PUBLIC DOCUMENT
TRADE SECRET DATA EXCISED

minnesota power
AN ALLETE COMPANY

30 West Superior Street
Duluth, MN 55802-2093
www.mnpower.com

March 2, 2020

VIA E-FILING
Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

Re: **Annual Automatic Adjustment of Charges Report - Electric**
Docket No. E015/AA-20-171
Annual Filing

Dear Mr. Seuffert:

Minnesota Power respectfully submits to the Minnesota Public Utilities Commission its annual report pursuant to the Minnesota Rules 7825.2800 to 7825.2840 governing Automatic Adjustment of Charges.

Please contact me at (218) 355-3455 or hcreurer@allete.com if you have any questions regarding this compliance filing.

Yours truly,

Hillary A. Creurer
Regulatory Compliance Administrator

HAC:th
Attach.

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of Minnesota Power's Annual Automatic Adjustment of Charges Report	Docket No. E015/AA-20-171 **MINNESOTA POWER'S ANNUAL REPORT**

I. SUMMARY

Minnesota Power (or the "Company") hereby submits to the Minnesota Public Utilities Commission ("Commission") this Annual Report pursuant to Minn. Rule 7825.2800 through 7825.2840 governing Automatic Adjustment of Charges ("AAA") for electric utilities for the period of July 1, 2018 to December 31, 2019.

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of Minnesota Power's Annual Automatic Adjustment of Charges Report	Docket No. E015/AA-20-171 **MINNESOTA POWER'S ANNUAL REPORT**

I. INTRODUCTION

Minnesota Power (or the "Company") hereby submits to the Minnesota Public Utilities Commission ("Commission") this Annual Report pursuant to Minn. Rule 7825.2800 through 7825.2840 governing Automatic Adjustment of Charges ("AAA") for electric utilities for the period of July 1, 2018 to December 31, 2019.

II. PROCEDURAL REQUIREMENTS

In accordance with Minn. Rule 7829.1300, subp. 3, and additional Commission Orders, Minnesota Power provides the following required information.

A. Name, Address and Telephone Number of Utility

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

B. Name, Address and Telephone Number of Utility Attorney

David R. Moeller,
Senior Attorney & Director of Regulatory Compliance
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 723-3963
dmoeller@allete.com (email)

C. Date of Filing and Date Proposed Rates Take Effect

Consistent with the filing requirements in Minn. Rule 7825.2840, the date of this filing is March 2, 2020. The information contained in this filing is submitted in compliance with the aforementioned Rules concerning AAA reporting.

D. Statute Controlling Schedule for Processing the Petition

No statute establishes a schedule for processing this filing. The applicable rules are Minn. Rule 7825.2800 through 7825.2840.

E. Utility Employee Responsible for Filing

Hillary A. Creurer
Regulatory Compliance Administrator
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 355-3455
hcreurer@allete.com (email)

F. Official Service List

Pursuant to Minn. Rule 7829.0700, Minnesota Power respectfully requests the following persons to be included on the Commission's official service list for this proceeding:

David R. Moeller
Senior Attorney
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 723-3963
dmoeller@allete.com

Hillary A. Creurer
Regulatory Compliance Administrator
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 355-3455
hcreurer@allete.com

G. Service on Other Parties

Minnesota Power has electronically filed this report with the Minnesota Public Utilities Commission, and copies of the Notice of Report Availability have been served on the parties on the attached service lists.

H. Filing Summary

Pursuant to Minn. Rule 7829.1300, subp. 1, a one-paragraph summary of this filing accompanies this Report.

III. DESCRIPTION AND PURPOSE OF FILING

In compliance with Minn. Rules 7825.2800 through 7825.2840, Minnesota Power hereby submits to the Commission the following reports and information:

Attachment No. 1	Independent Auditor's Report on Minnesota Power's Accounting for Automatic Adjustments during the period July 2018 through December 2019 (MN Rule 7825.2820).
Attachment No. 2	Minnesota Power's Fuel and Energy Source Procurement and Energy Dispatching Policies Annual Report (MN Rule 7825.2800). In addition, Minnesota Power's additional information regarding its plans with respect to acquiring fuel and purchased energy as required in Docket No. E015/M-05-277, dated December 20, 2006. Please note this document contains Trade Secret Data.
Attachment No. 3	Minnesota Power's Annual Report of Automatic Adjustment Charges for the period July 2018 through December 2019 (MN Rule 7825.2810). Included is a breakdown by energy type as required in Docket No. E,G999/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 Compliance Report on MISO Operations and Cost Impacts to Minnesota Power (Docket No. E015/PA-01-539).
Attachment No. 6	Minnesota Power's List of Network Resources Designated to Serve Native Load (Docket No. E015/M-05-277 dated December 20, 2006).
Attachment No. 7	Minnesota Power's additional reporting requirements. MISO Day 2 Cost Order Reporting Matrix (Docket No. E015/M-05-277 and Docket No. E015/M-08-528) and Listing of Dockets (Docket No. E999/AA-15-611).
Attachment No. 8	Minnesota Power's monthly MISO Day 2 charges and allocation (Docket No. E999/AA-07-1130).
Attachment No. 9	Minnesota Power's Annual and Daily ASM charges and summary (Docket No. E015/M-08-528, dated August 23, 2010).
Attachment No. 10	Minnesota Power's ARR process and information. (Docket No. E015/M-05-277). Please note this document contains Trade Secret Data.
Attachment No. 11	Minnesota Power's generation facilities maintenance expenses (Docket No. E999/AA-06-1208, dated February 6, 2008).
Attachment No. 12	Minnesota Power's transmission transformer inventory by size for 100 kV defined by low side transmission kV (Docket No. E999/AA-07-1130, dated August 31, 2009). Please note this document contains Trade Secret Data.
Attachment No. 13	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. 14	Minnesota Power's Offsetting Revenues and/or Compensation Received by Investor-Owned Utilities (IOUs) (Docket No. E999/AA-

	10-884, dated April 6, 2012). Please note this document contains Trade Secret Data.
Attachment No. 15	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. E999/AA-10-884, dated April 6, 2012).
Attachment No. 16	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. E999/AA-10-884 and Docket No. E999/AA-09-961, dated April 6, 2012). Please note this document contains Trade Secret Data.
Attachment No. 17	Congestion Cost Analysis (Docket No. E999/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. 18	Plant Outages Contingency Plans (Docket No. E999/AA-08-995 dated March 15, 2010).
Attachment No. 19	Wind Curtailment Report for Oliver I and Oliver II (Docket No. E015/M-05-975, dated December 20, 2005). Please note this document contains Trade Secret Data.
Attachment No. 20	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). Please note this document contains Trade Secret Data.
Attachment No. 21	Minnesota Power's Notice of Reports Availability (MN Rule 7825.2840), Certificate of Service and Service Lists.

On June 12, 2019, the Minnesota Public Utilities Commission issued an order in Docket No. E999/CI-03-802 approving the disclosure of the five-year projection of fuel costs by source of power to the annual Fuel Clause Adjustment Forecast ("FCA Forecast") filing. Due to the changes with Fuel Clause Reform Minnesota Power has included the five-year projection of fuel costs which was filed on May 1, 2019 as part of the 2020 FCA Forecast filing. An updated five-year projection of fuel costs will be included in the 2021 FCA Forecast filing due on May 1, 2020.

IV. TRADE SECRET JUSTIFICATION

Various attachments to this filing contain information that Minnesota Power considers trade secret. The Company believes this filing comports with the Commission's Notice relating to Revised Procedures for handling Trade Secret and Privileged Data, pursuant to Minn. Rule 7829.0500. As required by the revised procedures, a statement providing the justification for excising the trade secret data is included.

V. CONCLUSION

Minnesota Power submits this annual report pursuant to the Commission's rules regarding Automatic Adjustment of Charges.

Dated: March 2, 2020

Respectfully Submitted,

Hillary A. Creurer
Regulatory Compliance Administrator
Minnesota Power
30 W. Superior Street
Duluth, MN 55802
(218) 355-3455
hcreurer@allete.com

STATEMENT REGARDING JUSTIFICATION FOR EXCISING TRADE SECRET INFORMATION

Minnesota Power has excised material from the Annual Automatic Adjustment of Charges Report ("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.

Report of Independent Accountants

Report of Independent Accountants

To the 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 you 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, 2018 through December 31, 2019 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. The sufficiency of these procedures is solely the responsibility of the parties specified in this report. Consequently, we make no representation regarding the sufficiency of the procedures enumerated 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 October 2018, February 2019 and June 2019, 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 and general ledger without exception. For the months of October 2018, February 2019 and June 2019, we agreed fuel purchases recorded in the Company's fuel ledger to supporting invoices for fuel purchases totaling $12.9 million (100% coverage), $8.1 million (100% coverage), and $7.3 million (100% coverage), respectively, without exception. Docket No. E-999/AA – 15-611 Paragraph 7.a.

2) For the months of October 2018, February 2019 and June 2019, we obtained the Minnesota Public Utilities Commission – Approved Base Costs of Power, Docket No. E-015/GR-16-664 and compared the base costs of power to the bases in use and found them to be in agreement for one large industrial and three retail customers. Docket No. E-999/AA – 15-611 Paragraph 7.b.

3) We recalculated the billing adjustment charge (credit) per kWh charged customers for purchased power for the period July 1, 2018 through December 31, 2019 as set forth in Attachment No. 3 (pages 2 – 4) of the Automatic Retail Fuel Adjustments and Recovery report for each customer class listed and found them to be mathematically accurate. Docket No. E-999/AA – 15-611 Paragraph 7.a and 7.c.

4) For the months of October 2018, February 2019 and June 2019, on a test basis, we examined individual billings for one large industrial and three retail customers and recalculated the automatic adjustment of charges and credits by tracing these amounts to the individual customers' accounting records to validate that the calculated charge or credit was recorded and found them to be in agreement. Docket No. E-999/AA – 15-611 Paragraph 7.e.

5) For the months of October 2018, February 2019 and June 2019 the Company asserted that there were no corrections to the fuel adjustment clause charges or other billing errors, which we agreed to testing procedures performed. Docket No. E-999/AA – 15-611 Paragraph 7.f and 7.h.

6) For the months of October 2018, February 2019 and June 2019 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 October 2018, February 2019 and June 2019, we selected, purchase transactions by purchased energy type (i.e. from a specific counterparty or MISO (Midcontinent Independent System Operator, Inc.) charge type) from the Company's fuel ledger

representing aggregate purchases of $12.6 million (72% coverage), $17.7 million (73% coverage), and $12.6 million (72% coverage), respectively. We agreed the selected purchase transaction amounts to supporting invoice and payment documentation, consisting of third party 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.

7) For purchase transactions selected in 6) above which were MISO Charges, (October 2018), we obtained the MISO Charge Types Excluding Asset Energy and Admin Charges Report and, selected, at a minimum, 16 MISO related charges for October 2018, respectively, and agreed them to the underlying invoices, noting no differences.

8) For the months of October 2018, February 2019 and June 2019, 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 and general ledger, as adjusted for unbilled amounts, for each respective month noting no differences.

9) For the months October 2018, February 2019 and June 2019, 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 248.8 million kWh (70% coverage), 209.9 million kWh (73% coverage), and 208.1 million kWh (71% coverage) for the months of October 2018, February 2019 and June 2019, 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.

10) For the period July 1, 2018 through December 31, 2019, we obtained and compared the accounting records for the revenues billed to customers for energy delivered to the total sales of electric energy without exception. Docket No. E-999/AA – 15-611 Paragraph 7.d and 7.g.

11) For the period July 1, 2018 through December 31, 2019, we reviewed the revenue reconciliations from the CIS sub-ledger to the company general ledger (obtained from the CIS Admin and Energy Pricing and Billing departments), for total revenue and did not identify any unreconciled differences. For the period July 1, 2018 through December 31, 2019, we reviewed the cost of power reconciliations from the Energy Pricing and Billing department, which includes (1) coal burned, (2) total purchase power, (3) MISO non-recoverable cost, and (4) purchased steam, to the company general ledger and did not identify any unreconciled differences. Docket No. E-999/AA – 15-611 Paragraph 7.d and 7.g.

This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. We were not engaged to and did not conduct an examination or review, the objective of which would be the expression of an opinion or conclusion, respectively, on Section A of Minnesota Power's Annual Report of Automatic Adjustment Charges for the period July 1, 2018 through December 31, 2019 found in Attachment No. 3 of the Company's Annual Report. Accordingly, we do not express such an opinion or conclusion. 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., Minnesota Power and the MPUC**,** and is not intended to be and should not be used by anyone other than these specified parties.

PricewaterhouseCoopers LLP

Minneapolis, MN
February 28, 2020

**PUBLIC DOCUMENT –
TRADE SECRET DATA EXCISED**

Minnesota Power
Fuel and Energy Source Procurement & Energy Dispatching Policies
Minn. Rule 7825.2800

**PUBLIC DOCUMENT –
TRADE SECRET DATA EXCISED**

I. Fuel Source Procurement Policies

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.

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:

- 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.

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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 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 Minnesota Power uses to help with analysis and participation in the MISO market. Minnesota Power offers to sell energy and ancillary services sourced from its 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 the Company is allocated its load ratio share of the costs to procure the needed ancillary services. If market clearing prices are above Minnesota Power's generator offer prices, Minnesota Power generation will be selected to serve load. If market prices are below the generator offers, other lower cost resources will be selected to serve Minnesota Power's load, and the Company's generation will be backed down. The Company 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

Minnesota Power uses a production cost model to determine its forward monthly energy position. Model inputs include forecasted customer loads, generator capabilities, contract energy purchases and sales, forward energy prices, planned generator

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outages, and forced and maintenance outage rates. Inputs are updated and the model is run periodically to determine Minnesota Power's forward energy position.

Planned generator outages are usually known about a year or more in advance. When a significant energy deficit is identified, the Company monitors the wholesale market for least cost supply opportunities and enters into bilateral purchases to maintain volumetric position limits as outlined in Minnesota Power'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, Minnesota Power may choose to use bilateral purchases from those border areas to cover a generator outage.

II. Summary of Fuel Contracts

Coal Contracts

Kennecott Coal Sales LLC, an Oregon LLC (currently known as Navajo Transitional Energy Company, and formerly known as both Cloud Peak Energy and Rio Tinto Energy), Spring Creek Mine, Decker, Montana

Contract Signed	Start Date	End Date	Minimum Tons	Maximum Tons
[TRADE SECRET DATA BEGINS				
[redacted]				
TRADE SECRET DATA ENDS]				

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Kennecott Coal Sales LLC, an Oregon LLC (currently known as Navajo Transitional Energy Company, and formerly known as both Cloud Peak Energy and Rio Tinto Energy), Antelope Mine, Campbell and Converse Counties, Wyoming

Contract Signed	Start Date	End Date	Minimum Tons	Maximum Tons
[TRADE SECRET DATA BEGINS				
[redacted]				
TRADE SECRET DATA ENDS]				

Arch Coal Sales, Black Thunder Mine, Wright, Wyoming

Contract Signed	Start Date	End Date	Minimum Tons	Maximum Tons
[TRADE SECRET DATA BEGINS				
[redacted]				
TRADE SECRET DATA ENDS]				

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

Start Date	End Date	Minimum Tons	Maximum Tons
[TRADE SECRET DATA BEGINS			
[redacted]			
TRADE SECRET DATA ENDS]			

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Peabody CoalSales, LLC., St. Louis, Missouri, Caballo Mine, Campbell County, Wyoming

Start Date	End Date	Minimum Tons	Maximum Tons
[TRADE SECRET DATA BEGINS			
[redacted]			
			TRADE SECRET DATA ENDS]

Decker Coal Company (currently known as Lighthouse Resources, Inc.), Decker Mine, Decker, Montana

Contract Signed	Start Date	End Date	Minimum Tons	Maximum Tons
[TRADE SECRET DATA BEGINS				
[redacted]				
				TRADE SECRET DATA ENDS]

Venture Fuels – Coal and Transportation Agreement for Hibbard Renewable Energy Center

Start Date	End Date	Maximum Tons
[TRADE SECRET DATA BEGINS		
[redacted]		
		TRADE SECRET DATA ENDS]

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, Minnesota Power contracts with a Ties2 for ground railroad ties.

Contract	Start Date	End Date	Minimum Tons	Maximum Tons
	[TRADE SECRET DATA BEGINS			
Ties2	[redacted]			
				TRADE SECRET DATA ENDS]

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Transportation Contracts

Burlington Northern Santa Fe (currently known as BNSF Railway)

Contract Expiration	Minimum Tons	Maximum Tons
[TRADE SECRET DATA BEGINS [redacted] **TRADE SECRET DATA ENDS]**		

Trucking Contracts

Midwest Energy Resources Company

Start Date	End Date	Maximum Tons
[TRADE SECRET DATA BEGINS [redacted] **TRADE SECRET DATA ENDS]**		

Supplemental Fuels

Minnesota Power uses natural gas for start-up and flame stabilization at the Boswell Station and at the Rapids Energy Center. Minnesota Power will go out for bids for the natural gas at the Rapids Energy Center and Boswell Stations. Minnesota Power also purchases natural gas for start-up, flame stabilization, as well as generation at the Hibbard Station. At the Laskin Energy Center gas is purchased from BP as part of a gas management service contract. This agreement provides services from **[TRADE SECRET DATA BEGINS** [redacted] **TRADE SECRET DATA ENDS]** through **[TRADE SECRET DATA BEGINS** [redacted] **TRADE SECRET DATA ENDS]**.

Minnesota Power
Automatic Retail Fuel Adjustment Recovery

July 1, 2018 through December 31, 2019
Minn. Rule 7825.2810
Docket No. E,G999/AA-04-1279, dated December 7, 2005

Minnesota Power
Automatic Retail Fuel Adjustments Recovery
July 2018 - December 2019

A. Summary - Automatic Adjustment Charges:

Line No.	Revenue/Accounting Month	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019
	Cost of Fuel												
1	Company's Generating Stations (A/C 151)	$12,193,250	$11,234,268	$12,030,953	$12,658,122	$12,049,233	$11,399,208	$12,805,938	$12,413,661	$11,351,520	$5,278,138	$5,503,949	$6,046,694
2	Plus: Purchased Energy	15,134,284	15,459,835	17,601,281	17,128,097	16,405,146	17,617,168	17,166,851	16,756,612	19,160,810	24,070,790	24,001,835	18,315,685
2	Less: MISO Schedules 16 &17 & 24	(6539)	(15420)	(23571)	(42289)	(9320)	35947	65110	10083	(37237)	(22326)	3550	569
3	Less: Fuel Cost Recovered Through Inter-System Sales	9,436,629	8,374,124	8,724,311	8,842,678	9,156,173	9,578,954	9,518,284	9,372,564	8,697,534	7,444,249	7,484,973	7,078,780
4	Less: Costs Related to Solar	4569	3115	2932	989	216	(0)	(0)	0	0	(0)	426	0
5	Plus: Time of Generation and Solar Energy Adjustment	48,600	49,057	83,106	64,312	38,292	28,990	14,621	10,040	26,386	10,245	34,128	37,539
6	Total Monthly Cost of Fuel	$17,941,476	$18,381,341	$21,011,668	$21,049,153	$19,345,602	$19,430,465	$20,404,016	$19,797,666	$21,878,418	$21,937,250	$22,050,964	$17,320,568
7	2-Month Total Cost of Fuel	$35,908,933	$36,322,817	$39,393,008	$42,060,820	$40,394,754	$38,776,066	$39,834,480	$40,201,682	$41,676,085	$43,815,668	$43,988,214	$39,371,532
	KWh Sales												
8	Total Sales of Electricity	1,215,939,675	1,148,248,103	1,197,956,654	1,209,987,886	1,178,392,552	1,171,674,412	1,211,175,040	1,259,309,477	1,259,383,442	1,125,375,895	1,184,082,370	1,096,079,270
9	Less: Inter-System Sales	407,011,370	362,128,094	367,112,059	379,775,636	374,566,190	356,508,400	378,636,789	393,118,772	355,981,021	288,020,640	317,378,601	288,145,026
10	Less: Solar Generation and Purchased kWh	2,054,809	1,784,689	2,097,155	1,641,008	1,378,752	1,129,054	605,976	423,829	899,755	326,322	1,208,300	1,378,759
11	Total Monthly kWh Sales	806,873,496	784,335,320	828,747,440	828,571,242	802,447,610	814,036,958	831,932,275	865,766,876	902,502,666	837,028,933	865,495,469	806,555,485
12	2-Month Total kWh Sales	1,627,905,958	1,591,208,816	1,613,082,760	1,657,318,682	1,631,018,852	1,616,484,568	1,645,969,233	1,697,699,151	1,768,269,542	1,739,531,599	1,702,524,402	1,672,050,954
	Fuel Adjustment Charge - Fuel Clause 16 (¢/KWh)												
13	2-Month Average Cost of Fuel (¢/kWh)	2.206	2.283	2.442	2.538	2.477	2.399	2.420	2.368	2.357	2.519	2.584	2.355
14	Base Cost of Fuel (¢/kWh)	1.018	1.018	1.018	1.018	1.018	2.121	2.121	2.121	2.121	2.121	2.121	2.121
15	Fuel Adjustment Charge (lines 10 - line 11) (¢/kWh)	1.188	1.265	1.424	1.520	1.459	0.278	0.299	0.247	0.236	0.398	0.463	0.234
16	Applicable During **Billing Month** of:	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019

2-Month Average Cost of Fuel by Energy Type (¢/kWh)

	Billing Month:	**Jul-18**	**Aug-18**	**Sep-18**	**Oct-18**	**Nov-18**	**Dec-18**	**Jan-19**	**Feb-19**	**Mar-19**	**Apr-19**	**May-19**	**Jun-19**
17	Generation - Coal	0.937	1.005	0.974	1.024	1.032	0.939	0.977	1.023	0.907	0.572	0.295	0.382
18	Generation - Gas	0.004	0.002	0.006	0.007	0.004	0.003	0.001	0.000	0.012	0.013	0.004	0.003
19	Generation - BioFuel	0.001	0.001	0.002	0.005	0.009	0.009	0.003	0.000	0.000	0.005	0.021	0.016
20	Purchased Power - Coal	0.117	0.120	0.129	0.132	0.128	0.129	0.134	0.128	0.122	0.123	0.127	0.157
21	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
22	Purchased Power - Hydro	0.146	0.150	0.148	0.146	0.146	0.148	0.146	0.141	0.138	0.135	0.139	0.135
23	Purchased Power - Gas	0.002	0.005	0.008	0.011	0.006	0.004	0.003	0.001	0.001	0.002	0.002	0.002
24	Purchased Power - Wind	0.107	0.089	0.076	0.073	0.087	0.118	0.119	0.106	0.113	0.103	0.110	0.120
25	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
26	Purchased Power - Unknown	0.892	0.910	1.099	1.140	1.064	1.050	1.035	0.970	1.062	1.567	1.885	1.540
27	Total Two-Month Average Cost	2.206	2.283	2.442	2.538	2.477	2.399	2.420	2.368	2.357	2.519	2.584	2.355

Minnesota Power
Automatic Retail Fuel Adjustments Recovery
July 2018 - December 2019

A. Summary - Automatic Adjustment Charges:

Line No.	Revenue/Accounting Month	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019
	Cost of Fuel								
1	Company's Generating Stations (A/C 151)	$4,994,247	$7,495,690	$7,835,580	$7,869,881	$7,297,873	$6,981,445	$8,971,004	$8,483,159
2	Plus: Purchased Energy	17,082,700	17,619,002	24,661,468	18,019,942	14,715,005	14,851,582	18,552,926	17,369,953
2	Less: MISO Schedules 16 &17 & 24	(7357)	(20831)	(73443)	(85598)	(55666)	(16018)	(18524)	(13681)
3	Less: Fuel Cost Recovered Through Inter-System Sales	6,441,067	6,597,069	8,220,183	7,289,358	6,236,652	6,834,542	9,410,789	8,658,681
4	Less: Costs Related to Solar	(0)	0	0	1	(0)	(0)	(0)	1227
5	Plus: Time of Generation and Solar Energy Adjustment	43,953	46,556	68,255	64,821	35,542	23,239	11,882	10,380
6	Total Monthly Cost of Fuel	$15,687,191	$18,585,010	$24,418,563	$18,750,884	$15,867,433	$15,037,741	$18,143,547	$17,217,266
7	2-Month Total Cost of Fuel	$33,007,759	$34,272,201	$43,003,573	$43,169,447	$34,618,317	$30,905,174	$33,181,288	$35,360,813
	KWh Sales								
8	Total Sales of Electricity	1,069,416,329	1,070,034,940	1,127,345,592	1,155,302,379	1,033,618,740	1,098,780,673	1,202,629,925	1,242,696,378
9	Less: Inter-System Sales	278,552,740	294,453,511	326,444,074	340,866,260	260,337,090	313,179,309	388,719,047	420,576,108
10	Less: Solar Generation and Purchased kWh	1,623,620	1,811,818	1,881,395	1,888,608	1,159,900	961,625	486,729	401,113
11	Total Monthly kWh Sales	789,239,969	773,769,611	799,020,123	812,547,511	772,121,750	784,639,739	813,424,149	821,719,157
12	2-Month Total kWh Sales	1,595,795,454	1,563,009,580	1,572,789,734	1,611,567,634	1,584,669,261	1,556,761,489	1,598,063,888	1,635,143,306
	Fuel Adjustment Charge - Fuel Clause 16 (¢/KWh)								
13	2-Month Average Cost of Fuel (¢/kWh)	2.068	2.193	2.734	2.679	2.185	1.985		
14	Base Cost of Fuel (¢/kWh)	2.121	2.121	2.121	2.121	2.121	2.121		
15	Fuel Adjustment Charge (lines 10 - line 11) (¢/kWh)	(0.053)	0.072	0.613	0.558	0.064	(0.136)		
16	Applicable During **Billing Month** of:	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019		

2-Month Average Cost of Fuel by Energy Type (¢/kWh)

	Billing Month:	**Jul-19**	**Aug-19**	**Sep-19**	**Oct-19**	**Nov-19**	**Dec-19**
17	Generation - Coal	0.395	0.461	0.577	0.593	0.631	0.563
18	Generation - Gas	0.000	0.003	0.022	0.019	0.001	0.003
19	Generation - BioFuel	0.000	0.000	0.023	0.032	0.009	0.000
20	Purchased Power - Coal	0.162	0.146	0.140	0.130	0.091	0.028
21	Purchased Power - Biomass	0.000	0.000	0.000	0.000	0.000	0.000
22	Purchased Power - Hydro	0.179	0.196	0.204	0.200	0.152	0.132
23	Purchased Power - Gas	0.002	0.004	0.011	0.018	0.009	0.001
24	Purchased Power - Wind	0.103	0.091	0.076	0.078	0.098	0.135
25	Purchased Power - Diesel	0.000	0.000	0.000	0.000	0.000	0.000
26	Purchased Power - Unknown	1.227	1.292	1.680	1.609	1.194	1.125
27	Total Two-Month Average Cost	2.068	2.193	2.734	2.679	2.185	1.985

B. Summary - Revenue Collected From Retail

Customers Through Fuel Adjustment Charges:

Line No.		Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
1	Total Monthly Cost of Fuel (line 5, section A)	$21,011,668	$21,049,153	$19,345,602	$19,430,465	$20,404,016	$19,797,666	$21,878,418	$21,937,250	$22,050,964	$17,320,568	$15,687,191	$18,585,010
2	Total Monthly KWH Sales (line 10, section A)	828,747,440	828,571,242	802,447,610	814,036,958	831,932,275	865,766,876	902,502,666	837,028,933	865,495,469	806,555,485	789,239,969	773,769,611
3	Actual Monthly Cost of Fuel (¢/kWh) (line 1/ line 2)	2.535	2.540	2.411	2.387	2.453	2.287	2.424	2.621	2.548	2.147	1.988	2.402
4	Retail kWh Sales Subject to FAC (line 5 + line 13+ line 20+ line 27+ line 34+ line 41+ line 48+ line 55)	696,463,050	697,917,065	682,061,581	687,628,217	698,715,314	731,081,312	754,792,751	705,799,281	733,658,813	687,841,695	672,922,052	656,300,528
	Retail Fuel Clause No. 16												
	KWh Sales												
5	Retail kWh Sales Subject to Fuel Clause No. 16	0	0	0	0	0	0	0	0	0	0	0	0
6	KWh Sales Under Competitive Rate Schedules	0	0	0	0	0	0	0	0	0	0	0	0
7	Total (line 5 + line 6)	0	0	0	0	0	0	0	0	0	0	0	0
	Fuel Cost Recovery (¢/KWh)												
8	Base Cost of Fuel (¢/kWh) (line 14, section A)	1.018	1.018	1.018	1.018	1.018	2.121	2.121	2.121	2.121	2.121	2.121	2.121
9	Fuel Adjustment Charge (¢/kWh) (line 15, section A)	1.188	1.265	1.424	1.520	1.459	0.278	0.299	0.247	0.236	0.398	0.463	0.234
	Fuel Cost Recovery (Total $)												
10	Base Cost of Fuel (line 7 x line 8)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
11	Fuel Adjustment Charge (line 5 x line 9)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
12	Subtotal (line 10 + line 11)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Retail Fuel Clause -RESIDENTIAL												
	KWh Sales												
13	Retail kWh Sales Subject to Fuel Clause	76,054,785	81,608,399	77,245,945	71,812,768	82,506,874	100,450,592	107,351,491	120,448,416	103,270,259	88,679,170	75,147,225	68,603,769
	Fuel Cost Recovery (¢/KWh)												
14	Class Cost Factor (RIDER FOR FUEL AND PURCHASED ENERGY ADJUSTMENT June 1, 2011)	1.07076	1.07076	1.07076	1.07076	1.07076	1.01406	1.01406	1.01406	1.01406	1.01406	1.01406	1.01406
15	Base Cost of Fuel (¢/kWh) (line 14, section A x line 14)	1.090	1.090	1.090	1.090	1.090	2.151	2.151	2.151	2.151	2.151	2.151	2.151
16	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 14)	1.272	1.355	1.525	1.628	1.562	0.282	0.303	0.250	0.239	0.404	0.470	0.237
	Fuel Cost Recovery (Total $)						1/						
17	Base Cost of Fuel (line 13 x line 15)	$828,997	$889,532	$841,981	$782,759	$899,325	$1,404,024	$2,309,131	$2,590,845	$2,221,343	$1,907,489	$1,616,417	$1,475,667
18	Fuel Adjustment Charge (line 13 x line 16)	$967,417	$1,105,794	$1,178,001	$1,169,112	$1,288,757	$1,196,106	$325,275	$301,121	$246,816	$358,264	$353,192	$162,591
19	Subtotal (line 17 + line 18)	$1,796,414	$1,995,325	$2,019,981	$1,951,871	$2,188,082	$2,600,130	$2,634,406	$2,891,966	$2,468,159	$2,265,753	$1,969,609	$1,638,258
	Retail Fuel Clause -GENERAL SERVICE												
	KWH SALES												
20	Retail kWh Sales Subject to Fuel Clause	54,230,137	58,508,892	56,611,120	50,423,404	52,677,296	60,219,737	59,300,478	64,760,629	57,784,841	53,743,888	49,791,007	49,126,752
	FUEL COST RECOVERY (¢/KWH)												
21	Class Cost Factor (RIDER FOR FUEL AND PURCHASED ENERG	1.07093	1.07093	1.07093	1.07093	1.07093	1.03518	1.03518	1.03518	1.03518	1.03518	1.03518	1.03518
22	Base Cost of Fuel (¢/kWh) (line 14, section A x line 21)	1.090	1.090	1.090	1.090	1.090	2.196	2.196	2.196	2.196	2.196	2.196	2.196
23	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 21)	1.272	1.355	1.525	1.628	1.562	0.288	0.310	0.256	0.244	0.412	0.479	0.242
	FUEL COST RECOVERY ($)						1/						
24	Base Cost of Fuel (line 20 x line 22)	$591,108	$637,747	$617,061	$549,615	$574,183	$846,590	$1,302,238	$1,422,143	$1,268,955	$1,180,216	$1,093,411	$1,078,823
25	Fuel Adjustment Charge (line 20 x line 23)	$689,807	$792,795	$863,320	$820,893	$822,819	$721,547	$183,831	$165,787	$140,995	$221,425	$238,499	$118,887
26	Subtotal (line 24 + line 25)	$1,280,916	$1,430,542	$1,480,381	$1,370,508	$1,397,002	$1,568,137	$1,486,070	$1,587,931	$1,409,950	$1,401,641	$1,331,909	$1,197,710

B. Summary - Revenue Collected From Retail

Customers Through Fuel Adjustment Charges:

Line No.		Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
1	Total Monthly Cost of Fuel (line 5, section A)	$24,418,563	$18,750,884	$15,867,433	$15,037,741	$18,143,547	$17,217,266
2	Total Monthly KWH Sales (line 10, section A)	799,020,123	812,547,511	772,121,750	784,639,739	813,424,149	821,719,157
3	Actual Monthly Cost of Fuel (¢/kWh) (line 1/ line 2)	3.056	2.308	2.055	1.917	2.231	2.095
4	Retail kWh Sales Subject to FAC (line 5 + line 13+ line 20+ line 27+ line 34+ line 41+ line 48+ line 55)	680,449,027	699,818,104	667,687,441	673,525,296	697,023,002	694,165,956
	Retail Fuel Clause No. 16						
	KWh Sales						
5	Retail kWh Sales Subject to Fuel Clause No. 16	0	0	0	0	0	0
6	KWh Sales Under Competitive Rate Schedules	0	0	0	0	0	0
7	Total (line 5 + line 6)	0	0	0	0	0	0
	Fuel Cost Recovery (¢/KWh)						
8	Base Cost of Fuel (¢/kWh) (line 14, section A)	2.121	2.121	2.121	2.121	2.121	2.121
9	Fuel Adjustment Charge (¢/kWh) (line 15, section A)	(0.053)	0.072	0.613	0.558	0.064	(0.136)
	Fuel Cost Recovery (Total $)						
10	Base Cost of Fuel (line 7 x line 8)	$0	$0	$0	$0	$0	$0
11	Fuel Adjustment Charge (line 5 x line 9)	$0	$0	$0	$0	$0	$0
12	Subtotal (line 10 + line 11)	$0	$0	$0	$0	$0	$0
	Retail Fuel Clause -RESIDENTIAL						
	KWh Sales						
13	Retail kWh Sales Subject to Fuel Clause	72,558,687	84,226,852	71,065,894	67,934,237	82,510,876	95,867,239
	Fuel Cost Recovery (¢/KWh)						
14	Class Cost Factor (RIDER FOR FUEL AND PURCHASED ENERGY ADJUSTMENT June 1, 2011)	1.01406	1.01406	1.01406	1.01406	1.01406	1.01406
15	Base Cost of Fuel (¢/kWh) (line 14, section A x line 14)	2.151	2.151	2.151	2.151	2.151	2.151
16	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 14)	(0.054)	0.073	0.622	0.566	0.065	(0.138)
	Fuel Cost Recovery (Total $)						
17	Base Cost of Fuel (line 13 x line 15)	$1,560,737	$1,811,720	$1,528,627	$1,461,265	$1,774,809	$2,062,104
18	Fuel Adjustment Charge (line 13 x line 16)	($39,182)	$61,486	$442,030	$384,508	$53,632	($132,297)
19	Subtotal (line 17 + line 18)	$1,521,556	$1,873,205	$1,970,657	$1,845,773	$1,828,441	$1,929,808
	Retail Fuel Clause -GENERAL SERVICE						
	KWH SALES						
20	Retail kWh Sales Subject to Fuel Clause	53,918,873	59,731,463	54,301,302	50,613,898	53,871,151	59,243,047
	FUEL COST RECOVERY (¢/KWH)						
21	Class Cost Factor (RIDER FOR FUEL AND PURCHASED ENERG	1.03518	1.03518	1.03518	1.03518	1.03518	1.03518
22	Base Cost of Fuel (¢/kWh) (line 14, section A x line 21)	2.196	2.196	2.196	2.196	2.196	2.196
23	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 21)	(0.055)	0.075	0.635	0.578	0.066	(0.141)
	FUEL COST RECOVERY ($)						
24	Base Cost of Fuel (line 20 x line 22)	$1,184,058	$1,311,703	$1,192,457	$1,111,481	$1,183,010	$1,300,977
25	Fuel Adjustment Charge (line 20 x line 23)	($29,655)	$44,799	$344,813	$292,548	$35,555	($83,533)
26	Subtotal (line 24 + line 25)	$1,154,403	$1,356,502	$1,537,270	$1,404,030	$1,218,565	$1,217,445

Minnesota Power
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	Retail Fuel Clause -LARGE LIGHT AND POWER	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
	KWH SALES												
27	Retail kWh Sales Subject to Fuel Clause	107,853,752	112,915,303	110,471,067	108,362,231	103,546,369	107,844,870	111,530,132	112,655,118	113,294,746	110,777,430	104,505,597	102,917,888
	FUEL COST RECOVERY (¢/KWH)												
	Class Cost Factor (RIDER FOR FUEL AND PURCHASED												
28	ENERGY ADJUSTMENT Nov 2, 2009)	1.00424	1.00424	1.00424	1.00424	1.00424	1.00982	1.00982	1.00982	1.00982	1.00982	1.00982	1.00982
29	Base Cost of Fuel (¢/kWh) (line 14, section A x line 28)	1.022	1.022	1.022	1.022	1.022	2.142	2.142	2.142	2.142	2.142	2.142	2.142
30	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 28)	1.193	1.270	1.430	1.526	1.465	0.281	0.302	0.249	0.238	0.402	0.468	0.236
	FUEL COST RECOVERY ($)						1/						
31	Base Cost of Fuel (line 27 x line 29)	$1,102,265	$1,153,994	$1,129,014	$1,107,462	$1,058,244	$1,816,327	$2,388,975	$2,413,073	$2,426,773	$2,372,853	$2,238,510	$2,204,501
32	Fuel Adjustment Charge (line 27 x line 30)	$1,286,695	$1,434,024	$1,579,736	$1,653,608	$1,516,954	$824,967	$336,821	$280,511	$269,641	$445,325	$489,086	$242,886
33	Subtotal (line 31 + line 32)	$2,388,961	$2,588,019	$2,708,751	$2,761,070	$2,575,198	$2,641,293	$2,725,796	$2,693,584	$2,696,415	$2,818,178	$2,727,596	$2,447,387
	Retail Fuel Clause -LARGE POWER												
	KWH SALES												
34	Retail kWh Sales Subject to Fuel Clause	456,181,075	442,647,598	435,335,730	454,488,330	457,033,808	459,376,322	473,405,528	404,797,323	456,479,125	432,004,096	441,022,388	433,896,227
	FUEL COST RECOVERY (¢/KWH)												
	Class Cost Factor (RIDER FOR FUEL AND PURCHASED												
35	ENERGY ADJUSTMENT Nov 2, 2009)	0.97769	0.97769	0.97769	0.97769	0.97769	0.99024	0.99024	0.99024	0.99024	0.99024	0.99024	0.99024
36	Base Cost of Fuel (¢/kWh) (line 14, section A x line 35)	0.995	0.995	0.995	0.995	0.995	2.100	2.100	2.100	2.100	2.100	2.100	2.100
37	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 35)	1.161	1.237	1.392	1.486	1.426	0.275	0.296	0.245	0.234	0.394	0.458	0.232
	FUEL COST RECOVERY ($)						1/						
38	Base Cost of Fuel (line 34 x line 36)	$4,539,002	$4,404,344	$4,331,591	$4,522,159	$4,547,486	$9,646,903	$9,941,516	$8,500,744	$9,586,062	$9,072,086	$9,261,470	$9,111,821
39	Fuel Adjustment Charge (line 34 x line 37)	$5,296,262	$5,475,551	$6,059,873	$6,753,697	$6,517,302	$1,263,285	$1,401,280	$991,753	$1,068,161	$1,702,096	$2,019,883	$1,006,639
40	Subtotal (line 38 + line 39)	$9,835,264	$9,879,894	$10,391,464	$11,275,855	$11,064,788	$10,910,188	$11,342,796	$9,492,497	$10,654,223	$10,774,182	$11,281,353	$10,118,460
	Retail Fuel Clause -MUNICIPAL PUMPING												
	KWH SALES												
41	Retail kWh Sales Subject to Fuel Clause	1,011,542	995,570	938,063	963,102	1,035,792	1,118,842	1,048,977	1,179,053	1,169,003	1,140,674	1,160,345	611,336
	FUEL COST RECOVERY (¢/KWH)												
	Class Cost Factor (RIDER FOR FUEL AND PURCHASED												
42	ENERGY ADJUSTMENT Nov 2, 2009)	0.98103	0.98103	0.98103	0.98103	0.98103	1.01571	1.01571	1.01571	1.01571	1.01571	1.01571	1.01571
43	Base Cost of Fuel (¢/kWh) (line 14, section A x line 42)	0.999	0.999	0.999	0.999	0.999	2.154	2.154	2.154	2.154	2.154	2.154	2.154
44	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 42)	1.165	1.241	1.397	1.491	1.431	0.282	0.304	0.251	0.240	0.404	0.470	0.238
	FUEL COST RECOVERY ($)						1/						
45	Base Cost of Fuel (line 41 x line 43)	$10,105	$9,946	$9,371	$9,621	$10,348	$14,438	$22,595	$25,397	$25,180	$24,570	$24,994	$13,168
46	Fuel Adjustment Charge (line 41 x line 44)	$11,784	$12,355	$13,105	$14,360	$14,822	$12,767	$3,189	$2,959	$2,806	$4,608	$5,454	$1,455
47	Subtotal (line 45 + line 46)	$21,890	$22,301	$22,476	$23,981	$25,170	$27,205	$25,784	$28,356	$27,986	$29,178	$30,447	$14,623

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	Retail Fuel Clause -LARGE LIGHT AND POWER	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
	KWH SALES						
27	Retail kWh Sales Subject to Fuel Clause	105,949,924	112,359,076	106,354,535	105,777,424	106,883,744	106,693,984
	FUEL COST RECOVERY (¢/KWH)						
	Class Cost Factor (RIDER FOR FUEL AND PURCHASED						
28	ENERGY ADJUSTMENT Nov 2, 2009)	1.00982	1.00982	1.00982	1.00982	1.00982	1.00982
29	Base Cost of Fuel (¢/kWh) (line 14, section A x line 28)	2.142	2.142	2.142	2.142	2.142	2.142
30	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 28)	(0.054)	0.073	0.619	0.563	0.065	(0.137)
	FUEL COST RECOVERY ($)						
31	Base Cost of Fuel (line 27 x line 29)	$2,269,447	$2,406,731	$2,278,114	$2,265,752	$2,289,450	$2,285,385
32	Fuel Adjustment Charge (line 27 x line 30)	($57,213)	$82,022	$658,335	$595,527	$69,474	($146,171)
33	Subtotal (line 31 + line 32)	$2,212,234	$2,488,754	$2,936,449	$2,861,279	$2,358,924	$2,139,214
	Retail Fuel Clause -LARGE POWER						
	KWH SALES						
34	Retail kWh Sales Subject to Fuel Clause	446,923,219	442,319,270	434,581,169	447,627,125	451,933,359	430,390,588
	FUEL COST RECOVERY (¢/KWH)						
	Class Cost Factor (RIDER FOR FUEL AND PURCHASED						
35	ENERGY ADJUSTMENT Nov 2, 2009)	0.99024	0.99024	0.99024	0.99024	0.99024	0.99024
36	Base Cost of Fuel (¢/kWh) (line 14, section A x line 35)	2.100	2.100	2.100	2.100	2.100	2.100
37	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 35)	(0.052)	0.071	0.607	0.553	0.063	(0.135)
	FUEL COST RECOVERY ($)						
38	Base Cost of Fuel (line 34 x line 36)	$9,385,388	$9,288,705	$9,126,205	$9,400,170	$9,490,601	$9,038,202
39	Fuel Adjustment Charge (line 34 x line 37)	($232,400)	$314,047	$2,637,908	$2,475,378	$284,718	($581,027)
40	Subtotal (line 38 + line 39)	$9,152,988	$9,602,751	$11,764,112	$11,875,548	$9,775,319	$8,457,175
	Retail Fuel Clause -MUNICIPAL PUMPING						
	KWH SALES						
41	Retail kWh Sales Subject to Fuel Clause	0	0	0	0	0	0
	FUEL COST RECOVERY (¢/KWH)						
	Class Cost Factor (RIDER FOR FUEL AND PURCHASED						
42	ENERGY ADJUSTMENT Nov 2, 2009)	1.01571	1.01571	1.01571	1.01571	1.01571	1.01571
43	Base Cost of Fuel (¢/kWh) (line 14, section A x line 42)	2.154	2.154	2.154	2.154	2.154	2.154
44	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 42)	(0.054)	0.073	0.623	0.567	0.065	(0.138)
	FUEL COST RECOVERY ($)						
45	Base Cost of Fuel (line 41 x line 43)	$0	$0	$0	$0	$0	$0
46	Fuel Adjustment Charge (line 41 x line 44)	$0	$0	$0	$0	$0	$0
47	Subtotal (line 45 + line 46)	$0	$0	$0	$0	$0	$0

Minnesota Power
Automatic Retail Fuel Adjustments Recovery
July 2018 - December 2019

	Retail Fuel Clause -LIGHTING	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
	KWH SALES												
48	Retail kWh Sales Subject to Fuel Clause	1,131,759	1,241,303	1,459,656	1,578,382	1,915,175	2,070,949	2,156,145	1,958,742	1,660,839	1,496,437	1,295,490	1,144,556
	FUEL COST RECOVERY (¢/KWH)												
	Class Cost Factor (RIDER FOR FUEL AND PURCHASED												
49	ENERGY ADJUSTMENT Nov 2, 2009)	0.74029	0.74029	0.74029	0.74029	0.74029	0.82572	0.82572	0.82572	0.82572	0.82572	0.82572	0.82572
50	Base Cost of Fuel (¢/kWh) (line 14, section A x line 49)	0.754	0.754	0.754	0.754	0.754	1.751	1.751	1.751	1.751	1.751	1.751	1.751
51	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 49)	0.879	0.936	1.054	1.125	1.080	0.230	0.247	0.204	0.195	0.329	0.382	0.193
	FUEL COST RECOVERY ($)						1/						
52	Base Cost of Fuel (line 48 x line 50)	$8,533	$9,359	$11,006	$11,901	$14,440	$24,259	$37,754	$34,298	$29,081	$26,203	$22,684	$20,041
53	Fuel Adjustment Charge (line 48 x line 51)	$9,948	$11,619	$15,385	$17,757	$20,684	$14,997	$5,326	$3,996	$3,239	$4,923	$4,949	$2,209
54	Subtotal (line 52 + line 53)	$18,482	$20,978	$26,391	$29,658	$35,124	$39,256	$43,080	$38,293	$32,320	$31,126	$27,633	$22,250
	Total Fuel Cost Recovery From Retail Sales:												
	Base Cost of Fuel (line 10+line 17+ line 24+ line 31+ line 38+ line												
61	45+ line 52 + line 58)	$7,080,011	$7,104,922	$6,940,024	$6,983,518	$7,104,026	$13,752,540	$16,002,210	$14,986,500	$15,557,395	$14,583,416	$14,257,485	$13,904,022
	Fuel Adjustment Charge (line 11+ line 18+ line 25+ line 32+ line												
62	39+ line 46+ line 53 + line 59)	$8,261,914	$8,832,138	$9,709,419	$10,429,426	$10,181,339	$4,033,668	$2,255,722	$1,746,128	$1,731,658	$2,736,642	$3,111,062	$1,534,667
	Total Fuel Cost Recovery (line 12+ line 19+ line 26+ line 33+ line												
63	40+ line 47+ line 54 + line 60)	$15,341,926	$15,937,060	$16,649,443	$17,412,943	$17,285,365	$17,786,208	$18,257,932	$16,732,628	$17,289,053	$17,320,058	$17,368,547	$15,438,689

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

Line No.		Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
1	Total Retail Fuel Cost Recovery (line 63, section B)	$15,341,926	$15,937,060	$16,649,443	$17,412,943	$17,285,365	$17,786,208	$18,257,932	$16,732,628	$17,289,053	$17,320,058	$17,368,547	$15,438,689
2	Retail kWh Sales Subject to FAC (line 4, section B)	696,463,050	697,917,065	682,061,581	687,628,217	698,715,314	731,081,312	754,792,751	705,799,281	733,658,813	687,841,695	672,922,052	656,300,528
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)	696,463,050	697,917,065	682,061,581	687,628,217	698,715,314	731,081,312	754,792,751	705,799,281	733,658,813	687,841,695	672,922,052	656,300,528
5	Actual Monthly Cost of Fuel (¢/kWh) (line 3, section B)	2.535	2.540	2.411	2.387	2.453	2.287	2.424	2.621	2.548	2.147	1.988	2.402
6	Actual Monthly Cost of Fuel for Retail kWh (line 4 x line 5)	$17,655,338	$17,727,093	$16,444,505	$16,413,686	$17,139,487	$16,719,830	$18,296,176	$18,498,999	$18,693,627	$14,767,961	$13,377,690	$15,764,339
7	Total Over (Under) Recovery - Monthly (line 1- line 6)	($2,313,412)	($1,790,034)	$204,939	$999,258	$145,878	$1,066,379	($38,244)	($1,766,371)	($1,404,574)	$2,552,097	$3,990,857	($325,650)
8	Cumulative Over (Under) Recovery (Based on line 7)	($2,313,412)	($4,103,446)	($3,898,508)	($2,899,250)	($2,753,372)	($1,686,993)	($1,725,237)	($3,491,608)	($4,896,182)	($2,344,086)	$1,646,771	$1,321,122

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 November 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

1/ Effective 12/1/2018, the Base Cost of Fuel was updated to $21.21 from $10.18. Because of the change, kWh recorded for December 2019 included recovery from the old $10.18 base and also recovery from the new $21.21 base. In order to correctly reflect the recovery of Base and FAC, we had to split the kWh and apply the different base and FAC adjustment to the split. The totals are reflected above by adding the splits together to come up with the total recovery for the month of December 2018

Minnesota Power
Automatic Retail Fuel Adjustments Recovery
July 2018 - December 2019

	Retail Fuel Clause -LIGHTING	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
	KWH SALES						
48	Retail kWh Sales Subject to Fuel Clause	1,098,324	1,181,443	1,384,541	1,572,612	1,823,872	1,971,098
	FUEL COST RECOVERY (¢/KWH)						
49	Class Cost Factor (RIDER FOR FUEL AND PURCHASED ENERGY ADJUSTMENT Nov 2, 2009)	0.82572	0.82572	0.82572	0.82572	0.82572	0.82572
50	Base Cost of Fuel (¢/kWh) (line 14, section A x line 49)	1.751	1.751	1.751	1.751	1.751	1.751
51	Fuel Adjustment Charge (¢/kWh) (line 15, section A x line 49)	(0.044)	0.059	0.506	0.461	0.053	(0.112)
	FUEL COST RECOVERY ($)						
52	Base Cost of Fuel (line 48 x line 50)	$19,232	$20,687	$24,243	$27,536	$31,936	$34,514
53	Fuel Adjustment Charge (line 48 x line 51)	($483)	$697	$7,006	$7,250	$967	($2,208)
54	Subtotal (line 52 + line 53)	$18,748	$21,384	$31,249	$34,786	$32,903	$32,306
	Total Fuel Cost Recovery From Retail Sales:						
61	Base Cost of Fuel (line 10+line 17+ line 24+ line 31+ line 38+ line 45+ line 52 + line 58)	$14,418,862	$14,839,546	$14,149,646	$14,266,205	$14,769,806	$14,721,183
62	Fuel Adjustment Charge (line 11+ line 18+ line 25+ line 32+ line 39+ line 46+ line 53 + line 59)	($358,933)	$503,050	$4,090,091	$3,755,211	$444,346	($945,235)
63	Total Fuel Cost Recovery (line 12+ line 19+ line 26+ line 33+ line 40+ line 47+ line 54 + line 60)	$14,059,929	$15,342,596	$18,239,737	$18,021,416	$15,214,152	$13,775,948

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

Line No.		Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
1	Total Retail Fuel Cost Recovery (line 63, section B)	$14,059,929	$15,342,596	$18,239,737	$18,021,416	$15,214,152	$13,775,948
2	Retail kWh Sales Subject to FAC (line 4, section B)	680,449,027	699,818,104	667,687,441	673,525,296	697,023,002	694,165,956
3	KWh Sales Under Competitive Rates / (line 6, section B)	0	0	0	0	0	0
4	Subtotal (line 2 + line 3)	680,449,027	699,818,104	667,687,441	673,525,296	697,023,002	694,165,956
5	Actual Monthly Cost of Fuel (¢/kWh) (line 3, section B)	3.056	2.308	2.055	1.917	2.231	2.095
6	Actual Monthly Cost of Fuel for Retail kWh (line 4 x line 5)	$20,794,522	$16,151,802	$13,720,977	$12,911,480	$15,550,583	$14,542,777
7	Total Over (Under) Recovery - Monthly (line 1- line 6)	($6,734,593)	($809,206)	$4,518,760	$5,109,936	($336,431)	($766,829)
8	Cumulative Over (Under) Recovery (Based on line 7)	($5,413,472)	($6,222,678)	($1,703,918)	$3,406,018	$3,069,587	$2,302,758

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Minnesota Power's

Annual Five-Year Projection of Fuel Costs

Minn. Rule 7825.2830

NON-PUBLIC DOCUMENT
CONTAINS TRADE SECRET DATA

Introduction

On June 12, 2019, the Minnesota Public Utilities Commission issued an Order in Docket No. E999/CI-03-802 approving the disclosure of the five-year projection of fuel costs by source of power to the annual Fuel Clause Adjustment Forecast ("FCA Forecast" filing. Due to the changes with Fuel Clause Reform Minnesota Power has included the five-year projection of fuel costs which was filed on May 1, 2019 as part of the 2020 FCA Forecast filing. An updated five-year projection of fuel costs will be included in the 2021 FCA forecast filing due on May 1, 2020.

Five-year Projection Filed May 1, 2019 in Docket No. E015/AA-19-302

Minnesota Power's five-year projection of fuel costs by source of power is based on data, generated by the Electric Financial Forecast. Forecast data beyond 2020 is available on an annual basis only.

Minnesota Power has six 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 fuel cost), and from other power suppliers
- Wind Generation from Company owned generating plants, and from other power suppliers, and
- Solar Generation from Company owned generating plant (Camp Ripley) and Community Solar Garden program.

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

1. With the *Energy*Forward strategy Minnesota Power's steam generation will decrease from historical levels in order to seek a sustainable balance of energy

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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 retired Taconite Harbor Unit 3 generator (75 MW) and converted its Laskin Energy Center to natural gas which runs significantly less than its previous baseload operation as it serves as a peaking and reliability resource for customer power supply. Per the approved 2015 Integrated Resource Plan, in fall of 2016 Taconite Harbor units 1 and 2 were idled (150 MW), and are utilized for reliability of the bulk electric system as market conditions require through 2020, and will cease coal-fired operation post-2020. Since the 2015 IRP, Minnesota Power announced it ceased coal-fired operation at Boswell units 1 and 2 in December 2018.

2. Total Steam generation costs attributed to coal are expected to **[TRADE SECRET DATA BEGINS** [redacted] **[TRADE SECRET DATA ENDS]** from 2020 to 2024.

3. Starting in June 2015 purchased generation from Square Butte declined to reflect Minnesota Power's decreased share of the unit's total output of approximately 22 percent. After 2022, Minnesota Power's share of the output will continue to be reduced per the North Dakota Wind Project and decrease to zero by end of 2025.

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 capabilities for its customer native load. There is no fuel cost associated with this energy source. Hydro generation is projected to **[TRADE SECRET DATA BEGINS** [redacted] **TRADE SECRET DATA**

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ENDS]. For the FAC Forecast period (2020), Minnesota Power used a hydrological forecast, which can vary from the longer-term expectation mentioned above.

6. Minnesota Power's load is expected to increase as additional large industrial customers begin or expand operation in our service territory.

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, 2019, 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 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 2020-2024.

8. Minnesota Power has developed an energy-rich wind portfolio composed of 850 MW of wind located in North Dakota and Minnesota. The 600 MW of wind energy located in North Dakota is transported across a high-voltage DC line that starts in Center, ND and terminates outside Duluth, MN. Also included is the 250 MW Nobles 2 Wind project approved by the Commission in January 2019 and is expected to start generating in 2020. This new project is expected to generate approximately 1 million MWh annually and is located in southwest Minnesota.

   Note, for the FAC Forecast period (2020), Minnesota Power used a meterlogical wind speed forecast to estimate wind farm energy production. Post 2020, the long-term wind energy production forecast is based on historical production.

PUBLIC DOCUMENT
TRADE SECRET DATA EXCISED

	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 BEGINS				[TRADE SECRET DATA BEGINS		[TRADE SECRET DATA BEGINS				
JAN 20	$10,414	$23	[redacted]			$3,184	[redacted]	$14,036	[redacted]	($6,719)	$20,963	897,801	$23.35
FEB	$10,017	$22				$2,589		$11,840		($6,043)	$18,460	805,417	$22.92
MAR	$9,638	$25				$3,180		$12,537		($6,457)	$18,963	849,595	$22.32
APR	$4,338	$7				$3,089		$14,984		($6,314)	$16,148	759,526	$21.26
MAY	$4,734	$16				$3,184		$13,377		($5,038)	$16,321	786,706	$20.75
JUN	$8,524	$18				$2,684		$13,916		($5,271)	$19,915	766,089	$26.00
JUL	$10,221	$545				$3,184		$15,033		($6,135)	$22,914	827,000	$27.71
AUG	$10,256	$119				$3,184		$15,135		($5,723)	$23,031	823,837	$27.96
SEP	$8,108	$19				$2,684		$14,185		($5,091)	$19,948	775,347	$25.73
OCT	$7,202	$28				$3,184		$16,364		($6,681)	$20,103	772,239	$26.03
NOV	$9,136	$22				$3,094		$15,688		($6,678)	$21,261	816,670	$26.03
DEC 20	$9,795	$23				$3,183		$17,161		($6,353)	$23,815	884,429	$26.93
TOTAL	$102,383	$866				$36,423		$174,256		($72,502)	$241,843	9,764,655	$24.77
		Avg Cost per MWh	TRADE SECRET DATA ENDS]				TRADE SECRET DATA ENDS]		TRADE SECRET DATA ENDS]				

[TRADE SECRET DATA BEGINS

JAN 21 - DEC 21	[redacted]
	Avg Cost per MWh
JAN 22 - DEC 22	[redacted]
	Avg Cost per MWh
JAN 23 - DEC 23	[redacted]
	Avg Cost per MWh
JAN 24 - DEC 24	[redacted]
	Avg Cost per MWh

TRADE SECRET DATA ENDS]

Minnesota Power
MISO Operations and Cost Impacts
Docket No. E015/PA-01-539

Background

On April 26, 2002, the Commission approved Minnesota Power's petition in Docket No. E015/PA-01-539, to transfer functional control of certain transmission facilities to MISO. The Order states, Minnesota Power is required to report the following information as part of its AAA report:

1. **Section 2, Item C, Part 3(a): The Schedule 10 administrative charges paid to the MISO under MISO tariff.**

   The information related to MISO Schedule 10 is no longer required to be reported as part of the AAA process per Commission order dated July 21, 2017 in Docket No. E-999/AA-15-611

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 Minnesota Power to curtail Minnesota Power's own generation, for reliability reasons, that resulted in an interruption of firm retail electric service to Minnesota Power'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 Minnesota Power'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 Minnesota Power'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 Minnesota Power's overall transmission costs and revenues and its overall energy costs for retail customers, including:**

   i. **an analysis of how MISO membership has affected Minnesota Power's ability to use its own generating sources when they are the least-cost power source; and**

   ii. **Minnesota Power'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.

Minnesota Power participates in the MISO Day-Ahead, Real-Time, and Ancillary Services Market. 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 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 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 Minnesota Power to re-dispatch Minnesota Power's owned generation for reliability reasons, including an explanation of financial impact on rates, if any, and the reason for the re-dispatch, if known.**

   The Commission discontinued this requirement in their February 6, 2008, Order in Docket No. E017/M-05-284.

Minnesota Power
Network Resources Designated to Serve Native Load

Docket No. E015/M-05-277, dated December 20, 2006

PUBLIC DOCUMENT
TRADE SECRET DATA EXCISED

Steam Generation /1	**MW** /2
Boswell Energy Center	**[TRADE SECRET DATA BEGINS**
Unit No. 1	[redacted] /5
Unit No. 2	/5
Unit No. 3	
Unit No. 4	
Taconite Harbor Energy Center	
Unit No. 1	
Unit No. 2	
Unit No. 3	
Laskin Energy Center	
Unit No. 1	
Unit No. 2	
Hibbard Energy Center	
Unit No. 3/4	
Hydro Generation	**MW** /2
Thomson	[redacted]
Blanchard	
Fond du Lac	
Other Hydro	
Wind Generation	**MW** /4
Taconite Ridge	[redacted]
Bison	
Long Term Purchase	**MW** /2
Square Butte /3	[redacted]
Oliver County 1	
Oliver County 2	
Wing River	
	TRADE SECRET DATA ENDS]

Notes:

/1 Steam Generation is also provided by MP Non-Regulated Units: Rapids Energy Center (29.5 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 2019-2020 as these quantities are currently in effect. Values are comprised from the MISO Planning Year 2019-2020 List of GVTC Test Results as found in the Planning Year 2019-2020 unit list of capacity.

/3 Minnesota Power's share of Square Butte.

/4 All quantities relate to MISO Planning Year 2019-2020 as these quantities are currently in effect. Values are comprised from the MISO Planning Year 2019-2020 List of Capacity Credit Results as found in the Planning Year 2019-2020 unit list of capacity.

/5 Boswell 1&2 are no longer accredited as of MISO Planning Year 2019-2020.

Minnesota Power
Additional Reporting Requirements
Docket Nos. E015/M-05-277, E015/M-08-528, E999/AA-15-611

Accounting Treatment for MISO Day 2/ASM Costs (Docket: E015/M-05-277)

	Reporting Requirement	Requirement Satisfied in Reporting Document
A.	Provide additional information regarding plans with respect to acquiring fuel and purchase energy: 1) Overview of plans for acquiring fuel & purchased energy and actions to minimize or lower fuel costs, including: • Planned actions to minimize or lower fuel costs, including financial instruments and hedging • Plans to cover fuel and energy risk during planned unit outages • Plans for optimization of congestion cost hedging through FTR's 2) Provide list of network resources designated to serve native load.	Annual AAA Report, Attachment No. 2 Annual AAA Report, Attachment No. 6
B.	Provide Annual Fuel Adjustment Clause (FAC) Forecast for next 12 months including: • Fuel and energy costs • MISO Day 2 Costs & Revenues • Major changes affecting stability of forecast due to changes in utility cost inputs • Projected variance in fuel/purchased power due to increased volatility in markets • An explanation of deviations between forecast and actual costs in previous year	Annual monthly FAC Forecast submitted after final budget is approved in December in the December fuel filing prepared the following January. Explanations of major changes and deviations between forecast and actual costs for previous year will be included in the annual FAC report to customers, which will also be submitted to the DOC (and MPUC) by the beginning of March each year.
C.	Prepare a summary AAA filing stating key factors affecting costs including RSG & RNU along with the FAC Forecast. The FAC Forecast shall be shared with customer representatives who sign a protective agreement.	Annual monthly FAC Forecast submitted after final budget is approved in December. Annual FAC report to Key Account Customers will be finalized as soon after the end of each calendar year as possible, typically the beginning of March, and provided to customers who sign confidentiality agreements.

