regulation Reserve Cost Distribution Amount	55500-0071	210,890.44	-	-	-	-	-	-	-	6,355.56	-	-	(797.92)	45,691.57	-	-	-	
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	57,453.64	-	-	-	-	-	-	-	1,982.85	-	-	(89.13)	12,457.40	-	-	-	
Real Time Spinning Reserve Amount	55500-0072	(23,122.28)	-	-	-	-	-	-	-	330.72	-	-	(1,009.46)	1,825.89	-	-	(6,829.33)	
Spinning Reserve Cost Distribution Amount	55500-0073	262,928.21	-	-	-	-	-	-	-	7,879.74	-	-	(927.16)	56,998.06	-	-	-	
Real Time Supplemental Reserve Amount	55500-0074	(505.29)	-	-	-	-	-	-	-	6.24	-	-	(30.46)	39.23	-	-	(136.18)	
Supplemental Reserve Cost Distribution Amount	55500-0075	116,450.43	-	-	-	-	-	-	-	3,407.88	-	-	(487.60)	25,189.40	-	-	-	
Subtotal		83,105.93	762,190	-	762,190	-	-	-	-	1,170,855	22,480.96	1,170,855	(22,492.12)	2,725,417	151,301.97	2,725,417	(132,857.46)	
Grand Total		30,219,786.38	762,190	-	762,190	-	-	-	-	1,170,855	886,123.23	1,170,855	(364,325.53)	2,725,417	5,627,019.70	2,725,417	(2,094,303.62)	

Attachment 10

Minnesota Power's July 2015 through June 2016 ASM Cost and Benefit Compliance Filing

Overview

Minnesota Power has been participating in Midcontinent ISO's (MISO) Ancillary Service Market (ASM) since it started on January 6, 2009. Since market start, Minnesota Power has not seen any major changes to operation or clearing our units for energy in the market. We have had some additional opportunities in the ASM to optimize generation portfolio revenues by providing regulation and spinning reserve without creating a negative impact on available energy necessary to meet customer needs.

Spinning Reserves

Currently, Minnesota Power has 8 generating resources that are qualified to supply energy, regulation, and spinning reserves service for MISO. Minnesota Power can fully utilize these resources for energy and spinning reserves at 100 percent utilization within the ASM. Under normal operating conditions Minnesota Power has the potential of carrying approximately 80MW of spinning reserves above the cruise operating level on these generation facilities without reducing energy available for customers. Prior to the ASM, Minnesota Power's share of the spinning reserves obligation was 21MW. Under ASM, Minnesota Power can currently clear up to approximately 80MW of spinning reserves on thermal generation without impacting energy availability. The additional ancillary service revenues reduce overall customer costs because the spinning reserve revenues are allocated to the FCA through our MISO allocation process.

The ASM has also added value for customers when generating units have backed down to minimum generation levels due to low energy prices. The generators can be backed down and still provide spinning reserves at the lower operating levels. MISO could also back down generation to acquire the market's required spinning reserves, however to date Minnesota Power's thermal generators have been almost exclusively selected to supply energy and have not been backed down to supply spinning reserves.

Including ASM charge type impact only, MISO's Spinning Reserves process had a net benefit of \$44,667.65 in July 2015 through June 2016. The Spinning Reserve costs and revenues are provided in Attachment 10-A. The true benefit of ASM Spinning Reserves is far greater.

Supplemental Reserves

Minnesota Power's cost allocation for supplemental reserves was \$116,617.80 for July 2015 through June 2016. Prior to the ASM, Minnesota Power utilized interruptible

loads at our large power customers to cover our supplemental reserves requirements. Due to low prices for this product under ASM, Minnesota Power has elected not to offer MISO supplemental reserves from our large industrial customers because the benefit is too small for the risk it provides to our customers. The impact to our customers due to lost production if interrupted for deployment of supplemental reserves greatly exceeds the cost of purchasing supplemental reserves from MISO. Minnesota Power will continue to monitor prices and work with customers as conditions change to see if supplying additional supplemental reserves is appropriate in the future. The Supplemental Reserve costs and revenues are provided in Attachment 10-A.

Regulation

Prior to ASM, Minnesota Power scheduled approximately 8 MW of regulation on our system on an hourly basis to meet Balancing Authority control performance criteria requirements. Under ASM, Minnesota Power units are only selected by MISO for regulation when it is cost effective. Most of the time our units are cleared for energy instead of being held back to provide the 8 MW we used to reserve for regulation. Under ASM, due to regulation clearing and our ability to purchase affordable regulation service, we have more economic energy available from our low cost generation facilities to serve our customers. Including ASM charge type impact only, MISO's Regulation process provided a net benefit of \$50,955.86 in July 2015 through June 2016. The Regulation costs and revenues are provided in Attachment 10-A. The true benefit of ASM Regulation is far greater.

ASM Charge Summary

Operation in the ASM market has been smooth and there continues to be a positive economic benefit for Minnesota Power's customers. We are now able to maximize the capabilities of our units to a greater extent, which ultimately has led to greater operational efficiencies for Minnesota Power. We have developed many tools and reports to track the benefit of the ASM on a unit by unit and day by day basis. Our overall strategy is to continue to develop strategies in the ASM that have a positive impact for our customers.

Minnesota Power reviews all MISO charges and credits including ASM charge types on a daily basis. Attachment 10-A provides the July 2015 through June 2016 summary of ASM hourly charges which has provided a net cost of \$82,782.28. Minnesota Power allocates all ASM charges in the same manner as it has allocated MISO Day 2 charge types – on a per MWh approach netting costs and benefits of the various charges. During July 2015 through June 2016, a net cost of \$53,585.64 was allocated to the Retail FCA.

Attachment 10-B provides a summary of July 2015 through June 2016 hourly MWh related to ASM products. The table provides Minnesota Power's net position for each of the three ASM products which indicate that Minnesota Power was a net buyer of Regulation Service and Spinning and Supplemental Reserves for July 2015 through June 2016.

Schedule 17 Costs

MISO took on additional responsibilities with the start of the ASM and related to this increased systems responsibilities and analysis; additional costs were incurred at MISO. These costs were recovered from Market Participants including Minnesota Power through increased Schedule 17 charges. Attachment 10-C provides a summary of the Schedule 17 costs before and after the start of ASM. Prior to the start of ASM, Schedule 17 rates averaged \$0.07223 for an average monthly billing of \$140,922.50 per month. For July 2015 through June 2016, the Schedule 17 rate averaged \$0.07479 for an average monthly billing of \$149,093.09.

Daily Detail / Negative Benefits

Attachment 10-D provides the daily details supporting the monthly and quarterly benefits shown in Attachment 10-A. For the reporting period, 237 days or 65 percent show a net negative benefit. With the exception of 33 days, the negative benefit was not caused by Contingency Reserve Deployment Failure Charges (CRDFC) or Real Time Excessive Deficient Energy Deployment Charges (EDED). The negative benefits appear to be caused by a reduction in cleared ASM products. Fewer MWh of Regulation, Spinning and Supplemental reserves were supplied by Minnesota Power during the current reporting period as compared to the prior reporting period.

Net negative benefits can be caused by various factors, including but not limited to: the amount of energy cleared at each unit, the amount of reserves cleared, reserve clearing price, reserve distribution costs, and load ratio share. Most of these factors are out of Minnesota Power's control.

Contingency Reserve Deployment Failure Charge (CRDFC)

For the period of July 2015 through June 2016, Minnesota Power did not incur any contingency reserve deployment failure charges.

As shown in Attachment 10-E, Minnesota Power's generating units responded to the reserve deployments by delivering 100 percent of the energy requested.

Real Time Excessive Deficient Energy Deployment Charge Amount (EDED)

For the period of July 2015 through June 2016, Minnesota Power incurred \$60,829.00 in EDED as shown in Attachment 10-D. The majority of the instances when EDED occurs are during start-up, shut downs, set point deviations or when the unit is having equipment problems and the unit is not considered dispatchable by MISO.

Summary of 12 ASM Charge Types																	
	July '15	August '15	September '15	3rd Quarter '15 Total	October '15	November '15	December '15	4th Quarter '15 Total	January '16	February '16	March '16	1st Quarter '16 Total	April '16	May '16	June '16	2nd Quarter '16 Total	Period-to-date Total
Day Ahead Regulation Amount	\$ (21,697.73)	\$ (19,003.18)	\$ (28,715.18)	\$ (69,416.09)	\$ (25,573.88)	\$ (17,923.45)	\$ (22,108.75)	\$ (65,606.08)	\$ (16,680.81)	\$ (15,161.84)	\$ (26,510.33)	\$ (58,352.98)	\$ (24,731.54)	\$ (35,998.70)	\$ (24,932.49)	\$ (85,662.73)	\$ (279,037.88)
Real Time Regulation Amount	\$ (3,887.36)	\$ 1,203.74	\$ 5,636.45	\$ 2,952.83	\$ 4,573.77	\$ 3,282.24	\$ 5,337.64	\$ 13,193.65	\$ 564.57	\$ (1,672.08)	\$ (2,448.30)	\$ (3,555.81)	\$ 4,211.49	\$ 9,073.95	\$ (3,587.45)	\$ 9,697.99	\$ 22,288.66
Regulation Cost Distribution Amount	\$ 15,774.38	\$ 18,118.03	\$ 18,058.35	\$ 51,950.76	\$ 21,435.58	\$ 17,398.36	\$ 15,773.31	\$ 54,607.25	\$ 14,349.03	\$ 13,635.65	\$ 15,967.42	\$ 43,952.10	\$ 18,536.48	\$ 20,517.73	\$ 16,229.04	\$ 55,283.25	\$ 205,793.36
Regulation SubTotal	\$ (9,810.71)	\$ 318.59	\$ (5,020.38)	\$ (14,512.50)	\$ 435.47	\$ 2,757.15	\$ (997.80)	\$ 2,194.82	\$ (1,767.21)	\$ (3,198.27)	\$ (12,991.21)	\$ (17,956.69)	\$ (1,983.57)	\$ (6,407.02)	\$ (12,290.90)	\$ (20,681.49)	\$ (50,955.86)
Day Ahead Spinning Reserve Amount	\$ (22,144.71)	\$ (8,343.55)	\$ (12,765.37)	\$ (43,253.63)	\$ (17,790.12)	\$ (15,464.35)	\$ (18,848.13)	\$ (52,102.60)	\$ (20,695.57)	\$ (16,555.82)	\$ (36,175.10)	\$ (73,426.49)	\$ (29,343.78)	\$ (43,852.58)	\$ (41,797.43)	\$ (114,993.79)	\$ (283,776.51)
Real Time Spinning Reserve Amount	\$ (609.66)	\$ (532.06)	\$ 1,643.84	\$ 502.12	\$ 1,040.18	\$ 1,402.10	\$ 2,771.21	\$ 5,213.49	\$ (7,405.97)	\$ (6,987.45)	\$ (9,518.26)	\$ (23,911.68)	\$ (4,387.82)	\$ (969.01)	\$ 833.59	\$ (4,523.24)	\$ (22,719.31)
Spinning Reserve Cost Distribution Amount	\$ 28,411.49	\$ 19,403.56	\$ 22,994.75	\$ 70,809.80	\$ 25,304.13	\$ 18,174.77	\$ 17,253.88	\$ 60,732.78	\$ 17,474.54	\$ 14,842.33	\$ 20,778.18	\$ 53,095.05	\$ 23,870.28	\$ 27,686.66	\$ 25,633.60	\$ 77,190.54	\$ 261,828.17
Spinning Reserve SubTotal	\$ 5,657.12	\$ 10,527.95	\$ 11,873.22	\$ 28,058.29	\$ 8,554.19	\$ 4,112.52	\$ 1,176.96	\$ 13,843.67	\$ (10,627.00)	\$ (8,700.94)	\$ (24,915.18)	\$ (44,243.12)	\$ (9,861.32)	\$ (17,134.93)	\$ (15,330.24)	\$ (42,326.49)	\$ (44,667.65)
Day Ahead Supplemental Reserve Amount	\$ -	\$ (0.30)	\$ -	\$ (0.30)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (9.00)	\$ (9.00)	\$ (52.70)	\$ -	\$ -	\$ (52.70)	\$ (62.00)
Real Time Supplemental Reserve Amount	\$ -	\$ 0.17	\$ (34.11)	\$ (33.94)	\$ -	\$ -	\$ -	\$ -	\$ (23.04)	\$ (456.12)	\$ 3.72	\$ (475.44)	\$ 19.59	\$ (15.50)	\$ (249.87)	\$ (245.78)	\$ (755.16)
Supplemental Reserve Cost Distribution Amount	\$ 10,383.96	\$ 8,923.43	\$ 14,356.69	\$ 33,664.08	\$ 18,611.15	\$ 9,650.88	\$ 9,506.40	\$ 37,768.43	\$ 7,749.55	\$ 6,389.47	\$ 7,531.98	\$ 21,671.00	\$ 7,903.17	\$ 9,358.44	\$ 7,069.84	\$ 24,331.45	\$ 117,434.96
Supplemental Reserve SubTotal	\$ 10,383.96	\$ 8,923.30	\$ 14,322.58	\$ 33,629.84	\$ 18,611.15	\$ 9,650.88	\$ 9,506.40	\$ 37,768.43	\$ 7,726.51	\$ 5,933.35	\$ 7,526.70	\$ 21,186.56	\$ 7,870.06	\$ 9,342.94	\$ 6,819.97	\$ 24,032.97	\$ 116,617.80
Contingency Reserve Deployment Failure Charge Amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Real Time Excessive Deficient Energy Deployment Charge Amount	\$ 3,700.60	\$ 1,559.97	\$ 3,730.74	\$ 8,991.31	\$ 2,677.02	\$ 2,427.82	\$ 2,066.50	\$ 7,171.34	\$ 2,114.34	\$ 5,409.53	\$ 12,246.99	\$ 19,770.86	\$ 8,211.00	\$ 7,031.64	\$ 9,652.85	\$ 24,895.49	\$ 60,829.00
Net Regulation Adjustment Amount	\$ 814.60	\$ 949.08	\$ 897.99	\$ 2,661.67	\$ (130.86)	\$ (448.21)	\$ (346.51)	\$ (925.58)	\$ (5.06)	\$ (292.07)	\$ (1,147.09)	\$ (1,444.22)	\$ 9.77	\$ (20.99)	\$ 678.34	\$ 667.12	\$ 958.99
Other Charge SubTotal	\$ 4,515.20	\$ 2,509.05	\$ 4,628.73	\$ 11,652.98	\$ 2,546.16	\$ 1,979.61	\$ 1,719.99	\$ 6,245.76	\$ 2,109.28	\$ 5,117.46	\$ 11,099.90	\$ 18,326.64	\$ 8,220.77	\$ 7,010.65	\$ 10,331.19	\$ 25,562.61	\$ 61,787.99
Total	\$ 10,745.57	\$ 22,278.89	\$ 25,804.15	\$ 58,828.61	\$ 30,146.97	\$ 18,500.16	\$ 11,405.55	\$ 60,052.68	\$ (2,558.42)	\$ (848.40)	\$ (19,279.79)	\$ (22,686.61)	\$ 4,245.94	\$ (7,188.36)	\$ (10,469.98)	\$ (13,412.40)	\$ 82,782.28

Negative numbers indicate a payment from MISO
Positive numbers indicate a charge from MISO

Summary of MWh of ASM products Purchased and Supplied																	
	July '15	August '15	September '15	3rd Quarter '15 Total	October '15	November '15	December '15	4th Quarter '15 Total	January '16	February '16	March '16	1st Quarter '16 Total	April '16	May '16	June '16	2nd Quarter '16 Total	Period-to-date Total
Total MISO Reg Procured (MWh)	295,198.78	294,563.87	285,600.66	875,363.31	294,904.84	285,292.87	295,203.57	875,401.28	294,603.77	276,001.78	295,195.24	865,800.79	285,189.67	294,901.39	285,632.10	865,723.16	3,482,288.54
MP Share of Reg Procured by MISO	3,868.46	3,978.11	4,151.44	11,998.01	4,879.18	4,746.74	4,726.44	14,352.36	4,613.49	4,478.65	4,957.54	14,049.68	4,584.17	4,532.68	3,883.13	12,999.98	53,400.03
MP Supplied Reg Volume	4,248.44	2,858.60	3,460.70	10,567.74	2,644.35	2,004.34	2,750.24	7,398.93	2,884.76	2,930.71	3,471.27	9,286.74	2,248.44	2,875.74	3,558.59	8,682.77	35,936.18
MP Net Buyer or (Seller) of Regulation	(379.98)	1,119.51	690.74	1,430.27	2,234.83	2,742.40	1,976.20	6,953.43	1,728.73	1,547.94	1,486.27	4,762.94	2,335.73	1,656.94	324.54	4,317.21	17,463.85
Total MISO Spin Procured (MWh)	797,034.51	813,320.31	789,595.83	2,399,950.65	841,564.51	768,124.10	737,284.28	2,346,972.89	723,770.55	686,963.99	704,680.90	2,115,415.44	695,842.28	710,127.51	714,336.71	2,120,306.50	8,982,645.48
MP Share of Spin Procured by MISO	10,486.25	11,197.70	11,555.66	33,239.61	14,038.00	12,903.95	11,867.92	38,809.87	11,376.95	11,207.53	11,883.44	34,467.92	11,227.22	10,967.35	9,774.31	31,968.88	138,486.28
MP Supplied Spin Volume	11,302.76	4,687.37	5,088.36	21,078.49	11,610.22	8,113.87	11,240.74	30,964.83	24,691.08	26,596.64	30,668.86	81,956.58	17,800.58	23,295.07	23,562.46	64,658.11	198,658.01
MP Net Buyer or (Seller) of Spinning Reserves	(816.51)	6,510.33	6,467.30	12,161.12	2,427.78	4,790.08	627.18	7,845.04	(13,314.13)	(15,389.11)	(18,785.42)	(47,488.66)	(6,573.36)	(12,327.72)	(13,788.15)	(32,689.23)	(60,171.73)
Total MISO Supp Procured (MWh)	726,592.51	706,767.66	681,948.18	2,115,308.35	678,871.28	703,403.07	783,653.94	2,165,928.29	796,434.89	735,708.41	816,269.02	2,348,412.32	775,760.79	810,527.07	757,474.21	2,343,762.07	8,973,411.03
MP Share of Supp Procured by MISO	9,574.36	9,444.33	9,943.39	28,962.08	11,226.33	11,659.48	12,549.80	35,435.61	12,491.25	11,939.13	13,750.08	38,180.46	12,518.05	12,518.87	10,330.64	35,367.56	137,945.71
MP Supplied Supp Volume	-	-	35.73	35.73	-	-	-	-	12.42	8.99	-	21.41	11.65	4.09	108.28	124.02	181.16
MP Net Buyer or (Seller) of Supplemental Reserves	9,574.36	9,444.33	9,907.66	28,926.35	11,226.33	11,659.48	12,549.80	35,435.61	12,478.83	11,930.14	13,750.08	38,159.05	12,506.40	12,514.78	10,222.36	35,243.54	137,764.55

Negative numbers indicate a payment from MISO
Positive numbers indicate a charge from MISO

**Comparison of MISO Schedule 17 Rates and Amounts
before and after the start of the ASM Market**

Monthly Average Schedule 17 Amount

April '05 through December '08	\$ 140,922.50
July '15 through June '16	\$ 149,093.09
Average Monthly Increase	\$ 8,170.59

Monthly Average Schedule 17 Rate per MWh

April '05 through December '08	\$ 0.07223
July '15 through June '16	\$ 0.07479
Average Monthly Increase	\$ 0.00256

NOTE: A negative number is a payment from MISO and a positive number is a payment to MISO

Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
7/1/2015	(268.32)	(20.45)	483.01	\$ 194.24	(333.88)	47.20	718.92	\$ 432.24	-	-	165.55	\$ 165.55	-	104.77	63.47	\$ 168.24	\$ 960.27
7/2/2015	(150.45)	(730.24)	434.82	\$ (445.87)	(221.67)	(35.64)	581.92	\$ 324.61	-	-	170.24	\$ 170.24	-	133.17	2.83	\$ 136.00	\$ 184.98
7/3/2015	(858.38)	(678.52)	467.44	\$ (1,069.46)	(458.91)	104.63	619.15	\$ 264.87	-	-	187.47	\$ 187.47	-	184.00	36.26	\$ 220.26	\$ (396.86)
7/4/2015	(1,295.64)	(52.07)	649.28	\$ (698.43)	(385.31)	84.97	559.04	\$ 258.70	-	-	176.30	\$ 176.30	-	73.35	(127.30)	\$ (53.95)	\$ (317.38)
7/5/2015	(1,395.11)	310.86	582.07	\$ (502.18)	(427.57)	59.92	622.27	\$ 254.62	-	-	175.40	\$ 175.40	-	219.70	9.59	\$ 229.29	\$ 157.13
7/6/2015	(1,650.19)	87.73	557.71	\$ (1,004.75)	(319.21)	(83.72)	584.66	\$ 181.73	-	-	321.08	\$ 321.08	-	236.24	34.00	\$ 270.24	\$ (231.70)
7/7/2015	(731.28)	(253.52)	557.33	\$ (427.47)	(780.93)	312.70	554.82	\$ 86.59	-	-	148.75	\$ 148.75	-	125.00	(36.92)	\$ 88.08	\$ (104.05)
7/8/2015	(1,288.03)	236.09	543.43	\$ (508.51)	(570.51)	279.96	509.14	\$ 218.59	-	-	175.95	\$ 175.95	-	227.93	94.10	\$ 322.03	\$ 208.06
7/9/2015	(471.87)	(478.76)	486.66	\$ (463.97)	(622.96)	(102.64)	593.51	\$ (132.09)	-	-	180.91	\$ 180.91	-	58.02	(0.58)	\$ 57.44	\$ (357.71)
7/10/2015	(619.32)	38.46	677.85	\$ 96.99	(333.28)	(56.08)	664.93	\$ 275.57	-	-	186.74	\$ 186.74	-	43.07	(1.20)	\$ 41.87	\$ 601.17
7/11/2015	(1,248.83)	774.64	576.10	\$ 101.91	(287.82)	(83.46)	520.95	\$ 149.67	-	-	184.57	\$ 184.57	-	80.00	7.52	\$ 87.52	\$ 523.67
7/12/2015	-	(1,934.43)	506.36	\$ (1,428.07)	(491.56)	(1,250.56)	2,667.75	\$ 925.63	-	-	(1,410.23)	\$ (1,410.23)	-	160.74	267.99	\$ 428.73	\$ (1,483.94)
7/13/2015	(545.81)	58.27	806.06	\$ 318.52	(671.48)	(152.79)	1,456.99	\$ 632.72	-	-	324.31	\$ 324.31	-	214.44	10.99	\$ 225.43	\$ 1,500.98
7/14/2015	(440.46)	(245.70)	816.32	\$ 130.16	(890.81)	131.36	1,335.45	\$ 576.00	-	-	857.81	\$ 857.81	-	41.93	8.70	\$ 50.63	\$ 1,614.60
7/15/2015	(521.79)	(174.17)	529.34	\$ (166.62)	(407.64)	(97.32)	885.35	\$ 380.39	-	-	573.77	\$ 573.77	-	164.82	8.96	\$ 173.78	\$ 961.32
7/16/2015	(808.35)	(766.94)	387.87	\$ (1,187.42)	(468.84)	(40.97)	732.80	\$ 222.99	-	-	486.39	\$ 486.39	-	209.88	124.15	\$ 334.03	\$ (144.01)
7/17/2015	(471.23)	(313.99)	369.77	\$ (415.45)	(695.70)	114.32	1,301.13	\$ 719.75	-	-	542.20	\$ 542.20	-	91.46	98.16	\$ 189.62	\$ 1,036.12
7/18/2015	(405.94)	(203.50)	432.35	\$ (177.09)	(798.97)	(50.89)	1,213.52	\$ 363.66	-	-	977.58	\$ 977.58	-	122.92	(11.86)	\$ 111.06	\$ 1,275.21
7/19/2015	(229.16)	(484.59)	316.50	\$ (397.25)	(719.72)	8.94	812.99	\$ 102.21	-	-	554.07	\$ 554.07	-	148.51	22.93	\$ 171.44	\$ 430.47
7/20/2015	(339.83)	(515.31)	294.74	\$ (560.40)	(701.13)	26.26	823.90	\$ 149.03	-	-	556.51	\$ 556.51	-	139.91	34.53	\$ 174.44	\$ 319.58
7/21/2015	(1,574.21)	458.12	353.87	\$ (762.22)	(709.07)	(221.28)	802.37	\$ (127.98)	-	-	169.76	\$ 169.76	-	96.93	(36.28)	\$ 60.65	\$ (659.79)
7/22/2015	(818.07)	(375.72)	392.35	\$ (801.44)	(1,060.31)	77.64	830.62	\$ (152.05)	-	-	10.90	\$ 10.90	-	31.52	(0.53)	\$ 30.99	\$ (911.60)
7/23/2015	(695.33)	456.85	274.76	\$ 36.28	(1,173.03)	711.69	928.38	\$ 467.04	-	-	194.58	\$ 194.58	-	78.87	9.72	\$ 88.59	\$ 786.49
7/24/2015	(768.53)	579.65	436.79	\$ 247.91	(1,001.40)	(282.27)	1,362.36	\$ 78.69	-	-	655.34	\$ 655.34	-	39.30	3.68	\$ 42.98	\$ 1,024.92
7/25/2015	(548.67)	536.79	287.90	\$ 276.02	(817.19)	(925.30)	1,241.23	\$ (501.26)	-	-	242.95	\$ 242.95	-	90.89	7.84	\$ 98.73	\$ 116.44
7/26/2015	(400.84)	289.82	476.35	\$ 365.33	(1,280.70)	(357.78)	974.61	\$ (663.87)	-	-	619.32	\$ 619.32	-	89.18	7.97	\$ 97.15	\$ 417.93
7/27/2015	(181.08)	(78.72)	789.93	\$ 530.13	(1,219.72)	(41.90)	1,593.09	\$ 331.47	-	-	978.29	\$ 978.29	-	104.85	27.02	\$ 131.87	\$ 1,971.76
7/28/2015	(1,253.54)	177.27	652.16	\$ (424.11)	(1,705.60)	67.22	1,001.55	\$ (636.83)	-	-	745.03	\$ 745.03	-	195.81	40.27	\$ 236.08	\$ (79.83)
7/29/2015	(895.38)	(472.34)	524.55	\$ (843.17)	(1,119.41)	716.08	548.43	\$ 145.10	-	-	380.41	\$ 380.41	-	24.43	98.19	\$ 122.62	\$ (195.04)
7/30/2015	(434.44)	(40.18)	615.50	\$ 140.88	(1,038.14)	398.55	675.29	\$ 35.70	-	-	439.80	\$ 439.80	-	135.03	(6.79)	\$ 128.24	\$ 744.62
7/31/2015	(387.65)	(72.76)	495.21	\$ 34.80	(432.24)	31.50	694.37	\$ 293.63	-	-	412.21	\$ 412.21	-	33.93	17.19	\$ 51.12	\$ 791.76
July Total	\$ (21,697.73)	\$ (3,887.36)	\$ 15,774.38	\$ (9,810.71)	\$ (22,144.71)	\$ (609.66)	\$ 28,411.49	\$ 5,657.12	\$ -	\$ -	\$ 10,383.96	\$ 10,383.96	\$ -	\$ 3,700.60	\$ 814.60	\$ 4,515.20	\$ 10,745.57

NOTE: A negative number is a payment from MISO and a positive number is a payment to MISO

Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
8/1/2015	(689.66)	(529.20)	491.60	\$ (727.26)	(379.20)	26.21	804.60	\$ 451.61	-	-	105.45	\$ 105.45	-	31.24	332.88	\$ 364.12	\$ 193.92
8/2/2015	(1,381.68)	521.99	431.79	\$ (427.90)	(352.00)	(488.05)	873.00	\$ 32.95	-	-	(72.65)	\$ (72.65)	-	81.42	134.00	\$ 215.42	\$ (252.18)
8/3/2015	(389.01)	(269.14)	561.03	\$ (97.12)	(407.04)	20.63	618.72	\$ 232.31	-	-	287.82	\$ 287.82	-	5.41	20.40	\$ 25.81	\$ 448.82
8/4/2015	(294.14)	(267.84)	535.39	\$ (26.59)	(432.61)	19.83	668.36	\$ 255.58	-	-	408.02	\$ 408.02	-	13.56	13.52	\$ 27.08	\$ 664.09
8/5/2015	(407.56)	(58.09)	575.21	\$ 109.56	(469.57)	20.91	697.71	\$ 249.05	-	-	595.95	\$ 595.95	-	70.85	(11.91)	\$ 58.94	\$ 1,013.50
8/6/2015	(1,152.06)	(193.25)	445.15	\$ (900.16)	(396.66)	27.54	533.72	\$ 164.60	-	-	382.08	\$ 382.08	-	65.15	6.64	\$ 71.79	\$ (281.69)
8/7/2015	(550.49)	(19.24)	611.23	\$ 41.50	(363.10)	66.78	629.44	\$ 333.12	-	-	416.39	\$ 416.39	-	27.70	47.90	\$ 75.60	\$ 866.61
8/8/2015	(918.58)	371.64	607.14	\$ 60.20	(279.36)	25.77	676.26	\$ 422.67	-	-	299.22	\$ 299.22	-	31.48	7.14	\$ 38.62	\$ 820.71
8/9/2015	(344.69)	(64.89)	591.56	\$ 181.98	(299.22)	27.13	701.43	\$ 429.34	-	-	373.37	\$ 373.37	-	34.31	0.25	\$ 34.56	\$ 1,019.25
8/10/2015	(417.89)	(212.55)	617.53	\$ (12.91)	(343.72)	(133.59)	799.59	\$ 322.28	-	-	541.90	\$ 541.90	-	53.44	(5.06)	\$ 48.38	\$ 899.65
8/11/2015	(388.87)	(194.41)	541.63	\$ (41.65)	(264.52)	16.04	520.00	\$ 271.52	-	-	153.70	\$ 153.70	-	2.82	11.35	\$ 14.17	\$ 397.74
8/12/2015	(391.75)	(402.17)	415.32	\$ (378.60)	(228.96)	198.67	1,109.82	\$ 1,079.53	-	-	(503.58)	\$ (503.58)	-	20.73	168.52	\$ 189.25	\$ 386.60
8/13/2015	(357.11)	99.46	504.44	\$ 246.79	(250.26)	(47.59)	874.80	\$ 576.95	-	-	47.38	\$ 47.38	-	45.69	10.01	\$ 55.70	\$ 926.82
8/14/2015	(251.21)	58.76	808.30	\$ 615.85	(401.70)	(107.88)	1,222.09	\$ 712.51	-	-	894.45	\$ 894.45	-	36.45	(1.01)	\$ 35.44	\$ 2,258.25
8/15/2015	(287.70)	56.78	555.77	\$ 324.85	(290.43)	5.56	917.35	\$ 632.48	-	-	710.80	\$ 710.80	-	67.02	(2.65)	\$ 64.37	\$ 1,732.50
8/16/2015	(211.37)	(289.36)	615.72	\$ 114.99	(243.09)	11.98	655.99	\$ 424.88	-	-	272.52	\$ 272.52	-	113.52	(10.02)	\$ 103.50	\$ 915.89
8/17/2015	(287.76)	(97.52)	700.27	\$ 314.99	(294.47)	(22.69)	771.62	\$ 454.46	-	-	697.42	\$ 697.42	-	4.36	(6.73)	\$ (2.37)	\$ 1,464.50
8/18/2015	(1,072.67)	(102.15)	470.70	\$ (704.12)	(266.54)	26.28	589.03	\$ 348.77	-	-	282.67	\$ 282.67	-	29.62	37.06	\$ 66.68	\$ (6.00)
8/19/2015	(696.19)	(91.19)	451.85	\$ (335.53)	(96.84)	(0.63)	312.29	\$ 214.82	-	-	143.77	\$ 143.77	-	62.22	24.24	\$ 86.46	\$ 109.52
8/20/2015	(1,309.65)	711.67	465.18	\$ (132.80)	(52.89)	(1.48)	419.46	\$ 365.09	-	-	194.87	\$ 194.87	-	219.31	12.85	\$ 232.16	\$ 659.32
8/21/2015	(1,543.84)	1,390.05	679.73	\$ 525.94	(116.70)	(41.38)	361.32	\$ 203.24	-	-	194.63	\$ 194.63	-	30.38	(1.80)	\$ 28.58	\$ 952.39
8/22/2015	(529.19)	423.29	636.89	\$ 530.99	(129.64)	(47.25)	384.06	\$ 207.17	-	-	197.01	\$ 197.01	-	26.83	(2.89)	\$ 23.94	\$ 959.11
8/23/2015	(187.95)	(84.93)	674.35	\$ 401.47	(95.44)	(183.78)	331.35	\$ 52.13	(0.30)	0.17	181.19	\$ 181.06	-	168.52	9.57	\$ 178.09	\$ 812.75
8/24/2015	(208.75)	77.66	610.95	\$ 479.86	(170.82)	7.31	362.62	\$ 199.11	-	-	182.02	\$ 182.02	-	92.50	(2.09)	\$ 90.41	\$ 951.40
8/25/2015	(33.70)	(159.57)	646.58	\$ 453.31	(204.78)	-	447.47	\$ 242.69	-	-	186.67	\$ 186.67	-	31.40	1.31	\$ 32.71	\$ 915.38
8/26/2015	(387.00)	(74.83)	634.73	\$ 172.90	(166.54)	(3.63)	393.65	\$ 223.48	-	-	197.74	\$ 197.74	-	22.48	14.94	\$ 37.42	\$ 631.54
8/27/2015	(616.49)	223.82	574.14	\$ 181.47	(130.08)	(1.67)	333.25	\$ 201.50	-	-	186.87	\$ 186.87	-	59.70	16.91	\$ 76.61	\$ 646.45
8/28/2015	(1,108.21)	214.42	646.54	\$ (247.25)	(218.58)	11.22	412.87	\$ 205.51	-	-	212.78	\$ 212.78	-	5.93	23.62	\$ 29.55	\$ 200.59
8/29/2015	(992.08)	(33.04)	630.16	\$ (394.96)	(247.90)	11.59	514.08	\$ 277.77	-	-	221.78	\$ 221.78	-	21.42	44.91	\$ 66.33	\$ 170.92
8/30/2015	(1,100.93)	30.08	549.49	\$ (521.36)	(254.63)	11.24	503.73	\$ 260.34	-	-	187.95	\$ 187.95	-	35.89	54.83	\$ 90.72	\$ 17.65
8/31/2015	(495.00)	167.49	837.66	\$ 510.15	(496.26)	12.87	963.88	\$ 480.49	-	-	743.24	\$ 743.24	-	48.62	0.39	\$ 49.01	\$ 1,782.89
Aug Total	\$ (19,003.18)	\$ 1,203.74	\$ 18,118.03	\$ 318.59	\$ (8,343.55)	\$ (532.06)	\$ 19,403.56	\$ 10,527.95	\$ (0.30)	\$ 0.17	\$ 8,923.43	\$ 8,923.30	\$ -	\$ 1,559.97	\$ 949.08	\$ 2,509.05	\$ 22,278.89

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Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
9/1/2015	(406.36)	163.39	728.59	\$ 485.62	(459.56)	(12.63)	864.17	\$ 391.98	-	-	748.78	\$ 748.78	-	18.72	45.74	\$ 64.46	\$ 1,690.84
9/2/2015	(359.51)	15.54	603.34	\$ 259.37	(123.76)	14.74	953.94	\$ 844.92	-	-	919.67	\$ 919.67	-	34.93	(6.78)	\$ 28.15	\$ 2,052.11
9/3/2015	(392.27)	94.81	780.41	\$ 482.95	(70.90)	(15.11)	827.65	\$ 741.64	-	-	802.77	\$ 802.77	-	53.46	3.97	\$ 57.43	\$ 2,084.79
9/4/2015	(426.93)	124.67	546.27	\$ 244.01	(71.12)	(22.22)	628.21	\$ 534.87	-	-	579.19	\$ 579.19	-	68.68	(2.94)	\$ 65.74	\$ 1,423.81
9/5/2015	(370.57)	6.26	395.16	\$ 30.85	(256.00)	4.80	454.43	\$ 203.23	-	-	193.21	\$ 193.21	-	42.46	(0.35)	\$ 42.11	\$ 469.40
9/6/2015	(362.75)	(450.05)	347.83	\$ (464.97)	(604.48)	155.89	432.18	\$ (16.41)	-	-	306.02	\$ 306.02	-	141.47	(10.96)	\$ 130.51	\$ (44.85)
9/7/2015	(620.34)	66.38	617.71	\$ 63.75	(920.40)	398.88	630.01	\$ 108.49	-	-	494.70	\$ 494.70	-	18.26	97.59	\$ 115.85	\$ 782.79
9/8/2015	(509.95)	(366.34)	491.52	\$ (384.77)	(437.38)	14.81	809.22	\$ 386.65	-	-	503.05	\$ 503.05	-	77.73	(21.53)	\$ 56.20	\$ 561.13
9/9/2015	(706.94)	327.24	500.19	\$ 120.49	(324.46)	34.84	512.65	\$ 223.03	-	-	378.70	\$ 378.70	-	54.07	(9.06)	\$ 45.01	\$ 767.23
9/10/2015	(1,286.55)	263.87	630.18	\$ (392.50)	(345.41)	73.61	507.93	\$ 236.13	-	-	350.63	\$ 350.63	-	84.89	(21.16)	\$ 63.73	\$ 257.99
9/11/2015	(923.99)	204.61	414.08	\$ (305.30)	(193.28)	20.27	409.22	\$ 236.21	-	-	254.90	\$ 254.90	-	30.34	(11.54)	\$ 18.80	\$ 204.61
9/12/2015	(1,667.48)	(94.55)	716.26	\$ (1,045.77)	(212.53)	55.02	431.43	\$ 273.92	-	-	226.70	\$ 226.70	-	367.36	(23.39)	\$ 343.97	\$ (201.18)
9/13/2015	(2,353.00)	667.39	614.36	\$ (1,071.25)	(151.98)	19.90	346.12	\$ 214.04	-	-	235.56	\$ 235.56	-	414.03	431.11	\$ 845.14	\$ 223.49
9/14/2015	(2,074.75)	1,240.54	218.29	\$ (615.92)	(397.10)	77.32	566.99	\$ 247.21	-	-	260.57	\$ 260.57	-	320.82	75.07	\$ 395.89	\$ 287.75
9/15/2015	(1,847.37)	884.45	354.83	\$ (608.09)	(567.30)	95.39	772.34	\$ 300.43	-	-	237.67	\$ 237.67	-	153.22	60.35	\$ 213.57	\$ 143.58
9/16/2015	(942.40)	475.15	476.77	\$ 9.52	(510.40)	(99.71)	899.23	\$ 289.12	-	-	671.67	\$ 671.67	-	96.96	0.78	\$ 97.74	\$ 1,068.05
9/17/2015	(1,392.34)	493.73	795.75	\$ (102.86)	(572.10)	(465.76)	1,422.95	\$ 385.09	-	-	591.20	\$ 591.20	-	106.32	23.53	\$ 129.85	\$ 1,003.28
9/18/2015	(1,152.56)	492.34	686.05	\$ 25.83	(733.82)	134.72	908.51	\$ 309.41	-	-	706.06	\$ 706.06	-	70.37	8.81	\$ 79.18	\$ 1,120.48
9/19/2015	(1,660.06)	361.13	611.81	\$ (687.12)	(412.03)	63.53	623.24	\$ 274.74	-	-	564.70	\$ 564.70	-	170.77	20.38	\$ 191.15	\$ 343.47
9/20/2015	(1,997.92)	507.96	807.82	\$ (682.14)	(389.23)	110.94	630.48	\$ 352.19	-	-	563.74	\$ 563.74	-	101.93	30.84	\$ 132.77	\$ 366.56
9/21/2015	(1,466.38)	772.04	717.29	\$ 22.95	(498.22)	101.02	953.76	\$ 556.56	-	-	653.99	\$ 653.99	-	103.60	61.03	\$ 164.63	\$ 1,398.13
9/22/2015	(580.75)	(269.97)	713.41	\$ (137.31)	(527.05)	74.97	990.83	\$ 538.75	-	-	702.38	\$ 702.38	-	268.78	0.19	\$ 268.97	\$ 1,372.79
9/23/2015	(994.56)	(357.96)	675.31	\$ (677.21)	(616.59)	141.73	1,064.35	\$ 589.49	-	-	581.55	\$ 581.55	-	154.96	82.16	\$ 237.12	\$ 730.95
9/24/2015	(855.96)	421.98	736.91	\$ 302.93	(541.28)	(257.64)	1,314.14	\$ 515.22	-	-	598.69	\$ 598.69	-	38.65	8.07	\$ 46.72	\$ 1,463.56
9/25/2015	(736.94)	547.66	751.60	\$ 562.32	(503.51)	113.30	986.44	\$ 596.23	-	-	721.73	\$ 721.73	-	226.91	(1.22)	\$ 225.69	\$ 2,105.97
9/26/2015	(75.95)	(254.15)	669.49	\$ 339.39	(381.06)	7.37	738.30	\$ 364.61	-	(26.78)	525.73	\$ 498.95	-	304.69	(30.73)	\$ 273.96	\$ 1,476.91
9/27/2015	(248.53)	177.13	370.69	\$ 299.29	(341.38)	625.75	638.17	\$ 922.54	-	(6.40)	(135.41)	\$ (141.81)	-	54.41	10.55	\$ 64.96	\$ 1,144.98
9/28/2015	(39.35)	(1,093.31)	810.81	\$ (321.85)	(634.58)	48.80	1,195.44	\$ 609.66	-	(0.93)	85.53	\$ 84.60	-	28.49	(18.32)	\$ 10.17	\$ 382.58
9/29/2015	(1,112.39)	(233.67)	561.60	\$ (784.46)	(505.92)	64.48	811.28	\$ 369.84	-	-	638.97	\$ 638.97	-	46.32	47.48	\$ 93.80	\$ 318.15
9/30/2015	(1,150.33)	448.18	714.02	\$ 11.87	(462.54)	64.83	671.14	\$ 273.43	-	-	394.04	\$ 394.04	-	77.14	48.32	\$ 125.46	\$ 804.80
Sept Total	\$ (28,715.18)	\$ 5,636.45	\$ 18,058.35	\$ (5,020.38)	\$ (12,765.37)	\$ 1,643.84	\$ 22,994.75	\$ 11,873.22	\$ -	\$ (34.11)	\$ 14,356.69	\$ 14,322.58	-	3,730.74	897.99	\$ 4,628.73	\$ 25,804.15