D.	Meet with customer representatives to discuss FAC forecast and new proposals in MISO Day 2 Market.	As requested by interested parties who have signed a confidentiality agreement
E.	Monthly FAC forecasts will be revised when forecast is expected to exceed the original budget by more than 10%	Monthly FAC Report
F.	When the FAC forecast deviates from actual costs by 15% or more, MP will explain and quantify the difference, including an explanation of the extent to which the costs can be controlled.	Monthly FAC Report
G.	Provide monthly and year-to-date MISO Day 2 costs by charge type category **Revised format in 2008 with clear allocations of MISO Day 2 costs and revenues between retail and wholesale customers.**	Monthly FAC Report Annual AAA Filing, Attachment No. 8
H.	Supplement monthly FAC reports with any significant events affecting costs	Monthly FAC Report
I.	Summary of the ARR process and information	Annual AAA Filing, Attachment No. 10
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. 11

The Department of Commerce - Division of Energy Resources Recommendations for Reporting Requirements for ASM Cost Recovery (Docket: E015/M-08-528)

	Reporting Requirement	**Requirement Satisfied in Reporting Document**
A.	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: • Analysis of the costs and benefits of participation in ASM • Address the potential for double recovery of such costs	Annual ASM Cost Benefit Filing completed and sent February 6, 2010

	Upon request from any party, the utility shall submit their request for recovery with supporting analysis within 30 days of the request.	
B.	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.	Quarterly Filings sent May 15, 2009, August 15, 2009 and November 15, 2009 Annual AAA Filing, Attachment No. 9
C.	The Department of Commerce - Division of Energy Resources recommends that the following be included in their final ASM Report: • 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 Minnesota Power to follow up in reply comments regarding the following: CRDFC - • what the causes were for the penalties • why they should be recovered from ratepayers • how MP intends to address in the future Regarding Excessive/Deficient - • explain the causes for the charge • why it should be recovered from ratepayers The Department of Commerce - Division of Energy Resources recommends that the utility address whether the current Purchase Power Agreements (PPA)	Response comments filed July 28, 2010

	provide for compensation to the utility when the generation under the PPA does not show up due to an outage or other problem If so, the utility should indicate whether that compensation is given back to ratepayers via the FAC If not, utilities should: • Explain why its appropriate for ratepayers to pay those penalties	
D.	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; Format suggested: • 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 January 2010 - June 2010 on AAA report filed September 1, 2010 July 2010 - June 2011 on AAA report filed September 1, 2011	Annual AAA Filing, Attachment No. 9

Listing of Docket which impact the FAC (Docket No. E999/AA-15-611)

MN Docket No.	Order Dated
E015/M-05-277	December 20, 2006
E015/M-05-975	December 20, 2005
E015/M-08-528	August 23, 2010
E015/M-10-961	March 11, 2011
E015/M-11-234	September 8, 2011
E015/M-11-626	November 2, 2011
E015/GR-09-1151	December 10, 2012
E015/PA-01-539	April 26, 2002
E999/AA-04-1279	December 7, 2005
E999/AA-06-1208	February 7, 2008
E999/AA-07-1130	August 31, 2009
E999/AA-08-995	March 15, 2010
E999/AA-09-961	April 6, 2012
E999/AA-10-884	April 6, 2012
E999/AA-11-792	August 16, 2013
E999/AA-12-757	June 2, 2016
E999/AA-13-599	June 2, 2016
E999/AA-14-579	June 2, 2016
E999/GR-16-709	December 30, 2016
E999/M-15-773	December 12, 2016
E999/MR-16-709	December 30, 2016
E999/M-15-825	April 21, 2017
E999/AA-15-611	July 21, 2017
E999/GR-16-664	March 12, 2018
E999/AA-16-523	March 16, 2018
E999/AA-17-492	February 7, 2019
E999/AA-18-373	November 13, 2019
E999/C1-03-802	June 2, 2016 December 19, 2017 December 12, 2018 June 12, 2019 November 5, 2019
E015/AA-19-302	November 14, 2019
E015/GR-19-442	Still Open

Minnesota Power's
Monthly MISO Day 2 Charges and Allocation

Docket No. E999/AA-07-1130

Description of the following categories shown in Attachment No. 8:

1) **FAC Retail** – 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 sales MWh to MISO, the source of which was a purchase from another entity that was intended to serve 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 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 Production 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-FAC sales first to help ensure that the FAC 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 FAC MWh by a separate analysis. A similar analysis is not done for non-FAC sales because there has not been a need to report the sources of non-FAC sales. The company does not have a system in place and has not seen the need to identify the sources of non-FAC sales. We are unable to identify what portion of Day Ahead and Real Time Energy was assigned to the other non-FAC 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 MISO Non-Liquidation, MISO Liquidation, Others-Liquidation, and Contract Sales as these amounts are not tracked separately by Minnesota Power's systems as discussed above.

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2018	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	5,383,228.61									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,103,209.44)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	100,382.47									-				
	Excessive Energy Amount	55500-0066	36,166.93									-				
	Non-Excessive Energy Amount	55500-0069	738,271.10									-				
22	Real Time Non-Asset Energy	55500-0043	19,954.61									-				
	Subtotal		**5,174,794.28**	**696,463**	**4,160,099.42**			**134,382**	**792,399.89**			4,952,499.31	**5,803**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,043,430.46		696,969.54		-		132,756.10		-	829,725.64		5,411.26		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	424,376.20		285,180.81		-		54,320.15		-	339,500.96		2,040.68		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(35,763.17)		-		(23,888.36)		-		(4,550.16)	(28,438.52)		-		(185.47)
14	Real Time Distribution of Losses	55500-0041	(304,853.55)		-		(204,861.59)		-		(39,021.25)	(243,882.84)		-		(1,465.94)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**1,127,189.94**	**696,463**	**982,150.34**	**696,463**	**(228,749.94)**	**134,382**	**187,076.26**	**134,382**	**(43,571.42)**	**896,905.24**	**5,803**	**7,451.95**	**5,803**	**(1,651.41)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**696,463**	**-**	**696,463**	**-**	**134,382**	**-**	**134,382**	**-**	**-**	**5,803**	**-**	**5,803**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	128,103.33		86,085.44		-		16,397.23		-	102,482.66		616.01		-
19	Real Time Market Administration (Schedule 17)	55500-0036	10,337.81		6,947.01		-		1,323.24		-	8,270.25		49.71		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,947.81		1,980.93		-		377.32		-	2,358.25		14.18		-
	Subtotal		**141,388.95**	**696,463**	**95,013.37**	**696,463**	**-**	**134,382**	**18,097.79**	**134,382**	**-**	**113,111.16**	**5,803**	**679.89**	**5,803**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2018	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	549,733.00		367,199.51		-		69,942.76		-	437,142.27		2,850.93		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(4,520.29)		-		(3,019.37)		-		(575.12)	(3,594.49)		-		(23.44)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	318,349.76		213,931.04		-		40,748.77		-	254,679.81		1,530.84		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(204,548.05)		-		(137,456.29)		-		(26,182.15)	(163,638.44)		-		(983.60)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	304,815.60		204,836.08		-		39,016.40		-	243,852.48		1,465.76		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,439.18		4,999.13		-		952.22		-	5,951.34		35.77		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(92,397.22)		-		(62,090.93)		-		(11,826.84)	(73,917.78)		-		(444.31)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(372,580.48)		-		(250,374.08)		-		(47,690.30)	(298,064.38)		-		(1,791.62)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(1,431.80)		-		(962.17)		-		(183.27)	(1,145.44)		-		(6.89)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(1,469.43)		-		(987.46)		-		(188.09)	(1,175.54)		-		(7.07)
	FTR Guarantee Uplift Amount	55500-0055	1,469.41		987.44		-		188.08		-	1,175.53		7.07		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-		-		-		-		-	-		-		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**504,859.68**	**696,463**	**791,953.20**	**696,463**	**(454,890.30)**	**134,382**	**150,848.23**	**134,382**	**(86,645.77)**	**401,265.36**	**5,803**	**5,890.36**	**5,803**	**(3,256.92)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	13,705.46		9,210.07		-		1,754.30		-	10,964.37		65.90		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(21,604.37)		-		(14,518.14)		-		(2,765.36)	(17,283.50)		-		(103.89)
	Real Time Price Volatility Make Whole Payment	55500-0057	(2,690.48)		-		(1,808.00)		-		(344.38)	(2,152.38)		-		(12.94)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	98,332.22		66,079.25		-		12,586.52		-	78,665.78		472.85		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(75,909.61)		-		(51,011.26)		-		(9,716.43)	(60,727.69)		-		(365.02)
	Subtotal		**11,833.22**	**696,463**	**75,289.32**	**696,463**	**(67,337.40)**	**134,382**	**14,340.82**	**134,382**	**(12,826.17)**	**9,466.58**	**5,803**	**538.75**	**5,803**	**(481.85)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	61,097.23		41,057.34		-		7,820.45		-	48,877.78		293.80		-
21	Real Time Net Inadvertent Distribution	55500-0044	43,246.24		29,061.47		-		5,535.52		-	34,596.99		207.96		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	8,852.95		5,949.18		-		1,133.18		-	7,082.36		42.57		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(1,461.42)		-		(982.07)		-		(187.06)	(1,169.14)		-		(7.03)
34	Real Time Ramp Capability Amount	55500-0080	(794.90)		-		(534.17)		-		(101.75)	(635.92)		-		(3.82)
	Subtotal		**110,940.10**	**696,463**	**76,067.99**	**696,463**	**(1,516.25)**	**134,382**	**14,489.14**	**134,382**	**(288.81)**	**88,752.08**	**5,803**	**544.32**	**5,803**	**(10.85)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2018	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**696,463**	**-**	**696,463**	**-**	**134,382**	**-**	**134,382**	**-**	**-**	**5,803**	**-**	**5,803**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(7,671.22)		-		(5,155.06)		-		(981.92)	(6,136.98)		-		(36.89)
	Day Ahead Spinning Reserve Amount	55500-0063	(24,333.63)		-		(16,352.20)		-		(3,114.70)	(19,466.90)		-		(117.01)
	Day Ahead Supplemental Reserve Amount	55500-0064	(12.50)		-		(8.40)		-		(1.60)	(10.00)		-		(0.06)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	78.03		52.44		-		9.99		-	62.42		0.38		-
	Net Regulation Adjustment Amount	55500-0068	371.95		249.95		-		47.61		-	297.56		1.79		-
	Real Time Regulation Amount	55500-0070	(40,581.42)		-		(27,270.71)		-		(5,194.42)	(32,465.14)		-		(195.14)
	Regulation Reserve Cost Distribution Amount	55500-0071	25,902.26		17,406.32		-		3,315.49		-	20,721.81		124.56		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	21,680.29		14,569.15		-		2,775.08		-	17,344.23		104.25		-
	Real Time Spinning Reserve Amount	55500-0072	(8,822.51)		-		(5,928.73)		-		(1,129.28)	(7,058.01)		-		(42.42)
	Spinning Reserve Cost Distribution Amount	55500-0073	24,696.35		16,595.95		-		3,161.13		-	19,757.08		118.76		-
	Real Time Supplemental Reserve Amount	55500-0074	(515.44)		-		(346.38)		-		(65.98)	(412.35)		-		(2.48)
	Supplemental Reserve Cost Distribution Amount	55500-0075	3,805.28		2,557.15		-		487.08		-	3,044.22		18.30		-
	Subtotal		**(5,402.56)**	**696,463**	**51,430.96**	**696,463**	**(55,061.48)**	**134,382**	**9,796.37**	**134,382**	**(10,487.90)**	**(4,322.05)**	**5,803**	**368.03**	**5,803**	**(394.01)**
	Grand Total		**7,065,603.61**	**696,463**	**6,232,004.61**	**696,463**	**(807,555.36)**	**134,382**	**1,187,048.50**	**134,382**	**(153,820.07)**	**6,457,677.68**	**5,803**	**15,473.30**	**5,803**	**(5,795.03)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	July 2018	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	44700-0000 or 55500-0000 or 55500-0050	5,383,228.61																
Day Ahead Non-Asset Energy	55500-0027	(1,103,209.44)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	100,382.47																
Excessive Energy Amount	55500-0066	36,166.93																
Non-Excessive Energy Amount	55500-0069	738,271.10																
Real Time Non-Asset Energy	55500-0043	19,954.61																
Subtotal		**5,174,794.28**	**24,942**				**37,909**				**68,159**				**232,397**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,043,430.46										63,560.14		-		144,733.42		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	424,376.20										23,969.67		-		58,864.89		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(35,763.17)										-		(2,178.50)		-		(4,960.68)
Real Time Distribution of Losses	55500-0041	(304,853.55)										-		(17,218.78)		-		(42,286.00)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**1,127,189.94**	**24,942**	**-**	**24,942**	**-**	**37,909**	**-**	**37,909**	**-**	**68,159**	**87,529.81**	**68,159**	**(19,397.27)**	**232,397**	**203,598.30**	**232,397**	**(47,246.68)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**24,942**	**-**	**24,942**	**-**	**37,909**	**-**	**37,909**	**-**	**68,159**	**-**	**68,159**	**-**	**232,397**	**-**	**232,397**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	128,103.33										7,235.55		-		17,769.11		-
Real Time Market Administration (Schedule 17)	55500-0036	10,337.81										583.90		-		1,433.95		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,947.81										166.50		-		408.89		-
Subtotal		**141,388.95**	**24,942**	**-**	**24,942**	**-**	**37,909**	**-**	**37,909**	**-**	**68,159**	**7,985.95**	**68,159**	**-**	**232,397**	**19,611.95**	**232,397**	**-**

MINNESOTA POWER

MISO MONTHLY ALLOCATION

	Account Number	July 2018	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	44700-0000 or 55500-0000 or 55500-0050	549,733.00										33,486.76		-		76,253.03		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(4,520.29)										-		(275.35)		-		(627.01)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	318,349.76										17,981.07		-		44,158.04		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(204,548.05)										-		(11,553.31)		-		(28,372.70)
Financial Transmission Rights Annual Transaction Amount	55500-0059	304,815.60										17,216.63		-		42,280.73		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,439.18										420.18		-		1,031.88		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(92,397.22)										-		(5,218.79)		-		(12,816.35)
Financial Transmission Rights Hourly Allocation	55500-0032	(372,580.48)										-		(21,044.14)		-		(51,680.34)
Financial Transmission Rights Monthly Allocation	55500-0033	(1,431.80)										-		(80.87)		-		(198.60)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(1,469.43)										-		(83.00)		-		(203.82)
FTR Guarantee Uplift Amount	55500-0055	1,469.41										83.00		-		203.82		-
Financial Transmission Rights Monthly Transaction Amount	55500-0056	-										-		-		-		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**504,859.68**	**24,942**	**-**	**24,942**	**-**	**37,909**	**-**	**37,909**	**-**	**68,159**	**69,187.64**	**68,159**	**(38,255.45)**	**232,397**	**163,927.51**	**232,397**	**(93,898.82)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	13,705.46										774.11		-		1,901.07		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(21,604.37)										-		(1,220.26)		-		(2,996.73)
Real Time Price Volatility Make Whole Payment	55500-0057	(2,690.48)										-		(151.96)		-		(373.19)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	98,332.22										5,554.01		-		13,639.58		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(75,909.61)										-		(4,287.54)		-		(10,529.36)
Subtotal		**11,833.22**	**24,942**	**-**	**24,942**	**-**	**37,909**	**-**	**37,909**	**-**	**68,159**	**6,328.13**	**68,159**	**(5,659.76)**	**232,397**	**15,540.66**	**232,397**	**(13,899.28)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	61,097.23										3,450.90		-		8,474.75		-
Real Time Net Inadvertent Distribution	55500-0044	43,246.24										2,442.64		-		5,998.65		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	8,852.95										500.03		-		1,227.99		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	(1,461.42)										-		(82.54)		-		(202.71)
Real Time Ramp Capability Amount	55500-0080	(794.90)										-		(44.90)		-		(110.26)
Subtotal		**110,940.10**	**24,942**	**-**	**24,942**	**-**	**37,909**	**-**	**37,909**	**-**	**68,159**	**6,393.57**	**68,159**	**(127.44)**	**232,397**	**15,701.39**	**232,397**	**(312.97)**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2018	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		**-**	**24,942**	**-**	**24,942**	**-**	**37,909**	**-**	**37,909**	**-**	**68,159**	**-**	**68,159**	**-**	**232,397**	**-**	**232,397**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(7,671.22)										-		(433.29)		-		(1,064.07)
Day Ahead Spinning Reserve Amount	55500-0063	(24,333.63)										-		(1,374.42)		-		(3,375.30)
Day Ahead Supplemental Reserve Amount	55500-0064	(12.50)										-		(0.71)		-		(1.73)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	78.03										4.41		-		10.82		-
Net Regulation Adjustment Amount	55500-0068	371.95										21.01		-		51.59		-
Real Time Regulation Amount	55500-0070	(40,581.42)										-		(2,292.12)		-		(5,629.02)
Regulation Reserve Cost Distribution Amount	55500-0071	25,902.26										1,463.01		-		3,592.88		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	21,680.29										1,224.55		-		3,007.26		-
Real Time Spinning Reserve Amount	55500-0072	(8,822.51)										-		(498.31)		-		(1,223.76)
Spinning Reserve Cost Distribution Amount	55500-0073	24,696.35										1,394.90		-		3,425.61		-
Real Time Supplemental Reserve Amount	55500-0074	(515.44)										-		(29.11)		-		(71.50)
Supplemental Reserve Cost Distribution Amount	55500-0075	3,805.28										214.93		-		527.83		-
Subtotal		**(5,402.56)**	**24,942**	**-**	**24,942**	**-**	**37,909**	**-**	**37,909**	**-**	**68,159**	**4,322.81**	**68,159**	**(4,627.96)**	**232,397**	**10,615.99**	**232,397**	**(11,365.38)**
Grand Total		**7,065,603.61**	**24,942**	**-**	**24,942**	**-**	**37,909**	**-**	**37,909**	**-**	**68,159**	**181,747.91**	**68,159**	**(68,067.89)**	**232,397**	**428,995.80**	**232,397**	**(166,723.13)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	August 2018	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	6,478,838.07									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,326,630.52)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	241,193.91									-				
	Excessive Energy Amount	55500-0066	36,089.24									-				
	Non-Excessive Energy Amount	55500-0069	(185,860.57)									-				
22	Real Time Non-Asset Energy	55500-0043	110,888.91									-				
	Subtotal		**5,354,519.04**	**698,724**	**4,175,236.77**			**131,488**	**795,283.20**			4,970,519.97	**3,933**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,318,045.21		876,900.10		-		167,028.59		-	1,043,928.69		4,644.21		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	365,353.59		242,448.64		-		46,180.69		-	288,629.34		1,325.31		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(210,020.35)		-		(139,727.28)		-		(26,614.72)	(166,342.00)		-		(740.02)
14	Real Time Distribution of Losses	55500-0041	(359,666.03)		-		(238,674.38)		-		(45,461.79)	(284,136.16)		-		(1,304.68)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**1,113,712.42**	**698,724**	**1,119,348.74**	**698,724**	**(378,401.65)**	**131,488**	**213,209.28**	**131,488**	**(72,076.51)**	**882,079.86**	**3,933**	**5,969.53**	**3,933**	**(2,044.70)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**698,724**	**-**	**698,724**	**-**	**131,488**	**-**	**131,488**	**-**	**-**	**3,933**	**-**	**3,933**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	102,751.47		68,185.88		-		12,987.79		-	81,173.66		372.73		-
19	Real Time Market Administration (Schedule 17)	55500-0036	6,916.79		4,589.98		-		874.28		-	5,464.26		25.09		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,640.99		1,752.56		-		333.82		-	2,086.38		9.58		-
	Subtotal		**112,309.25**	**698,724**	**74,528.42**	**698,724**	**-**	**131,488**	**14,195.89**	**131,488**	**-**	**88,724.31**	**3,933**	**407.40**	**3,933**	**-**

MINNESOTA POWER

MISO MONTHLY ALLOCATION

		Account Number	August 2018	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	87,472.97		58,196.07		-		11,084.97		-	69,281.04		308.22		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	12,115.61		8,060.56		-		1,535.34		-	9,595.90		42.69		-
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	105,552.02		70,044.32		-		13,341.78		-	83,386.10		382.89		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(204,548.05)		-		(135,738.09)		-		(25,854.87)	(161,592.96)		-		(741.99)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	304,815.60		202,275.63		-		38,528.69		-	240,804.32		1,105.71		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,439.18		4,936.64		-		940.31		-	5,876.95		26.99		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(92,397.22)		-		(61,314.80)		-		(11,679.01)	(72,993.80)		-		(335.17)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(19,145.33)		-		(12,704.84)		-		(2,419.97)	(15,124.81)		-		(69.45)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(6,244.88)		-		(4,144.10)		-		(789.35)	(4,933.46)		-		(22.65)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	565.82		375.48		-		71.52		-	447.00		2.05		-
	FTR Guarantee Uplift Amount	55500-0055	(565.82)		-		(375.48)		-		(71.52)	(447.00)		-		(2.05)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-		-		-		-		-	-		-		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**195,059.90**	**698,724**	**343,888.70**	**698,724**	**(214,277.30)**	**131,488**	**65,502.61**	**131,488**	**(40,814.72)**	**154,299.29**	**3,933**	**1,868.55**	**3,933**	**(1,171.32)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	14,661.07		9,729.09		-		1,853.16		-	11,582.25		53.18		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(6,045.55)		-		(4,011.83)		-		(764.16)	(4,775.98)		-		(21.93)
	Real Time Price Volatility Make Whole Payment	55500-0057	(4,057.36)		-		(2,692.46)		-		(512.85)	(3,205.31)		-		(14.72)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	57,798.14		38,354.85		-		7,305.68		-	45,660.53		209.66		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(2,516.40)		-		(1,669.88)		-		(318.07)	(1,987.96)		-		(9.13)
	Subtotal		**59,839.90**	**698,724**	**48,083.93**	**698,724**	**(8,374.17)**	**131,488**	**9,158.84**	**131,488**	**(1,595.08)**	**47,273.52**	**3,933**	**262.84**	**3,933**	**(45.78)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	85,159.84		56,512.07		-		10,764.20		-	67,276.27		308.92		-
21	Real Time Net Inadvertent Distribution	55500-0044	13,725.66		9,108.35		-		1,734.92		-	10,843.27		49.79		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	(5,768.85)		-		(3,828.21)		-		(729.18)	(4,557.39)		-		(20.93)
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(811.86)		-		(538.75)		-		(102.62)	(641.37)		-		(2.95)
34	Real Time Ramp Capability Amount	55500-0080	(106.47)		-		(70.65)		-		(13.46)	(84.11)		-		(0.39)
	Subtotal		**92,198.32**	**698,724**	**65,620.42**	**698,724**	**(4,437.61)**	**131,488**	**12,499.13**	**131,488**	**(845.26)**	**72,836.67**	**3,933**	**358.71**	**3,933**	**(24.26)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	August 2018	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**698,724**	**-**	**698,724**	**-**	**131,488**	**-**	**131,488**	**-**	**-**	**3,933**	**-**	**3,933**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(79,437.65)		-		(52,714.82)		-		(10,040.92)	(62,755.74)		-		(288.16)
	Day Ahead Spinning Reserve Amount	55500-0063	(53,050.97)		-		(35,204.62)		-		(6,705.64)	(41,910.27)		-		(192.44)
	Day Ahead Supplemental Reserve Amount	55500-0064	(50.88)		-		(33.76)		-		(6.43)	(40.20)		-		(0.18)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	6,571.32		4,360.73		-		830.61		-	5,191.34		23.84		-
	Real Time Regulation Amount	55500-0070	(11,136.23)		-		(7,390.00)		-		(1,407.62)	(8,797.62)		-		(40.40)
	Regulation Reserve Cost Distribution Amount	55500-0071	24,610.28		16,331.38		-		3,110.74		-	19,442.12		89.27		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	34,247.55		22,726.67		-		4,328.89		-	27,055.56		124.23		-
	Real Time Spinning Reserve Amount	55500-0072	2,100.39		1,393.82		-		265.49		-	1,659.31		7.62		-
	Spinning Reserve Cost Distribution Amount	55500-0073	28,329.90		18,799.72		-		3,580.90		-	22,380.62		102.77		-
	Real Time Supplemental Reserve Amount	55500-0074	(62.53)		-		(41.49)		-		(7.90)	(49.40)		-		(0.23)
	Supplemental Reserve Cost Distribution Amount	55500-0075	5,988.29		3,973.83		-		756.92		-	4,730.75		21.72		-
	Subtotal		**(41,890.53)**	**698,724**	**67,586.15**	**698,724**	**(95,384.71)**	**131,488**	**12,873.55**	**131,488**	**(18,168.52)**	**(33,093.52)**	**3,933**	**369.45**	**3,933**	**(521.41)**
	Grand Total		**6,885,748.30**	**698,724**	**5,894,293.14**	**698,724**	**(700,875.45)**	**131,488**	**1,122,722.50**	**131,488**	**(133,500.09)**	**6,182,640.10**	**3,933**	**9,236.47**	**3,933**	**(3,807.46)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	August 2018	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	44700-0000 or 55500-0000 or 55500-0050	6,478,838.07																
Day Ahead Non-Asset Energy	55500-0027	(1,326,630.52)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	241,193.91																
Excessive Energy Amount	55500-0066	36,089.24																
Non-Excessive Energy Amount	55500-0069	(185,860.57)																
Real Time Non-Asset Energy	55500-0043	110,888.91																
Subtotal		**5,354,519.04**	**31,234**				**36,848**				**72,813**				**236,589**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,318,045.21										85,986.95		-		183,485.36		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	365,353.59										24,537.99		-		50,860.95		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(210,020.35)										-		(13,701.36)		-		(29,236.98)
Real Time Distribution of Losses	55500-0041	(359,666.03)										-		(24,156.00)		-		(50,069.19)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**1,113,712.42**	**31,234**	**-**	**31,234**	**-**	**36,848**	**-**	**36,848**	**-**	**72,813**	**110,524.94**	**72,813**	**(37,857.36)**	**236,589**	**234,346.32**	**236,589**	**(79,306.17)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**31,234**	**-**	**31,234**	**-**	**36,848**	**-**	**36,848**	**-**	**72,813**	**-**	**72,813**	**-**	**236,589**	**-**	**236,589**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	102,751.47										6,901.03		-		14,304.05		-
Real Time Market Administration (Schedule 17)	55500-0036	6,916.79										464.55		-		962.89		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,640.99										177.37		-		367.65		-
Subtotal		**112,309.25**	**31,234**	**-**	**31,234**	**-**	**36,848**	**-**	**36,848**	**-**	**72,813**	**7,542.95**	**72,813**	**-**	**236,589**	**15,634.60**	**236,589**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	August 2018	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	87,472.97										5,706.58		-		12,177.13		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	12,115.61										790.40		-		1,686.62		-
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	105,552.02										7,089.12		-		14,693.92		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(204,548.05)										-		(13,737.92)		-		(28,475.18)
Financial Transmission Rights Annual Transaction Amount	55500-0059	304,815.60										20,472.12		-		42,433.45		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,439.18										499.63		-		1,035.61		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(92,397.22)										-		(6,205.61)		-		(12,862.64)
Financial Transmission Rights Hourly Allocation	55500-0032	(19,145.33)										-		(1,285.84)		-		(2,665.23)
Financial Transmission Rights Monthly Allocation	55500-0033	(6,244.88)										-		(419.42)		-		(869.35)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	565.82										38.00		-		78.77		-
FTR Guarantee Uplift Amount	55500-0055	(565.82)										-		(38.00)		-		(78.77)
Financial Transmission Rights Monthly Transaction Amount	55500-0056	-										-		-		-		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**195,059.90**	**31,234**	**-**	**31,234**	**-**	**36,848**	**-**	**36,848**	**-**	**72,813**	**34,595.85**	**72,813**	**(21,686.79)**	**236,589**	**72,105.49**	**236,589**	**(44,951.16)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	14,661.07										984.67		-		2,040.97		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(6,045.55)										-		(406.03)		-		(841.60)
Real Time Price Volatility Make Whole Payment	55500-0057	(4,057.36)										-		(272.50)		-		(564.83)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	57,798.14										3,881.86		-		8,046.09		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(2,516.40)										-		(169.01)		-		(350.31)
Subtotal		**59,839.90**	**31,234**	**-**	**31,234**	**-**	**36,848**	**-**	**36,848**	**-**	**72,813**	**4,866.53**	**72,813**	**(847.54)**	**236,589**	**10,087.06**	**236,589**	**(1,756.74)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	85,159.84										5,719.53		-		11,855.12		-
Real Time Net Inadvertent Distribution	55500-0044	13,725.66										921.85		-		1,910.75		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	(5,768.85)										-		(387.45)		-		(803.08)
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	(811.86)										-		(54.53)		-		(113.02)
Real Time Ramp Capability Amount	55500-0080	(106.47)										-		(7.15)		-		(14.82)
Subtotal		**92,198.32**	**31,234**	**-**	**31,234**	**-**	**36,848**	**-**	**36,848**	**-**	**72,813**	**6,641.38**	**72,813**	**(449.13)**	**236,589**	**13,765.87**	**236,589**	**(930.92)**

MINNESOTA POWER	Account																	
MISO MONTHLY ALLOCATION	Number	August 2018	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		**-**	**31,234**	**-**	**31,234**	**-**	**36,848**	**-**	**36,848**	**-**	**72,813**	**-**	**72,813**	**-**	**236,589**	**-**	**236,589**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(79,437.65)										-		(5,335.22)		-		(11,058.53)
Day Ahead Spinning Reserve Amount	55500-0063	(53,050.97)										-		(3,563.03)		-		(7,385.24)
Day Ahead Supplemental Reserve Amount	55500-0064	(50.88)										-		(3.42)		-		(7.08)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	6,571.32										441.34		-		914.79		-
Real Time Regulation Amount	55500-0070	(11,136.23)										-		(747.93)		-		(1,550.28)
Regulation Reserve Cost Distribution Amount	55500-0071	24,610.28										1,652.88		-		3,426.00		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	34,247.55										2,300.14		-		4,767.61		-
Real Time Spinning Reserve Amount	55500-0072	2,100.39										141.07		-		292.40		-
Spinning Reserve Cost Distribution Amount	55500-0073	28,329.90										1,902.70		-		3,943.81		-
Real Time Supplemental Reserve Amount	55500-0074	(62.53)										-		(4.20)		-		(8.70)
Supplemental Reserve Cost Distribution Amount	55500-0075	5,988.29										402.19		-		833.63		-
Subtotal		**(41,890.53)**	**31,234**	**-**	**31,234**	**-**	**36,848**	**-**	**36,848**	**-**	**72,813**	**6,840.33**	**72,813**	**(9,653.79)**	**236,589**	**14,178.24**	**236,589**	**(20,009.83)**
Grand Total		**6,885,748.30**	**31,234**	**-**	**31,234**	**-**	**36,848**	**-**	**36,848**	**-**	**72,813**	**171,011.97**	**72,813**	**(70,494.61)**	**236,589**	**360,117.58**	**236,589**	**(146,954.82)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	September 2018	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	4,319,868.10									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,890,411.30)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	(302,836.07)									-				
	Excessive Energy Amount	55500-0066	23,696.55									-				
	Non-Excessive Energy Amount	55500-0069	375,492.32									-				
22	Real Time Non-Asset Energy	55500-0043	567,912.47									-				
	Subtotal		**3,093,722.07**	**682,205**	**2,714,025.53**			**121,621**	**478,945.68**			3,192,971.21	**16,841**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,007,815.59		664,320.87		-		117,233.09		-	781,553.96		16,268.76		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	474,062.51		314,303.44		-		55,465.31		-	369,768.76		7,243.33		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	11,455.21		7,550.92		-		1,332.52		-	8,883.44		184.92		-
14	Real Time Distribution of Losses	55500-0041	(247,811.19)		-		(164,298.82)		-		(28,993.91)	(193,292.73)		-		(3,786.37)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**1,245,522.12**	**682,205**	**986,175.23**	**682,205**	**(164,298.82)**	**121,621**	**174,030.92**	**121,621**	**(28,993.91)**	**966,913.43**	**16,841**	**23,697.00**	**16,841**	**(3,786.37)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**682,205**	**-**	**682,205**	**-**	**121,621**	**-**	**121,621**	**-**	**-**	**16,841**	**-**	**16,841**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	143,450.70		95,107.81		-		16,783.73		-	111,891.55		2,191.82		-
19	Real Time Market Administration (Schedule 17)	55500-0036	12,845.54		8,516.59		-		1,502.93		-	10,019.52		196.27		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,531.12		1,678.13		-		296.14		-	1,974.27		38.67		-
	Subtotal		**158,827.36**	**682,205**	**105,302.54**	**682,205**	**-**	**121,621**	**18,582.80**	**121,621**	**-**	**123,885.34**	**16,841**	**2,426.77**	**16,841**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	September 2018	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	397,316.91		261,899.02		-		46,217.47		-	308,116.49		6,413.73		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	422,654.18		278,600.56		-		49,164.81		-	327,765.37		6,822.73		-
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	537,820.90		356,575.26		-		62,925.05		-	419,500.30		8,217.51		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(174,913.00)		-		(115,967.32)		-		(20,464.82)	(136,432.14)		-		(2,672.54)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	383,146.80		254,026.33		-		44,828.18		-	298,854.50		5,854.20		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	22,445.92		14,881.64		-		2,626.17		-	17,507.82		342.96		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(71,649.78)		-		(47,503.80)		-		(8,383.02)	(55,886.83)		-		(1,094.76)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(207,560.84)		-		(137,612.84)		-		(24,284.62)	(161,897.46)		-		(3,171.38)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(2,807.73)		-		(1,861.52)		-		(328.50)	(2,190.03)		-		(42.90)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(1,835.60)		-		(1,217.00)		-		(214.77)	(1,431.77)		-		(28.05)
	FTR Guarantee Uplift Amount	55500-0055	1,835.60		1,217.00		-		214.77		-	1,431.77		28.05		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	24,310.48		16,117.85		-		2,844.33		-	18,962.17		371.45		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**1,330,763.84**	**682,205**	**1,183,317.66**	**682,205**	**(304,162.49)**	**121,621**	**208,820.76**	**121,621**	**(53,675.73)**	**1,034,300.21**	**16,841**	**28,050.62**	**16,841**	**(7,009.62)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	13,674.72		9,066.34		-		1,599.94		-	10,666.28		208.94		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(11,687.50)		-		(7,748.81)		-		(1,367.44)	(9,116.25)		-		(178.58)
	Real Time Price Volatility Make Whole Payment	55500-0057	(2,046.13)		-		(1,356.58)		-		(239.40)	(1,595.98)		-		(31.26)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	43,306.29		28,712.07		-		5,066.84		-	33,778.91		661.69		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(28,514.25)		-		(18,904.95)		-		(3,336.17)	(22,241.12)		-		(435.68)
	Subtotal		**14,733.13**	**682,205**	**37,778.41**	**682,205**	**(28,010.34)**	**121,621**	**6,666.78**	**121,621**	**(4,943.00)**	**11,491.84**	**16,841**	**870.63**	**16,841**	**(645.52)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	26,853.47		17,803.85		-		3,141.86		-	20,945.71		410.30		-
21	Real Time Net Inadvertent Distribution	55500-0044	(14,885.99)		-		(9,869.41)		-		(1,741.66)	(11,611.07)		-		(227.45)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	26,860.54		17,808.54		-		3,142.68		-	20,951.22		410.41		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	(10.20)		-		(6.76)		-		(1.19)	(7.96)		-		(0.16)
33	Day Ahead Ramp Capability Amount	55500-0079	(738.98)		-		(489.94)		-		(86.46)	(576.40)		-		(11.29)
34	Real Time Ramp Capability Amount	55500-0080	(432.58)		-		(286.80)		-		(50.61)	(337.41)		-		(6.61)
	Subtotal		**37,646.26**	**682,205**	**35,612.39**	**682,205**	**(10,652.92)**	**121,621**	**6,284.54**	**121,621**	**(1,879.93)**	**29,364.08**	**16,841**	**820.71**	**16,841**	**(245.50)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	September 2018	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**682,205**	**-**	**682,205**	**-**	**121,621**	**-**	**121,621**	**-**	**-**	**16,841**	**-**	**16,841**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(117,356.39)		-		(77,807.29)		-		(13,730.70)	(91,537.98)		-		(1,793.12)
	Day Ahead Spinning Reserve Amount	55500-0063	(66,024.06)		-		(43,773.95)		-		(7,724.82)	(51,498.77)		-		(1,008.80)
	Day Ahead Supplemental Reserve Amount	55500-0064	(848.13)		-		(562.31)		-		(99.23)	(661.54)		-		(12.96)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	106.04		70.30		-		12.41		-	82.71		1.62		-
	Net Regulation Adjustment Amount	55500-0068	3,940.46		2,612.52		-		461.03		-	3,073.56		60.21		-
	Real Time Regulation Amount	55500-0070	20,145.16		13,356.24		-		2,356.98		-	15,713.22		307.80		-
	Regulation Reserve Cost Distribution Amount	55500-0071	28,564.44		18,938.22		-		3,342.04		-	22,280.26		436.44		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	40,010.63		26,527.05		-		4,681.24		-	31,208.29		611.33		-
	Real Time Spinning Reserve Amount	55500-0072	23,353.87		15,483.62		-		2,732.40		-	18,216.02		356.83		-
	Spinning Reserve Cost Distribution Amount	55500-0073	36,214.29		24,010.07		-		4,237.07		-	28,247.15		553.33		-
	Real Time Supplemental Reserve Amount	55500-0074	(3,207.60)		-		(2,126.64)		-		(375.29)	(2,501.93)		-		(49.01)
	Supplemental Reserve Cost Distribution Amount	55500-0075	14,783.40		9,801.39		-		1,729.66		-	11,531.05		225.88		-
	Subtotal		**(20,317.89)**	**682,205**	**110,799.43**	**682,205**	**(124,270.19)**	**121,621**	**19,552.84**	**121,621**	**(21,930.03)**	**(15,847.95)**	**16,841**	**2,553.45**	**16,841**	**(2,863.89)**
	Grand Total		**5,860,896.89**	**682,205**	**5,173,011.19**	**682,205**	**(631,394.76)**	**121,621**	**912,884.33**	**121,621**	**(111,422.60)**	**5,343,078.16**	**16,841**	**58,419.18**	**16,841**	**(14,550.91)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	September 2018	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	44700-0000 or 55500-0000 or 55500-0050	4,319,868.10																
Day Ahead Non-Asset Energy	55500-0027	(1,890,411.30)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	(302,836.07)																
Excessive Energy Amount	55500-0066	23,696.55																
Non-Excessive Energy Amount	55500-0069	375,492.32																
Real Time Non-Asset Energy	55500-0043	567,912.47																
Subtotal		**3,093,722.07**	**26,241**				**35,814**				**71,079**				**225,970**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,007,815.59										68,663.02		-		141,329.85		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	474,062.51										30,570.80		-		66,479.62		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	11,455.21										780.45		-		1,606.41		-
Real Time Distribution of Losses	55500-0041	(247,811.19)										-		(15,980.56)		-		(34,751.52)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**1,245,522.12**	**26,241**	**-**	**26,241**	**-**	**35,814**	**-**	**35,814**	**-**	**71,079**	**100,014.27**	**71,079**	**(15,980.56)**	**225,970**	**209,415.88**	**225,970**	**(34,751.52)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**26,241**	**-**	**26,241**	**-**	**35,814**	**-**	**35,814**	**-**	**71,079**	**-**	**71,079**	**-**	**225,970**	**-**	**225,970**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	143,450.70										9,250.68		-		20,116.65		-
Real Time Market Administration (Schedule 17)	55500-0036	12,845.54										828.37		-		1,801.38		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,531.12										163.22		-		354.95		-
Subtotal		**158,827.36**	**26,241**	**-**	**26,241**	**-**	**35,814**	**-**	**35,814**	**-**	**71,079**	**10,242.28**	**71,079**	**-**	**225,970**	**22,272.98**	**225,970**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	September 2018	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	397,316.91										27,069.42		-		55,717.28		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	422,654.18										28,795.66		-		59,270.42		-
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	537,820.90										34,682.38		-		75,420.71		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(174,913.00)										-		(11,279.59)		-		(24,528.73)
Financial Transmission Rights Annual Transaction Amount	55500-0059	383,146.80										24,707.93		-		53,730.16		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	22,445.92										1,447.47		-		3,147.68		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(71,649.78)										-		(4,620.47)		-		(10,047.73)
Financial Transmission Rights Hourly Allocation	55500-0032	(207,560.84)										-		(13,384.94)		-		(29,107.06)
Financial Transmission Rights Monthly Allocation	55500-0033	(2,807.73)										-		(181.06)		-		(393.74)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(1,835.60)										-		(118.37)		-		(257.41)
FTR Guarantee Uplift Amount	55500-0055	1,835.60										118.37		-		257.41		-
Financial Transmission Rights Monthly Transaction Amount	55500-0056	24,310.48										1,567.71		-		3,409.15		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**1,330,763.84**	**26,241**	**-**	**26,241**	**-**	**35,814**	**-**	**35,814**	**-**	**71,079**	**118,388.93**	**71,079**	**(29,584.44)**	**225,970**	**250,952.81**	**225,970**	**(64,334.67)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	13,674.72										881.84		-		1,917.66		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(11,687.50)										-		(753.69)		-		(1,638.98)
Real Time Price Volatility Make Whole Payment	55500-0057	(2,046.13)										-		(131.95)		-		(286.94)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	43,306.29										2,792.69		-		6,073.01		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(28,514.25)										-		(1,838.79)		-		(3,998.66)
Subtotal		**14,733.13**	**26,241**	**-**	**26,241**	**-**	**35,814**	**-**	**35,814**	**-**	**71,079**	**3,674.53**	**71,079**	**(2,724.43)**	**225,970**	**7,990.67**	**225,970**	**(5,924.58)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	26,853.47										1,731.70		-		3,765.77		-
Real Time Net Inadvertent Distribution	55500-0044	(14,885.99)										-		(959.95)		-		(2,087.52)
Real Time Revenue Neutrality Uplift Amount	55500-0045	26,860.54										1,732.15		-		3,766.76		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	(10.20)										-		(0.66)		-		(1.43)
Day Ahead Ramp Capability Amount	55500-0079	(738.98)										-		(47.65)		-		(103.63)
Real Time Ramp Capability Amount	55500-0080	(432.58)										-		(27.90)		-		(60.66)
Subtotal		**37,646.26**	**26,241**	**-**	**26,241**	**-**	**35,814**	**-**	**35,814**	**-**	**71,079**	**3,463.85**	**71,079**	**(1,036.16)**	**225,970**	**7,532.52**	**225,970**	**(2,253.24)**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	**September 2018**	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		**-**	**26,241**	**-**	**26,241**	**-**	**35,814**	**-**	**35,814**	**-**	**71,079**	**-**	**71,079**	**-**	**225,970**	**-**	**225,970**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(117,356.39)										-		(7,567.94)		-		(16,457.34)
Day Ahead Spinning Reserve Amount	55500-0063	(66,024.06)										-		(4,257.68)		-		(9,258.81)
Day Ahead Supplemental Reserve Amount	55500-0064	(848.13)										-		(54.69)		-		(118.94)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	106.04										6.84		-		14.87		-
Net Regulation Adjustment Amount	55500-0068	3,940.46										254.11		-		552.59		-
Real Time Regulation Amount	55500-0070	20,145.16										1,299.10		-		2,825.03		-
Regulation Reserve Cost Distribution Amount	55500-0071	28,564.44										1,842.03		-		4,005.70		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	40,010.63										2,580.16		-		5,610.85		-
Real Time Spinning Reserve Amount	55500-0072	23,353.87										1,506.02		-		3,275.00		-
Spinning Reserve Cost Distribution Amount	55500-0073	36,214.29										2,335.35		-		5,078.47		-
Real Time Supplemental Reserve Amount	55500-0074	(3,207.60)										-		(206.85)		-		(449.81)
Supplemental Reserve Cost Distribution Amount	55500-0075	14,783.40										953.33		-		2,073.13		-
Subtotal		**(20,317.89)**	**26,241**	**-**	**26,241**	**-**	**35,814**	**-**	**35,814**	**-**	**71,079**	**10,776.93**	**71,079**	**(12,087.17)**	**225,970**	**23,435.65**	**225,970**	**(26,284.90)**
Grand Total		**5,860,896.89**	**26,241**	**-**	**26,241**	**-**	**35,814**	**-**	**35,814**	**-**	**71,079**	**246,560.78**	**71,079**	**(61,412.76)**	**225,970**	**521,600.51**	**225,970**	**(133,548.92)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	October 2018	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	5,919,747.65									-				
5	Day Ahead Non-Asset Energy	55500-0027	(2,125,556.22)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	250,564.26									-				
	Excessive Energy Amount	55500-0066	24,208.63									-				
	Non-Excessive Energy Amount	55500-0069	111,777.49									-				
22	Real Time Non-Asset Energy	55500-0043	148,546.99									-				
	Subtotal		**4,329,288.80**	**687,757**	**3,917,924.98**			**127,409**	**746,271.42**			4,664,196.40	**23,413**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,181,956.27		773,833.58		-		147,396.87		-	921,230.45		24,584.96		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	427,762.20		280,269.79		-		53,384.72		-	333,654.52		8,835.70		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(195,700.43)		-		(128,126.20)		-		(24,404.99)	(152,531.19)		-		(4,070.61)
14	Real Time Distribution of Losses	55500-0041	(345,242.68)		-		(226,203.00)		-		(43,086.29)	(269,289.29)		-		(7,131.21)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**1,068,775.36**	**687,757**	**1,054,103.37**	**687,757**	**(354,329.20)**	**127,409**	**200,781.59**	**127,409**	**(67,491.28)**	**833,064.48**	**23,413**	**33,420.66**	**23,413**	**(11,201.82)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**687,757**	**-**	**687,757**	**-**	**127,409**	**-**	**127,409**	**-**	**-**	**23,413**	**-**	**23,413**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	194,760.60		127,607.15		-		24,306.12		-	151,913.27		4,022.90		-
19	Real Time Market Administration (Schedule 17)	55500-0036	13,552.37		8,879.51		-		1,691.34		-	10,570.85		279.93		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,290.28		1,500.59		-		285.83		-	1,786.42		47.31		-
	Subtotal		**210,603.25**	**687,757**	**137,987.25**	**687,757**	**-**	**127,409**	**26,283.29**	**127,409**	**-**	**164,270.54**	**23,413**	**4,350.14**	**23,413**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	October 2018	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	93,391.53		61,143.97		-		11,646.47		-	72,790.44		1,942.56		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	49,325.57		32,293.74		-		6,151.19		-	38,444.92		1,025.98		-
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	393,363.63		257,731.85		-		49,091.78		-	306,823.63		8,125.18		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(174,913.00)		-		(114,603.00)		-		(21,829.14)	(136,432.14)		-		(3,612.94)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	383,146.80		251,037.78		-		47,816.72		-	298,854.50		7,914.14		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	22,445.92		14,706.57		-		2,801.25		-	17,507.82		463.63		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(71,649.70)		-		(46,944.88)		-		(8,941.88)	(55,886.77)		-		(1,479.97)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(156,108.82)		-		(102,282.50)		-		(19,482.38)	(121,764.88)		-		(3,224.53)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(6,789.38)		-		(4,448.40)		-		(847.31)	(5,295.72)		-		(140.24)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(5,883.03)		-		(3,854.56)		-		(734.20)	(4,588.76)		-		(121.52)
	FTR Guarantee Uplift Amount	55500-0055	5,883.03		3,854.56		-		734.20		-	4,588.76		121.52		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	13,537.19		8,869.57		-		1,689.44		-	10,559.01		279.62		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**545,749.74**	**687,757**	**629,638.03**	**687,757**	**(272,133.34)**	**127,409**	**119,931.05**	**127,409**	**(51,834.92)**	**425,600.82**	**23,413**	**19,872.64**	**23,413**	**(8,579.19)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	21,168.14		13,869.37		-		2,641.78		-	16,511.15		437.24		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(4,929.79)		-		(3,230.00)		-		(615.24)	(3,845.24)		-		(101.83)
	Real Time Price Volatility Make Whole Payment	55500-0057	(146.85)		-		(96.22)		-		(18.33)	(114.54)		-		(3.03)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	50,089.42		32,818.59		-		6,251.16		-	39,069.75		1,034.63		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(20,670.33)		-		(13,543.20)		-		(2,579.66)	(16,122.86)		-		(426.96)
	Subtotal		**45,510.59**	**687,757**	**46,687.95**	**687,757**	**(16,869.41)**	**127,409**	**8,892.94**	**127,409**	**(3,213.22)**	**35,498.26**	**23,413**	**1,471.87**	**23,413**	**(531.82)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	48,224.36		31,596.60		-		6,018.40		-	37,615.00		996.10		-
21	Real Time Net Inadvertent Distribution	55500-0044	20,183.96		13,224.53		-		2,518.96		-	15,743.49		416.91		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	163,179.85		106,915.44		-		20,364.85		-	127,280.28		3,370.58		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(155.78)		-		(102.07)		-		(19.44)	(121.51)		-		(3.22)
34	Real Time Ramp Capability Amount	55500-0080	(204.74)		-		(134.15)		-		(25.55)	(159.70)		-		(4.23)
	Subtotal		**231,227.65**	**687,757**	**151,736.57**	**687,757**	**(236.21)**	**127,409**	**28,902.20**	**127,409**	**(44.99)**	**180,357.57**	**23,413**	**4,783.60**	**23,413**	**(7.45)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	October 2018	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**687,757**	**-**	**687,757**	**-**	**127,409**	**-**	**127,409**	**-**	**-**	**23,413**	**-**	**23,413**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(93,944.45)		-		(61,552.40)		-		(11,724.27)	(73,276.67)		-		(1,940.48)
	Day Ahead Spinning Reserve Amount	55500-0063	(44,163.33)		-		(28,935.81)		-		(5,511.58)	(34,447.40)		-		(912.22)
	Day Ahead Supplemental Reserve Amount	55500-0064	133.73		87.62		-		16.69		-	104.31		2.76		-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	1,987.71		1,302.35		-		248.07		-	1,550.41		41.06		-
	Real Time Regulation Amount	55500-0070	(10,297.17)		-		(6,746.71)		-		(1,285.09)	(8,031.79)		-		(212.69)
	Regulation Reserve Cost Distribution Amount	55500-0071	41,492.59		27,185.94		-		5,178.28		-	32,364.22		857.06		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	51,142.96		33,508.87		-		6,382.64		-	39,891.51		1,056.39		-
	Real Time Spinning Reserve Amount	55500-0072	2,511.18		1,645.33		-		313.40		-	1,958.72		51.87		-
	Spinning Reserve Cost Distribution Amount	55500-0073	57,200.39		37,477.70		-		7,138.61		-	44,616.30		1,181.51		-
	Real Time Supplemental Reserve Amount	55500-0074	204.65		134.09		-		25.54		-	159.63		4.23		-
	Supplemental Reserve Cost Distribution Amount	55500-0075	9,590.00		6,283.37		-		1,196.83		-	7,480.20		198.09		-
	Subtotal		**15,858.26**	**687,757**	**107,625.26**	**687,757**	**(97,234.92)**	**127,409**	**20,500.05**	**127,409**	**(18,520.94)**	**12,369.44**	**23,413**	**3,392.96**	**23,413**	**(3,065.40)**
	Grand Total		**6,447,013.65**	**687,757**	**6,045,703.41**	**687,757**	**(740,803.10)**	**127,409**	**1,151,562.55**	**127,409**	**(141,105.35)**	**6,315,357.52**	**23,413**	**67,291.87**	**23,413**	**(23,385.68)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	October 2018	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	44700-0000 or 55500-0000 or 55500-0050	5,919,747.65																
Day Ahead Non-Asset Energy	55500-0027	(2,125,556.22)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	250,564.26																
Excessive Energy Amount	55500-0066	24,208.63																
Non-Excessive Energy Amount	55500-0069	111,777.49																
Real Time Non-Asset Energy	55500-0043	148,546.99																
Subtotal		**4,329,288.80**	**24,481**				**36,970**				**71,874**				**200,899**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,181,956.27										75,471.14		-		160,669.72		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	427,762.20										27,123.93		-		58,148.06		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(195,700.43)										-		(12,496.01)		-		(26,602.62)
Real Time Distribution of Losses	55500-0041	(345,242.68)										-		(21,891.45)		-		(46,930.73)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**1,068,775.36**	**24,481**	**-**	**24,481**	**-**	**36,970**	**-**	**36,970**	**-**	**71,874**	**102,595.07**	**71,874**	**(34,387.46)**	**200,899**	**218,817.78**	**200,899**	**(73,533.35)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**24,481**	**-**	**24,481**	**-**	**36,970**	**-**	**36,970**	**-**	**71,874**	**-**	**71,874**	**-**	**200,899**	**-**	**200,899**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	194,760.60										12,349.55		-		26,474.87		-
Real Time Market Administration (Schedule 17)	55500-0036	13,552.37										859.34		-		1,842.25		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,290.28										145.22		-		311.33		-
Subtotal		**210,603.25**	**24,481**	**-**	**24,481**	**-**	**36,970**	**-**	**36,970**	**-**	**71,874**	**13,354.12**	**71,874**	**-**	**200,899**	**28,628.45**	**200,899**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	October 2018	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	93,391.53										5,963.30		-		12,695.22		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	49,325.57										3,149.57		-		6,705.09		-
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	393,363.63										24,942.75		-		53,472.07		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(174,913.00)										-		(11,091.04)		-		(23,776.88)
Financial Transmission Rights Annual Transaction Amount	55500-0059	383,146.80										24,294.91		-		52,083.24		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	22,445.92										1,423.27		-		3,051.20		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(71,649.70)										-		(4,543.23)		-		(9,739.74)
Financial Transmission Rights Hourly Allocation	55500-0032	(156,108.82)										-		(9,898.69)		-		(21,220.73)
Financial Transmission Rights Monthly Allocation	55500-0033	(6,789.38)										-		(430.51)		-		(922.92)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(5,883.03)										-		(373.04)		-		(799.71)
FTR Guarantee Uplift Amount	55500-0055	5,883.03										373.04		-		799.71		-
Financial Transmission Rights Monthly Transaction Amount	55500-0056	13,537.19										858.38		-		1,840.18		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**545,749.74**	**24,481**	**-**	**24,481**	**-**	**36,970**	**-**	**36,970**	**-**	**71,874**	**61,005.22**	**71,874**	**(26,336.50)**	**200,899**	**130,646.72**	**200,899**	**(56,459.97)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	21,168.14										1,342.25		-		2,877.50		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(4,929.79)										-		(312.59)		-		(670.13)
Real Time Price Volatility Make Whole Payment	55500-0057	(146.85)										-		(9.31)		-		(19.96)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	50,089.42										3,176.11		-		6,808.93		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(20,670.33)										-		(1,310.68)		-		(2,809.83)
Subtotal		**45,510.59**	**24,481**	**-**	**24,481**	**-**	**36,970**	**-**	**36,970**	**-**	**71,874**	**4,518.36**	**71,874**	**(1,632.59)**	**200,899**	**9,686.43**	**200,899**	**(3,499.93)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	48,224.36										3,057.85		-		6,555.40		-
Real Time Net Inadvertent Distribution	55500-0044	20,183.96										1,279.84		-		2,743.72		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	163,179.85										10,347.05		-		22,181.93		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	(155.78)										-		(9.88)		-		(21.18)
Real Time Ramp Capability Amount	55500-0080	(204.74)										-		(12.98)		-		(27.83)
Subtotal		**231,227.65**	**24,481**	**-**	**24,481**	**-**	**36,970**	**-**	**36,970**	**-**	**71,874**	**14,684.75**	**71,874**	**(22.86)**	**200,899**	**31,481.05**	**200,899**	**(49.01)**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	October 2018	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		**-**	**24,481**	**-**	**24,481**	**-**	**36,970**	**-**	**36,970**	**-**	**71,874**	**-**	**71,874**	**-**	**200,899**	**-**	**200,899**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(93,944.45)										-		(5,956.91)		-		(12,770.38)
Day Ahead Spinning Reserve Amount	55500-0063	(44,163.33)										-		(2,800.35)		-		(6,003.36)
Day Ahead Supplemental Reserve Amount	55500-0064	133.73										8.48		-		18.18		-
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	1,987.71										126.04		-		270.20		-
Real Time Regulation Amount	55500-0070	(10,297.17)										-		(652.93)		-		(1,399.75)
Regulation Reserve Cost Distribution Amount	55500-0071	41,492.59										2,631.00		-		5,640.31		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	51,142.96										3,242.92		-		6,952.14		-
Real Time Spinning Reserve Amount	55500-0072	2,511.18										159.23		-		341.36		-
Spinning Reserve Cost Distribution Amount	55500-0073	57,200.39										3,627.01		-		7,775.56		-
Real Time Supplemental Reserve Amount	55500-0074	204.65										12.98		-		27.82		-
Supplemental Reserve Cost Distribution Amount	55500-0075	9,590.00										608.09		-		1,303.62		-
Subtotal		**15,858.26**	**24,481**	**-**	**24,481**	**-**	**36,970**	**-**	**36,970**	**-**	**71,874**	**10,415.75**	**71,874**	**(9,410.19)**	**200,899**	**22,329.20**	**200,899**	**(20,173.50)**
Grand Total		**6,447,013.65**	**24,481**	**-**	**24,481**	**-**	**36,970**	**-**	**36,970**	**-**	**71,874**	**206,573.27**	**71,874**	**(71,789.60)**	**200,899**	**441,589.63**	**200,899**	**(153,715.75)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	November 2018	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	4,801,117.43									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,894,304.22)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	374,126.89									-				
	Excessive Energy Amount	55500-0066	12,505.01									-				
	Non-Excessive Energy Amount	55500-0069	863,674.13									-				
22	Real Time Non-Asset Energy	55500-0043	198,839.85									-				
	Subtotal		**4,355,959.09**	**698,853**	**3,886,523.96**			**133,685**	**740,290.28**			4,626,814.24	**17,198**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,479,210.82		983,213.08		-		187,278.68		-	1,170,491.76		22,721.85		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	335,031.81		222,327.11		-		42,348.02		-	264,675.13		5,231.46		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(268,957.99)		-		(178,773.04)		-		(34,052.01)	(212,825.05)		-		(4,131.41)
14	Real Time Distribution of Losses	55500-0041	(434,211.98)		-		(288,143.07)		-		(54,884.39)	(343,027.46)		-		(6,780.14)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**1,111,072.66**	**698,853**	**1,205,540.19**	**698,853**	**(466,916.11)**	**133,685**	**229,626.70**	**133,685**	**(88,936.40)**	**879,314.38**	**17,198**	**27,953.32**	**17,198**	**(10,911.55)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**698,853**	**-**	**698,853**	**-**	**133,685**	**-**	**133,685**	**-**	**-**	**17,198**	**-**	**17,198**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	219,751.45		145,827.06		-		27,776.58		-	173,603.65		3,431.38		-
19	Real Time Market Administration (Schedule 17)	55500-0036	18,430.16		12,230.25		-		2,329.57		-	14,559.83		287.78		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	1,360.93		903.11		-		172.02		-	1,075.13		21.25		-
	Subtotal		**239,542.54**	**698,853**	**158,960.43**	**698,853**	**-**	**133,685**	**30,278.18**	**133,685**	**-**	**189,238.61**	**17,198**	**3,740.41**	**17,198**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	November 2018	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	(58,008.43)		-		(38,557.48)		-		(7,344.28)	(45,901.77)		-		(891.06)
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	78,515.46		52,188.25		-		9,940.62		-	62,128.87		1,206.06		-
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	209,062.12		138,733.62		-		26,425.45		-	165,159.07		3,264.47		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(174,913.00)		-		(116,072.27)		-		(22,109.00)	(138,181.27)		-		(2,731.24)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	383,146.80		254,256.22		-		48,429.76		-	302,685.97		5,982.77		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	22,445.92		14,895.11		-		2,837.16		-	17,732.28		350.49		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(71,649.62)		-		(47,546.69)		-		(9,056.51)	(56,603.20)		-		(1,118.80)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(140,918.15)		-		(93,513.28)		-		(17,812.05)	(111,325.34)		-		(2,200.41)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(9,327.41)		-		(6,189.67)		-		(1,178.98)	(7,368.65)		-		(145.65)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	2,560.26		1,698.99		-		323.62		-	2,022.61		39.98		-
	FTR Guarantee Uplift Amount	55500-0055	(2,404.99)		-		(1,595.95)		-		(303.99)	(1,899.94)		-		(37.55)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	11,459.78		7,604.71		-		1,448.52		-	9,053.23		178.94		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**249,968.74**	**698,853**	**469,376.90**	**698,853**	**(303,475.34)**	**133,685**	**89,405.12**	**133,685**	**(57,804.83)**	**197,501.86**	**17,198**	**11,022.71**	**17,198**	**(7,124.70)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	30,596.25		20,303.67		-		3,867.37		-	24,171.04		477.75		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(8,484.37)		-		(5,630.23)		-		(1,072.42)	(6,702.65)		-		(132.48)
	Real Time Price Volatility Make Whole Payment	55500-0057	(448.29)		-		(297.49)		-		(56.66)	(354.15)		-		(7.00)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	121,653.04		80,728.96		-		15,376.94		-	96,105.90		1,899.59		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(31,053.13)		-		(20,606.86)		-		(3,925.12)	(24,531.97)		-		(484.89)
	Subtotal		**112,263.50**	**698,853**	**101,032.63**	**698,853**	**(26,534.57)**	**133,685**	**19,244.31**	**133,685**	**(5,054.20)**	**88,688.17**	**17,198**	**2,377.35**	**17,198**	**(624.37)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	24,294.81		16,122.04		-		3,070.86		-	19,192.90		379.36		-
21	Real Time Net Inadvertent Distribution	55500-0044	(35,539.27)		-		(23,583.86)		-		(4,492.16)	(28,076.02)		-		(554.94)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	69,223.14		45,936.48		-		8,749.80		-	54,686.28		1,080.91		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	0.12		0.08		-		0.02		-	0.09		0.00		-
33	Day Ahead Ramp Capability Amount	55500-0079	(200.41)		-		(132.99)		-		(25.33)	(158.32)		-		(3.13)
34	Real Time Ramp Capability Amount	55500-0080	(98.36)		-		(65.27)		-		(12.43)	(77.70)		-		(1.54)
	Subtotal		**57,680.03**	**698,853**	**62,058.59**	**698,853**	**(23,782.12)**	**133,685**	**11,820.68**	**133,685**	**(4,529.93)**	**45,567.22**	**17,198**	**1,460.27**	**17,198**	**(559.60)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	November 2018	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**698,853**	**-**	**698,853**	**-**	**133,685**	**-**	**133,685**	**-**	**-**	**17,198**	**-**	**17,198**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(142,600.27)		-		(94,629.54)		-		(18,024.67)	(112,654.21)		-		(2,226.68)
	Day Ahead Spinning Reserve Amount	55500-0063	(43,817.02)		-		(29,076.97)		-		(5,538.47)	(34,615.45)		-		(684.19)
	Day Ahead Supplemental Reserve Amount	55500-0064	(28.62)		-		(18.99)		-		(3.62)	(22.61)		-		(0.45)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	3,494.26		2,318.79		-		441.67		-	2,760.47		54.56		-
	Real Time Regulation Amount	55500-0070	14,691.76		9,749.45		-		1,857.04		-	11,606.49		229.41		-
	Regulation Reserve Cost Distribution Amount	55500-0071	44,164.85		29,307.79		-		5,582.44		-	34,890.23		689.63		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	57,101.23		37,892.38		-		7,217.60		-	45,109.97		891.63		-
	Real Time Spinning Reserve Amount	55500-0072	6,681.48		4,433.83		-		844.54		-	5,278.37		104.33		-
	Spinning Reserve Cost Distribution Amount	55500-0073	43,426.34		28,817.72		-		5,489.09		-	34,306.81		678.09		-
	Real Time Supplemental Reserve Amount	55500-0074	123.77		82.13		-		15.64		-	97.78		1.93		-
	Supplemental Reserve Cost Distribution Amount	55500-0075	3,846.19		2,552.33		-		486.16		-	3,038.49		60.06		-
	Subtotal		**(12,916.03)**	**698,853**	**115,154.43**	**698,853**	**(123,725.51)**	**133,685**	**21,934.18**	**133,685**	**(23,566.76)**	**(10,203.66)**	**17,198**	**2,709.64**	**17,198**	**(2,911.32)**
	Grand Total		**6,113,570.53**	**698,853**	**5,998,647.13**	**698,853**	**(944,433.65)**	**133,685**	**1,142,599.45**	**133,685**	**(179,892.12)**	**6,016,920.81**	**17,198**	**49,263.69**	**17,198**	**(22,131.54)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	November 2018	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	44700-0000 or 55500-0000 or 55500-0050	4,801,117.43																
Day Ahead Non-Asset Energy	55500-0027	(1,894,304.22)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	374,126.89																
Excessive Energy Amount	55500-0066	12,505.01																
Non-Excessive Energy Amount	55500-0069	863,674.13																
Real Time Non-Asset Energy	55500-0043	198,839.85																
Subtotal		**4,355,959.09**	**26,937**				**35,031**				**70,462**				**229,615**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,479,210.82										93,092.64		-		192,904.56		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	335,031.81										21,433.58		-		43,691.64		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(268,957.99)										-		(16,926.60)		-		(35,074.94)
Real Time Distribution of Losses	55500-0041	(434,211.98)										-		(27,778.60)		-		(56,625.77)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**1,111,072.66**	**26,937**	**-**	**26,937**	**-**	**35,031**	**-**	**35,031**	**-**	**70,462**	**114,526.22**	**70,462**	**(44,705.20)**	**229,615**	**236,596.21**	**229,615**	**(91,700.70)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**26,937**	**-**	**26,937**	**-**	**35,031**	**-**	**35,031**	**-**	**70,462**	**-**	**70,462**	**-**	**229,615**	**-**	**229,615**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	219,751.45										14,058.54		-		28,657.88		-
Real Time Market Administration (Schedule 17)	55500-0036	18,430.16										1,179.06		-		2,403.49		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	1,360.93										87.07		-		177.48		-
Subtotal		**239,542.54**	**26,937**	**-**	**26,937**	**-**	**35,031**	**-**	**35,031**	**-**	**70,462**	**15,324.67**	**70,462**	**-**	**229,615**	**31,238.84**	**229,615**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	November 2018	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	(58,008.43)										-		(3,650.70)		-		(7,564.91)
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	78,515.46										4,941.29		-		10,239.24		-
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	209,062.12										13,374.70		-		27,263.88		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(174,913.00)										-		(11,190.02)		-		(22,810.48)
Financial Transmission Rights Annual Transaction Amount	55500-0059	383,146.80										24,511.72		-		49,966.34		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	22,445.92										1,435.97		-		2,927.18		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(71,649.62)										-		(4,583.77)		-		(9,343.86)
Financial Transmission Rights Hourly Allocation	55500-0032	(140,918.15)										-		(9,015.20)		-		(18,377.20)
Financial Transmission Rights Monthly Allocation	55500-0033	(9,327.41)										-		(596.72)		-		(1,216.39)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	2,560.26										163.79		-		333.88		-
FTR Guarantee Uplift Amount	55500-0055	(2,404.99)										-		(153.86)		-		(313.64)
Financial Transmission Rights Monthly Transaction Amount	55500-0056	11,459.78										733.14		-		1,494.47		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**249,968.74**	**26,937**	**-**	**26,937**	**-**	**35,031**	**-**	**35,031**	**-**	**70,462**	**45,160.61**	**70,462**	**(29,190.27)**	**229,615**	**92,225.00**	**229,615**	**(59,626.47)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	30,596.25										1,957.39		-		3,990.07		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(8,484.37)										-		(542.79)		-		(1,106.45)
Real Time Price Volatility Make Whole Payment	55500-0057	(448.29)										-		(28.68)		-		(58.46)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	121,653.04										7,782.72		-		15,864.82		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(31,053.13)										-		(1,986.62)		-		(4,049.65)
Subtotal		**112,263.50**	**26,937**	**-**	**26,937**	**-**	**35,031**	**-**	**35,031**	**-**	**70,462**	**9,740.11**	**70,462**	**(2,558.08)**	**229,615**	**19,854.89**	**229,615**	**(5,214.56)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	24,294.81										1,554.25		-		3,168.30		-
Real Time Net Inadvertent Distribution	55500-0044	(35,539.27)										-		(2,273.62)		-		(4,634.69)
Real Time Revenue Neutrality Uplift Amount	55500-0045	69,223.14										4,428.53		-		9,027.42		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	0.12										0.01		-		0.02		-
Day Ahead Ramp Capability Amount	55500-0079	(200.41)										-		(12.82)		-		(26.14)
Real Time Ramp Capability Amount	55500-0080	(98.36)										-		(6.29)		-		(12.83)
Subtotal		**57,680.03**	**26,937**	**-**	**26,937**	**-**	**35,031**	**-**	**35,031**	**-**	**70,462**	**5,982.80**	**70,462**	**(2,292.73)**	**229,615**	**12,195.73**	**229,615**	**(4,673.65)**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	November 2018	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		**-**	**26,937**	**-**	**26,937**	**-**	**35,031**	**-**	**35,031**	**-**	**70,462**	**-**	**70,462**	**-**	**229,615**	**-**	**229,615**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(142,600.27)										-		(9,122.82)		-		(18,596.56)
Day Ahead Spinning Reserve Amount	55500-0063	(43,817.02)										-		(2,803.18)		-		(5,714.20)
Day Ahead Supplemental Reserve Amount	55500-0064	(28.62)										-		(1.83)		-		(3.73)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	3,494.26										223.54		-		455.69		-
Real Time Regulation Amount	55500-0070	14,691.76										939.90		-		1,915.96		-
Regulation Reserve Cost Distribution Amount	55500-0071	44,164.85										2,825.44		-		5,759.56		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	57,101.23										3,653.04		-		7,446.60		-
Real Time Spinning Reserve Amount	55500-0072	6,681.48										427.45		-		871.33		-
Spinning Reserve Cost Distribution Amount	55500-0073	43,426.34										2,778.19		-		5,663.25		-
Real Time Supplemental Reserve Amount	55500-0074	123.77										7.92		-		16.14		-
Supplemental Reserve Cost Distribution Amount	55500-0075	3,846.19										246.06		-		501.58		-
Subtotal		**(12,916.03)**	**26,937**	**-**	**26,937**	**-**	**35,031**	**-**	**35,031**	**-**	**70,462**	**11,101.53**	**70,462**	**(11,927.83)**	**229,615**	**22,630.11**	**229,615**	**(24,314.49)**
Grand Total		**6,113,570.53**	**26,937**	**-**	**26,937**	**-**	**35,031**	**-**	**35,031**	**-**	**70,462**	**201,835.94**	**70,462**	**(90,674.11)**	**229,615**	**414,740.78**	**229,615**	**(185,529.88)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	December 2018	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	5,037,137.07									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,855,829.72)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	349,484.83									-				
	Excessive Energy Amount	55500-0066	3,251.45									-				
	Non-Excessive Energy Amount	55500-0069	657,598.71									-				
22	Real Time Non-Asset Energy	55500-0043	130,708.20									-				
	Subtotal		**4,322,350.54**	**729,864**	**3,767,554.39**			**136,327**	**717,629.41**			4,485,183.80	**18,968**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,406,781.20		928,973.21		-		176,947.28		-	1,105,920.49		23,197.22		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	440,429.84		292,269.24		-		55,670.33		-	347,939.57		6,926.17		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(208,460.45)		-		(137,657.64)		-		(26,220.50)	(163,878.14)		-		(3,437.42)
14	Real Time Distribution of Losses	55500-0041	(420,607.43)		-		(279,115.09)		-		(53,164.78)	(332,279.87)		-		(6,614.44)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**1,218,143.15**	**729,864**	**1,221,242.45**	**729,864**	**(416,772.73)**	**136,327**	**232,617.61**	**136,327**	**(79,385.28)**	**957,702.05**	**18,968**	**30,123.39**	**18,968**	**(10,051.87)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**729,864**	**-**	**729,864**	**-**	**136,327**	**-**	**136,327**	**-**	**-**	**18,968**	**-**	**18,968**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	159,937.70		106,134.66		-		20,216.13		-	126,350.78		2,515.17		-
19	Real Time Market Administration (Schedule 17)	55500-0036	12,298.10		8,161.02		-		1,554.48		-	9,715.50		193.40		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	1,703.99		1,130.77		-		215.38		-	1,346.15		26.80		-
	Subtotal		**173,939.79**	**729,864**	**115,426.44**	**729,864**	**-**	**136,327**	**21,985.99**	**136,327**	**-**	**137,412.43**	**18,968**	**2,735.37**	**18,968**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	December 2018	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	(51,896.04)		-		(34,269.75)		-		(6,527.57)	(40,797.32)		-		(855.74)
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	9,924.13		6,553.44		-		1,248.27		-	7,801.71		163.64		-
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	254,513.45		168,895.13		-		32,170.50		-	201,065.63		4,002.46		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(105,297.03)		-		(69,875.11)		-		(13,309.54)	(83,184.65)		-		(1,655.89)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	120,936.61		80,253.53		-		15,286.39		-	95,539.92		1,901.84		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,158.49		4,750.37		-		904.83		-	5,655.21		112.57		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(90,081.28)		-		(59,777.94)		-		(11,386.27)	(71,164.21)		-		(1,416.61)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(84,723.02)		-		(56,222.20)		-		(10,708.99)	(66,931.19)		-		(1,332.35)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(6,861.38)		-		(4,553.21)		-		(867.28)	(5,420.49)		-		(107.90)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	1,755.25		1,164.78		-		221.86		-	1,386.65		27.60		-
	FTR Guarantee Uplift Amount	55500-0055	(1,752.81)		-		(1,163.16)		-		(221.56)	(1,384.72)		-		(27.56)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	50,058.95		33,219.12		-		6,327.45		-	39,546.57		787.22		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**103,735.32**	**729,864**	**294,836.37**	**729,864**	**(225,861.37)**	**136,327**	**56,159.31**	**136,327**	**(43,021.21)**	**82,113.11**	**18,968**	**6,995.35**	**18,968**	**(5,396.06)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	36,859.73		24,460.12		-		4,659.07		-	29,119.19		579.65		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(2,676.91)		-		(1,776.40)		-		(338.36)	(2,114.76)		-		(42.10)
	Real Time Price Volatility Make Whole Payment	55500-0057	(38.05)		-		(25.25)		-		(4.81)	(30.06)		-		(0.60)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	36,615.98		24,298.36		-		4,628.26		-	28,926.62		575.82		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-		-		-		-		-	-		-		-
	Subtotal		**70,760.75**	**729,864**	**48,758.48**	**729,864**	**(1,801.65)**	**136,327**	**9,287.33**	**136,327**	**(343.17)**	**55,900.99**	**18,968**	**1,155.47**	**18,968**	**(42.70)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	42,596.44		28,267.00		-		5,384.19		-	33,651.19		669.87		-
21	Real Time Net Inadvertent Distribution	55500-0044	23,092.97		15,324.49		-		2,918.95		-	18,243.45		363.16		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	138,269.87		91,755.89		-		17,477.31		-	109,233.20		2,174.42		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	-		-		-		-		-	-		-		-
34	Real Time Ramp Capability Amount	55500-0080	(32.83)		-		(21.79)		-		(4.15)	(25.94)		-		(0.52)
	Subtotal		**203,926.45**	**729,864**	**135,347.38**	**729,864**	**(21.79)**	**136,327**	**25,780.45**	**136,327**	**(4.15)**	**161,101.90**	**18,968**	**3,207.45**	**18,968**	**(0.52)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	December 2018	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**729,864**	**-**	**729,864**	**-**	**136,327**	**-**	**136,327**	**-**	**-**	**18,968**	**-**	**18,968**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(119,746.92)		-		(79,464.06)		-		(15,136.01)	(94,600.07)		-		(1,883.13)
	Day Ahead Spinning Reserve Amount	55500-0063	(83,200.83)		-		(55,212.07)		-		(10,516.58)	(65,728.66)		-		(1,308.41)
	Day Ahead Supplemental Reserve Amount	55500-0064	(39.22)		-		(26.03)		-		(4.96)	(30.98)		-		(0.62)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	1,637.63		1,086.73		-		207.00		-	1,293.73		25.75		-
	Real Time Regulation Amount	55500-0070	25,686.51		17,045.57		-		3,246.77		-	20,292.34		403.94		-
	Regulation Reserve Cost Distribution Amount	55500-0071	43,758.74		29,038.30		-		5,531.10		-	34,569.40		688.15		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	48,322.22		32,066.63		-		6,107.93		-	38,174.55		759.91		-
	Real Time Spinning Reserve Amount	55500-0072	17,108.22		11,353.01		-		2,162.48		-	13,515.49		269.04		-
	Spinning Reserve Cost Distribution Amount	55500-0073	37,118.56		24,631.88		-		4,691.79		-	29,323.66		583.72		-
	Real Time Supplemental Reserve Amount	55500-0074	(6.28)		-		(4.17)		-		(0.79)	(4.96)		-		(0.10)
	Supplemental Reserve Cost Distribution Amount	55500-0075	6,283.86		4,169.97		-		794.28		-	4,964.25		98.82		-
	Subtotal		**(23,077.51)**	**729,864**	**119,392.09**	**729,864**	**(134,706.32)**	**136,327**	**22,741.35**	**136,327**	**(25,658.35)**	**(18,231.23)**	**18,968**	**2,829.34**	**18,968**	**(3,192.26)**
	Grand Total		**6,069,778.49**	**729,864**	**5,702,557.61**	**729,864**	**(779,163.85)**	**136,327**	**1,086,201.45**	**136,327**	**(148,412.16)**	**5,861,183.04**	**18,968**	**47,046.37**	**18,968**	**(18,683.40)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	December 2018	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	44700-0000 or 55500-0000 or 55500-0050	5,037,137.07																
Day Ahead Non-Asset Energy	55500-0027	(1,855,829.72)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	349,484.83																
Excessive Energy Amount	55500-0066	3,251.45																
Non-Excessive Energy Amount	55500-0069	657,598.71																
Real Time Non-Asset Energy	55500-0043	130,708.20																
Subtotal		**4,322,350.54**	**22,382**				**36,864**				**77,026**				**238,302**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,406,781.20										94,198.77		-		183,464.72		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	440,429.84										28,125.64		-		57,438.46		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(208,460.45)										-		(13,958.62)		-		(27,186.27)
Real Time Distribution of Losses	55500-0041	(420,607.43)										-		(26,859.79)		-		(54,853.33)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**1,218,143.15**	**22,382**	**-**	**22,382**	**-**	**36,864**	**-**	**36,864**	**-**	**77,026**	**122,324.41**	**77,026**	**(40,818.41)**	**238,302**	**240,903.18**	**238,302**	**(82,039.60)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**22,382**	**-**	**22,382**	**-**	**36,864**	**-**	**36,864**	**-**	**77,026**	**-**	**77,026**	**-**	**238,302**	**-**	**238,302**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	159,937.70										10,213.54		-		20,858.20		-
Real Time Market Administration (Schedule 17)	55500-0036	12,298.10										785.35		-		1,603.85		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	1,703.99										108.82		-		222.23		-
Subtotal		**173,939.79**	**22,382**	**-**	**22,382**	**-**	**36,864**	**-**	**36,864**	**-**	**77,026**	**11,107.71**	**77,026**	**-**	**238,302**	**22,684.28**	**238,302**	**-**

MINNESOTA POWER	Account																	
MISO MONTHLY ALLOCATION	Number	December 2018	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	44700-0000 or 55500-0000 or 55500-0050	(51,896.04)										-		(3,474.99)		-		(6,768.00)
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	9,924.13										664.52		-		1,294.25		-
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	254,513.45										16,253.11		-		33,192.26		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(105,297.03)										-		(6,724.22)		-		(13,732.26)
Financial Transmission Rights Annual Transaction Amount	55500-0059	120,936.61										7,722.95		-		15,771.89		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,158.49										457.14		-		933.57		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(90,081.28)										-		(5,752.55)		-		(11,747.91)
Financial Transmission Rights Hourly Allocation	55500-0032	(84,723.02)										-		(5,410.37)		-		(11,049.11)
Financial Transmission Rights Monthly Allocation	55500-0033	(6,861.38)										-		(438.16)		-		(894.82)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	1,755.25										112.09		-		228.91		-
FTR Guarantee Uplift Amount	55500-0055	(1,752.81)										-		(111.93)		-		(228.59)
Financial Transmission Rights Monthly Transaction Amount	55500-0056	50,058.95										3,196.74		-		6,528.42		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**103,735.32**	**22,382**	**-**	**22,382**	**-**	**36,864**	**-**	**36,864**	**-**	**77,026**	**28,406.55**	**77,026**	**(21,912.22)**	**238,302**	**57,949.30**	**238,302**	**(44,420.70)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	36,859.73										2,353.84		-		4,807.05		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(2,676.91)										-		(170.95)		-		(349.11)
Real Time Price Volatility Make Whole Payment	55500-0057	(38.05)										-		(2.43)		-		(4.96)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	36,615.98										2,338.28		-		4,775.26		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-										-		-		-		-
Subtotal		**70,760.75**	**22,382**	**-**	**22,382**	**-**	**36,864**	**-**	**36,864**	**-**	**77,026**	**4,692.12**	**77,026**	**(173.38)**	**238,302**	**9,582.30**	**238,302**	**(354.07)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	42,596.44										2,720.19		-		5,555.20		-
Real Time Net Inadvertent Distribution	55500-0044	23,092.97										1,474.71		-		3,011.66		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	138,269.87										8,829.85		-		18,032.40		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	-										-		-		-		-
Real Time Ramp Capability Amount	55500-0080	(32.83)										-		(2.10)		-		(4.28)
Subtotal		**203,926.45**	**22,382**	**-**	**22,382**	**-**	**36,864**	**-**	**36,864**	**-**	**77,026**	**13,024.74**	**77,026**	**(2.10)**	**238,302**	**26,599.26**	**238,302**	**(4.28)**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	December 2018	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		**-**	**22,382**	**-**	**22,382**	**-**	**36,864**	**-**	**36,864**	**-**	**77,026**	**-**	**77,026**	**-**	**238,302**	**-**	**238,302**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(119,746.92)										-		(7,646.98)		-		(15,616.74)
Day Ahead Spinning Reserve Amount	55500-0063	(83,200.83)										-		(5,313.17)		-		(10,850.60)
Day Ahead Supplemental Reserve Amount	55500-0064	(39.22)										-		(2.50)		-		(5.11)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	1,637.63										104.58		-		213.57		-
Real Time Regulation Amount	55500-0070	25,686.51										1,640.33		-		3,349.89		-
Regulation Reserve Cost Distribution Amount	55500-0071	43,758.74										2,794.41		-		5,706.78		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	48,322.22										3,085.83		-		6,301.92		-
Real Time Spinning Reserve Amount	55500-0072	17,108.22										1,092.52		-		2,231.16		-
Spinning Reserve Cost Distribution Amount	55500-0073	37,118.56										2,370.37		-		4,840.80		-
Real Time Supplemental Reserve Amount	55500-0074	(6.28)										-		(0.40)		-		(0.82)
Supplemental Reserve Cost Distribution Amount	55500-0075	6,283.86										401.28		-		819.51		-
Subtotal		**(23,077.51)**	**22,382**	**-**	**22,382**	**-**	**36,864**	**-**	**36,864**	**-**	**77,026**	**11,489.33**	**77,026**	**(12,963.05)**	**238,302**	**23,463.63**	**238,302**	**(26,473.27)**
Grand Total		**6,069,778.49**	**22,382**	**-**	**22,382**	**-**	**36,864**	**-**	**36,864**	**-**	**77,026**	**191,044.87**	**77,026**	**(75,869.15)**	**238,302**	**381,181.94**	**238,302**	**(153,291.93)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	January 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	7,495,040.12									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,144,487.21)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	337,821.40									-				
	Excessive Energy Amount	55500-0066	862.07									-				
	Non-Excessive Energy Amount	55500-0069	(61,902.18)									-				
22	Real Time Non-Asset Energy	55500-0043	(105,254.19)									-				
	Subtotal		**6,522,080.01**	**753,893**	**5,408,762.62**			**148,610**	**1,030,240.50**			6,439,003.12	**4,031**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,494,256.72		1,021,357.19		-		194,544.23		-	1,215,901.42		4,883.59		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	212,055.53		144,282.58		-		27,482.40		-	171,764.98		745.05		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(286,811.24)		-		(196,041.77)		-		(37,341.29)	(233,383.06)		-		(937.37)
14	Real Time Distribution of Losses	55500-0041	(396,820.04)		-		(269,996.36)		-		(51,427.88)	(321,424.23)		-		(1,394.22)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**1,022,680.97**	**753,893**	**1,165,639.78**	**753,893**	**(466,038.12)**	**148,610**	**222,026.62**	**148,610**	**(88,769.17)**	**832,859.11**	**4,031**	**5,628.64**	**4,031**	**(2,331.59)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**753,893**	**-**	**753,893**	**-**	**148,610**	**-**	**148,610**	**-**	**-**	**4,031**	**-**	**4,031**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	93,545.95		63,648.66		-		12,123.56		-	75,772.22		328.67		-
19	Real Time Market Administration (Schedule 17)	55500-0036	8,261.26		5,620.96		-		1,070.66		-	6,691.62		29.03		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,999.97		2,041.18		-		388.80		-	2,429.98		10.54		-
	Subtotal		**104,807.18**	**753,893**	**71,310.81**	**753,893**	**-**	**148,610**	**13,583.01**	**148,610**	**-**	**84,893.82**	**4,031**	**368.24**	**4,031**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	January 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	138,932.58		94,963.46		-		18,088.28		-	113,051.74		454.07		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(85,937.55)		-		(58,740.19)		-		(11,188.61)	(69,928.80)		-		(280.86)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	(30,841.50)		-		(20,984.56)		-		(3,997.06)	(24,981.62)		-		(108.36)
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(105,297.03)		-		(71,644.10)		-		(13,646.50)	(85,290.59)		-		(369.96)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	120,936.61		82,285.27		-		15,673.38		-	97,958.65		424.91		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,159.35		4,871.22		-		927.85		-	5,799.07		25.15		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(88,590.67)		-		(60,277.09)		-		(11,481.35)	(71,758.44)		-		(311.26)
28	Financial Transmission Rights Hourly Allocation	55500-0032	76,176.39		51,830.42		-		9,872.46		-	61,702.88		267.64		-
30	Financial Transmission Rights Monthly Allocation	55500-0033	(4,669.13)		-		(3,176.88)		-		(605.12)	(3,782.00)		-		(16.40)
32	Financial Transmission Rights Yearly Allocation	55500-0035	(44,752.34)		-		(30,449.49)		-		(5,799.90)	(36,249.40)		-		(157.24)
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	47,191.77		32,109.28		-		6,116.05		-	38,225.33		165.81		-
	FTR Guarantee Uplift Amount	55500-0055	(49,563.34)		-		(33,722.90)		-		(6,423.41)	(40,146.31)		-		(174.14)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	6,999.91		4,762.74		-		907.19		-	5,669.93		24.59		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**(12,254.94)**	**753,893**	**270,822.39**	**753,893**	**(278,995.21)**	**148,610**	**51,585.22**	**148,610**	**(53,141.94)**	**(9,729.54)**	**4,031**	**1,362.17**	**4,031**	**(1,418.23)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	20,167.93		13,722.26		-		2,613.76		-	16,336.02		70.86		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(2,271.29)		-		(1,545.39)		-		(294.36)	(1,839.74)		-		(7.98)
	Real Time Price Volatility Make Whole Payment	55500-0057	(24.85)		-		(16.91)		-		(3.22)	(20.13)		-		(0.09)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	16,915.19		11,509.10		-		2,192.21		-	13,701.30		59.43		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-		-		-		-		-	-		-		-
	Subtotal		**34,786.98**	**753,893**	**25,231.35**	**753,893**	**(1,562.29)**	**148,610**	**4,805.97**	**148,610**	**(297.58)**	**28,177.45**	**4,031**	**130.29**	**4,031**	**(8.07)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	96,797.65		65,861.12		-		12,544.98		-	78,406.10		340.10		-
21	Real Time Net Inadvertent Distribution	55500-0044	(15,204.27)		-		(10,344.99)		-		(1,970.47)	(12,315.46)		-		(53.42)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	1,522.21		1,035.71		-		197.28		-	1,232.99		5.35		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	(0.05)		-		(0.03)		-		(0.01)	(0.04)		-		(0.00)
33	Day Ahead Ramp Capability Amount	55500-0079	-		-		-		-		-	-		-		-
34	Real Time Ramp Capability Amount	55500-0080	(0.17)		-		(0.12)		-		(0.02)	(0.14)		-		(0.00)
	Subtotal		**83,115.37**	**753,893**	**66,896.83**	**753,893**	**(10,345.13)**	**148,610**	**12,742.25**	**148,610**	**(1,970.50)**	**67,323.45**	**4,031**	**345.44**	**4,031**	**(53.42)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	January 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**753,893**	**-**	**753,893**	**-**	**148,610**	**-**	**148,610**	**-**	**-**	**4,031**	**-**	**4,031**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(56,795.94)		-		(38,643.96)		-		(7,360.75)	(46,004.71)		-		(199.55)
	Day Ahead Spinning Reserve Amount	55500-0063	(38,595.98)		-		(26,260.70)		-		(5,002.04)	(31,262.74)		-		(135.61)
	Day Ahead Supplemental Reserve Amount	55500-0064	(20.71)		-		(14.09)		-		(2.68)	(16.78)		-		(0.07)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	1,426.84		970.82		-		184.92		-	1,155.74		5.01		-
	Real Time Regulation Amount	55500-0070	18,658.34		12,695.13		-		2,418.12		-	15,113.26		65.56		-
	Regulation Reserve Cost Distribution Amount	55500-0071	29,163.56		19,842.89		-		3,779.60		-	23,622.48		102.47		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	22,419.66		15,254.34		-		2,905.59		-	18,159.92		78.77		-
	Real Time Spinning Reserve Amount	55500-0072	5,548.02		3,774.87		-		719.02		-	4,493.90		19.49		-
	Spinning Reserve Cost Distribution Amount	55500-0073	26,312.18		17,902.81		-		3,410.06		-	21,312.87		92.45		-
	Real Time Supplemental Reserve Amount	55500-0074	(57.26)		-		(38.96)		-		(7.42)	(46.38)		-		(0.20)
	Supplemental Reserve Cost Distribution Amount	55500-0075	3,827.05		2,603.92		-		495.99		-	3,099.91		13.45		-
	Subtotal		**11,885.76**	**753,893**	**73,044.78**	**753,893**	**(64,957.71)**	**148,610**	**13,913.29**	**148,610**	**(12,372.90)**	**9,627.47**	**4,031**	**377.19**	**4,031**	**(335.43)**
	Grand Total		**7,767,101.32**	**753,893**	**7,081,708.57**	**753,893**	**(821,898.47)**	**148,610**	**1,348,896.87**	**148,610**	**(156,552.09)**	**7,452,154.88**	**4,031**	**8,211.98**	**4,031**	**(4,146.73)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	January 2019	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	44700-0000 or 55500-0000 or 55500-0050	7,495,040.12																
Day Ahead Non-Asset Energy	55500-0027	(1,144,487.21)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	337,821.40																
Excessive Energy Amount	55500-0066	862.07																
Non-Excessive Energy Amount	55500-0069	(61,902.18)																
Real Time Non-Asset Energy	55500-0043	(105,254.19)																
Subtotal		**6,522,080.01**	**39,743**				**12,092**				**64,241**				**236,773**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,494,256.72										77,827.11		-		195,644.60		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	212,055.53										11,873.48		-		27,672.02		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(286,811.24)										-		(14,938.32)		-		(37,552.50)
Real Time Distribution of Losses	55500-0041	(396,820.04)										-		(22,218.88)		-		(51,782.71)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**1,022,680.97**	**39,743**	**-**	**39,743**	**-**	**12,092**	**-**	**12,092**	**-**	**64,241**	**89,700.59**	**64,241**	**(37,157.20)**	**236,773**	**223,316.62**	**236,773**	**(89,335.21)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**39,743**	**-**	**39,743**	**-**	**12,092**	**-**	**12,092**	**-**	**64,241**	**-**	**64,241**	**-**	**236,773**	**-**	**236,773**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	93,545.95										5,237.86		-		12,207.20		-
Real Time Market Administration (Schedule 17)	55500-0036	8,261.26										462.57		-		1,078.05		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,999.97										167.98		-		391.48		-
Subtotal		**104,807.18**	**39,743**	**-**	**39,743**	**-**	**12,092**	**-**	**12,092**	**-**	**64,241**	**5,868.40**	**64,241**	**-**	**236,773**	**13,676.73**	**236,773**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	January 2019	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	138,932.58										7,236.19		-		18,190.59		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(85,937.55)										-		(4,475.98)		-		(11,251.89)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	(30,841.50)										-		(1,726.89)		-		(4,024.64)
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(105,297.03)										-		(5,895.83)		-		(13,740.65)
Financial Transmission Rights Annual Transaction Amount	55500-0059	120,936.61										6,771.52		-		15,781.53		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,159.35										400.87		-		934.25		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(88,590.67)										-		(4,960.40)		-		(11,560.57)
Financial Transmission Rights Hourly Allocation	55500-0032	76,176.39										4,265.29		-		9,940.58		-
Financial Transmission Rights Monthly Allocation	55500-0033	(4,669.13)										-		(261.44)		-		(609.29)
Financial Transmission Rights Yearly Allocation	55500-0035	(44,752.34)										-		(2,505.79)		-		(5,839.92)
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	47,191.77										2,642.38		-		6,158.25		-
FTR Guarantee Uplift Amount	55500-0055	(49,563.34)										-		(2,775.17)		-		(6,467.73)
Financial Transmission Rights Monthly Transaction Amount	55500-0056	6,999.91										391.94		-		913.45		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**(12,254.94)**	**39,743**	**-**	**39,743**	**-**	**12,092**	**-**	**12,092**	**-**	**64,241**	**21,708.19**	**64,241**	**(22,601.49)**	**236,773**	**51,918.64**	**236,773**	**(53,494.69)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	20,167.93										1,129.25		-		2,631.80		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(2,271.29)										-		(127.17)		-		(296.39)
Real Time Price Volatility Make Whole Payment	55500-0057	(24.85)										-		(1.39)		-		(3.24)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	16,915.19										947.12		-		2,207.33		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-										-		-		-		-
Subtotal		**34,786.98**	**39,743**	**-**	**39,743**	**-**	**12,092**	**-**	**12,092**	**-**	**64,241**	**2,076.37**	**64,241**	**(128.57)**	**236,773**	**4,839.13**	**236,773**	**(299.63)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	96,797.65										5,419.93		-		12,631.53		-
Real Time Net Inadvertent Distribution	55500-0044	(15,204.27)										-		(851.32)		-		(1,984.07)
Real Time Revenue Neutrality Uplift Amount	55500-0045	1,522.21										85.23		-		198.64		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	(0.05)										-		(0.00)		-		(0.01)
Day Ahead Ramp Capability Amount	55500-0079	-										-		-		-		-
Real Time Ramp Capability Amount	55500-0080	(0.17)										-		(0.01)		-		(0.02)
Subtotal		**83,115.37**	**39,743**	**-**	**39,743**	**-**	**12,092**	**-**	**12,092**	**-**	**64,241**	**5,505.16**	**64,241**	**(851.33)**	**236,773**	**12,830.17**	**236,773**	**(1,984.10)**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	January 2019	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		**-**	**39,743**	**-**	**39,743**	**-**	**12,092**	**-**	**12,092**	**-**	**64,241**	**-**	**64,241**	**-**	**236,773**	**-**	**236,773**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(56,795.94)										-		(3,180.14)		-		(7,411.54)
Day Ahead Spinning Reserve Amount	55500-0063	(38,595.98)										-		(2,161.08)		-		(5,036.55)
Day Ahead Supplemental Reserve Amount	55500-0064	(20.71)										-		(1.16)		-		(2.70)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	1,426.84										79.89		-		186.19		-
Real Time Regulation Amount	55500-0070	18,658.34										1,044.72		-		2,434.81		-
Regulation Reserve Cost Distribution Amount	55500-0071	29,163.56										1,632.94		-		3,805.68		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	22,419.66										1,255.33		-		2,925.64		-
Real Time Spinning Reserve Amount	55500-0072	5,548.02										310.65		-		723.98		-
Spinning Reserve Cost Distribution Amount	55500-0073	26,312.18										1,473.28		-		3,433.59		-
Real Time Supplemental Reserve Amount	55500-0074	(57.26)										-		(3.21)		-		(7.47)
Supplemental Reserve Cost Distribution Amount	55500-0075	3,827.05										214.29		-		499.41		-
Subtotal		**11,885.76**	**39,743**	**-**	**39,743**	**-**	**12,092**	**-**	**12,092**	**-**	**64,241**	**6,011.09**	**64,241**	**(5,345.58)**	**236,773**	**14,009.29**	**236,773**	**(12,458.27)**
Grand Total		**7,767,101.32**	**39,743**	**-**	**39,743**	**-**	**12,092**	**-**	**12,092**	**-**	**64,241**	**130,869.80**	**64,241**	**(66,084.17)**	**236,773**	**320,590.58**	**236,773**	**(157,571.90)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	February 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	14,260,740.16									-				
5	Day Ahead Non-Asset Energy	55500-0027	(916,603.80)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	(66,601.11)									-				
	Excessive Energy Amount	55500-0066	2,448.42									-				
	Non-Excessive Energy Amount	55500-0069	523.01									-				
22	Real Time Non-Asset Energy	55500-0043	(169,544.20)									-				
	Subtotal		**13,110,962.48**	**705,473**	**10,573,910.27**			**131,556**	**2,014,078.15**			12,587,988.41	**-**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,004,868.23		687,406.85		-		130,934.64		-	818,341.49		-		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	116,372.34		79,179.74		-		15,081.86		-	94,261.60		-		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(380,128.41)		-		(260,036.96)		-		(49,530.85)	(309,567.80)		-		-
14	Real Time Distribution of Losses	55500-0041	(726,364.48)		-		(494,218.39)		-		(94,136.84)	(588,355.23)		-		-
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**14,747.68**	**705,473**	**766,586.59**	**705,473**	**(754,255.35)**	**131,556**	**146,016.49**	**131,556**	**(143,667.69)**	**14,680.05**	**-**	**-**	**-**	**-**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**705,473**	**-**	**705,473**	**-**	**131,556**	**-**	**131,556**	**-**	**-**	**-**	**-**	**-**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	111,278.27		75,713.73		-		14,421.66		-	90,135.40		-		-
19	Real Time Market Administration (Schedule 17)	55500-0036	9,365.94		6,372.59		-		1,213.83		-	7,586.41		-		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	818.75		557.08		-		106.11		-	663.19		-		-
	Subtotal		**121,462.96**	**705,473**	**82,643.40**	**705,473**	**-**	**131,556**	**15,741.60**	**131,556**	**-**	**98,385.00**	**-**	**-**	**-**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	February 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	103,090.27		70,521.64		-		13,432.69		-	83,954.34		-		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(23,669.61)		-		(16,191.83)		-		(3,084.16)	(19,275.98)		-		-
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	(115,797.72)		-		(78,788.77)		-		(15,007.38)	(93,796.15)		-		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(105,297.03)		-		(71,644.10)		-		(13,646.50)	(85,290.59)		-		-
	Financial Transmission Rights Annual Transaction Amount	55500-0059	120,936.61		82,285.27		-		15,673.38		-	97,958.65		-		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,161.07		4,872.39		-		928.07		-	5,800.47		-		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(89,023.04)		-		(60,571.28)		-		(11,537.39)	(72,108.66)		-		-
28	Financial Transmission Rights Hourly Allocation	55500-0032	47,297.96		32,181.53		-		6,129.82		-	38,311.35		-		-
30	Financial Transmission Rights Monthly Allocation	55500-0033	(4,169.20)		-		(2,836.72)		-		(540.33)	(3,377.05)		-		-
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(6,527.50)		-		(4,441.31)		-		(845.96)	(5,287.28)		-		-
	FTR Guarantee Uplift Amount	55500-0055	5,730.74		3,899.20		-		742.70		-	4,641.90		-		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	6,487.75		4,414.27		-		840.81		-	5,255.08		-		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**(53,779.70)**	**705,473**	**198,174.30**	**705,473**	**(234,474.00)**	**131,556**	**37,747.49**	**131,556**	**(44,661.72)**	**(43,213.94)**	**-**	**-**	**-**	**-**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	30,536.30		20,776.90		-		3,957.50		-	24,734.40		-		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(5,242.43)		-		(3,566.95)		-		(679.42)	(4,246.37)		-		-
	Real Time Price Volatility Make Whole Payment	55500-0057	(24.17)		-		(16.45)		-		(3.13)	(19.58)		-		-
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	56,139.45		38,197.28		-		7,275.67		-	45,472.95		-		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(102,594.74)		-		(69,805.46)		-		(13,296.28)	(83,101.74)		-		-
	Subtotal		**(21,185.59)**	**705,473**	**58,974.18**	**705,473**	**(73,388.86)**	**131,556**	**11,233.18**	**131,556**	**(13,978.83)**	**(17,160.33)**	**-**	**-**	**-**	**-**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	49,498.70		33,678.92		-		6,415.03		-	40,093.95		-		-
21	Real Time Net Inadvertent Distribution	55500-0044	(26,769.53)		-		(18,213.99)		-		(3,469.33)	(21,683.32)		-		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	391,008.85		266,042.42		-		50,674.75		-	316,717.17		-		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	162.15		110.33		-		21.01		-	131.34		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(70.50)		-		(47.97)		-		(9.14)	(57.11)		-		-
34	Real Time Ramp Capability Amount	55500-0080	2.14		1.46		-		0.28		-	1.73		-		-
	Subtotal		**413,831.81**	**705,473**	**299,833.12**	**705,473**	**(18,261.96)**	**131,556**	**57,111.07**	**131,556**	**(3,478.47)**	**335,203.77**	**-**	**-**	**-**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	February 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**705,473**	**-**	**705,473**	**-**	**131,556**	**-**	**131,556**	**-**	**-**	**-**	**-**	**-**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(10,841.40)		-		(7,376.49)		-		(1,405.05)	(8,781.53)		-		-
	Day Ahead Spinning Reserve Amount	55500-0063	(25,730.08)		-		(17,506.75)		-		(3,334.62)	(20,841.36)		-		-
	Day Ahead Supplemental Reserve Amount	55500-0064	4.95		3.37		-		0.64		-	4.01		-		-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	(353.14)		-		(240.28)		-		(45.77)	(286.04)		-		-
	Real Time Regulation Amount	55500-0070	5,114.13		3,479.65		-		662.79		-	4,142.45		-		-
	Regulation Reserve Cost Distribution Amount	55500-0071	25,925.00		17,639.37		-		3,359.88		-	20,999.25		-		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	8,028.56		5,462.63		-		1,040.50		-	6,503.13		-		-
	Real Time Spinning Reserve Amount	55500-0072	2,999.48		2,040.85		-		388.73		-	2,429.58		-		-
	Spinning Reserve Cost Distribution Amount	55500-0073	26,942.45		18,331.64		-		3,491.74		-	21,823.38		-		-
	Real Time Supplemental Reserve Amount	55500-0074	(3,496.42)		-		(2,378.96)		-		(453.14)	(2,832.10)		-		-
	Supplemental Reserve Cost Distribution Amount	55500-0075	9,106.11		6,195.80		-		1,180.15		-	7,375.95		-		-
	Subtotal		**37,699.64**	**705,473**	**53,153.31**	**705,473**	**(27,502.48)**	**131,556**	**10,124.44**	**131,556**	**(5,238.57)**	**30,536.71**	**-**	**-**	**-**	**-**
	Grand Total		**13,623,739.28**	**705,473**	**12,033,275.16**	**705,473**	**(1,107,882.64)**	**131,556**	**2,292,052.41**	**131,556**	**(211,025.26)**	**13,006,419.67**	**-**	**-**	**-**	**-**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	February 2019	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	44700-0000 or 55500-0000 or 55500-0050	14,260,740.16																
Day Ahead Non-Asset Energy	55500-0027	(916,603.80)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	(66,601.11)																
Excessive Energy Amount	55500-0066	2,448.42																
Non-Excessive Energy Amount	55500-0069	523.01																
Real Time Non-Asset Energy	55500-0043	(169,544.20)																
Subtotal		**13,110,962.48**	**33,314**				**9,755**				**57,597**				**187,681**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,004,868.23										53,069.85		-		133,456.90		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	116,372.34										6,655.30		-		15,455.45		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(380,128.41)										-		(20,075.62)		-		(50,484.99)
Real Time Distribution of Losses	55500-0041	(726,364.48)										-		(41,540.57)		-		(96,468.69)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**14,747.68**	**33,314**	**-**	**33,314**	**-**	**9,755**	**-**	**9,755**	**-**	**57,597**	**59,725.15**	**57,597**	**(61,616.19)**	**187,681**	**148,912.34**	**187,681**	**(146,953.67)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**33,314**	**-**	**33,314**	**-**	**9,755**	**-**	**9,755**	**-**	**57,597**	**-**	**57,597**	**-**	**187,681**	**-**	**187,681**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	111,278.27										6,363.97		-		14,778.90		-
Real Time Market Administration (Schedule 17)	55500-0036	9,365.94										535.64		-		1,243.89		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	818.75										46.82		-		108.74		-
Subtotal		**121,462.96**	**33,314**	**-**	**33,314**	**-**	**9,755**	**-**	**9,755**	**-**	**57,597**	**6,946.43**	**57,597**	**-**	**187,681**	**16,131.53**	**187,681**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	**February 2019**	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	103,090.27										5,444.48		-		13,691.45		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(23,669.61)										-		(1,250.06)		-		(3,143.57)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	(115,797.72)										-		(6,622.44)		-		(15,379.13)
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(105,297.03)										-		(6,021.91)		-		(13,984.53)
Financial Transmission Rights Annual Transaction Amount	55500-0059	120,936.61										6,916.33		-		16,061.63		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,161.07										409.54		-		951.06		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(89,023.04)										-		(5,091.20)		-		(11,823.18)
Financial Transmission Rights Hourly Allocation	55500-0032	47,297.96										2,704.96		-		6,281.66		-
Financial Transmission Rights Monthly Allocation	55500-0033	(4,169.20)										-		(238.44)		-		(553.71)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(6,527.50)										-		(373.31)		-		(866.92)
FTR Guarantee Uplift Amount	55500-0055	5,730.74										327.74		-		761.10		-
Financial Transmission Rights Monthly Transaction Amount	55500-0056	6,487.75										371.03		-		861.64		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**(53,779.70)**	**33,314**	**-**	**33,314**	**-**	**9,755**	**-**	**9,755**	**-**	**57,597**	**16,174.08**	**57,597**	**(19,597.34)**	**187,681**	**38,608.54**	**187,681**	**(45,751.04)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	30,536.30										1,746.36		-		4,055.54		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(5,242.43)										-		(299.81)		-		(696.25)
Real Time Price Volatility Make Whole Payment	55500-0057	(24.17)										-		(1.38)		-		(3.21)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	56,139.45										3,210.60		-		7,455.90		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(102,594.74)										-		(5,867.36)		-		(13,625.64)
Subtotal		**(21,185.59)**	**33,314**	**-**	**33,314**	**-**	**9,755**	**-**	**9,755**	**-**	**57,597**	**4,956.96**	**57,597**	**(6,168.56)**	**187,681**	**11,511.43**	**187,681**	**(14,325.10)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	49,498.70										2,830.82		-		6,573.94		-
Real Time Net Inadvertent Distribution	55500-0044	(26,769.53)										-		(1,530.94)		-		(3,555.27)
Real Time Revenue Neutrality Uplift Amount	55500-0045	391,008.85										22,361.68		-		51,930.00		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	162.15										9.27		-		21.54		-
Day Ahead Ramp Capability Amount	55500-0079	(70.50)										-		(4.03)		-		(9.36)
Real Time Ramp Capability Amount	55500-0080	2.14										0.12		-		0.28		-
Subtotal		**413,831.81**	**33,314**	**-**	**33,314**	**-**	**9,755**	**-**	**9,755**	**-**	**57,597**	**25,201.89**	**57,597**	**(1,534.97)**	**187,681**	**58,525.76**	**187,681**	**(3,564.63)**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	February 2019	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		**-**	**33,314**	**-**	**33,314**	**-**	**9,755**	**-**	**9,755**	**-**	**57,597**	**-**	**57,597**	**-**	**187,681**	**-**	**187,681**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(10,841.40)										-		(620.02)		-		(1,439.85)
Day Ahead Spinning Reserve Amount	55500-0063	(25,730.08)										-		(1,471.50)		-		(3,417.22)
Day Ahead Supplemental Reserve Amount	55500-0064	4.95										0.28		-		0.66		-
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	(353.14)										-		(20.20)		-		(46.90)
Real Time Regulation Amount	55500-0070	5,114.13										292.48		-		679.21		-
Regulation Reserve Cost Distribution Amount	55500-0071	25,925.00										1,482.64		-		3,443.11		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	8,028.56										459.15		-		1,066.28		-
Real Time Spinning Reserve Amount	55500-0072	2,999.48										171.54		-		398.36		-
Spinning Reserve Cost Distribution Amount	55500-0073	26,942.45										1,540.83		-		3,578.23		-
Real Time Supplemental Reserve Amount	55500-0074	(3,496.42)										-		(199.96)		-		(464.36)
Supplemental Reserve Cost Distribution Amount	55500-0075	9,106.11										520.78		-		1,209.39		-
Subtotal		**37,699.64**	**33,314**	**-**	**33,314**	**-**	**9,755**	**-**	**9,755**	**-**	**57,597**	**4,467.70**	**57,597**	**(2,311.67)**	**187,681**	**10,375.23**	**187,681**	**(5,368.33)**
Grand Total		**13,623,739.28**	**33,314**	**-**	**33,314**	**-**	**9,755**	**-**	**9,755**	**-**	**57,597**	**117,472.20**	**57,597**	**(91,228.73)**	**187,681**	**284,064.84**	**187,681**	**(215,962.77)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	March 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	9,920,442.79									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,748,626.67)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	1,109,025.30									-				
	Excessive Energy Amount	55500-0066	3,670.74									-				
	Non-Excessive Energy Amount	55500-0069	(506,380.65)									-				
22	Real Time Non-Asset Energy	55500-0043	(666,616.57)									-				
	Subtotal		**8,111,514.94**	**732,451**	**6,424,811.21**			**133,045**	**1,133,790.21**			7,558,601.42	**-**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	977,225.98		699,246.08		-		123,396.37		-	822,642.45		-		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	304,203.50		217,201.30		-		38,329.64		-	255,530.94		-		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(213,098.32)		-		(152,480.76)		-		(26,908.37)	(179,389.13)		-		-
14	Real Time Distribution of Losses	55500-0041	(412,477.26)		-		(294,508.76)		-		(51,972.13)	(346,480.90)		-		-
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**655,853.90**	**732,451**	**916,447.38**	**732,451**	**(446,989.53)**	**133,045**	**161,726.01**	**133,045**	**(78,880.50)**	**552,303.36**	**-**	**-**	**-**	**-**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**732,451**	**-**	**732,451**	**-**	**133,045**	**-**	**133,045**	**-**	**-**	**-**	**-**	**-**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	151,877.65		108,440.64		-		19,136.58		-	127,577.23		-		-
19	Real Time Market Administration (Schedule 17)	55500-0036	9,709.70		6,932.73		-		1,223.42		-	8,156.15		-		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	3,435.63		2,453.04		-		432.89		-	2,885.93		-		-
	Subtotal		**165,022.98**	**732,451**	**117,826.41**	**732,451**	**-**	**133,045**	**20,792.90**	**133,045**	**-**	**138,619.30**	**-**	**-**	**-**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	March 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	376,519.85		269,415.71		-		47,543.95		-	316,959.66		-		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(430,156.09)		-		(307,794.68)		-		(54,316.71)	(362,111.39)		-		-
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	428,785.43		306,152.80		-		54,026.96		-	360,179.76		-		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(205,488.82)		-		(146,719.02)		-		(25,891.59)	(172,610.61)		-		-
	Financial Transmission Rights Annual Transaction Amount	55500-0059	279,805.07		199,780.82		-		35,255.44		-	235,036.26		-		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,438.83		7,453.32		-		1,315.29		-	8,768.62		-		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(30,057.22)		-		(21,460.86)		-		(3,787.21)	(25,248.06)		-		-
28	Financial Transmission Rights Hourly Allocation	55500-0032	(143,777.05)		-		(102,656.81)		-		(18,115.91)	(120,772.72)		-		-
30	Financial Transmission Rights Monthly Allocation	55500-0033	(6,636.47)		-		(4,738.44)		-		(836.20)	(5,574.63)		-		-
32	Financial Transmission Rights Yearly Allocation	55500-0035	0.27		0.19		-		0.03		-	0.23		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(8,447.44)		-		(6,031.47)		-		(1,064.38)	(7,095.85)		-		-
	FTR Guarantee Uplift Amount	55500-0055	8,447.46		6,031.49		-		1,064.38		-	7,095.87		-		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	11,661.39		8,326.23		-		1,469.34		-	9,795.57		-		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**291,095.22**	**732,451**	**797,160.56**	**732,451**	**(589,401.28)**	**133,045**	**140,675.39**	**133,045**	**(104,011.99)**	**244,422.69**	**-**	**-**	**-**	**-**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	32,470.03		23,183.60		-		4,091.22		-	27,274.83		-		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(31,460.32)		-		(22,462.67)		-		(3,964.00)	(26,426.67)		-		-
	Real Time Price Volatility Make Whole Payment	55500-0057	(1,100.11)		-		(785.48)		-		(138.61)	(924.09)		-		-
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	33,927.64		24,224.33		-		4,274.88		-	28,499.22		-		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(786.91)		-		(561.85)		-		(99.15)	(661.00)		-		-
	Subtotal		**33,050.33**	**732,451**	**47,407.94**	**732,451**	**(23,810.00)**	**133,045**	**8,366.11**	**133,045**	**(4,201.76)**	**27,762.28**	**-**	**-**	**-**	**-**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	38,648.75		27,595.21		-		4,869.74		-	32,464.95		-		-
21	Real Time Net Inadvertent Distribution	55500-0044	18,546.90		13,242.49		-		2,336.91		-	15,579.40		-		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	84,581.93		60,391.50		-		10,657.32		-	71,048.82		-		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(78.05)		-		(55.73)		-		(9.83)	(65.56)		-		-
34	Real Time Ramp Capability Amount	55500-0080	(79.43)		-		(56.71)		-		(10.01)	(66.72)		-		-
	Subtotal		**141,620.10**	**732,451**	**101,229.19**	**732,451**	**(112.44)**	**133,045**	**17,863.98**	**133,045**	**(19.84)**	**118,960.88**	**-**	**-**	**-**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	March 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**732,451**	**-**	**732,451**	**-**	**133,045**	**-**	**133,045**	**-**	**-**	**-**	**-**	**-**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(12,642.31)		-		(9,026.61)		-		(1,592.93)	(10,619.54)		-		-
	Day Ahead Spinning Reserve Amount	55500-0063	(46,391.47)		-		(33,123.51)		-		(5,845.33)	(38,968.83)		-		-
	Day Ahead Supplemental Reserve Amount	55500-0064	(543.47)		-		(388.04)		-		(68.48)	(456.51)		-		-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	(911.47)		-		(650.79)		-		(114.85)	(765.63)		-		-
	Real Time Regulation Amount	55500-0070	2,251.06		1,607.26		-		283.63		-	1,890.89		-		-
	Regulation Reserve Cost Distribution Amount	55500-0071	35,069.12		25,039.35		-		4,418.71		-	29,458.06		-		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	4,677.84		3,339.98		-		589.41		-	3,929.39		-		-
	Real Time Spinning Reserve Amount	55500-0072	(1,534.21)		-		(1,095.43)		-		(193.31)	(1,288.74)		-		-
	Spinning Reserve Cost Distribution Amount	55500-0073	34,723.66		24,792.69		-		4,375.18		-	29,167.87		-		-
	Real Time Supplemental Reserve Amount	55500-0074	(297.88)		-		(212.69)		-		(37.53)	(250.22)		-		-
	Supplemental Reserve Cost Distribution Amount	55500-0075	10,885.70		7,772.39		-		1,371.60		-	9,143.99		-		-
	Subtotal		**25,286.57**	**732,451**	**62,551.67**	**732,451**	**(44,497.06)**	**133,045**	**11,038.53**	**133,045**	**(7,852.42)**	**21,240.72**	**-**	**-**	**-**	**-**
	Grand Total		**9,423,444.04**	**732,451**	**8,467,434.36**	**732,451**	**(1,104,810.30)**	**133,045**	**1,494,253.12**	**133,045**	**(194,966.52)**	**8,661,910.65**	**-**	**-**	**-**	**-**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	March 2019	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	44700-0000 or 55500-0000 or 55500-0050	9,920,442.79																
Day Ahead Non-Asset Energy	55500-0027	(1,748,626.67)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	1,109,025.30																
Excessive Energy Amount	55500-0066	3,670.74																
Non-Excessive Energy Amount	55500-0069	(506,380.65)																
Real Time Non-Asset Energy	55500-0043	(666,616.57)																
Subtotal		**8,111,514.94**	**48,210**				**8,400**				**59,277**				**202,699**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	977,225.98										49,832.04		-		104,751.49		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	304,203.50										16,064.17		-		32,608.39		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(213,098.32)										-		(10,866.60)		-		(22,842.58)
Real Time Distribution of Losses	55500-0041	(412,477.26)										-		(21,781.81)		-		(44,214.55)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**655,853.90**	**48,210**	**-**	**48,210**	**-**	**8,400**	**-**	**8,400**	**-**	**59,277**	**65,896.21**	**59,277**	**(32,648.41)**	**202,699**	**137,359.89**	**202,699**	**(67,057.14)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**48,210**	**-**	**48,210**	**-**	**8,400**	**-**	**8,400**	**-**	**59,277**	**-**	**59,277**	**-**	**202,699**	**-**	**202,699**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	151,877.65										8,020.25		-		16,280.18		-
Real Time Market Administration (Schedule 17)	55500-0036	9,709.70										512.74		-		1,040.81		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	3,435.63										181.43		-		368.27		-
Subtotal		**165,022.98**	**48,210**	**-**	**48,210**	**-**	**8,400**	**-**	**8,400**	**-**	**59,277**	**8,714.42**	**59,277**	**-**	**202,699**	**17,689.26**	**202,699**	**-**

MINNESOTA POWER

MISO MONTHLY ALLOCATION

	Account Number	March 2019	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	44700-0000 or 55500-0000 or 55500-0050	376,519.85										19,200.01		-		40,360.18		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(430,156.09)										-		(21,935.11)		-		(46,109.59)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	428,785.43										22,643.00		-		45,962.67		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(205,488.82)										-		(10,851.31)		-		(22,026.90)
Financial Transmission Rights Annual Transaction Amount	55500-0059	279,805.07										14,775.75		-		29,993.06		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,438.83										551.25		-		1,118.97		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(30,057.22)										-		(1,587.24)		-		(3,221.91)
Financial Transmission Rights Hourly Allocation	55500-0032	(143,777.05)										-		(7,592.48)		-		(15,411.85)
Financial Transmission Rights Monthly Allocation	55500-0033	(6,636.47)										-		(350.45)		-		(711.38)
Financial Transmission Rights Yearly Allocation	55500-0035	0.27										0.01		-		0.03		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(8,447.44)										-		(446.09)		-		(905.50)
FTR Guarantee Uplift Amount	55500-0055	8,447.46										446.09		-		905.51		-
Financial Transmission Rights Monthly Transaction Amount	55500-0056	11,661.39										615.81		-		1,250.02		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**291,095.22**	**48,210**	**-**	**48,210**	**-**	**8,400**	**-**	**8,400**	**-**	**59,277**	**58,231.92**	**59,277**	**(42,762.68)**	**202,699**	**119,590.43**	**202,699**	**(88,387.14)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	32,470.03										1,714.65		-		3,480.55		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(31,460.32)										-		(1,661.33)		-		(3,372.32)
Real Time Price Volatility Make Whole Payment	55500-0057	(1,100.11)										-		(58.09)		-		(117.92)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	33,927.64										1,791.63		-		3,636.80		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(786.91)										-		(41.55)		-		(84.35)
Subtotal		**33,050.33**	**48,210**	**-**	**48,210**	**-**	**8,400**	**-**	**8,400**	**-**	**59,277**	**3,506.28**	**59,277**	**(1,760.98)**	**202,699**	**7,117.35**	**202,699**	**(3,574.59)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	38,648.75										2,040.94		-		4,142.86		-
Real Time Net Inadvertent Distribution	55500-0044	18,546.90										979.41		-		1,988.09		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	84,581.93										4,466.54		-		9,066.57		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	(78.05)										-		(4.12)		-		(8.37)
Real Time Ramp Capability Amount	55500-0080	(79.43)										-		(4.19)		-		(8.51)
Subtotal		**141,620.10**	**48,210**	**-**	**48,210**	**-**	**8,400**	**-**	**8,400**	**-**	**59,277**	**7,486.89**	**59,277**	**(8.32)**	**202,699**	**15,197.52**	**202,699**	**(16.88)**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	**March 2019**	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		**-**	**48,210**	**-**	**48,210**	**-**	**8,400**	**-**	**8,400**	**-**	**59,277**	**-**	**59,277**	**-**	**202,699**	**-**	**202,699**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(12,642.31)										-		(667.61)		-		(1,355.16)
Day Ahead Spinning Reserve Amount	55500-0063	(46,391.47)										-		(2,449.81)		-		(4,972.83)
Day Ahead Supplemental Reserve Amount	55500-0064	(543.47)										-		(28.70)		-		(58.26)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	(911.47)										-		(48.13)		-		(97.70)
Real Time Regulation Amount	55500-0070	2,251.06										118.87		-		241.30		-
Regulation Reserve Cost Distribution Amount	55500-0071	35,069.12										1,851.91		-		3,759.15		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	4,677.84										247.02		-		501.43		-
Real Time Spinning Reserve Amount	55500-0072	(1,534.21)										-		(81.02)		-		(164.46)
Spinning Reserve Cost Distribution Amount	55500-0073	34,723.66										1,833.66		-		3,722.12		-
Real Time Supplemental Reserve Amount	55500-0074	(297.88)										-		(15.73)		-		(31.93)
Supplemental Reserve Cost Distribution Amount	55500-0075	10,885.70										574.84		-		1,166.87		-
Subtotal		**25,286.57**	**48,210**	**-**	**48,210**	**-**	**8,400**	**-**	**8,400**	**-**	**59,277**	**4,626.31**	**59,277**	**(3,290.99)**	**202,699**	**9,390.87**	**202,699**	**(6,680.34)**
Grand Total		**9,423,444.04**	**48,210**	**-**	**48,210**	**-**	**8,400**	**-**	**8,400**	**-**	**59,277**	**148,462.03**	**59,277**	**(80,471.38)**	**202,699**	**306,345.31**	**202,699**	**(165,716.09)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	April 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	6,225,272.20									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,237,097.96)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	700,676.57									-				
	Excessive Energy Amount	55500-0066	4,931.19									-				
	Non-Excessive Energy Amount	55500-0069	44,745.22									-				
22	Real Time Non-Asset Energy	55500-0043	(337,901.97)									-				
	Subtotal		**5,400,625.26**	**686,463**	**4,582,317.94**			**120,093**	**808,644.34**			5,390,962.28	**979**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	791,575.63		557,458.70		-		98,375.06		-	655,833.76		762.05		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	133,654.99		94,293.60		-		16,640.05		-	110,933.64		125.42		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(94,366.83)		-		(66,456.83)		-		(11,727.68)	(78,184.51)		-		(90.85)
14	Real Time Distribution of Losses	55500-0041	(160,286.33)		-		(113,082.01)		-		(19,955.65)	(133,037.65)		-		(150.41)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**670,577.46**	**686,463**	**651,752.29**	**686,463**	**(179,538.84)**	**120,093**	**115,015.11**	**120,093**	**(31,683.32)**	**555,545.24**	**979**	**887.47**	**979**	**(241.26)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**686,463**	**-**	**686,463**	**-**	**120,093**	**-**	**120,093**	**-**	**-**	**979**	**-**	**979**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	141,150.85		99,581.92		-		17,573.28		-	117,155.21		132.46		-
19	Real Time Market Administration (Schedule 17)	55500-0036	11,484.43		8,102.27		-		1,429.81		-	9,532.08		10.78		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	5,384.62		3,798.85		-		670.39		-	4,469.23		5.05		-
	Subtotal		**158,019.90**	**686,463**	**111,483.04**	**686,463**	**-**	**120,093**	**19,673.48**	**120,093**	**-**	**131,156.52**	**979**	**148.29**	**979**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	April 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	110,682.19		77,946.75		-		13,755.31		-	91,702.06		106.55		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(181,139.34)		-		(127,565.45)		-		(22,511.55)	(150,077.00)		-		(174.38)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	293,482.44		207,051.86		-		36,538.56		-	243,590.43		275.41		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(205,488.82)		-		(144,972.36)		-		(25,583.36)	(170,555.72)		-		(192.83)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	279,805.07		197,402.48		-		34,835.73		-	232,238.21		262.57		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,438.83		7,364.59		-		1,299.63		-	8,664.23		9.80		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(30,057.22)		-		(21,205.37)		-		(3,742.12)	(24,947.49)		-		(28.21)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(99,318.04)		-		(70,068.88)		-		(12,365.10)	(82,433.97)		-		(93.20)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(12,369.18)		-		(8,726.46)		-		(1,539.96)	(10,266.42)		-		(11.61)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	6,914.80		4,878.39		-		860.89		-	5,739.28		6.49		-
	FTR Guarantee Uplift Amount	55500-0055	(6,354.21)		-		(4,482.90)		-		(791.10)	(5,273.99)		-		(5.96)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	(3,085.71)		-		(2,176.97)		-		(384.17)	(2,561.14)		-		(2.90)
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**163,510.81**	**686,463**	**494,644.08**	**686,463**	**(379,198.38)**	**120,093**	**87,290.13**	**120,093**	**(66,917.36)**	**135,818.47**	**979**	**660.81**	**979**	**(509.09)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	22,211.83		15,670.45		-		2,765.37		-	18,435.82		20.84		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	3,626.29		2,558.35		-		451.47		-	3,009.82		3.40		-
	Real Time Price Volatility Make Whole Payment	55500-0057	(16.31)		-		(11.51)		-		(2.03)	(13.54)		-		(0.02)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	13,295.04		9,379.65		-		1,655.23		-	11,034.88		12.48		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(226.57)		-		(159.85)		-		(28.21)	(188.05)		-		(0.21)
	Subtotal		**38,890.28**	**686,463**	**27,608.44**	**686,463**	**(171.35)**	**120,093**	**4,872.08**	**120,093**	**(30.24)**	**32,278.93**	**979**	**36.72**	**979**	**(0.23)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	51,385.72		36,252.63		-		6,397.52		-	42,650.15		48.22		-
21	Real Time Net Inadvertent Distribution	55500-0044	(13,178.95)		-		(9,297.75)		-		(1,640.78)	(10,938.53)		-		(12.37)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	74,624.28		52,647.43		-		9,290.72		-	61,938.15		70.03		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	(0.01)		-		(0.01)		-		(0.00)	(0.01)		-		(0.00)
33	Day Ahead Ramp Capability Amount	55500-0079	(166.71)		-		(117.61)		-		(20.76)	(138.37)		-		(0.16)
34	Real Time Ramp Capability Amount	55500-0080	5.44		3.84		-		0.68		-	4.52		0.01		-
	Subtotal		**112,669.77**	**686,463**	**88,903.89**	**686,463**	**(9,415.37)**	**120,093**	**15,688.92**	**120,093**	**(1,661.54)**	**93,515.91**	**979**	**118.25**	**979**	**(12.52)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	April 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**686,463**	**-**	**686,463**	**-**	**120,093**	**-**	**120,093**	**-**	**-**	**979**	**-**	**979**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(25,382.88)		-		(17,907.62)		-		(3,160.17)	(21,067.79)		-		(23.82)
	Day Ahead Spinning Reserve Amount	55500-0063	(12,920.03)		-		(9,115.08)		-		(1,608.54)	(10,723.62)		-		(12.12)
	Day Ahead Supplemental Reserve Amount	55500-0064	22.36		15.77		-		2.78		-	18.56		0.02		-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	126.68		89.37		-		15.77		-	105.14		0.12		-
	Net Regulation Adjustment Amount	55500-0068	(787.24)		-		(555.40)		-		(98.01)	(653.41)		-		(0.74)
	Real Time Regulation Amount	55500-0070	(692.82)		-		(488.78)		-		(86.26)	(575.04)		-		(0.65)
	Regulation Reserve Cost Distribution Amount	55500-0071	26,012.29		18,351.67		-		3,238.53		-	21,590.20		24.41		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	10,531.59		7,430.04		-		1,311.18		-	8,741.22		9.88		-
	Real Time Spinning Reserve Amount	55500-0072	4,182.90		2,951.04		-		520.77		-	3,471.81		3.93		-
	Spinning Reserve Cost Distribution Amount	55500-0073	35,846.65		25,289.81		-		4,462.91		-	29,752.72		33.64		-
	Real Time Supplemental Reserve Amount	55500-0074	21.04		14.84		-		2.62		-	17.46		0.02		-
	Supplemental Reserve Cost Distribution Amount	55500-0075	4,367.91		3,081.56		-		543.80		-	3,625.37		4.10		-
	Subtotal		**41,328.45**	**686,463**	**57,224.11**	**686,463**	**(28,066.89)**	**120,093**	**10,098.37**	**120,093**	**(4,952.98)**	**34,302.61**	**979**	**76.12**	**979**	**(37.33)**
	Grand Total		**6,585,621.92**	**686,463**	**6,013,933.79**	**686,463**	**(596,390.83)**	**120,093**	**1,061,282.43**	**120,093**	**(105,245.44)**	**6,373,579.96**	**979**	**1,927.66**	**979**	**(800.43)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	April 2019	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	44700-0000 or 55500-0000 or 55500-0050	6,225,272.20																
Day Ahead Non-Asset Energy	55500-0027	(1,237,097.96)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	700,676.57																
Excessive Energy Amount	55500-0066	4,931.19																
Non-Excessive Energy Amount	55500-0069	44,745.22																
Real Time Non-Asset Energy	55500-0043	(337,901.97)																
Subtotal		**5,400,625.26**	**30,806**				**8,096**				**58,819**				**190,824**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	791,575.63										45,765.64		-		89,214.18		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	133,654.99										7,532.40		-		15,063.53		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(94,366.83)										-		(5,455.90)		-		(10,635.57)
Real Time Distribution of Losses	55500-0041	(160,286.33)										-		(9,033.26)		-		(18,065.00)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**670,577.46**	**30,806**	**-**	**30,806**	**-**	**8,096**	**-**	**8,096**	**-**	**58,819**	**53,298.03**	**58,819**	**(14,489.16)**	**190,824**	**104,277.71**	**190,824**	**(28,700.57)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**30,806**	**-**	**30,806**	**-**	**8,096**	**-**	**8,096**	**-**	**58,819**	**-**	**58,819**	**-**	**190,824**	**-**	**190,824**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	141,150.85										7,954.84		-		15,908.34		-
Real Time Market Administration (Schedule 17)	55500-0036	11,484.43										647.23		-		1,294.35		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	5,384.62										303.46		-		606.87		-
Subtotal		**158,019.90**	**30,806**	**-**	**30,806**	**-**	**8,096**	**-**	**8,096**	**-**	**58,819**	**8,905.53**	**58,819**	**-**	**190,824**	**17,809.56**	**190,824**	**-**