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Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
10/1/2015	(921.00)	347.86	665.85	\$ 92.71	(364.22)	44.20	500.00	\$ 179.98	-	-	337.99	\$ 337.99	-	83.96	0.66	\$ 84.62	\$ 695.30
10/2/2015	(864.96)	388.22	727.44	\$ 250.70	(354.84)	43.85	472.44	\$ 161.45	-	-	278.93	\$ 278.93	-	18.26	2.94	\$ 21.20	\$ 712.28
10/3/2015	(1,135.24)	234.58	740.81	\$ (159.85)	(342.68)	61.28	457.95	\$ 176.55	-	-	214.98	\$ 214.98	-	33.17	(6.21)	\$ 26.96	\$ 258.64
10/4/2015	(1,372.67)	97.50	669.70	\$ (605.47)	(406.23)	110.38	795.43	\$ 499.58	-	-	518.84	\$ 518.84	-	47.54	(30.32)	\$ 17.22	\$ 430.17
10/5/2015	(1,163.30)	(200.95)	991.10	\$ (373.15)	(686.67)	120.71	1,388.95	\$ 822.99	-	-	958.40	\$ 958.40	-	82.63	(33.59)	\$ 49.04	\$ 1,457.28
10/6/2015	(780.36)	(104.55)	854.23	\$ (30.68)	(797.42)	221.23	1,126.67	\$ 550.48	-	-	793.43	\$ 793.43	-	17.40	4.06	\$ 21.46	\$ 1,334.69
10/7/2015	(811.69)	(97.22)	651.58	\$ (257.33)	(691.34)	109.17	899.24	\$ 317.07	-	-	611.64	\$ 611.64	-	63.95	(19.16)	\$ 44.79	\$ 716.17
10/8/2015	(852.59)	(145.36)	531.06	\$ (466.89)	(700.87)	71.29	744.02	\$ 114.44	-	-	487.39	\$ 487.39	-	84.44	(28.16)	\$ 56.28	\$ 191.22
10/9/2015	(633.68)	6.82	555.70	\$ (71.16)	(485.37)	34.00	787.42	\$ 336.05	-	-	520.14	\$ 520.14	-	34.89	17.47	\$ 52.36	\$ 837.39
10/10/2015	(223.25)	(154.99)	622.43	\$ 244.19	(639.65)	60.29	569.16	\$ (10.20)	-	-	416.18	\$ 416.18	-	43.81	(0.99)	\$ 42.82	\$ 692.99
10/11/2015	(515.73)	(41.66)	575.70	\$ 18.31	(615.42)	141.71	515.38	\$ 41.67	-	-	368.27	\$ 368.27	-	103.59	(20.19)	\$ 83.40	\$ 511.65
10/12/2015	(402.60)	(659.80)	630.72	\$ (431.68)	(918.97)	(116.81)	848.84	\$ (186.94)	-	-	640.36	\$ 640.36	-	467.79	(70.02)	\$ 397.77	\$ 419.51
10/13/2015	(1,242.49)	217.66	787.36	\$ (237.47)	(783.05)	(20.44)	937.79	\$ 134.30	-	-	609.83	\$ 609.83	-	59.69	(8.29)	\$ 51.40	\$ 558.06
10/14/2015	(1,188.49)	87.16	791.92	\$ (309.41)	(708.64)	(83.81)	973.02	\$ 180.57	-	-	731.31	\$ 731.31	-	145.12	23.51	\$ 168.63	\$ 771.10
10/15/2015	(1,026.58)	601.48	737.24	\$ 312.14	(615.48)	58.25	850.81	\$ 293.58	-	-	801.02	\$ 801.02	-	44.42	(6.23)	\$ 38.19	\$ 1,444.93
10/16/2015	(347.34)	42.04	611.29	\$ 305.99	(483.50)	(162.12)	799.63	\$ 154.01	-	-	585.41	\$ 585.41	-	17.14	19.12	\$ 36.26	\$ 1,081.67
10/17/2015	(1,764.59)	859.96	703.62	\$ (201.01)	(496.44)	(94.13)	957.86	\$ 367.29	-	-	783.58	\$ 783.58	-	111.40	24.46	\$ 135.86	\$ 1,085.72
10/18/2015	(760.05)	18.23	456.57	\$ (285.25)	(393.96)	46.55	488.04	\$ 140.63	-	-	372.39	\$ 372.39	-	18.45	(31.66)	\$ (13.21)	\$ 214.56
10/19/2015	(407.91)	(137.09)	450.02	\$ (94.98)	(453.67)	(23.34)	617.89	\$ 140.88	-	-	500.93	\$ 500.93	-	105.99	32.26	\$ 138.25	\$ 685.08
10/20/2015	(813.72)	288.79	761.19	\$ 236.26	(629.55)	13.32	966.39	\$ 350.16	-	-	604.26	\$ 604.26	-	124.88	(14.89)	\$ 109.99	\$ 1,300.67
10/21/2015	(995.25)	421.46	700.67	\$ 126.88	(816.87)	117.08	1,177.59	\$ 477.80	-	-	923.09	\$ 923.09	-	35.80	(5.93)	\$ 29.87	\$ 1,557.64
10/22/2015	(715.95)	189.03	855.24	\$ 328.32	(727.52)	132.37	1,030.11	\$ 434.96	-	-	846.08	\$ 846.08	-	92.50	(14.31)	\$ 78.19	\$ 1,687.55
10/23/2015	(783.90)	256.57	623.41	\$ 96.08	(451.96)	32.55	662.00	\$ 242.59	-	-	561.95	\$ 561.95	-	194.56	(26.18)	\$ 168.38	\$ 1,069.00
10/24/2015	(1,001.76)	447.08	589.21	\$ 34.53	(353.41)	(12.29)	609.02	\$ 243.32	-	-	520.04	\$ 520.04	-	74.53	(18.85)	\$ 55.68	\$ 853.57
10/25/2015	(795.00)	159.38	554.37	\$ (81.25)	(549.78)	5.88	938.32	\$ 394.42	-	-	590.47	\$ 590.47	-	156.48	36.40	\$ 192.88	\$ 1,096.52
10/26/2015	(831.74)	203.64	1,202.26	\$ 574.16	(807.83)	(3.31)	1,489.45	\$ 678.31	-	-	1,268.54	\$ 1,268.54	-	65.15	11.45	\$ 76.60	\$ 2,597.61
10/27/2015	(838.75)	204.88	824.87	\$ 191.00	(636.24)	79.54	1,038.30	\$ 481.60	-	-	729.95	\$ 729.95	-	116.01	47.73	\$ 163.74	\$ 1,566.29
10/28/2015	(617.07)	323.69	675.97	\$ 382.59	(373.14)	(21.02)	684.34	\$ 290.18	-	-	468.51	\$ 468.51	-	45.66	(2.47)	\$ 43.19	\$ 1,184.47
10/29/2015	(736.85)	443.68	677.78	\$ 384.61	(579.20)	1.61	746.99	\$ 169.40	-	-	674.04	\$ 674.04	-	34.55	9.49	\$ 44.04	\$ 1,272.09
10/30/2015	(648.46)	94.83	613.48	\$ 59.85	(482.25)	35.42	647.16	\$ 200.33	-	-	611.89	\$ 611.89	-	108.42	(17.65)	\$ 90.77	\$ 962.84
10/31/2015	(380.91)	180.85	602.79	\$ 402.73	(443.95)	36.77	583.92	\$ 176.74	-	-	281.31	\$ 281.31	-	44.84	(5.31)	\$ 39.53	\$ 900.31
Oct Total	\$ (25,573.88)	\$ 4,573.77	\$ 21,435.58	\$ 435.47	\$ (17,790.12)	\$ 1,040.18	\$ 25,304.13	\$ 8,554.19	\$ -	\$ -	\$ 18,611.15	\$ 18,611.15	-	2,677.02	(130.86)	\$ 2,546.16	\$ 30,146.97

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Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
11/1/2015	(440.56)	36.25	667.79	\$ 263.48	(441.29)	12.60	690.50	\$ 261.81	-	-	387.32	\$ 387.32	-	69.67	(5.09)	\$ 64.58	\$ 977.19
11/2/2015	(1,043.96)	560.19	729.55	\$ 245.78	(731.58)	(3.71)	1,114.39	\$ 379.10	-	-	577.53	\$ 577.53	-	79.34	(16.53)	\$ 62.81	\$ 1,265.22
11/3/2015	(677.92)	263.49	705.52	\$ 291.09	(575.52)	43.70	628.60	\$ 96.78	-	-	537.39	\$ 537.39	-	82.91	(16.85)	\$ 66.06	\$ 991.32
11/4/2015	(822.72)	(4.40)	624.51	\$ (202.61)	(647.21)	73.09	634.43	\$ 60.31	-	-	613.36	\$ 613.36	-	44.09	(52.81)	\$ (8.72)	\$ 462.34
11/5/2015	(758.07)	31.14	653.86	\$ (73.07)	(563.38)	55.68	562.73	\$ 55.03	-	-	340.22	\$ 340.22	-	61.83	(100.42)	\$ (38.59)	\$ 283.59
11/6/2015	(1,087.07)	301.98	592.27	\$ (192.82)	(569.17)	57.35	613.65	\$ 101.83	-	-	274.06	\$ 274.06	-	195.89	(49.67)	\$ 146.22	\$ 329.29
11/7/2015	(911.58)	589.36	454.57	\$ 132.35	(496.33)	54.71	566.83	\$ 125.21	-	-	274.44	\$ 274.44	-	64.66	(12.69)	\$ 51.97	\$ 583.97
11/8/2015	(338.22)	132.10	613.98	\$ 407.86	(819.39)	107.21	565.52	\$ (146.66)	-	-	416.22	\$ 416.22	-	33.08	(1.46)	\$ 31.62	\$ 709.04
11/9/2015	(476.99)	(56.11)	568.67	\$ 35.57	(650.94)	23.93	699.27	\$ 72.26	-	-	586.45	\$ 586.45	-	63.58	7.07	\$ 70.65	\$ 764.93
11/10/2015	(603.78)	68.83	606.35	\$ 71.40	(558.06)	82.56	739.41	\$ 263.91	-	-	550.11	\$ 550.11	-	67.35	(10.55)	\$ 56.80	\$ 942.22
11/11/2015	(609.85)	167.70	634.54	\$ 192.39	(308.70)	4.11	536.87	\$ 232.28	-	-	290.15	\$ 290.15	-	47.56	(8.42)	\$ 39.14	\$ 753.96
11/12/2015	(20.83)	(233.41)	515.61	\$ 261.37	(401.45)	98.59	484.20	\$ 181.34	-	-	220.59	\$ 220.59	-	28.79	(12.75)	\$ 16.04	\$ 679.34
11/13/2015	(412.61)	60.74	537.21	\$ 185.34	(544.80)	60.00	577.12	\$ 92.32	-	-	227.49	\$ 227.49	-	94.91	(22.21)	\$ 72.70	\$ 577.85
11/14/2015	(154.55)	(33.75)	489.28	\$ 300.98	(355.29)	49.67	386.00	\$ 80.38	-	-	221.78	\$ 221.78	-	63.82	(3.43)	\$ 60.39	\$ 663.53
11/15/2015	-	(327.72)	453.10	\$ 125.38	(299.28)	28.67	360.07	\$ 89.46	-	-	209.57	\$ 209.57	-	28.74	1.01	\$ 29.75	\$ 454.16
11/16/2015	(449.08)	260.08	577.93	\$ 388.93	(513.21)	2.79	610.57	\$ 100.15	-	-	423.72	\$ 423.72	-	79.56	(33.57)	\$ 45.99	\$ 958.79
11/17/2015	(397.30)	(44.66)	434.43	\$ (7.53)	(359.17)	32.23	396.22	\$ 69.28	-	-	262.17	\$ 262.17	-	67.94	(46.88)	\$ 21.06	\$ 344.98
11/18/2015	(233.65)	(129.46)	438.25	\$ 75.14	(304.95)	66.16	328.18	\$ 89.39	-	-	215.12	\$ 215.12	-	151.90	(1.62)	\$ 150.28	\$ 529.93
11/19/2015	-	(180.83)	448.43	\$ 267.60	(266.50)	0.82	421.67	\$ 155.99	-	-	221.91	\$ 221.91	-	113.83	6.31	\$ 120.14	\$ 765.64
11/20/2015	(4.29)	(343.02)	492.30	\$ 144.99	(411.00)	0.20	632.09	\$ 221.29	-	-	231.93	\$ 231.93	-	44.87	(38.19)	\$ 6.68	\$ 604.89
11/21/2015	(402.86)	97.02	519.96	\$ 214.12	(476.64)	18.21	679.25	\$ 220.82	-	-	217.47	\$ 217.47	-	150.79	(13.24)	\$ 137.55	\$ 789.96
11/22/2015	(928.76)	341.15	621.21	\$ 33.60	(784.27)	150.40	688.28	\$ 54.41	-	-	268.58	\$ 268.58	-	122.06	(14.97)	\$ 107.09	\$ 463.68
11/23/2015	(1,032.02)	324.78	678.39	\$ (28.85)	(632.64)	81.59	769.03	\$ 217.98	-	-	249.87	\$ 249.87	-	167.03	(3.46)	\$ 163.57	\$ 602.57
11/24/2015	(744.41)	(122.37)	611.92	\$ (254.86)	(571.06)	22.41	671.65	\$ 123.00	-	-	226.37	\$ 226.37	-	151.04	(19.98)	\$ 131.06	\$ 225.57
11/25/2015	(826.83)	338.97	670.19	\$ 182.33	(572.49)	51.78	680.25	\$ 159.54	-	-	229.87	\$ 229.87	-	87.70	6.21	\$ 93.91	\$ 665.65
11/26/2015	(227.92)	(177.65)	593.68	\$ 188.11	(327.37)	58.74	318.25	\$ 49.62	-	-	211.95	\$ 211.95	-	8.79	(10.57)	\$ (1.78)	\$ 447.90
11/27/2015	(1,229.26)	224.50	660.14	\$ (344.62)	(425.91)	66.61	489.05	\$ 129.75	-	-	234.46	\$ 234.46	-	142.44	(3.55)	\$ 138.89	\$ 158.48
11/28/2015	(1,163.33)	304.19	562.62	\$ (296.52)	(505.53)	57.21	622.68	\$ 174.36	-	-	236.51	\$ 236.51	-	41.20	38.59	\$ 79.79	\$ 194.14
11/29/2015	(988.01)	461.68	556.43	\$ 30.10	(549.90)	95.72	707.38	\$ 253.20	-	-	218.31	\$ 218.31	-	53.05	(3.66)	\$ 49.39	\$ 551.00
11/30/2015	(937.02)	371.47	685.67	\$ 120.12	(801.32)	(50.93)	1,000.63	\$ 148.38	-	-	475.96	\$ 475.96	-	19.40	(4.83)	\$ 14.57	\$ 759.03
Nov Total	\$ (17,923.45)	\$ 3,282.24	\$ 17,398.36	\$ 2,757.15	\$ (15,464.35)	\$ 1,402.10	\$ 18,174.77	\$ 4,112.52	\$ -	\$ -	\$ 9,650.88	\$ 9,650.88	\$ -	\$ 2,427.82	\$ (448.21)	\$ 1,979.61	\$ 18,500.16

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Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
12/1/2015	(325.40)	186.62	418.74	\$ 279.96	(480.56)	4.39	592.00	\$ 115.83	-	-	276.32	\$ 276.32	-	42.26	(15.51)	\$ 26.75	\$ 698.86
12/2/2015	(639.48)	317.66	642.83	\$ 321.01	(927.44)	37.82	1,118.59	\$ 228.97	-	-	688.67	\$ 688.67	-	104.38	(40.97)	\$ 63.41	\$ 1,302.06
12/3/2015	(437.31)	141.83	609.15	\$ 313.67	(894.97)	34.63	1,093.16	\$ 232.82	-	-	798.81	\$ 798.81	-	26.06	(11.31)	\$ 14.75	\$ 1,360.05
12/4/2015	(550.15)	(158.33)	374.14	\$ (334.34)	(513.28)	(13.88)	530.75	\$ 3.59	-	-	354.20	\$ 354.20	-	87.20	(6.79)	\$ 80.41	\$ 103.86
12/5/2015	(379.03)	(53.64)	490.52	\$ 57.85	(515.76)	25.13	495.70	\$ 5.07	-	-	245.60	\$ 245.60	-	77.18	(34.34)	\$ 42.84	\$ 351.36
12/6/2015	(929.67)	357.46	509.08	\$ (63.13)	(562.42)	59.08	606.40	\$ 103.06	-	-	258.26	\$ 258.26	-	2.11	(21.28)	\$ (19.17)	\$ 279.02
12/7/2015	(179.40)	(94.18)	505.72	\$ 232.14	(623.45)	105.32	530.35	\$ 12.22	-	-	411.68	\$ 411.68	-	19.50	(39.98)	\$ (20.48)	\$ 635.56
12/8/2015	(226.85)	(71.44)	424.33	\$ 126.04	(565.06)	75.93	509.06	\$ 19.93	-	-	246.86	\$ 246.86	-	58.25	(29.44)	\$ 28.81	\$ 421.64
12/9/2015	(66.97)	9.11	525.71	\$ 467.85	(536.86)	65.71	492.95	\$ 21.80	-	-	230.90	\$ 230.90	-	68.03	2.17	\$ 70.20	\$ 790.75
12/10/2015	(122.60)	32.11	539.72	\$ 449.23	(517.01)	47.53	486.92	\$ 17.44	-	-	245.13	\$ 245.13	-	32.38	(4.63)	\$ 27.75	\$ 739.55
12/11/2015	(152.54)	(161.46)	504.28	\$ 190.28	(503.77)	61.02	494.88	\$ 52.13	-	-	232.82	\$ 232.82	-	20.73	(16.15)	\$ 4.58	\$ 479.81
12/12/2015	(618.13)	205.96	512.41	\$ 100.24	(376.14)	39.25	440.81	\$ 103.92	-	-	194.35	\$ 194.35	-	45.94	(37.06)	\$ 8.88	\$ 407.39
12/13/2015	(625.76)	338.88	541.30	\$ 254.42	(318.41)	41.10	343.65	\$ 66.34	-	-	253.30	\$ 253.30	-	9.94	(24.57)	\$ (14.63)	\$ 559.43
12/14/2015	(793.26)	609.91	463.36	\$ 280.01	(414.96)	52.06	423.21	\$ 60.31	-	-	220.48	\$ 220.48	-	209.33	19.79	\$ 229.12	\$ 789.92
12/15/2015	(377.95)	(1,031.13)	380.07	\$ (1,029.01)	(620.39)	389.17	566.97	\$ 335.75	-	-	251.87	\$ 251.87	-	101.00	33.38	\$ 134.38	\$ (307.01)
12/16/2015	(189.44)	88.94	378.82	\$ 278.32	(465.35)	37.54	526.46	\$ 98.65	-	-	350.33	\$ 350.33	-	3.05	(3.52)	\$ (0.47)	\$ 726.83
12/17/2015	(449.46)	245.07	513.20	\$ 308.81	(503.21)	17.21	558.79	\$ 72.79	-	-	366.36	\$ 366.36	-	24.81	(2.09)	\$ 22.72	\$ 770.68
12/18/2015	(995.39)	117.67	503.46	\$ (374.26)	(496.35)	101.90	504.20	\$ 109.75	-	-	276.95	\$ 276.95	-	47.28	7.68	\$ 54.96	\$ 67.40
12/19/2015	(662.28)	280.52	399.22	\$ 17.46	(495.41)	221.75	447.76	\$ 174.10	-	-	295.25	\$ 295.25	-	35.01	(42.37)	\$ (7.36)	\$ 479.45
12/20/2015	(607.82)	(642.48)	405.62	\$ (844.68)	(405.20)	64.13	458.74	\$ 117.67	-	-	249.33	\$ 249.33	-	139.62	(66.64)	\$ 72.98	\$ (404.70)
12/21/2015	(837.21)	(209.93)	576.63	\$ (470.51)	(789.23)	117.96	922.31	\$ 251.04	-	-	404.04	\$ 404.04	-	80.71	31.20	\$ 111.91	\$ 296.48
12/22/2015	(480.52)	(99.58)	500.09	\$ (80.01)	(364.63)	32.56	431.75	\$ 99.68	-	-	282.51	\$ 282.51	-	17.63	3.15	\$ 20.78	\$ 322.96
12/23/2015	(447.64)	308.84	431.49	\$ 292.69	(470.62)	52.09	489.51	\$ 70.98	-	-	215.81	\$ 215.81	-	16.73	(7.43)	\$ 9.30	\$ 588.78
12/24/2015	(1,201.90)	1,162.78	562.33	\$ 523.21	(376.28)	39.21	419.43	\$ 82.36	-	-	224.59	\$ 224.59	-	54.07	(3.02)	\$ 51.05	\$ 881.21
12/25/2015	(1,648.43)	489.88	628.44	\$ (530.11)	(539.14)	168.89	386.48	\$ 16.23	-	-	224.56	\$ 224.56	-	19.15	(5.99)	\$ 13.16	\$ (276.16)
12/26/2015	(1,646.37)	768.97	639.72	\$ (237.68)	(379.44)	65.75	385.07	\$ 71.38	-	-	233.69	\$ 233.69	-	92.71	(4.53)	\$ 88.18	\$ 155.57
12/27/2015	(1,616.93)	461.18	512.73	\$ (643.02)	(418.31)	(60.61)	490.25	\$ 11.33	-	-	235.25	\$ 235.25	-	171.73	6.29	\$ 178.02	\$ (218.42)
12/28/2015	(1,329.62)	534.70	416.80	\$ (378.12)	(1,080.62)	503.32	487.80	\$ (89.50)	-	-	218.98	\$ 218.98	-	167.62	(12.68)	\$ 154.94	\$ (93.70)
12/29/2015	(1,187.64)	411.41	629.47	\$ (146.76)	(1,433.87)	342.93	703.37	\$ (387.57)	-	-	341.45	\$ 341.45	-	104.80	(8.46)	\$ 96.34	\$ (96.54)
12/30/2015	(896.78)	(77.80)	653.61	\$ (320.97)	(1,731.33)	251.46	730.87	\$ (749.00)	-	-	343.41	\$ 343.41	-	181.36	(2.52)	\$ 178.84	\$ (547.72)
12/31/2015	(1,486.82)	868.11	580.32	\$ (38.39)	(528.66)	(209.14)	585.69	\$ (152.11)	-	-	334.64	\$ 334.64	-	5.93	(8.89)	\$ (2.96)	\$ 141.18
Dec Total	\$ (22,108.75)	\$ 5,337.64	\$ 15,773.31	\$ (997.80)	\$ (18,848.13)	\$ 2,771.21	\$ 17,253.88	\$ 1,176.96	\$ -	\$ -	\$ 9,506.40	\$ 9,506.40	\$ -	\$ 2,066.50	\$ (346.51)	\$ 1,719.99	\$ 11,405.55