MINNESOTA POWER

MISO MONTHLY ALLOCATION

	Account Number	April 2019	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	44700-0000 or 55500-0000 or 55500-0050	110,682.19										6,399.19		-		12,474.39		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(181,139.34)										-		(10,472.73)		-		(20,415.23)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	293,482.44										16,539.80		-		33,076.81		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(205,488.82)										-		(11,580.74)		-		(23,159.53)
Financial Transmission Rights Annual Transaction Amount	55500-0059	279,805.07										15,768.98		-		31,535.31		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,438.83										588.30		-		1,176.50		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(30,057.22)										-		(1,693.94)		-		(3,387.59)
Financial Transmission Rights Hourly Allocation	55500-0032	(99,318.04)										-		(5,597.27)		-		(11,193.60)
Financial Transmission Rights Monthly Allocation	55500-0033	(12,369.18)										-		(697.09)		-		(1,394.06)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	6,914.80										389.70		-		779.33		-
FTR Guarantee Uplift Amount	55500-0055	(6,354.21)										-		(358.10)		-		(716.15)
Financial Transmission Rights Monthly Transaction Amount	55500-0056	(3,085.71)										-		(173.90)		-		(347.77)
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**163,510.81**	**30,806**	**-**	**30,806**	**-**	**8,096**	**-**	**8,096**	**-**	**58,819**	**39,685.97**	**58,819**	**(30,573.77)**	**190,824**	**79,042.34**	**190,824**	**(60,613.92)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	22,211.83										1,251.79		-		2,503.37		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	3,626.29										204.37		-		408.70		-
Real Time Price Volatility Make Whole Payment	55500-0057	(16.31)										-		(0.92)		-		(1.84)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	13,295.04										749.27		-		1,498.41		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(226.57)										-		(12.77)		-		(25.54)
Subtotal		**38,890.28**	**30,806**	**-**	**30,806**	**-**	**8,096**	**-**	**8,096**	**-**	**58,819**	**2,205.43**	**58,819**	**(13.69)**	**190,824**	**4,410.49**	**190,824**	**(27.37)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	51,385.72										2,895.95		-		5,791.40		-
Real Time Net Inadvertent Distribution	55500-0044	(13,178.95)										-		(742.73)		-		(1,485.33)
Real Time Revenue Neutrality Uplift Amount	55500-0045	74,624.28										4,205.60		-		8,410.50		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	(0.01)										-		(0.00)		-		(0.00)
Day Ahead Ramp Capability Amount	55500-0079	(166.71)										-		(9.40)		-		(18.79)
Real Time Ramp Capability Amount	55500-0080	5.44										0.31		-		0.61		-
Subtotal		**112,669.77**	**30,806**	**-**	**30,806**	**-**	**8,096**	**-**	**8,096**	**-**	**58,819**	**7,101.86**	**58,819**	**(752.12)**	**190,824**	**14,202.51**	**190,824**	**(1,504.12)**

MINNESOTA POWER

MISO MONTHLY ALLOCATION

	Account Number	April 2019	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		**-**	**30,806**	**-**	**30,806**	**-**	**8,096**	**-**	**8,096**	**-**	**58,819**	**-**	**58,819**	**-**	**190,824**	**-**	**190,824**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(25,382.88)										-		(1,430.50)		-		(2,860.77)
Day Ahead Spinning Reserve Amount	55500-0063	(12,920.03)										-		(728.13)		-		(1,456.15)
Day Ahead Supplemental Reserve Amount	55500-0064	22.36										1.26		-		2.52		-
Contingency Reserve Deployment Failure Charge Amount	55500-0065	126.68										7.14		-		14.28		-
Net Regulation Adjustment Amount	55500-0068	(787.24)										-		(44.37)		-		(88.73)
Real Time Regulation Amount	55500-0070	(692.82)										-		(39.05)		-		(78.08)
Regulation Reserve Cost Distribution Amount	55500-0071	26,012.29										1,465.98		-		2,931.70		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	10,531.59										593.53		-		1,186.96		-
Real Time Spinning Reserve Amount	55500-0072	4,182.90										235.74		-		471.43		-
Spinning Reserve Cost Distribution Amount	55500-0073	35,846.65										2,020.21		-		4,040.08		-
Real Time Supplemental Reserve Amount	55500-0074	21.04										1.19		-		2.37		-
Supplemental Reserve Cost Distribution Amount	55500-0075	4,367.91										246.16		-		492.28		-
Subtotal		**41,328.45**	**30,806**	**-**	**30,806**	**-**	**8,096**	**-**	**8,096**	**-**	**58,819**	**4,571.20**	**58,819**	**(2,242.05)**	**190,824**	**9,141.63**	**190,824**	**(4,483.72)**
Grand Total		**6,585,621.92**	**30,806**	**-**	**30,806**	**-**	**8,096**	**-**	**8,096**	**-**	**58,819**	**115,768.02**	**58,819**	**(48,070.80)**	**190,824**	**228,884.24**	**190,824**	**(95,329.71)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	May 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	6,427,159.68									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,273,087.01)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	381,830.56									-				
	Excessive Energy Amount	55500-0066	677.79									-				
	Non-Excessive Energy Amount	55500-0069	354,321.92									-				
22	Real Time Non-Asset Energy	55500-0043	(261,295.92)									-				
	Subtotal		**5,629,607.02**	**671,298**	**4,585,174.06**			**117,942**	**809,148.36**			5,394,322.42	**72**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	603,775.09		424,260.84		-		74,869.56		-	499,130.41		41.51		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	209,231.03		147,612.49		-		26,049.26		-	173,661.75		13.56		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(59,294.49)		-		(41,665.07)		-		(7,352.66)	(49,017.72)		-		(4.08)
14	Real Time Distribution of Losses	55500-0041	(142,521.97)		-		(100,549.25)		-		(17,743.99)	(118,293.24)		-		(9.23)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**611,189.66**	**671,298**	**571,873.34**	**671,298**	**(142,214.32)**	**117,942**	**100,918.82**	**117,942**	**(25,096.64)**	**505,481.20**	**72**	**55.07**	**72**	**(13.31)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**671,298**	**-**	**671,298**	**-**	**117,942**	**-**	**117,942**	**-**	**-**	**72**	**-**	**72**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	132,325.30		93,355.50		-		16,474.50		-	109,830.00		8.57		-
19	Real Time Market Administration (Schedule 17)	55500-0036	11,718.91		8,267.69		-		1,459.00		-	9,726.70		0.76		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	3,476.03		2,452.34		-		432.77		-	2,885.10		0.23		-
	Subtotal		**147,520.24**	**671,298**	**104,075.53**	**671,298**	**-**	**117,942**	**18,366.27**	**117,942**	**-**	**122,441.80**	**72**	**9.56**	**72**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	May 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	45,027.42		31,639.88		-		5,583.51		-	37,223.39		3.10		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(161,904.59)		-		(113,767.16)		-		(20,076.56)	(133,843.72)		-		(11.13)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	258,734.08		182,536.89		-		32,212.39		-	214,749.29		16.76		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(205,488.82)		-		(144,972.36)		-		(25,583.36)	(170,555.72)		-		(13.31)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	279,805.07		197,402.48		-		34,835.73		-	232,238.21		18.13		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,438.83		7,364.59		-		1,299.63		-	8,664.23		0.68		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(30,057.27)		-		(21,205.40)		-		(3,742.13)	(24,947.53)		-		(1.95)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(109,760.94)		-		(77,436.34)		-		(13,665.24)	(91,101.58)		-		(7.11)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(5,461.77)		-		(3,853.28)		-		(679.99)	(4,533.27)		-		(0.35)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(4,690.94)		-		(3,309.46)		-		(584.02)	(3,893.48)		-		(0.30)
	FTR Guarantee Uplift Amount	55500-0055	4,737.12		3,342.04		-		589.77		-	3,931.81		0.31		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	(3,085.71)		-		(2,176.97)		-		(384.17)	(2,561.14)		-		(0.20)
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**78,292.48**	**671,298**	**422,285.89**	**671,298**	**(366,720.98)**	**117,942**	**74,521.04**	**117,942**	**(64,715.47)**	**65,370.48**	**72**	**38.97**	**72**	**(34.36)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	19,329.14		13,636.71		-		2,406.48		-	16,043.19		1.25		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(1,651.53)		-		(1,165.15)		-		(205.62)	(1,370.77)		-		(0.11)
	Real Time Price Volatility Make Whole Payment	55500-0057	(1,488.28)		-		(1,049.98)		-		(185.29)	(1,235.27)		-		(0.10)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	24,060.91		16,974.97		-		2,995.58		-	19,970.56		1.56		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-		-		-		-		-	-		-		-
	Subtotal		**40,250.24**	**671,298**	**30,611.68**	**671,298**	**(2,215.14)**	**117,942**	**5,402.06**	**117,942**	**(390.91)**	**33,407.70**	**72**	**2.81**	**72**	**(0.20)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	(714,356.98)		-		(503,978.85)		-		(88,937.44)	(592,916.29)		-		(46.28)
21	Real Time Net Inadvertent Distribution	55500-0044	(12,600.86)		-		(8,889.91)		-		(1,568.81)	(10,458.71)		-		(0.82)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	162,058.67		114,332.39		-		20,176.30		-	134,508.70		10.50		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	0.01		0.01		-		0.00		-	0.01		0.00		-
33	Day Ahead Ramp Capability Amount	55500-0079	(6.97)		-		(4.92)		-		(0.87)	(5.79)		-		(0.00)
34	Real Time Ramp Capability Amount	55500-0080	(4.29)		-		(3.03)		-		(0.53)	(3.56)		-		(0.00)
	Subtotal		**(564,910.42)**	**671,298**	**114,332.40**	**671,298**	**(512,876.70)**	**117,942**	**20,176.31**	**117,942**	**(90,507.65)**	**(468,875.65)**	**72**	**10.50**	**72**	**(47.10)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	May 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**671,298**	**-**	**671,298**	**-**	**117,942**	**-**	**117,942**	**-**	**-**	**72**	**-**	**72**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(47,617.03)		-		(33,593.81)		-		(5,928.32)	(39,522.13)		-		(3.09)
	Day Ahead Spinning Reserve Amount	55500-0063	(22,024.65)		-		(15,538.39)		-		(2,742.07)	(18,280.46)		-		(1.43)
	Day Ahead Supplemental Reserve Amount	55500-0064	(109.47)		-		(77.23)		-		(13.63)	(90.86)		-		(0.01)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	3,049.75		2,151.60		-		379.69		-	2,531.29		0.20		-
	Real Time Regulation Amount	55500-0070	14,895.35		10,508.67		-		1,854.47		-	12,363.14		0.97		-
	Regulation Reserve Cost Distribution Amount	55500-0071	34,668.84		24,458.87		-		4,316.27		-	28,775.14		2.25		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	17,101.54		12,065.14		-		2,129.14		-	14,194.28		1.11		-
	Real Time Spinning Reserve Amount	55500-0072	4,619.14		3,258.80		-		575.08		-	3,833.89		0.30		-
	Spinning Reserve Cost Distribution Amount	55500-0073	34,994.86		24,688.87		-		4,356.86		-	29,045.73		2.27		-
	Real Time Supplemental Reserve Amount	55500-0074	228.14		160.95		-		28.40		-	189.36		0.01		-
	Supplemental Reserve Cost Distribution Amount	55500-0075	8,995.77		6,346.52		-		1,119.97		-	7,466.49		0.58		-
	Subtotal		**48,802.24**	**671,298**	**83,639.42**	**671,298**	**(49,209.44)**	**117,942**	**14,759.90**	**117,942**	**(8,684.02)**	**40,505.86**	**72**	**7.68**	**72**	**(4.52)**
	Grand Total		**5,990,751.47**	**671,298**	**5,911,992.30**	**671,298**	**(1,073,236.56)**	**117,942**	**1,043,292.76**	**117,942**	**(189,394.69)**	**5,692,653.81**	**72**	**124.59**	**72**	**(99.49)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	May 2019	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	44700-0000 or 55500-0000 or 55500-0050	6,427,159.68																
Day Ahead Non-Asset Energy	55500-0027	(1,273,087.01)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	381,830.56																
Excessive Energy Amount	55500-0066	677.79																
Non-Excessive Energy Amount	55500-0069	354,321.92																
Real Time Non-Asset Energy	55500-0043	(261,295.92)																
Subtotal		**5,629,607.02**	**30,004**				**8,448**				**59,896**				**181,757**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	603,775.09										34,724.09		-		69,879.09		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	209,231.03										11,339.96		-		24,215.76		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(59,294.49)										-		(3,410.12)		-		(6,862.56)
Real Time Distribution of Losses	55500-0041	(142,521.97)										-		(7,724.44)		-		(16,495.06)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**611,189.66**	**30,004**	**-**	**30,004**	**-**	**8,448**	**-**	**8,448**	**-**	**59,896**	**46,064.04**	**59,896**	**(11,134.57)**	**181,757**	**94,094.85**	**181,757**	**(23,357.62)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**30,004**	**-**	**30,004**	**-**	**8,448**	**-**	**8,448**	**-**	**59,896**	**-**	**59,896**	**-**	**181,757**	**-**	**181,757**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	132,325.30										7,171.80		-		15,314.93		-
Real Time Market Administration (Schedule 17)	55500-0036	11,718.91										635.14		-		1,356.31		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	3,476.03										188.39		-		402.31		-
Subtotal		**147,520.24**	**30,004**	**-**	**30,004**	**-**	**8,448**	**-**	**8,448**	**-**	**59,896**	**7,995.34**	**59,896**	**-**	**181,757**	**17,073.54**	**181,757**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	**May 2019**	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	45,027.42										2,589.60		-		5,211.34		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(161,904.59)										-		(9,311.40)		-		(18,738.34)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	258,734.08										14,022.94		-		29,945.09		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(205,488.82)										-		(11,137.14)		-		(23,782.65)
Financial Transmission Rights Annual Transaction Amount	55500-0059	279,805.07										15,164.95		-		32,383.79		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,438.83										565.77		-		1,208.16		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(30,057.27)										-		(1,629.05)		-		(3,478.74)
Financial Transmission Rights Hourly Allocation	55500-0032	(109,760.94)										-		(5,948.85)		-		(12,703.40)
Financial Transmission Rights Monthly Allocation	55500-0033	(5,461.77)										-		(296.02)		-		(632.13)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(4,690.94)										-		(254.24)		-		(542.92)
FTR Guarantee Uplift Amount	55500-0055	4,737.12										256.74		-		548.26		-
Financial Transmission Rights Monthly Transaction Amount	55500-0056	(3,085.71)										-		(167.24)		-		(357.13)
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**78,292.48**	**30,004**	**-**	**30,004**	**-**	**8,448**	**-**	**8,448**	**-**	**59,896**	**32,600.00**	**59,896**	**(28,743.94)**	**181,757**	**69,296.63**	**181,757**	**(60,235.30)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	19,329.14										1,047.61		-		2,237.10		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(1,651.53)										-		(89.51)		-		(191.14)
Real Time Price Volatility Make Whole Payment	55500-0057	(1,488.28)										-		(80.66)		-		(172.25)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	24,060.91										1,304.06		-		2,784.74		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-										-		-		-		-
Subtotal		**40,250.24**	**30,004**	**-**	**30,004**	**-**	**8,448**	**-**	**8,448**	**-**	**59,896**	**2,351.67**	**59,896**	**(170.17)**	**181,757**	**5,021.83**	**181,757**	**(363.39)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	(714,356.98)										-		(38,716.91)		-		(82,677.50)
Real Time Net Inadvertent Distribution	55500-0044	(12,600.86)										-		(682.94)		-		(1,458.39)
Real Time Revenue Neutrality Uplift Amount	55500-0045	162,058.67										8,783.30		-		18,756.18		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	0.01										0.00		-		0.00		-
Day Ahead Ramp Capability Amount	55500-0079	(6.97)										-		(0.38)		-		(0.81)
Real Time Ramp Capability Amount	55500-0080	(4.29)										-		(0.23)		-		(0.50)
Subtotal		**(564,910.42)**	**30,004**	**-**	**30,004**	**-**	**8,448**	**-**	**8,448**	**-**	**59,896**	**8,783.30**	**59,896**	**(39,400.46)**	**181,757**	**18,756.18**	**181,757**	**(84,137.19)**

MINNESOTA POWER	Account																	
MISO MONTHLY ALLOCATION	Number	May 2019	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		**-**	**30,004**	**-**	**30,004**	**-**	**8,448**	**-**	**8,448**	**-**	**59,896**	**-**	**59,896**	**-**	**181,757**	**-**	**181,757**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(47,617.03)										-		(2,580.76)		-		(5,511.05)
Day Ahead Spinning Reserve Amount	55500-0063	(22,024.65)										-		(1,193.70)		-		(2,549.07)
Day Ahead Supplemental Reserve Amount	55500-0064	(109.47)										-		(5.93)		-		(12.67)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	3,049.75										165.29		-		352.97		-
Real Time Regulation Amount	55500-0070	14,895.35										807.30		-		1,723.94		-
Regulation Reserve Cost Distribution Amount	55500-0071	34,668.84										1,878.99		-		4,012.47		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	17,101.54										926.87		-		1,979.28		-
Real Time Spinning Reserve Amount	55500-0072	4,619.14										250.35		-		534.61		-
Spinning Reserve Cost Distribution Amount	55500-0073	34,994.86										1,896.66		-		4,050.20		-
Real Time Supplemental Reserve Amount	55500-0074	228.14										12.36		-		26.40		-
Supplemental Reserve Cost Distribution Amount	55500-0075	8,995.77										487.56		-		1,041.14		-
Subtotal		**48,802.24**	**30,004**	**-**	**30,004**	**-**	**8,448**	**-**	**8,448**	**-**	**59,896**	**6,425.39**	**59,896**	**(3,780.39)**	**181,757**	**13,721.01**	**181,757**	**(8,072.79)**
Grand Total		**5,990,751.47**	**30,004**	**-**	**30,004**	**-**	**8,448**	**-**	**8,448**	**-**	**59,896**	**104,219.73**	**59,896**	**(83,229.53)**	**181,757**	**217,964.04**	**181,757**	**(176,166.28)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	June 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	7,234,179.08									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,325,092.51)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	597,817.96									-				
	Excessive Energy Amount	55500-0066	(488.13)									-				
	Non-Excessive Energy Amount	55500-0069	352,684.35									-				
22	Real Time Non-Asset Energy	55500-0043	(126,826.86)									-				
	Subtotal		**6,732,273.89**	**654,489**	**5,364,869.25**			**119,281**	**946,741.63**			6,311,610.88	**989**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	304,368.71		215,058.86		-		37,951.56		-	253,010.43		302.05		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	146,878.18		103,622.56		-		18,286.33		-	121,908.89		148.13		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	323,495.68		228,573.47		-		40,336.50		-	268,909.97		321.03		-
14	Real Time Distribution of Losses	55500-0041	(91,301.12)		-		(64,412.94)		-		(11,366.99)	(75,779.93)		-		(92.08)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**683,441.45**	**654,489**	**547,254.89**	**654,489**	**(64,412.94)**	**119,281**	**96,574.39**	**119,281**	**(11,366.99)**	**568,049.35**	**989**	**771.22**	**989**	**(92.08)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**654,489**	**-**	**654,489**	**-**	**119,281**	**-**	**119,281**	**-**	**-**	**989**	**-**	**989**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	148,142.53		104,514.55		-		18,443.74		-	122,958.30		149.41		-
19	Real Time Market Administration (Schedule 17)	55500-0036	14,879.69		10,497.62		-		1,852.52		-	12,350.14		15.01		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	4,392.84		3,099.15		-		546.91		-	3,646.06		4.43		-
	Subtotal		**167,415.06**	**654,489**	**118,111.32**	**654,489**	**-**	**119,281**	**20,843.17**	**119,281**	**-**	**138,954.50**	**989**	**168.84**	**989**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	June 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	560,994.59		396,383.91		-		69,950.10		-	466,334.01		556.73		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(19,025.86)		-		(13,443.17)		-		(2,372.32)	(15,815.49)		-		(18.88)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	206,930.47		145,989.45		-		25,762.84		-	171,752.29		208.70		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(173,074.80)		-		(122,104.27)		-		(21,547.81)	(143,652.08)		-		(174.55)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	225,436.51		159,045.46		-		28,066.85		-	187,112.30		227.36		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	4,558.31		3,215.89		-		567.51		-	3,783.40		4.60		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(94,030.32)		-		(66,338.39)		-		(11,706.77)	(78,045.17)		-		(94.83)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(244,316.43)		-		(172,365.24)		-		(30,417.40)	(202,782.64)		-		(246.40)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(8,992.65)		-		(6,344.31)		-		(1,119.58)	(7,463.90)		-		(9.07)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(14,718.81)		-		(10,384.12)		-		(1,832.49)	(12,216.61)		-		(14.84)
	FTR Guarantee Uplift Amount	55500-0055	15,413.79		10,874.43		-		1,919.02		-	12,793.45		15.55		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-		-		-		-		-	-		-		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**459,174.80**	**654,489**	**715,509.13**	**654,489**	**(390,979.51)**	**119,281**	**126,266.32**	**119,281**	**(68,996.38)**	**381,799.55**	**989**	**1,012.92**	**989**	**(558.58)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	11,274.99		7,954.51		-		1,403.74		-	9,358.24		11.37		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(24,541.84)		-		(17,314.27)		-		(3,055.46)	(20,369.73)		-		(24.75)
	Real Time Price Volatility Make Whole Payment	55500-0057	(1,735.18)		-		(1,224.17)		-		(216.03)	(1,440.20)		-		(1.75)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	37,013.68		26,113.15		-		4,608.20		-	30,721.35		37.33		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-		-		-		-		-	-		-		-
	Subtotal		**22,011.65**	**654,489**	**34,067.66**	**654,489**	**(18,538.44)**	**119,281**	**6,011.94**	**119,281**	**(3,271.49)**	**18,269.67**	**989**	**48.70**	**989**	**(26.50)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	55,114.74		38,883.45		-		6,861.79		-	45,745.23		55.58		-
21	Real Time Net Inadvertent Distribution	55500-0044	8,207.61		5,790.47		-		1,021.85		-	6,812.32		8.28		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	1,516.03		1,069.56		-		188.75		-	1,258.30		1.53		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(45.24)		-		(31.92)		-		(5.63)	(37.55)		-		(0.05)
34	Real Time Ramp Capability Amount	55500-0080	(135.20)		-		(95.38)		-		(16.83)	(112.22)		-		(0.14)
	Subtotal		**64,657.94**	**654,489**	**45,743.48**	**654,489**	**(127.30)**	**119,281**	**8,072.38**	**119,281**	**(22.46)**	**53,666.09**	**989**	**65.39**	**989**	**(0.18)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	June 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**654,489**	**-**	**654,489**	**-**	**119,281**	**-**	**119,281**	**-**	**-**	**989**	**-**	**989**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(33,942.01)		-		(23,946.09)		-		(4,225.78)	(28,171.87)		-		(34.23)
	Day Ahead Spinning Reserve Amount	55500-0063	(30,704.60)		-		(21,662.10)		-		(3,822.72)	(25,484.82)		-		(30.97)
	Day Ahead Supplemental Reserve Amount	55500-0064	(35.36)		-		(24.95)		-		(4.40)	(29.35)		-		(0.04)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	(3,741.05)		-		(2,639.31)		-		(465.76)	(3,105.07)		-		(3.77)
	Real Time Regulation Amount	55500-0070	10,340.87		7,295.48		-		1,287.44		-	8,582.92		10.43		-
	Regulation Reserve Cost Distribution Amount	55500-0071	23,723.65		16,737.04		-		2,953.59		-	19,690.63		23.93		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	12,932.62		9,123.96		-		1,610.11		-	10,734.07		13.04		-
	Real Time Spinning Reserve Amount	55500-0072	3,811.39		2,688.94		-		474.52		-	3,163.45		3.84		-
	Spinning Reserve Cost Distribution Amount	55500-0073	19,794.04		13,964.70		-		2,464.36		-	16,429.05		19.96		-
	Real Time Supplemental Reserve Amount	55500-0074	(97.63)		-		(68.88)		-		(12.15)	(81.03)		-		(0.10)
	Supplemental Reserve Cost Distribution Amount	55500-0075	4,062.57		2,866.14		-		505.79		-	3,371.93		4.10		-
	Subtotal		**6,144.49**	**654,489**	**52,676.26**	**654,489**	**(48,341.32)**	**119,281**	**9,295.81**	**119,281**	**(8,530.82)**	**5,099.93**	**989**	**75.30**	**989**	**(69.11)**
	Grand Total		**8,135,119.28**	**654,489**	**6,878,231.98**	**654,489**	**(522,399.50)**	**119,281**	**1,213,805.64**	**119,281**	**(92,188.15)**	**7,477,449.98**	**989**	**2,142.38**	**989**	**(746.45)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	June 2019	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	44700-0000 or 55500-0000 or 55500-0050	7,234,179.08																
Day Ahead Non-Asset Energy	55500-0027	(1,325,092.51)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	597,817.96																
Excessive Energy Amount	55500-0066	(488.13)																
Non-Excessive Energy Amount	55500-0069	352,684.35																
Real Time Non-Asset Energy	55500-0043	(126,826.86)																
Subtotal		**6,732,273.89**	**24,819**				**27,680**				**54,712**				**188,066**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	304,368.71										16,716.48		-		34,339.75		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	146,878.18										8,198.02		-		16,623.14		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	323,495.68										17,766.97		-		36,497.71		-
Real Time Distribution of Losses	55500-0041	(91,301.12)										-		(5,095.98)		-		(10,333.13)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**683,441.45**	**24,819**	**-**	**24,819**	**-**	**27,680**	**-**	**27,680**	**-**	**54,712**	**42,681.47**	**54,712**	**(5,095.98)**	**188,066**	**87,460.60**	**188,066**	**(10,333.13)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**24,819**	**-**	**24,819**	**-**	**27,680**	**-**	**27,680**	**-**	**54,712**	**-**	**54,712**	**-**	**188,066**	**-**	**188,066**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	148,142.53										8,268.59		-		16,766.24		-
Real Time Market Administration (Schedule 17)	55500-0036	14,879.69										830.51		-		1,684.03		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	4,392.84										245.19		-		497.17		-
Subtotal		**167,415.06**	**24,819**	**-**	**24,819**	**-**	**27,680**	**-**	**27,680**	**-**	**54,712**	**9,344.29**	**54,712**	**-**	**188,066**	**18,947.43**	**188,066**	**-**

MINNESOTA POWER

MISO MONTHLY ALLOCATION

	Account Number	June 2019	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	44700-0000 or 55500-0000 or 55500-0050	560,994.59										30,810.84		-		63,293.01		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(19,025.86)										-		(1,044.93)		-		(2,146.55)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	206,930.47										11,549.84		-		23,419.64		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(173,074.80)										-		(9,660.18)		-		(19,587.98)
Financial Transmission Rights Annual Transaction Amount	55500-0059	225,436.51										12,582.76		-		25,514.09		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	4,558.31										254.42		-		515.89		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(94,030.32)										-		(5,248.31)		-		(10,642.01)
Financial Transmission Rights Hourly Allocation	55500-0032	(244,316.43)										-		(13,636.54)		-		(27,650.85)
Financial Transmission Rights Monthly Allocation	55500-0033	(8,992.65)										-		(501.93)		-		(1,017.76)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(14,718.81)										-		(821.53)		-		(1,665.82)
FTR Guarantee Uplift Amount	55500-0055	15,413.79										860.32		-		1,744.48		-
Financial Transmission Rights Monthly Transaction Amount	55500-0056	-										-		-		-		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**459,174.80**	**24,819**	**-**	**24,819**	**-**	**27,680**	**-**	**27,680**	**-**	**54,712**	**56,058.18**	**54,712**	**(30,913.43)**	**188,066**	**114,487.12**	**188,066**	**(62,710.97)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	11,274.99										629.31		-		1,276.06		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(24,541.84)										-		(1,369.80)		-		(2,777.56)
Real Time Price Volatility Make Whole Payment	55500-0057	(1,735.18)										-		(96.85)		-		(196.38)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	37,013.68										2,065.92		-		4,189.07		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-										-		-		-		-
Subtotal		**22,011.65**	**24,819**	**-**	**24,819**	**-**	**27,680**	**-**	**27,680**	**-**	**54,712**	**2,695.24**	**54,712**	**(1,466.65)**	**188,066**	**5,465.14**	**188,066**	**(2,973.94)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	55,114.74										3,076.23		-		6,237.69		-
Real Time Net Inadvertent Distribution	55500-0044	8,207.61										458.11		-		928.91		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	1,516.03										84.62		-		171.58		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	(45.24)										-		(2.53)		-		(5.12)
Real Time Ramp Capability Amount	55500-0080	(135.20)										-		(7.55)		-		(15.30)
Subtotal		**64,657.94**	**24,819**	**-**	**24,819**	**-**	**27,680**	**-**	**27,680**	**-**	**54,712**	**3,618.96**	**54,712**	**(10.07)**	**188,066**	**7,338.17**	**188,066**	**(20.42)**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	June 2019	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		**-**	**24,819**	**-**	**24,819**	**-**	**27,680**	**-**	**27,680**	**-**	**54,712**	**-**	**54,712**	**-**	**188,066**	**-**	**188,066**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(33,942.01)										-		(1,894.48)		-		(3,841.43)
Day Ahead Spinning Reserve Amount	55500-0063	(30,704.60)										-		(1,713.78)		-		(3,475.04)
Day Ahead Supplemental Reserve Amount	55500-0064	(35.36)										-		(1.97)		-		(4.00)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	(3,741.05)										-		(208.81)		-		(423.40)
Real Time Regulation Amount	55500-0070	10,340.87										577.18		-		1,170.34		-
Regulation Reserve Cost Distribution Amount	55500-0071	23,723.65										1,324.14		-		2,684.96		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	12,932.62										721.84		-		1,463.67		-
Real Time Spinning Reserve Amount	55500-0072	3,811.39										212.73		-		431.36		-
Spinning Reserve Cost Distribution Amount	55500-0073	19,794.04										1,104.81		-		2,240.22		-
Real Time Supplemental Reserve Amount	55500-0074	(97.63)										-		(5.45)		-		(11.05)
Supplemental Reserve Cost Distribution Amount	55500-0075	4,062.57										226.75		-		459.79		-
Subtotal		**6,144.49**	**24,819**	**-**	**24,819**	**-**	**27,680**	**-**	**27,680**	**-**	**54,712**	**4,167.44**	**54,712**	**(3,824.49)**	**188,066**	**8,450.33**	**188,066**	**(7,754.92)**
Grand Total		**8,135,119.28**	**24,819**	**-**	**24,819**	**-**	**27,680**	**-**	**27,680**	**-**	**54,712**	**118,565.58**	**54,712**	**(41,310.62)**	**188,066**	**242,148.79**	**188,066**	**(83,793.38)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	10,708,022.11									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,155,427.44)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	(174,061.22)									-				
	Excessive Energy Amount	55500-0066	(452.10)									-				
	Non-Excessive Energy Amount	55500-0069	(19,249.06)									-				
22	Real Time Non-Asset Energy	55500-0043	496,582.79									-				
	Subtotal		**9,855,415.08**	**678,568**	**7,697,326.58**			**120,452**	**1,358,351.75**			9,055,678.33	**462**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	607,420.64		423,089.42		-		74,662.84		-	497,752.26		262.28		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	273,511.27		190,637.36		-		33,641.89		-	224,279.24		117.14		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	82,941.39		57,771.54		-		10,194.98		-	67,966.51		35.81		-
14	Real Time Distribution of Losses	55500-0041	(318,989.61)		-		(222,335.76)		-		(39,235.72)	(261,571.48)		-		(136.62)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**644,883.68**	**678,568**	**671,498.31**	**678,568**	**(222,335.76)**	**120,452**	**118,499.70**	**120,452**	**(39,235.72)**	**528,426.53**	**462**	**415.24**	**462**	**(136.62)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**678,568**	**-**	**678,568**	**-**	**120,452**	**-**	**120,452**	**-**	**-**	**462**	**-**	**462**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	118,884.41		82,862.43		-		14,622.78		-	97,485.22		50.92		-
19	Real Time Market Administration (Schedule 17)	55500-0036	10,699.01		7,457.21		-		1,315.98		-	8,773.19		4.58		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,773.19		1,932.91		-		341.10		-	2,274.02		1.19		-
	Subtotal		**132,356.61**	**678,568**	**92,252.56**	**678,568**	**-**	**120,452**	**16,279.86**	**120,452**	**-**	**108,532.42**	**462**	**56.69**	**462**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	1,684,290.81		1,173,166.63		-		207,029.41		-	1,380,196.04		727.27		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	584,545.03		407,155.77		-		71,851.02		-	479,006.79		252.41		-
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	526,246.80		366,794.02		-		64,728.36		-	431,522.38		225.39		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(170,206.36)		-		(118,633.83)		-		(20,935.38)	(139,569.22)		-		(72.90)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	225,436.51		157,129.25		-		27,728.69		-	184,857.94		96.55		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	4,478.49		3,121.51		-		550.85		-	3,672.36		1.92		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(93,198.40)		-		(64,959.28)		-		(11,463.40)	(76,422.69)		-		(39.92)
28	Financial Transmission Rights Hourly Allocation	55500-0032	156,722.69		109,235.71		-		19,276.89		-	128,512.61		67.12		-
30	Financial Transmission Rights Monthly Allocation	55500-0033	(7,758.10)		-		(5,407.40)		-		(954.25)	(6,361.64)		-		(3.32)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(21,184.00)		-		(14,765.25)		-		(2,605.63)	(17,370.88)		-		(9.07)
	FTR Guarantee Uplift Amount	55500-0055	20,870.40		14,546.67		-		2,567.06		-	17,113.73		8.94		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-		-		-		-		-	-		-		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**2,910,243.88**	**678,568**	**2,231,149.56**	**678,568**	**(203,765.76)**	**120,452**	**393,732.28**	**120,452**	**(35,958.66)**	**2,385,157.42**	**462**	**1,379.61**	**462**	**(125.21)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	15,870.09		11,061.45		-		1,952.02		-	13,013.47		6.80		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(24,157.49)		-		(16,837.77)		-		(2,971.37)	(19,809.14)		-		(10.35)
	Real Time Price Volatility Make Whole Payment	55500-0057	(6,892.22)		-		(4,803.88)		-		(847.74)	(5,651.62)		-		(2.95)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	43,987.54		30,659.32		-		5,410.47		-	36,069.78		18.84		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(32,600.78)		-		(22,722.74)		-		(4,009.90)	(26,732.64)		-		(13.96)
	Subtotal		**(3,792.86)**	**678,568**	**41,720.77**	**678,568**	**(44,364.39)**	**120,452**	**7,362.49**	**120,452**	**(7,829.01)**	**(3,110.15)**	**462**	**25.64**	**462**	**(27.26)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	65,434.49		45,607.84		-		8,048.44		-	53,656.28		28.03		-
21	Real Time Net Inadvertent Distribution	55500-0044	674.75		470.30		-		82.99		-	553.30		0.29		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	95,380.39		66,480.13		-		11,731.79		-	78,211.92		40.85		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(31.51)		-		(21.96)		-		(3.88)	(25.84)		-		(0.01)
34	Real Time Ramp Capability Amount	55500-0080	1.93		1.35		-		0.24		-	1.58		0.00		-
	Subtotal		**161,460.05**	**678,568**	**112,559.62**	**678,568**	**(21.96)**	**120,452**	**19,863.46**	**120,452**	**(3.88)**	**132,397.24**	**462**	**69.17**	**462**	**(0.01)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**678,568**	**-**	**678,568**	**-**	**120,452**	**-**	**120,452**	**-**	**-**	**462**	**-**	**462**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(38,314.03)		-		(26,704.88)		-		(4,712.63)	(31,417.50)		-		(16.41)
	Day Ahead Spinning Reserve Amount	55500-0063	(33,464.60)		-		(23,324.83)		-		(4,116.15)	(27,440.97)		-		(14.33)
	Day Ahead Supplemental Reserve Amount	55500-0064	(2,652.59)		-		(1,848.86)		-		(326.27)	(2,175.12)		-		(1.14)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	(866.87)		-		(604.21)		-		(106.63)	(710.83)		-		(0.37)
	Real Time Regulation Amount	55500-0070	4,238.18		2,954.01		-		521.30		-	3,475.31		1.82		-
	Regulation Reserve Cost Distribution Amount	55500-0071	25,783.98		17,971.43		-		3,171.43		-	21,142.86		11.04		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	15,317.39		10,676.22		-		1,884.04		-	12,560.26		6.56		-
	Real Time Spinning Reserve Amount	55500-0072	25,386.11		17,694.12		-		3,122.49		-	20,816.61		10.87		-
	Spinning Reserve Cost Distribution Amount	55500-0073	28,785.55		20,063.53		-		3,540.62		-	23,604.15		12.33		-
	Real Time Supplemental Reserve Amount	55500-0074	(299.41)		-		(208.69)		-		(36.83)	(245.52)		-		(0.13)
	Supplemental Reserve Cost Distribution Amount	55500-0075	12,761.67		8,894.88		-		1,569.69		-	10,464.57		5.47		-
	Subtotal		**36,675.38**	**678,568**	**78,254.20**	**678,568**	**(52,691.46)**	**120,452**	**13,809.56**	**120,452**	**(9,298.49)**	**30,073.81**	**462**	**48.09**	**462**	**(32.38)**
	Grand Total		**13,737,241.82**	**678,568**	**10,924,761.59**	**678,568**	**(523,179.33)**	**120,452**	**1,927,899.10**	**120,452**	**(92,325.76)**	**12,237,155.60**	**462**	**1,994.42**	**462**	**(321.49)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	July 2019	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	44700-0000 or 55500-0000 or 55500-0050	10,708,022.11																
Day Ahead Non-Asset Energy	55500-0027	(1,155,427.44)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	(174,061.22)																
Excessive Energy Amount	55500-0066	(452.10)																
Non-Excessive Energy Amount	55500-0069	(19,249.06)																
Real Time Non-Asset Energy	55500-0043	496,582.79																
Subtotal		**9,855,415.08**	**30,132**				**26,640**				**71,762**				**199,330**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	607,420.64										40,775.45		-		68,630.64		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	273,511.27										18,211.66		-		30,903.22		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	82,941.39										5,567.76		-		9,371.30		-
Real Time Distribution of Losses	55500-0041	(318,989.61)										-		(21,239.82)		-		(36,041.68)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**644,883.68**	**30,132**	**-**	**30,132**	**-**	**26,640**	**-**	**26,640**	**-**	**71,762**	**64,554.88**	**71,762**	**(21,239.82)**	**199,330**	**108,905.16**	**199,330**	**(36,041.68)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**30,132**	**-**	**30,132**	**-**	**26,640**	**-**	**26,640**	**-**	**71,762**	**-**	**71,762**	**-**	**199,330**	**-**	**199,330**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	118,884.41										7,915.88		-		13,432.39		-
Real Time Market Administration (Schedule 17)	55500-0036	10,699.01										712.39		-		1,208.85		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,773.19										184.65		-		313.33		-
Subtotal		**132,356.61**	**30,132**	**-**	**30,132**	**-**	**26,640**	**-**	**26,640**	**-**	**71,762**	**8,812.92**	**71,762**	**-**	**199,330**	**14,954.58**	**199,330**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	July 2019	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	1,684,290.81										113,064.52		-		190,302.98		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	584,545.03										39,239.84		-		66,046.00		-
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	526,246.80										35,039.98		-		59,459.05		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(170,206.36)										-		(11,333.14)		-		(19,231.11)
Financial Transmission Rights Annual Transaction Amount	55500-0059	225,436.51										15,010.62		-		25,471.40		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	4,478.49										298.20		-		506.01		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(93,198.40)										-		(6,205.59)		-		(10,530.21)
Financial Transmission Rights Hourly Allocation	55500-0032	156,722.69										10,435.33		-		17,707.63		-
Financial Transmission Rights Monthly Allocation	55500-0033	(7,758.10)										-		(516.57)		-		(876.56)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(21,184.00)										-		(1,410.53)		-		(2,393.52)
FTR Guarantee Uplift Amount	55500-0055	20,870.40										1,389.65		-		2,358.08		-
Financial Transmission Rights Monthly Transaction Amount	55500-0056	-										-		-		-		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**2,910,243.88**	**30,132**	**-**	**30,132**	**-**	**26,640**	**-**	**26,640**	**-**	**71,762**	**214,478.14**	**71,762**	**(19,465.83)**	**199,330**	**361,851.15**	**199,330**	**(33,031.40)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	15,870.09										1,056.71		-		1,793.11		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(24,157.49)										-		(1,608.52)		-		(2,729.48)
Real Time Price Volatility Make Whole Payment	55500-0057	(6,892.22)										-		(458.92)		-		(778.73)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	43,987.54										2,928.90		-		4,970.02		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(32,600.78)										-		(2,170.71)		-		(3,683.46)
Subtotal		**(3,792.86)**	**30,132**	**-**	**30,132**	**-**	**26,640**	**-**	**26,640**	**-**	**71,762**	**3,985.60**	**71,762**	**(4,238.15)**	**199,330**	**6,763.13**	**199,330**	**(7,191.68)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	65,434.49										4,356.94		-		7,393.25		-
Real Time Net Inadvertent Distribution	55500-0044	674.75										44.93		-		76.24		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	95,380.39										6,350.87		-		10,776.75		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	(31.51)										-		(2.10)		-		(3.56)
Real Time Ramp Capability Amount	55500-0080	1.93										0.13		-		0.22		-
Subtotal		**161,460.05**	**30,132**	**-**	**30,132**	**-**	**26,640**	**-**	**26,640**	**-**	**71,762**	**10,752.87**	**71,762**	**(2.10)**	**199,330**	**18,246.45**	**199,330**	**(3.56)**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	July 2019	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		**-**	**30,132**	**-**	**30,132**	**-**	**26,640**	**-**	**26,640**	**-**	**71,762**	**-**	**71,762**	**-**	**199,330**	**-**	**199,330**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(38,314.03)										-		(2,551.13)		-		(4,328.99)
Day Ahead Spinning Reserve Amount	55500-0063	(33,464.60)										-		(2,228.23)		-		(3,781.07)
Day Ahead Supplemental Reserve Amount	55500-0064	(2,652.59)										-		(176.62)		-		(299.71)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	(866.87)										-		(57.72)		-		(97.95)
Real Time Regulation Amount	55500-0070	4,238.18										282.20		-		478.86		-
Regulation Reserve Cost Distribution Amount	55500-0071	25,783.98										1,716.82		-		2,913.25		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	15,317.39										1,019.90		-		1,730.67		-
Real Time Spinning Reserve Amount	55500-0072	25,386.11										1,690.33		-		2,868.30		-
Spinning Reserve Cost Distribution Amount	55500-0073	28,785.55										1,916.68		-		3,252.39		-
Real Time Supplemental Reserve Amount	55500-0074	(299.41)										-		(19.94)		-		(33.83)
Supplemental Reserve Cost Distribution Amount	55500-0075	12,761.67										849.73		-		1,441.90		-
Subtotal		**36,675.38**	**30,132**	**-**	**30,132**	**-**	**26,640**	**-**	**26,640**	**-**	**71,762**	**7,475.66**	**71,762**	**(5,033.64)**	**199,330**	**12,685.38**	**199,330**	**(8,541.54)**
Grand Total		**13,737,241.82**	**30,132**	**-**	**30,132**	**-**	**26,640**	**-**	**26,640**	**-**	**71,762**	**310,060.06**	**71,762**	**(49,979.53)**	**199,330**	**523,405.85**	**199,330**	**(84,809.85)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	August 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Day Ahead and Real Time Energy															
1a	Day Ahead Asset Energy	44700-0000 or 55500-0000 or 55500-0050	8,661,438.98									-				
5	Day Ahead Non-Asset Energy	55500-0027	(2,087,748.76)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	769,474.86									-				
	Excessive Energy Amount	55500-0066	(509.49)									-				
	Non-Excessive Energy Amount	55500-0069	866,950.22									-				
22	Real Time Non-Asset Energy	55500-0043	(314,718.65)									-				
	Subtotal		**7,894,887.16**	**697,929**	**6,124,496.69**			**114,618**	**997,011.09**			7,121,507.78	**1,761**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	781,761.48		540,867.99		-		88,048.28		-	628,916.27		1,314.26		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	235,270.48		161,866.09		-		26,350.29		-	188,216.38		418.19		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(24,826.20)		-		(17,176.21)		-		(2,796.13)	(19,972.33)		-		(41.74)
14	Real Time Distribution of Losses	55500-0041	(200,043.72)		-		(137,630.08)		-		(22,404.90)	(160,034.98)		-		(355.57)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**792,162.04**	**697,929**	**702,734.08**	**697,929**	**(154,806.29)**	**114,618**	**114,398.57**	**114,618**	**(25,201.02)**	**637,125.34**	**1,761**	**1,732.45**	**1,761**	**(397.31)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**697,929**	**-**	**697,929**	**-**	**114,618**	**-**	**114,618**	**-**	**-**	**1,761**	**-**	**1,761**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	74,192.76		51,044.62		-		8,309.59		-	59,354.21		131.88		-
19	Real Time Market Administration (Schedule 17)	55500-0036	8,605.37		5,920.49		-		963.80		-	6,884.30		15.30		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	1,063.30		731.55		-		119.09		-	850.64		1.89		-
	Subtotal		**83,861.43**	**697,929**	**57,696.66**	**697,929**	**-**	**114,618**	**9,392.48**	**114,618**	**-**	**67,089.14**	**1,761**	**149.06**	**1,761**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	August 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	710,328.04		491,446.18		-		80,002.87		-	571,449.05		1,194.17		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(147,916.63)		-		(102,337.31)		-		(16,659.56)	(118,996.88)		-		(248.67)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	294,102.47		202,342.50		-		32,939.48		-	235,281.98		522.76		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(170,206.36)		-		(117,101.98)		-		(19,063.11)	(136,165.09)		-		(302.54)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	225,436.51		155,100.32		-		25,248.89		-	180,349.21		400.71		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	4,478.49		3,081.20		-		501.59		-	3,582.79		7.96		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(93,668.46)		-		(64,443.90)		-		(10,490.87)	(74,934.77)		-		(166.49)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(1,578,016.42)		-		(1,085,675.30)		-		(176,737.84)	(1,262,413.14)		-		(2,804.90)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(36,093.01)		-		(24,831.99)		-		(4,042.42)	(28,874.41)		-		(64.15)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(87,277.27)		-		(60,046.76)		-		(9,775.05)	(69,821.82)		-		(155.13)
	FTR Guarantee Uplift Amount	55500-0055	79,995.30		55,036.77		-		8,959.47		-	63,996.24		142.19		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-		-		-		-		-	-		-		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**(798,837.34)**	**697,929**	**907,006.97**	**697,929**	**(1,454,437.24)**	**114,618**	**147,652.30**	**114,618**	**(236,768.85)**	**(636,546.83)**	**1,761**	**2,267.79**	**1,761**	**(3,741.89)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	10,847.29		7,462.94		-		1,214.90		-	8,677.83		19.28		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(43,282.75)		-		(29,778.53)		-		(4,847.67)	(34,626.20)		-		(76.93)
	Real Time Price Volatility Make Whole Payment	55500-0057	(1,504.53)		-		(1,035.12)		-		(168.51)	(1,203.62)		-		(2.67)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	54,468.90		37,474.60		-		6,100.52		-	43,575.12		96.82		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(48,137.43)		-		(33,118.55)		-		(5,391.39)	(38,509.94)		-		(85.56)
	Subtotal		**(27,608.52)**	**697,929**	**44,937.54**	**697,929**	**(63,932.20)**	**114,618**	**7,315.41**	**114,618**	**(10,407.57)**	**(22,086.82)**	**1,761**	**116.10**	**1,761**	**(165.17)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	52,354.22		36,019.70		-		5,863.67		-	41,883.38		93.06		-
21	Real Time Net Inadvertent Distribution	55500-0044	13,970.75		9,611.88		-		1,564.72		-	11,176.60		24.83		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	97,632.48		67,171.15		-		10,934.84		-	78,105.98		173.54		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(1.48)		-		(1.02)		-		(0.17)	(1.18)		-		(0.00)
34	Real Time Ramp Capability Amount	55500-0080	(28.81)		-		(19.82)		-		(3.23)	(23.05)		-		(0.05)
	Subtotal		**163,927.16**	**697,929**	**112,802.73**	**697,929**	**(20.84)**	**114,618**	**18,363.23**	**114,618**	**(3.39)**	**131,141.73**	**1,761**	**291.43**	**1,761**	**(0.05)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	August 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**697,929**	**-**	**697,929**	**-**	**114,618**	**-**	**114,618**	**-**	**-**	**1,761**	**-**	**1,761**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(66,292.02)		-		(45,608.91)		-		(7,424.71)	(53,033.62)		-		(117.83)
	Day Ahead Spinning Reserve Amount	55500-0063	(45,062.97)		-		(31,003.32)		-		(5,047.05)	(36,050.38)		-		(80.10)
	Day Ahead Supplemental Reserve Amount	55500-0064	552.86		380.37		-		61.92		-	442.29		0.98		-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	754.57		519.14		-		84.51		-	603.66		1.34		-
	Net Regulation Adjustment Amount	55500-0068	389.68		268.10		-		43.64		-	311.74		0.69		-
	Real Time Regulation Amount	55500-0070	23,754.32		16,342.97		-		2,660.48		-	19,003.46		42.22		-
	Regulation Reserve Cost Distribution Amount	55500-0071	26,342.19		18,123.43		-		2,950.33		-	21,073.75		46.82		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	15,049.40		10,353.99		-		1,685.53		-	12,039.52		26.75		-
	Real Time Spinning Reserve Amount	55500-0072	(6,775.10)		-		(4,661.27)		-		(758.81)	(5,420.08)		-		(12.04)
	Spinning Reserve Cost Distribution Amount	55500-0073	24,585.34		16,914.71		-		2,753.56		-	19,668.27		43.70		-
	Real Time Supplemental Reserve Amount	55500-0074	(73.19)		-		(50.35)		-		(8.20)	(58.55)		-		(0.13)
	Supplemental Reserve Cost Distribution Amount	55500-0075	2,860.07		1,967.73		-		320.33		-	2,288.06		5.08		-
	Subtotal		**(23,914.85)**	**697,929**	**64,870.44**	**697,929**	**(81,323.86)**	**114,618**	**10,560.30**	**114,618**	**(13,238.77)**	**(19,131.88)**	**1,761**	**167.60**	**1,761**	**(210.10)**
	Grand Total		**8,084,477.08**	**697,929**	**8,014,545.11**	**697,929**	**(1,754,520.42)**	**114,618**	**1,304,693.39**	**114,618**	**(285,619.60)**	**7,279,098.47**	**1,761**	**4,724.42**	**1,761**	**(4,514.53)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	August 2019	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	44700-0000 or 55500-0000 or 55500-0050	8,661,438.98																
Day Ahead Non-Asset Energy	55500-0027	(2,087,748.76)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	769,474.86																
Excessive Energy Amount	55500-0066	(509.49)																
Non-Excessive Energy Amount	55500-0069	866,950.22																
Real Time Non-Asset Energy	55500-0043	(314,718.65)																
Subtotal		**7,894,887.16**	**30,407**				**24,108**				**80,247**				**206,232**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	781,761.48										59,886.26		-		91,644.70		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	235,270.48										19,055.51		-		27,580.40		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(24,826.20)										-		(1,901.79)		-		(2,910.34)
Real Time Distribution of Losses	55500-0041	(200,043.72)										-		(16,202.35)		-		(23,450.82)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**792,162.04**	**30,407**	**-**	**30,407**	**-**	**24,108**	**-**	**24,108**	**-**	**80,247**	**78,941.77**	**80,247**	**(18,104.14)**	**206,232**	**119,225.09**	**206,232**	**(26,361.15)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**30,407**	**-**	**30,407**	**-**	**24,108**	**-**	**24,108**	**-**	**80,247**	**-**	**80,247**	**-**	**206,232**	**-**	**206,232**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	74,192.76										6,009.17		-		8,697.50		-
Real Time Market Administration (Schedule 17)	55500-0036	8,605.37										696.98		-		1,008.79		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	1,063.30										86.12		-		124.65		-
Subtotal		**83,861.43**	**30,407**	**-**	**30,407**	**-**	**24,108**	**-**	**24,108**	**-**	**80,247**	**6,792.28**	**80,247**	**-**	**206,232**	**9,830.95**	**206,232**	**-**

MINNESOTA POWER

MISO MONTHLY ALLOCATION

	Account Number	August 2019	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	44700-0000 or 55500-0000 or 55500-0050	710,328.04										54,414.16		-		83,270.66		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(147,916.63)										-		(11,331.04)		-		(17,340.04)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	294,102.47										23,820.55		-		34,477.18		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(170,206.36)										-		(13,785.70)		-		(19,953.03)
Financial Transmission Rights Annual Transaction Amount	55500-0059	225,436.51										18,259.02		-		26,427.58		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	4,478.49										362.73		-		525.01		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(93,668.46)										-		(7,586.59)		-		(10,980.61)
Financial Transmission Rights Hourly Allocation	55500-0032	(1,578,016.42)										-		(127,809.95)		-		(184,988.44)
Financial Transmission Rights Monthly Allocation	55500-0033	(36,093.01)										-		(2,923.32)		-		(4,231.13)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(87,277.27)										-		(7,068.94)		-		(10,231.38)
FTR Guarantee Uplift Amount	55500-0055	79,995.30										6,479.14		-		9,377.73		-
Financial Transmission Rights Monthly Transaction Amount	55500-0056	-										-		-		-		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**(798,837.34)**	**30,407**	**-**	**30,407**	**-**	**24,108**	**-**	**24,108**	**-**	**80,247**	**103,335.60**	**80,247**	**(170,505.54)**	**206,232**	**154,078.15**	**206,232**	**(247,724.62)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	10,847.29										878.57		-		1,271.61		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(43,282.75)										-		(3,505.65)		-		(5,073.97)
Real Time Price Volatility Make Whole Payment	55500-0057	(1,504.53)										-		(121.86)		-		(176.37)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	54,468.90										4,411.66		-		6,385.31		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(48,137.43)										-		(3,898.85)		-		(5,643.08)
Subtotal		**(27,608.52)**	**30,407**	**-**	**30,407**	**-**	**24,108**	**-**	**24,108**	**-**	**80,247**	**5,290.22**	**80,247**	**(7,526.35)**	**206,232**	**7,656.92**	**206,232**	**(10,893.42)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	52,354.22										4,240.38		-		6,137.40		-
Real Time Net Inadvertent Distribution	55500-0044	13,970.75										1,131.55		-		1,637.77		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	97,632.48										7,907.65		-		11,445.31		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	(1.48)										-		(0.12)		-		(0.17)
Real Time Ramp Capability Amount	55500-0080	(28.81)										-		(2.33)		-		(3.38)
Subtotal		**163,927.16**	**30,407**	**-**	**30,407**	**-**	**24,108**	**-**	**24,108**	**-**	**80,247**	**13,279.58**	**80,247**	**(2.45)**	**206,232**	**19,220.48**	**206,232**	**(3.55)**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	August 2019	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		**-**	**30,407**	**-**	**30,407**	**-**	**24,108**	**-**	**24,108**	**-**	**80,247**	**-**	**80,247**	**-**	**206,232**	**-**	**206,232**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(66,292.02)										-		(5,369.26)		-		(7,771.31)
Day Ahead Spinning Reserve Amount	55500-0063	(45,062.97)										-		(3,649.83)		-		(5,282.66)
Day Ahead Supplemental Reserve Amount	55500-0064	552.86										44.78		-		64.81		-
Contingency Reserve Deployment Failure Charge Amount	55500-0065	754.57										61.12		-		88.46		-
Net Regulation Adjustment Amount	55500-0068	389.68										31.56		-		45.68		-
Real Time Regulation Amount	55500-0070	23,754.32										1,923.96		-		2,784.68		-
Regulation Reserve Cost Distribution Amount	55500-0071	26,342.19										2,133.56		-		3,088.05		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	15,049.40										1,218.91		-		1,764.22		-
Real Time Spinning Reserve Amount	55500-0072	(6,775.10)										-		(548.74)		-		(794.23)
Spinning Reserve Cost Distribution Amount	55500-0073	24,585.34										1,991.27		-		2,882.10		-
Real Time Supplemental Reserve Amount	55500-0074	(73.19)										-		(5.93)		-		(8.58)
Supplemental Reserve Cost Distribution Amount	55500-0075	2,860.07										231.65		-		335.28		-
Subtotal		**(23,914.85)**	**30,407**	**-**	**30,407**	**-**	**24,108**	**-**	**24,108**	**-**	**80,247**	**7,636.80**	**80,247**	**(9,573.76)**	**206,232**	**11,053.29**	**206,232**	**(13,856.79)**
Grand Total		**8,084,477.08**	**30,407**	**-**	**30,407**	**-**	**24,108**	**-**	**24,108**	**-**	**80,247**	**215,276.25**	**80,247**	**(205,712.25)**	**206,232**	**321,064.87**	**206,232**	**(298,839.54)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	September 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Day Ahead and Real Time Energy															
1a	Day Ahead Asset Energy	44700-0000 or 55500-0000 or 55500-0050	3,931,879.56									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,360,372.20)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	684,751.40									-				
	Excessive Energy Amount	55500-0066	(53.31)									-				
	Non-Excessive Energy Amount	55500-0069	538,315.84									-				
22	Real Time Non-Asset Energy	55500-0043	(133,952.89)									-				
	Subtotal		**3,660,568.40**	**666,528**	**3,182,227.74**			**105,594**	**518,037.07**			3,700,264.82	**1,551**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	610,605.12		420,956.91		-		68,527.87		-	489,484.78		968.03		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	304,997.70		209,838.42		-		34,159.74		-	243,998.16		492.63		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(59,068.07)		-		(40,722.09)		-		(6,629.18)	(47,351.26)		-		(93.64)
14	Real Time Distribution of Losses	55500-0041	(120,382.20)		-		(82,822.95)		-		(13,482.81)	(96,305.76)		-		(194.44)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**736,152.55**	**666,528**	**630,795.33**	**666,528**	**(123,545.04)**	**105,594**	**102,687.61**	**105,594**	**(20,111.98)**	**589,825.92**	**1,551**	**1,460.66**	**1,551**	**(288.08)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**666,528**	**-**	**666,528**	**-**	**105,594**	**-**	**105,594**	**-**	**-**	**1,551**	**-**	**1,551**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	114,281.26		78,625.51		-		12,799.50		-	91,425.01		184.58		-
19	Real Time Market Administration (Schedule 17)	55500-0036	10,311.42		7,094.26		-		1,154.88		-	8,249.14		16.65		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	3,582.62		2,464.84		-		401.25		-	2,866.10		5.79		-
	Subtotal		**128,175.30**	**666,528**	**88,184.61**	**666,528**	**-**	**105,594**	**14,355.63**	**105,594**	**-**	**102,540.24**	**1,551**	**207.03**	**1,551**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	September 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	26,779.44		18,462.00		-		3,005.44		-	21,467.44		42.46		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(79,692.16)		-		(54,940.52)		-		(8,943.81)	(63,884.33)		-		(126.34)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	329,541.50		226,724.55		-		36,908.65		-	263,633.20		532.27		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(172,029.84)		-		(118,356.53)		-		(19,267.34)	(137,623.87)		-		(277.86)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	291,686.92		200,680.60		-		32,668.94		-	233,349.54		471.13		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,366.12		7,131.89		-		1,161.01		-	8,292.90		16.74		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(59,721.33)		-		(41,088.28)		-		(6,688.79)	(47,777.06)		-		(96.46)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(77,917.09)		-		(53,606.96)		-		(8,726.71)	(62,333.67)		-		(125.85)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(43,221.51)		-		(29,736.40)		-		(4,840.81)	(34,577.21)		-		(69.81)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	26,538.84		18,258.72		-		2,972.35		-	21,231.07		42.86		-
	FTR Guarantee Uplift Amount	55500-0055	(29,482.44)		-		(20,283.92)		-		(3,302.03)	(23,585.95)		-		(47.62)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-		-		-		-		-	-		-		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**222,848.46**	**666,528**	**471,257.77**	**666,528**	**(318,012.60)**	**105,594**	**76,716.38**	**105,594**	**(51,769.49)**	**178,192.05**	**1,551**	**1,105.46**	**1,551**	**(743.94)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	12,543.15		8,629.69		-		1,404.83		-	10,034.52		20.26		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	2,744.28		1,888.06		-		307.36		-	2,195.42		4.43		-
	Real Time Price Volatility Make Whole Payment	55500-0057	(87,014.01)		-		(59,865.64)		-		(9,745.57)	(69,611.21)		-		(140.54)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	15,575.04		10,715.63		-		1,744.40		-	12,460.03		25.16		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	9,871.99		6,791.93		-		1,105.66		-	7,897.59		15.95		-
	Subtotal		**(46,279.55)**	**666,528**	**28,025.31**	**666,528**	**(59,865.64)**	**105,594**	**4,562.26**	**105,594**	**(9,745.57)**	**(37,023.64)**	**1,551**	**65.79**	**1,551**	**(140.54)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	43,674.97		30,048.38		-		4,891.60		-	34,939.98		70.54		-
21	Real Time Net Inadvertent Distribution	55500-0044	1,141.05		785.04		-		127.80		-	912.84		1.84		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	18,451.43		12,694.58		-		2,066.56		-	14,761.14		29.80		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(30.00)		-		(20.64)		-		(3.36)	(24.00)		-		(0.05)
34	Real Time Ramp Capability Amount	55500-0080	(1.58)		-		(1.09)		-		(0.18)	(1.26)		-		(0.00)
	Subtotal		**63,235.87**	**666,528**	**43,528.01**	**666,528**	**(21.73)**	**105,594**	**7,085.95**	**105,594**	**(3.54)**	**50,588.70**	**1,551**	**102.19**	**1,551**	**(0.05)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	September 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**666,528**	**-**	**666,528**	**-**	**105,594**	**-**	**105,594**	**-**	**-**	**1,551**	**-**	**1,551**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(88,095.06)		-		(60,609.40)		-		(9,866.65)	(70,476.05)		-		(142.29)
	Day Ahead Spinning Reserve Amount	55500-0063	(12,516.06)		-		(8,611.05)		-		(1,401.80)	(10,012.85)		-		(20.22)
	Day Ahead Supplemental Reserve Amount	55500-0064	(60.68)		-		(41.75)		-		(6.80)	(48.54)		-		(0.10)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	2,251.08		1,548.74		-		252.12		-	1,800.86		3.64		-
	Real Time Regulation Amount	55500-0070	30,809.83		21,197.16		-		3,450.70		-	24,647.86		49.76		-
	Regulation Reserve Cost Distribution Amount	55500-0071	27,145.62		18,676.19		-		3,040.31		-	21,716.50		43.85		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	19,251.01		13,244.69		-		2,156.11		-	15,400.81		31.09		-
	Real Time Spinning Reserve Amount	55500-0072	(1,855.82)		-		(1,276.80)		-		(207.85)	(1,484.66)		-		(3.00)
	Spinning Reserve Cost Distribution Amount	55500-0073	20,561.90		14,146.59		-		2,302.93		-	16,449.52		33.21		-
	Real Time Supplemental Reserve Amount	55500-0074	50.14		34.50		-		5.62		-	40.11		0.08		-
	Supplemental Reserve Cost Distribution Amount	55500-0075	4,683.52		3,222.26		-		524.55		-	3,746.82		7.56		-
	Subtotal		**2,225.48**	**666,528**	**72,070.13**	**666,528**	**(70,539.00)**	**105,594**	**11,732.35**	**105,594**	**(11,483.09)**	**1,780.38**	**1,551**	**169.20**	**1,551**	**(165.60)**
	Grand Total		**4,766,926.50**	**666,528**	**4,516,088.89**	**666,528**	**(571,984.01)**	**105,594**	**735,177.26**	**105,594**	**(93,113.68)**	**4,586,168.47**	**1,551**	**3,110.32**	**1,551**	**(1,338.22)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	September 2019	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	44700-0000 or 55500-0000 or 55500-0050	3,931,879.56																
Day Ahead Non-Asset Energy	55500-0027	(1,360,372.20)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	684,751.40																
Excessive Energy Amount	55500-0066	(53.31)																
Non-Excessive Energy Amount	55500-0069	538,315.84																
Real Time Non-Asset Energy	55500-0043	(133,952.89)																
Subtotal		**3,660,568.40**	**28,742**				**24,117**				**83,692**				**123,396**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	610,605.12										52,248.74		-		67,903.56		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	304,997.70										26,589.03		-		33,917.88		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(59,068.07)										-		(5,054.38)		-		(6,568.78)
Real Time Distribution of Losses	55500-0041	(120,382.20)										-		(10,494.66)		-		(13,387.34)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**736,152.55**	**28,742**	**-**	**28,742**	**-**	**24,117**	**-**	**24,117**	**-**	**83,692**	**78,837.77**	**83,692**	**(15,549.04)**	**123,396**	**101,821.44**	**123,396**	**(19,956.13)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**28,742**	**-**	**28,742**	**-**	**24,117**	**-**	**24,117**	**-**	**83,692**	**-**	**83,692**	**-**	**123,396**	**-**	**123,396**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	114,281.26										9,962.79		-		12,708.88		-
Real Time Market Administration (Schedule 17)	55500-0036	10,311.42										898.93		-		1,146.70		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	3,582.62										312.32		-		398.41		-
Subtotal		**128,175.30**	**28,742**	**-**	**28,742**	**-**	**24,117**	**-**	**24,117**	**-**	**83,692**	**11,174.04**	**83,692**	**-**	**123,396**	**14,253.99**	**123,396**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	September 2019	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	26,779.44										2,291.48		-		2,978.06		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(79,692.16)										-		(6,819.16)		-		(8,862.33)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	329,541.50										28,728.71		-		36,647.32		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(172,029.84)										-		(14,997.19)		-		(19,130.92)
Financial Transmission Rights Annual Transaction Amount	55500-0059	291,686.92										25,428.63		-		32,437.63		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,366.12										903.70		-		1,152.79		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(59,721.33)										-		(5,206.38)		-		(6,641.43)
Financial Transmission Rights Hourly Allocation	55500-0032	(77,917.09)										-		(6,792.64)		-		(8,664.93)
Financial Transmission Rights Monthly Allocation	55500-0033	(43,221.51)										-		(3,767.96)		-		(4,806.53)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	26,538.84										2,313.60		-		2,951.30		-
FTR Guarantee Uplift Amount	55500-0055	(29,482.44)										-		(2,570.21)		-		(3,278.65)
Financial Transmission Rights Monthly Transaction Amount	55500-0056	-										-		-		-		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**222,848.46**	**28,742**	**-**	**28,742**	**-**	**24,117**	**-**	**24,117**	**-**	**83,692**	**59,666.12**	**83,692**	**(40,153.54)**	**123,396**	**76,167.10**	**123,396**	**(51,384.79)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	12,543.15										1,093.48		-		1,394.89		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	2,744.28										239.24		-		305.18		-
Real Time Price Volatility Make Whole Payment	55500-0057	(87,014.01)										-		(7,585.69)		-		(9,676.57)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	15,575.04										1,357.80		-		1,732.05		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	9,871.99										860.62		-		1,097.83		-
Subtotal		**(46,279.55)**	**28,742**	**-**	**28,742**	**-**	**24,117**	**-**	**24,117**	**-**	**83,692**	**3,551.14**	**83,692**	**(7,585.69)**	**123,396**	**4,529.96**	**123,396**	**(9,676.57)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	43,674.97										3,807.49		-		4,856.96		-
Real Time Net Inadvertent Distribution	55500-0044	1,141.05										99.47		-		126.89		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	18,451.43										1,608.56		-		2,051.93		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	(30.00)										-		(2.62)		-		(3.34)
Real Time Ramp Capability Amount	55500-0080	(1.58)										-		(0.14)		-		(0.18)
Subtotal		**63,235.87**	**28,742**	**-**	**28,742**	**-**	**24,117**	**-**	**24,117**	**-**	**83,692**	**5,515.52**	**83,692**	**(2.75)**	**123,396**	**7,035.78**	**123,396**	**(3.51)**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	**September 2019**	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		**-**	**28,742**	**-**	**28,742**	**-**	**24,117**	**-**	**24,117**	**-**	**83,692**	**-**	**83,692**	**-**	**123,396**	**-**	**123,396**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(88,095.06)										-		(7,679.94)		-		(9,796.79)
Day Ahead Spinning Reserve Amount	55500-0063	(12,516.06)										-		(1,091.12)		-		(1,391.87)
Day Ahead Supplemental Reserve Amount	55500-0064	(60.68)										-		(5.29)		-		(6.75)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	2,251.08										196.24		-		250.34		-
Real Time Regulation Amount	55500-0070	30,809.83										2,685.93		-		3,426.27		-
Regulation Reserve Cost Distribution Amount	55500-0071	27,145.62										2,366.50		-		3,018.78		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	19,251.01										1,678.26		-		2,140.85		-
Real Time Spinning Reserve Amount	55500-0072	(1,855.82)										-		(161.79)		-		(206.38)
Spinning Reserve Cost Distribution Amount	55500-0073	20,561.90										1,792.54		-		2,286.63		-
Real Time Supplemental Reserve Amount	55500-0074	50.14										4.37		-		5.58		-
Supplemental Reserve Cost Distribution Amount	55500-0075	4,683.52										408.30		-		520.84		-
Subtotal		**2,225.48**	**28,742**	**-**	**28,742**	**-**	**24,117**	**-**	**24,117**	**-**	**83,692**	**9,132.15**	**83,692**	**(8,938.13)**	**123,396**	**11,649.28**	**123,396**	**(11,401.79)**
Grand Total		**4,766,926.50**	**28,742**	**-**	**28,742**	**-**	**24,117**	**-**	**24,117**	**-**	**83,692**	**167,876.74**	**83,692**	**(72,229.16)**	**123,396**	**215,457.56**	**123,396**	**(92,422.79)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	October 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	6,986,725.22									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,731,684.79)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	835,975.66									-				
	Excessive Energy Amount	55500-0066	(0.92)									-				
	Non-Excessive Energy Amount	55500-0069	(76,359.02)									-				
22	Real Time Non-Asset Energy	55500-0043	(338,179.34)									-				
	Subtotal		**5,676,476.81**	**672,564**	**4,307,813.72**			**112,076**	**701,272.00**			5,009,085.72	**3,487**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	671,608.39		441,145.35		-		71,814.36		-	512,959.71		2,147.38		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	282,934.25		184,925.83		-		30,104.20		-	215,030.03		938.91		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(30,539.34)		-		(20,059.74)		-		(3,265.54)	(23,325.27)		-		(97.65)
14	Real Time Distribution of Losses	55500-0041	(242,681.52)		-		(158,616.64)		-		(25,821.31)	(184,437.96)		-		(805.33)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**681,321.79**	**672,564**	**626,071.18**	**672,564**	**(178,676.38)**	**112,076**	**101,918.56**	**112,076**	**(29,086.85)**	**520,226.51**	**3,487**	**3,086.29**	**3,487**	**(902.98)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**672,564**	**-**	**672,564**	**-**	**112,076**	**-**	**112,076**	**-**	**-**	**3,487**	**-**	**3,487**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	156,280.04		102,144.63		-		16,628.20		-	118,772.83		518.61		-
19	Real Time Market Administration (Schedule 17)	55500-0036	17,201.71		11,243.04		-		1,830.26		-	13,073.30		57.08		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	3,043.97		1,989.54		-		323.88		-	2,313.42		10.10		-
	Subtotal		**176,525.72**	**672,564**	**115,377.21**	**672,564**	**-**	**112,076**	**18,782.34**	**112,076**	**-**	**134,159.55**	**3,487**	**585.79**	**3,487**	**-**

MINNESOTA POWER

MISO MONTHLY ALLOCATION

		Account Number	October 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	817,358.32		536,881.06		-		87,399.24		-	624,280.30		2,613.40		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(256,469.85)		-		(168,461.98)		-		(27,424.04)	(195,886.03)		-		(820.03)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	673,696.86		440,328.27		-		71,681.35		-	512,009.61		2,235.64		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(172,029.84)		-		(112,438.70)		-		(18,303.97)	(130,742.68)		-		(570.88)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	291,686.92		190,646.57		-		31,035.49		-	221,682.06		967.95		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,366.12		6,775.30		-		1,102.96		-	7,878.25		34.40		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(59,727.03)		-		(39,037.59)		-		(6,354.96)	(45,392.54)		-		(198.20)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(1,809,633.77)		-		(1,182,776.63)		-		(192,545.03)	(1,375,321.67)		-		(6,005.21)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(7,198.37)		-		(4,704.85)		-		(765.91)	(5,470.76)		-		(23.89)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(154,757.37)		-		(101,149.42)		-		(16,466.18)	(117,615.60)		-		(513.56)
	FTR Guarantee Uplift Amount	55500-0055	155,534.17		101,657.13		-		16,548.84		-	118,205.97		516.14		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-		-		-		-		-	-		-		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**(511,173.84)**	**672,564**	**1,276,288.32**	**672,564**	**(1,608,569.18)**	**112,076**	**207,767.87**	**112,076**	**(261,860.10)**	**(386,373.09)**	**3,487**	**6,367.53**	**3,487**	**(8,131.76)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	22,507.11		14,710.65		-		2,394.76		-	17,105.40		74.69		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(45,475.47)		-		(29,722.77)		-		(4,838.59)	(34,561.36)		-		(150.91)
	Real Time Price Volatility Make Whole Payment	55500-0057	(818.37)		-		(534.89)		-		(87.07)	(621.96)		-		(2.72)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	31,144.64		20,356.14		-		3,313.79		-	23,669.93		103.35		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(1.00)		-		(0.65)		-		(0.11)	(0.76)		-		(0.00)
	Subtotal		**7,356.91**	**672,564**	**35,066.78**	**672,564**	**(30,258.31)**	**112,076**	**5,708.55**	**112,076**	**(4,925.77)**	**5,591.25**	**3,487**	**178.04**	**3,487**	**(153.63)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	51,395.58		33,592.15		-		5,468.49		-	39,060.64		170.55		-
21	Real Time Net Inadvertent Distribution	55500-0044	5,910.35		3,863.00		-		628.86		-	4,491.87		19.61		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	141,585.88		92,540.53		-		15,064.74		-	107,605.27		469.85		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(2.72)		-		(1.78)		-		(0.29)	(2.07)		-		(0.01)
34	Real Time Ramp Capability Amount	55500-0080	(20.69)		-		(13.52)		-		(2.20)	(15.72)		-		(0.07)
	Subtotal		**198,868.40**	**672,564**	**129,995.69**	**672,564**	**(15.30)**	**112,076**	**21,162.09**	**112,076**	**(2.49)**	**151,139.98**	**3,487**	**660.02**	**3,487**	**(0.08)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	October 2019	FPE Retail				FAC Resale				Subtotal FPE and FAC	MISO Non-Liquidation			
				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		**-**	**672,564**	**-**	**672,564**	**-**	**112,076**	**-**	**112,076**	**-**	**-**	**3,487**	**-**	**3,487**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(74,410.53)		-		(48,634.72)		-		(7,917.28)	(56,552.00)		-		(246.93)
	Day Ahead Spinning Reserve Amount	55500-0063	(23,020.19)		-		(15,046.00)		-		(2,449.35)	(17,495.34)		-		(76.39)
	Day Ahead Supplemental Reserve Amount	55500-0064	(10.83)		-		(7.08)		-		(1.15)	(8.23)		-		(0.04)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	796.26		520.44		-		84.72		-	605.16		2.64		-
	Real Time Regulation Amount	55500-0070	34,905.03		22,813.93		-		3,713.90		-	26,527.82		115.83		-
	Regulation Reserve Cost Distribution Amount	55500-0071	33,618.90		21,973.31		-		3,577.05		-	25,550.36		111.56		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	18,224.96		11,911.83		-		1,939.14		-	13,850.97		60.48		-
	Real Time Spinning Reserve Amount	55500-0072	17,447.86		11,403.92		-		1,856.45		-	13,260.37		57.90		-
	Spinning Reserve Cost Distribution Amount	55500-0073	24,766.90		16,187.65		-		2,635.20		-	18,822.84		82.19		-
	Real Time Supplemental Reserve Amount	55500-0074	(567.78)		-		(371.10)		-		(60.41)	(431.51)		-		(1.88)
	Supplemental Reserve Cost Distribution Amount	55500-0075	7,388.31		4,829.00		-		786.12		-	5,615.12		24.52		-
	Subtotal		**39,138.89**	**672,564**	**89,640.08**	**672,564**	**(64,058.90)**	**112,076**	**14,592.57**	**112,076**	**(10,428.19)**	**29,745.56**	**3,487**	**455.12**	**3,487**	**(325.24)**
	Grand Total		**6,268,514.68**	**672,564**	**6,580,252.98**	**672,564**	**(1,881,578.06)**	**112,076**	**1,071,203.97**	**112,076**	**(306,303.41)**	**5,463,575.49**	**3,487**	**11,332.79**	**3,487**	**(9,513.69)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	October 2019	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	44700-0000 or 55500-0000 or 55500-0050	6,986,725.22																
Day Ahead Non-Asset Energy	55500-0027	(1,731,684.79)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	835,975.66																
Excessive Energy Amount	55500-0066	(0.92)																
Non-Excessive Energy Amount	55500-0069	(76,359.02)																
Real Time Non-Asset Energy	55500-0043	(338,179.34)																
Subtotal		**5,676,476.81**	**35,715**				**23,514**				**105,305**				**146,120**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	671,608.39										64,847.56		-		91,653.75		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	282,934.25										28,353.55		-		38,611.76		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(30,539.34)										-		(2,948.74)		-		(4,167.67)
Real Time Distribution of Losses	55500-0041	(242,681.52)										-		(24,319.72)		-		(33,118.51)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**681,321.79**	**35,715**	**-**	**35,715**	**-**	**23,514**	**-**	**23,514**	**-**	**105,305**	**93,201.10**	**105,305**	**(27,268.47)**	**146,120**	**130,265.51**	**146,120**	**(37,286.19)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**35,715**	**-**	**35,715**	**-**	**23,514**	**-**	**23,514**	**-**	**105,305**	**-**	**105,305**	**-**	**146,120**	**-**	**146,120**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	156,280.04										15,661.21		-		21,327.39		-
Real Time Market Administration (Schedule 17)	55500-0036	17,201.71										1,723.83		-		2,347.50		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	3,043.97										305.04		-		415.41		-
Subtotal		**176,525.72**	**35,715**	**-**	**35,715**	**-**	**23,514**	**-**	**23,514**	**-**	**105,305**	**17,690.08**	**105,305**	**-**	**146,120**	**24,090.29**	**146,120**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	October 2019	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	817,358.32										78,920.53		-		111,544.10		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(256,469.85)										-		(24,763.60)		-		(35,000.19)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	673,696.86										67,512.85		-		91,938.76		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(172,029.84)										-		(17,239.54)		-		(23,476.75)
Financial Transmission Rights Annual Transaction Amount	55500-0059	291,686.92										29,230.68		-		39,806.23		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,366.12										1,038.81		-		1,414.65		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(59,727.03)										-		(5,985.40)		-		(8,150.89)
Financial Transmission Rights Hourly Allocation	55500-0032	(1,809,633.77)										-		(181,347.93)		-		(246,958.97)
Financial Transmission Rights Monthly Allocation	55500-0033	(7,198.37)										-		(721.37)		-		(982.35)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(154,757.37)										-		(15,508.62)		-		(21,119.59)
FTR Guarantee Uplift Amount	55500-0055	155,534.17										15,586.47		-		21,225.60		-
Financial Transmission Rights Monthly Transaction Amount	55500-0056	-										-		-		-		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**(511,173.84)**	**35,715**	**-**	**35,715**	**-**	**23,514**	**-**	**23,514**	**-**	**105,305**	**192,289.33**	**105,305**	**(245,566.45)**	**146,120**	**265,929.34**	**146,120**	**(335,688.74)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	22,507.11										2,255.49		-		3,071.52		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(45,475.47)										-		(4,557.21)		-		(6,205.99)
Real Time Price Volatility Make Whole Payment	55500-0057	(818.37)										-		(82.01)		-		(111.68)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	31,144.64										3,121.08		-		4,250.28		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(1.00)										-		(0.10)		-		(0.14)
Subtotal		**7,356.91**	**35,715**	**-**	**35,715**	**-**	**23,514**	**-**	**23,514**	**-**	**105,305**	**5,376.58**	**105,305**	**(4,639.32)**	**146,120**	**7,321.80**	**146,120**	**(6,317.81)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	51,395.58										5,150.48		-		7,013.91		-
Real Time Net Inadvertent Distribution	55500-0044	5,910.35										592.29		-		806.58		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	141,585.88										14,188.68		-		19,322.09		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	(2.72)										-		(0.27)		-		(0.37)
Real Time Ramp Capability Amount	55500-0080	(20.69)										-		(2.07)		-		(2.82)
Subtotal		**198,868.40**	**35,715**	**-**	**35,715**	**-**	**23,514**	**-**	**23,514**	**-**	**105,305**	**19,931.45**	**105,305**	**(2.35)**	**146,120**	**27,142.57**	**146,120**	**(3.19)**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	October 2019	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		**-**	**35,715**	**-**	**35,715**	**-**	**23,514**	**-**	**23,514**	**-**	**105,305**	**-**	**105,305**	**-**	**146,120**	**-**	**146,120**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(74,410.53)										-		(7,456.87)		-		(10,154.73)
Day Ahead Spinning Reserve Amount	55500-0063	(23,020.19)										-		(2,306.91)		-		(3,141.54)
Day Ahead Supplemental Reserve Amount	55500-0064	(10.83)										-		(1.09)		-		(1.48)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	796.26										79.80		-		108.66		-
Real Time Regulation Amount	55500-0070	34,905.03										3,497.92		-		4,763.46		-
Regulation Reserve Cost Distribution Amount	55500-0071	33,618.90										3,369.03		-		4,587.94		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	18,224.96										1,826.37		-		2,487.14		-
Real Time Spinning Reserve Amount	55500-0072	17,447.86										1,748.49		-		2,381.09		-
Spinning Reserve Cost Distribution Amount	55500-0073	24,766.90										2,481.95		-		3,379.91		-
Real Time Supplemental Reserve Amount	55500-0074	(567.78)										-		(56.90)		-		(77.48)
Supplemental Reserve Cost Distribution Amount	55500-0075	7,388.31										740.40		-		1,008.28		-
Subtotal		**39,138.89**	**35,715**	**-**	**35,715**	**-**	**23,514**	**-**	**23,514**	**-**	**105,305**	**13,743.97**	**105,305**	**(9,821.76)**	**146,120**	**18,716.48**	**146,120**	**(13,375.24)**
Grand Total		**6,268,514.68**	**35,715**	**-**	**35,715**	**-**	**23,514**	**-**	**23,514**	**-**	**105,305**	**342,232.51**	**105,305**	**(287,298.35)**	**146,120**	**473,466.01**	**146,120**	**(392,671.17)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	November 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	5,054,849.27									-				
5	Day Ahead Non-Asset Energy	55500-0027	(1,457,272.13)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	618,816.34									-				
	Excessive Energy Amount	55500-0066	(322.44)									-				
	Non-Excessive Energy Amount	55500-0069	357,577.56									-				
22	Real Time Non-Asset Energy	55500-0043	(235,984.78)									-				
	Subtotal		**4,337,663.82**	**696,536**	**3,398,251.41**			**116,888**	**553,203.72**			3,951,455.13	**4,991**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,011,983.10		658,613.72		-		107,216.19		-	765,829.90		4,504.13		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	367,696.68		240,326.55		-		39,122.93		-	279,449.48		1,590.24		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(69,406.58)		-		(45,170.84)		-		(7,353.39)	(52,524.23)		-		(308.91)
14	Real Time Distribution of Losses	55500-0041	(269,027.35)		-		(175,836.28)		-		(28,624.51)	(204,460.79)		-		(1,163.51)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**1,041,245.85**	**696,536**	**898,940.27**	**696,536**	**(221,007.11)**	**116,888**	**146,339.11**	**116,888**	**(35,977.90)**	**788,294.37**	**4,991**	**6,094.37**	**4,991**	**(1,472.42)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**696,536**	**-**	**696,536**	**-**	**116,888**	**-**	**116,888**	**-**	**-**	**4,991**	**-**	**4,991**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	160,367.63		104,816.28		-		17,063.12		-	121,879.40		693.57		-
19	Real Time Market Administration (Schedule 17)	55500-0036	11,035.48		7,212.79		-		1,174.18		-	8,386.96		47.73		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,641.56		1,726.52		-		281.06		-	2,007.59		11.42		-
	Subtotal		**174,044.67**	**696,536**	**113,755.60**	**696,536**	**-**	**116,888**	**18,518.35**	**116,888**	**-**	**132,273.95**	**4,991**	**752.72**	**4,991**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	November 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	143,279.13		93,248.20		-		15,179.94		-	108,428.14		637.71		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(85,178.80)		-		(55,435.63)		-		(9,024.41)	(64,460.04)		-		(379.11)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	348,712.75		227,918.65		-		37,103.04		-	265,021.69		1,508.14		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(172,029.84)		-		(112,438.70)		-		(18,303.97)	(130,742.68)		-		(744.01)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	291,686.92		190,646.57		-		31,035.49		-	221,682.06		1,261.51		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,366.12		6,775.30		-		1,102.96		-	7,878.25		44.83		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(59,711.47)		-		(39,027.42)		-		(6,353.30)	(45,380.72)		-		(258.24)
28	Financial Transmission Rights Hourly Allocation	55500-0032	222,125.93		145,181.51		-		23,634.20		-	168,815.71		960.67		-
30	Financial Transmission Rights Monthly Allocation	55500-0033	(51,068.81)		-		(33,378.57)		-		(5,433.72)	(38,812.30)		-		(220.87)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	35,564.07		23,244.68		-		3,784.02		-	27,028.69		153.81		-
	FTR Guarantee Uplift Amount	55500-0055	(54,586.50)		-		(35,677.74)		-		(5,808.00)	(41,485.74)		-		(236.08)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	-		-		-		-		-	-		-		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**629,159.50**	**696,536**	**687,014.90**	**696,536**	**(275,958.07)**	**116,888**	**111,839.64**	**116,888**	**(44,923.41)**	**477,973.07**	**4,991**	**4,566.66**	**4,991**	**(1,838.31)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	21,604.93		14,120.98		-		2,298.76		-	16,419.75		93.44		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	8,083.85		5,283.60		-		860.12		-	6,143.73		34.96		-
	Real Time Price Volatility Make Whole Payment	55500-0057	(2,086.38)		-		(1,363.66)		-		(221.99)	(1,585.65)		-		(9.02)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	20,615.45		13,474.26		-		2,193.48		-	15,667.74		89.16		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-		-		-		-		-	-		-		-
	Subtotal		**48,217.85**	**696,536**	**32,878.84**	**696,536**	**(1,363.66)**	**116,888**	**5,352.37**	**116,888**	**(221.99)**	**36,645.57**	**4,991**	**217.56**	**4,991**	**(9.02)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	56,029.13		36,620.64		-		5,961.50		-	42,582.14		242.32		-
21	Real Time Net Inadvertent Distribution	55500-0044	8,243.04		5,387.65		-		877.06		-	6,264.71		35.65		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	(19,829.45)		-		(12,960.53)		-		(2,109.85)	(15,070.38)		-		(85.76)
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(1.52)		-		(0.99)		-		(0.16)	(1.16)		-		(0.01)
34	Real Time Ramp Capability Amount	55500-0080	-		-		-		-		-	-		-		-
	Subtotal		**44,441.20**	**696,536**	**42,008.29**	**696,536**	**(12,961.52)**	**116,888**	**6,838.56**	**116,888**	**(2,110.02)**	**33,775.31**	**4,991**	**277.97**	**4,991**	**(85.77)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	November 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**696,536**	**-**	**696,536**	**-**	**116,888**	**-**	**116,888**	**-**	**-**	**4,991**	**-**	**4,991**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(81,362.34)		-		(53,178.43)		-		(8,656.95)	(61,835.38)		-		(351.88)
	Day Ahead Spinning Reserve Amount	55500-0063	(19,930.34)		-		(13,026.47)		-		(2,120.59)	(15,147.06)		-		(86.20)
	Day Ahead Supplemental Reserve Amount	55500-0064	(67.29)		-		(43.98)		-		(7.16)	(51.14)		-		(0.29)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	207.54		135.65		-		22.08		-	157.73		0.90		-
	Real Time Regulation Amount	55500-0070	6,824.34		4,460.39		-		726.11		-	5,186.50		29.51		-
	Regulation Reserve Cost Distribution Amount	55500-0071	35,822.41		23,413.53		-		3,811.50		-	27,225.03		154.93		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	37,762.54		24,681.60		-		4,017.93		-	28,699.53		163.32		-
	Real Time Spinning Reserve Amount	55500-0072	(154.61)		-		(101.05)		-		(16.45)	(117.50)		-		(0.67)
	Spinning Reserve Cost Distribution Amount	55500-0073	17,744.79		11,597.99		-		1,888.05		-	13,486.04		76.74		-
	Real Time Supplemental Reserve Amount	55500-0074	(394.18)		-		(257.64)		-		(41.94)	(299.58)		-		(1.70)
	Supplemental Reserve Cost Distribution Amount	55500-0075	1,169.34		764.28		-		124.42		-	888.70		5.06		-
	Subtotal		**(2,377.80)**	**696,536**	**65,053.44**	**696,536**	**(66,607.57)**	**116,888**	**10,590.09**	**116,888**	**(10,843.09)**	**(1,807.13)**	**4,991**	**430.46**	**4,991**	**(440.74)**
	Grand Total		**6,272,395.10**	**696,536**	**5,237,902.75**	**696,536**	**(577,897.92)**	**116,888**	**852,681.84**	**116,888**	**(94,076.41)**	**5,418,610.26**	**4,991**	**12,339.74**	**4,991**	**(3,846.26)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	November 2019	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	44700-0000 or 55500-0000 or 55500-0050	5,054,849.27																
Day Ahead Non-Asset Energy	55500-0027	(1,457,272.13)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	618,816.34																
Excessive Energy Amount	55500-0066	(322.44)																
Non-Excessive Energy Amount	55500-0069	357,577.56																
Real Time Non-Asset Energy	55500-0043	(235,984.78)																
Subtotal		**4,337,663.82**	**23,578**				**25,300**				**123,366**				**211,971**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	1,011,983.10										111,327.22		-		130,321.85		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	367,696.68										39,305.47		-		47,351.49		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(69,406.58)										-		(7,635.35)		-		(8,938.09)
Real Time Distribution of Losses	55500-0041	(269,027.35)										-		(28,758.07)		-		(34,644.99)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**1,041,245.85**	**23,578**	**-**	**23,578**	**-**	**25,300**	**-**	**25,300**	**-**	**123,366**	**150,632.68**	**123,366**	**(36,393.41)**	**211,971**	**177,673.34**	**211,971**	**(43,583.07)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**23,578**	**-**	**23,578**	**-**	**25,300**	**-**	**25,300**	**-**	**123,366**	**-**	**123,366**	**-**	**211,971**	**-**	**211,971**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	160,367.63										17,142.73		-		20,651.93		-
Real Time Market Administration (Schedule 17)	55500-0036	11,035.48										1,179.65		-		1,421.13		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	2,641.56										282.37		-		340.18		-
Subtotal		**174,044.67**	**23,578**	**-**	**23,578**	**-**	**25,300**	**-**	**25,300**	**-**	**123,366**	**18,604.76**	**123,366**	**-**	**211,971**	**22,413.24**	**211,971**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	November 2019	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	143,279.13										15,761.99		-		18,451.30		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(85,178.80)										-		(9,370.43)		-		(10,969.21)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	348,712.75										37,276.15		-		44,906.77		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(172,029.84)										-		(18,389.38)		-		(22,153.78)
Financial Transmission Rights Annual Transaction Amount	55500-0059	291,686.92										31,180.30		-		37,563.06		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	10,366.12										1,108.10		-		1,334.94		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(59,711.47)										-		(6,382.94)		-		(7,689.56)
Financial Transmission Rights Hourly Allocation	55500-0032	222,125.93										23,744.47		-		28,605.08		-
Financial Transmission Rights Monthly Allocation	55500-0033	(51,068.81)										-		(5,459.07)		-		(6,576.57)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	35,564.07										3,801.67		-		4,579.89		-
FTR Guarantee Uplift Amount	55500-0055	(54,586.50)										-		(5,835.10)		-		(7,029.58)
Financial Transmission Rights Monthly Transaction Amount	55500-0056	-										-		-		-		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**629,159.50**	**23,578**	**-**	**23,578**	**-**	**25,300**	**-**	**25,300**	**-**	**123,366**	**112,872.69**	**123,366**	**(45,436.93)**	**211,971**	**135,441.04**	**211,971**	**(54,418.71)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	21,604.93										2,309.49		-		2,782.25		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	8,083.85										864.13		-		1,041.03		-
Real Time Price Volatility Make Whole Payment	55500-0057	(2,086.38)										-		(223.03)		-		(268.68)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	20,615.45										2,203.72		-		2,654.83		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	-										-		-		-		-
Subtotal		**48,217.85**	**23,578**	**-**	**23,578**	**-**	**25,300**	**-**	**25,300**	**-**	**123,366**	**5,377.34**	**123,366**	**(223.03)**	**211,971**	**6,478.11**	**211,971**	**(268.68)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	56,029.13										5,989.32		-		7,215.36		-
Real Time Net Inadvertent Distribution	55500-0044	8,243.04										881.15		-		1,061.53		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	(19,829.45)										-		(2,119.70)		-		(2,553.61)
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	(1.52)										-		(0.16)		-		(0.20)
Real Time Ramp Capability Amount	55500-0080	-										-		-		-		-
Subtotal		**44,441.20**	**23,578**	**-**	**23,578**	**-**	**25,300**	**-**	**25,300**	**-**	**123,366**	**6,870.47**	**123,366**	**(2,119.86)**	**211,971**	**8,276.89**	**211,971**	**(2,553.81)**

MINNESOTA POWER	Account																	
MISO MONTHLY ALLOCATION	Number	November 2019	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		**-**	**23,578**	**-**	**23,578**	**-**	**25,300**	**-**	**25,300**	**-**	**123,366**	**-**	**123,366**	**-**	**211,971**	**-**	**211,971**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(81,362.34)										-		(8,697.35)		-		(10,477.73)
Day Ahead Spinning Reserve Amount	55500-0063	(19,930.34)										-		(2,130.48)		-		(2,566.60)
Day Ahead Supplemental Reserve Amount	55500-0064	(67.29)										-		(7.19)		-		(8.67)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	207.54										22.19		-		26.73		-
Real Time Regulation Amount	55500-0070	6,824.34										729.50		-		878.83		-
Regulation Reserve Cost Distribution Amount	55500-0071	35,822.41										3,829.29		-		4,613.16		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	37,762.54										4,036.68		-		4,863.01		-
Real Time Spinning Reserve Amount	55500-0072	(154.61)										-		(16.53)		-		(19.91)
Spinning Reserve Cost Distribution Amount	55500-0073	17,744.79										1,896.86		-		2,285.15		-
Real Time Supplemental Reserve Amount	55500-0074	(394.18)										-		(42.14)		-		(50.76)
Supplemental Reserve Cost Distribution Amount	55500-0075	1,169.34										125.00		-		150.59		-
Subtotal		**(2,377.80)**	**23,578**	**-**	**23,578**	**-**	**25,300**	**-**	**25,300**	**-**	**123,366**	**10,639.51**	**123,366**	**(10,893.68)**	**211,971**	**12,817.47**	**211,971**	**(13,123.68)**
Grand Total		**6,272,395.10**	**23,578**	**-**	**23,578**	**-**	**25,300**	**-**	**25,300**	**-**	**123,366**	**304,997.45**	**123,366**	**(95,066.92)**	**211,971**	**363,100.08**	**211,971**	**(113,947.94)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	December 2019	FPE Retail				FAC Resale				Subtotal FPE and 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	44700-0000 or 55500-0000 or 55500-0050	4,536,836.78									-				
5	Day Ahead Non-Asset Energy	55500-0027	(874,425.83)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	549,876.41									-				
	Excessive Energy Amount	55500-0066	(2,076.48)									-				
	Non-Excessive Energy Amount	55500-0069	440,771.83									-				
22	Real Time Non-Asset Energy	55500-0043	(215,655.39)									-				
	Subtotal		**4,435,327.33**	**693,765**	**3,660,752.15**			**127,954**	**697,286.12**			4,358,038.28	**6,585**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	907,659.42		575,123.96		-		109,547.42		-	684,671.38		5,291.40		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	329,421.45		207,535.51		-		39,530.57		-	247,066.09		1,994.21		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(116,745.35)		-		(73,973.83)		-		(14,090.25)	(88,064.09)		-		(680.59)
14	Real Time Distribution of Losses	55500-0041	(335,503.49)		-		(211,367.20)		-		(40,260.42)	(251,627.62)		-		(2,031.03)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**784,832.03**	**693,765**	**782,659.47**	**693,765**	**(285,341.03)**	**127,954**	**149,077.99**	**127,954**	**(54,350.67)**	**592,045.76**	**6,585**	**7,285.61**	**6,585**	**(2,711.62)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-				
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-				
	Subtotal		**-**	**693,765**	**-**	**693,765**	**-**	**127,954**	**-**	**127,954**	**-**	**-**	**6,585**	**-**	**6,585**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	163,057.33		102,726.12		-		19,566.88		-	122,293.00		987.10		-
19	Real Time Market Administration (Schedule 17)	55500-0036	15,804.80		9,957.02		-		1,896.58		-	11,853.60		95.68		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	3,309.21		2,084.80		-		397.11		-	2,481.91		20.03		-
	Subtotal		**182,171.34**	**693,765**	**114,767.94**	**693,765**	**-**	**127,954**	**21,860.56**	**127,954**	**-**	**136,628.51**	**6,585**	**1,102.81**	**6,585**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	December 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation Revenue
	Congestion, FTRs & ARRs															
1b	Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	45,793.20		29,016.13		-		5,526.88		-	34,543.02		266.96		-
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(84,057.01)		-		(53,261.39)		-		(10,145.03)	(63,406.42)		-		(490.03)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	98,493.85		62,051.13		-		11,819.26		-	73,870.39		596.25		-
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(72,545.70)		-		(45,703.79)		-		(8,705.48)	(54,409.28)		-		(439.17)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	92,311.20		58,156.06		-		11,077.34		-	69,233.40		558.82		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,513.13		4,733.27		-		901.58		-	5,634.85		45.48		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(66,690.22)		-		(42,014.84)		-		(8,002.83)	(50,017.67)		-		(403.72)
28	Financial Transmission Rights Hourly Allocation	55500-0032	42,770.10		26,945.16		-		5,132.41		-	32,077.58		258.92		-
30	Financial Transmission Rights Monthly Allocation	55500-0033	(5,575.56)		-		(3,512.60)		-		(669.07)	(4,181.67)		-		(33.75)
32	Financial Transmission Rights Yearly Allocation	55500-0035	-		-		-		-		-	-		-		-
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	39.32		24.77		-		4.72		-	29.49		0.24		-
	FTR Guarantee Uplift Amount	55500-0055	906.65		571.19		-		108.80		-	679.99		5.49		-
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	22,336.39		14,071.93		-		2,680.37		-	16,752.29		135.22		-
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**81,295.35**	**693,765**	**195,569.64**	**693,765**	**(144,492.62)**	**127,954**	**37,251.36**	**127,954**	**(27,522.40)**	**60,805.97**	**6,585**	**1,867.38**	**6,585**	**(1,366.67)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	23,910.19		15,063.42		-		2,869.22		-	17,932.64		144.74		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(7,780.88)		-		(4,901.95)		-		(933.71)	(5,835.66)		-		(47.10)
	Real Time Price Volatility Make Whole Payment	55500-0057	(138.14)		-		(87.03)		-		(16.58)	(103.61)		-		(0.84)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	17,368.27		10,942.01		-		2,084.19		-	13,026.20		105.14		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(40,173.02)		-		(25,309.00)		-		(4,820.76)	(30,129.77)		-		(243.19)
	Subtotal		**(6,813.58)**	**693,765**	**26,005.43**	**693,765**	**(30,297.99)**	**127,954**	**4,953.42**	**127,954**	**(5,771.04)**	**(5,110.19)**	**6,585**	**249.89**	**6,585**	**(291.13)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	47,150.40		29,704.75		-		5,658.05		-	35,362.80		285.43		-
21	Real Time Net Inadvertent Distribution	55500-0044	6,958.25		4,383.70		-		834.99		-	5,218.69		42.12		-
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	109,879.96		69,224.37		-		13,185.60		-	82,409.97		665.18		-
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
27	Demand Response Allocation Uplift Amount	55500-0077	-		-		-		-		-	-		-		-
33	Day Ahead Ramp Capability Amount	55500-0079	(21.72)		-		(13.68)		-		(2.61)	(16.29)		-		(0.13)
34	Real Time Ramp Capability Amount	55500-0080	2.23		1.40		-		0.27		-	1.67		0.01		-
	Subtotal		**163,969.12**	**693,765**	**103,314.23**	**693,765**	**(13.68)**	**127,954**	**19,678.90**	**127,954**	**(2.61)**	**122,976.84**	**6,585**	**992.75**	**6,585**	**(0.13)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	December 2019	FPE Retail Mwh	FPE Retail Cost	FPE Retail Mwh	FPE Retail Revenue	FAC Resale Mwh	FAC Resale Cost	FAC Resale Mwh	FAC Resale Revenue	Subtotal FPE and FAC Cost/(Revenue)	MISO Non-Liquidation Mwh	MISO Non-Liquidation Cost	MISO Non-Liquidation Mwh	MISO Non-Liquidation 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		**-**	**693,765**	**-**	**693,765**	**-**	**127,954**	**-**	**127,954**	**-**	**-**	**6,585**	**-**	**6,585**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(77,660.87)		-		(48,926.35)		-		(9,319.30)	(58,245.65)		-		(470.13)
	Day Ahead Spinning Reserve Amount	55500-0063	(28,133.51)		-		(17,724.11)		-		(3,376.02)	(21,100.13)		-		(170.31)
	Day Ahead Supplemental Reserve Amount	55500-0064	10.76		6.78		-		1.29		-	8.07		0.07		-
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	-		-		-		-		-	-		-		-
	Net Regulation Adjustment Amount	55500-0068	1.22		0.77		-		0.15		-	0.92		0.01		-
	Real Time Regulation Amount	55500-0070	7,941.89		5,003.39		-		953.03		-	5,956.42		48.08		-
	Regulation Reserve Cost Distribution Amount	55500-0071	30,733.49		19,362.10		-		3,688.02		-	23,050.12		186.05		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	34,722.05		21,874.89		-		4,166.65		-	26,041.54		210.20		-
	Real Time Spinning Reserve Amount	55500-0072	2,928.71		1,845.09		-		351.45		-	2,196.53		17.73		-
	Spinning Reserve Cost Distribution Amount	55500-0073	11,409.60		7,188.05		-		1,369.15		-	8,557.20		69.07		-
	Real Time Supplemental Reserve Amount	55500-0074	39.46		24.86		-		4.74		-	29.60		0.24		-
	Supplemental Reserve Cost Distribution Amount	55500-0075	4,206.19		2,649.90		-		504.74		-	3,154.64		25.46		-
	Subtotal		**(13,801.01)**	**693,765**	**57,955.82**	**693,765**	**(66,650.46)**	**127,954**	**11,039.20**	**127,954**	**(12,695.33)**	**(10,350.76)**	**6,585**	**556.90**	**6,585**	**(640.45)**
	Grand Total		**5,626,980.57**	**693,765**	**4,941,024.69**	**693,765**	**(526,795.78)**	**127,954**	**941,147.56**	**127,954**	**(100,342.05)**	**5,255,034.41**	**6,585**	**12,055.33**	**6,585**	**(5,010.01)**

1/ All Administration Charges reflected in the Retail column are now in the base rates (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	Account Number	December 2019	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	44700-0000 or 55500-0000 or 55500-0050	4,536,836.78																
Day Ahead Non-Asset Energy	55500-0027	(874,425.83)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	549,876.41																
Excessive Energy Amount	55500-0066	(2,076.48)																
Non-Excessive Energy Amount	55500-0069	440,771.83																
Real Time Non-Asset Energy	55500-0043	(215,655.39)																
Subtotal		**4,435,327.33**	**30,077**				**25,113**				**120,622**				**238,580**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	907,659.42										96,924.82		-		120,771.82		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	329,421.45										36,528.82		-		43,832.33		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(116,745.35)										-		(12,466.70)		-		(15,533.96)
Real Time Distribution of Losses	55500-0041	(335,503.49)										-		(37,203.24)		-		(44,641.60)
Real Time Financial Bilateral Transaction Loss	55500-0038	-										-		-		-		-
Subtotal		**784,832.03**	**30,077**	**-**	**30,077**	**-**	**25,113**	**-**	**25,113**	**-**	**120,622**	**133,453.64**	**120,622**	**(49,669.95)**	**238,580**	**164,604.15**	**238,580**	**(60,175.56)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-																
Real Time Virtual Energy	55500-0049	-																
Subtotal		**-**	**30,077**	**-**	**30,077**	**-**	**25,113**	**-**	**25,113**	**-**	**120,622**	**-**	**120,622**	**-**	**238,580**	**-**	**238,580**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	163,057.33										18,081.07		-		21,696.17		-
Real Time Market Administration (Schedule 17)	55500-0036	15,804.80										1,752.56		-		2,102.96		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	3,309.21										366.95		-		440.32		-
Subtotal		**182,171.34**	**30,077**	**-**	**30,077**	**-**	**25,113**	**-**	**25,113**	**-**	**120,622**	**20,200.58**	**120,622**	**-**	**238,580**	**24,239.45**	**238,580**	**-**

MINNESOTA POWER	Account		MISO - Liquidation				Others - Liquidation				Others - Non-Liquidation				Contract Sales			
MISO MONTHLY ALLOCATION	Number	December 2019	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue	Mwh	Cost	Mwh	Revenue
Congestion, FTRs & ARRs																		
Day Ahead Congestion	44700-0000 or 55500-0000 or 55500-0050	45,793.20										4,890.05		-		6,093.18		-
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(84,057.01)										-		(8,976.07)		-		(11,184.50)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	98,493.85										10,921.77		-		13,105.45		-
Real Time Financial Bilateral Transaction Congestion	55500-0037	-										-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(72,545.70)										-		(8,044.43)		-		(9,652.82)
Financial Transmission Rights Annual Transaction Amount	55500-0059	92,311.20										10,236.19		-		12,282.79		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	7,513.13										833.11		-		999.69		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(66,690.22)										-		(7,395.13)		-		(8,873.70)
Financial Transmission Rights Hourly Allocation	55500-0032	42,770.10										4,742.68		-		5,690.93		-
Financial Transmission Rights Monthly Allocation	55500-0033	(5,575.56)										-		(618.26)		-		(741.88)
Financial Transmission Rights Yearly Allocation	55500-0035	-										-		-		-		-
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	39.32										4.36		-		5.23		-
FTR Guarantee Uplift Amount	55500-0055	906.65										100.54		-		120.64		-
Financial Transmission Rights Monthly Transaction Amount	55500-0056	22,336.39										2,476.83		-		2,972.05		-
Financial Transmission Rights Transaction	55500-0034	-										-		-		-		-
Subtotal		**81,295.35**	**30,077**	**-**	**30,077**	**-**	**25,113**	**-**	**25,113**	**-**	**120,622**	**34,205.53**	**120,622**	**(25,033.89)**	**238,580**	**41,269.94**	**238,580**	**(30,452.90)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	23,910.19										2,651.35		-		3,181.45		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(7,780.88)										-		(862.80)		-		(1,035.31)
Real Time Price Volatility Make Whole Payment	55500-0057	(138.14)										-		(15.32)		-		(18.38)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	17,368.27										1,925.93		-		2,311.00		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(40,173.02)										-		(4,454.70)		-		(5,345.36)
Subtotal		**(6,813.58)**	**30,077**	**-**	**30,077**	**-**	**25,113**	**-**	**25,113**	**-**	**120,622**	**4,577.28**	**120,622**	**(5,332.82)**	**238,580**	**5,492.45**	**238,580**	**(6,399.06)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	47,150.40										5,228.40		-		6,273.76		-
Real Time Net Inadvertent Distribution	55500-0044	6,958.25										771.59		-		925.85		-
Real Time Revenue Neutrality Uplift Amount	55500-0045	109,879.96										12,184.35		-		14,620.46		-
Real Time Uninstructed Deviation	55500-0048	-										-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	-										-		-		-		-
Day Ahead Ramp Capability Amount	55500-0079	(21.72)										-		(2.41)		-		(2.89)
Real Time Ramp Capability Amount	55500-0080	2.23										0.25		-		0.30		-
Subtotal		**163,969.12**	**30,077**	**-**	**30,077**	**-**	**25,113**	**-**	**25,113**	**-**	**120,622**	**18,184.58**	**120,622**	**(2.41)**	**238,580**	**21,820.38**	**238,580**	**(2.89)**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	December 2019	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		**-**	**30,077**	**-**	**30,077**	**-**	**25,113**	**-**	**25,113**	**-**	**120,622**	**-**	**120,622**	**-**	**238,580**	**-**	**238,580**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(77,660.87)										-		(8,611.64)		-		(10,333.44)
Day Ahead Spinning Reserve Amount	55500-0063	(28,133.51)										-		(3,119.66)		-		(3,743.40)
Day Ahead Supplemental Reserve Amount	55500-0064	10.76										1.19		-		1.43		-
Contingency Reserve Deployment Failure Charge Amount	55500-0065	-										-		-		-		-
Net Regulation Adjustment Amount	55500-0068	1.22										0.14		-		0.16		-
Real Time Regulation Amount	55500-0070	7,941.89										880.66		-		1,056.74		-
Regulation Reserve Cost Distribution Amount	55500-0071	30,733.49										3,407.97		-		4,089.35		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	34,722.05										3,850.25		-		4,620.06		-
Real Time Spinning Reserve Amount	55500-0072	2,928.71										324.76		-		389.69		-
Spinning Reserve Cost Distribution Amount	55500-0073	11,409.60										1,265.19		-		1,518.14		-
Real Time Supplemental Reserve Amount	55500-0074	39.46										4.38		-		5.25		-
Supplemental Reserve Cost Distribution Amount	55500-0075	4,206.19										466.42		-		559.67		-
Subtotal		**(13,801.01)**	**30,077**	**-**	**30,077**	**-**	**25,113**	**-**	**25,113**	**-**	**120,622**	**10,200.94**	**120,622**	**(11,731.31)**	**238,580**	**12,240.50**	**238,580**	**(14,076.84)**
Grand Total		**5,626,980.57**	**30,077**	**-**	**30,077**	**-**	**25,113**	**-**	**25,113**	**-**	**120,622**	**220,822.55**	**120,622**	**(91,770.38)**	**238,580**	**269,666.87**	**238,580**	**(111,107.25)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2018 - December 2019	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	44700-0000 or 55500-0000 or 55500-0050	123,382,522.87									-				
5	Day Ahead Non-Asset Energy	55500-0027	(26,507,867.73)									-				
13a	Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	7,358,320.44									-				
	Excessive Energy Amount	55500-0066	144,605.15									-				
	Non-Excessive Energy Amount	55500-0069	4,852,952.22									-				
22	Real Time Non-Asset Energy	55500-0043	(1,232,496.94)									-				
	Subtotal		**107,998,036.02**	**12,503,823**	**87,932,078.70**			**2,253,021**	**15,838,624.83**			**103,770,703.53**	**111,064**			
	Day Ahead and Real Time Energy Loss															
1c	Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	17,204,348.06		11,588,796.24		-		2,108,528.99		-	13,697,325.23		117,304.95		-
3	Day Ahead Financial Bilateral Transaction Loss	55500-0022	5,383,243.55		3,618,121.05		-		652,148.40		-	4,270,269.45		38,186.14		-
13c	Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(1,835,294.95)		293,895.93		(1,521,956.59)		51,863.99		(282,837.71)	(1,459,034.39)		541.77		(14,819.76)
14	Real Time Distribution of Losses	55500-0041	(5,528,791.95)		-		(3,726,672.56)		-		(681,045.55)	(4,407,718.11)		-		(33,415.24)
16	Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-	-		-		-
	Subtotal		**15,223,504.70**	**12,503,823**	**15,500,813.22**	**12,503,823**	**(5,248,629.15)**	**2,253,021**	**2,812,541.38**	**2,253,021**	**(963,883.26)**	**12,100,842.18**	**111,064**	**156,032.85**	**111,064**	**(48,235.00)**
	Virtual Energy															
12	Day Ahead Virtual Energy	55500-0030	-		-		-		-		-	-		-		-
27	Real Time Virtual Energy	55500-0049	-		-		-		-		-	-		-		-
	Subtotal		**-**	**12,503,823**	**-**	**12,503,823**	**-**	**2,253,021**	**-**	**2,253,021**	**-**	**-**	**111,064**	**-**	**111,064**	**-**
	Schedule 16 & 17 1/															
4	Day Ahead Market Administration (Schedule 17)	55500-0020	2,514,139.23		1,696,422.61		-		305,630.97		-	2,002,053.58		16,335.77		-
19	Real Time Market Administration (Schedule 17)	55500-0036	213,458.49		144,003.03		-		25,860.75		-	169,863.79		1,324.78		-
29	Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	50,396.81		34,277.90		-		6,121.86		-	40,399.76		228.46		-
	Subtotal		**2,777,994.53**	**12,503,823**	**1,874,703.54**	**12,503,823**	**-**	**2,253,021**	**337,613.58**	**2,253,021**	**-**	**2,212,317.12**	**111,064**	**17,889.01**	**111,064**	**-**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2018 - December 2019	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	44700-0000 or 55500-0000 or 55500-0050	5,781,085.79		4,031,530.13		(72,827.23)		705,389.29		(13,871.85)	4,650,220.34		18,117.84		(1,746.80)
13b	Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(402,587.78)		784,852.32		(1,074,958.70)		139,891.25		(186,321.87)	(336,537.00)		9,513.52		(2,572.88)
2	Day Ahead Financial Bilateral Transaction Congestion	55500-0021	5,130,749.31		3,573,801.33		(99,773.33)		628,424.21		(19,004.44)	4,083,447.78		31,644.66		(108.36)
15	Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-	-		-		-
	Auction Revenue Rights Transaction Amount	55500-0058	(2,968,315.39)		-		(2,016,441.82)		-		(360,227.92)	(2,376,669.73)		-		(15,556.21)
	Financial Transmission Rights Annual Transaction Amount	55500-0059	4,604,978.13		3,117,246.71		-		557,041.48		-	3,674,288.19		28,914.06		-
	Auction Revenue Rights Infeasible Uplift Amount	55500-0060	187,138.30		125,929.95		-		22,720.88		-	148,650.83		1,523.97		-
	Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(1,284,357.47)		-		(866,808.73)		-		(156,624.66)	(1,023,433.39)		-		(7,488.90)
28	Financial Transmission Rights Hourly Allocation	55500-0032	(4,498,683.31)		365,374.33		(3,397,295.90)		64,045.78		(574,971.54)	(3,542,847.33)		1,554.35		(21,072.40)
30	Financial Transmission Rights Monthly Allocation	55500-0033	(226,676.34)		-		(153,406.99)		-		(26,222.05)	(179,629.04)		-		(919.45)
32	Financial Transmission Rights Yearly Allocation	55500-0035	(44,752.07)		0.19		(30,449.49)		0.03		(5,799.90)	(36,249.17)		-		(157.24)
	Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(185,661.26)		81,755.09		(206,186.81)		14,355.03		(34,310.78)	(144,387.47)		438.84		(849.54)
	FTR Guarantee Uplift Amount	55500-0055	156,113.56		202,017.91		(97,302.04)		33,637.09		(16,921.61)	121,431.35		845.24		(530.97)
	Financial Transmission Rights Monthly Transaction Amount	55500-0056	140,680.42		97,386.41		(4,353.94)		18,207.44		(768.34)	110,471.57		1,777.04		(3.10)
31	Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-	-		-		-
	Subtotal		**6,389,711.89**	**12,503,823**	**12,379,894.38**	**12,503,823**	**(8,019,804.97)**	**2,253,021**	**2,183,712.49**	**2,253,021**	**(1,395,044.97)**	**5,148,756.94**	**111,064**	**94,329.52**	**111,064**	**(51,005.86)**
	RSG & Make Whole Payments															
10	Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	373,938.35		252,632.19		-		45,748.19		-	298,380.39		2,286.21		-
11	Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(226,838.07)		9,730.02		(164,210.85)		1,618.95		(28,713.17)	(181,575.05)		42.80		(898.93)
	Real Time Price Volatility Make Whole Payment	55500-0057	(112,269.71)		-		(77,070.70)		-		(12,812.21)	(89,882.91)		-		(230.24)
24	Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	772,306.84		521,012.51		-		95,064.05		-	616,076.56		5,403.50		-
25	Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(373,312.18)		6,791.93		(257,414.26)		1,105.66		(47,521.24)	(297,037.90)		15.95		(2,064.61)
	Subtotal		**433,825.23**	**12,503,823**	**790,166.65**	**12,503,823**	**(498,695.81)**	**2,253,021**	**143,536.86**	**2,253,021**	**(89,046.61)**	**345,961.09**	**111,064**	**7,748.46**	**111,064**	**(3,193.79)**
	RNU & Misc Charges															
20	Real Time Miscellaneous	55500-0042	181,353.52		605,223.68		(503,978.85)		109,180.76		(88,937.44)	121,488.15		4,392.18		(46.28)
21	Real Time Net Inadvertent Distribution	55500-0044	45,722.66		110,253.37		(80,199.90)		20,183.54		(14,883.22)	35,353.79		1,170.45		(848.99)
23	Real Time Revenue Neutrality Uplift Amount	55500-0045	1,559,030.16		1,071,995.30		(16,788.74)		195,036.46		(2,839.04)	1,247,403.99		8,545.52		(106.69)
26	Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-	-		-		-
	Demand Response Allocation Uplift Amount	55500-0077	152.02		110.41		(6.80)		21.03		(1.20)	123.44		0.00		(0.16)
33	Day Ahead Ramp Capability Amount	55500-0079	(3,824.87)		-		(2,564.05)		-		(477.60)	(3,041.65)		-		(28.02)
34	Real Time Ramp Capability Amount	55500-0080	(1,928.31)		8.04		(1,302.50)		1.46		(240.95)	(1,533.95)		0.02		(17.36)
	Subtotal		**1,780,505.18**	**12,503,823**	**1,787,590.81**	**12,503,823**	**(604,840.84)**	**2,253,021**	**324,423.25**	**2,253,021**	**(107,379.45)**	**1,399,793.77**	**111,064**	**14,108.17**	**111,064**	**(1,047.50)**

	MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2018 - December 2019	FPE Retail				FAC Resale				Subtotal FAC	MISO Non-Liquidation			
				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		**-**	**12,503,823**	**-**	**12,503,823**	**-**	**2,253,021**	**-**	**2,253,021**	**-**	**-**	**111,064**	**-**	**111,064**	**-**
	ASM Charge Types (12 Other)															
	Day Ahead Regulation Amount	55500-0062	(1,174,113.32)		-		(785,480.44)		-		(141,209.00)	(926,689.44)		-		(9,774.62)
	Day Ahead Spinning Reserve Amount	55500-0063	(653,084.32)		-		(440,497.94)		-		(79,978.07)	(520,476.01)		-		(4,850.75)
	Day Ahead Supplemental Reserve Amount	55500-0064	(3,755.09)		493.91		(3,095.46)		83.33		(546.41)	(3,064.63)		3.83		(15.94)
	Contingency Reserve Deployment Failure Charge Amount	55500-0065	1,065.32		731.26		-		122.68		-	853.94		3.46		-
	Net Regulation Adjustment Amount	55500-0068	19,465.93		17,527.19		(4,689.98)		3,203.32		(831.01)	15,209.52		220.29		(4.88)
	Real Time Regulation Amount	55500-0070	157,549.13		148,509.31		(41,896.21)		25,992.76		(7,973.38)	124,632.49		1,305.33		(448.88)
	Regulation Reserve Cost Distribution Amount	55500-0071	562,502.21		379,797.13		-		68,365.31		-	448,162.44		3,592.40		-
	Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	468,524.04		312,710.05		-		56,928.71		-	369,638.76		4,148.95		-
	Real Time Spinning Reserve Amount	55500-0072	99,536.50		79,967.23		(13,063.28)		14,326.82		(2,305.71)	78,925.06		903.76		(58.13)
	Spinning Reserve Cost Distribution Amount	55500-0073	533,453.75		361,402.08		-		65,349.20		-	426,751.28		3,683.74		-
	Real Time Supplemental Reserve Amount	55500-0074	(8,408.40)		451.37		(6,105.95)		82.56		(1,107.59)	(6,679.60)		6.51		(55.96)
	Supplemental Reserve Cost Distribution Amount	55500-0075	118,611.23		80,532.43		-		14,498.07		-	95,030.50		718.24		-
	Subtotal		**121,346.98**	**12,503,823**	**1,382,121.95**	**12,503,823**	**(1,294,829.25)**	**2,253,021**	**248,952.77**	**2,253,021**	**(233,951.17)**	**102,294.30**	**111,064**	**14,586.51**	**111,064**	**(15,209.18)**
	Grand Total		**134,724,924.53**	**12,503,823**	**121,647,369.26**	**12,503,823**	**(15,666,800.01)**	**2,253,021**	**21,889,405.16**	**2,253,021**	**(2,789,305.46)**	**125,080,668.94**	**111,064**	**304,694.52**	**111,064**	**(118,691.32)**

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 2018 - December 2019	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	44700-0000 or 55500-0000 or 55500-0050	123,382,522.87																
Day Ahead Non-Asset Energy	55500-0027	(26,507,867.73)																
Real Time Asset Energy	44700-0000 or 55500-0000 or 55500-0050	7,358,320.44																
Excessive Energy Amount	55500-0066	144,605.15																
Non-Excessive Energy Amount	55500-0069	4,852,952.22																
Real Time Non-Asset Energy	55500-0043	(1,232,496.94)																
Subtotal		**107,998,036.02**	**541,761**				**442,698**				**1,370,951**				**3,677,201**			
Day Ahead and Real Time Energy Loss																		
Day Ahead Loss	44700-0000 or 55500-0000 or 55500-0050	17,204,348.06		-		-		-		-		1,184,917.92		-		2,204,799.96		-
Day Ahead Financial Bilateral Transaction Loss	55500-0022	5,383,243.55		-		-		-		-		385,468.96		-		689,318.99		-
Real Time Loss	44700-0000 or 55500-0000 or 55500-0050	(1,835,294.95)		-		-		-		-		24,115.18		(144,014.62)		47,475.42		(289,558.54)
Real Time Distribution of Losses	55500-0041	(5,528,791.95)		-		-		-		-		-		(379,497.99)		-		(708,160.61)
Real Time Financial Bilateral Transaction Loss	55500-0038	-		-		-		-		-		-		-		-		-
Subtotal		**15,223,504.70**	**541,761**	**-**	**541,761**	**-**	**442,698**	**-**	**442,698**	**-**	**1,370,951**	**1,594,502.07**	**1,370,951**	**(523,512.62)**	**3,677,201**	**2,941,594.37**	**3,677,201**	**(997,719.15)**
Virtual Energy																		
Day Ahead Virtual Energy	55500-0030	-		-		-		-		-		-		-		-		-
Real Time Virtual Energy	55500-0049	-		-		-		-		-		-		-		-		-
Subtotal		**-**	**541,761**	**-**	**541,761**	**-**	**442,698**	**-**	**442,698**	**-**	**1,370,951**	**-**	**1,370,951**	**-**	**3,677,201**	**-**	**3,677,201**	**-**
Schedule 16 & 17 1/																		
Day Ahead Market Administration (Schedule 17)	55500-0020	2,514,139.23		-		-		-		-		177,799.06		-		317,950.82		-
Real Time Market Administration (Schedule 17)	55500-0036	213,458.49		-		-		-		-		15,288.74		-		26,981.18		-
Financial Transmission Rights Market Administration (Schedule 16)	55500-0031	50,396.81		-		-		-		-		3,518.94		-		6,249.66		-
Subtotal		**2,777,994.53**	**541,761**	**-**	**541,761**	**-**	**442,698**	**-**	**442,698**	**-**	**1,370,951**	**196,606.75**	**1,370,951**	**-**	**3,677,201**	**351,181.66**	**3,677,201**	**-**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2018 - December 2019	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	44700-0000 or 55500-0000 or 55500-0050	5,781,085.79		-		-		-		-		413,249.10		(7,125.69)		722,703.90		(14,332.90)
Real Time Congestion	44700-0000 or 55500-0000 or 55500-0050	(402,587.78)		-		-		-		-		77,581.29		(110,025.86)		145,241.61		(185,788.46)
Day Ahead Financial Bilateral Transaction Congestion	55500-0021	5,130,749.31		-		-		-		-		382,378.71		(8,349.32)		661,139.62		(19,403.77)
Real Time Financial Bilateral Transaction Congestion	55500-0037	-		-		-		-		-		-		-		-		-
Auction Revenue Rights Transaction Amount	55500-0058	(2,968,315.39)		-		-		-		-		-		(204,512.57)		-		(371,576.88)
Financial Transmission Rights Annual Transaction Amount	55500-0059	4,604,978.13		-		-		-		-		320,251.98		-		581,523.89		-
Auction Revenue Rights Infeasible Uplift Amount	55500-0060	187,138.30		-		-		-		-		12,998.46		-		23,965.04		-
Auction Revenue Rights Stage 2 Distribution Amount	55500-0061	(1,284,357.47)		-		-		-		-		-		(89,896.57)		-		(163,538.61)
Financial Transmission Rights Hourly Allocation	55500-0032	(4,498,683.31)		-		-		-		-		45,892.74		(408,764.84)		68,225.87		(641,671.69)
Financial Transmission Rights Monthly Allocation	55500-0033	(226,676.34)		-		-		-		-		-		(18,498.65)		-		(27,629.19)
Financial Transmission Rights Yearly Allocation	55500-0035	(44,752.07)		-		-		-		-		0.01		(2,505.79)		0.03		(5,839.92)
Financial Transmission Rights Full Funding Guarantee Amount	55500-0054	(185,661.26)		-		-		-		-		9,465.59		(26,457.66)		15,115.57		(38,986.59)
FTR Guarantee Uplift Amount	55500-0055	156,113.56		-		-		-		-		26,021.09		(11,842.38)		38,302.34		(18,113.10)
Financial Transmission Rights Monthly Transaction Amount	55500-0056	140,680.42		-		-		-		-		10,211.58		(341.14)		19,269.38		(704.90)
Financial Transmission Rights Transaction	55500-0034	-		-		-		-		-		-		-		-		-
Subtotal		**6,389,711.89**	**541,761**	**-**	**541,761**	**-**	**442,698**	**-**	**442,698**	**-**	**1,370,951**	**1,298,050.55**	**1,370,951**	**(888,320.49)**	**3,677,201**	**2,275,487.25**	**3,677,201**	**(1,487,586.02)**
RSG & Make Whole Payments																		
Day Ahead Revenue Sufficiency Guarantee Distribution	55500-0028	373,938.35		-		-		-		-		26,058.17		-		47,213.58		-
Day Ahead Revenue Sufficiency Guarantee Make Whole Payment	55500-0029	(226,838.07)		-		-		-		-		1,307.74		(17,488.12)		1,754.91		(29,981.42)
Real Time Price Volatility Make Whole Payment	55500-0057	(112,269.71)		-		-		-		-		-		(9,322.95)		-		(12,833.60)
Real Time Revenue Sufficiency Guarantee First Pass Dist	55500-0046	772,306.84		-		-		-		-		51,543.35		-		99,283.43		-
Real Time Revenue Sufficiency Guarantee Make Whole Payment	55500-0047	(373,312.18)		-		-		-		-		860.62		(26,038.68)		1,097.83		(50,145.38)
Subtotal		**433,825.23**	**541,761**	**-**	**541,761**	**-**	**442,698**	**-**	**442,698**	**-**	**1,370,951**	**79,769.88**	**1,370,951**	**(52,849.76)**	**3,677,201**	**149,349.75**	**3,677,201**	**(92,960.40)**
RNU & Misc Charges																		
Real Time Miscellaneous	55500-0042	181,353.52		-		-		-		-		63,271.29		(38,716.91)		113,642.59		(82,677.50)
Real Time Net Inadvertent Distribution	55500-0044	45,722.66		-		-		-		-		11,077.53		(7,041.50)		21,216.64		(15,205.26)
Real Time Revenue Neutrality Uplift Amount	55500-0045	1,559,030.16		-		-		-		-		108,064.69		(2,507.15)		200,986.49		(3,356.69)
Real Time Uninstructed Deviation	55500-0048	-		-		-		-		-		-		-		-		-
Demand Response Allocation Uplift Amount	55500-0077	152.02		-		-		-		-		9.28		(0.66)		21.55		(1.44)
Day Ahead Ramp Capability Amount	55500-0079	(3,824.87)		-		-		-		-		-		(235.55)		-		(519.65)
Real Time Ramp Capability Amount	55500-0080	(1,928.31)		-		-		-		-		0.80		(117.84)		1.41		(261.40)
Subtotal		**1,780,505.18**	**541,761**	**-**	**541,761**	**-**	**442,698**	**-**	**442,698**	**-**	**1,370,951**	**182,423.60**	**1,370,951**	**(48,619.61)**	**3,677,201**	**335,868.68**	**3,677,201**	**(102,021.93)**

MINNESOTA POWER MISO MONTHLY ALLOCATION	Account Number	July 2018 - December 2019	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		**-**	**541,761**	**-**	**541,761**	**-**	**442,698**	**-**	**442,698**	**-**	**1,370,951**	**-**	**1,370,951**	**-**	**3,677,201**	**-**	**3,677,201**	**-**
ASM Charge Types (12 Other)																		
Day Ahead Regulation Amount	55500-0062	(1,174,113.32)		-		-		-		-		-		(86,802.83)		-		(150,846.43)
Day Ahead Spinning Reserve Amount	55500-0063	(653,084.32)		-		-		-		-		-		(44,356.06)		-		(83,401.50)
Day Ahead Supplemental Reserve Amount	55500-0064	(3,755.09)		-		-		-		-		55.99		(291.11)		87.60		(530.83)
Contingency Reserve Deployment Failure Charge Amount	55500-0065	1,065.32		-		-		-		-		79.50		-		128.43		-
Net Regulation Adjustment Amount	55500-0068	19,465.93		-		-		-		-		1,745.73		(379.22)		3,429.17		(754.67)
Real Time Regulation Amount	55500-0070	157,549.13		-		-		-		-		16,720.05		(3,732.04)		27,729.31		(8,657.13)
Regulation Reserve Cost Distribution Amount	55500-0071	562,502.21		-		-		-		-		39,668.53		-		71,078.84		-
Real-Time Excessive Deficient Deployment Charge Amount	55500-0067	468,524.04		-		-		-		-		33,920.76		-		60,815.56		-
Real Time Spinning Reserve Amount	55500-0072	99,536.50		-		-		-		-		8,270.87		(1,306.39)		15,210.08		(2,408.74)
Spinning Reserve Cost Distribution Amount	55500-0073	533,453.75		-		-		-		-		35,622.45		-		67,396.28		-
Real Time Supplemental Reserve Amount	55500-0074	(8,408.40)		-		-		-		-		43.19		(589.81)		83.56		(1,216.30)
Supplemental Reserve Cost Distribution Amount	55500-0075	118,611.23		-		-		-		-		7,917.76		-		14,944.73		-
Subtotal		**121,346.98**	**541,761**	**-**	**541,761**	**-**	**442,698**	**-**	**442,698**	**-**	**1,370,951**	**144,044.83**	**1,370,951**	**(137,457.45)**	**3,677,201**	**260,903.57**	**3,677,201**	**(247,815.61)**
Grand Total		**134,724,924.53**	**541,761**	**-**	**541,761**	**-**	**442,698**	**-**	**442,698**	**-**	**1,370,951**	**3,495,397.67**	**1,370,951**	**(1,650,759.92)**	**3,677,201**	**6,314,385.28**	**3,677,201**	**(2,928,103.11)**

ASM Cost and Benefit Compliance Filing

Docket No. E015/M-08-528, dated August 23, 2010

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. Under normal operating conditions Minnesota Power has the potential of carrying approximately 80 MW of spinning reserves on these generation facilities without reducing energy available for customers. Prior to the ASM, Minnesota Power's share of the spinning reserves obligation was 21 MW. Under ASM, Minnesota Power can currently clear up to approximately 10 MW 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 FAC 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 gain of $22,033.95 for July 2018 through December 2019. The Spinning Reserve costs and revenues are provided in Table 9-A.