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Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
1/1/2016	(718.74)	236.75	551.31	\$ 69.32	(523.61)	(290.11)	518.68	\$ (295.04)	-	-	269.93	\$ 269.93	-	8.38	(12.57)	\$ (4.19)	\$ 40.02
1/2/2016	(1,520.48)	680.41	589.98	\$ (250.09)	(504.88)	(189.16)	545.13	\$ (148.91)	-	-	263.54	\$ 263.54	-	35.40	(15.75)	\$ 19.65	\$ (115.81)
1/3/2016	(1,256.58)	446.47	548.33	\$ (261.78)	(511.05)	(253.05)	537.93	\$ (226.17)	-	-	272.66	\$ 272.66	-	10.46	9.98	\$ 20.44	\$ (194.85)
1/4/2016	(784.15)	90.02	550.94	\$ (143.19)	(764.12)	(353.92)	845.14	\$ (272.90)	-	-	262.59	\$ 262.59	-	27.08	(9.74)	\$ 17.34	\$ (136.16)
1/5/2016	(294.60)	(606.96)	430.42	\$ (471.14)	(760.63)	(469.19)	591.12	\$ (638.70)	-	(17.97)	287.32	\$ 269.35	-	33.67	69.92	\$ 103.59	\$ (736.90)
1/6/2016	(558.01)	(259.55)	346.91	\$ (470.65)	(454.22)	(459.59)	503.03	\$ (410.78)	-	-	224.00	\$ 224.00	-	52.38	(9.65)	\$ 42.73	\$ (614.70)
1/7/2016	(596.19)	(443.48)	453.61	\$ (586.06)	(801.21)	(7.42)	643.96	\$ (164.67)	-	-	261.10	\$ 261.10	-	71.44	11.13	\$ 82.57	\$ (407.06)
1/8/2016	(457.42)	126.56	342.86	\$ 12.00	(623.19)	(235.95)	526.80	\$ (332.34)	-	-	253.04	\$ 253.04	-	17.25	(4.93)	\$ 12.32	\$ (54.98)
1/9/2016	(1,330.88)	719.56	492.92	\$ (118.40)	(590.04)	(283.63)	579.67	\$ (294.00)	-	-	265.91	\$ 265.91	-	52.81	(12.84)	\$ 39.97	\$ (106.52)
1/10/2016	(1,445.39)	562.84	537.18	\$ (345.37)	(530.19)	(574.85)	638.20	\$ (466.84)	-	-	246.34	\$ 246.34	-	182.72	2.89	\$ 185.61	\$ (380.26)
1/11/2016	(644.49)	287.75	606.08	\$ 249.34	(869.68)	(2,338.04)	986.09	\$ (2,221.63)	-	-	316.10	\$ 316.10	-	35.13	(5.30)	\$ 29.83	\$ (1,626.36)
1/12/2016	(437.77)	209.22	514.33	\$ 285.78	(511.86)	(124.14)	582.11	\$ (53.89)	-	-	235.23	\$ 235.23	-	28.34	2.96	\$ 31.30	\$ 498.42
1/13/2016	(241.79)	(212.84)	414.41	\$ (40.22)	(575.11)	(163.20)	596.83	\$ (141.48)	-	-	251.57	\$ 251.57	-	91.68	9.53	\$ 101.21	\$ 171.08
1/14/2016	(337.61)	53.18	489.79	\$ 205.36	(483.50)	(86.44)	533.23	\$ (36.71)	-	-	234.24	\$ 234.24	-	166.84	(3.48)	\$ 163.36	\$ 566.25
1/15/2016	(191.91)	(307.67)	387.66	\$ (111.92)	(914.73)	318.38	411.56	\$ (184.79)	-	-	219.27	\$ 219.27	-	108.49	(6.95)	\$ 101.54	\$ 24.10
1/16/2016	(1,169.07)	681.65	472.09	\$ (15.33)	(844.44)	90.70	486.89	\$ (266.85)	-	-	260.12	\$ 260.12	-	37.50	(1.87)	\$ 35.63	\$ 13.57
1/17/2016	(501.82)	279.50	391.10	\$ 168.78	(742.98)	66.00	450.85	\$ (226.13)	-	-	228.14	\$ 228.14	-	62.70	9.56	\$ 72.26	\$ 243.05
1/18/2016	(364.11)	(26.51)	550.75	\$ 160.13	(1,253.77)	279.34	794.49	\$ (179.94)	-	-	224.13	\$ 224.13	-	123.50	(10.36)	\$ 113.14	\$ 317.46
1/19/2016	(333.16)	(94.91)	683.93	\$ 255.86	(1,211.38)	151.78	923.58	\$ (136.02)	-	(5.07)	602.88	\$ 597.81	-	21.12	6.71	\$ 27.83	\$ 745.48
1/20/2016	(324.96)	(470.13)	158.50	\$ (636.59)	(658.63)	68.61	508.55	\$ (81.47)	-	-	234.30	\$ 234.30	-	146.18	9.48	\$ 155.66	\$ (328.10)
1/21/2016	(219.01)	(192.20)	380.36	\$ (30.85)	(723.22)	(21.41)	564.09	\$ (180.54)	-	-	234.21	\$ 234.21	-	117.09	(1.38)	\$ 115.71	\$ 138.53
1/22/2016	(475.47)	(508.79)	454.45	\$ (529.81)	(721.86)	(209.49)	595.69	\$ (335.66)	-	-	231.69	\$ 231.69	-	168.87	36.79	\$ 205.66	\$ (428.12)
1/23/2016	(315.66)	(58.21)	489.25	\$ 115.38	(631.09)	(35.91)	448.45	\$ (218.55)	-	-	219.55	\$ 219.55	-	128.69	(22.49)	\$ 106.20	\$ 222.58
1/24/2016	(642.22)	316.01	515.16	\$ 188.95	(635.85)	(99.47)	506.76	\$ (228.56)	-	-	230.22	\$ 230.22	-	58.55	1.08	\$ 59.63	\$ 250.24
1/25/2016	(394.02)	(7.03)	428.43	\$ 27.38	(649.16)	(284.74)	490.75	\$ (443.15)	-	-	219.55	\$ 219.55	-	78.44	(3.74)	\$ 74.70	\$ (121.52)
1/26/2016	(148.06)	(202.24)	488.06	\$ 137.76	(643.34)	(267.79)	457.05	\$ (454.08)	-	-	192.39	\$ 192.39	-	11.89	7.72	\$ 19.61	\$ (104.32)
1/27/2016	(305.08)	168.00	393.75	\$ 256.67	(767.87)	(146.74)	426.05	\$ (488.56)	-	-	195.41	\$ 195.41	-	1.24	4.08	\$ 5.32	\$ (31.16)
1/28/2016	(19.79)	(150.10)	413.46	\$ 243.57	(499.42)	(685.59)	460.32	\$ (724.69)	-	-	197.82	\$ 197.82	-	28.73	(5.58)	\$ 23.15	\$ (260.15)
1/29/2016	(177.15)	(639.74)	384.47	\$ (432.42)	(562.71)	(425.35)	630.22	\$ (357.84)	-	-	213.30	\$ 213.30	-	155.82	(15.85)	\$ 139.97	\$ (436.99)
1/30/2016	(186.02)	(210.63)	417.14	\$ 20.49	(370.92)	(207.60)	368.79	\$ (209.73)	-	-	202.42	\$ 202.42	-	40.63	(41.14)	\$ (0.51)	\$ 12.67
1/31/2016	(289.20)	97.64	471.40	\$ 279.84	(360.91)	(168.00)	322.53	\$ (206.38)	-	-	200.58	\$ 200.58	-	11.32	(3.27)	\$ 8.05	\$ 282.09
Jan Total	\$ (16,680.81)	\$ 564.57	\$ 14,349.03	\$ (1,767.21)	\$ (20,695.57)	\$ (7,405.97)	\$ 17,474.54	\$ (10,627.00)	\$ -	\$ (23.04)	\$ 7,749.55	\$ 7,726.51	\$ -	\$ 2,114.34	\$ (5.06)	\$ 2,109.28	\$ (2,558.42)

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Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
2/1/2016	(503.72)	(240.10)	528.67	\$ (215.15)	(658.97)	41.52	609.35	\$ (8.10)	-	-	240.47	\$ 240.47	-	134.63	(2.89)	\$ 131.74	\$ 148.96
2/2/2016	(265.93)	(13.74)	506.71	\$ 227.04	(443.35)	(57.04)	431.07	\$ (69.32)	-	-	227.07	\$ 227.07	-	7.71	(4.84)	\$ 2.87	\$ 387.66
2/3/2016	(419.22)	222.97	586.24	\$ 389.99	(450.95)	(127.92)	474.78	\$ (104.09)	-	-	212.06	\$ 212.06	-	54.72	(0.33)	\$ 54.39	\$ 552.35
2/4/2016	(498.15)	(206.70)	419.78	\$ (285.07)	(358.48)	(55.13)	529.56	\$ 115.95	-	-	208.49	\$ 208.49	-	44.49	18.22	\$ 62.71	\$ 102.08
2/5/2016	(346.94)	(280.63)	382.86	\$ (244.71)	(358.86)	(412.57)	679.92	\$ (91.51)	-	(456.12)	65.25	\$ (390.87)	-	210.98	(10.07)	\$ 200.91	\$ (526.18)
2/6/2016	(384.22)	381.54	296.63	\$ 293.95	(381.39)	(177.86)	376.28	\$ (182.97)	-	-	186.83	\$ 186.83	-	2.08	(1.73)	\$ 0.35	\$ 298.16
2/7/2016	-	(18.31)	370.54	\$ 352.23	(393.12)	(110.46)	356.00	\$ (147.58)	-	-	176.89	\$ 176.89	-	33.78	(1.38)	\$ 32.40	\$ 413.94
2/8/2016	-	(27.04)	382.38	\$ 355.34	(419.54)	(253.24)	376.66	\$ (296.12)	-	-	216.99	\$ 216.99	-	9.39	(24.61)	\$ (15.22)	\$ 260.99
2/9/2016	(634.69)	(8.47)	413.89	\$ (229.27)	(619.01)	(169.75)	556.28	\$ (232.48)	-	-	216.21	\$ 216.21	-	109.09	(4.10)	\$ 104.99	\$ (140.55)
2/10/2016	(354.06)	36.69	559.12	\$ 241.75	(734.03)	(226.72)	748.87	\$ (211.88)	-	-	237.26	\$ 237.26	-	96.59	(16.90)	\$ 79.69	\$ 346.82
2/11/2016	(540.40)	149.01	876.11	\$ 484.72	(784.86)	(139.68)	905.51	\$ (19.03)	-	-	202.27	\$ 202.27	-	59.44	(12.63)	\$ 46.81	\$ 714.77
2/12/2016	(306.30)	89.75	365.68	\$ 149.13	(531.79)	(37.50)	487.93	\$ (81.36)	-	-	229.09	\$ 229.09	-	19.61	11.46	\$ 31.07	\$ 327.93
2/13/2016	(819.09)	410.89	549.83	\$ 141.63	(528.27)	(304.79)	427.02	\$ (406.04)	-	-	260.21	\$ 260.21	-	71.50	(14.06)	\$ 57.44	\$ 53.24
2/14/2016	(466.19)	84.48	432.41	\$ 50.70	(809.03)	24.67	381.08	\$ (403.28)	-	-	221.38	\$ 221.38	-	155.16	(6.62)	\$ 148.54	\$ 17.34
2/15/2016	(785.65)	265.67	466.56	\$ (53.42)	(857.98)	38.44	508.31	\$ (311.23)	-	-	247.93	\$ 247.93	-	79.59	(12.93)	\$ 66.66	\$ (50.06)
2/16/2016	(882.18)	(226.71)	454.48	\$ (654.41)	(469.26)	(138.00)	423.23	\$ (184.03)	-	-	236.50	\$ 236.50	-	212.99	(24.06)	\$ 188.93	\$ (413.01)
2/17/2016	(1,221.74)	122.61	537.31	\$ (561.82)	(599.62)	(106.62)	586.76	\$ (119.48)	-	-	254.20	\$ 254.20	-	92.45	(22.52)	\$ 69.93	\$ (357.17)
2/18/2016	(77.11)	(423.13)	470.87	\$ (29.37)	(478.99)	(416.62)	437.95	\$ (457.66)	-	-	235.75	\$ 235.75	-	146.71	(10.42)	\$ 136.29	\$ (114.99)
2/19/2016	(77.11)	(625.55)	468.20	\$ (234.46)	(455.89)	(399.59)	409.95	\$ (445.53)	-	-	238.65	\$ 238.65	-	255.72	(20.15)	\$ 235.57	\$ (205.77)
2/20/2016	(1,020.39)	322.79	549.00	\$ (148.60)	(488.14)	(138.90)	491.22	\$ (135.82)	-	-	251.50	\$ 251.50	-	106.35	(12.48)	\$ 93.87	\$ 60.95
2/21/2016	(983.80)	522.23	392.41	\$ (69.16)	(804.61)	100.42	423.93	\$ (280.26)	-	-	215.44	\$ 215.44	-	127.61	6.37	\$ 133.98	\$ -
2/22/2016	(640.87)	(420.02)	524.15	\$ (536.74)	(544.24)	(261.59)	539.13	\$ (266.70)	-	-	251.51	\$ 251.51	-	181.92	25.28	\$ 207.20	\$ (344.73)
2/23/2016	(827.68)	284.91	439.74	\$ (103.03)	(642.76)	(350.04)	541.12	\$ (451.68)	-	-	256.86	\$ 256.86	-	118.12	(4.79)	\$ 113.33	\$ (184.52)
2/24/2016	(509.36)	(604.85)	387.28	\$ (726.93)	(503.16)	(465.74)	480.99	\$ (487.91)	-	-	218.41	\$ 218.41	-	412.90	1.52	\$ 414.42	\$ (582.01)
2/25/2016	(529.25)	(41.21)	455.84	\$ (114.62)	(682.98)	(729.92)	557.45	\$ (855.45)	-	-	190.26	\$ 190.26	-	394.47	(17.17)	\$ 377.30	\$ (402.51)
2/26/2016	(1,151.97)	(492.39)	562.88	\$ (1,081.48)	(968.76)	(547.87)	829.73	\$ (686.90)	-	-	232.61	\$ 232.61	-	952.17	(58.08)	\$ 894.09	\$ (641.68)
2/27/2016	(111.09)	(399.00)	320.99	\$ (189.10)	(478.44)	(478.51)	437.69	\$ (519.26)	-	-	189.07	\$ 189.07	-	432.82	(42.86)	\$ 389.96	\$ (129.33)
2/28/2016	(324.88)	66.19	454.89	\$ 196.20	(457.80)	(432.82)	333.52	\$ (557.10)	-	-	206.81	\$ 206.81	-	184.43	(16.31)	\$ 168.12	\$ 14.03
2/29/2016	(479.85)	(603.96)	480.20	\$ (603.61)	(651.54)	(653.62)	501.04	\$ (804.12)	-	-	263.50	\$ 263.50	-	702.11	(12.99)	\$ 689.12	\$ (455.11)
Feb Total	\$ (15,161.84)	\$ (1,672.08)	\$ 13,635.65	\$ (3,198.27)	\$ (16,555.82)	\$ (6,987.45)	\$ 14,842.33	\$ (8,700.94)	\$ -	\$ (456.12)	\$ 6,389.47	\$ 5,933.35	\$ -	\$ 5,409.53	\$ (292.07)	\$ 5,117.46	\$ (848.40)