Supplemental Reserves

Minnesota Power's cost allocation for supplemental reserves was $106,310.59 for July 2018 through December 2019. 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. Currently, Minnesota Power offers Supplemental Reserves off of its generating resources. The Supplemental Reserve costs and revenues are provided in Table 9-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 had a net gain of $449,378.21 for July 2018 through December 2019. The Regulation costs and revenues are provided in Table 9-A.

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. Table 9-A provides the July 2018 through December 2019 summary of ASM hourly charges which had a net cost of $122,969.86. 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 2018 through December 2019, a net cost of $87,292.70 was allocated to the Retail FCA.

Table 9-B provides a summary of July 2018 through December 2019 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 seller of Regulation Service and Spinning and Supplemental Reserves for July 2018 through December 2019.

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. Table 9-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 2018 through December 2019, the Schedule 17 rate averaged $0.08589 for an average monthly billing of $151,533.21.

Daily Detail

Table 9-D provides the daily details supporting the monthly and quarterly benefits shown in Table 9-A. For the reporting period, 334 days or 61 percent show a net

cost. With the exception of 121 days, the cost was not caused by Contingency Reserve Deployment Failure Charges (CRDFC) or Real Time Excessive Deficient Energy Deployment Charges (EDEDC). The cost appears 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 costs 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 2018 through December 2019, Minnesota Power incurred $284.88 of CRDFC. This charge occurred on three operating days as shown in Table 9-E. The shortfall MWh totaled of 10.8 for an average cost of $26.38 per MWh of shortfall.

During all other CRD events, Minnesota Power's generating units responded to the reserve deployments; however, in this instance Minnesota Power fell short of delivering 100 percent of the energy requested.

Real Time Excessive Deficient Energy Deployment Charge Amount (EDEDC)

For the period of July 2018 through December 2019, Minnesota Power incurred $467,372.72 in EDEDC as shown in Table 9-D. The majority of the instances when EDEDC 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.

Table 9-A: Summary of ASM Charge Types

	Jul-18	Aug-18	Sep-18	3rd Quarter 2018 Total	Oct-18	Nov-18	Dec-18	4th Quarter 2018 Total
Day Ahead Regulation Amount	(6,643.66)	(85,193.59)	(130,532.47)	$ (222,369.72)	(84,338.41)	(126,728.18)	(123,943.83)	$ (335,010.42)
Real Time Regulation Amount	(37,819.79)	(4,694.33)	15,722.28	$ (26,791.84)	(11,937.77)	15,971.99	28,363.23	$ 32,397.45
Regulation Cost Distribution Amount	25,779.88	24,503.99	31,232.78	$ 81,516.65	40,630.63	43,568.82	42,265.16	$ 126,464.61
Regulation SubTotal	**$ (18,683.57)**	**$ (65,383.93)**	**$ (83,577.41)**	**$ (167,644.91)**	**$ (55,645.55)**	**$ (67,187.37)**	**$ (53,315.44)**	**$ (176,148.36)**
Day Ahead Spinning Reserve Amount	(21,879.11)	(51,585.97)	(71,001.56)	$ (144,466.64)	(37,976.77)	(59,115.82)	(67,001.33)	$ (164,093.92)
Real Time Spinning Reserve Amount	(11,874.33)	3,968.55	22,973.02	$ 15,067.24	(1,775.35)	15,599.59	11,204.74	$ 25,028.98
Spinning Reserve Cost Distribution Amount	23,771.39	27,750.10	38,516.13	$ 90,037.62	55,160.27	44,258.03	33,608.09	$ 133,026.39
Spinning Reserve SubTotal	**$ (9,982.05)**	**$ (19,867.32)**	**$ (9,512.41)**	**$ (39,361.78)**	**$ 15,408.15**	**$ 741.80**	**$ (22,188.50)**	**$ (6,038.55)**
Day Ahead Supplemental Reserve Amount	(10.03)	(59.17)	(705.61)	$ (774.81)	(12.86)	(14.36)	(42.37)	$ (69.59)
Real Time Supplemental Reserve Amount	(401.39)	(124.18)	(2,477.24)	$ (3,002.81)	(441.14)	(14.36)	(23.24)	$ (478.74)
Supplemental Reserve Cost Distribution Amount	3,782.94	5,483.70	13,062.33	$ 22,328.97	10,164.94	5,764.83	5,738.37	$ 21,668.14
Supplemental Reserve SubTotal	**$ 3,371.52**	**$ 5,300.35**	**$ 9,879.48**	**$ 18,551.35**	**$ 9,710.94**	**$ 5,736.11**	**$ 5,672.76**	**$ 21,119.81**
Contigency Reserve Deployment Failure Charge Amount	78.03	106.04	-	$ 184.07	-	-	-	$ -
Real Time Excessive Deficient Energy Deployment Charge Amount	18,070.75	37,862.57	55,327.78	$ 111,261.10	43,318.79	51,792.14	44,818.53	$ 139,929.46
Net Regulation Adjustment Amount	353.63	6,870.87	5,464.54	$ 12,689.04	1,759.12	2,440.44	1,645.58	$ 5,845.14
Other Charge SubTotal	**$ 18,502.41**	**$ 44,839.48**	**$ 60,792.32**	**$ 124,134.21**	**$ 45,077.91**	**$ 54,232.58**	**$ 46,464.11**	**$ 145,774.60**
Total	**$ (6,791.69)**	**$ (35,111.42)**	**$ (22,418.02)**	**$ (64,321.13)**	**$ 14,551.45**	**$ (6,476.88)**	**$ (23,367.07)**	**$ (15,292.50)**

	Jan-19	Feb-19	Mar-19	1st Quarter 2019 Total	Apr-19	May-19	Jun-19	2nd Quarter 2019 Total
Day Ahead Regulation Amount	(59,292.74)	(10,779.62)	(11,143.60)	$ (81,215.96)	-28897.31	(45,555.12)	(37,098.35)	$ (111,550.78)
Real Time Regulation Amount	15,883.64	4,030.04	416.36	$ 20,330.04	3518.85	13,605.49	13,650.88	$ 30,775.22
Regulation Cost Distribution Amount	32,639.00	24,043.80	34,412.08	$ 91,094.88	27958.95	31,570.49	23,781.21	$ 83,310.65
Regulation SubTotal	**$ (10,770.10)**	**$ 17,294.22**	**$ 23,684.84**	**$ 30,208.96**	**$ 2,580.49**	**$ (379.14)**	**$ 333.74**	**$ 2,535.09**
Day Ahead Spinning Reserve Amount	(47,559.87)	(25,990.67)	(36,566.47)	$ (110,117.01)	(19,615.84)	(20,568.14)	(31,893.98)	$ (72,077.96)
Real Time Spinning Reserve Amount	8,029.13	558.73	(535.64)	$ 8,052.22	3,650.08	4,782.89	4,183.86	$ 12,616.83
Spinning Reserve Cost Distribution Amount	37,641.65	21,333.93	32,567.33	$ 91,542.91	37,168.78	32,192.27	22,142.55	$ 91,503.60
Spinning Reserve SubTotal	**$ (1,889.09)**	**$ (4,098.01)**	**$ (4,534.78)**	**$ (10,521.88)**	**$ 21,203.02**	**$ 16,407.02**	**$ (5,567.57)**	**$ 32,042.47**
Day Ahead Supplemental Reserve Amount	(16.98)	-	(512.37)	$ (529.35)	(22.32)	(83.84)	(90.34)	$ (196.50)
Real Time Supplemental Reserve Amount	(3,489.31)	(156.31)	(74.04)	$ (3,719.66)	(67.19)	164.73	(36.44)	$ 61.10
Supplemental Reserve Cost Distribution Amount	8,637.18	4,661.96	9,258.15	$ 22,557.29	7,840.16	6,435.60	5,747.01	$ 20,022.77
Supplemental Reserve SubTotal	**$ 5,130.89**	**$ 4,505.65**	**$ 8,671.74**	**$ 18,308.28**	**$ 7,750.65**	**$ 6,516.49**	**$ 5,620.23**	**$ 19,887.37**
Contigency Reserve Deployment Failure Charge Amount	-	-	-	$ -	126.68	-	-	$ 126.68
Real Time Excessive Deficient Energy Deployment Charge Amount	20,521.43	4,449.91	5,402.22	$ 30,373.56	12,346.50	17,417.65	12,167.40	$ 41,931.55
Net Regulation Adjustment Amount	1,131.60	(209.22)	(722.77)	$ 199.61	(665.26)	2,107.38	(2,396.15)	$ (954.03)
Other Charge SubTotal	**$ 21,653.03**	**$ 4,240.69**	**$ 4,679.45**	**$ 30,573.17**	**$ 11,807.92**	**$ 19,525.03**	**$ 9,771.25**	**$ 41,104.20**
Total	**$ 14,124.73**	**$ 21,942.55**	**$ 32,501.25**	**$ 68,568.53**	**$ 43,342.08**	**$ 42,069.40**	**$ 10,157.65**	**$ 95,569.13**

	Jul-19	Aug-19	Sep-19	3rd Quarter 2019 Total	Oct-19	Nov-19	Dec-19	4th Quarter 2019 Total	Period-to-date Total
Day Ahead Regulation Amount	-37364.83	(69,371.34)	(76,148.46)	$ (182,884.63)	-72848.5	(92,731.57)	(80,259.96)	$ (245,840.03)	$ (1,178,871.54)
Real Time Regulation Amount	3250.34	26,744.95	23,995.86	$ 53,991.15	24180.88	20,084.60	11,539.96	$ 55,805.44	$ 166,507.46
Regulation Cost Distribution Amount	26705.34	25,991.57	27,568.19	$ 80,265.10	34354.37	35,424.92	30,554.69	$ 100,333.98	$ 562,985.87
Regulation SubTotal	**$ (7,409.15)**	**$ (16,634.82)**	**$ (24,584.41)**	**$ (48,628.38)**	**$ (14,313.25)**	**$ (37,222.05)**	**$ (38,165.31)**	**$ (89,700.61)**	**$ (449,378.21)**
Day Ahead Spinning Reserve Amount	(32,231.14)	(39,670.66)	(20,487.81)	$ (92,389.61)	(18,732.28)	(22,853.81)	(29,121.28)	$ (70,707.37)	$ (653,852.51)
Real Time Spinning Reserve Amount	18,158.11	(164.96)	86.34	$ 18,079.49	12,479.41	3,545.56	3,430.87	$ 19,455.84	$ 98,300.60
Spinning Reserve Cost Distribution Amount	27,253.23	23,664.37	21,667.67	$ 72,585.27	26,553.73	14,987.23	13,281.21	$ 54,822.17	$ 533,517.96
Spinning Reserve SubTotal	**$ 13,180.20**	**$ (16,171.25)**	**$ 1,266.20**	**$ (1,724.85)**	**$ 20,300.86**	**$ (4,321.02)**	**$ (12,409.20)**	**$ 3,570.64**	**$ (22,033.95)**
Day Ahead Supplemental Reserve Amount	(2,023.53)	(38.96)	(42.94)	$ (2,105.43)	(17.71)	(55.55)	(13.40)	$ (86.66)	$ (3,762.34)
Real Time Supplemental Reserve Amount	(259.89)	(99.97)	(1.20)	$ (361.06)	(427.77)	(398.55)	(93.34)	$ (919.66)	$ (8,420.83)
Supplemental Reserve Cost Distribution Amount	10,082.20	4,251.88	5,576.81	$ 19,910.89	6,420.48	1,894.81	3,690.41	$ 12,005.70	$ 118,493.76
Supplemental Reserve SubTotal	**$ 7,798.78**	**$ 4,112.95**	**$ 5,532.67**	**$ 17,444.40**	**$ 5,975.00**	**$ 1,440.71**	**$ 3,583.67**	**$ 10,999.38**	**$ 106,310.59**
Contigency Reserve Deployment Failure Charge Amount	-	754.57	-	$ 754.57	-	-	-	$ -	$ 1,065.32
Real Time Excessive Deficient Energy Deployment Charge Amount	16,698.77	15,307.24	16,808.51	$ 48,814.52	24,667.96	37,193.64	33,200.93	$ 95,062.53	$ 467,372.72
Net Regulation Adjustment Amount	(954.96)	(412.06)	2,124.03	$ 757.01	1,338.26	(195.47)	(46.17)	$ 1,096.62	$ 19,633.39
Other Charge SubTotal	**$ 15,743.81**	**$ 15,649.75**	**$ 18,932.54**	**$ 50,326.10**	**$ 26,006.22**	**$ 36,998.17**	**$ 33,154.76**	**$ 96,159.15**	**$ 488,071.43**
Total	**$ 29,313.64**	**$ (13,043.37)**	**$ 1,147.00**	**$ 17,417.27**	**$ 37,968.83**	**$ (3,104.19)**	**$ (13,836.08)**	**$ 21,028.56**	**$ 122,969.86**

Table 9-B: Summary of MWh of ASM products Purchased and Supplied

	Jul-18	Aug-18	Sep-18	3rd Quarter 2018 Total	Oct-18	Nov-18	Dec-18	4th Quarter 2018 Total
Total MISO Reg Procured (MWh)	294,857.58	295,107.78	266,066.13	856,031.49	295,159.25	285,581.20	294,586.82	875,327.27
MP Share of Reg Procured by MISO	4,358.05	4,393.61	4,240.01	12,991.67	5,373.25	5,274.70	5,334.33	15,982.28
MP Supplied Reg Volume	829.40	11,335.80	13,151.10	25,316.30	9,502.30	11,520.50	12,031.50	33,054.30
MP Net Buyer or (Seller) of Regulation	**3,528.65**	**(6,942.19)**	**(8,911.09)**	**(12,324.63)**	**(4,129.05)**	**(6,245.80)**	**(6,697.17)**	**(17,072.02)**
Total MISO Spin Procured (MWh)	700,449.17	690,896.49	635,117.16	2,026,462.82	686,563.81	664,724.02	688,552.02	2,039,839.85
MP Share of Spin Procured by MISO	10,401.45	10,347.20	10,095.95	30,844.60	12,530.96	12,311.82	12,493.09	37,335.87
MP Supplied Spin Volume	8,289.30	25,023.50	23,336.90	56,649.70	14,670.90	23,173.70	33,399.90	71,244.50
MP Net Buyer or (Seller) of Spinning Reserves	**2,112.15**	**(14,676.30)**	**(13,240.95)**	**(25,805.10)**	**(2,139.94)**	**(10,861.88)**	**(20,906.81)**	**(33,908.63)**
Total MISO Supp Procured (MWh)	805,566.80	811,866.55	719,355.08	2,336,788.43	817,805.14	796,690.57	819,817.18	2,434,312.89
MP Share of Supp Procured by MISO	11,957.99	12,124.89	11,600.36	35,683.24	14,974.56	14,749.16	14,876.04	44,599.76
MP Supplied Supp Volume	-	40.40	489.90	530.30	48.00	31.90	48.00	127.90
MP Net Buyer or (Seller) of Supplemental Reserves	**11,957.99**	**12,084.49**	**11,110.46**	**35,152.94**	**14,926.56**	**14,717.26**	**14,828.04**	**44,471.86**

	Jan-19	Feb-19	Mar-19	1st Quarter 2019 Total	Apr-19	May-19	Jun-19	2nd Quarter 2019 Total
Total MISO Reg Procured (MWh)	295,202.03	266,395.18	295,066.75	856,663.96	285,561.00	295,165.44	284,953.01	865,679.45
MP Share of Reg Procured by MISO	5,242.90	4,806.86	5,542.21	15,591.97	5,499.71	5,148.65	4,579.06	15,227.42
MP Supplied Reg Volume	8,951.80	1,764.00	1,866.30	12,582.10	4,390.30	6,029.30	5,400.50	15,820.10
MP Net Buyer or (Seller) of Regulation	**(3,708.90)**	**3,042.86**	**3,675.91**	**3,009.87**	**1,109.41**	**(880.65)**	**(821.44)**	**(592.68)**
Total MISO Spin Procured (MWh)	723,343.91	621,515.10	694,464.83	2,039,323.84	658,807.71	678,512.95	662,590.20	1,999,910.86
MP Share of Spin Procured by MISO	12,779.10	11,236.20	13,053.30	37,068.60	12,730.03	11,888.83	10,713.04	35,331.90
MP Supplied Spin Volume	22,697.70	16,112.00	16,395.30	55,205.00	7,951.60	8,491.90	19,871.80	36,315.30
MP Net Buyer or (Seller) of Spinning Reserves	**(9,918.60)**	**(4,875.80)**	**(3,342.00)**	**(18,136.40)**	**4,778.43**	**3,396.93**	**(9,158.76)**	**(983.40)**
Total MISO Supp Procured (MWh)	779,262.81	738,172.20	810,836.27	2,328,271.28	797,128.06	823,859.93	782,579.83	2,403,567.82
MP Share of Supp Procured by MISO	13,957.41	13,351.00	15,303.01	42,611.42	15,412.42	14,428.04	12,607.69	42,448.15
MP Supplied Supp Volume	56.00	-	1,673.20	1,729.20	47.80	48.00	162.40	258.20
MP Net Buyer or (Seller) of Supplemental Reserves	**13,901.41**	**13,351.00**	**13,629.81**	**40,882.22**	**15,364.62**	**14,380.04**	**12,445.29**	**42,189.95**

	Jul-19	Aug-19	Sep-19	3rd Quarter 2019 Total	Oct-19	Nov-19	Dec-19	4th Quarter 2019 Total	Period-to-date Total
Total MISO Reg Procured (MWh)	285,902.15	294,880.32	285,224.14	866,006.61	295,208.37	285,222.20	294,888.68	875,319.25	5,195,028.03
MP Share of Reg Procured by MISO	4,194.63	4,496.10	4,552.76	13,243.49	5,566.23	5,400.31	5,341.06	16,307.60	89,344.43
MP Supplied Reg Volume	5,373.80	10,224.90	9,811.50	25,410.20	9,846.30	10,623.00	10,647.00	31,116.30	143,299.30
MP Net Buyer or (Seller) of Regulation	**(1,179.17)**	**(5,728.80)**	**(5,258.74)**	**(12,166.71)**	**(4,280.07)**	**(5,222.69)**	**(5,305.94)**	**(14,808.70)**	**(53,954.87)**
Total MISO Spin Procured (MWh)	674,042.28	689,498.62	657,340.71	2,020,881.61	687,554.06	669,003.52	685,502.29	2,042,059.87	12,168,478.85
MP Share of Spin Procured by MISO	9,925.86	10,581.31	10,562.23	31,069.40	13,006.37	12,679.46	12,457.10	38,142.93	209,793.30
MP Supplied Spin Volume	17,578.50	19,700.20	12,066.60	49,345.30	11,275.80	28,068.60	39,505.00	78,849.40	347,609.20
MP Net Buyer or (Seller) of Spinning Reserves	**(7,652.64)**	**(9,118.89)**	**(1,504.37)**	**(18,275.90)**	**1,730.57**	**(15,389.14)**	**(27,047.90)**	**(40,706.47)**	**(137,815.90)**
Total MISO Supp Procured (MWh)	779,415.11	810,083.26	791,366.74	2,380,865.11	819,518.63	785,616.00	814,290.37	2,419,425.00	14,303,230.53
MP Share of Supp Procured by MISO	11,473.78	12,384.91	12,678.44	36,537.13	15,530.01	14,915.70	14,776.37	45,222.08	247,101.78
MP Supplied Supp Volume	362.60	21.30	156.00	539.90	-	180.00	71.80	251.80	3,437.30
MP Net Buyer or (Seller) of Supplemental Reserves	**11,111.18**	**12,363.61**	**12,522.44**	**35,997.23**	**15,530.01**	**14,735.70**	**14,704.57**	**44,970.28**	**243,664.48**

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

Table 9-C: Comparison of MISO Schedule 17 Rates and Amounts before and after the start of the ASM Market

Monthly Average Schedule 17	**Amount**	**Rate per MWh**
April 2005 through December 2008	$ 140,922.50	$ 0.07223
July 2018 through June 2019	$ 151,533.21	$ 0.08589
Average Monthly Increase	$ 10,610.71	$ 0.01366

Table 9-D: ASM Charge Daily Detail / CRDFC / EDEDC

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	Contigency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	Other Charge SubTotal	Net Benefit
7/1/2018	(295.04)	(688.80)	899.28	$ (84.56)	(629.77)	(104.64)	964.10	$ 229.69	(2.42)	2.08	114.90	$ 114.56	-	406.96	12.17	$ 419.13	$ 678.82
7/2/2018	(597.07)	(1,033.55)	1,049.59	$ (581.03)	(711.62)	(136.71)	1,172.15	$ 323.82	-	(1.39)	140.56	$ 139.17	-	740.62	(5.34)	$ 735.28	$ 617.24
7/3/2018	(582.62)	(855.86)	841.39	$ (597.09)	(1,844.88)	106.81	853.40	$ (884.67)	-	(0.71)	117.54	$ 116.83	-	347.25	(47.08)	$ 300.17	$ (1,064.76)
7/4/2018	(31.88)	(4,650.82)	297.91	$ (4,384.79)	(283.03)	(235.05)	322.37	$ (195.71)	(0.82)	(9.63)	109.30	$ 98.85	-	2,172.64	345.51	$ 2,518.15	$ (1,963.50)
7/5/2018	(364.05)	(464.25)	1,117.59	$ 289.29	(699.65)	(163.85)	788.52	$ (74.98)	-	(4.88)	125.85	$ 120.97	-	254.16	(15.50)	$ 238.66	$ 573.94
7/6/2018	(209.25)	(480.81)	939.60	$ 249.54	(409.80)	(113.32)	528.95	$ 5.83	-	(2.33)	125.97	$ 123.64	-	294.63	(18.74)	$ 275.89	$ 654.90
7/7/2018	(161.08)	(989.01)	879.60	$ (270.49)	(311.85)	(230.19)	453.02	$ (89.02)	-	(0.08)	122.87	$ 122.79	-	422.54	(60.92)	$ 361.62	$ 124.90
7/8/2018	(87.86)	(2,539.24)	862.67	$ (1,764.43)	(411.80)	(278.10)	599.50	$ (90.40)	-	(3.01)	124.80	$ 121.79	-	1,800.66	(42.72)	$ 1,757.94	$ 24.90
7/9/2018	(209.55)	(972.64)	989.19	$ (193.00)	(797.68)	14.19	904.39	$ 120.90	(2.02)	(165.10)	115.19	$ (51.93)	-	504.19	(44.58)	$ 459.61	$ 335.58
7/10/2018	(131.01)	(921.61)	910.23	$ (142.39)	(739.65)	(800.96)	790.26	$ (750.35)	-	(66.88)	1.51	$ (65.37)	-	262.60	64.91	$ 327.51	$ (630.60)
7/11/2018	(64.42)	(624.66)	930.82	$ 241.74	(988.13)	12.31	795.41	$ (180.41)	(1.92)	(108.73)	137.94	$ 27.29	-	269.07	(3.82)	$ 265.25	$ 353.87
7/12/2018	(448.94)	(528.00)	1,110.33	$ 133.39	(768.46)	41.07	873.98	$ 146.59	(1.08)	(10.84)	131.56	$ 119.64	-	649.16	3.49	$ 652.65	$ 1,052.27
7/13/2018	(368.68)	(1,020.35)	1,121.78	$ (267.25)	(1,195.43)	(1,109.41)	1,366.27	$ (938.57)	-	(11.07)	210.62	$ 199.55	78.03	233.90	(2.31)	$ 309.62	$ (696.65)
7/14/2018	(790.17)	(280.50)	810.99	$ (259.68)	(2,384.27)	32.46	944.10	$ (1,407.71)	-	(1.58)	124.00	$ 122.42	-	587.50	(14.89)	$ 572.61	$ (972.36)
7/15/2018	(268.97)	(1,730.25)	575.78	$ (1,423.44)	(645.45)	(751.32)	769.45	$ (627.32)	-	(0.28)	129.29	$ 129.01	-	378.96	17.37	$ 396.33	$ (1,525.42)
7/16/2018	(272.25)	(1,458.83)	786.73	$ (944.35)	(853.79)	(1,193.77)	935.24	$ (1,112.32)	-	(6.10)	112.91	$ 106.81	-	429.95	(207.62)	$ 222.33	$ (1,727.53)
7/17/2018	(404.33)	(458.98)	813.89	$ (49.42)	(1,525.65)	(286.89)	706.70	$ (1,105.84)	-	(1.29)	159.56	$ 158.27	-	301.54	134.71	$ 436.25	$ (560.74)
7/18/2018	(112.45)	(918.06)	861.55	$ (168.96)	(426.94)	(237.73)	838.68	$ 174.01	-	(0.11)	124.29	$ 124.18	-	680.62	0.27	$ 680.89	$ 810.12
7/19/2018	(50.73)	(2,643.27)	613.03	$ (2,080.97)	(353.06)	(593.18)	584.15	$ (362.09)	-	(1.02)	116.35	$ 115.33	-	1,084.42	698.36	$ 1,782.78	$ (544.95)
7/20/2018	(90.29)	(1,391.50)	684.72	$ (797.07)	(433.42)	(772.72)	819.35	$ (386.79)	-	(0.62)	112.37	$ 111.75	-	455.76	(50.68)	$ 405.08	$ (667.03)
7/21/2018	(43.81)	(1,229.71)	625.38	$ (648.14)	(207.96)	(389.02)	463.21	$ (133.77)	-	(0.81)	117.98	$ 117.17	-	588.78	(57.46)	$ 531.32	$ (133.42)
7/22/2018	(38.00)	(1,124.42)	657.34	$ (505.08)	(403.24)	(332.77)	551.71	$ (184.30)	(1.42)	(3.04)	110.45	$ 105.99	-	567.41	(53.09)	$ 514.32	$ (69.07)
7/23/2018	(60.41)	(667.33)	858.61	$ 130.87	(615.75)	(258.79)	755.27	$ (119.27)	-	(0.44)	114.35	$ 113.91	-	396.92	34.80	$ 431.72	$ 557.23
7/24/2018	(110.35)	(321.28)	899.47	$ 467.84	(816.20)	(381.13)	961.63	$ (235.70)	-	(1.19)	110.10	$ 108.91	-	248.74	14.32	$ 263.06	$ 604.11
7/25/2018	(203.24)	(1,523.52)	907.15	$ (819.61)	(644.34)	(851.93)	913.20	$ (583.07)	-	(0.74)	111.09	$ 110.35	-	371.33	(184.27)	$ 187.06	$ (1,105.27)
7/26/2018	(54.88)	(992.17)	750.20	$ (296.85)	(433.99)	(193.83)	647.60	$ 19.78	-	(0.34)	134.58	$ 134.24	-	382.43	(52.19)	$ 330.24	$ 187.41
7/27/2018	(86.07)	(972.95)	724.24	$ (334.78)	(372.35)	(240.41)	591.63	$ (21.13)	(0.35)	(0.17)	113.54	$ 113.02	-	451.97	(22.97)	$ 429.00	$ 186.11
7/28/2018	(87.40)	(2,802.52)	625.89	$ (2,264.03)	(497.38)	(945.93)	731.60	$ (711.71)	-	-	129.10	$ 129.10	-	973.63	(3.58)	$ 970.05	$ (1,876.59)
7/29/2018	(71.61)	(1,696.99)	748.23	$ (1,020.37)	(334.22)	(374.13)	588.93	$ (119.42)	-	(1.09)	126.00	$ 124.91	-	849.33	(39.86)	$ 809.47	$ (205.41)
7/30/2018	(247.04)	(1,168.69)	994.47	$ (421.26)	(708.15)	(451.68)	951.61	$ (208.22)	-	-	128.31	$ 128.31	-	661.48	37.61	$ 699.09	$ 197.92
7/31/2018	(100.21)	(669.22)	892.23	$ 122.80	(431.20)	(653.71)	605.01	$ (479.90)	-	-	130.06	$ 130.06	-	301.60	(82.27)	$ 219.33	$ (7.71)
July Total	**$ (6,643.66)**	**$ (37,819.79)**	**$ 25,779.88**	**$ (18,683.57)**	**$ (21,879.11)**	**$ (11,874.33)**	**$ 23,771.39**	**$ (9,982.05)**	**$ (10.03)**	**$ (401.39)**	**$ 3,782.94**	**$ 3,371.52**	**$ 78.03**	**$ 18,070.75**	**$ 353.63**	**$ 18,502.41**	**$ (6,791.69)**
8/1/2018	(909.62)	(644.11)	817.31	$ (736.42)	(1,109.65)	(225.03)	766.67	$ (568.01)	-	(1.34)	118.83	$ 117.49	-	803.52	(101.77)	$ 701.75	$ (485.19)
8/2/2018	(138.56)	(6,666.27)	616.99	$ (6,187.84)	(630.31)	(2,316.37)	1,484.04	$ (1,462.64)	(0.09)	(44.84)	171.13	$ 126.20	-	2,848.39	1,368.87	$ 4,217.26	$ (3,307.02)
8/3/2018	(140.07)	(4,469.33)	748.26	$ (3,861.14)	(744.71)	(193.75)	702.46	$ (236.00)	(11.04)	(0.86)	113.18	$ 101.28	-	1,681.12	391.17	$ 2,072.29	$ (1,923.57)
8/4/2018	(3,673.26)	995.91	573.53	$ (2,103.82)	(1,178.49)	(337.82)	737.21	$ (779.10)	(8.11)	5.55	115.05	$ 112.49	-	1,077.28	(78.00)	$ 999.28	$ (1,771.15)
8/5/2018	(5,319.10)	847.34	731.85	$ (3,739.91)	(1,124.05)	(455.77)	749.62	$ (830.20)	(0.58)	(3.41)	185.38	$ 181.39	-	2,503.05	1,072.95	$ 3,576.00	$ (812.72)
8/6/2018	(3,321.10)	5.20	1,005.26	$ (2,310.64)	(1,973.95)	(54.46)	1,570.02	$ (458.39)	-	(1.66)	144.08	$ 142.42	-	688.29	482.07	$ 1,170.36	$ (1,456.25)
8/7/2018	(2,007.85)	(783.02)	828.35	$ (1,962.52)	(2,142.47)	307.40	916.91	$ (918.16)	-	(0.58)	138.75	$ 138.17	-	1,274.06	265.43	$ 1,539.49	$ (1,203.02)
8/8/2018	(2,322.11)	857.62	653.80	$ (810.69)	(1,664.89)	779.15	964.31	$ 78.57	(2.55)	1.33	133.98	$ 132.76	-	753.02	312.48	$ 1,065.50	$ 466.14
8/9/2018	(1,929.67)	(42.71)	896.33	$ (1,076.05)	(1,666.33)	57.43	1,064.86	$ (544.04)	(3.84)	1.42	161.69	$ 159.27	-	724.13	311.14	$ 1,035.27	$ (425.55)
8/10/2018	(1,900.77)	157.28	938.98	$ (804.51)	(1,672.03)	664.51	886.63	$ (120.89)	(4.91)	(4.02)	141.94	$ 133.01	-	502.58	200.30	$ 702.88	$ (89.51)
8/11/2018	(2,710.69)	320.19	946.36	$ (1,444.14)	(2,233.19)	523.98	852.76	$ (856.45)	-	(1.51)	127.08	$ 125.57	-	1,454.37	43.07	$ 1,497.44	$ (677.58)
8/12/2018	(2,533.55)	(594.79)	858.42	$ (2,269.92)	(1,450.52)	563.93	725.09	$ (161.50)	(2.20)	(21.95)	212.55	$ 188.40	-	1,705.33	443.91	$ 2,149.24	$ (93.78)
8/13/2018	(1,449.80)	(340.11)	1,125.84	$ (664.07)	(3,201.04)	(1,024.19)	1,530.04	$ (2,695.19)	(3.44)	(46.08)	1,479.25	$ 1,429.73	-	812.81	(30.45)	$ 782.36	$ (1,147.17)
8/14/2018	(1,976.20)	1.35	840.07	$ (1,134.78)	(4,409.39)	623.82	1,089.57	$ (2,696.00)	(0.40)	(11.51)	132.88	$ 120.97	-	886.28	127.69	$ 1,013.97	$ (2,695.84)
8/15/2018	(1,532.38)	(147.32)	625.57	$ (1,054.13)	(2,351.54)	1,479.13	895.34	$ 22.93	-	(0.17)	161.45	$ 161.28	-	523.72	405.72	$ 929.44	$ 59.52
8/16/2018	(1,817.46)	31.24	860.62	$ (925.60)	(2,762.58)	763.19	1,086.30	$ (913.09)	(1.44)	0.77	126.73	$ 126.06	-	435.14	157.60	$ 592.74	$ (1,119.89)
8/17/2018	(1,759.79)	(765.02)	956.17	$ (1,568.64)	(2,692.70)	4.05	1,143.09	$ (1,545.56)	-	(1.02)	134.31	$ 133.29	-	1,479.74	14.23	$ 1,493.97	$ (1,486.94)
8/18/2018	(2,358.93)	87.65	920.35	$ (1,350.93)	(2,777.16)	168.30	1,122.12	$ (1,486.74)	(0.58)	(1.68)	119.26	$ 117.00	-	1,069.26	13.79	$ 1,083.05	$ (1,637.62)
8/19/2018	(2,604.63)	(43.09)	771.72	$ (1,876.00)	(1,379.66)	188.44	819.43	$ (371.79)	-	(1.80)	123.28	$ 121.48	-	1,101.99	(112.38)	$ 989.61	$ (1,136.70)
8/20/2018	(4,687.61)	1,109.63	725.71	$ (2,852.27)	(1,354.02)	313.74	702.43	$ (337.85)	(1.74)	(0.15)	103.10	$ 101.21	-	1,202.44	(123.75)	$ 1,078.69	$ (2,010.22)
8/21/2018	(4,172.85)	354.91	560.41	$ (3,257.53)	(1,167.31)	423.83	586.20	$ (157.28)	-	-	102.76	$ 102.76	-	1,380.96	258.96	$ 1,639.92	$ (1,672.13)
8/22/2018	(4,793.89)	1,275.19	780.14	$ (2,738.56)	(1,148.36)	151.19	638.48	$ (358.69)	(0.38)	0.09	110.87	$ 110.58	-	1,972.45	242.39	$ 2,214.84	$ (771.83)
8/23/2018	(3,931.44)	708.02	662.19	$ (2,561.23)	(1,015.20)	129.37	579.60	$ (306.23)	-	(2.60)	121.01	$ 118.41	-	1,423.81	(61.70)	$ 1,362.11	$ (1,386.94)
8/24/2018	(4,158.52)	408.78	754.84	$ (2,994.90)	(740.98)	122.36	603.95	$ (14.67)	-	(0.69)	121.58	$ 120.89	-	1,943.11	(88.69)	$ 1,854.42	$ (1,034.26)
8/25/2018	(4,182.62)	1,797.24	846.69	$ (1,538.69)	(1,021.03)	105.62	871.25	$ (44.16)	-	(0.37)	124.10	$ 123.73	-	1,053.66	203.20	$ 1,256.86	$ (202.26)
8/26/2018	(3,892.44)	242.90	626.57	$ (3,022.97)	(1,247.75)	317.08	734.76	$ (195.91)	(3.37)	0.43	116.96	$ 114.02	-	1,504.86	273.40	$ 1,778.26	$ (1,326.60)
8/27/2018	(1,144.86)	(2,592.31)	691.93	$ (3,045.24)	(1,241.08)	(287.42)	1,019.26	$ (509.24)	(6.82)	7.10	123.22	$ 123.50	-	1,840.38	845.74	$ 2,686.12	$ (744.86)
8/28/2018	(4,751.63)	2,390.59	845.19	$ (1,515.85)	(1,605.81)	2.07	786.52	$ (817.22)	-	(0.13)	122.52	$ 122.39	-	849.88	(161.30)	$ 688.58	$ (1,522.10)
8/29/2018	(4,268.21)	1,011.70	947.74	$ (2,308.77)	(1,451.76)	50.11	823.81	$ (577.84)	(7.68)	5.76	117.02	$ 115.10	106.04	590.69	(110.53)	$ 586.20	$ (2,185.31)
8/30/2018	(1,986.88)	(491.16)	666.25	$ (1,811.79)	(807.32)	201.98	576.22	$ (29.12)	-	-	126.23	$ 126.23	-	724.70	95.97	$ 820.67	$ (894.01)
8/31/2018	(2,817.10)	282.17	680.55	$ (1,854.38)	(1,620.69)	922.68	721.15	$ 23.14	-	(0.26)	153.53	$ 153.27	-	1,051.55	209.36	$ 1,260.91	$ (417.06)
Aug Total	**$ (85,193.59)**	**$ (4,694.33)**	**$ 24,503.99**	**$ (65,383.93)**	**$ (51,585.97)**	**$ 3,968.55**	**$ 27,750.10**	**$ (19,867.32)**	**$ (59.17)**	**$ (124.18)**	**$ 5,483.70**	**$ 5,300.35**	**$ 106.04**	**$ 37,862.57**	**$ 6,870.87**	**$ 44,839.48**	**$ (35,111.42)**

Table 9-D: ASM Charge Daily Detail / CRDFC / EDEDC

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**	Contigency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	**Other Charge SubTotal**	**Net Benefit**
9/1/2018	(4,488.59)	1,271.39	941.03	**$ (2,276.17)**	(1,990.09)	397.72	1,131.53	**$ (460.84)**	-	(0.09)	129.68	**$ 129.59**	-	1,250.53	255.67	**$ 1,506.20**	**$ (1,101.22)**
9/2/2018	(5,140.54)	904.12	951.42	**$ (3,285.00)**	(1,877.14)	757.23	1,194.84	**$ 74.93**	-	(0.30)	128.65	**$ 128.35**	-	1,304.63	160.16	**$ 1,464.79**	**$ (1,616.93)**
9/3/2018	(4,810.41)	1,219.89	846.86	**$ (2,743.66)**	(2,746.81)	544.39	1,029.23	**$ (1,173.19)**	-	-	122.16	**$ 122.16**	-	1,555.62	39.30	**$ 1,594.92**	**$ (2,199.77)**
9/4/2018	(2,701.20)	780.60	991.04	**$ (929.56)**	(1,370.98)	(643.46)	1,398.19	**$ (616.25)**	(163.56)	293.59	373.33	**$ 503.36**	-	934.55	36.59	**$ 971.14**	**$ (71.31)**
9/5/2018	(5,356.64)	1,232.02	1,020.29	**$ (3,104.33)**	(3,461.82)	(187.87)	1,267.56	**$ (2,382.13)**	-	(0.22)	122.05	**$ 121.83**	-	1,077.16	(19.95)	**$ 1,057.21**	**$ (4,307.42)**
9/6/2018	(4,077.71)	1,487.09	888.06	**$ (1,702.56)**	(4,219.08)	931.44	1,137.61	**$ (2,150.03)**	-	(2.24)	133.05	**$ 130.81**	-	1,261.86	(33.90)	**$ 1,227.96**	**$ (2,493.82)**
9/7/2018	(2,812.26)	630.87	897.80	**$ (1,283.59)**	(3,148.11)	1,364.48	934.73	**$ (848.90)**	-	(0.05)	185.76	**$ 185.71**	-	594.27	(56.47)	**$ 537.80**	**$ (1,408.98)**
9/8/2018	(2,883.17)	479.50	982.21	**$ (1,421.46)**	(617.80)	450.57	623.21	**$ 455.98**	-	(0.45)	248.32	**$ 247.87**	-	977.71	(73.57)	**$ 904.14**	**$ 186.53**
9/9/2018	(3,545.07)	859.73	1,028.24	**$ (1,657.10)**	(711.14)	233.13	896.78	**$ 418.77**	(7.20)	2.40	280.03	**$ 275.23**	-	1,268.65	(9.86)	**$ 1,258.79**	**$ 295.69**
9/10/2018	(4,702.92)	1,961.95	959.43	**$ (1,781.54)**	(1,291.52)	366.39	938.58	**$ 13.45**	-	(0.02)	200.83	**$ 200.81**	-	1,356.36	38.53	**$ 1,394.89**	**$ (172.39)**
9/11/2018	(3,698.25)	2,590.99	769.17	**$ (338.09)**	(722.58)	102.50	736.89	**$ 116.81**	(51.45)	21.78	188.24	**$ 158.57**	-	978.75	26.73	**$ 1,005.48**	**$ 942.77**
9/12/2018	(4,601.30)	1,519.97	790.79	**$ (2,290.54)**	(1,145.44)	(84.23)	825.82	**$ (403.85)**	(0.70)	0.34	179.88	**$ 179.52**	-	1,585.88	183.20	**$ 1,769.08**	**$ (745.79)**
9/13/2018	(5,125.85)	1,624.16	838.87	**$ (2,662.82)**	(1,526.31)	714.86	535.39	**$ (276.06)**	(25.41)	12.26	386.07	**$ 372.92**	-	2,026.95	2,200.66	**$ 4,227.61**	**$ 1,661.65**
9/14/2018	(1,816.75)	(3,844.05)	641.81	**$ (5,018.99)**	(3,299.96)	3,871.27	1,592.45	**$ 2,163.76**	-	(481.56)	573.57	**$ 92.01**	-	1,850.14	127.40	**$ 1,977.54**	**$ (785.68)**
9/15/2018	(2,309.76)	(1,824.86)	1,081.27	**$ (3,053.35)**	(2,624.94)	6,734.45	2,571.37	**$ 6,680.88**	-	(1,969.42)	124.36	**$ (1,845.06)**	-	1,287.92	(516.16)	**$ 771.76**	**$ 2,554.23**
9/16/2018	(1,705.77)	(121.68)	882.15	**$ (945.30)**	(2,668.10)	863.81	1,735.20	**$ (69.09)**	(5.71)	(330.28)	1,071.25	**$ 735.26**	-	1,600.18	74.01	**$ 1,674.19**	**$ 1,395.06**
9/17/2018	(2,391.21)	(1,921.92)	1,599.73	**$ (2,713.40)**	(7,042.45)	(289.82)	2,656.33	**$ (4,675.94)**	(37.50)	(39.75)	2,737.69	**$ 2,660.44**	-	1,920.21	371.26	**$ 2,291.47**	**$ (2,437.43)**
9/18/2018	(2,234.20)	(2,234.35)	1,265.20	**$ (3,203.35)**	(5,419.90)	(9.43)	1,996.76	**$ (3,432.57)**	(280.16)	(10.27)	1,803.35	**$ 1,512.92**	-	1,431.53	41.58	**$ 1,473.11**	**$ (3,649.89)**
9/19/2018	(4,827.53)	(13.75)	804.49	**$ (4,036.79)**	(2,777.81)	526.68	1,373.05	**$ (878.08)**	(1.41)	(13.08)	1,162.21	**$ 1,147.72**	-	2,365.57	106.27	**$ 2,471.84**	**$ (1,295.31)**
9/20/2018	(5,706.32)	3,852.43	804.32	**$ (1,049.57)**	(1,898.15)	509.77	1,113.27	**$ (275.11)**	(30.68)	3.08	858.96	**$ 831.36**	-	1,138.64	87.61	**$ 1,226.25**	**$ 732.93**
9/21/2018	(3,207.87)	893.52	921.71	**$ (1,392.64)**	(991.92)	225.09	1,142.26	**$ 375.43**	(5.40)	(0.09)	234.85	**$ 229.36**	-	1,286.89	38.94	**$ 1,325.83**	**$ 537.98**
9/22/2018	(3,080.66)	(454.87)	1,083.35	**$ (2,452.18)**	(561.80)	14.63	778.59	**$ 231.42**	(14.40)	7.02	208.04	**$ 200.66**	-	1,571.73	101.96	**$ 1,673.69**	**$ (346.41)**
9/23/2018	(4,979.78)	886.92	1,137.72	**$ (2,955.14)**	(1,131.81)	99.08	869.07	**$ (163.66)**	(22.19)	8.02	229.75	**$ 215.58**	-	1,655.27	26.01	**$ 1,681.28**	**$ (1,221.94)**
9/24/2018	(6,031.97)	(349.94)	1,236.92	**$ (5,144.99)**	(1,920.03)	903.04	1,235.68	**$ 218.69**	(57.60)	25.32	376.80	**$ 344.52**	-	3,334.29	1,886.41	**$ 5,220.70**	**$ 638.92**
9/25/2018	(6,088.21)	145.83	1,052.60	**$ (4,889.78)**	(4,205.81)	914.77	1,412.53	**$ (1,878.51)**	-	(0.02)	228.65	**$ 228.63**	-	4,001.56	152.54	**$ 4,154.10**	**$ (2,385.56)**
9/26/2018	(5,591.13)	899.34	1,068.24	**$ (3,623.55)**	(1,256.77)	330.69	1,182.97	**$ 256.89**	(2.24)	0.94	198.54	**$ 197.24**	-	2,714.04	49.85	**$ 2,763.89**	**$ (405.53)**
9/27/2018	(6,973.22)	814.12	1,515.36	**$ (4,643.74)**	(2,801.04)	1,565.13	1,674.71	**$ 438.80**	-	(0.16)	209.91	**$ 209.75**	-	2,224.08	194.99	**$ 2,419.07**	**$ (1,576.12)**
9/28/2018	(7,261.41)	708.28	1,598.36	**$ (4,954.77)**	(4,123.36)	916.59	1,827.28	**$ (1,379.49)**	-	-	127.83	**$ 127.83**	-	4,158.85	(79.71)	**$ 4,079.14**	**$ (2,127.29)**
9/29/2018	(6,209.01)	1,058.45	1,354.28	**$ (3,796.28)**	(2,096.27)	443.62	1,393.76	**$ (258.89)**	-	(3.99)	99.98	**$ 95.99**	-	3,277.60	(14.89)	**$ 3,262.71**	**$ (696.47)**
9/30/2018	(6,173.76)	666.53	1,280.06	**$ (4,227.17)**	(1,352.62)	406.50	1,310.49	**$ 364.37**	-	-	138.54	**$ 138.54**	-	3,336.36	69.38	**$ 3,405.74**	**$ (318.52)**
Sept Total	**$ (130,532.47)**	**$ 15,722.28**	**$ 31,232.78**	**$ (83,577.41)**	**$ (71,001.56)**	**$ 22,973.02**	**$ 38,516.13**	**$ (9,512.41)**	**$ (705.61)**	**$ (2,477.24)**	**$ 13,062.33**	**$ 9,879.48**	**-**	**55,327.78**	**5,464.54**	**$ 60,792.32**	**$ (22,418.02)**
10/1/2018	(2,277.43)	(2,168.70)	1,270.71	**$ (3,175.42)**	(2,144.30)	(172.38)	2,130.35	**$ (186.33)**	-	(3.60)	167.75	**$ 164.15**	-	1,951.13	38.11	**$ 1,989.24**	**$ (1,208.36)**
10/2/2018	(2,172.79)	(1,606.94)	1,107.11	**$ (2,672.62)**	(3,192.52)	590.67	2,104.13	**$ (497.72)**	-	(2.57)	159.26	**$ 156.69**	-	1,444.42	(155.56)	**$ 1,288.86**	**$ (1,724.79)**
10/3/2018	(5,108.40)	756.53	1,132.78	**$ (3,219.09)**	(4,590.57)	584.74	1,885.49	**$ (2,120.34)**	-	(0.08)	143.20	**$ 143.12**	-	1,941.23	0.71	**$ 1,941.94**	**$ (3,254.37)**
10/4/2018	(1,324.76)	(121.67)	1,505.24	**$ 58.81**	(1,409.50)	112.25	1,886.02	**$ 588.77**	-	(7.37)	264.96	**$ 257.59**	-	437.84	129.07	**$ 566.91**	**$ 1,472.08**
10/5/2018	(2,442.41)	2,481.18	1,586.98	**$ 1,625.75**	(2,707.74)	1,375.64	2,600.58	**$ 1,268.48**	-	(19.73)	233.63	**$ 213.90**	-	136.34	1.22	**$ 137.56**	**$ 3,245.69**
10/6/2018	(1,472.49)	(1,600.48)	1,629.06	**$ (1,443.91)**	(2,593.35)	451.90	2,759.78	**$ 618.33**	-	-	182.11	**$ 182.11**	-	1,016.21	(28.13)	**$ 988.08**	**$ 344.61**
10/7/2018	(3,576.35)	712.41	1,443.80	**$ (1,420.14)**	(2,021.31)	940.34	2,299.64	**$ 1,218.67**	-	-	185.39	**$ 185.39**	-	1,267.09	153.84	**$ 1,420.93**	**$ 1,404.85**
10/8/2018	(865.91)	(156.35)	1,396.95	**$ 374.69**	(644.98)	182.22	2,443.41	**$ 1,980.65**	-	(13.22)	2,166.71	**$ 2,153.49**	-	411.48	149.24	**$ 560.72**	**$ 5,069.55**
10/9/2018	(1,059.18)	(408.72)	1,466.74	**$ (1.16)**	(658.89)	85.20	2,363.65	**$ 1,789.96**	-	(1.52)	2,233.34	**$ 2,231.82**	-	695.39	4.61	**$ 700.00**	**$ 4,720.62**
10/10/2018	(2,867.66)	60.35	1,132.51	**$ (1,674.80)**	(450.47)	8.70	1,320.21	**$ 878.44**	-	(0.07)	242.82	**$ 242.75**	-	1,338.59	(7.48)	**$ 1,331.11**	**$ 777.50**
10/11/2018	(936.79)	(1,093.44)	1,283.66	**$ (746.57)**	(286.17)	(34.78)	1,193.23	**$ 872.28**	(2.30)	(1.52)	224.92	**$ 221.10**	-	694.34	42.14	**$ 736.48**	**$ 1,083.29**
10/12/2018	(1,558.54)	(1,133.77)	1,488.89	**$ (1,203.42)**	(282.74)	(51.87)	1,559.22	**$ 1,224.61**	-	-	236.51	**$ 236.51**	-	1,207.13	21.34	**$ 1,228.47**	**$ 1,486.17**
10/13/2018	(3,439.33)	(271.31)	1,078.54	**$ (2,632.10)**	(1,006.03)	566.89	1,460.99	**$ 1,021.85**	-	-	244.53	**$ 244.53**	-	901.25	187.42	**$ 1,088.67**	**$ (277.05)**
10/14/2018	(4,904.93)	981.65	1,540.63	**$ (2,382.65)**	(955.57)	425.09	1,912.57	**$ 1,382.09**	-	-	263.81	**$ 263.81**	-	1,599.24	164.60	**$ 1,763.84**	**$ 1,027.09**
10/15/2018	(2,100.42)	640.78	1,410.44	**$ (49.20)**	(549.24)	(37.33)	1,954.66	**$ 1,368.09**	-	(0.29)	278.27	**$ 277.98**	-	419.11	0.94	**$ 420.05**	**$ 2,016.92**
10/16/2018	(1,258.68)	(200.33)	1,322.94	**$ (136.07)**	(560.78)	(11.95)	1,539.15	**$ 966.42**	-	(0.26)	324.37	**$ 324.11**	-	747.79	28.01	**$ 775.80**	**$ 1,930.26**
10/17/2018	(1,182.21)	(27.89)	1,212.82	**$ 2.72**	(1,058.21)	29.53	1,496.49	**$ 467.81**	-	-	311.51	**$ 311.51**	-	291.88	66.17	**$ 358.05**	**$ 1,140.09**
10/18/2018	(2,836.56)	1,025.80	951.54	**$ (859.22)**	(821.56)	46.29	1,176.28	**$ 401.01**	-	-	181.84	**$ 181.84**	-	540.46	12.58	**$ 553.04**	**$ 276.67**
10/19/2018	(1,686.76)	509.82	747.21	**$ (429.73)**	(1,837.43)	786.20	1,081.87	**$ 30.64**	-	-	174.12	**$ 174.12**	-	478.10	29.50	**$ 507.60**	**$ 282.63**
10/20/2018	(4,678.36)	(287.26)	1,108.75	**$ (3,856.87)**	(740.01)	171.43	1,210.10	**$ 641.52**	-	(0.02)	217.26	**$ 217.24**	-	3,313.31	308.01	**$ 3,621.32**	**$ 623.21**
10/21/2018	(5,844.39)	1,518.31	1,420.26	**$ (2,905.82)**	(781.84)	42.59	1,391.21	**$ 651.96**	-	-	152.67	**$ 152.67**	-	1,331.80	(573.26)	**$ 758.54**	**$ (1,342.65)**
10/22/2018	(1,573.12)	(2,576.20)	1,352.27	**$ (2,797.05)**	(1,434.09)	(3,309.18)	2,289.90	**$ (2,453.37)**	-	(397.32)	185.01	**$ (212.31)**	-	717.88	(164.67)	**$ 553.21**	**$ (4,909.52)**
10/23/2018	(1,375.73)	(3,155.94)	1,097.12	**$ (3,434.55)**	(1,751.76)	(839.14)	1,951.59	**$ (639.31)**	-	-	179.68	**$ 179.68**	-	2,249.85	137.49	**$ 2,387.34**	**$ (1,506.84)**
10/24/2018	(2,180.67)	(2,126.60)	1,178.47	**$ (3,128.80)**	(511.36)	(120.06)	1,317.20	**$ 685.78**	-	-	168.54	**$ 168.54**	-	2,799.08	0.67	**$ 2,799.75**	**$ 525.27**
10/25/2018	(1,067.00)	(415.71)	1,553.43	**$ 70.72**	(691.19)	(1,276.05)	1,484.91	**$ (482.33)**	-	-	119.74	**$ 119.74**	-	725.56	(131.30)	**$ 594.26**	**$ 302.39**
10/26/2018	(623.88)	(1,635.22)	1,184.83	**$ (1,074.27)**	(908.54)	(1,366.90)	1,956.56	**$ (318.88)**	-	-	172.36	**$ 172.36**	-	1,069.68	19.77	**$ 1,089.45**	**$ (131.34)**
10/27/2018	(6,294.42)	(63.42)	1,995.07	**$ (4,362.77)**	(684.78)	(138.12)	1,880.54	**$ 1,057.64**	-	-	112.49	**$ 112.49**	-	2,863.76	49.86	**$ 2,913.62**	**$ (279.02)**
10/28/2018	(4,120.54)	282.36	1,206.75	**$ (2,631.43)**	(604.00)	97.10	1,381.45	**$ 874.55**	(10.56)	6.43	119.13	**$ 115.00**	-	3,370.20	57.36	**$ 3,427.56**	**$ 1,785.68**
10/29/2018	(4,864.37)	(773.80)	1,387.55	**$ (4,250.62)**	(703.00)	(396.37)	1,860.06	**$ 760.69**	-	-	178.91	**$ 178.91**	-	3,340.08	133.52	**$ 3,473.60**	**$ 162.58**
10/30/2018	(5,052.57)	1,655.86	1,088.95	**$ (2,307.76)**	(927.10)	(138.01)	1,705.81	**$ 640.70**	-	-	151.46	**$ 151.46**	-	1,662.87	475.78	**$ 2,138.65**	**$ 623.05**
10/31/2018	(3,591.76)	(2,739.07)	1,348.63	**$ (4,982.20)**	(467.74)	(379.99)	1,563.22	**$ 715.49**	-	-	188.64	**$ 188.64**	-	2,355.70	607.56	**$ 2,963.26**	**$ (1,114.81)**
Oct Total	**$ (84,338.41)**	**$ (11,937.77)**	**$ 40,630.63**	**$ (55,645.55)**	**$ (37,976.77)**	**$ (1,775.35)**	**$ 55,160.27**	**$ 15,408.15**	**$ (12.86)**	**$ (441.14)**	**$ 10,164.94**	**$ 9,710.94**	**-**	**43,318.79**	**1,759.12**	**$ 45,077.91**	**$ 14,551.45**