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Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
3/1/2016	(1,021.05)	924.62	303.12	\$ 206.69	(1,361.17)	(76.42)	656.53	\$ (781.06)	-	-	224.64	\$ 224.64	-	282.94	12.50	\$ 295.44	\$ (54.29)
3/2/2016	(1,171.92)	449.30	532.28	\$ (190.34)	(1,277.97)	(428.84)	598.77	\$ (1,108.04)	-	-	243.30	\$ 243.30	-	534.79	(18.79)	\$ 516.00	\$ (539.08)
3/3/2016	(807.03)	(182.16)	453.73	\$ (535.46)	(1,430.58)	81.31	639.81	\$ (709.46)	-	-	207.73	\$ 207.73	-	618.39	14.79	\$ 633.18	\$ (404.01)
3/4/2016	(353.39)	(1,170.50)	467.59	\$ (1,056.30)	(1,108.12)	(307.40)	491.44	\$ (924.08)	-	-	219.37	\$ 219.37	-	519.61	(31.76)	\$ 487.85	\$ (1,273.16)
3/5/2016	(702.61)	(531.14)	300.40	\$ (933.35)	(1,045.72)	217.17	485.83	\$ (342.72)	-	-	212.18	\$ 212.18	-	384.38	(16.57)	\$ 367.81	\$ (696.08)
3/6/2016	(177.87)	(15.90)	462.14	\$ 268.37	(975.46)	(85.86)	387.98	\$ (673.34)	-	-	207.32	\$ 207.32	-	119.41	0.42	\$ 119.83	\$ (77.82)
3/7/2016	(1,277.06)	118.51	498.83	\$ (659.72)	(1,348.47)	(54.91)	589.31	\$ (814.07)	-	-	201.08	\$ 201.08	-	419.20	(87.86)	\$ 331.34	\$ (941.37)
3/8/2016	(343.23)	(289.63)	320.25	\$ (312.61)	(1,127.13)	(381.39)	495.80	\$ (1,012.72)	-	-	195.57	\$ 195.57	-	221.11	(32.65)	\$ 188.46	\$ (941.30)
3/9/2016	(1,832.85)	(81.48)	661.78	\$ (1,252.55)	(1,638.91)	269.46	716.18	\$ (653.27)	(9.00)	3.72	226.18	\$ 220.90	-	1,097.05	(103.64)	\$ 993.41	\$ (691.51)
3/10/2016	(457.10)	(366.30)	538.36	\$ (285.04)	(695.22)	(389.65)	626.11	\$ (458.76)	-	-	247.86	\$ 247.86	-	117.27	(14.84)	\$ 102.43	\$ (393.51)
3/11/2016	(60.38)	(288.71)	601.02	\$ 251.93	(679.36)	(369.96)	624.27	\$ (425.05)	-	-	217.94	\$ 217.94	-	165.03	(30.55)	\$ 134.48	\$ 179.30
3/12/2016	(50.08)	(442.83)	515.16	\$ 22.25	(548.85)	(558.53)	496.21	\$ (611.17)	-	-	231.87	\$ 231.87	-	14.52	(16.73)	\$ (2.21)	\$ (359.26)
3/13/2016	(556.25)	(96.96)	437.64	\$ (215.57)	(752.12)	(427.74)	570.90	\$ (608.96)	-	-	272.56	\$ 272.56	-	176.48	(16.74)	\$ 159.74	\$ (392.23)
3/14/2016	(1,621.59)	28.21	500.17	\$ (1,093.21)	(872.40)	(1,083.58)	728.91	\$ (1,227.07)	-	-	286.30	\$ 286.30	-	602.89	(15.03)	\$ 587.86	\$ (1,446.12)
3/15/2016	(221.20)	(546.82)	631.42	\$ (136.60)	(881.38)	(1,646.48)	639.98	\$ (1,887.88)	-	-	270.35	\$ 270.35	-	296.90	24.47	\$ 321.37	\$ (1,432.76)
3/16/2016	(358.46)	(222.09)	549.43	\$ (31.12)	(2,408.36)	(1,019.01)	706.74	\$ (2,720.63)	-	-	238.67	\$ 238.67	-	341.16	36.32	\$ 377.48	\$ (2,135.60)
3/17/2016	(730.70)	54.36	645.56	\$ (30.78)	(3,118.40)	1,896.70	666.32	\$ (555.38)	-	-	206.40	\$ 206.40	-	235.24	(7.01)	\$ 228.23	\$ (151.53)
3/18/2016	(1,245.45)	891.54	452.86	\$ 98.95	(729.62)	99.80	696.89	\$ 67.07	-	-	275.13	\$ 275.13	-	355.69	(15.22)	\$ 340.47	\$ 781.62
3/19/2016	(715.51)	74.27	409.96	\$ (231.28)	(712.07)	(147.58)	547.11	\$ (312.54)	-	-	249.17	\$ 249.17	-	172.19	(12.36)	\$ 159.83	\$ (134.82)
3/20/2016	(1,120.66)	383.87	455.76	\$ (281.03)	(797.35)	(228.06)	640.13	\$ (385.28)	-	-	212.97	\$ 212.97	-	176.51	(18.16)	\$ 158.35	\$ (294.99)
3/21/2016	(1,984.15)	578.28	717.33	\$ (688.54)	(999.38)	(127.60)	838.62	\$ (288.36)	-	-	234.91	\$ 234.91	-	822.10	(0.57)	\$ 821.53	\$ 79.54
3/22/2016	(1,441.66)	(253.41)	329.42	\$ (1,365.65)	(868.32)	(322.42)	730.11	\$ (460.63)	-	-	247.85	\$ 247.85	-	545.99	(186.42)	\$ 359.57	\$ (1,218.86)
3/23/2016	(312.77)	(2,409.75)	133.66	\$ (2,588.86)	(844.28)	(1,960.63)	630.06	\$ (2,174.85)	-	-	264.75	\$ 264.75	-	1,166.38	(372.47)	\$ 793.91	\$ (3,705.05)
3/24/2016	(1,240.46)	(517.46)	402.14	\$ (1,355.78)	(903.89)	(1,223.49)	710.99	\$ (1,416.39)	-	-	251.74	\$ 251.74	-	886.80	(41.42)	\$ 845.38	\$ (1,675.05)
3/25/2016	(782.24)	15.47	594.69	\$ (172.08)	(1,008.28)	(635.54)	781.76	\$ (862.06)	-	-	290.10	\$ 290.10	-	284.92	(29.23)	\$ 255.69	\$ (488.35)
3/26/2016	(1,236.13)	380.32	604.83	\$ (250.98)	(2,494.05)	13.79	653.41	\$ (1,826.85)	-	-	277.62	\$ 277.62	-	254.13	(6.07)	\$ 248.06	\$ (1,552.15)
3/27/2016	(1,274.60)	1,064.03	755.66	\$ 545.09	(1,672.48)	164.25	739.16	\$ (769.07)	-	-	299.37	\$ 299.37	-	159.97	(9.11)	\$ 150.86	\$ 226.25
3/28/2016	(469.07)	(122.36)	745.83	\$ 154.40	(640.10)	(866.83)	1,035.00	\$ (471.93)	-	-	233.17	\$ 233.17	-	313.39	(14.96)	\$ 298.43	\$ 214.07
3/29/2016	(511.16)	(227.34)	661.62	\$ (76.88)	(1,669.70)	74.57	1,101.99	\$ (493.14)	-	-	290.95	\$ 290.95	-	278.83	(47.16)	\$ 231.67	\$ (47.40)
3/30/2016	(1,335.67)	337.66	592.89	\$ (405.12)	(1,080.08)	204.74	774.10	\$ (101.24)	-	-	250.20	\$ 250.20	-	258.52	1.03	\$ 259.55	\$ 3.39
3/31/2016	(1,098.03)	16.10	691.89	\$ (390.04)	(485.88)	(198.13)	777.76	\$ 93.75	-	-	244.73	\$ 244.73	-	425.20	(91.30)	\$ 333.90	\$ 282.34
Mar Total	\$ (26,510.33)	\$ (2,448.30)	\$ 15,967.42	\$ (12,991.21)	\$ (36,175.10)	\$ (9,518.26)	\$ 20,778.18	\$ (24,915.18)	\$ (9.00)	\$ 3.72	\$ 7,531.98	\$ 7,526.70	\$ -	\$ 12,246.99	\$ (1,147.09)	\$ 11,099.90	\$ (19,279.79)

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Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
4/1/2016	(662.22)	114.03	565.41	\$ 17.22	(655.79)	(19.44)	723.23	\$ 48.00	-	-	267.49	\$ 267.49	-	148.37	(11.48)	\$ 136.89	\$ 469.60
4/2/2016	(221.10)	(717.13)	429.10	\$ (509.13)	(496.90)	155.89	686.65	\$ 345.64	-	-	252.96	\$ 252.96	-	448.41	111.76	\$ 560.17	\$ 649.64
4/3/2016	(211.83)	20.90	657.48	\$ 466.55	(613.90)	(163.23)	715.55	\$ (61.58)	-	-	198.32	\$ 198.32	-	242.35	(6.06)	\$ 236.29	\$ 839.58
4/4/2016	(665.56)	(302.93)	702.37	\$ (266.12)	(715.88)	(20.77)	812.80	\$ 76.15	-	-	202.82	\$ 202.82	-	393.01	12.06	\$ 405.07	\$ 417.92
4/5/2016	(894.29)	34.68	750.32	\$ (109.29)	(724.51)	(619.50)	796.10	\$ (547.91)	-	-	282.62	\$ 282.62	-	562.42	(18.29)	\$ 544.13	\$ 169.55
4/6/2016	(672.89)	294.53	623.26	\$ 244.90	(558.50)	(194.62)	669.62	\$ (83.50)	-	-	269.71	\$ 269.71	-	234.46	(16.41)	\$ 218.05	\$ 649.16
4/7/2016	(831.76)	708.48	541.87	\$ 418.59	(585.73)	(11.00)	694.84	\$ 98.11	-	-	275.82	\$ 275.82	-	239.53	(56.75)	\$ 182.78	\$ 975.30
4/8/2016	(342.31)	235.02	621.81	\$ 514.52	(495.40)	(303.55)	778.19	\$ (20.76)	-	-	273.96	\$ 273.96	-	127.22	(23.75)	\$ 103.47	\$ 871.19
4/9/2016	(352.70)	(609.35)	653.05	\$ (309.00)	(518.20)	(279.74)	813.88	\$ 15.94	-	-	217.40	\$ 217.40	-	782.10	159.07	\$ 941.17	\$ 865.51
4/10/2016	(123.59)	(373.60)	704.21	\$ 207.02	(513.42)	(756.35)	808.70	\$ (461.07)	-	-	283.10	\$ 283.10	-	222.26	(42.43)	\$ 179.83	\$ 208.88
4/11/2016	(355.12)	27.31	625.90	\$ 298.09	(976.23)	(77.40)	922.68	\$ (130.95)	-	-	454.34	\$ 454.34	-	217.15	(34.67)	\$ 182.48	\$ 803.96
4/12/2016	(253.04)	(441.73)	729.85	\$ 35.08	(1,016.56)	(423.00)	1,000.66	\$ (438.90)	-	-	122.40	\$ 122.40	-	335.09	(20.12)	\$ 314.97	\$ 33.55
4/13/2016	(996.33)	722.02	708.31	\$ 434.00	(1,068.71)	(42.75)	987.37	\$ (124.09)	-	-	415.71	\$ 415.71	-	183.33	(11.22)	\$ 172.11	\$ 897.73
4/14/2016	(785.66)	(184.82)	532.47	\$ (438.01)	(1,389.03)	91.46	793.17	\$ (504.40)	-	-	244.46	\$ 244.46	-	422.52	(52.54)	\$ 369.98	\$ (327.97)
4/15/2016	(369.89)	(413.03)	564.17	\$ (218.75)	(981.95)	(690.83)	692.27	\$ (980.51)	(52.70)	19.59	302.19	\$ 269.08	-	227.83	(37.52)	\$ 190.31	\$ (739.87)
4/16/2016	(141.52)	(176.36)	432.11	\$ 114.23	(828.56)	(429.95)	621.12	\$ (637.39)	-	-	229.85	\$ 229.85	-	79.25	12.69	\$ 91.94	\$ (201.37)
4/17/2016	(400.26)	(25.55)	429.26	\$ 3.45	(1,044.85)	(337.16)	680.72	\$ (701.29)	-	-	282.78	\$ 282.78	-	172.18	18.55	\$ 190.73	\$ (224.33)
4/18/2016	(1,733.48)	365.16	636.73	\$ (731.59)	(1,892.74)	150.49	994.20	\$ (748.05)	-	-	247.40	\$ 247.40	-	306.42	18.99	\$ 325.41	\$ (906.83)
4/19/2016	(2,097.94)	844.11	860.88	\$ (392.95)	(1,000.00)	48.46	953.64	\$ 2.10	-	-	244.56	\$ 244.56	-	644.21	49.08	\$ 693.29	\$ 547.00
4/20/2016	(1,761.90)	960.87	821.68	\$ 20.65	(1,038.90)	30.66	938.69	\$ (69.55)	-	-	267.67	\$ 267.67	-	200.06	(8.92)	\$ 191.14	\$ 409.91
4/21/2016	(1,265.27)	674.81	755.79	\$ 165.33	(782.51)	(303.24)	716.19	\$ (369.56)	-	-	244.91	\$ 244.91	-	186.63	(4.99)	\$ 181.64	\$ 222.32
4/22/2016	(1,733.60)	946.34	762.30	\$ (24.96)	(2,032.97)	(367.64)	1,131.93	\$ (1,268.68)	-	-	193.49	\$ 193.49	-	417.20	62.48	\$ 479.68	\$ (620.47)
4/23/2016	(326.82)	(207.82)	723.71	\$ 189.07	(1,332.01)	(873.64)	793.45	\$ (1,412.20)	-	-	258.96	\$ 258.96	-	241.46	(22.13)	\$ 219.33	\$ (744.84)
4/24/2016	(1,002.81)	439.23	632.43	\$ 68.85	(1,890.75)	101.62	771.30	\$ (1,017.83)	-	-	416.40	\$ 416.40	-	130.94	(56.96)	\$ 73.98	\$ (458.60)
4/25/2016	(1,481.43)	830.32	605.54	\$ (45.57)	(2,117.28)	721.90	788.94	\$ (606.44)	-	-	282.47	\$ 282.47	-	161.77	60.75	\$ 222.52	\$ (147.02)
4/26/2016	(1,182.01)	211.67	587.80	\$ (382.54)	(1,025.46)	56.93	784.99	\$ (183.54)	-	-	240.14	\$ 240.14	-	148.89	(14.10)	\$ 134.79	\$ (191.15)
4/27/2016	(1,076.51)	(13.59)	537.92	\$ (552.18)	(920.75)	423.40	643.34	\$ 145.99	-	-	233.52	\$ 233.52	-	256.08	(75.24)	\$ 180.84	\$ 8.17
4/28/2016	(1,849.31)	1,117.17	319.82	\$ (412.32)	(633.76)	157.36	716.72	\$ 240.32	-	-	202.14	\$ 202.14	-	211.83	76.24	\$ 288.07	\$ 318.21
4/29/2016	(888.55)	(376.52)	409.96	\$ (855.11)	(914.78)	126.49	731.69	\$ (56.60)	-	-	238.05	\$ 238.05	-	182.13	(20.79)	\$ 161.34	\$ (512.32)
4/30/2016	(51.84)	(492.73)	610.97	\$ 66.40	(577.75)	(538.67)	707.65	\$ (408.77)	-	-	257.53	\$ 257.53	-	85.90	(37.53)	\$ 48.37	\$ (36.47)
Apr total	\$ (24,731.54)	\$ 4,211.49	\$ 18,536.48	\$ (1,983.57)	\$ (29,343.78)	\$ (4,387.82)	\$ 23,870.28	\$ (9,861.32)	\$ (52.70)	\$ 19.59	\$ 7,903.17	\$ 7,870.06	\$ -	\$ 8,211.00	\$ 9.77	\$ 8,220.77	\$ 4,245.94

NOTE: A negative number is a payment from MISO and a positive number is a payment to MISO

Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
5/1/2016	(734.49)	(50.38)	641.09	\$ (143.78)	(778.95)	(827.10)	820.04	\$ (786.01)	-	-	259.51	\$ 259.51	-	64.38	(17.20)	\$ 47.18	\$ (623.10)
5/2/2016	(1,271.08)	(147.77)	737.78	\$ (681.07)	(1,215.48)	62.23	1,248.64	\$ 95.39	-	-	281.80	\$ 281.80	-	278.87	14.98	\$ 293.85	\$ (10.03)
5/3/2016	(1,096.02)	603.89	600.38	\$ 108.25	(750.35)	(303.49)	808.52	\$ (245.32)	-	-	292.29	\$ 292.29	-	79.98	1.19	\$ 81.17	\$ 236.39
5/4/2016	(1,500.75)	726.98	602.36	\$ (171.41)	(864.20)	(191.92)	770.38	\$ (285.74)	-	-	253.83	\$ 253.83	-	77.74	(13.52)	\$ 64.22	\$ (139.10)
5/5/2016	(2,005.63)	419.06	694.92	\$ (891.65)	(1,058.61)	(128.28)	1,010.65	\$ (176.24)	-	-	262.43	\$ 262.43	-	508.06	18.63	\$ 526.69	\$ (278.77)
5/6/2016	(2,155.08)	1,326.15	827.33	\$ (1.60)	(1,436.03)	201.07	1,049.18	\$ (185.78)	-	-	268.17	\$ 268.17	-	205.90	(8.38)	\$ 197.52	\$ 278.31
5/7/2016	(1,651.45)	295.91	674.58	\$ (680.96)	(1,349.13)	262.80	949.22	\$ (137.11)	-	-	260.06	\$ 260.06	-	250.81	(16.83)	\$ 233.98	\$ (324.03)
5/8/2016	(1,244.11)	581.32	628.99	\$ (33.80)	(1,372.82)	161.78	940.58	\$ (270.46)	-	-	267.48	\$ 267.48	-	176.37	(17.29)	\$ 159.08	\$ 122.30
5/9/2016	(553.22)	(682.51)	651.28	\$ (584.45)	(2,762.16)	1,187.12	1,045.86	\$ (529.18)	-	-	281.74	\$ 281.74	-	304.22	(46.56)	\$ 257.66	\$ (574.23)
5/10/2016	(1,795.21)	476.75	722.43	\$ (596.03)	(2,255.36)	135.71	1,089.92	\$ (1,029.73)	-	-	230.93	\$ 230.93	-	249.22	(25.13)	\$ 224.09	\$ (1,170.74)
5/11/2016	(1,647.81)	303.84	622.60	\$ (721.37)	(2,259.30)	455.18	965.51	\$ (838.61)	-	(15.50)	406.06	\$ 390.56	-	319.43	(3.41)	\$ 316.02	\$ (853.40)
5/12/2016	(272.12)	(276.23)	610.93	\$ 62.58	(1,636.85)	(728.07)	734.01	\$ (1,630.91)	-	-	282.59	\$ 282.59	-	115.40	39.80	\$ 155.20	\$ (1,130.54)
5/13/2016	(624.51)	141.23	571.07	\$ 87.79	(1,777.46)	(83.98)	821.02	\$ (1,040.42)	-	-	256.65	\$ 256.65	-	161.37	6.82	\$ 168.19	\$ (527.79)
5/14/2016	(882.94)	230.45	836.39	\$ 183.90	(1,324.25)	(687.45)	790.02	\$ (1,221.68)	-	-	248.28	\$ 248.28	-	319.65	(15.11)	\$ 304.54	\$ (484.96)
5/15/2016	(1,282.95)	509.84	693.85	\$ (79.26)	(1,385.18)	(563.30)	783.88	\$ (1,164.60)	-	-	254.28	\$ 254.28	-	44.52	(22.03)	\$ 22.49	\$ (967.09)
5/16/2016	(1,359.57)	397.47	439.67	\$ (522.43)	(2,205.95)	450.49	1,004.73	\$ (750.73)	-	-	273.62	\$ 273.62	-	311.78	(64.86)	\$ 246.92	\$ (752.62)
5/17/2016	(1,473.57)	512.53	605.25	\$ (355.79)	(1,064.21)	(531.61)	884.26	\$ (711.56)	-	-	242.97	\$ 242.97	-	159.68	18.77	\$ 178.45	\$ (645.93)
5/18/2016	(682.31)	389.94	747.65	\$ 455.28	(1,487.43)	55.46	841.32	\$ (590.65)	-	-	255.18	\$ 255.18	-	59.00	(9.72)	\$ 49.28	\$ 169.09
5/19/2016	(360.91)	258.39	568.06	\$ 465.54	(1,378.14)	(107.90)	694.34	\$ (791.70)	-	-	255.55	\$ 255.55	-	120.08	(5.77)	\$ 114.31	\$ 43.70
5/20/2016	(661.73)	(67.07)	490.33	\$ (238.47)	(807.04)	(899.09)	667.80	\$ (1,038.33)	-	-	246.75	\$ 246.75	-	115.14	(34.02)	\$ 81.12	\$ (948.93)
5/21/2016	(308.22)	138.41	809.82	\$ 640.01	(604.08)	(166.20)	593.05	\$ (177.23)	-	-	265.77	\$ 265.77	-	70.20	(0.79)	\$ 69.41	\$ 797.96
5/22/2016	(231.71)	(20.93)	955.30	\$ 702.66	(1,441.33)	244.19	734.96	\$ (462.18)	-	-	272.96	\$ 272.96	-	153.31	(11.40)	\$ 141.91	\$ 655.35
5/23/2016	(1,659.55)	856.10	749.07	\$ (54.38)	(1,889.26)	533.65	906.72	\$ (448.89)	-	-	283.11	\$ 283.11	-	202.41	1.24	\$ 203.65	\$ (16.51)
5/24/2016	(1,750.41)	543.69	629.19	\$ (577.53)	(1,342.19)	343.76	1,181.43	\$ 183.00	-	-	428.61	\$ 428.61	-	345.96	345.79	\$ 691.75	\$ 725.83
5/25/2016	(900.52)	(37.30)	600.19	\$ (337.63)	(1,208.28)	252.71	822.19	\$ (133.38)	-	-	596.44	\$ 596.44	-	233.77	(4.23)	\$ 229.54	\$ 354.97
5/26/2016	(261.89)	(604.17)	591.19	\$ (274.87)	(1,328.82)	(30.09)	1,233.26	\$ (125.65)	-	-	908.46	\$ 908.46	-	613.31	27.11	\$ 640.42	\$ 1,148.36
5/27/2016	(1,610.22)	756.63	753.05	\$ (100.54)	(1,175.98)	46.27	977.05	\$ (152.66)	-	-	205.12	\$ 205.12	-	112.55	(14.27)	\$ 98.28	\$ 50.20
5/28/2016	(1,847.09)	436.14	658.78	\$ (752.17)	(1,366.35)	205.76	851.82	\$ (308.77)	-	-	211.47	\$ 211.47	-	119.28	(59.78)	\$ 59.50	\$ (789.97)
5/29/2016	(1,725.12)	246.61	608.98	\$ (869.53)	(1,342.06)	67.81	733.48	\$ (540.77)	-	-	198.86	\$ 198.86	-	458.01	(80.84)	\$ 377.17	\$ (834.27)
5/30/2016	(1,445.83)	379.34	652.68	\$ (413.81)	(1,449.82)	(203.48)	756.70	\$ (896.60)	-	-	198.74	\$ 198.74	-	587.16	(7.02)	\$ 580.14	\$ (531.53)
5/31/2016	(1,002.68)	429.64	542.54	\$ (30.50)	(1,535.51)	(183.04)	976.12	\$ (742.43)	-	-	408.73	\$ 408.73	-	214.08	(17.16)	\$ 196.92	\$ (167.28)
May Total	\$ (35,998.70)	\$ 9,073.95	\$ 20,517.73	\$ (6,407.02)	\$ (43,852.58)	\$ (969.01)	\$ 27,686.66	\$ (17,134.93)	\$ -	\$ (15.50)	\$ 9,358.44	\$ 9,342.94	\$ -	\$ 7,031.64	\$ (20.99)	\$ 7,010.65	\$ (7,188.36)