Table 9-D: ASM Charge Daily Detail / CRDFC / EDEDC

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**	Contigency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	**Other Charge SubTotal**	**Net Benefit**
11/1/2018	(1,845.50)	(757.39)	1,307.63	**$ (1,295.26)**	(1,319.16)	(43.78)	1,899.35	**$ 536.41**	-	-	156.70	**$ 156.70**	-	1,080.27	44.82	**$ 1,125.09**	**$ 522.94**
11/2/2018	(1,787.03)	(987.51)	1,259.20	**$ (1,515.34)**	(1,093.58)	160.09	1,919.54	**$ 986.05**	-	-	183.61	**$ 183.61**	-	914.05	130.94	**$ 1,044.99**	**$ 699.31**
11/3/2018	(5,858.16)	1,559.05	1,273.35	**$ (3,025.76)**	(1,524.20)	482.88	1,568.02	**$ 526.70**	-	-	139.54	**$ 139.54**	-	1,468.71	147.21	**$ 1,615.92**	**$ (743.60)**
11/4/2018	(5,498.45)	2,345.71	1,380.17	**$ (1,772.57)**	(925.07)	79.00	1,481.55	**$ 635.48**	-	-	154.78	**$ 154.78**	-	865.78	(47.22)	**$ 818.56**	**$ (163.75)**
11/5/2018	(5,902.11)	997.88	1,689.26	**$ (3,214.97)**	(906.25)	39.10	1,537.77	**$ 670.62**	-	(0.08)	143.74	**$ 143.66**	-	1,069.15	(12.77)	**$ 1,056.38**	**$ (1,344.31)**
11/6/2018	(5,611.89)	2,233.49	1,116.89	**$ (2,261.51)**	(905.93)	193.60	1,036.07	**$ 323.74**	-	-	178.57	**$ 178.57**	-	2,159.18	(112.01)	**$ 2,047.17**	**$ 287.97**
11/7/2018	(4,177.40)	(103.34)	1,502.67	**$ (2,778.07)**	(1,441.92)	421.70	1,379.18	**$ 358.96**	-	-	161.33	**$ 161.33**	-	1,470.61	89.98	**$ 1,560.59**	**$ (697.19)**
11/8/2018	(1,622.45)	(741.03)	1,936.33	**$ (427.15)**	(844.87)	(87.04)	2,043.19	**$ 1,111.28**	-	-	271.63	**$ 271.63**	-	957.82	187.94	**$ 1,145.76**	**$ 2,101.52**
11/9/2018	(5,015.81)	533.29	1,481.77	**$ (3,000.75)**	(1,049.65)	38.77	1,549.28	**$ 538.40**	-	-	197.42	**$ 197.42**	-	1,910.79	19.30	**$ 1,930.09**	**$ (334.84)**
11/10/2018	(5,313.14)	359.91	1,319.78	**$ (3,633.45)**	(1,899.75)	2,434.64	1,416.99	**$ 1,951.88**	-	-	111.14	**$ 111.14**	-	4,151.55	481.23	**$ 4,632.78**	**$ 3,062.35**
11/11/2018	(6,157.99)	656.11	1,511.52	**$ (3,990.36)**	(1,598.64)	571.41	1,425.31	**$ 398.08**	-	-	167.40	**$ 167.40**	-	2,846.39	(85.99)	**$ 2,760.40**	**$ (664.48)**
11/12/2018	(2,503.61)	(3,926.82)	1,644.10	**$ (4,786.33)**	(1,643.65)	(154.32)	1,721.02	**$ (76.95)**	-	-	176.33	**$ 176.33**	-	2,632.87	743.16	**$ 3,376.03**	**$ (1,310.92)**
11/13/2018	(1,930.38)	716.85	1,478.84	**$ 265.31**	(1,090.86)	542.50	2,109.19	**$ 1,560.83**	-	-	199.61	**$ 199.61**	-	380.83	(44.18)	**$ 336.65**	**$ 2,362.40**
11/14/2018	(3,579.63)	1,262.58	1,411.11	**$ (905.94)**	(1,558.32)	451.80	1,888.51	**$ 781.99**	-	-	191.60	**$ 191.60**	-	695.93	(29.88)	**$ 666.05**	**$ 733.70**
11/15/2018	(3,193.80)	804.25	1,086.30	**$ (1,303.25)**	(860.72)	(35.71)	1,618.40	**$ 721.97**	(9.00)	4.00	191.45	**$ 186.45**	-	1,201.35	19.36	**$ 1,220.71**	**$ 825.88**
11/16/2018	(3,137.69)	(436.74)	1,612.07	**$ (1,962.36)**	(790.52)	(969.74)	1,371.51	**$ (388.75)**	-	-	219.09	**$ 219.09**	-	2,209.85	123.10	**$ 2,332.95**	**$ 200.93**
11/17/2018	(6,047.52)	1,024.40	1,671.69	**$ (3,351.43)**	(2,378.26)	863.65	1,345.85	**$ (168.76)**	-	(3.40)	126.66	**$ 123.26**	-	1,863.03	38.46	**$ 1,901.49**	**$ (1,495.44)**
11/18/2018	(6,827.61)	63.85	1,608.74	**$ (5,155.02)**	(2,101.16)	(479.59)	1,510.10	**$ (1,070.65)**	(5.36)	1.42	224.23	**$ 220.29**	-	3,183.53	131.90	**$ 3,315.43**	**$ (2,689.95)**
11/19/2018	(3,715.48)	(382.17)	1,536.12	**$ (2,561.53)**	(2,089.74)	894.79	913.82	**$ (281.13)**	-	-	207.79	**$ 207.79**	-	2,225.79	69.68	**$ 2,295.47**	**$ (339.40)**
11/20/2018	(4,816.19)	395.95	1,410.64	**$ (3,009.60)**	(2,721.34)	295.45	1,169.39	**$ (1,256.50)**	-	-	203.14	**$ 203.14**	-	1,789.54	22.70	**$ 1,812.24**	**$ (2,250.72)**
11/21/2018	(4,768.35)	1,775.80	1,587.27	**$ (1,405.28)**	(3,136.24)	1,223.78	1,299.23	**$ (613.23)**	-	-	201.49	**$ 201.49**	-	1,996.36	(14.12)	**$ 1,982.24**	**$ 165.22**
11/22/2018	(7,038.42)	2,585.68	1,204.55	**$ (3,248.19)**	(2,439.06)	1,100.75	901.23	**$ (437.08)**	-	(8.24)	266.67	**$ 258.43**	-	1,743.37	(33.19)	**$ 1,710.18**	**$ (1,716.66)**
11/23/2018	(6,471.76)	2,267.60	1,181.59	**$ (3,022.57)**	(2,828.32)	265.11	933.64	**$ (1,629.57)**	-	(3.82)	140.28	**$ 136.46**	-	2,877.58	11.73	**$ 2,889.31**	**$ (1,626.37)**
11/24/2018	(7,251.93)	(105.75)	1,419.03	**$ (5,938.65)**	(3,653.87)	2,039.45	1,430.82	**$ (183.60)**	-	(0.04)	235.19	**$ 235.15**	-	3,664.18	158.38	**$ 3,822.56**	**$ (2,064.54)**
11/25/2018	(7,224.70)	2,642.49	1,433.02	**$ (3,149.19)**	(2,643.47)	396.18	1,336.73	**$ (910.56)**	-	(3.80)	252.38	**$ 248.58**	-	1,952.54	(29.23)	**$ 1,923.31**	**$ (1,887.86)**
11/26/2018	(2,106.56)	(1,471.58)	1,292.53	**$ (2,285.61)**	(4,428.65)	566.85	1,788.88	**$ (2,072.92)**	-	(0.08)	132.01	**$ 131.93**	-	1,993.96	350.36	**$ 2,344.32**	**$ (1,882.28)**
11/27/2018	(1,380.19)	1,033.94	1,719.86	**$ 1,373.61**	(4,249.45)	2,287.04	1,760.89	**$ (201.52)**	-	-	234.41	**$ 234.41**	-	149.33	(37.48)	**$ 111.85**	**$ 1,518.35**
11/28/2018	(3,103.89)	542.15	1,491.01	**$ (1,070.73)**	(2,410.41)	39.76	1,505.52	**$ (865.13)**	-	(0.23)	192.25	**$ 192.02**	-	1,344.94	138.10	**$ 1,483.04**	**$ (260.80)**
11/29/2018	(1,245.58)	362.93	1,623.05	**$ 740.40**	(1,916.98)	729.67	1,199.47	**$ 12.16**	-	-	275.09	**$ 275.09**	-	558.25	(35.89)	**$ 522.36**	**$ 1,550.01**
11/30/2018	(1,594.96)	720.41	1,378.73	**$ 504.18**	(2,665.78)	1,251.80	1,197.58	**$ (216.40)**	-	(0.09)	229.30	**$ 229.21**	-	434.61	14.05	**$ 448.66**	**$ 965.65**
Nov Total	**$ (126,728.18)**	**$ 15,971.99**	**$ 43,568.82**	**$ (67,187.37)**	**$ (59,115.82)**	**$ 15,599.59**	**$ 44,258.03**	**$ 741.80**	**$ (14.36)**	**$ (14.36)**	**$ 5,764.83**	**$ 5,736.11**	**$ -**	**$ 51,792.14**	**$ 2,440.44**	**$ 54,232.58**	**$ (6,476.88)**
12/1/2018	(6,525.08)	667.51	1,076.59	**$ (4,780.98)**	(1,822.24)	26.40	1,032.56	**$ (763.28)**	-	(2.41)	203.06	**$ 200.65**	-	3,336.26	(88.78)	**$ 3,247.48**	**$ (2,096.13)**
12/2/2018	(6,516.51)	1,380.10	1,257.88	**$ (3,878.53)**	(3,457.94)	618.68	1,811.77	**$ (1,027.49)**	(21.60)	7.84	199.44	**$ 185.68**	-	2,292.53	158.86	**$ 2,451.39**	**$ (2,268.95)**
12/3/2018	(1,865.55)	(689.61)	1,562.91	**$ (992.25)**	(2,718.36)	471.44	1,472.33	**$ (774.59)**	-	-	199.56	**$ 199.56**	-	606.22	45.87	**$ 652.09**	**$ (915.19)**
12/4/2018	(1,792.41)	(70.66)	1,711.09	**$ (151.98)**	(1,565.77)	94.31	1,580.83	**$ 109.37**	-	-	180.92	**$ 180.92**	-	835.52	(24.32)	**$ 811.20**	**$ 949.51**
12/5/2018	(1,798.51)	167.00	1,417.14	**$ (214.37)**	(2,294.82)	332.45	1,272.13	**$ (690.24)**	-	(1.48)	177.10	**$ 175.62**	-	1,371.88	(59.45)	**$ 1,312.43**	**$ 583.44**
12/6/2018	(2,820.53)	1,654.92	1,615.49	**$ 449.88**	(4,046.98)	2,533.61	1,354.15	**$ (159.22)**	-	-	111.75	**$ 111.75**	-	943.83	32.46	**$ 976.29**	**$ 1,378.70**
12/7/2018	(797.62)	307.08	1,714.64	**$ 1,224.10**	(2,031.86)	229.50	1,393.19	**$ (409.17)**	-	-	195.29	**$ 195.29**	-	176.29	(35.72)	**$ 140.57**	**$ 1,150.79**
12/8/2018	(3,086.38)	(119.25)	1,628.61	**$ (1,577.02)**	(1,521.34)	(404.94)	1,262.22	**$ (664.06)**	-	(0.30)	192.23	**$ 191.93**	-	1,917.27	73.38	**$ 1,990.65**	**$ (58.50)**
12/9/2018	(2,676.16)	249.56	1,468.49	**$ (958.11)**	(1,907.54)	266.44	1,188.94	**$ (452.16)**	-	-	191.02	**$ 191.02**	-	1,423.31	66.25	**$ 1,489.56**	**$ 270.31**
12/10/2018	(2,577.53)	653.98	1,548.06	**$ (375.49)**	(2,439.88)	(51.48)	1,489.58	**$ (1,001.78)**	-	(2.02)	194.55	**$ 192.53**	-	1,689.11	(88.04)	**$ 1,601.07**	**$ 416.33**
12/11/2018	(1,806.31)	(1,840.64)	1,575.30	**$ (2,071.65)**	(4,294.40)	136.79	1,694.44	**$ (2,463.17)**	-	(0.30)	198.29	**$ 197.99**	-	1,429.22	16.99	**$ 1,446.21**	**$ (2,890.62)**
12/12/2018	(4,346.52)	(1,620.66)	1,367.45	**$ (4,599.73)**	(3,308.68)	242.54	1,189.33	**$ (1,876.81)**	-	(0.37)	192.61	**$ 192.24**	-	2,654.33	356.40	**$ 3,010.73**	**$ (3,273.57)**
12/13/2018	(6,168.92)	1,440.90	1,593.70	**$ (3,134.32)**	(5,303.93)	1,264.57	1,565.82	**$ (2,473.54)**	-	-	204.58	**$ 204.58**	-	1,770.64	49.54	**$ 1,820.18**	**$ (3,583.10)**
12/14/2018	(5,911.77)	3,293.43	1,574.20	**$ (1,044.14)**	(3,204.20)	1,237.09	1,581.49	**$ (385.62)**	-	(0.39)	204.61	**$ 204.22**	-	1,696.70	563.49	**$ 2,260.19**	**$ 1,034.65**
12/15/2018	(5,452.14)	2,005.34	1,265.27	**$ (2,181.53)**	(2,000.14)	572.78	1,040.04	**$ (387.32)**	-	(0.97)	211.76	**$ 210.79**	-	1,423.11	(4.76)	**$ 1,418.35**	**$ (939.71)**
12/16/2018	(5,734.68)	337.44	1,343.88	**$ (4,053.36)**	(1,547.58)	229.38	1,159.15	**$ (159.05)**	-	(0.36)	213.39	**$ 213.03**	-	2,247.77	38.84	**$ 2,286.61**	**$ (1,712.77)**
12/17/2018	(4,330.08)	(1,583.76)	1,459.62	**$ (4,454.22)**	(2,323.88)	(1.81)	1,512.20	**$ (813.49)**	-	(4.05)	213.48	**$ 209.43**	-	3,519.42	108.20	**$ 3,627.62**	**$ (1,430.66)**
12/18/2018	(5,161.69)	2,478.64	1,182.09	**$ (1,500.96)**	(1,763.50)	247.62	983.88	**$ (532.00)**	-	-	242.17	**$ 242.17**	-	1,395.10	(90.07)	**$ 1,305.03**	**$ (485.76)**
12/19/2018	(5,205.80)	2,157.49	1,086.51	**$ (1,961.80)**	(1,304.60)	32.03	810.59	**$ (461.98)**	-	(0.97)	243.18	**$ 242.21**	-	1,276.61	3.75	**$ 1,280.36**	**$ (901.21)**
12/20/2018	(4,936.84)	1,547.90	1,315.83	**$ (2,073.11)**	(1,082.92)	116.33	703.77	**$ (262.82)**	-	(2.30)	220.81	**$ 218.51**	-	2,423.29	(27.72)	**$ 2,395.57**	**$ 278.15**
12/21/2018	(5,296.32)	1,331.69	1,177.25	**$ (2,787.38)**	(2,062.99)	1,021.26	838.58	**$ (203.15)**	(12.15)	5.37	216.78	**$ 210.00**	-	1,700.24	307.64	**$ 2,007.88**	**$ (772.65)**
12/22/2018	(4,601.16)	2,863.50	999.44	**$ (738.22)**	(1,056.56)	32.47	405.64	**$ (618.45)**	-	(0.79)	107.50	**$ 106.71**	-	1,053.45	(70.38)	**$ 983.07**	**$ (266.89)**
12/23/2018	(5,364.93)	2,520.19	1,145.51	**$ (1,699.23)**	(1,415.36)	188.26	712.82	**$ (514.28)**	-	(0.46)	170.67	**$ 170.21**	-	939.80	(26.84)	**$ 912.96**	**$ (1,130.34)**
12/24/2018	(3,651.54)	756.47	1,520.15	**$ (1,374.92)**	(1,682.90)	102.47	697.15	**$ (883.28)**	-	-	162.62	**$ 162.62**	-	437.95	(32.17)	**$ 405.78**	**$ (1,689.80)**
12/25/2018	(6,460.96)	3,333.25	1,497.98	**$ (1,629.73)**	(1,687.44)	161.29	663.22	**$ (862.93)**	-	(0.38)	167.96	**$ 167.58**	-	535.90	(31.31)	**$ 504.59**	**$ (1,820.49)**
12/26/2018	(4,763.94)	1,457.47	1,295.33	**$ (2,011.14)**	(1,302.72)	142.61	447.04	**$ (713.07)**	-	-	159.62	**$ 159.62**	-	749.91	(33.21)	**$ 716.70**	**$ (1,847.89)**
12/27/2018	(3,528.39)	677.68	1,269.52	**$ (1,581.19)**	(1,003.99)	120.73	421.06	**$ (462.20)**	-	(6.28)	159.35	**$ 153.07**	-	1,295.83	8.16	**$ 1,303.99**	**$ (586.33)**
12/28/2018	(4,536.34)	518.97	1,435.52	**$ (2,581.85)**	(1,760.92)	(54.98)	821.74	**$ (994.16)**	(8.62)	(3.14)	137.16	**$ 125.40**	-	1,909.50	236.12	**$ 2,145.62**	**$ (1,304.99)**
12/29/2018	(3,016.65)	1,036.90	990.52	**$ (989.23)**	(1,909.00)	89.71	877.38	**$ (941.91)**	-	(2.90)	119.82	**$ 116.92**	-	943.66	149.49	**$ 1,093.15**	**$ (721.07)**
12/30/2018	(1,610.47)	1,110.02	1,126.64	**$ 626.19**	(1,207.69)	344.21	686.18	**$ (177.30)**	-	(3.62)	157.79	**$ 154.17**	-	279.84	(33.34)	**$ 246.50**	**$ 849.56**
12/31/2018	(1,602.10)	340.38	1,042.55	**$ (219.17)**	(1,971.20)	862.98	938.87	**$ (169.35)**	-	(2.96)	189.30	**$ 186.34**	-	544.04	76.25	**$ 620.29**	**$ 418.11**
Dec Total	**$ (123,943.83)**	**$ 28,363.23**	**$ 42,265.16**	**$ (53,315.44)**	**$ (67,001.33)**	**$ 11,204.74**	**$ 33,608.09**	**$ (22,188.50)**	**$ (42.37)**	**$ (23.24)**	**$ 5,738.37**	**$ 5,672.76**	**$ -**	**$ 44,818.53**	**$ 1,645.58**	**$ 46,464.11**	**$ (23,367.07)**

Table 9-D: ASM Charge Daily Detail / CRDFC / EDEDC

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**	Contigency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	**Other Charge SubTotal**	**Net Benefit**
1/1/2019	(1,174.56)	(168.90)	945.35	**$ (398.11)**	(1,171.79)	(77.19)	874.14	**$ (374.84)**	-	(2.15)	179.72	**$ 177.57**	-	459.05	54.93	**$ 513.98**	**$ (81.40)**
1/2/2019	(3,504.12)	1,831.39	1,085.92	**$ (586.81)**	(1,838.00)	245.65	1,015.40	**$ (576.95)**	-	(1.19)	123.51	**$ 122.32**	-	691.07	11.86	**$ 702.93**	**$ (338.51)**
1/3/2019	(1,412.50)	842.45	700.46	**$ 130.41**	(1,106.70)	126.36	635.29	**$ (345.05)**	-	-	129.89	**$ 129.89**	-	271.80	8.47	**$ 280.27**	**$ 195.52**
1/4/2019	(1,279.84)	127.94	788.56	**$ (363.34)**	(1,897.77)	389.45	919.20	**$ (589.12)**	-	-	140.11	**$ 140.11**	-	886.70	1.13	**$ 887.83**	**$ 75.48**
1/5/2019	(2,674.40)	1,434.13	986.28	**$ (253.99)**	(868.70)	131.78	665.18	**$ (71.74)**	-	(2.23)	142.33	**$ 140.10**	-	210.75	5.51	**$ 216.26**	**$ 30.63**
1/6/2019	(1,442.72)	379.71	1,002.14	**$ (60.87)**	(316.14)	(2.78)	232.95	**$ (85.97)**	(13.46)	(6.20)	153.53	**$ 133.87**	-	628.98	3.14	**$ 632.12**	**$ 619.15**
1/7/2019	(921.87)	(431.54)	742.98	**$ (610.43)**	(1,015.12)	546.98	656.12	**$ 187.98**	-	(1.79)	166.66	**$ 164.87**	-	625.62	13.81	**$ 639.43**	**$ 381.85**
1/8/2019	(975.18)	434.75	638.38	**$ 97.95**	(860.69)	277.24	640.05	**$ 56.60**	-	(1.58)	169.43	**$ 167.85**	-	446.45	9.29	**$ 455.74**	**$ 778.14**
1/9/2019	(1,621.91)	(229.45)	906.81	**$ (944.55)**	(1,917.88)	545.18	1,138.43	**$ (234.27)**	-	(0.17)	127.08	**$ 126.91**	-	998.89	6.96	**$ 1,005.85**	**$ (46.06)**
1/10/2019	(2,426.38)	671.01	892.63	**$ (862.74)**	(1,925.22)	3.99	1,359.11	**$ (562.12)**	-	(0.15)	168.46	**$ 168.31**	-	466.08	115.38	**$ 581.46**	**$ (675.09)**
1/11/2019	(2,258.19)	718.11	732.88	**$ (807.20)**	(1,770.43)	500.81	1,186.66	**$ (82.96)**	-	(2.42)	158.35	**$ 155.93**	-	1,052.97	214.64	**$ 1,267.61**	**$ 533.38**
1/12/2019	(2,829.52)	616.83	890.37	**$ (1,322.32)**	(1,098.52)	397.32	731.58	**$ 30.38**	-	-	105.18	**$ 105.18**	-	854.46	0.07	**$ 854.53**	**$ (332.23)**
1/13/2019	(2,783.16)	1,534.90	862.06	**$ (386.20)**	(1,060.12)	373.85	856.48	**$ 170.21**	(3.52)	2.88	105.41	**$ 104.77**	-	931.34	86.01	**$ 1,017.35**	**$ 906.13**
1/14/2019	(2,440.82)	919.37	719.14	**$ (802.31)**	(1,940.70)	1,089.91	1,059.44	**$ 208.65**	-	-	114.87	**$ 114.87**	-	1,234.14	215.59	**$ 1,449.73**	**$ 970.94**
1/15/2019	(2,996.14)	828.03	1,062.80	**$ (1,105.31)**	(1,341.50)	229.90	1,067.98	**$ (43.62)**	-	(0.06)	120.90	**$ 120.84**	-	758.59	56.76	**$ 815.35**	**$ (212.74)**
1/16/2019	(3,613.26)	2,858.28	1,247.40	**$ 492.42**	(1,354.54)	172.05	1,136.38	**$ (46.11)**	-	(0.27)	117.70	**$ 117.43**	-	720.62	12.67	**$ 733.29**	**$ 1,297.03**
1/17/2019	(2,888.46)	2,640.28	1,414.09	**$ 1,165.91**	(1,766.84)	299.82	1,229.63	**$ (237.39)**	-	-	105.69	**$ 105.69**	-	108.30	41.65	**$ 149.95**	**$ 1,184.16**
1/18/2019	(523.98)	201.62	1,225.15	**$ 902.79**	(1,671.92)	313.19	1,184.04	**$ (174.69)**	-	-	109.36	**$ 109.36**	-	181.04	(3.23)	**$ 177.81**	**$ 1,015.27**
1/19/2019	(1,329.21)	(1,008.43)	1,408.12	**$ (929.52)**	(1,464.94)	2.23	1,132.93	**$ (329.78)**	-	(0.36)	109.71	**$ 109.35**	-	1,407.04	93.02	**$ 1,500.06**	**$ 350.11**
1/20/2019	(435.20)	(1,008.29)	1,335.89	**$ (107.60)**	(1,741.18)	(139.72)	1,442.06	**$ (438.84)**	-	(2.82)	119.62	**$ 116.80**	-	424.65	4.89	**$ 429.54**	**$ (0.10)**
1/21/2019	(1,511.64)	(1,651.92)	1,008.25	**$ (2,155.31)**	(1,462.74)	(362.18)	1,069.19	**$ (755.73)**	-	(1.24)	115.31	**$ 114.07**	-	1,632.85	(45.07)	**$ 1,587.78**	**$ (1,209.19)**
1/22/2019	(1,330.24)	(296.79)	918.08	**$ (708.95)**	(1,441.42)	402.38	947.49	**$ (91.55)**	-	(0.09)	100.36	**$ 100.27**	-	798.57	167.59	**$ 966.16**	**$ 265.93**
1/23/2019	(2,347.66)	736.35	991.17	**$ (620.14)**	(1,474.09)	(350.82)	930.96	**$ (893.95)**	-	(0.47)	89.23	**$ 88.76**	-	222.42	2.31	**$ 224.73**	**$ (1,200.60)**
1/24/2019	(1,718.56)	397.27	1,140.78	**$ (180.41)**	(1,660.18)	43.39	958.80	**$ (657.99)**	-	(9.99)	191.09	**$ 181.10**	-	140.90	18.88	**$ 159.78**	**$ (497.52)**
1/25/2019	-	(1,182.58)	1,323.20	**$ 140.62**	(2,036.92)	(27.09)	1,586.96	**$ (477.05)**	-	-	106.16	**$ 106.16**	-	379.25	114.64	**$ 493.89**	**$ 263.62**
1/26/2019	(3,975.42)	827.58	1,169.27	**$ (1,978.57)**	(1,858.38)	467.64	1,026.27	**$ (364.47)**	-	-	97.50	**$ 97.50**	-	2,251.10	14.78	**$ 2,265.88**	**$ 20.34**
1/27/2019	(3,390.26)	2,013.88	1,029.59	**$ (346.79)**	(1,010.92)	45.12	694.10	**$ (271.70)**	-	-	97.30	**$ 97.30**	-	1,028.68	0.64	**$ 1,029.32**	**$ 508.13**
1/28/2019	(2,398.70)	1,313.66	903.11	**$ (181.93)**	(1,295.70)	59.87	943.70	**$ (292.13)**	-	-	94.59	**$ 94.59**	-	225.60	16.62	**$ 242.22**	**$ (137.25)**
1/29/2019	(2,492.82)	803.19	1,350.90	**$ (338.73)**	(1,637.48)	24.47	1,214.96	**$ (398.05)**	-	(26.70)	466.42	**$ 439.72**	-	264.32	2.36	**$ 266.68**	**$ (30.38)**
1/30/2019	(596.02)	(74.93)	1,289.66	**$ 618.71**	(2,841.50)	2,146.03	7,220.40	**$ 6,524.93**	-	(3,307.35)	2,527.79	**$ (779.56)**	-	136.55	(77.20)	**$ 59.35**	**$ 6,423.43**
1/31/2019	-	(192.26)	1,925.48	**$ 1,733.22**	(2,711.84)	154.30	1,885.77	**$ (671.77)**	-	(124.96)	2,083.92	**$ 1,958.96**	-	82.65	(36.50)	**$ 46.15**	**$ 3,066.56**
Jan Total	**$ (59,292.74)**	**$ 15,883.64**	**$ 32,639.00**	**$ (10,770.10)**	**$ (47,559.87)**	**$ 8,029.13**	**$ 37,641.65**	**$ (1,889.09)**	**$ (16.98)**	**$ (3,489.31)**	**$ 8,637.18**	**$ 5,130.89**	**$ -**	**$ 20,521.43**	**$ 1,131.60**	**$ 21,653.03**	**$ 14,124.73**
2/1/2019	(885.36)	(71.88)	1,207.78	**$ 250.54**	(1,547.28)	(7.61)	1,090.45	**$ (464.44)**	-	(27.96)	938.19	**$ 910.23**	-	154.55	42.19	**$ 196.74**	**$ 893.07**
2/2/2019	(1,572.89)	187.21	906.50	**$ (479.18)**	(681.14)	110.91	415.75	**$ (154.48)**	-	(0.65)	149.37	**$ 148.72**	-	711.72	25.16	**$ 736.88**	**$ 251.94**
2/3/2019	(1,466.08)	355.49	866.81	**$ (243.78)**	(544.52)	(163.62)	422.88	**$ (285.26)**	-	(1.85)	159.46	**$ 157.61**	-	1,108.96	9.48	**$ 1,118.44**	**$ 747.01**
2/4/2019	(1,163.88)	397.45	1,073.71	**$ 307.28**	(505.08)	95.30	432.21	**$ 22.43**	-	(1.20)	124.49	**$ 123.29**	-	318.51	(6.30)	**$ 312.21**	**$ 765.21**
2/5/2019	(914.43)	513.67	949.23	**$ 548.47**	(1,315.00)	207.90	858.05	**$ (249.05)**	-	-	154.44	**$ 154.44**	-	287.21	36.91	**$ 324.12**	**$ 777.98**
2/6/2019	(759.94)	134.35	665.69	**$ 40.10**	(1,046.57)	440.40	722.81	**$ 116.64**	-	-	110.85	**$ 110.85**	-	528.83	3.21	**$ 532.04**	**$ 799.63**
2/7/2019	(1,790.05)	2,630.34	607.64	**$ 1,447.93**	(862.43)	599.53	476.96	**$ 214.06**	-	-	102.70	**$ 102.70**	-	90.65	(43.54)	**$ 47.11**	**$ 1,811.80**
2/8/2019	-	(50.81)	987.94	**$ 937.13**	(1,205.40)	(609.38)	904.62	**$ (910.16)**	-	-	174.67	**$ 174.67**	-	23.08	(12.51)	**$ 10.57**	**$ 212.21**
2/9/2019	-	(0.05)	904.00	**$ 903.95**	(845.20)	72.41	623.52	**$ (149.27)**	-	(0.20)	98.69	**$ 98.49**	-	10.84	-	**$ 10.84**	**$ 864.01**
2/10/2019	-	-	604.06	**$ 604.06**	(709.76)	55.95	548.88	**$ (104.93)**	-	-	103.60	**$ 103.60**	-	3.27	-	**$ 3.27**	**$ 606.00**
2/11/2019	-	(40.30)	870.07	**$ 829.77**	(646.84)	133.40	534.55	**$ 21.11**	-	-	99.24	**$ 99.24**	-	38.22	(15.69)	**$ 22.53**	**$ 972.65**
2/12/2019	-	(53.62)	516.23	**$ 462.61**	(813.80)	158.87	661.50	**$ 6.57**	-	-	101.14	**$ 101.14**	-	99.97	(25.18)	**$ 74.79**	**$ 645.11**
2/13/2019	-	-	820.79	**$ 820.79**	(465.40)	32.21	700.00	**$ 266.81**	-	(0.14)	103.55	**$ 103.41**	-	46.14	-	**$ 46.14**	**$ 1,237.15**
2/14/2019	-	-	646.88	**$ 646.88**	(337.36)	(38.66)	591.77	**$ 215.75**	-	(0.54)	111.92	**$ 111.38**	-	39.52	-	**$ 39.52**	**$ 1,013.53**
2/15/2019	-	-	933.79	**$ 933.79**	(789.04)	65.99	892.64	**$ 169.59**	-	-	117.46	**$ 117.46**	-	3.07	-	**$ 3.07**	**$ 1,223.91**
2/16/2019	-	(0.26)	942.68	**$ 942.42**	(547.52)	(15.89)	648.63	**$ 85.22**	-	-	114.07	**$ 114.07**	-	16.22	-	**$ 16.22**	**$ 1,157.93**
2/17/2019	-	(17.82)	972.99	**$ 955.17**	(565.44)	113.56	548.46	**$ 96.58**	-	-	105.61	**$ 105.61**	-	46.56	(7.70)	**$ 38.86**	**$ 1,196.22**
2/18/2019	-	-	1,007.33	**$ 1,007.33**	(853.42)	(16.17)	948.49	**$ 78.90**	-	-	105.12	**$ 105.12**	-	0.54	-	**$ 0.54**	**$ 1,191.89**
2/19/2019	-	(48.94)	722.11	**$ 673.17**	(790.92)	87.49	820.09	**$ 116.66**	-	(0.39)	208.02	**$ 207.63**	-	49.55	(12.97)	**$ 36.58**	**$ 1,034.04**
2/20/2019	(48.94)	(20.29)	579.09	**$ 509.86**	(816.68)	(88.88)	727.61	**$ (177.95)**	-	(0.02)	128.26	**$ 128.24**	-	51.51	(29.10)	**$ 22.41**	**$ 482.56**
2/21/2019	(48.21)	(3.30)	704.82	**$ 653.31**	(838.26)	(8.37)	754.13	**$ (92.50)**	-	(1.74)	104.66	**$ 102.92**	-	29.90	(14.66)	**$ 15.24**	**$ 678.97**
2/22/2019	(43.65)	(25.54)	582.48	**$ 513.29**	(669.26)	3.35	600.10	**$ (65.81)**	-	-	113.43	**$ 113.43**	-	72.10	(35.43)	**$ 36.67**	**$ 597.58**
2/23/2019	(50.75)	(24.65)	726.64	**$ 651.24**	(666.54)	9.41	646.74	**$ (10.39)**	-	(1.72)	146.41	**$ 144.69**	-	98.89	(47.28)	**$ 51.61**	**$ 837.15**
2/24/2019	(78.89)	38.41	1,169.24	**$ 1,128.76**	(532.70)	100.47	623.40	**$ 191.17**	-	(0.27)	121.83	**$ 121.56**	-	25.32	(2.65)	**$ 22.67**	**$ 1,464.16**
2/25/2019	(88.29)	(631.69)	1,054.61	**$ 334.63**	(1,290.80)	20.14	1,342.89	**$ 72.23**	-	(113.91)	225.72	**$ 111.81**	-	170.47	(5.78)	**$ 164.69**	**$ 683.36**
2/26/2019	(794.12)	363.34	1,053.78	**$ 623.00**	(2,774.07)	307.51	1,659.36	**$ (807.20)**	-	-	193.19	**$ 193.19**	-	215.18	(25.14)	**$ 190.04**	**$ 199.03**
2/27/2019	(485.21)	319.23	758.12	**$ 592.14**	(1,563.19)	(1,116.35)	882.41	**$ (1,797.13)**	-	-	196.65	**$ 196.65**	-	68.22	(14.82)	**$ 53.40**	**$ (954.94)**
2/28/2019	(588.93)	79.70	1,208.79	**$ 699.56**	(1,767.05)	8.86	1,255.03	**$ (503.16)**	-	(5.72)	249.22	**$ 243.50**	-	140.91	(27.42)	**$ 113.49**	**$ 553.39**
				$ -				**$ -**				**$ -**				**$ -**	**$ -**
Feb Total	**$ (10,779.62)**	**$ 4,030.04**	**$ 24,043.80**	**$ 17,294.22**	**$ (25,990.67)**	**$ 558.73**	**$ 21,333.93**	**$ (4,098.01)**	**$ -**	**$ (156.31)**	**$ 4,661.96**	**$ 4,505.65**	**$ -**	**$ 4,449.91**	**$ (209.22)**	**$ 4,240.69**	**$ 21,942.55**

Table 9-D: ASM Charge Daily Detail / CRDFC / EDEDC

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**	Contigency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	**Other Charge SubTotal**	**Net Benefit**
3/1/2019	(366.66)	(80.25)	933.76	**$ 486.85**	(2,476.90)	259.74	1,245.18	**$ (971.98)**	-	(0.18)	212.63	**$ 212.45**	-	299.40	(34.97)	**$ 264.43**	**$ (8.25)**
3/2/2019	(447.74)	234.50	984.96	**$ 771.72**	(2,099.22)	1.26	1,122.11	**$ (975.85)**	-	(0.79)	358.31	**$ 357.52**	-	81.69	(42.83)	**$ 38.86**	**$ 192.25**
3/3/2019	(704.80)	320.89	1,352.94	**$ 969.03**	(1,501.99)	(27.75)	919.57	**$ (610.17)**	(9.40)	(1.57)	512.14	**$ 501.17**	-	113.00	(24.62)	**$ 88.38**	**$ 948.41**
3/4/2019	(1,256.48)	183.52	1,881.86	**$ 808.90**	(1,824.59)	(27.87)	1,673.65	**$ (178.81)**	(90.23)	(96.47)	1,826.44	**$ 1,639.74**	-	136.95	(69.97)	**$ 66.98**	**$ 2,336.81**
3/5/2019	(781.27)	213.38	1,332.68	**$ 764.79**	(1,656.51)	(142.98)	1,210.86	**$ (588.63)**	-	(104.61)	1,244.18	**$ 1,139.57**	-	265.23	(46.90)	**$ 218.33**	**$ 1,534.06**
3/6/2019	(1,113.90)	273.70	1,536.01	**$ 695.81**	(2,255.63)	(245.07)	1,440.87	**$ (1,059.83)**	-	(136.54)	884.38	**$ 747.84**	-	582.89	115.42	**$ 698.31**	**$ 1,082.13**
3/7/2019	(1,208.91)	440.24	1,300.88	**$ 532.21**	(2,251.59)	10.03	1,326.99	**$ (914.57)**	-	(4.13)	756.13	**$ 752.00**	-	204.70	89.30	**$ 294.00**	**$ 663.64**
3/8/2019	(618.25)	74.79	1,162.99	**$ 619.53**	(1,284.14)	(320.39)	948.90	**$ (655.63)**	-	-	191.41	**$ 191.41**	-	95.05	22.56	**$ 117.61**	**$ 272.92**
3/9/2019	(93.05)	(77.17)	1,080.12	**$ 909.90**	(639.39)	29.35	628.70	**$ 18.66**	(8.00)	3.97	231.35	**$ 227.32**	-	201.09	(42.56)	**$ 158.53**	**$ 1,314.41**
3/10/2019	(102.21)	(17.05)	1,225.47	**$ 1,106.21**	(582.22)	(345.16)	534.78	**$ (392.60)**	-	-	150.64	**$ 150.64**	-	138.96	(28.23)	**$ 110.73**	**$ 974.98**
3/11/2019	(533.76)	265.66	1,372.40	**$ 1,104.30**	(2,314.52)	(91.03)	1,484.93	**$ (920.62)**	(18.40)	11.55	245.18	**$ 238.33**	-	128.15	(20.19)	**$ 107.96**	**$ 529.97**
3/12/2019	(37.51)	(184.44)	655.41	**$ 433.46**	(1,217.25)	78.63	1,019.04	**$ (119.58)**	(38.40)	29.03	153.16	**$ 143.79**	-	137.62	(33.91)	**$ 103.71**	**$ 561.38**
3/13/2019	(52.85)	(80.03)	628.65	**$ 495.77**	(764.31)	8.65	869.85	**$ 114.19**	(33.60)	24.46	127.00	**$ 117.86**	-	119.18	(25.58)	**$ 93.60**	**$ 821.42**
3/14/2019	(57.60)	(54.60)	895.86	**$ 783.66**	(921.12)	75.19	978.76	**$ 132.83**	(38.40)	6.37	118.43	**$ 86.40**	-	38.34	(49.78)	**$ (11.44)**	**$ 991.45**
3/15/2019	(83.74)	(43.63)	927.23	**$ 799.86**	(1,033.86)	162.65	1,236.58	**$ 365.37**	(28.80)	18.97	140.56	**$ 130.73**	-	103.00	(72.84)	**$ 30.16**	**$ 1,326.12**
3/16/2019	(66.80)	(25.55)	979.27	**$ 886.92**	(863.02)	71.85	991.02	**$ 199.85**	(9.60)	7.20	122.73	**$ 120.33**	-	113.31	(57.22)	**$ 56.09**	**$ 1,263.19**
3/17/2019	(58.00)	(46.97)	934.70	**$ 829.73**	(788.07)	200.15	853.07	**$ 265.15**	(22.00)	18.00	120.55	**$ 116.55**	-	133.76	(40.93)	**$ 92.83**	**$ 1,304.26**
3/18/2019	(723.35)	532.52	1,034.29	**$ 843.46**	(1,612.68)	83.64	1,171.29	**$ (357.75)**	-	-	119.96	**$ 119.96**	-	91.49	(31.33)	**$ 60.16**	**$ 665.83**
3/19/2019	(516.00)	197.76	1,137.31	**$ 819.07**	(1,726.99)	82.65	1,145.97	**$ (498.37)**	(19.20)	14.40	111.28	**$ 106.48**	-	173.77	(70.11)	**$ 103.66**	**$ 530.84**
3/20/2019	(458.85)	256.62	750.28	**$ 548.05**	(1,061.09)	(432.81)	770.37	**$ (723.53)**	(28.80)	21.40	108.90	**$ 101.50**	-	171.55	(49.14)	**$ 122.41**	**$ 48.43**
3/21/2019	(409.89)	122.68	972.90	**$ 685.69**	(1,551.32)	74.04	772.65	**$ (704.63)**	(33.60)	24.21	121.35	**$ 111.96**	-	72.76	16.71	**$ 89.47**	**$ 182.49**
3/22/2019	(544.78)	205.82	1,312.37	**$ 973.41**	(1,754.32)	265.51	1,146.89	**$ (341.92)**	(8.00)	1.80	177.00	**$ 170.80**	-	283.68	(39.29)	**$ 244.39**	**$ 1,046.68**
3/23/2019	(76.74)	(41.20)	1,138.38	**$ 1,020.44**	(728.40)	(19.27)	926.72	**$ 179.05**	(29.52)	13.92	165.06	**$ 149.46**	-	121.08	(33.72)	**$ 87.36**	**$ 1,436.31**
3/24/2019	(57.75)	(10.62)	1,005.52	**$ 937.15**	(151.68)	(106.48)	732.91	**$ 474.75**	(4.80)	3.60	135.31	**$ 134.11**	-	64.67	(18.06)	**$ 46.61**	**$ 1,592.62**
3/25/2019	(98.01)	(60.77)	1,172.68	**$ 1,013.90**	(738.18)	24.51	1,769.11	**$ 1,055.44**	(18.74)	15.34	145.60	**$ 142.20**	-	94.11	(31.00)	**$ 63.11**	**$ 2,274.65**
3/26/2019	(88.51)	(91.74)	1,397.04	**$ 1,216.79**	(1,389.56)	(159.45)	1,442.35	**$ (106.66)**	(8.80)	4.80	171.88	**$ 167.88**	-	155.76	(21.73)	**$ 134.03**	**$ 1,412.04**
3/27/2019	(73.52)	(433.37)	992.04	**$ 485.15**	(733.96)	311.85	925.38	**$ 503.27**	(33.28)	26.32	131.85	**$ 124.89**	-	182.27	(3.24)	**$ 179.03**	**$ 1,292.34**
3/28/2019	(78.96)	(747.42)	1,172.34	**$ 345.96**	(201.52)	(31.71)	900.98	**$ 667.75**	(26.40)	21.60	118.21	**$ 113.41**	-	343.82	(34.65)	**$ 309.17**	**$ 1,436.29**
3/29/2019	(49.90)	(445.20)	1,155.68	**$ 660.58**	(106.56)	(31.13)	829.43	**$ 691.74**	(4.40)	3.44	123.63	**$ 122.67**	-	201.44	13.75	**$ 215.19**	**$ 1,690.18**
3/30/2019	(70.97)	(33.74)	1,101.52	**$ 996.81**	(116.60)	0.49	550.62	**$ 434.51**	-	(0.01)	116.09	**$ 116.08**	-	102.71	(31.42)	**$ 71.29**	**$ 1,618.69**
3/31/2019	(312.84)	(431.97)	884.54	**$ 139.73**	(219.28)	(294.73)	997.80	**$ 483.79**	-	(0.12)	116.81	**$ 116.69**	-	450.79	(26.29)	**$ 424.50**	**$ 1,164.71**
Mar Total	**$ (11,143.60)**	**$ 416.36**	**$ 34,412.08**	**$ 23,684.84**	**$ (36,566.47)**	**$ (535.64)**	**$ 32,567.33**	**$ (4,534.78)**	**$ (512.37)**	**$ (74.04)**	**$ 9,258.15**	**$ 8,671.74**	**$ -**	**$ 5,402.22**	**$ (722.77)**	**$ 4,679.45**	**$ 32,501.25**
4/1/2019	(413.15)	(484.04)	909.75	**$ 12.56**	(778.84)	73.45	1,591.60	**$ 886.21**	-	-	190.31	**$ 190.31**	-	581.03	(82.21)	**$ 498.82**	**$ 1,587.90**
4/2/2019	(1,090.53)	788.12	595.71	**$ 293.30**	(634.60)	160.21	1,151.54	**$ 677.15**	-	-	143.08	**$ 143.08**	-	238.71	66.80	**$ 305.51**	**$ 1,419.04**
4/3/2019	(519.30)	(319.43)	828.81	**$ (9.92)**	(581.36)	91.32	1,144.57	**$ 654.53**	-	-	137.56	**$ 137.56**	-	496.10	(70.33)	**$ 425.77**	**$ 1,207.94**
4/4/2019	(1,311.53)	551.55	651.64	**$ (108.34)**	(563.72)	207.43	1,065.58	**$ 709.29**	-	-	176.76	**$ 176.76**	-	439.50	(25.80)	**$ 413.70**	**$ 1,191.41**
4/5/2019	(420.16)	(1,640.85)	534.56	**$ (1,526.45)**	(676.87)	177.76	1,304.85	**$ 805.74**	-	-	233.91	**$ 233.91**	-	584.73	6.76	**$ 591.49**	**$ 104.69**
4/6/2019	(2,165.14)	670.21	1,271.03	**$ (223.90)**	(487.12)	328.78	835.23	**$ 676.89**	-	-	138.31	**$ 138.31**	-	672.47	37.23	**$ 709.70**	**$ 1,301.00**
4/7/2019	(1,131.25)	347.74	851.99	**$ 68.48**	(706.56)	330.04	1,193.16	**$ 816.64**	-	(0.18)	139.60	**$ 139.42**	-	344.59	(9.61)	**$ 334.98**	**$ 1,359.52**
4/8/2019	(1,135.01)	423.74	927.72	**$ 216.45**	(761.11)	(57.64)	1,482.35	**$ 663.60**	-	(0.20)	202.01	**$ 201.81**	-	316.44	(9.47)	**$ 306.97**	**$ 1,388.83**
4/9/2019	(674.80)	(757.31)	973.79	**$ (458.32)**	(711.40)	220.65	1,306.23	**$ 815.48**	-	-	253.37	**$ 253.37**	-	622.33	134.08	**$ 756.41**	**$ 1,366.94**
4/10/2019	(1,646.61)	433.80	1,008.94	**$ (203.87)**	(671.53)	183.06	1,142.08	**$ 653.61**	-	-	173.72	**$ 173.72**	-	474.85	61.91	**$ 536.76**	**$ 1,160.22**
4/11/2019	(1,324.83)	540.32	988.14	**$ 203.63**	(794.92)	122.10	1,487.61	**$ 814.79**	-	-	156.19	**$ 156.19**	-	271.51	(31.91)	**$ 239.60**	**$ 1,414.21**
4/12/2019	(883.86)	48.23	1,102.31	**$ 266.68**	(503.72)	39.24	1,175.25	**$ 710.77**	-	-	119.45	**$ 119.45**	-	315.41	(3.70)	**$ 311.71**	**$ 1,408.61**
4/13/2019	(408.46)	(655.16)	996.30	**$ (67.32)**	(650.95)	58.44	1,299.87	**$ 707.36**	-	-	185.73	**$ 185.73**	-	429.44	(32.68)	**$ 396.76**	**$ 1,222.53**
4/14/2019	(1,142.02)	184.04	982.34	**$ 24.36**	(505.36)	21.64	1,089.14	**$ 605.42**	(2.86)	0.54	206.29	**$ 203.97**	-	273.06	(21.96)	**$ 251.10**	**$ 1,084.85**
4/15/2019	(866.48)	42.03	965.59	**$ 141.14**	(675.20)	12.59	1,302.71	**$ 640.10**	(3.84)	0.32	203.10	**$ 199.58**	-	104.31	(1.73)	**$ 102.58**	**$ 1,083.40**
4/16/2019	(473.61)	(1,095.45)	887.38	**$ (681.68)**	(756.96)	266.42	1,428.06	**$ 937.52**	-	(5.20)	219.99	**$ 214.79**	126.68	805.85	(75.25)	**$ 857.28**	**$ 1,327.91**
4/17/2019	(396.74)	(198.57)	623.70	**$ 28.39**	(575.97)	94.18	987.31	**$ 505.52**	-	-	209.00	**$ 209.00**	-	222.17	30.82	**$ 252.99**	**$ 995.90**
4/18/2019	(1,385.53)	760.38	1,013.38	**$ 388.23**	(692.75)	121.72	1,158.35	**$ 587.32**	-	-	200.63	**$ 200.63**	-	330.64	(2.79)	**$ 327.85**	**$ 1,504.03**
4/19/2019	(740.16)	156.85	750.24	**$ 166.93**	(657.40)	135.07	1,072.29	**$ 549.96**	-	(0.05)	203.62	**$ 203.57**	-	273.38	9.91	**$ 283.29**	**$ 1,203.75**
4/20/2019	(688.62)	(0.99)	676.45	**$ (13.16)**	(588.17)	292.56	815.36	**$ 519.75**	-	-	205.67	**$ 205.67**	-	402.61	(5.36)	**$ 397.25**	**$ 1,109.51**
4/21/2019	(777.81)	586.63	532.79	**$ 341.61**	(395.71)	194.07	752.14	**$ 550.50**	-	(0.03)	252.19	**$ 252.16**	-	240.25	8.71	**$ 248.96**	**$ 1,393.23**
4/22/2019	(898.93)	579.76	979.77	**$ 660.60**	(660.41)	74.80	1,245.36	**$ 659.75**	-	(1.75)	290.41	**$ 288.66**	-	203.26	(592.78)	**$ (389.52)**	**$ 1,219.49**
4/23/2019	(692.31)	822.63	743.59	**$ 873.91**	(579.82)	117.64	1,415.08	**$ 952.90**	-	(64.55)	268.40	**$ 203.85**	-	319.45	(17.47)	**$ 301.98**	**$ 2,332.64**
4/24/2019	(647.88)	(121.36)	1,075.50	**$ 306.26**	(701.16)	(153.88)	1,554.42	**$ 699.38**	-	(0.05)	626.52	**$ 626.47**	-	301.81	(45.99)	**$ 255.82**	**$ 1,887.93**
4/25/2019	(522.34)	359.91	1,053.85	**$ 891.42**	(652.55)	135.38	1,469.41	**$ 952.24**	-	(0.07)	236.49	**$ 236.42**	-	183.94	(9.34)	**$ 174.60**	**$ 2,254.68**
4/26/2019	(848.67)	(126.13)	1,094.28	**$ 119.48**	(744.67)	0.81	1,380.90	**$ 637.04**	-	(0.21)	293.83	**$ 293.62**	-	485.09	(17.40)	**$ 467.69**	**$ 1,517.83**
4/27/2019	(2,077.31)	944.71	1,193.72	**$ 61.12**	(567.83)	199.18	1,029.11	**$ 660.46**	(3.40)	1.67	213.93	**$ 212.20**	-	568.00	(31.62)	**$ 536.38**	**$ 1,470.16**
4/28/2019	(1,389.98)	651.25	1,123.58	**$ 384.85**	(619.24)	131.81	1,236.21	**$ 748.78**	(4.76)	2.34	209.39	**$ 206.97**	-	297.59	28.89	**$ 326.48**	**$ 1,667.08**
4/29/2019	(867.04)	(183.29)	1,416.09	**$ 365.76**	(1,083.70)	63.40	1,965.81	**$ 945.51**	(7.46)	0.39	1,501.30	**$ 1,494.23**	-	817.68	37.32	**$ 855.00**	**$ 3,660.50**
4/30/2019	(1,357.25)	209.53	1,206.01	**$ 58.29**	(636.24)	7.85	1,087.20	**$ 458.81**	-	(0.16)	249.40	**$ 249.24**	-	730.30	(0.29)	**$ 730.01**	**$ 1,496.35**
Apr total	**$ (28,897.31)**	**$ 3,518.85**	**$ 27,958.95**	**$ 2,580.49**	**$ (19,615.84)**	**$ 3,650.08**	**$ 37,168.78**	**$ 21,203.02**	**$ (22.32)**	**$ (67.19)**	**$ 7,840.16**	**$ 7,750.65**	**$ 126.68**	**$ 12,346.50**	**$ (665.26)**	**$ 11,807.92**	**$ 43,342.08**

Table 9-D: ASM Charge Daily Detail / CRDFC / EDEDC

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**	Contigency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	**Other Charge SubTotal**	**Net Benefit**
5/1/2019	(795.54)	(760.55)	1,483.64	**$ (72.45)**	(1,373.48)	330.05	2,364.46	**$ 1,321.03**	-	-	323.03	**$ 323.03**	-	522.84	17.87	**$ 540.71**	**$ 2,112.32**
5/2/2019	(506.30)	(862.37)	1,551.26	**$ 182.59**	(1,160.60)	(8.98)	2,201.09	**$ 1,031.51**	-	-	293.43	**$ 293.43**	-	543.59	(11.29)	**$ 532.30**	**$ 2,039.83**
5/3/2019	(1,968.57)	241.45	1,221.63	**$ (505.49)**	(748.12)	42.61	1,318.45	**$ 612.94**	-	-	213.12	**$ 213.12**	-	839.75	(1.19)	**$ 838.56**	**$ 1,159.13**
5/4/2019	(1,912.53)	457.01	1,140.04	**$ (315.48)**	(597.48)	26.42	974.36	**$ 403.30**	-	-	188.61	**$ 188.61**	-	892.43	(5.58)	**$ 886.85**	**$ 1,163.28**
5/5/2019	(2,154.22)	537.28	1,164.60	**$ (452.34)**	(614.28)	150.34	1,017.35	**$ 553.41**	-	(0.19)	202.69	**$ 202.50**	-	558.69	1.95	**$ 560.64**	**$ 864.21**
5/6/2019	(1,912.81)	607.30	1,060.61	**$ (244.90)**	(690.72)	24.86	1,230.65	**$ 564.79**	-	(0.07)	259.91	**$ 259.84**	-	455.52	(1.68)	**$ 453.84**	**$ 1,033.57**
5/7/2019	(1,744.59)	254.82	899.54	**$ (590.23)**	(522.69)	20.05	892.05	**$ 389.41**	-	-	190.11	**$ 190.11**	-	313.48	45.95	**$ 359.43**	**$ 348.72**
5/8/2019	(1,815.69)	1,123.27	1,034.75	**$ 342.33**	(575.30)	50.39	813.70	**$ 288.79**	-	-	178.47	**$ 178.47**	-	446.89	12.32	**$ 459.21**	**$ 1,268.80**
5/9/2019	(1,302.74)	923.35	693.50	**$ 314.11**	(515.03)	360.23	771.64	**$ 616.84**	-	-	192.67	**$ 192.67**	-	442.84	21.93	**$ 464.77**	**$ 1,588.39**
5/10/2019	(1,760.80)	611.14	965.01	**$ (184.65)**	(364.60)	192.57	607.70	**$ 435.67**	-	-	185.46	**$ 185.46**	-	999.60	(52.92)	**$ 946.68**	**$ 1,383.16**
5/11/2019	(1,817.87)	926.92	881.21	**$ (9.74)**	(379.84)	123.24	635.67	**$ 379.07**	-	-	119.12	**$ 119.12**	-	605.32	17.16	**$ 622.48**	**$ 1,110.93**
5/12/2019	(1,559.52)	325.75	891.03	**$ (342.74)**	(320.64)	219.93	607.62	**$ 506.91**	-	-	213.02	**$ 213.02**	-	856.91	(26.81)	**$ 830.10**	**$ 1,207.29**
5/13/2019	(2,030.73)	1,088.17	973.35	**$ 30.79**	(521.33)	175.78	865.89	**$ 520.34**	(0.68)	0.30	202.82	**$ 202.44**	-	851.00	240.34	**$ 1,091.34**	**$ 1,844.91**
5/14/2019	(1,579.12)	465.94	919.75	**$ (193.43)**	(657.92)	462.84	957.12	**$ 762.04**	-	-	241.34	**$ 241.34**	-	956.10	4.23	**$ 960.33**	**$ 1,770.28**
5/15/2019	(2,431.52)	1,228.99	1,087.24	**$ (115.29)**	(1,328.44)	416.34	1,378.46	**$ 466.36**	-	-	208.55	**$ 208.55**	-	1,019.40	(9.83)	**$ 1,009.57**	**$ 1,569.19**
5/16/2019	(1,724.28)	1,026.15	970.77	**$ 272.64**	(720.98)	(503.46)	1,179.08	**$ (45.36)**	(70.84)	156.00	673.33	**$ 758.49**	-	93.45	2,059.35	**$ 2,152.80**	**$ 3,138.57**
5/17/2019	(1,749.31)	1,043.13	1,210.31	**$ 504.13**	(1,116.62)	341.83	1,254.43	**$ 479.64**	-	-	232.50	**$ 232.50**	-	290.29	(15.04)	**$ 275.25**	**$ 1,491.52**
5/18/2019	(1,247.14)	475.32	1,110.88	**$ 339.06**	(865.58)	404.53	1,236.68	**$ 775.63**	-	-	213.20	**$ 213.20**	-	58.50	(13.62)	**$ 44.88**	**$ 1,372.77**
5/19/2019	(841.83)	(457.75)	982.00	**$ (317.58)**	(532.90)	326.75	866.13	**$ 659.98**	-	-	189.38	**$ 189.38**	-	1,130.87	(2.22)	**$ 1,128.65**	**$ 1,660.43**
5/20/2019	(1,904.16)	515.85	1,094.84	**$ (293.47)**	(517.07)	78.58	1,061.65	**$ 623.16**	-	(0.25)	194.79	**$ 194.54**	-	877.23	9.23	**$ 886.46**	**$ 1,410.69**
5/21/2019	(321.97)	2.29	924.05	**$ 604.37**	(754.25)	262.09	864.82	**$ 372.66**	-	(0.41)	187.84	**$ 187.43**	-	89.16	(5.60)	**$ 83.56**	**$ 1,248.02**
5/22/2019	(694.88)	478.24	930.90	**$ 714.26**	(686.96)	160.14	978.86	**$ 452.04**	(2.72)	1.46	175.19	**$ 173.93**	-	70.09	(0.68)	**$ 69.41**	**$ 1,409.64**
5/23/2019	(973.09)	67.69	1,005.08	**$ 99.68**	(375.64)	37.91	1,083.01	**$ 745.28**	-	-	217.14	**$ 217.14**	-	461.75	27.61	**$ 489.36**	**$ 1,551.46**
5/24/2019	(1,138.32)	289.64	978.05	**$ 129.37**	(678.31)	352.79	862.07	**$ 536.55**	-	-	159.64	**$ 159.64**	-	395.70	(68.73)	**$ 326.97**	**$ 1,152.53**
5/25/2019	(1,475.52)	750.28	1,028.98	**$ 303.74**	(391.91)	(21.66)	1,027.02	**$ 613.45**	-	-	125.89	**$ 125.89**	-	55.59	(6.83)	**$ 48.76**	**$ 1,091.84**
5/26/2019	(1,300.52)	204.24	995.10	**$ (101.18)**	(738.76)	260.58	954.96	**$ 476.78**	(9.60)	8.37	113.10	**$ 111.87**	-	936.03	17.83	**$ 953.86**	**$ 1,441.33**
5/27/2019	(841.12)	307.07	1,021.56	**$ 487.51**	(621.41)	123.94	900.94	**$ 403.47**	-	-	120.08	**$ 120.08**	-	316.78	(5.26)	**$ 311.52**	**$ 1,322.58**
5/28/2019	(1,969.50)	1,091.30	837.86	**$ (40.34)**	(612.88)	62.93	930.19	**$ 380.24**	-	-	145.99	**$ 145.99**	-	422.51	(5.49)	**$ 417.02**	**$ 902.91**
5/29/2019	(1,484.37)	189.24	857.40	**$ (437.73)**	(519.32)	164.88	765.51	**$ 411.07**	-	-	148.87	**$ 148.87**	-	926.44	(50.93)	**$ 875.51**	**$ 997.72**
5/30/2019	(1,114.47)	79.69	888.08	**$ (146.70)**	(618.24)	129.58	901.44	**$ 412.78**	-	-	163.56	**$ 163.56**	-	446.04	(42.34)	**$ 403.70**	**$ 833.34**
5/31/2019	(1,482.09)	374.64	767.47	**$ (339.98)**	(446.84)	14.81	689.27	**$ 257.24**	-	(0.48)	162.75	**$ 162.27**	-	542.86	(42.35)	**$ 500.51**	**$ 580.04**
May Total	**$ (45,555.12)**	**$ 13,605.49**	**$ 31,570.49**	**$ (379.14)**	**$ (20,568.14)**	**$ 4,782.89**	**$ 32,192.27**	**$ 16,407.02**	**$ (83.84)**	**$ 164.73**	**$ 6,435.60**	**$ 6,516.49**	**$ -**	**$ 17,417.65**	**$ 2,107.38**	**$ 19,525.03**	**$ 42,069.40**
6/1/2019	(1,550.02)	334.38	657.72	**$ (557.92)**	(357.41)	(55.39)	609.11	**$ 196.31**	-	(0.53)	145.55	**$ 145.02**	-	528.43	(40.66)	**$ 487.77**	**$ 271.18**
6/2/2019	(1,145.00)	79.07	611.84	**$ (454.09)**	(400.86)	2.34	534.28	**$ 135.76**	-	(0.02)	147.09	**$ 147.07**	-	516.21	(20.08)	**$ 496.13**	**$ 324.87**
6/3/2019	(1,304.44)	68.79	866.62	**$ (369.03)**	(387.52)	(27.78)	612.73	**$ 197.43**	-	(2.01)	201.65	**$ 199.64**	-	313.67	(23.85)	**$ 289.82**	**$ 317.86**
6/4/2019	(1,451.33)	65.36	864.15	**$ (521.82)**	(466.20)	96.39	481.01	**$ 111.20**	(29.20)	3.66	177.59	**$ 152.05**	-	344.43	(17.55)	**$ 326.88**	**$ 68.31**
6/5/2019	(1,561.24)	536.60	623.71	**$ (400.93)**	(1,055.08)	624.06	828.41	**$ 397.39**	-	(9.25)	150.92	**$ 141.67**	-	1,154.31	(1,534.59)	**$ (380.28)**	**$ (242.15)**
6/6/2019	(723.77)	(216.85)	878.30	**$ (62.32)**	(669.28)	81.99	946.82	**$ 359.53**	-	(31.36)	154.75	**$ 123.39**	-	658.50	(36.64)	**$ 621.86**	**$ 1,042.46**
6/7/2019	(1,311.06)	400.59	758.79	**$ (151.68)**	(1,080.79)	344.97	719.58	**$ (16.24)**	-	(0.09)	142.25	**$ 142.16**	-	497.13	4.56	**$ 501.69**	**$ 475.93**
6/8/2019	(1,496.67)	722.16	789.43	**$ 14.92**	(607.05)	176.32	634.27	**$ 203.54**	-	(0.51)	135.44	**$ 134.93**	-	596.94	0.96	**$ 597.90**	**$ 951.29**
6/9/2019	(1,093.60)	715.62	826.35	**$ 448.37**	(438.03)	120.55	481.40	**$ 163.92**	-	(0.47)	153.33	**$ 152.86**	-	161.29	41.67	**$ 202.96**	**$ 968.11**
6/10/2019	(1,340.88)	879.28	817.49	**$ 355.89**	(480.26)	21.88	531.84	**$ 73.46**	(3.02)	(0.83)	165.40	**$ 161.55**	-	370.15	(72.54)	**$ 297.61**	**$ 888.51**
6/11/2019	(504.15)	459.60	743.51	**$ 698.96**	(1,290.75)	558.69	560.80	**$ (171.26)**	(3.65)	2.59	143.11	**$ 142.05**	-	48.76	(48.77)	**$ (0.01)**	**$ 669.74**
6/12/2019	(862.44)	618.96	832.35	**$ 588.87**	(1,936.08)	839.14	557.74	**$ (539.20)**	-	-	159.81	**$ 159.81**	-	174.34	(31.76)	**$ 142.58**	**$ 352.06**
6/13/2019	(1,360.94)	466.73	829.11	**$ (65.10)**	(2,310.40)	1,302.60	696.03	**$ (311.77)**	-	(1.14)	173.73	**$ 172.59**	-	319.63	(142.43)	**$ 177.20**	**$ (27.08)**
6/14/2019	(1,121.75)	328.29	802.01	**$ 8.55**	(999.02)	39.70	581.16	**$ (378.16)**	-	(0.38)	185.85	**$ 185.47**	-	441.79	(227.83)	**$ 213.96**	**$ 29.82**
6/15/2019	(1,625.49)	593.40	861.62	**$ (170.47)**	(1,402.58)	39.05	841.00	**$ (522.53)**	-	(0.08)	142.17	**$ 142.09**	-	482.60	(33.61)	**$ 448.99**	**$ (101.92)**
6/16/2019	(1,076.46)	557.10	895.74	**$ 376.38**	(1,454.24)	(778.62)	796.91	**$ (1,435.95)**	-	(0.03)	131.97	**$ 131.94**	-	216.51	(14.95)	**$ 201.56**	**$ (726.07)**
6/17/2019	(440.80)	(192.42)	995.55	**$ 362.33**	(1,716.09)	(531.24)	998.78	**$ (1,248.55)**	-	-	160.15	**$ 160.15**	-	281.37	6.91	**$ 288.28**	**$ (437.79)**
6/18/2019	(592.91)	36.69	997.08	**$ 440.86**	(1,959.60)	48.09	959.25	**$ (952.26)**	-	(5.55)	156.83	**$ 151.28**	-	87.58	(46.20)	**$ 41.38**	**$ (318.74)**
6/19/2019	(826.00)	261.49	931.97	**$ 367.46**	(1,028.96)	160.43	821.36	**$ (47.17)**	-	-	144.90	**$ 144.90**	-	286.30	(5.85)	**$ 280.45**	**$ 745.64**
6/20/2019	(1,505.03)	265.89	789.60	**$ (449.54)**	(999.53)	264.07	780.04	**$ 44.58**	-	-	147.02	**$ 147.02**	-	769.84	45.48	**$ 815.32**	**$ 557.38**
6/21/2019	(1,417.08)	289.60	863.20	**$ (264.28)**	(329.96)	(901.83)	835.40	**$ (396.39)**	(0.48)	0.24	155.69	**$ 155.45**	-	521.12	(18.80)	**$ 502.32**	**$ (2.90)**
6/22/2019	(1,126.16)	321.29	813.20	**$ 8.33**	(1,880.45)	905.44	779.28	**$ (195.73)**	-	(0.06)	151.67	**$ 151.61**	-	469.05	(4.57)	**$ 464.48**	**$ 428.69**
6/23/2019	(1,198.02)	411.39	816.30	**$ 29.67**	(978.35)	(67.19)	669.33	**$ (376.21)**	-	-	155.94	**$ 155.94**	-	55.82	(27.50)	**$ 28.32**	**$ (162.28)**
6/24/2019	(1,356.46)	705.37	709.56	**$ 58.47**	(1,463.21)	380.03	617.88	**$ (465.30)**	(37.60)	23.86	116.95	**$ 103.21**	-	101.40	(79.15)	**$ 22.25**	**$ (281.37)**
6/25/2019	(1,352.01)	618.85	779.12	**$ 45.96**	(857.97)	86.67	732.25	**$ (39.05)**	(2.27)	(2.57)	153.48	**$ 148.64**	-	434.14	(23.56)	**$ 410.58**	**$ 566.13**
6/26/2019	(1,340.96)	712.49	930.42	**$ 301.95**	(1,247.87)	(67.68)	1,046.27	**$ (269.28)**	(9.22)	(0.25)	800.91	**$ 791.44**	-	388.02	(37.65)	**$ 350.37**	**$ 1,174.48**
6/27/2019	(1,576.06)	526.92	912.94	**$ (136.20)**	(1,176.30)	131.68	956.88	**$ (87.74)**	(1.60)	(2.97)	184.01	**$ 179.44**	-	242.87	(6.36)	**$ 236.51**	**$ 192.01**
6/28/2019	(2,541.40)	1,136.03	935.73	**$ (469.64)**	(1,236.76)	121.22	1,091.18	**$ (24.36)**	(1.24)	(5.29)	648.49	**$ 641.96**	-	553.31	0.35	**$ 553.66**	**$ 701.62**
6/29/2019	(1,304.14)	1,692.26	(75.47)	**$ 312.65**	(872.85)	186.01	779.32	**$ 92.48**	-	(0.22)	132.41	**$ 132.19**	-	968.31	38.32	**$ 1,006.63**	**$ 1,543.95**
6/30/2019	(992.08)	255.95	723.27	**$ (12.86)**	(810.53)	82.27	662.24	**$ (66.02)**	(2.06)	(3.18)	127.95	**$ 122.71**	-	183.58	(39.50)	**$ 144.08**	**$ 187.91**
June Total	**$ (37,098.35)**	**$ 13,650.88**	**$ 23,781.21**	**$ 333.74**	**$ (31,893.98)**	**$ 4,183.86**	**$ 22,142.55**	**$ (5,567.57)**	**$ (90.34)**	**$ (36.44)**	**$ 5,747.01**	**$ 5,620.23**	**$ -**	**$ 12,167.40**	**$ (2,396.15)**	**$ 9,771.25**	**$ 10,157.65**