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Date	Day Ahead Regulation Amount	Real Time Regulation Amount	Regulation Cost Distribution Amount	Regulation SubTotal	Day Ahead Spinning Reserve Amount	Real Time Spinning Reserve Amount	Spinning Reserve Cost Distribution Amount	Spinning Reserve SubTotal	Day Ahead Supplemental Reserve Amount	Real Time Supplemental Reserve Amount	Supplemental Reserve Cost Distribution Amount	Supplemental Reserve SubTotal	Contingency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
6/1/2016	(582.08)	552.19	447.85	\$ 417.96	(1,324.51)	(107.30)	597.85	\$ (833.96)	-	-	147.72	\$ 147.72	-	41.86	0.49	\$ 42.35	\$ (225.93)
6/2/2016	(1,390.62)	946.21	528.86	\$ 84.45	(1,670.38)	(177.00)	822.12	\$ (1,025.26)	-	-	153.58	\$ 153.58	-	145.00	(21.23)	\$ 123.77	\$ (663.46)
6/3/2016	(1,066.56)	85.18	618.39	\$ (362.99)	(893.08)	(1,150.16)	727.46	\$ (1,315.78)	-	-	164.53	\$ 164.53	-	241.49	(63.55)	\$ 177.94	\$ (1,336.30)
6/4/2016	(101.20)	(173.92)	637.88	\$ 362.76	(1,201.47)	(956.11)	658.31	\$ (1,499.27)	-	-	157.20	\$ 157.20	-	80.59	(6.92)	\$ 73.67	\$ (905.64)
6/5/2016	(506.28)	71.92	618.43	\$ 184.07	(1,143.17)	(845.50)	633.05	\$ (1,355.62)	-	-	178.09	\$ 178.09	-	46.67	(11.80)	\$ 34.87	\$ (958.59)
6/6/2016	(201.80)	(1,383.42)	291.91	\$ (1,293.31)	(2,701.81)	1,069.93	845.61	\$ (786.27)	-	-	164.40	\$ 164.40	-	226.95	(131.95)	\$ 95.00	\$ (1,820.18)
6/7/2016	(1,336.21)	(247.93)	439.95	\$ (1,144.19)	(750.64)	(408.59)	627.79	\$ (531.44)	-	-	169.82	\$ 169.82	-	600.89	26.67	\$ 627.56	\$ (878.25)
6/8/2016	(1,447.33)	57.67	498.18	\$ (891.48)	(732.77)	(477.19)	560.91	\$ (649.05)	-	-	168.39	\$ 168.39	-	976.42	(1.10)	\$ 975.32	\$ (396.82)
6/9/2016	(623.04)	(1,123.49)	555.80	\$ (1,190.73)	(853.83)	(160.55)	652.77	\$ (361.61)	-	-	164.33	\$ 164.33	-	246.79	73.27	\$ 320.06	\$ (1,067.95)
6/10/2016	(229.43)	(328.18)	657.29	\$ 99.68	(1,523.42)	146.59	1,098.46	\$ (278.37)	-	-	154.71	\$ 154.71	-	161.33	20.25	\$ 181.58	\$ 157.60
6/11/2016	(794.28)	(222.94)	494.63	\$ (522.59)	(2,334.42)	(75.14)	1,090.21	\$ (1,319.35)	-	-	143.24	\$ 143.24	-	327.89	19.37	\$ 347.26	\$ (1,351.44)
6/12/2016	(551.76)	55.04	438.75	\$ (57.97)	(887.75)	(237.26)	547.84	\$ (577.17)	-	-	144.59	\$ 144.59	-	101.42	8.05	\$ 109.47	\$ (381.08)
6/13/2016	(246.93)	(513.46)	541.35	\$ (219.04)	(4,313.21)	804.82	1,060.42	\$ (2,447.97)	-	-	140.72	\$ 140.72	-	166.76	42.97	\$ 209.73	\$ (2,316.56)
6/14/2016	(659.82)	(446.73)	399.82	\$ (706.73)	(1,450.51)	(69.51)	763.53	\$ (756.49)	-	-	140.11	\$ 140.11	-	103.12	79.56	\$ 182.68	\$ (1,140.43)
6/15/2016	(461.49)	(582.18)	522.93	\$ (520.74)	(3,466.57)	2,499.26	1,187.39	\$ 220.08	-	-	23.57	\$ 23.57	-	424.72	11.05	\$ 435.77	\$ 158.68
6/16/2016	(1,409.60)	60.64	534.50	\$ (814.46)	(1,066.04)	(0.59)	1,059.50	\$ (7.13)	-	-	126.46	\$ 126.46	-	737.82	96.44	\$ 834.26	\$ 139.13
6/17/2016	(189.67)	(311.88)	556.37	\$ 54.82	(711.16)	13.89	1,017.81	\$ 320.54	-	-	143.81	\$ 143.81	-	260.35	(10.05)	\$ 250.30	\$ 769.47
6/18/2016	(542.98)	(123.86)	495.30	\$ (171.54)	(683.69)	(67.29)	668.81	\$ (82.17)	-	-	160.79	\$ 160.79	-	229.12	(2.20)	\$ 226.92	\$ 134.00
6/19/2016	(744.53)	103.35	476.08	\$ (165.10)	(742.87)	254.12	500.03	\$ 11.28	-	-	157.59	\$ 157.59	-	189.97	(47.19)	\$ 142.78	\$ 146.55
6/20/2016	(322.07)	(1,015.99)	576.19	\$ (761.87)	(1,635.17)	59.23	1,466.40	\$ (109.54)	-	-	142.52	\$ 142.52	-	519.57	4.25	\$ 523.82	\$ (205.07)
6/21/2016	(599.64)	(231.84)	717.42	\$ (114.06)	(1,154.15)	38.96	818.45	\$ (296.74)	-	-	142.40	\$ 142.40	-	543.22	(17.31)	\$ 525.91	\$ 257.51
6/22/2016	(1,234.81)	923.71	538.46	\$ 227.36	(1,182.31)	902.39	746.36	\$ 466.44	-	-	228.59	\$ 228.59	-	268.49	105.72	\$ 374.21	\$ 1,296.60
6/23/2016	(984.07)	(850.93)	667.44	\$ (1,167.56)	(1,357.84)	(813.48)	946.02	\$ (1,225.30)	-	-	910.17	\$ 910.17	-	488.00	210.82	\$ 698.82	\$ (783.87)
6/24/2016	(1,623.32)	237.64	621.34	\$ (764.34)	(990.38)	(64.31)	714.06	\$ (340.63)	-	-	510.19	\$ 510.19	-	888.85	53.00	\$ 941.85	\$ 347.07
6/25/2016	(776.43)	289.16	343.61	\$ (143.66)	(1,325.07)	1,930.18	748.57	\$ 1,353.68	-	-	(600.82)	\$ (600.82)	-	206.83	82.14	\$ 288.97	\$ 898.17
6/26/2016	(1,383.09)	243.52	463.65	\$ (675.92)	(793.43)	(311.72)	800.37	\$ (304.78)	-	-	(65.82)	\$ (65.82)	-	225.81	316.62	\$ 542.43	\$ (504.09)
6/27/2016	(1,806.18)	(20.56)	763.24	\$ (1,063.50)	(1,546.98)	(420.66)	1,307.19	\$ (660.45)	-	-	941.10	\$ 941.10	-	638.29	(54.61)	\$ 583.68	\$ (199.17)
6/28/2016	(1,001.79)	(757.49)	643.57	\$ (1,115.71)	(1,020.58)	(395.87)	940.50	\$ (475.95)	-	-	600.55	\$ 600.55	-	159.42	(42.78)	\$ 116.64	\$ (874.47)
6/29/2016	(1,075.96)	490.29	654.69	\$ 69.02	(1,156.20)	(311.70)	1,057.67	\$ (410.23)	-	-	730.94	\$ 730.94	-	95.72	(24.96)	\$ 70.76	\$ 460.49
6/30/2016	(1,039.52)	630.83	485.16	\$ 76.47	(1,184.02)	164.15	968.14	\$ (51.73)	-	(249.87)	726.37	\$ 476.50	-	309.49	(36.68)	\$ 272.81	\$ 774.05
June Total	\$ (24,932.49)	\$ (3,587.45)	\$ 16,229.04	\$ (12,290.90)	\$ (41,797.43)	\$ 833.59	\$ 25,633.60	\$ (15,330.24)	\$ -	\$ (249.87)	\$ 7,069.84	\$ 6,819.97	\$ -	\$ 9,652.85	\$ 678.34	\$ 10,331.19	\$ (10,469.98)
Period to Date Total	\$ (279,037.88)	\$ 22,288.66	\$ 205,793.36	\$ (50,955.86)	\$ (283,776.51)	\$ (22,719.31)	\$ 261,828.17	\$ (44,667.65)	\$ (62.00)	\$ (755.16)	\$ 117,434.96	\$ 116,617.80	\$ -	\$ 60,829.00	\$ 958.99	\$ 61,787.99	\$ 82,782.28

CRD Events

Date	Day of Week	Node	Contingency Reserve Deployment Failure Charge Amount	HE	Shortfall Mw	Event MW Provided

Total \$ - 0.0

There were no Contingency Reserve Deployment Failures
during the July 2015 through June 2016 time period.

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

**Minnesota Power
Report on Addressing Treatment of Auction Revenue
Rights (ARRs)
Docket No. E-015/M-05-277**

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

Minnesota Power’s response to how the ARR process will be treated for retail and wholesale purposes:

[TRADE SECRET DATA HAS BEEN EXCISED]

Minnesota Power’s Self Scheduled FTRs from the 2015/2016 and 2016/2017 Annual Allocation:

		2015/2016 Annual Allocation							
		Summer 2015		Fall 2015		Winter 2015/2016		Spring 2016	
Source	Sink	On Peak	Off peak	On Peak	Off Peak	On Peak	Off Peak	On Peak	Off Peak
[TRADE SECRET DATA EXCISED]									
[TRADE SECRET DATA EXCISED]									

Annual FTR Allocation Continued:

		2016/2017 Annual Allocation	
		Summer 2016	
Source	Sink	On Peak	Off Peak
[TRADE SECRET DATA EXCISED]			

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

Minnesota Power’s FTRs purchased in the Annual Auction for the requested time period:

Annual FTR Purchases						
Source	Sink	Class Period	Season	Awarded FTRs	Clearing \$/MW Month	Total Monthly Cost
[TRADE SECRET DATA EXCISED]						
[TRADE SECRET DATA EXCISED]						

Minnesota Power’s Total ARR/FTR revenues and costs for the requested time period:

Total ARR/FTR revenues and costs		
	Cost to hold FTRS	Revenue Generated from ARR/FTRs
[TRADE SECRET DATA EXCISED]		
[TRADE SECRET DATA EXCISED]		

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

Below is monthly detail of different MISO charge type costs included in the ARR/FTR Revenue and Cost Table. Charge types labeled “COST” are included in the Cost to Hold FTRs calculation and charge types labeled “REVENUE” are included in the Revenues Generated from ARRs/FTRs calculation.

Note: Charges/Credits are shown in the month in which they were recorded in 555 of the General Ledger and included in the FAC recovery.

Charge Type		July '15	August '15	September '15	October '15	November '15	December '15	January-16	February-16	March-16	April-16	May-16	June-16	Total
Financial Transmission Rights Market Administration Amount	Cost	3,897.84	5,090.16	2,853.68	2,554.64	2,210.40	4,433.12	4,473.28	5,314.80	4,574.80	6,076.80	4,906.56	4,934.40	51,320.48
Auction Revenue Rights Transaction Amount	Revenue	(192,548.92)	(192,548.92)	(36,337.04)	(36,337.04)	(36,337.04)	(139,596.70)	(139,596.70)	(139,596.70)	(197,345.61)	(197,345.61)	(197,345.61)	(137,413.20)	(1,642,349.09)
Financial Transmission Rights Annual Transaction Amount	Cost	282,534.72	282,534.72	45,231.37	45,231.37	45,231.37	155,288.21	155,288.21	155,288.21	347,239.42	347,239.42	347,239.42	222,562.34	2,430,908.78
Auction Revenue Rights Infeasible Uplift Amount	cost	12,047.38	12,047.38	13,877.11	13,877.11	13,877.11	12,062.02	12,062.02	12,062.02	5,670.46	5,670.46	5,670.46	13,639.76	132,563.29
Auction Revenue Rights Stage 2 Distribution Amount	Revenue	(47,326.05)	(47,328.94)	(147,192.08)	(147,905.33)	(147,905.33)	(76,048.60)	(76,290.95)	(76,290.95)	(81,479.64)	(80,596.31)	(80,984.94)	(56,899.89)	(1,066,249.01)
Financial Transmission Rights Hourly Allocation Amount	Revenue	(24,827.91)	(2,349.09)	15,966.00	2,062.30	(55,097.12)	(137,828.39)	(26,073.25)	(55,988.16)	(203,629.41)	(250,129.73)	(98,147.42)	(263,955.95)	(1,099,998.13)
Financial Transmission Rights Monthly Allocation Amount	Revenue	(3,689.42)	(5,462.03)	(1,995.93)	(1,998.14)	(5,916.80)	(10,714.14)	(2,321.14)	(3,645.50)	(17,976.96)	(23,894.51)	(20,757.74)	-	(98,372.31)
Financial Transmission Rights Transaction Amount	Cost													-
Financial Transmission Rights Yearly Allocation Amount	Revenue	-	-	-	-	-	(20,143.25)	-	-	-	-	-	-	(20,143.25)
Financial Transmission Rights Full Funding Guarantee Amount	Revenue	(0.04)	0.04	(1,162.70)	(1,753.11)	(17,622.34)	18,472.57	0.00	-	-	(10,799.64)	(3,509.90)	(20,802.88)	(37,178.00)
FTR Guarantee Uplift Amount	Revenue	0.04	(0.04)	1,046.00	1,636.56	14,659.95	(14,529.26)	(0.00)	-	-	10,429.02	3,319.42	20,802.88	37,364.57
Financial Transmission Rights Monthly Transaction Amount	Cost	-	25,938.53	-	-	50,665.59	213,331.70	109,350.61	139,071.89	-	34,191.62	14,254.16	159,889.15	746,693.25
Costs of hold FTRs	Cost	298,479.94	325,610.79	61,962.16	61,663.12	111,984.47	385,115.05	281,174.12	311,736.92	357,484.68	393,178.30	372,070.60	401,025.65	3,361,485.80
Revenue Generated from ARR/FTRs	Revenue	(268,392.30)	(247,688.98)	(169,675.75)	(184,294.76)	(248,218.68)	(380,387.77)	(244,282.04)	(275,521.31)	(500,431.62)	(552,336.78)	(397,426.19)	(458,269.04)	(3,926,925.22)

Minnesota Power's Generation Facilities
Maintenance Expenses
(Docket No.)

	FERC Acct	2015	Final Rates	2014
		Actual Expenses 1/	Test Year 2010	Actual Expenses 3/
Steam Power Generation				
		Docket No. E015/GR-09-1151 2/		
Maintenance Supervision and Engineering	510	4,942,241	6,911,666	5,116,835
Maintenance of Structures	511	1,255,848	5,790,920	1,581,838
Maintenance of Boiler Plant	512	16,238,027	10,366,204	18,800,545
Maintenance of Electric Plant	513	2,955,749	1,386,050	2,995,960
Maintenance of Misc. Steam Plant	514	5,047,469	5,977,730	4,900,806
		<u>30,439,334</u>	<u>30,432,570</u>	<u>33,395,984</u>
Hydraulic Power Generation				
Maintenance Supervision and Engineering	541	400,287	1,255,984	550,753
Maintenance of Structures	542	90,298	950,000	196,550
Maintenance of Reservoirs, Dams and Waterways	543	789,103	-	781,297
Maintenance of Electric Plant	544	835,319	980,640	1,167,143
Maintenance of Misc. Hydraulic Plant	545	892,626	-	1,584,546
		<u>3,007,633</u>	<u>3,186,624</u>	<u>4,280,289</u>
Other Power Generation - Wind				
Maintenance Supervision and Engineering	551	34,788	0	148,703
Maintenance of Structures	552	19,980	0	87,407
Maintenance of Generating and Electric Plant	553	6,066,187	0	3,567,275
Maintenance of Misc. Other Pwr Generation Plt.	554	907,540	0	756,589
		<u>7,028,495</u>	<u>0</u>	<u>4,559,974</u>

1/ 2015 FERC Form 1 page 320.

2/Attachment 12 page 3 of 5, lines 10, 6, 11, 12, 7, 20, 21 and 23.

3/ 2014 FERC Form 1 page 320.

Docket E015/GR-09-1151
Minnesota Power
FINAL 2010 General Rates

				Total Company Compliance 2010	
<u>Utility Operating Expense</u>	FERC	Total	Final	Cost of	
Operations & Maintenance Exp.	<u>Acct No.</u>	<u>Amounts</u>	<u>Adjustments</u>	<u>Service Model</u>	<u>Allocator</u>
Steam Production Demand					
1 Supervision & Engineering	500	1,629,651			DPROD
2 Steam Expenses	502	26,664,197			DPROD
3 Steam from other sources	503	3,034,305			DPROD
4 Electric Expenses	505	7,624,740			DPROD
5 Miscellaneous	506	6,142,546			DPROD
6 Maint. Structures	511	5,790,920			DPROD
7 Misc Maint Plant	514	5,977,730			DPROD
8 Total Demand Steam Production		56,864,089			DPROD
9 Steam Production Energy:					
10 Maint. Supervision & Engineering	510	6,911,666			EPROD
11 Maint. Boiler Plant	512	13,485,442	(3,119,238)	10,366,204	EPROD
12 Main. Electric Plant	513	1,386,050			EPROD
13 Total Steam Energy		21,783,158			EPROD
14 Total Steam per COSS Vol I		78,647,247	(3,119,238)		
15 MP Compliance Filing Section IX COSS page 10 line 3				75,528,009	
Hydro Production:					
Demand					
16 Operations Supervision & Engineering	535	821,496			
17 Hydraulic Expenses	537	442,590			
18 Electric Expenses	538	575,380			
19 Miscellaneous	539	739,947			
20 Maintenance Supervision & Engineering	541	1,255,984			
21 Maint. Structures	542	950,000			
22 Total Demand Hydro		4,785,397			DPROD
Energy					
23 Electric Plant	544	980,640			EPROD
24 Total Hydro per COSS Vol I		5,766,037		5,766,037	
25 MP Compliance Filing Section IX COSS page 10 line 6					
Other Power Generation					
26 Operation & Engineering	546	-			DPROD
27 Maintenance Supervision & Engineering	551	1,111,330			
28 Total Other Power per COSS Vol II		1,111,330		1,111,330	
29 MP Compliance Filing IX COSS page 10 line 7					
Other Power Supply- Demand					
30 System Control & Load Dispatching	556	1,902,042			
31 Other Expenses	557	1,677,824			
32 Total		3,579,866			
33 Total Other per COSS Vol I				3,579,866	DPROD
34 MP Compliance Filing Section IX COSS page 10 line 8					
Purchased Power					
35 Demand	555	44,648,904			DPROD
36 Energy	555	120,580,037			EPROD
37 Total Purchased Power		165,228,941			
38 Total Purchased Power MP Compliance Filing IX p 10				165,228,941	
39 Fuel	501	166,631,695			EPROD
40 MP Compliance Filing IX Section COSS page 10 line 12				166,631,695	

Note: Classification of expenses between demand and energy are based on FERC methodology used in prior rate cases. Accounts 501,510,512,513, & 544 are energy related, all others are demand.

Minnesota Power	FERC Acct No.	Amounts	Final Adjustments	Total Company	
				Cost of Service Model	Allocator
41 Transmission					
42 Operation Supervision & Engineering	560	1,902,682			
43 Load Dispatching	561	-			
44 Load Dispatching -Reliability	561.1	2,611,659			
45 Load Disp.-monitoring/operate trans sys.	561.2	110,893			
46 Scheduling, system control & dispatch	561.4	1,496,009			
47 Reliability, Planning & Stds. Develop.	561.5	1,780,506			
48 Transmission Service Studies	561.6	229,702			
49 Generation Interconnection Studies	561.7	194,702			
50 Reliability, Planning & Stds. Develop.	561.8	90,310			
51 Overhead Line Expenses	563	-			
52 Transmission of Electricity by Others	565	22,375,224			
53 Rents	567	958,500			
54 Total Operation		31,750,187			
Maintenance					
55 Supervision & Engineering	568	-			
56 Maint Computer Hardware	569.1	383,644			
57 Maint Computer Software	569.2	329,881			
58 Maint Communications Equip.	569.3	451,155			
59 Station Equipment	570	4,925,642			
60 Overhead Lines	571	1,464,707			
61 Total Maintenance		7,555,029			
62 Total Transmission Exp.		39,305,216	(5,899,008)		
63 Total Transmisson Vol I				33,406,208	TRANPLT
64 MP Compliance Filing Section IX COSS page 10 line 13					
65 Regional Market Expenses	575.7	43,071			
66 Total Regional Mkt Vol I MP Exhibit __ (SJS)		43,071		43,071	DTRAN
67 MP Compliance Filing Section IX COSS page 10 line 14					
Distribution					
68 Meters	586	1,770,672			CMETERS
69 Bulk Delivery					DSUB46
70 Other Distribution					DISTPLMS
71 Supervision & Engineering	580	1,838,910			
72 Overhead Line Expenses	583	649,843			
73 Underground Line Expenses	584	-			
74 Miscellaneous	588	-			
75 Rents	589	-			
76 Total Operation		4,259,425		-	
Distribution Maintenance:					
77 Supervision & Engineering	590	1,030,446			
78 Station Equipment	592	3,303,251			
79 Overhead Lines	593	11,382,501			
80 Underground Lines	594	2,061,119			
81 Street Lighting& Signal Systems	596	150,148			
82 Meter Expenses	597	-			
83 Miscellaneous	598	-			
84 Total Maintenance		17,927,465			
85 Total Distribution		22,186,890			
86 Total Distribution Vol II				22,186,890	
87 MP Compliance Filing Section IX COSS page 10 line 19					

Minnesota Power

	FERC <u>Acct No.</u>	<u>Amounts</u>	Final <u>Adjustments</u>	Total Company Cost of <u>Service Model</u>	<u>Allocator</u>
Customer Accounts Expenses					
88 Meter Reading Expenses	902	666,985			
89 Customer Records & Collection Exp	903	6,012,441			
90 Uncollectible Accounts	904	600,000			
91 Total Customer Accting Vol I		7,279,426		7,279,426	CACCTS
92 MP Compliance Filing Section IX COSS page 10 line 20					
Customer Service & Info					
93 Operation					
94 Supervision	907	-			
95 Customer Assistance Expenses	908	3,965,076		4,266,923	CUSTSERV
96 Misc Customer Service & Informational Exp	910	301,847			
97 Conserv Improve Prog-energy		6,886,647	(2,262,539)	4,624,108	CIPEXPE
98 Total Customer Service & Info Expenses		11,153,570		8,891,031	
99 Total Customer Serv. Vol II				8,891,031	
100 MP Compliance Filing IX COSS page 10 line 21 & 22					
101 Sales	913	445,060			
102 less rate making adj. for disallowed advertising			(404,578)		
103 MP Compliance Filing Section IX COSS page 10 line 23		445,060		40,482	CSALES
Administration & General					
104 Property Insurance	924	5,319,449			PLANT
105 Regulatory Expenses- see note below at 2.	928	1,325,691	(849,481)	476,210	PLANT
106 Regulatory Expenses- see note below at 1.	928	1,619,558	(1,139,210)	480,348	DTRAN
107 Advertising	930.1	177,500	(162,500)	15,000	LABLAG
108 Franchise Requirement	927	1,117,000			RSALESJ
109 EPRI Dues	921	-			RSALESJ
110 Disallowed Organizational dues	n/a	0			RSALESJ
111 General Plant	935	7,322,068			LABLAG
112 Other A&G		49,116,265	(5,207,882)	43,908,383	LABLAG
113 Total A&G		65,997,531	(7,359,073)	58,638,458	
114 Customer Deposits Interest Expense		18,000			CUSTDEP
115 Charitable Contributions		1,198,000	(682,735)		LABLAG
116 Credit for Expedited Billing		572,000			LABLAG
117 Total Operations & Maintenance Exp.					
118 MP Compliance Filing Section IX COSS page 10 line 37		569,163,880	(20,576,652)	548,587,228	
119 * Other A&G includes the following FERC accts -920,921,923,925,926,930.2.					

PUBLIC DOCUMENT
TRADE SECRET DATA
HAS BEEN EXCISED

**Minnesota Power
Transformer Emergency Replacement Guide
Large Power Transformers All load Serving
Windings Greater than 100kV**

PUBLIC DOCUMENT
TRADE SECRET DATA
HAS BEEN EXCISED

Background

Minnesota Power has several autotransformers which meet the criteria in which all load serving windings are greater than 100kV. Minnesota Powers' backbone transmission system is 230kV with underlying 115kV which serve distribution substations. All of the transformation between the 230kV and 115kV system is accomplished with autotransformers. Additionally Minnesota Power is interconnected, at 115kV, 138 kV, 345kV, as well as 500kV. All of these higher voltage (greater than 100kV) transformations, except for the 115kV, are accomplished by autotransformers. (An autotransformer is simply a special connection/winding of a transformer which is useful to reduce the complexity and therefore cost of the transformer) Minnesota Power does have autotransformers in this class which connect separate portions internal to the Minnesota Power grid and form no interconnection externally.

Backup Strategies

[TRADE SECRET DATA HAS BEEN EXCISED]

Transmission Level Transformers Inventory (greater than 100 kV on the low side)

[TRADE SECRET DATA HAS BEEN EXCISED]

HVDC System Transmission Level Transformers Inventory (greater than 100 kV on the low side)

[TRADE SECRET DATA HAS BEEN EXCISED]

PUBLIC DOCUMENT
TRADE SECRET DATA
HAS BEEN EXCISED

**Minnesota Power's Report Addressing the Purchase
Power Agreement with Manitoba Hydro**

(Docket No. E015/M-10-961; order dated 3-11-11)

PUBLIC DOCUMENT
TRADE SECRET DATA
HAS BEEN EXCISED

The Commission's March 11, 2011 Order in Docket No. E-015/M-10-961 required MP to provide in its annual automatic adjustment report the following regarding the Purchase Power Agreement with Manitoba Hydro for the period of July 2015 through June 2016:

a) the number of times Manitoba Hydro offered Product B and/or C to Minnesota Power

See Appendix A

b) whether or not Minnesota Power accepted the power

See Appendix A

c) Minnesota Power's efforts to determine whether lower cost energy exists

The current bilateral energy market is thinly traded. Minnesota Power has undertaken efforts to procure energy from sources in the bilateral market, though to-date most energy purchased for MP load is purchased from the MISO market.

d) the prices of alternative energy

Prices for alternative energy (MISO purchases) are equivalent to Product B & C energy purchased from MH.

e) the cost comparison of energy under Product B and/or Product C and the alternative energy sources

The price paid for Product B & C energy is defined as the **[TRADE SECRET DATA HAS BEEN EXCISED]**. This **[TRADE SECRET DATA HAS BEEN EXCISED]** price is equivalent to the **[TRADE SECRET DATA HAS BEEN EXCISED]**. Since most energy purchased is transacted with MISO, the price for Product B & C is the same as the alternate energy sources.

PUBLIC DOCUMENT
TRADE SECRET DATA
HAS BEEN EXCISED

Appendix A

**2016 MHEB Product B & C
Minnesota Power - Short-term Non-firm Energy Sale Agreement**

	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
Offered (MWh)	[TRADE SECRET DATA BEGINS]											
Product B												
Product C												
Total												
Accepted (MWh)												
Product B												
Total												
Curtailment (MWh)												
Product B												
Total												
Accepted less Curtailment (MWh)												
Product B												
Total												
Number of Instances Offered												
Product B												
Total												
Number of Instances Accepted												
Product B												
Total												
	[TRADE SECRET DATA ENDS]											

PUBLIC DOCUMENT
TRADE SECRET DATA
HAS BEEN EXCISED

Minnesota Power's Offsetting Revenues and/or Compensation Received by Investor-Owned Utilities (IOUs)
Docket No. E-999/AA-10-884 dated April 6, 2012

PUBLIC DOCUMENT
TRADE SECRET DATA
HAS BEEN EXCISED

For the Reporting Period of July 1, 2015 through June 30, 2016

[TRADE SECRET DATA HAS BEEN EXCISED]		
		(1)
Source	MWh	Offsetting Revenues
[REDACTED]		
[TRADE SECRET DATA HAS BEEN EXCISED]		

Filed in monthly fuel filings Docket No.

Fuel Cost Month	Docket No.
July 2015	15-787
August 2015	15-1030
September 2015	15-1031
October 2015	15-1032
November 2015	15-1081
December 2015	16-100
January 2016	16-193
February 2016	16-267
March 2016	16-365
April 2016	16-481
May 2016	16-556
June 2016	16-633

The costs associated with the Contract MWh used to support the sales shown above were included in the "Less Fuel Costs Recovered through Inter System Sales" line in the Fuel Clause calculation. The revenues associated with all purchased power contracts except for Wing River, Oliver County I, and Oliver County II, are for the sale of purchases that were no longer needed to cover load. The margins from these sales were passed through to the ratepayers in the Fuel Clause.

**Annual Identification of Forced Outages, Lessons Learned and
Mechanism for Information Sharing
Docket E-999/AA-10-884 (Dated April 6, 2012)**

Annual Identification of Forced Outages and Lessons Learned

See MP AAA Table-1 on page 5 for details related to forced outages.

Our maintenance practices and reliability programs are constantly being evaluated to ensure continuous improvement of our employees' skills and equipment reliability. All of our craftspeople are required to be trained on precision maintenance as part of their apprenticeship. We also require classroom training for all of the operating staff for asset care and preservation. Those individuals are taught operational best practices for operating pumps, motors, valves etc. Since January 2011, over 60 employees at the leadership level – maintenance leads, operations and maintenance superintendents, maintenance planners, and engineers – have participated in Reliability University. Reliability University is a program that teaches students the best practices of equipment maintenance along with the tools needed to be proactive rather than reactive to ensure equipment reliability. Elements of Reliability University include condition monitoring, vibration analysis, system and components, troubleshooting, precision equipment installation and assembly, instrument and process variability and root cause failure analysis. Additionally, we have increased our expectations and requirements around specifications of new and rebuilt equipment and parts with enhanced use of overhaul specifications and visits to repair shops by engineers and technicians.

We are also in the process of instituting a program called Operational Excellence. The focus of Operational Excellence is to teach Human Performance tools to employees (3 way communication, Peer Checking, Labeling, Procedure Use and Adherence etc.) resulting in increased elimination of potential errors occurring in the field. In addition to the Human Performance tool usage, a “lessons learned” process is completed when an event does occur and those learnings are shared throughout the facilities.

Tube Leaks

Tube leaks are statistically the most common cause of outages in coal fired power plants. The most common causes of tube leaks:

- thermal fatigue
- soot blower erosion
- fly ash erosion
- chemical attack

Thermal fatigue manifests itself as cracking of the boiler tubes - sometimes as very small "micro" cracks and sometimes as large cracks. This occurs as a

result of changing boiler temperatures, usually when the boiler swings up or down to follow load and when the boilers start up and shut down. This is a similar effect to bending a paper clip back and forth - after so many cycles it eventually breaks. Minimizing boiler “swings” (base loading) helps minimize the impact of thermal fatigue. However, with the energy markets being what they are with the ever increasing impacts of intermittent wind generation, we are seeing more and more swings in output.

Soot blower erosion occurs in areas where soot blowers are used to 'blow off' ash or slag which accumulates on boiler tubes. Soot blowers use high pressure steam or high pressure air to do the cleaning. The ash removal is necessary to improve heat transfer which improves boiler thermal efficiency. Common practices to mitigate soot blower erosion are to add a weld overlay (commonly called “pad welding”) to existing tubes, add tube shields which are essential sacrificial attachments to the tubes, changing soot blower media pressure (usually not an option) and tube replacement in the affected areas. The use of the soot blowers is essential in keeping the units on line. Coal composition can differ from mine to mine or even within the same mine. As we look to find the best low cost fuel blend for our customers, certain coals may cause more fouling than others. The increased potential of this fouling requires both the frequency and duration of soot blowing to increase which minimizes the buildup on the boiler tubes. We are increasing using higher alloy weld overlay to provide increased tube longevity.

Fly ash erosion occurs when fly ash and combustion gases pass rapidly across superheated boiler tube surfaces. Because of the abrasiveness of fly ash, the surface of boiler tubes in the high flow areas slowly erode. Many things contribute to the amount of erosion, such as gas path restrictions (plugging- see reasons for soot blowing above), variations in coal quality (higher ash content), other additives which are added to the fuel mix typically for emission control, etc.

Chemical attack is becoming a common source of tube failures due to the corrosiveness of many of the additives being used to control emissions. When these chemicals come in contact with very hot boiler tubes, their normal corrosiveness is significantly increased. Since there tend to be few options for using alternate less corrosive additives, a common solution is to look at tube materials which perform better in the corrosive environment. This is usually a very expensive fix and can have environmental compliance implications.

Minnesota Power has a boiler reliability program which is very effective in proactively identifying areas of the boilers where tube leaks are likely to occur and minimizing that risk with proactive maintenance practices. The program uses a combination of visual inspections, non-destructive testing methods (NDT), tube sample analysis, tube failure history, and industry experiences to avoid forced outages due to unexpected tube leaks.

To give some perspective on the challenges with any boiler reliability program, consider the following:

Boswell-3 boiler has 473,891 ft (89.7 miles) of varying diameter boiler tubes
Boswell-4 boiler has 779,905 ft (147.6 miles) of varying diameter boiler tubes

The boiler tube surface area where a leak can occur is several hundred thousand square feet in either boiler.

A tube leak usually begins as a very small hole (0.10 inch or less) in the tube wall which can expand rapidly due to the high temperature and pressure. Considering the huge surface area in a boiler and the very small size of the hole or microscopic crack which results in a tube leak, it is very difficult to effectively screen the entire boiler to prevent all tube leaks. As part of our boiler reliability program, whenever there is an opportunity to get into the boiler to do an inspection – a forced or schedule outage – critical areas are inspected to evaluate erosion rates and to determine if repairs are needed. This information is used to plan for future capital expenditures to help minimize future tube leaks. During these inspection opportunities, small leaks are sometimes found and repaired. Similar proactive maintenance practices are routinely followed at the other Minnesota Power thermal facilities.

- ***Non Boiler related outages***

Minnesota Power has a Generation Reliability Group that is dedicated to monitoring and improving the reliability of not only the boiler but also the rotating equipment. The group is comprised of boiler, turbine and pulverizer engineers/specialists as well as specialists in predictive maintenance technologies. They work on a daily basis with the operating and maintenance groups at all facilities to improve the daily operating practices, planning for work and repairs to occur in future outages and establishing 5 and 10 year maintenance plans.

Rotating equipment that is monitored through various predictive technologies is summarized in a monthly reliability meeting with the specific plant. The manager is provided with a monthly scorecard as to their performance as well as identifying concerns and upcoming needs.

- ***Mechanism for Some Level of Information Sharing***

Minnesota Power is open to sharing lessons learned on a generic basis with the other utilities on an annual basis.

However, the concept of sharing lessons learned is more attractive in theory than in practice. Each utility's generating units are unique (manufacturer, date of installation, fuel type and mixture, base loaded vs. cyclic loading etc.), as is

each company's operation and maintenance practices. Furthermore, sharing best practices regarding planned outages over and above what companies have already described in public filings borders on releasing confidential information about outage planning and energy marketing. This could work to harm that utility's customers if it were made available to other parties, since those practices provide the utility its best protection in acquiring replacement energy at the lowest cost possible.

Minnesota Power will continue to provide information on forced outages and what steps, if any, could have helped in avoiding or alleviating outages.

Unit	Outage Category	DOC Primary Reason for the Outage	GADS Equivalent MWh lost	GADS Start Date/Time of Actual Outage	GADS End Date/Time of Actual Outage	DOC Equipment or Condition that Resulted in the Outage	DOC Description of Equipment Failure (including identified root cause)	DOC Steps Taken to Alleviate Reoccurrence	DOC Change in Energy
THEC 2	Unplanned Outage	Generator low voltage alarm	1114.07	7/1/2015 2:32	7/1/2015 18:55	Low voltage resulted in a turbine trip.	Lightning strike caused the low voltage on the transmission system.	Brought the unit back online following inspection of static inverter and voltage regulator to ensure no damage to the equipment.	\$ 11,233
BEC 3	Unplanned Outage	Boiler circulating pump repair	15282.67	7/10/2015 2:15	7/11/2015 21:40	3A boiler circulating pump mechanical seal failure.	There is insufficient data available to determine the exact root cause. The likely contributing factors were the age of the seal (over 5 years) and the temporary upset in the high pressure injection water.	The standard operating procedures were reviewed and updated with operations. This included both the pump as well as pump supporting equipment (seal water injection and leakoff).	\$ 122,208
BEC 4	Unplanned Outage	Bad turbine bearing vibration indication	7646.33	7/13/2015 22:01	7/14/2015 11:12	Turbine tripped as designed due to high bearing vibration indication.	The bearing vibration probe failed resulting in a false high vibration signal.	Replaced the proximator, probe and extension cable.	\$ 68,683
THEC 1	Unplanned Outage	High unit vibration in the exciter area and extraction steam leak	2541.5	7/23/2015 21:06	7/25/2015 9:56	Generator exciter	Exciter coupling stuck causing high vibrations on 7 and 8 exciter bearings.	Repaired main unit exciter coupling and placed back into service.	\$ 27,081
BEC 3	Unplanned Outage	Boiler Waterwall Leak	11880	8/7/15 23:50	8/9/15 9:35	Waterwall tube leak	Water side internal damage to the tube.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed.	\$ 1,142,613
BEC 3	Unplanned Outage	Main Boiler Feed Pump	78959.47	8/9/15 9:35	8/18/15 17:54	Main boiler feed pump	Boiler feed pump seized due to end-to-end casing differential temperatures.	Additional condition monitoring points were added to the pump for verification by plant personnel of the pump condition prior to placing it on turning gear via the plant DCS screen.	\$ -
THEC 2	Unplanned Outage	Complete Loss of Power - Lightning	870.4	8/13/15 1:59	8/13/15 14:47	Lightning strike on a transmission line.	There are three transmission lines available for the unit. Line 1, 2 and 128 provide the unit the ability to generate on the transmission system. Lines 1&2 were removed from service due to the lightning strike. Line 128 was out of service for maintenance. As a result, the unit was removed from service due the lack of a transmission outlet.	Unit brought back online following inspections of equipment and availability of a transmission line.	\$ 7,900
BEC 2	Unplanned Outage	Boiler Waterwall Leak / ROFA Fan Bearing Replacement	3223.82	10/9/15 21:12	10/11/15 21:19	Waterwall tube leak	Tube failure caused by weld porosity.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed.	\$ 6,081
THEC 1	Unplanned Outage	Boiler Tube Leak, Exciter Maintenance	7245	10/27/15 23:38	11/1/15 7:38	Low temp superheat tube leak	Sootblower erosion caused tube failure.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed.	\$ 4,225
BEC 3	Unplanned Outage	Boiler Waterwall Leak	14872	10/31/15 8:43	11/2/15 1:58	Waterwall tube leak	Fatigue stress cracking - overheating.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed. We have identified tubes to be replaced in the planned outage in the fall of 2016.	\$ (25,160)
THEC 2	Unplanned Outage	Boiler Tube Leak	5607.73	11/18/15 23:26	11/22/15 9:54	Waterwall tube leak	Sootblower erosion caused tube failure.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed.	\$ (4,821)
THEC 1	Unplanned Outage	Boiler Tube Leak	2134.4	12/15/15 21:27	12/17/15 4:23	Low temp superheat tube leak	Sootblower erosion caused tube failure.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed.	\$ (2,122)
BEC 3	Unplanned Outage	Steam Drum - Replace Blowdown Valve	8882.13	1/9/16 0:04	1/10/16 1:18	Steam drum blowdown throttle valve	The seal for the steam drum throttle valve failed creating an external steam leak hazard.	Replaced the root and throttle valves for the steam drum blowdown.	\$ 39,120
BEC 3	Unplanned Outage	Boiler Tube Leak	12648.53	3/4/16 23:47	3/6/16 11:43	Waterwall tube leak	Fatigue stress cracking - overheating.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed. We have identified tubes to be replaced in the planned outage in the fall of 2016.	\$ (59,890)
THEC 1	Unplanned Outage	Boiler Tube Leak	3983.6	3/9/16 22:40	3/12/16 8:24	Waterwall tube leak	Sootblower erosion caused tube failure.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed.	\$ (28,016)
BEC 3	Unplanned Outage	Boiler Waterwall Tube Leak	8682.67	4/2/16 0:01	4/3/16 0:41	Waterwall tube leak	Fatigue stress cracking - overheating.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed. We have identified tubes to be replaced in the planned outage in the fall of 2016.	\$ (13,121)
THEC 1	Unplanned Outage	Boiler Tube Leak	3257.95	4/29/16 22:44	5/1/16 21:57	Waterwall tube leak	Erosion caused tube failure.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed.	\$ (17,045)

Unit	Outage Category	DOC Primary Reason for the Outage	GADS Equivalent MWh lost	GADS Start Date/Time of Actual Outage	GADS End Date/Time of Actual Outage	DOC Equipment or Condition that Resulted in the Outage	DOC Description of Equipment Failure (including identified root cause)	DOC Steps Taken to Alleviate Reoccurrence	DOC Change in Energy
THEC 1	Unplanned Outage	Boiler Tube Leak	2595.55	5/20/16 21:23	5/22/16 11:00	Waterwall tube leak	Erosion caused tube failure.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed. Inspected urea lines and nozzles for pluggage to ensure urea is not being carried too far into the boiler or running down the wall tubes.	\$ (35,075)
THEC 2	Unplanned Outage	Boiler Tube Leak	4124.2	5/24/16 22:03	5/27/16 10:42	Economizer tube leak	Fatigue stress cracking - overheating.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed.	\$ 166
BEC 2	Unplanned Outage	Main Stop Valve Issues	1367.92	5/26/16 15:54	5/27/16 12:19	The turbine tripped as designed due to the inability to transfer from main steam control to control valve control.	Control valve #1 was not operating properly.	Control valve #1 was repaired by adjusting the linkage. All other control valves were inspected to verify proper operation.	\$ (18,505)
BEC 2	Unplanned Outage	Main Stop Valve Issues	35.73	5/27/16 12:35	5/27/16 13:07	The turbine tripped as designed due to the inability to transfer from main steam control to control valve control.	Control valve #1 was not operating properly.	Control valve #1 was repaired by adjusting the linkage. All other control valves were inspected to verify proper operation.	\$ -
BEC 2	Unplanned Outage	Main Stop Valve Issues	82.6	5/27/16 17:30	5/28/16 17:20	The turbine tripped as designed due to the inability to transfer from main steam control to control valve control.	Control valve #1 was not operating properly.	Control valve #1 was repaired by adjusting the linkage. All other control valves were inspected to verify proper operation.	\$ -
BEC 2	Unplanned Outage	Main Stop Valve Issues	1596.83	5/27/16 18:17	5/29/16 5:25	The turbine tripped as designed due to the inability to transfer from main steam control to control valve control.	Control valve #1 was not operating properly.	Control valve #1 was repaired by adjusting the linkage. All other control valves were inspected to verify proper operation.	\$ -
BEC 3	Unplanned Outage	Boiler Waterwall Tube Leak	12366.93	5/27/16 18:17	5/29/16 5:25	Waterwall tube leak.	Water side internal damage to the tube.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed. We have identified tubes to be replaced in the planned outage in the fall of 2016.	\$ (11,673)
BEC 3	Unplanned Outage	Boiler Waterwall Tube Leak	Waiting for June to close	6/14/16 0:34	6/15/16 23:02	Waterwall tube leak.	Water side internal damage to the tube.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed. We have identified tubes to be replaced in the planned outage in the fall of 2016.	\$ 62,876
BEC 4	Unplanned Outage	Boiler Waterwall Tube Leak	Waiting for June to close	6/17/16 23:52	6/20/16 5:35	Waterwall tube leak.	Water side internal damage to the tube.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed.	\$ 30,242
BEC 2	Unplanned Outage	Boiler Waterwall Tube Leak	Waiting for June to close	6/24/16 23:30	6/26/16 14:45	Waterwall tube leak.	Fatigue stress cracking - overheating.	Pad weld repair of the leak. During this outage opportunity, additional tubes in the surrounding area were inspected and repaired as needed.	\$ (3,982)

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Minnesota Power's Comparison and Reconciliation of the MISO Accredited
Value of the Company's Generators Using MISO Accredited UCAP Values
and Integrated Resource Plan Capacity Ratings.

Docket No. E-999/AA-09-961

and

Docket No. E-999/AA-10-884

Dated August 31, 2016

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Order Point 28 of the Commission Order states:

Interstate, Minnesota Power, Otter Tail and Xcel shall continue to provide a comparison and reconciliation of the MISO accredited value of their generators using MISO accredited UCAP values and integrated resource plan capacity ratings in future AAA filings. This comparison and reconciliation should be prepared in sufficient detail to allow the Department to understand: (a) the impacts of generation resources that are not network deliverable (i.e., not interconnected), and (b) the possible constraints of utilities' systems and the impact of those constraints.

MISO Accredited UCAP Values and 2015 Resource Plan Capacity Ratings

Minnesota Power has attached to this filing a comparison of the MISO accredited UCAP values for its generating resources from the MISO Planning Year 16/17 to the capacity ratings used in its 2015 Resource Plan (See attached file named: Attachment 17-Table A which contains Trade Secret Data). The capacity values used in Minnesota Power's 2015 Resource Plan were based on MISO Planning Year 15-16 capacity values; therefore, there are a couple differences between the UCAP values and is noted below.

Wind Generation

There is an approximate 21 MW difference in the wind UCAP capacity values between MISO Planning Year 16/17 and the 2015 Resource Plan. The higher wind UCAP capacity value used in the MISO Planning Year 16/17 is due to better wind performance during MISO peaks. Note that Minnesota Power expects the UCAP value for Bison to vary in the near term due to the limited history of operational data used in MISO's UCAP calculation for intermittent wind generation.

Thomson Hydro

There is an approximate 53 MW difference in the pondage hydro UCAP capacity values between MISO Planning Year 16/17 and the 2015 Resource Plan. The pondage hydro generation represents the Thomson hydro capacity. Due to the catastrophic outage from flooding that occurred in June 2012, only a portion of the Thomson hydro facility had returned to service resulting in a reduced UCAP value for MISO Planning Year 15/16 which was used in the 2015 Resource Plan for only 2015. For MISO Planning Year 16/17 Thomson hydro returned to full service and the UCAP value is for the entire facility.

Taconite Harbor 3: The capacity of this unit has not been accredited since the unit was suspended

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per the MISO Attachment Y submittal in 2014

Bilateral Purchase Transactions

There are two bilateral power purchase agreements with Great River Energy that total 100 MW of UCAP capacity and start in Planning Year 16/17. The duration of these two bilateral power purchase agreements are June 1, 2016 through May 31, 2020. The purchased capacity from Great River Energy was included in the resource plan as a capacity resource as part of the Company's Bilateral Bridge Strategy in its Near Term Action Plan from the 2013 Resource Plan.

There was two bilateral power purchase agreement that started prior to Planning Year 16/17. Minnesota Power purchased 50 MW of UCAP capacity from Minnkota Power Cooperative, Inc. for the duration of January 1, 2014 through May 31, 2020. Minnesota Power also purchased 50 MW of UCAP capacity from Manitoba Hydro for the duration of June 1, 2015 through May 31, 2020. The purchased capacity from Minnkota and Manitoba was included in the resource plan as a capacity resource as part of the Company's Bilateral Bridge Strategy in its Near Term Action Plan from the 2013 Resource Plan.

Minnesota Power Generation with Non-Network Interconnection Agreements with MISO

The Midcontinent ISO Generation Deliverability Test Results can be found on the MISO website at the following link:

<https://www.misoenergy.org/Library/Agreements/Pages/InterconnectionAgreements.aspx>

We have attached to this filing the current Midcontinent ISO Generation Deliverability Results file that has been formatted to highlight the Minnesota Power generating resources and their interconnection service designations. (See attached file named: Attachment 17-Table B)

It should be noted that under MISO's annual resource adequacy program that started June 1, 2013 there is no longer a "local" designation of capacity resources. All capacity resources are considered equal as long as all the requirements are met per the MISO Module E tariff. There remain two types of interconnection transmission service for generating sources: Network Resource Interconnection Service (NRIS) and Energy Resource Interconnection Service (ERIS). Under the previous MISO monthly resource adequacy program a generator with ERIS status was designated "local" capacity, where under the new MISO resource adequacy program a generator with ERIS status and transmission rights to a load in MISO is designated as a capacity resource similar to a generator with NRIS within its Local Resource Zone.

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With the new resource adequacy program no longer designating capacity with ERIS status as “Local”, Minnesota Power will address the following questions by discussing capacity resources on its system with ERIS interconnection service.

Identification of resources assigned, in full or in part, ERIS status based on Minnesota Power’s Deliverability Results from MISO and why these resources are designated as such.

Minnesota Power has two capacity resources that currently have ERIS interconnection service with MISO; the Taconite Ridge wind farm and the Taconite Harbor thermal generating facility. Details for each are provided below:

Taconite Ridge: An ERIS generation interconnection was utilized during the project implementation for this wind farm. To make this resource eligible for capacity credit Minnesota Power worked with the MISO transmission request process to gain 25MW of transmission rights from the generator to Minnesota Power’s load. With this transmission service the generation from the Taconite Ridge facility would be eligible for capacity credit to serve Minnesota Power’s customers.

To acquire enough transmission service to allow the Taconite Ridge wind farm to be eligible to serve any MISO customer, or become network deliverable, there would be bulk transmission upgrades required. Minnesota Power did not see the economic benefit of having customers pay for additional transmission upgrades to allow capacity from the wind farm to be eligible to be transferred to other Midwest ISO footprint customers.

Impact to Minnesota Power’s Integrated Resource Plan (as a result of these resources having ERIS interconnection service)

As Minnesota Power’s 2015 Resource Plan identifies how Minnesota Power will serve its local customers with available generation and power purchases, the definition of ERIS vs. NRIS does not impact its long-term plan as all of the capacity that has ERIS service is able to count for Minnesota Power’s capacity requirement. These MISO Resource Adequacy capacity attributes are included as part of the larger capacity position for each resource as it is being added to Minnesota Power’s long-term expansion plan.

Minnesota Power’s plan to address the ERIS resources and make them NRIS

See paragraph on Impact to Minnesota Power’s Integrated Resource Plan above. Minnesota Power continues to ensure its customers receive the maximum economic capacity available from its resources.

PY "2016-2017" Compared to 2015 Resource Plan Capacity Values

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TABLE A

<u>MN Power Thermal Generation</u>	Planning Year 16-17 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
	[TRADE SECRET DATA HAS BEEN EXCISED]		
Boswell 1			
Boswell 2			
Boswell 3			
Boswell 4			
Hibbard 3&4			
Laskin 1			
Laskin 2			
Young 2/Square Butte			
Taconite Harbor 1			
Taconite Harbor 2			
Taconite Harbor 3			
SAPPI TG 5			
Total			

<u>MN Power Hydro Generation</u>	Planning Year 16-17 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
	[TRADE SECRET DATA HAS BEEN EXCISED]		
Pondage			
Run of River			
Total			

<u>Bilateral Purchase Transactions</u>	Planning Year 16-17 UCAP Value	2013 Resource Plan Capacity ICAP Values	2013 Resource Plan Capacity UCAP Values Per DOC IR 4
	[TRADE SECRET DATA HAS BEEN EXCISED]		
MHEB 50 MW			
Minnkota			
Great River Energy			
Xcel			
Total			

<u>Behind The Meter Generation (BTMG)</u>	Planning Year 16-17 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
	[TRADE SECRET DATA HAS BEEN EXCISED]		
Customer Owned			
Minnesota Power Owned Non Hydro			
Total			
(A) Total BTMG			
(B) BTMG Coincident with Peak Demand			
(C) Duel Fuel			
Remaining MP and Customer Owned BTMG (A-B-C)			
Reserve Margin Requirement on BTMG Coincident with Peak (The UCAP Reserve Margin 7.1% & ICAP Reserve Margin 14.3% - Planning Year 15-16)&(The UCAP Reserve Margin 3.79% & ICAP Reserve Margin 11.32% - 2013 Resource Plan)			
BTMG Modeled in Strategist (non-coincident Customer Net Generation)			

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TABLE A

<u>Wind Generation</u>	Planning Year 16-17 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
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[TRADE SECRET DATA HAS BEEN EXCISED]

Oliver 1 & 2
Bison 1-4
Taconite Ridge
Wing River
Total

[REDACTED]

	Planning Year 16-17 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
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[TRADE SECRET DATA HAS BEEN EXCISED]

TOTAL OF ALL CAPACITY

[REDACTED]

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TABLE B

Midwest ISO Interconnection Service

CPNode	Operator Name	Total Interconnection Service	NRIS	NRIS (Local)	ERIS
MP.BISON1		496.6	496.6	0	
MP.BLNCHR123	BLANCHARD 1	18	18	0	
MP.BOS111	BOSWELL 1	75	75	0	
MP.BOS112	BOSWELL 2	75	75	0	
MP.BOS233	BOSWELL 3	364.5	364.5	0	
MP.FONDLA1	FOND-DU-LAC 1	12	12	0	
MP.HIBBAR3	HIBBARD 3	34	34	0	
MP.HIBBAR4	HIBBARD 4	35	35	0	
MP.LASKIN1	LASKIN 1	60.5	60.5	0	
MP.LASKIN2	LASKIN 2	60.5	60.5	0	
MP.MP_BOS4	BOSWELL 4 JOU MP (MP Share)	476	476	0	
MP.OLIVER12	MP OLIVERCO OLIVER_1 - 2_UNIT	101		0	101
MP.POTLTUN_5	POTLATCH 5	41.5	41.5	0	
MP.TACHB1	TACONITE HARBOR 1	76.0	76	0	
MP.TACHB2	TACONITE HARBOR 2	74.0	74	0	
MP.TACHB3	TACONITE HARBOR 3	75.0	50	0	25
MP.TACRIDGE1	MP MINNTAC MINNTA_1_UNIT	25	0	0	25
MP.THOMSON		77.3	39.3	0	
OTP.Y2ACGEN.MP	YOUNG 2 JOU MP	134.9	134.9	0	

Congestion Costs Analysis

Minnesota Power is providing, in a separate Access database, hourly Day-Ahead Locational Marginal Price data, including energy, line losses and congestion charges for each of its generation nodes, load node and Minnesota Hub for the time period of July 2015 through June 2016. The Access database also includes all hours in which congestion costs were incurred between our generator and load nodes (paths). Please note the access database is considered Trade Secret Data and will be provided separately on a cd as it is not in a format that can be filed.

Below is the reference guide to the Access database

The table “MP DA LMP” includes the Day Ahead LMPs for each of Minnesota Power’s generation nodes, our load node and Minnesota Hub node for each hour from July 1, 2015 through June 30, 2016. The table columns are defined as follows:

- Localday – calendar day of the year.
- HE – hour ending
- Location – MISO node name
- Market – Day Ahead market
- Lmp – Locational Marginal Price
- Mcc – Marginal Congestion Component of the LMP
- Mlc – Marginal Loss Component of the LMP
- Energy – Energy Component of the LMP

The table “DA Congestion” includes the data related to Minnesota Power’s calculation of Day Ahead Congestion costs for the paths between our generation nodes and our load node for July 1, 2015 through June 30, 2016. The table columns are defined as follows:

- Localday – calendar day of the year.
- HE – hour ending
- Mmi Nodename – MISO node name
- DA RE Mwh – Day Ahead cleared MWh at the generation node that are used in the calculation of the Day Ahead Congestion for the path between the generator and load
- Da Mcc Gen – Day Ahead Marginal Congestion Component of the Day Ahead LMP at the generator
- Da Mcc Load – Day Ahead Marginal Congestion Component of the Day Ahead LMP at Minnesota Power’s load node for the corresponding day and hour ending
- DA Congestion – the calculated congestion between the generator and load for the given day and hour ending.

The table “HVDC Utilization” included data related to the hedged congestion due to the transfer of energy across the HVDC line for July 1, 2015 through June 30, 2016. The table columns are defined as follows:

- Localday – calendar day of the year.
- HE – hour ending
- Mmi Nodename – MISO node name
- DA RE Mwh – Day Ahead cleared MWh on the DC line that are used in the calculation of the Day Ahead Congestion hedging on the DC line
- Da Mcc Gen – Day Ahead Marginal Congestion Component of the Day Ahead LMP at the west end of the DC line – MISO node name MP.HVDCW
- Da Mcc Load – Day Ahead Marginal Congestion Component of the Day Ahead LMP at the east end of the DC line – MISO node name MP.HVDCE
- DA Congestion – the calculated congestion between the west end of the DC line and east end of the DC line for the given day and hour ending.

The table below shows the sum of the qualifying congestion costs by path along with the FTR revenues for the top 10 paths.

As shown by the information provided, Minnesota Power has no FTRs associated with the MP.BISON1 to MP.MP path. This is because at the time of requesting ARR's for 2013 Minnesota Power did not have firm transmission from MP.BISON1 to MP.MP. It should also be noted that the FTRs associated with the MP.HVDCE to MP.MP path, are allocated to MP.Y2ACGEN.MP, MP.BISON1 and MP.OLIVER12. This represents the path between the east end of the DC line and Minnesota Power's load zone. MP.HVDCE is the node at the east end of the DC line where Minnesota Power sells power to the MISO market. HVDC Utilization is allocated to MP.Y2ACGEN.MP, MP.BISON1 and MP.OLIVER12 on a pro-rata basis based on the total DA Congestion on these paths.

Minnesota Power is always looking at ways to provide cost-effective delivery. Minnesota Power's ARR strategy has been to schedule FTRs up to the amount that MISO allows between generation and the load zone in order to sell electricity into the MISO market at the same price as it is being purchased.

**Day Ahead Congestion
by Path
July 2015 - June 2016**

	Path Node to MP.MP	Total DA Congestion	HVDC Utilization	FTR Revenues	Net Congestion
1	MP.BISON1	2,156,479.11	(1,751,388.98)		405,090.13
2	OTP.Y2ACGEN.MP	670,930.72	(544,897.77)	553,439.27	679,472.22
3	MP.OLIVER12	464,554.99	(377,289.30)	(50,309.95)	36,955.74
4	MP.BOS233	202,307.11		(138,230.62)	64,076.49
5	MP.MP_BOS4	65,519.34		(179,985.77)	(114,466.43)

6	MP.BLNCHR123	38,363.64		(28,687.64)	9,676.00
7	MP.BOS112	31,215.64		(35,646.90)	(4,431.26)
8	MP.BOS111	30,467.34		(30,519.63)	(52.29)
9	MP.TACHB2	16,521.10		(10,781.83)	5,739.27
10	MP.TACHB1	16,284.74		(10,781.83)	5,502.91
	subtotal of top 10	3,692,643.74	(2,673,576.05)	68,495.10	1,087,562.79
	MP.TACRIDGE1	5,660.66			5,660.66
	MP.LASKIN2	52.40			52.40
	MP.LASKIN1	47.77			47.77
	MP.TACHB3	-			-
	MINN.HUB	-			-
	MP.HIBBAR4	(7.67)			(7.67)
	MP.HIBBAR3	(198.34)			(198.34)
	MP.FONDLA1	(13,240.58)			(13,240.58)
	MP.POTLTUN_5	(22,808.12)			(22,808.12)
	MP.THOMSON	(75,428.63)			(75,428.63)
	Grand Total	3,586,721.23	(2,673,576.05)	68,495.10	981,640.28

Plant Outage Contingency Plans

Docket No. E-999/AA-08-995 dated March 15, 2010

Plant Outage Contingency Plans to address the following for the period of July 2015-June 2016:

1. Identification for the period of July 2015-June 2016 any and all contractors (and associated contracts) that increased replacement energy costs due to an extension of the plant outage days as a result of delays and/or lack of performance.
2. Please provide a narrative fully explaining the reasons for the delays and/or lack of performance for each of the contracts identified above.
3. Please describe the lessons learned and the contingency plans developed by the Company to mitigate against future risk of delays or lack of performance, when contractors perform poorly and increase costs during plant outages.

Identification and explanation of outage delays

During this period, there were no delays or lack of performance by contractors identified which impacted the length of the outages and/or the replacement energy costs.

Reasons for Delay and/or Lack of Performance

During this period, there were no delays or lack of performance by contractors identified which impacted the length of the outages and/or the replacement energy costs.

Lessons Learned and Contingency plans utilized

During this period, there were no delays or lack of performance by contractors identified which impacted the length of the outages and/or the replacement energy costs.

PUBLIC DOCUMENT
TRADE SECRET DATA
HAS BEEN EXCISED

Oliver I and II Wind Curtailment Reporting

Docket No. E015/M-05-975; Dated December 20, 2005

Minnesota Power
Wind Energy Purchase Agreement with FPL
Reporting Period: July 1, 2015 - June 30, 2016

Oliver County I				
FPL Wind Energy in FAC (MWh)	Curtailements of Wind Energy MWh	Curtailement Payments by MP	Reason Codes	Explanation
[TRADE SECRET DATA HAS BEEN EXCISED]				

Jul-15	1	\$77.69	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Aug-15	None	None	None	None
Sep-15	None	None	None	None
Oct-15	None	None	None	None
Nov-15	None	None	None	None
Dec-15	24	1,609	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Jan-16	<1	17	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Feb-16	3	\$177.54	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Mar-16	<1	\$30.21	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Apr-16	<1	\$11.50	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
May-16	None	None	None	None
Jun-16	26	\$1,747.03	None	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Total	53	\$ 3,670.10		

1. Minnesota Power's refusal to accept Contract Energy at the Point of Delivery as a result of low load conditions that justify not accepting Contract Energy; or
2. The availability of less expensive energy from another source; or
3. Minnesota Power's election to use non-firm transmission services to deliver Contract Energy.

Minnesota Power
Wind Energy Purchase Agreement with FPL
Reporting Period: July 1, 2015 - June 30, 2016

Oliver County II				
FPL Wind Energy in FAC (MWh)	Curtailments of Wind Energy MWh	Curtailment Payments by MP	Reason Codes	Explanation
[TRADE SECRET DATA HAS BEEN EXCISED]				

Jul-15		1	\$92.68	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Aug-15		None	None	None	None
Sep-15		7	\$567.66	None	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Oct-15		None	None	None	None
Nov-15		None	None	None	None
Dec-15		19	1,538	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Jan-16		None	None	None	None
Feb-16		1	\$66.68	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Mar-16		<1	\$7.95	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Apr-16		<1	11	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
May-16		None	None	None	None
Jun-16		10	788	2	Oliver County is a Dispatchable Intermittent Unit (DIR) within MISO. The offer price is set so that if the Locational Marginal Price (LMP) drops below the amount of a compensated curtailment payment amount on the PPA, then the unit will be curtailed. When this happens, the LMP is negative and Minnesota Power would be paying MISO to generate at this unit, or being paid not to generate. With the LMP this negative, the cost paid under the PPA is less than what Minnesota Power would have paid MISO if we would have generated.
Total		38	\$ 3,072.26		

1. Minnesota Power's refusal to accept Contract Energy at the Point of Delivery as a result of low load conditions that justify not accepting Contract Energy; or
2. The availability of less expensive energy from another source; or
3. Minnesota Power's election to use non-firm transmission services to deliver Contract Energy.

PUBLIC DOCUMENT
TRADE SECRET DATA
HAS BEEN EXCISED

Bison Wind Energy Curtailment Reporting

Docket No. E015/M-11-234; Dated September 8, 2011

Docket No. E015/M-11-626; Dated November 2, 2011

Minnesota Power
Bison Wind Energy Curtailment Reporting
Reporting Period: July 1, 2015 - June 30, 2016

PUBLIC DOCUMENT
TRADE SECRET DATA
HAS BEEN EXCISED

Delivered MWh	Lost MWh
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**[TRADE SECRET
DATA HAS BEEN
EXCISED]**

Jul-15		4,826
Aug-15		0
Sep-15		419
Oct-15		0
Nov-15		957
Dec-15		0
Jan-16		273
Feb-16		0
Mar-16		0
Apr-16		55
May-16		6,234
Jun-16		194
Total		12,958