Table 9-D: ASM Charge Daily Detail / CRDFC / EDEDC

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**	Contigency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	**Other Charge SubTotal**	**Net Benefit**
7/1/2019	(1,671.49)	(269.69)	899.32	**$ (1,041.86)**	(498.07)	(779.44)	1,173.07	**$ (104.44)**	(120.63)	(36.76)	1,159.59	**$ 1,002.20**	-	1,200.16	(40.54)	**$ 1,159.62**	**$ 1,015.52**
7/2/2019	(1,740.20)	650.88	854.31	**$ (235.01)**	(1,095.26)	30.92	1,018.52	**$ (45.82)**	(13.59)	(10.57)	872.83	**$ 848.67**	-	465.67	(19.00)	**$ 446.67**	**$ 1,014.51**
7/3/2019	(2,717.32)	1,615.08	895.17	**$ (207.07)**	(817.40)	225.75	786.07	**$ 194.42**	(1.30)	(11.49)	583.68	**$ 570.89**	-	220.80	(25.64)	**$ 195.16**	**$ 753.40**
7/4/2019	(1,912.63)	407.58	751.18	**$ (753.87)**	(763.59)	(20.44)	832.50	**$ 48.47**	-	(23.74)	125.84	**$ 102.10**	-	55.31	80.43	**$ 135.74**	**$ (467.56)**
7/5/2019	(3,171.89)	998.32	954.62	**$ (1,218.95)**	(1,195.15)	(210.14)	1,289.41	**$ (115.88)**	-	(2.08)	135.78	**$ 133.70**	-	346.51	(26.30)	**$ 320.21**	**$ (880.92)**
7/6/2019	(1,296.94)	321.33	632.29	**$ (343.32)**	(912.39)	55.26	614.00	**$ (243.13)**	-	(0.95)	112.29	**$ 111.34**	-	438.75	(52.51)	**$ 386.24**	**$ (88.87)**
7/7/2019	(1,139.75)	161.18	614.21	**$ (364.36)**	(850.28)	420.77	544.87	**$ 115.36**	(0.80)	(0.31)	149.78	**$ 148.67**	-	269.09	6.85	**$ 275.94**	**$ 175.61**
7/8/2019	(1,312.69)	(2,371.42)	629.61	**$ (3,054.50)**	(1,258.42)	318.89	744.42	**$ (195.11)**	(1.41)	(0.44)	122.57	**$ 120.72**	-	2,521.67	554.55	**$ 3,076.22**	**$ (52.67)**
7/9/2019	(1,074.66)	(469.49)	837.68	**$ (706.47)**	(3,644.68)	18,164.34	540.71	**$ 15,060.37**	-	(57.90)	(30.39)	**$ (88.29)**	-	1,611.37	394.33	**$ 2,005.70**	**$ 16,271.31**
7/10/2019	(855.06)	128.65	792.57	**$ 66.16**	(967.76)	105.94	574.39	**$ (287.43)**	-	-	107.35	**$ 107.35**	-	157.17	44.93	**$ 202.10**	**$ 88.18**
7/11/2019	(940.80)	40.61	918.39	**$ 18.20**	(1,432.81)	(393.87)	1,028.87	**$ (797.81)**	-	(17.50)	132.98	**$ 115.48**	-	268.61	7.69	**$ 276.30**	**$ (387.83)**
7/12/2019	(776.82)	148.12	853.05	**$ 224.35**	(1,672.45)	636.08	868.23	**$ (168.14)**	-	(12.27)	145.30	**$ 133.03**	-	224.78	16.78	**$ 241.56**	**$ 430.80**
7/13/2019	(947.48)	292.49	736.45	**$ 81.46**	(1,964.43)	1,107.77	896.61	**$ 39.95**	(0.92)	0.29	130.61	**$ 129.98**	-	397.71	(1,544.12)	**$ (1,146.41)**	**$ (895.02)**
7/14/2019	(529.67)	(33.66)	815.76	**$ 252.43**	(1,063.37)	138.17	856.03	**$ (69.17)**	(2.38)	0.93	138.02	**$ 136.57**	-	149.34	25.06	**$ 174.40**	**$ 494.23**
7/15/2019	(760.74)	125.69	940.79	**$ 305.74**	(1,080.98)	317.61	806.32	**$ 42.95**	-	(0.67)	150.37	**$ 149.70**	-	152.34	(73.31)	**$ 79.03**	**$ 577.42**
7/16/2019	(896.96)	(125.97)	1,021.41	**$ (1.52)**	(2,280.02)	934.30	1,345.24	**$ (0.48)**	(1.02)	(119.83)	155.24	**$ 34.39**	-	399.83	(57.33)	**$ 342.50**	**$ 374.89**
7/17/2019	(804.86)	83.89	952.64	**$ 231.67**	(887.14)	(254.14)	1,031.56	**$ (109.72)**	(6.52)	(8.04)	209.48	**$ 194.92**	-	459.33	(54.90)	**$ 404.43**	**$ 721.30**
7/18/2019	(1,086.23)	196.65	1,265.20	**$ 375.62**	(929.61)	(84.04)	1,729.55	**$ 715.90**	(1,821.54)	60.74	1,931.17	**$ 170.37**	-	469.73	(79.48)	**$ 390.25**	**$ 1,652.14**
7/19/2019	(437.68)	(65.40)	1,151.67	**$ 648.59**	(803.44)	(52.67)	1,479.72	**$ 623.61**	(41.72)	(5.31)	1,560.69	**$ 1,513.66**	-	284.18	(53.72)	**$ 230.46**	**$ 3,016.32**
7/20/2019	(1,093.32)	182.94	970.54	**$ 60.16**	(362.22)	(178.63)	787.73	**$ 246.88**	(8.01)	(3.83)	573.96	**$ 562.12**	-	446.25	(18.32)	**$ 427.93**	**$ 1,297.09**
7/21/2019	(870.73)	(429.79)	753.91	**$ (546.61)**	(291.94)	(246.84)	576.59	**$ 37.81**	(0.35)	0.11	117.94	**$ 117.70**	-	422.25	(1.52)	**$ 420.73**	**$ 29.63**
7/22/2019	(465.36)	(194.99)	718.85	**$ 58.50**	(262.36)	(40.31)	597.91	**$ 295.24**	(0.19)	(0.12)	150.86	**$ 150.55**	-	706.62	(70.44)	**$ 636.18**	**$ 1,140.47**
7/23/2019	(530.81)	(328.31)	891.05	**$ 31.93**	(330.68)	(31.46)	769.42	**$ 407.28**	-	(0.01)	157.58	**$ 157.57**	-	420.18	(53.32)	**$ 366.86**	**$ 963.64**
7/24/2019	(803.82)	(270.36)	776.79	**$ (297.39)**	(317.87)	(453.47)	692.93	**$ (78.41)**	-	(0.11)	157.96	**$ 157.85**	-	356.50	(59.75)	**$ 296.75**	**$ 78.80**
7/25/2019	(836.02)	266.30	813.71	**$ 243.99**	(358.19)	22.75	766.38	**$ 430.94**	(1.71)	(2.64)	144.34	**$ 139.99**	-	661.39	187.97	**$ 849.36**	**$ 1,664.28**
7/26/2019	(1,872.31)	569.23	961.58	**$ (341.50)**	(661.08)	(47.60)	857.05	**$ 148.37**	(0.67)	(0.41)	166.80	**$ 165.72**	-	929.94	(100.88)	**$ 829.06**	**$ 801.65**
7/27/2019	(608.10)	(1,718.84)	961.97	**$ (1,364.97)**	(605.79)	(2,023.60)	1,148.61	**$ (1,480.78)**	-	(1.53)	159.19	**$ 157.66**	-	1,637.55	34.29	**$ 1,671.84**	**$ (1,016.25)**
7/28/2019	(2,339.79)	1,449.25	819.74	**$ (70.80)**	(1,938.97)	(95.24)	943.78	**$ (1,090.43)**	-	(3.53)	112.25	**$ 108.72**	-	549.82	119.85	**$ 669.67**	**$ (382.84)**
7/29/2019	(1,664.60)	1,310.26	807.53	**$ 453.19**	(1,463.03)	464.83	727.53	**$ (270.67)**	-	(0.83)	139.90	**$ 139.07**	-	25.17	(70.77)	**$ (45.60)**	**$ 275.99**
7/30/2019	(720.51)	324.98	915.58	**$ 520.05**	(784.96)	22.23	674.35	**$ (88.38)**	-	-	144.73	**$ 144.73**	-	56.58	(1.26)	**$ 55.32**	**$ 631.72**
7/31/2019	(1,485.59)	254.83	797.77	**$ (432.99)**	(736.80)	104.39	550.86	**$ (81.55)**	(0.77)	(1.09)	163.51	**$ 161.65**	-	394.17	(24.58)	**$ 369.59**	**$ 16.70**
July Total	**$ (37,364.83)**	**$ 3,250.34**	**$ 26,705.34**	**$ (7,409.15)**	**$ (32,231.14)**	**$ 18,158.11**	**$ 27,253.23**	**$ 13,180.20**	**$ (2,023.53)**	**$ (259.89)**	**$ 10,082.20**	**$ 7,798.78**	**$ -**	**$ 16,698.77**	**$ (954.96)**	**$ 15,743.81**	**$ 29,313.64**
8/1/2019	(3,256.20)	2,000.60	972.44	**$ (283.16)**	(1,372.11)	431.35	984.95	**$ 44.19**	(1.62)	(3.12)	207.13	**$ 202.39**	-	469.88	10.98	**$ 480.86**	**$ 444.28**
8/2/2019	(1,522.42)	449.74	964.14	**$ (108.54)**	(796.30)	(755.28)	1,048.97	**$ (502.61)**	(1.36)	(88.32)	193.58	**$ 103.90**	754.57	341.85	(65.22)	**$ 1,031.20**	**$ 523.95**
8/3/2019	(767.49)	(679.57)	827.62	**$ (619.44)**	(433.19)	(1,138.18)	775.97	**$ (795.40)**	(1.48)	1.43	135.51	**$ 135.46**	-	369.13	(4.22)	**$ 364.91**	**$ (914.47)**
8/4/2019	(619.41)	(672.37)	866.29	**$ (425.49)**	(489.96)	(651.66)	834.37	**$ (307.25)**	(1.39)	(0.43)	142.56	**$ 140.74**	-	654.42	(21.42)	**$ 633.00**	**$ 41.00**
8/5/2019	(1,454.14)	562.93	1,018.23	**$ 127.02**	(949.98)	(169.01)	1,208.76	**$ 89.77**	(0.08)	(2.96)	196.53	**$ 193.49**	-	326.48	(46.93)	**$ 279.55**	**$ 689.83**
8/6/2019	(1,539.95)	545.27	1,032.07	**$ 37.39**	(870.95)	(1,313.00)	1,390.58	**$ (793.37)**	(5.60)	2.16	205.79	**$ 202.35**	-	90.17	(41.69)	**$ 48.48**	**$ (505.15)**
8/7/2019	(2,387.67)	1,356.29	967.12	**$ (64.26)**	(3,601.26)	(150.20)	1,199.89	**$ (2,553.57)**	-	(2.41)	156.08	**$ 153.67**	-	116.61	2.49	**$ 119.10**	**$ (2,345.06)**
8/8/2019	(2,322.96)	1,601.43	877.29	**$ 155.76**	(1,729.65)	487.62	784.32	**$ (457.71)**	-	(1.37)	124.72	**$ 123.35**	-	63.88	(52.73)	**$ 11.15**	**$ (167.45)**
8/9/2019	(2,317.37)	2,197.20	762.20	**$ 642.03**	(690.02)	(335.17)	645.60	**$ (379.59)**	-	(0.09)	131.69	**$ 131.60**	-	62.33	(36.62)	**$ 25.71**	**$ 419.75**
8/10/2019	(2,424.35)	599.99	734.71	**$ (1,089.65)**	(1,211.92)	617.94	574.93	**$ (19.05)**	(3.11)	0.32	124.41	**$ 121.62**	-	171.88	28.99	**$ 200.87**	**$ (786.21)**
8/11/2019	(2,671.99)	805.34	802.28	**$ (1,064.37)**	(2,621.88)	103.59	923.62	**$ (1,594.67)**	(0.72)	0.14	139.40	**$ 138.82**	-	775.07	(28.13)	**$ 746.94**	**$ (1,773.28)**
8/12/2019	(3,612.28)	844.91	929.22	**$ (1,838.15)**	(4,619.41)	132.84	1,154.12	**$ (3,332.45)**	-	(1.45)	140.80	**$ 139.35**	-	365.03	417.41	**$ 782.44**	**$ (4,248.81)**
8/13/2019	(3,851.55)	1,058.07	827.13	**$ (1,966.35)**	(3,073.72)	763.04	807.06	**$ (1,503.62)**	-	(3.23)	146.19	**$ 142.96**	-	1,115.99	(32.44)	**$ 1,083.55**	**$ (2,243.46)**
8/14/2019	(4,154.77)	1,747.64	900.24	**$ (1,506.89)**	(2,898.93)	610.93	788.98	**$ (1,499.02)**	-	(1.60)	133.37	**$ 131.77**	-	812.93	46.47	**$ 859.40**	**$ (2,014.74)**
8/15/2019	(3,150.92)	731.42	1,000.35	**$ (1,419.15)**	(3,360.07)	1,164.65	948.87	**$ (1,246.55)**	-	-	137.45	**$ 137.45**	-	801.08	(1.67)	**$ 799.41**	**$ (1,728.84)**
8/16/2019	(3,160.37)	486.90	845.36	**$ (1,828.11)**	(627.72)	(240.64)	800.29	**$ (68.07)**	-	(1.82)	136.59	**$ 134.77**	-	828.97	(224.58)	**$ 604.39**	**$ (1,157.02)**
8/17/2019	(258.45)	(186.05)	789.63	**$ 345.13**	(421.50)	11.44	698.85	**$ 288.79**	-	(0.99)	131.31	**$ 130.32**	-	113.30	(12.68)	**$ 100.62**	**$ 864.86**
8/18/2019	(275.16)	(26.79)	706.64	**$ 404.69**	(258.95)	15.81	443.66	**$ 200.52**	(3.89)	0.19	125.31	**$ 121.61**	-	226.69	1.12	**$ 227.81**	**$ 954.63**
8/19/2019	(412.51)	(40.10)	876.99	**$ 424.38**	(3,059.38)	1,236.62	891.14	**$ (931.62)**	-	(0.75)	130.36	**$ 129.61**	-	248.03	(33.16)	**$ 214.87**	**$ (162.76)**
8/20/2019	(438.21)	(551.57)	816.17	**$ (173.61)**	(491.04)	(292.07)	722.22	**$ (60.89)**	(4.26)	0.73	119.24	**$ 115.71**	-	271.35	(69.08)	**$ 202.27**	**$ 83.48**
8/21/2019	(3,206.42)	929.92	744.60	**$ (1,531.90)**	(804.25)	(184.20)	627.00	**$ (361.45)**	-	(1.40)	110.12	**$ 108.72**	-	1,261.19	98.68	**$ 1,359.87**	**$ (424.76)**
8/22/2019	(2,521.63)	1,174.48	645.33	**$ (701.82)**	(518.20)	39.03	505.16	**$ 25.99**	-	-	125.07	**$ 125.07**	-	736.32	27.75	**$ 764.07**	**$ 213.31**
8/23/2019	(1,951.07)	1,018.14	678.17	**$ (254.76)**	(397.95)	57.43	418.33	**$ 77.81**	(2.25)	0.30	123.44	**$ 121.49**	-	60.34	(11.27)	**$ 49.07**	**$ (6.39)**
8/24/2019	(1,955.86)	714.56	787.26	**$ (454.04)**	(316.30)	(35.66)	319.25	**$ (32.71)**	-	(0.65)	137.59	**$ 136.94**	-	506.47	(21.52)	**$ 484.95**	**$ 135.14**
8/25/2019	(2,823.04)	1,233.78	976.22	**$ (613.04)**	(421.53)	(54.33)	578.89	**$ 103.03**	(9.79)	6.02	116.66	**$ 112.89**	-	576.94	(33.34)	**$ 543.60**	**$ 146.48**
8/26/2019	(3,426.55)	1,369.56	829.74	**$ (1,227.25)**	(602.41)	(101.33)	653.92	**$ (49.82)**	(0.44)	0.36	99.59	**$ 99.51**	-	790.51	(105.62)	**$ 684.89**	**$ (492.67)**
8/27/2019	(3,095.59)	1,122.16	646.94	**$ (1,326.49)**	(448.57)	151.83	449.88	**$ 153.14**	(2.97)	1.33	96.95	**$ 95.31**	-	1,800.38	(225.50)	**$ 1,574.88**	**$ 496.84**
8/28/2019	(2,005.27)	1,264.56	717.79	**$ (22.92)**	(491.02)	39.99	529.50	**$ 78.47**	-	(0.94)	125.32	**$ 124.38**	-	257.18	(31.02)	**$ 226.16**	**$ 406.09**
8/29/2019	(2,722.86)	1,444.94	730.56	**$ (547.36)**	(599.04)	(49.45)	545.85	**$ (102.64)**	-	(0.68)	110.01	**$ 109.33**	-	575.58	75.68	**$ 651.26**	**$ 110.59**
8/30/2019	(2,534.17)	1,707.36	878.02	**$ 51.21**	(650.36)	(781.88)	727.62	**$ (704.62)**	-	-	147.70	**$ 147.70**	-	426.86	(6.19)	**$ 420.67**	**$ (85.04)**
8/31/2019	(2,530.71)	1,934.21	840.82	**$ 244.32**	(841.09)	222.99	681.82	**$ 63.72**	-	(0.74)	101.41	**$ 100.67**	-	90.40	(16.60)	**$ 73.80**	**$ 482.51**
August Total	**$ (69,371.34)**	**$ 26,744.95**	**$ 25,991.57**	**$ (16,634.82)**	**$ (39,670.66)**	**$ (164.96)**	**$ 23,664.37**	**$ (16,171.25)**	**$ (38.96)**	**$ (99.97)**	**$ 4,251.88**	**$ 4,112.95**	**$ 754.57**	**$ 15,307.24**	**$ (412.06)**	**$ 15,649.75**	**$ (13,043.37)**

Table 9-D: ASM Charge Daily Detail / CRDFC / EDEDC

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**	Contigency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	**Other Charge SubTotal**	**Net Benefit**
9/1/2019	(2,182.50)	941.34	837.38	**$ (403.78)**	(689.42)	14.14	587.41	**$ (87.87)**	(9.60)	8.19	98.19	**$ 96.78**	-	546.00	6.53	**$ 552.53**	**$ 157.66**
9/2/2019	(2,547.62)	1,441.19	764.02	**$ (342.41)**	(484.22)	(227.03)	475.81	**$ (235.44)**	-	(0.21)	111.20	**$ 110.99**	-	498.82	21.37	**$ 520.19**	**$ 53.33**
9/3/2019	(2,705.44)	1,033.45	790.62	**$ (881.37)**	(763.48)	96.53	564.05	**$ (102.90)**	-	(0.23)	140.37	**$ 140.14**	-	191.94	7.99	**$ 199.93**	**$ (644.20)**
9/4/2019	(2,877.92)	675.36	858.72	**$ (1,343.84)**	(678.00)	(488.81)	462.73	**$ (704.08)**	-	-	183.59	**$ 183.59**	-	1,246.84	373.46	**$ 1,620.30**	**$ (244.03)**
9/5/2019	(3,266.30)	1,002.65	908.83	**$ (1,354.82)**	(548.44)	(121.14)	805.59	**$ 136.01**	-	(0.28)	140.08	**$ 139.80**	-	552.96	142.93	**$ 695.89**	**$ (383.12)**
9/6/2019	(3,195.28)	506.60	946.97	**$ (1,741.71)**	(484.10)	(277.21)	904.92	**$ 143.61**	-	(0.37)	165.63	**$ 165.26**	-	1,003.38	6.37	**$ 1,009.75**	**$ (423.09)**
9/7/2019	(2,286.96)	783.16	894.95	**$ (608.85)**	(417.40)	(465.38)	500.22	**$ (382.56)**	-	(0.30)	165.10	**$ 164.80**	-	639.22	9.91	**$ 649.13**	**$ (177.48)**
9/8/2019	(2,169.64)	806.84	905.99	**$ (456.81)**	(225.40)	(316.71)	396.60	**$ (145.51)**	(7.20)	0.19	170.42	**$ 163.41**	-	713.40	0.04	**$ 713.44**	**$ 274.53**
9/9/2019	(2,639.05)	1,555.31	800.51	**$ (283.23)**	(502.52)	(463.12)	488.84	**$ (476.80)**	-	-	135.74	**$ 135.74**	-	507.53	5.29	**$ 512.82**	**$ (111.47)**
9/10/2019	(1,266.72)	11.99	772.40	**$ (482.33)**	(647.42)	293.56	751.97	**$ 398.11**	-	(6.93)	125.84	**$ 118.91**	-	450.04	(22.33)	**$ 427.71**	**$ 462.40**
9/11/2019	(3,832.38)	1,424.75	755.03	**$ (1,652.60)**	(620.00)	(7.94)	528.82	**$ (99.12)**	-	(1.69)	100.16	**$ 98.47**	-	275.61	52.12	**$ 327.73**	**$ (1,325.52)**
9/12/2019	(3,501.60)	1,081.86	975.13	**$ (1,444.61)**	(2,233.57)	598.26	900.60	**$ (734.71)**	-	-	132.92	**$ 132.92**	-	514.03	42.58	**$ 556.61**	**$ (1,489.79)**
9/13/2019	(3,099.02)	944.08	932.10	**$ (1,222.84)**	(1,041.62)	186.08	758.15	**$ (97.39)**	-	-	127.56	**$ 127.56**	-	499.36	(13.99)	**$ 485.37**	**$ (707.30)**
9/14/2019	(2,916.96)	838.11	796.34	**$ (1,282.51)**	(581.58)	121.11	619.02	**$ 158.55**	-	-	109.09	**$ 109.09**	-	1,554.34	98.89	**$ 1,653.23**	**$ 638.36**
9/15/2019	(3,413.28)	589.90	939.10	**$ (1,884.28)**	(527.34)	23.32	817.65	**$ 313.63**	(16.64)	9.60	287.07	**$ 280.03**	-	647.60	722.55	**$ 1,370.15**	**$ 79.53**
9/16/2019	(4,367.10)	1,340.65	1,189.94	**$ (1,836.51)**	(186.44)	(241.10)	1,202.15	**$ 774.61**	(0.72)	(0.43)	150.46	**$ 149.31**	-	1,127.44	50.44	**$ 1,177.88**	**$ 265.29**
9/17/2019	(3,709.84)	1,297.64	1,012.73	**$ (1,399.47)**	(449.88)	(266.67)	702.55	**$ (14.00)**	-	(0.59)	132.83	**$ 132.24**	-	811.99	104.59	**$ 916.58**	**$ (364.65)**
9/18/2019	(3,383.84)	393.15	998.32	**$ (1,992.37)**	(626.32)	3.53	1,135.47	**$ 512.68**	-	-	146.86	**$ 146.86**	-	1,002.14	4.41	**$ 1,006.55**	**$ (326.28)**
9/19/2019	(4,270.84)	969.47	1,136.82	**$ (2,164.55)**	(561.94)	(205.73)	1,251.75	**$ 484.08**	(8.00)	4.00	311.32	**$ 307.32**	-	483.10	53.32	**$ 536.42**	**$ (836.73)**
9/20/2019	(1,882.54)	554.13	913.66	**$ (414.75)**	(787.24)	99.26	977.64	**$ 289.66**	-	-	180.32	**$ 180.32**	-	279.53	29.11	**$ 308.64**	**$ 363.87**
9/21/2019	(1,565.52)	381.28	1,031.00	**$ (153.24)**	(497.02)	419.06	566.38	**$ 488.42**	-	-	196.44	**$ 196.44**	-	544.58	7.09	**$ 551.67**	**$ 1,083.29**
9/22/2019	(1,546.00)	585.76	975.22	**$ 14.98**	(303.24)	(40.30)	634.09	**$ 290.55**	-	(0.12)	242.78	**$ 242.66**	-	399.21	189.50	**$ 588.71**	**$ 1,136.90**
9/23/2019	(1,473.28)	464.06	923.78	**$ (85.44)**	(595.25)	373.22	881.03	**$ 659.00**	-	(0.04)	194.73	**$ 194.69**	-	239.56	78.70	**$ 318.26**	**$ 1,086.51**
9/24/2019	(270.80)	15.88	745.66	**$ 490.74**	(295.33)	78.47	633.76	**$ 416.90**	-	(0.19)	207.10	**$ 206.91**	-	83.57	(2.37)	**$ 81.20**	**$ 1,195.75**
9/25/2019	(1,423.42)	1,331.41	777.70	**$ 685.69**	(223.30)	58.11	351.40	**$ 186.21**	-	(1.26)	200.30	**$ 199.04**	-	6.12	3.62	**$ 9.74**	**$ 1,080.68**
9/26/2019	(1,071.56)	556.30	792.35	**$ 277.09**	(348.31)	(100.21)	404.95	**$ (43.57)**	(0.14)	(5.51)	193.98	**$ 188.33**	-	168.79	0.96	**$ 169.75**	**$ 591.60**
9/27/2019	(2,498.26)	334.17	1,011.38	**$ (1,152.71)**	(1,210.73)	741.75	655.16	**$ 186.18**	-	(5.34)	198.40	**$ 193.06**	-	832.59	119.87	**$ 952.46**	**$ 178.99**
9/28/2019	(2,069.35)	507.14	1,071.52	**$ (490.69)**	(805.07)	140.57	610.43	**$ (54.07)**	-	(0.09)	194.43	**$ 194.34**	-	562.24	30.32	**$ 592.56**	**$ 242.14**
9/29/2019	(1,256.18)	838.21	989.55	**$ 571.58**	(905.45)	(49.96)	627.21	**$ (328.20)**	(0.64)	0.40	194.73	**$ 194.49**	-	32.17	(0.21)	**$ 31.96**	**$ 469.83**
9/30/2019	(3,459.26)	790.02	1,120.47	**$ (1,548.77)**	(2,247.78)	110.68	1,471.32	**$ (665.78)**	-	-	639.17	**$ 639.17**	-	394.41	0.97	**$ 395.38**	**$ (1,180.00)**
September Total	**$ (76,148.46)**	**$ 23,995.86**	**$ 27,568.19**	**$ (24,584.41)**	**$ (20,487.81)**	**$ 86.34**	**$ 21,667.67**	**$ 1,266.20**	**$ (42.94)**	**$ (1.20)**	**$ 5,576.81**	**$ 5,532.67**	**$ -**	**$ 16,808.51**	**$ 2,124.03**	**$ 18,932.54**	**$ 1,147.00**
10/1/2019	(3,638.80)	3,338.28	905.27	**$ 604.75**	(1,669.28)	6,367.13	889.46	**$ 5,587.31**	(15.44)	(411.87)	361.28	**$ (66.03)**	-	637.30	851.53	**$ 1,488.83**	**$ 7,614.86**
10/2/2019	(3,448.80)	1,699.15	845.85	**$ (903.80)**	(402.90)	138.87	499.49	**$ 235.46**	-	(13.38)	341.21	**$ 327.83**	-	1,300.76	116.47	**$ 1,417.23**	**$ 1,076.72**
10/3/2019	(2,912.52)	1,164.56	929.00	**$ (818.96)**	(164.34)	119.22	557.17	**$ 512.05**	-	(0.03)	227.10	**$ 227.07**	-	865.87	37.19	**$ 903.06**	**$ 823.22**
10/4/2019	(1,808.49)	187.16	871.64	**$ (749.69)**	(418.77)	431.52	479.26	**$ 492.01**	(1.33)	0.62	186.61	**$ 185.90**	-	489.43	66.12	**$ 555.55**	**$ 483.77**
10/5/2019	(3,269.04)	827.89	963.85	**$ (1,477.30)**	(159.30)	161.94	308.48	**$ 311.12**	-	-	227.37	**$ 227.37**	-	861.88	108.92	**$ 970.80**	**$ 31.99**
10/6/2019	(3,461.94)	2,300.12	899.62	**$ (262.20)**	(166.44)	102.44	297.71	**$ 233.71**	-	(0.93)	177.20	**$ 176.27**	-	375.43	27.45	**$ 402.88**	**$ 550.66**
10/7/2019	(3,315.27)	633.79	1,094.03	**$ (1,587.45)**	(525.80)	88.23	896.98	**$ 459.41**	-	(1.70)	214.09	**$ 212.39**	-	1,596.50	61.54	**$ 1,658.04**	**$ 742.39**
10/8/2019	(3,111.98)	1,401.29	1,183.26	**$ (527.43)**	(460.70)	177.13	703.29	**$ 419.72**	-	(0.08)	173.22	**$ 173.14**	-	486.26	(22.84)	**$ 463.42**	**$ 528.85**
10/9/2019	(2,897.55)	930.67	1,072.80	**$ (894.08)**	(669.90)	95.33	851.37	**$ 276.80**	-	-	191.36	**$ 191.36**	-	883.40	31.85	**$ 915.25**	**$ 489.33**
10/10/2019	(3,603.86)	1,590.74	1,003.60	**$ (1,009.52)**	(866.81)	268.29	864.09	**$ 265.57**	-	-	168.04	**$ 168.04**	-	814.93	430.05	**$ 1,244.98**	**$ 669.07**
10/11/2019	(1,757.28)	724.76	1,096.28	**$ 63.76**	(292.36)	102.14	811.12	**$ 620.90**	-	-	177.66	**$ 177.66**	-	695.91	(6.22)	**$ 689.69**	**$ 1,552.01**
10/12/2019	(2,098.50)	805.42	1,138.93	**$ (154.15)**	(203.88)	57.21	475.24	**$ 328.57**	-	-	194.67	**$ 194.67**	-	871.93	(34.66)	**$ 837.27**	**$ 1,206.36**
10/13/2019	(3,161.72)	1,352.23	965.58	**$ (843.91)**	(310.50)	258.78	615.10	**$ 563.38**	-	-	209.82	**$ 209.82**	-	1,318.36	163.56	**$ 1,481.92**	**$ 1,411.21**
10/14/2019	(3,230.18)	2,025.62	1,336.75	**$ 132.19**	(2,238.84)	1,254.02	1,254.88	**$ 270.06**	-	(0.52)	262.70	**$ 262.18**	-	264.91	(116.87)	**$ 148.04**	**$ 812.47**
10/15/2019	(2,690.54)	1,504.30	993.87	**$ (192.37)**	(1,139.44)	421.82	881.37	**$ 163.75**	-	(0.52)	247.94	**$ 247.42**	-	639.80	(73.60)	**$ 566.20**	**$ 785.00**
10/16/2019	(151.65)	(870.80)	1,139.23	**$ 116.78**	(1,947.67)	1,039.55	971.22	**$ 63.10**	(0.94)	0.78	217.30	**$ 217.14**	-	194.96	(59.35)	**$ 135.61**	**$ 532.63**
10/17/2019	(2,677.42)	1,127.73	1,091.29	**$ (458.40)**	(1,180.71)	415.55	803.03	**$ 37.87**	-	-	216.96	**$ 216.96**	-	703.45	(81.82)	**$ 621.63**	**$ 418.06**
10/18/2019	(3,058.02)	1,448.92	1,074.20	**$ (534.90)**	(780.46)	213.89	804.06	**$ 237.49**	-	-	207.83	**$ 207.83**	-	484.27	(370.23)	**$ 114.04**	**$ 24.46**
10/19/2019	(2,355.90)	(344.64)	1,115.94	**$ (1,584.60)**	(690.54)	(202.26)	1,462.05	**$ 569.25**	-	-	186.17	**$ 186.17**	-	947.13	(260.05)	**$ 687.08**	**$ (142.10)**
10/20/2019	(2,830.23)	1,633.47	957.59	**$ (239.17)**	(959.78)	562.29	967.66	**$ 570.17**	-	-	217.02	**$ 217.02**	-	284.68	6.72	**$ 291.40**	**$ 839.42**
10/21/2019	(1,525.52)	603.47	1,328.89	**$ 406.84**	(251.92)	50.17	959.75	**$ 758.00**	-	-	169.96	**$ 169.96**	-	368.70	0.93	**$ 369.63**	**$ 1,704.43**
10/22/2019	(3,405.62)	2,787.74	1,254.48	**$ 636.60**	(427.92)	223.62	710.34	**$ 506.04**	-	-	173.07	**$ 173.07**	-	5.11	(1.02)	**$ 4.09**	**$ 1,319.80**
10/23/2019	(2,109.18)	1,116.28	1,222.45	**$ 229.55**	(423.68)	139.97	991.44	**$ 707.73**	-	-	205.47	**$ 205.47**	-	778.52	25.26	**$ 803.78**	**$ 1,946.53**
10/24/2019	(863.43)	280.85	1,435.88	**$ 853.30**	(202.34)	54.86	1,419.45	**$ 1,271.97**	-	(0.12)	231.65	**$ 231.53**	-	274.99	62.31	**$ 337.30**	**$ 2,694.10**
10/25/2019	(424.10)	(1,082.47)	1,282.68	**$ (223.89)**	(138.32)	15.18	793.61	**$ 670.47**	-	-	192.33	**$ 192.33**	-	916.21	14.09	**$ 930.30**	**$ 1,569.21**
10/26/2019	(1,203.90)	(98.75)	1,089.65	**$ (213.00)**	(73.20)	(18.50)	401.14	**$ 309.44**	-	-	117.89	**$ 117.89**	-	922.11	(6.20)	**$ 915.91**	**$ 1,130.24**
10/27/2019	(783.59)	(108.83)	1,223.71	**$ 331.29**	(146.60)	(133.15)	779.40	**$ 499.65**	-	-	125.65	**$ 125.65**	-	461.66	37.30	**$ 498.96**	**$ 1,455.55**
10/28/2019	(644.86)	(648.12)	1,414.97	**$ 121.99**	(103.80)	(88.87)	1,327.85	**$ 1,135.18**	-	(0.02)	250.97	**$ 250.95**	-	719.50	29.67	**$ 749.17**	**$ 2,257.29**
10/29/2019	(2,235.78)	(2,783.22)	1,171.04	**$ (3,847.96)**	(535.56)	(19.16)	1,003.51	**$ 448.79**	-	-	208.30	**$ 208.30**	-	4,001.09	199.97	**$ 4,201.06**	**$ 1,010.19**
10/30/2019	(2,406.62)	1,157.35	1,146.51	**$ (102.76)**	(814.04)	240.93	1,586.95	**$ 1,013.84**	-	-	172.42	**$ 172.42**	-	566.10	7.39	**$ 573.49**	**$ 1,656.99**
10/31/2019	(1,766.21)	(524.08)	1,105.53	**$ (1,184.76)**	(366.48)	(58.73)	1,187.26	**$ 762.05**	-	-	167.22	**$ 167.22**	-	936.81	92.80	**$ 1,029.61**	**$ 774.12**
October Total	**$ (72,848.50)**	**$ 24,180.88**	**$ 34,354.37**	**$ (14,313.25)**	**$ (18,732.28)**	**$ 12,479.41**	**$ 26,553.73**	**$ 20,300.86**	**$ (17.71)**	**$ (427.77)**	**$ 6,420.48**	**$ 5,975.00**	**$ -**	**$ 24,667.96**	**$ 1,338.26**	**$ 26,006.22**	**$ 37,968.83**

Table 9-D: ASM Charge Daily Detail / CRDFC / EDEDC

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**	Contigency Reserve Deployment Failure Charge Amount	Real Time Excessive Deficient Energy Deployment Charge Amount	Net Regulation Adjustment Amount	**Other Charge SubTotal**	**Net Benefit**
11/1/2019	(3,809.79)	964.86	1,140.12	**$ (1,704.81)**	(609.56)	68.54	1,327.77	**$ 786.75**	-	-	194.86	**$ 194.86**	-	1,109.39	(279.24)	**$ 830.15**	**$ 106.95**
11/2/2019	(3,188.51)	498.88	1,023.63	**$ (1,666.00)**	(422.48)	306.32	977.30	**$ 861.14**	-	-	170.70	**$ 170.70**	-	1,476.68	161.35	**$ 1,638.03**	**$ 1,003.87**
11/3/2019	(3,147.51)	(463.94)	1,358.76	**$ (2,252.69)**	(653.88)	43.50	1,539.08	**$ 928.70**	-	-	139.68	**$ 139.68**	-	956.08	13.96	**$ 970.04**	**$ (214.27)**
11/4/2019	(3,507.73)	970.53	1,338.11	**$ (1,199.09)**	(786.48)	102.36	1,211.86	**$ 527.74**	-	-	183.90	**$ 183.90**	-	748.62	23.36	**$ 771.98**	**$ 284.53**
11/5/2019	(2,036.77)	888.27	1,440.65	**$ 292.15**	(875.84)	205.10	1,437.66	**$ 766.92**	-	-	199.41	**$ 199.41**	-	765.72	44.58	**$ 810.30**	**$ 2,068.78**
11/6/2019	(3,837.60)	1,900.85	1,151.74	**$ (785.01)**	(984.19)	166.83	755.23	**$ (62.13)**	-	(0.51)	188.13	**$ 187.62**	-	959.92	27.90	**$ 987.82**	**$ 328.30**
11/7/2019	(887.54)	(158.81)	282.18	**$ (764.17)**	(1,128.44)	1,431.12	(654.30)	**$ (351.62)**	-	(0.15)	1,677.98	**$ 1,677.83**	-	807.42	5.24	**$ 812.66**	**$ 1,374.70**
11/8/2019	(3,974.92)	532.12	1,508.76	**$ (1,934.04)**	(1,162.59)	40.10	1,078.15	**$ (44.34)**	-	(4.23)	175.62	**$ 171.39**	-	1,475.79	118.78	**$ 1,594.57**	**$ (212.42)**
11/9/2019	(1,571.76)	(115.63)	1,180.17	**$ (507.22)**	(827.24)	103.26	722.67	**$ (1.31)**	(20.80)	17.47	135.65	**$ 132.32**	-	519.23	7.12	**$ 526.35**	**$ 150.14**
11/10/2019	(1,382.72)	(6.57)	1,000.57	**$ (388.72)**	(556.46)	14.65	530.83	**$ (10.98)**	(16.00)	13.41	115.65	**$ 113.06**	-	594.11	(1.24)	**$ 592.87**	**$ 306.23**
11/11/2019	(2,761.38)	1,366.74	1,338.10	**$ (56.54)**	(1,439.85)	82.43	1,364.39	**$ 6.97**	-	(6.67)	176.57	**$ 169.90**	-	76.95	33.18	**$ 110.13**	**$ 230.46**
11/12/2019	(4,625.88)	777.08	1,405.56	**$ (2,443.24)**	(1,318.10)	(62.47)	1,192.86	**$ (187.71)**	-	(8.41)	195.47	**$ 187.06**	-	1,637.40	6.50	**$ 1,643.90**	**$ (799.99)**
11/13/2019	(3,717.58)	5,369.40	1,182.08	**$ 2,833.90**	(297.62)	141.61	(2,947.66)	**$ (3,103.67)**	-	(408.11)	(4,014.23)	**$ (4,422.34)**	-	200.24	(130.07)	**$ 70.17**	**$ (4,621.94)**
11/14/2019	(3,892.84)	632.96	1,385.09	**$ (1,874.79)**	(343.31)	(135.96)	446.70	**$ (32.57)**	(1.46)	(2.04)	140.64	**$ 137.14**	-	1,850.97	17.24	**$ 1,868.21**	**$ 97.99**
11/15/2019	(3,601.88)	(553.73)	1,231.95	**$ (2,923.66)**	(490.96)	(56.27)	355.42	**$ (191.81)**	(17.29)	4.96	162.85	**$ 150.52**	-	2,408.88	7.24	**$ 2,416.12**	**$ (548.83)**
11/16/2019	(3,353.87)	62.26	976.19	**$ (2,315.42)**	(657.97)	113.05	269.02	**$ (275.90)**	-	(2.12)	152.00	**$ 149.88**	-	2,926.32	7.52	**$ 2,933.84**	**$ 492.40**
11/17/2019	(2,318.40)	(436.96)	1,043.84	**$ (1,711.52)**	(681.92)	137.15	365.87	**$ (178.90)**	-	-	150.63	**$ 150.63**	-	2,014.69	12.61	**$ 2,027.30**	**$ 287.51**
11/18/2019	(3,124.08)	956.80	1,216.10	**$ (951.18)**	(1,014.81)	10.63	818.66	**$ (185.52)**	-	-	193.62	**$ 193.62**	-	1,070.58	20.15	**$ 1,090.73**	**$ 147.65**
11/19/2019	(2,779.60)	(623.59)	1,168.06	**$ (2,235.13)**	(447.64)	(271.82)	434.88	**$ (284.58)**	-	(1.16)	177.52	**$ 176.36**	-	1,749.92	3.77	**$ 1,753.69**	**$ (589.66)**
11/20/2019	(3,739.68)	380.72	1,069.70	**$ (2,289.26)**	(596.27)	315.36	239.71	**$ (41.20)**	-	-	156.69	**$ 156.69**	-	1,403.27	102.82	**$ 1,506.09**	**$ (667.68)**
11/21/2019	(2,613.22)	1,279.48	1,147.37	**$ (186.37)**	(733.52)	252.76	338.48	**$ (142.28)**	-	-	169.15	**$ 169.15**	-	1,120.87	(14.76)	**$ 1,106.11**	**$ 946.61**
11/22/2019	(2,850.48)	(341.85)	1,212.75	**$ (1,979.58)**	(877.00)	(164.21)	576.65	**$ (464.56)**	-	(0.28)	162.73	**$ 162.45**	-	2,263.66	(19.66)	**$ 2,244.00**	**$ (37.69)**
11/23/2019	(2,570.75)	800.41	917.11	**$ (853.23)**	(405.72)	(112.69)	171.94	**$ (346.47)**	-	-	103.84	**$ 103.84**	-	1,106.38	(81.51)	**$ 1,024.87**	**$ (70.99)**
11/24/2019	(3,212.94)	1,213.86	1,177.43	**$ (821.65)**	(633.54)	(71.45)	326.66	**$ (378.33)**	-	-	104.69	**$ 104.69**	-	771.54	(61.43)	**$ 710.11**	**$ (385.18)**
11/25/2019	(2,287.54)	(18.79)	1,291.03	**$ (1,015.30)**	(596.47)	(17.40)	284.65	**$ (329.22)**	-	-	114.05	**$ 114.05**	-	1,167.26	(72.98)	**$ 1,094.28**	**$ (136.19)**
11/26/2019	(3,869.28)	685.81	1,184.78	**$ (1,998.69)**	(895.57)	157.95	352.82	**$ (384.80)**	-	-	107.23	**$ 107.23**	-	1,846.41	(169.68)	**$ 1,676.73**	**$ (599.53)**
11/27/2019	(2,553.53)	1,398.41	884.97	**$ (270.15)**	(705.20)	60.54	325.42	**$ (319.24)**	-	(0.71)	110.00	**$ 109.29**	-	751.71	(25.42)	**$ 726.29**	**$ 246.19**
11/28/2019	(3,975.66)	1,092.91	1,545.82	**$ (1,336.93)**	(740.93)	197.19	297.92	**$ (245.82)**	-	-	120.19	**$ 120.19**	-	576.34	(38.82)	**$ 537.52**	**$ (925.04)**
11/29/2019	(4,102.56)	481.07	1,220.34	**$ (2,401.15)**	(776.16)	241.18	314.62	**$ (220.36)**	-	-	111.89	**$ 111.89**	-	1,624.49	160.25	**$ 1,784.74**	**$ (724.88)**
11/30/2019	(3,435.57)	551.05	1,401.96	**$ (1,482.56)**	(1,194.09)	246.20	531.97	**$ (415.92)**	-	-	117.70	**$ 117.70**	-	1,212.80	(74.23)	**$ 1,138.57**	**$ (642.21)**
November Total	**$ (92,731.57)**	**$ 20,084.60**	**$ 35,424.92**	**$ (37,222.05)**	**$ (22,853.81)**	**$ 3,545.56**	**$ 14,987.23**	**$ (4,321.02)**	**$ (55.55)**	**$ (398.55)**	**$ 1,894.81**	**$ 1,440.71**	**$ -**	**$ 37,193.64**	**$ (195.47)**	**$ 36,998.17**	**$ (3,104.19)**
12/1/2019	(3,125.22)	746.28	1,188.69	**$ (1,190.25)**	(801.53)	111.41	360.74	**$ (329.38)**	-	-	104.74	**$ 104.74**	-	809.52	(33.95)	**$ 775.57**	**$ (639.32)**
12/2/2019	(3,783.34)	61.16	1,153.70	**$ (2,568.48)**	(968.27)	(88.38)	523.18	**$ (533.47)**	-	-	123.36	**$ 123.36**	-	1,732.92	(18.89)	**$ 1,714.03**	**$ (1,264.56)**
12/3/2019	(4,070.88)	1,387.94	1,074.13	**$ (1,608.81)**	(675.46)	375.93	241.04	**$ (58.49)**	-	-	108.06	**$ 108.06**	-	983.09	2.36	**$ 985.45**	**$ (573.79)**
12/4/2019	(3,340.46)	939.17	1,084.52	**$ (1,316.77)**	(656.40)	298.87	211.85	**$ (145.68)**	-	(1.37)	102.60	**$ 101.23**	-	997.96	(21.66)	**$ 976.30**	**$ (384.92)**
12/5/2019	(3,923.10)	1,394.03	1,244.17	**$ (1,284.90)**	(892.07)	60.90	302.48	**$ (528.69)**	-	(1.25)	101.59	**$ 100.34**	-	621.32	(42.47)	**$ 578.85**	**$ (1,134.40)**
12/6/2019	(3,501.14)	661.33	1,185.34	**$ (1,654.47)**	(987.18)	211.50	386.20	**$ (389.48)**	-	(4.27)	108.90	**$ 104.63**	-	1,038.81	(46.77)	**$ 992.04**	**$ (947.28)**
12/7/2019	(2,197.73)	683.11	738.07	**$ (776.55)**	(428.41)	191.11	132.45	**$ (104.85)**	-	(0.10)	104.79	**$ 104.69**	-	551.94	37.25	**$ 589.19**	**$ (187.52)**
12/8/2019	(2,502.26)	(15.16)	960.14	**$ (1,557.28)**	(601.85)	456.53	270.88	**$ 125.56**	-	(0.18)	105.70	**$ 105.52**	-	1,579.30	(4.47)	**$ 1,574.83**	**$ 248.63**
12/9/2019	(2,660.17)	622.66	816.09	**$ (1,221.42)**	(643.12)	359.49	204.57	**$ (79.06)**	-	(0.21)	105.66	**$ 105.45**	-	1,851.82	(44.07)	**$ 1,807.75**	**$ 612.72**
12/10/2019	(3,156.74)	11.38	1,097.56	**$ (2,047.80)**	(1,195.39)	(314.48)	641.37	**$ (868.50)**	-	-	152.22	**$ 152.22**	-	2,901.12	(47.25)	**$ 2,853.87**	**$ 89.79**
12/11/2019	(2,128.50)	(856.28)	1,045.45	**$ (1,939.33)**	(1,595.21)	(124.51)	689.03	**$ (1,030.69)**	-	(0.21)	147.01	**$ 146.80**	-	2,026.74	(31.93)	**$ 1,994.81**	**$ (828.41)**
12/12/2019	(793.20)	(1,803.97)	735.99	**$ (1,861.18)**	(1,046.95)	410.97	378.07	**$ (257.91)**	-	(1.34)	155.50	**$ 154.16**	-	1,825.75	(142.04)	**$ 1,683.71**	**$ (281.22)**
12/13/2019	(1,533.48)	(777.71)	692.44	**$ (1,618.75)**	(1,481.29)	681.09	613.32	**$ (186.88)**	-	-	109.10	**$ 109.10**	-	1,349.74	76.41	**$ 1,426.15**	**$ (270.38)**
12/14/2019	(1,900.28)	562.05	821.29	**$ (516.94)**	(677.23)	139.13	282.30	**$ (255.80)**	-	(1.30)	114.64	**$ 113.34**	-	470.63	(43.52)	**$ 427.11**	**$ (232.29)**
12/15/2019	(2,354.53)	1,057.89	920.35	**$ (376.29)**	(1,003.80)	133.97	511.72	**$ (358.11)**	(2.38)	1.69	117.10	**$ 116.41**	-	634.58	(8.51)	**$ 626.07**	**$ 8.08**
12/16/2019	(1,736.16)	187.75	1,100.12	**$ (448.29)**	(1,525.38)	83.61	754.57	**$ (687.20)**	(2.38)	1.97	106.30	**$ 105.89**	-	1,272.07	(104.67)	**$ 1,167.40**	**$ 137.80**
12/17/2019	(2,220.08)	(996.49)	771.34	**$ (2,445.23)**	(854.74)	201.72	465.76	**$ (187.26)**	-	-	99.99	**$ 99.99**	-	1,920.90	(75.88)	**$ 1,845.02**	**$ (687.48)**
12/18/2019	(2,554.01)	(1,705.45)	1,123.64	**$ (3,135.82)**	(1,372.48)	245.71	587.32	**$ (539.45)**	-	(0.21)	199.81	**$ 199.60**	-	1,347.53	1,017.29	**$ 2,364.82**	**$ (1,110.85)**
12/19/2019	(1,406.62)	19.46	1,096.29	**$ (290.87)**	(1,297.26)	(95.72)	854.45	**$ (538.53)**	-	(1.40)	164.29	**$ 162.89**	-	866.28	(63.56)	**$ 802.72**	**$ 136.21**
12/20/2019	(1,144.22)	66.23	982.98	**$ (95.01)**	(802.92)	(504.87)	532.62	**$ (775.17)**	-	-	130.01	**$ 130.01**	-	327.80	(71.25)	**$ 256.55**	**$ (483.62)**
12/21/2019	(1,545.60)	262.27	924.19	**$ (359.14)**	(456.70)	(251.92)	177.15	**$ (531.47)**	-	(7.50)	111.00	**$ 103.50**	-	579.74	(18.12)	**$ 561.62**	**$ (225.49)**
12/22/2019	(876.61)	346.65	598.33	**$ 68.37**	(373.36)	(199.21)	206.12	**$ (366.45)**	-	(11.45)	113.72	**$ 102.27**	-	170.57	(49.64)	**$ 120.93**	**$ (74.88)**
12/23/2019	(2,762.41)	936.86	985.93	**$ (839.62)**	(699.28)	(112.68)	381.63	**$ (430.33)**	-	(21.03)	116.68	**$ 95.65**	-	663.65	(15.82)	**$ 647.83**	**$ (526.47)**
12/24/2019	(3,090.42)	1,631.90	1,023.06	**$ (435.46)**	(533.04)	10.43	208.41	**$ (314.20)**	-	(14.48)	111.28	**$ 96.80**	-	251.52	(9.08)	**$ 242.44**	**$ (410.42)**
12/25/2019	(2,934.75)	1,293.22	1,035.14	**$ (606.39)**	(394.50)	34.43	145.23	**$ (214.84)**	-	(11.15)	103.16	**$ 92.01**	-	185.91	(2.87)	**$ 183.04**	**$ (546.18)**
12/26/2019	(3,247.35)	652.06	1,118.22	**$ (1,477.07)**	(652.39)	180.92	249.13	**$ (222.34)**	-	(12.07)	112.95	**$ 100.88**	-	1,233.10	(12.60)	**$ 1,220.50**	**$ (378.03)**
12/27/2019	(3,881.63)	446.65	1,235.42	**$ (2,199.56)**	(1,219.48)	99.81	533.90	**$ (585.77)**	-	(3.11)	110.32	**$ 107.21**	-	1,384.48	(57.95)	**$ 1,326.53**	**$ (1,351.59)**
12/28/2019	(3,631.04)	1,074.75	981.65	**$ (1,574.64)**	(814.88)	88.52	374.08	**$ (352.28)**	-	(7.02)	105.28	**$ 98.26**	-	1,360.04	(42.35)	**$ 1,317.69**	**$ (510.97)**
12/29/2019	(2,286.83)	754.25	809.21	**$ (723.37)**	(734.30)	63.07	371.19	**$ (300.04)**	(8.64)	7.37	103.75	**$ 102.48**	-	716.17	(91.43)	**$ 624.74**	**$ (296.19)**
12/30/2019	(2,957.57)	1,022.11	939.89	**$ (995.57)**	(1,672.77)	264.85	781.15	**$ (626.77)**	-	(0.48)	111.45	**$ 110.97**	-	1,034.16	(27.62)	**$ 1,006.54**	**$ (504.83)**
12/31/2019	(3,013.63)	873.86	1,071.35	**$ (1,068.42)**	(2,063.64)	418.67	909.30	**$ (735.67)**	-	(4.24)	129.45	**$ 125.21**	-	511.77	(51.11)	**$ 460.66**	**$ (1,218.22)**
December Total	**$ (80,259.96)**	**$ 11,539.96**	**$ 30,554.69**	**$ (38,165.31)**	**$ (29,121.28)**	**$ 3,430.87**	**$ 13,281.21**	**$ (12,409.20)**	**$ (13.40)**	**$ (93.34)**	**$ 3,690.41**	**$ 3,583.67**	**$ -**	**$ 33,200.93**	**$ (46.17)**	**$ 33,154.76**	**$ (13,836.08)**
Period to Date Total	**$ (1,178,871.54)**	**$ 166,507.46**	**$ 562,985.87**	**$ (449,378.21)**	**$ (653,852.51)**	**$ 98,300.60**	**$ 533,517.96**	**$ (22,033.95)**	**$ (3,762.34)**	**$ (8,420.83)**	**$ 118,493.76**	**$ 106,310.59**	**$ 1,065.32**	**$ 467,372.72**	**$ 19,633.39**	**$ 488,071.43**	**$ 122,969.86**

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

Cutoff date for data is 2/6/2020

Table 9-E: Contingency Reserve Deployment Events

Date	Day of Week	Node		Contingency Reserve Deployment Failure Charge Amount	HE	Shortfall MW	Event MW Provided	Event MW Requested
7/13/2018	Friday	Young 2	$	78.03	22	2.7	0.0	2.7
8/29/2018	Wednesday	Young 2	$	27.19	12	3.9	0.0	3.9
8/2/2019	Friday	Hibbard 4	$	179.66	2	4.2	5.8	10.0
		Total	**$**	**284.88**		**10.8**		

**PUBLIC DOCUMENT –
TRADE SECRET DATA EXCISED**

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

**PUBLIC DOCUMENT –
TRADE SECRET DATA EXCISED**

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

[TRADE SECRET DATA BEGINS [redacted]

TRADE SECRET DATA ENDS]

Minnesota Power's Self Scheduled FTRs from the 2018/2019 Annual Allocation:

		2018 / 2019 Annual Allocation							
		Summer 2018		Fall 2018		Winter 2018/2019		Spring 2019	
Source	Sink	On Peak	Off Peak	On Peak	Off Peak	On Peak	Off Peak	On Peak	Off Peak
[TRADE SECRET DATA BEGINS									
[redacted]									
TRADE SECRET DATA ENDS]									

**PUBLIC DOCUMENT –
TRADE SECRET DATA EXCISED**

Minnesota Power's Self Scheduled FTRs from the 2019/2020 Annual Allocation:

		2019 / 2020 Annual Allocation					
		Summer 2019		Fall 2019		Winter 2019/2020	
Source	Sink	On Peak	Off Peak	On Peak	Off Peak	On Peak	Off Peak
[TRADE SECRET DATA BEGINS							
[redacted]							
TRADE SECRET DATA ENDS]							

Minnesota Power's FTRs purchased in the Monthly Auction for the requested time period:

Monthly FTR Purchases						
Source	Sink	Class Period	Month	Awarded FTRs	Clearing ($/MW-Month)	Total Monthly Cost
[TRADE SECRET DATA BEGINS						
[redacted]						
TRADE SECRET DATA ENDS]						

**PUBLIC DOCUMENT –
TRADE SECRET DATA 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 BEGINS						
TRADE SECRET DATA ENDS]						

**PUBLIC DOCUMENT –
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
Jul-18	$ 315,202.67	$ (712,655.12)
Aug-18	$ 314,896.14	$ (396,440.48)
Sep-18	$ 432,436.64	$ (440,407.02)
Oct-18	$ 421,417.11	$ (404,569.84)
Nov-18	$ 418,414.26	$ (383,237.82)
Dec-18	$ 179,859.53	$ (330,049.06)
Jan-19	$ 138,096.03	$ (144,205.92)
Feb-19	$ 135,402.27	$ (159,611.38)
Mar-19	$ 305,344.01	$ (372,419.20)
Apr-19	$ 525,909.09	$ (838,776.92)
May-19	$ 290,626.59	$ (433,920.78)
Jun-19	$ 234,404.42	$ (489,873.71)
Jul-19	$ 232,681.64	$ (619,994.95)
Aug-19	$ 230,978.04	$ (1,275,913.72)
Sep-19	$ 305,640.24	$ (494,106.29)
Oct-19	$ 305,090.08	$ (1,679,357.86)
Nov-19	$ 304,689.84	$ (370,695.32)
Dec-19	$ 125,476.89	$ (157,817.51)

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.

**PUBLIC DOCUMENT –
TRADE SECRET DATA EXCISED**

Charge Type		Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Financial Transmission Rights Market Administration Amount	Cost	2,947.89	2,641.36	2,533.44	2,287.20	1,361.76	1,703.76
Auction Revenue Rights Transaction Amount	Revenue	(204,548.05)	(204,548.05)	(174,913.00)	(174,913.00)	(174,913.00)	(105,297.03)
Financial Transmission Rights Annual Transaction Amount	Cost	304,815.60	304,815.60	383,146.80	383,146.80	383,146.80	120,936.61
Auction Revenue Rights Infeasible Uplift Amount	Cost	7,439.18	7,439.18	22,445.92	22,445.92	22,445.92	7,160.21
Auction Revenue Rights Stage 2 Distribution Amount	Revenue	(92,397.22)	(92,397.30)	(71,649.62)	(71,649.62)	(71,042.24)	(89,298.76)
Financial Transmission Rights Full Funding Guarantee Amount	Revenue	(2,712.21)	-	1.84	(1,194.46)	(203.02)	44,752.07
FTR Guarantee Uplift Amount	Revenue	2,712.21	-	(1.80)	1,349.77	205.46	(47,123.68)
Financial Transmission Rights Monthly Transaction Amount	Cost	-	-	24,310.48	13,537.19	11,459.78	50,058.95
Financial Transmission Rights Hourly Allocation Amount	Revenue	(415,709.85)	(96,687.40)	(187,065.31)	(148,835.18)	(130,413.39)	(83,664.42)
Financial Transmission Rights Monthly Allocation Amount	Revenue	-	(2,807.73)	(6,779.13)	(9,327.35)	(6,871.63)	(4,665.17)
Financial Transmission Rights Transaction Amount	Cost	-	-	-	-	-	-
Financial Transmission Rights Yearly Allocation Amount	Revenue	-	-	-	-	-	(44,752.07)
Costs of hold FTRs		**315,202.67**	**314,896.14**	**432,436.64**	**421,417.11**	**418,414.26**	**179,859.53**
Revenue Generated from ARR/FTRs		**(712,655.12)**	**(396,440.48)**	**(440,407.02)**	**(404,569.84)**	**(383,237.82)**	**(330,049.06)**

**PUBLIC DOCUMENT –
TRADE SECRET DATA EXCISED**

Charge Type		Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total (Jul 2018 - Dec 2019)
Financial Transmission Rights Market Administration Amount	Cost	3,000.16	818 56	3,438.72	8,756.08	3,468.40	4,409.60	2,766.64	1063.04	3587 2	3,037 04	2,636 80	3,316.17	53,773 83
Auction Revenue Rights Transaction Amount	Revenue	(105,297.03)	(105,297 03)	(205,488 82)	(378,563.62)	(205,488.82)	(173,074.80)	(170,206.36)	-170206 36	-172029.84	(172,029 84)	(172,029 84)	(72,545.70)	(3,141,390.19)
Financial Transmission Rights Annual Transaction Amount	Cost	120,936.61	120,936 61	279,805 07	505,241.58	279,805.07	225,436.51	225,436.51	225436 51	291686.92	291,686 92	291,686 92	92,311.20	4,830,414.64
Auction Revenue Rights Infeasible Uplift Amount	Cost	7,159.35	7,159 35	10,438 83	14,997.14	10,438.83	4,558.31	4,478.49	4478.49	10366.12	10,366.12	10,366.12	7,513.13	191,696.61
Auction Revenue Rights Stage 2 Distribution Amount	Revenue	(89,805.43)	(89,805 56)	(30,057 27)	(124,087.54)	(30,057.27)	(94,515.58)	(93,189.22)	-93189.17	-59720.98	(59,720 98)	(59,720 98)	(66,690.22)	(1,378,994.96)
Financial Transmission Rights Full Funding Guarantee Amount	Revenue	(3,483.52)	-	(1,913 98)	(12,205.57)	(1,978.72)	(15,403.03)	(32,774.64)	-43922 5	-7556.32	(111,801.70)	(5,622 62)	(5,325.49)	(201,343.87)
FTR Guarantee Uplift Amount	Revenue	2,688.30	-	2,472.10	12,946.28	2,675.93	15,087.32	25,493.75	40978 9	8333.87	92,779 27	6,568 04	5,325.49	172,491.21
Financial Transmission Rights Monthly Transaction Amount	Cost	6,999.91	6,487.75	11,661 39	(3,085.71)	(3,085.71)	-	-	0	0	-	-	22,336.39	140,680.42
Financial Transmission Rights Hourly Allocation Amount	Revenue	55,862.60	42,126.76	(125,047 04)	(322,410.89)	(190,092.91)	(214,208.04)	(313,224.75)	-966353 08	-255935.12	(1,377,515 80)	(134,315 30)	(18,581.59)	(4,882,070.71)
Financial Transmission Rights Monthly Allocation Amount	Revenue	(4,170.84)	(6,635 55)	(12,384.19)	(14,455.58)	(8,978.99)	(7,759.58)	(36,093.73)	-43221 51	-7197 9	(51,068 81)	(5,574 62)	-	(227,992.31)
Financial Transmission Rights Transaction Amount	Cost	-	-	-	-	-	-	-	0	0	-	-	-	-
Financial Transmission Rights Yearly Allocation Amount	Revenue	-	-	-	-	-	-	-	0	0	-	-	-	(44,752 07)
Costs of hold FTRs		**138,096.03**	**135,402.27**	**305,344.01**	**525,909.09**	**290,626.59**	**234,404.42**	**232,681.64**	**230978.04**	**305640.24**	**305,090.08**	**304,689.84**	**125,476.89**	**5,216,565.50**
Revenue Generated from ARR/FTRs		**(144,205.92)**	**(159,611.38)**	**(372,419.20)**	**(838,776.92)**	**(433,920.78)**	**(489,873.71)**	**(619,994.95)**	**(1,275,913.72)**	**(494,106.29)**	**(1,679,357.86)**	**(370,695.32)**	**(157,817.51)**	**(9,704,052.90)**

Minnesota Power
Generation Facilities Maintenance Expenses
Docket No. E015/AA-06-1208, dated February 6, 2008

Minnesota Power
AAA Compliance Filing
Summary of Generation Maintenance Expenses

Steam Power Generation Maintenance	FERC Acct	2017 Actual Expenses [1]	Final Rates Test Year 2017 Docket No. E015/GR-16-664 [2]	2018 Actual Expenses [3]	2019 Projected Expenses [4]	Budget Test Year 2020 Docket No. E015/GR-19-442 [5]
Maintenance Supervision and Engineering	510	$4,074,056	$4,913,827	$3,357,688	$2,701,090	$4,124,087
Maintenance of Structures	511	$1,163,815	$582,993	$1,018,541	$532,581	$671,150
Maintenance of Boiler Plant	512	$11,731,724	$16,051,910	$9,613,150	$11,119,305	$11,663,286
Maintenance of Electric Plant	513	$3,226,061	$2,143,926	$2,713,305	$1,449,073	$1,851,131
Maintenance of Misc. Steam Plant	514	$4,725,423	$5,109,261	$3,867,090	$2,291,404	$2,200,024
Sub-Total Steam Power		$24,921,079	$28,801,917	$20,569,774	$18,093,453	$20,509,678
Hydraulic Power Generation Maintenance						
Maintenance Supervision and Engineering	541	$474,160	$514,969	$384,193	$35,199	$334,873
Maintenance of Structures	542	$45,560	$73,962	$76,957	$19,200	$60,395
Maintenance of Reservoirs, Dams and Waterways	543	$1,152,771	$604,374	$1,317,590	$1,053,818	$1,328,595
Maintenance of Electric Plant	544	$1,016,865	$1,581,601	$1,002,687	$942,297	$975,652
Maintenance of Misc. Hydraulic Plant	545	$1,306,137	$1,058,911	$1,242,398	$1,074,696	$1,134,230
Sub-Total Hydraulic Power		$3,995,493	$3,833,817	$4,023,825	$3,125,210	$3,833,745
Other Power Generation - Wind Maintenance						
Maintenance Supervision and Engineering	551	$25,426	$19,855	$18,976	$0	$504
Maintenance of Structures	552	$32,835	$15,000	$2,964	$50,000	$0
Maintenance of Generating and Electric Plant	553	$8,000,197	$9,116,984	$9,234,251	$9,238,012	$10,026,743
Maintenance of Misc. Other Pwr Generation Plt.	554	$1,580,917	$211,331	$2,201,046	$1,274,037	$1,723,270
Sub-Total Other Power - Wind		$9,639,375	$9,363,170	$11,457,237	$10,562,049	$11,750,517
TOTAL		$38,555,947	$41,998,904	$36,050,836	$31,780,712	$36,093,940

[1] 2017 FERC Form 1, pages 320 and 321, column (b)
[2] Docket E015/GR-16-664 Compliance Filing dated 6-28-18, Section VIII, Compliance Schedule 16, CCOSS, column Total Company
[3] 2018 FERC Form 1, page 320 and 321, column (b), and Docket No. E015/GR-19-442, Volume 4, Workpaper IS-20 2018 O-M Actual, page 1 of 4
[4] Docket No. E015/GR-19-442, Volume 4, Workpaper IS-02, 2019 O&M Projected, page 1 of 4. 2019 costs are projected until the FERC Form 1 is filed. Minnesota Power will submit a supplemental filing with Actual 2019 costs after the FERC Form 1 is filed in April 2020.
[5] Docket No. E015/GR-19-442, Income Statement 2020 Test Year Adjusted

PUBLIC DOCUMENT
TRADE SECRET DATA EXCISED

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

PUBLIC DOCUMENT
TRADE SECRET DATA 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 BEGINS

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TRADE SECRET DATA ENDS]

PUBLIC DOCUMENT
TRADE SECRET DATA EXCISED

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

[TRADE SECRET DATA BEGINS

Station Name	Unit No.	High Voltage (kV)	Low Voltage (kV)	Rating (KVA)	Status
[redacted]					

TRADE SECRET DATA ENDS]

PUBLIC DOCUMENT
TRADE SECRET DATA EXCISED

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

[TRADE SECRET DATA BEGINS

Station Name	Unit No.	High Voltage (kV)	Low Voltage (kV)	Rating (KVA)	Status
[redacted]					

TRADE SECRET DATA ENDS]

PUBLIC DOCUMENT
TRADE SECRET EXCISED

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

Docket No. E015/M-10-961; Order Date 03/11/2011

PUBLIC DOCUMENT
TRADE SECRET EXCISED

On March 11, 2011, the Commission issued an Order in Docket No. E-015/M-10-961 approving Minnesota Power's Purchase Power Agreement with Manitoba Hydro for the period of July 2018 through December 2020. Order Point 4 required Minnesota Power to provide the following information in future annual automatic adjustment reports.

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 short-term bilateral energy market in Minnesota is thinly traded. In the short-term markets, Minnesota Power has undertaken efforts to procure energy from sources in the bilateral market when there are not sufficient Minnesota Power resources available to meet customer load. To date, however, Minnesota Power has utilized the MISO market for most of its short-term energy needs.

d) the prices of alternative energy

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

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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 BEGINS]** [redacted] **TRADE SECRET DATA ENDS]**. This **[TRADE SECRET DATA BEGINS** [redacted] **TRADE SECRET DATA ENDS]** price is equivalent to the **[TRADE SECRET DATA BEGINS** [redacted] **TRADE SECRET DATA ENDS]**. Since most energy purchased is transacted with MISO, the price for Product B & C is the same as the alternate energy sources.

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Appendix A

2020 MHEB Product B & C
Minnesota Power - Short-term Non-firm Energy Sale Agreement

	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
Offered (MWh)	[TRADE SECRET DATA BEGINS																	
Product B																		
Product C																		
Total																		
Accepted (MWh)																		
Product B																		
Product C																		
Total																		
Curtailment (MWh)																		
Product B																		
Product C																		
Total																		
Accepted less Curtailment (MWh)																		
Product B																		
Product C																		
Total																		
Number of Instances Offered																		
Product B																		
Product C																		
Total																		
Number of Instances Accepted																		
Product B																		
Product C																		
Total																		

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PUBLIC DOCUMENT
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Minnesota Power
Offsetting Revenues and/or Compensation Received by Investor-Owned Utilities (IOUs)
Docket No. E999/AA-10-884, dated April 6, 2012

PUBLIC DOCUMENT
TRADE SECRET DATA EXCISED

Minnesota Power's Offsetting Revenues
For the Reporting Period of July 1, 2018 through December 31, 2019

[TRADE SECRET DATA BEGINS

Source	MWh	Offsetting Revenues /1
[redacted]		

TRADE SECRET DATA ENDS]

/1 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.

Filed in monthly fuel filings Docket No.

Fuel Cost Month	Docket No.
July 2018	18-569
August 2018	18-617
September 2018	18-671
October 2018	18-742
November 2018	18-784
December 2018	19-114
January 2019	19-194
February 2019	19-251
March 2019	19-294
April 2019	19-372
May 2019	19-431
June 2019	19-488
July 2019	19-546
August 2019	19-601
September 2019	19-680
October 2019	19-754
November 2019	19-832
December 2019	20-173

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

Our maintenance practices and reliability programs are constantly being evaluated to ensure continuous improvement of our employees' skills and work processes to improve 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.

Our Outage Planning process continues to be a focal area. A systematic approach to outage planning with improved tools has resulted in projects safely and efficiently executed while ensuring equipment reliability. Outage duration is set based on project scope with project milestones identified, resources allocated, materials ordered, and safety plans in place. Automated reports allow for better coordination, communication, budget management, and analysis of work required. For example, inspection activities that can only be performed with the unit offline are identified so they can be scheduled as early as possible in an outage to allow time to complete work within the outage window.

We continue to implement 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 a 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	Event Type	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
BEC 2	Unplanned Outage	Boiler Waterwall Leak	2,542	7/16/18 14:34	7/18/18 4:30	Superheat Tube Leak.	Tube failed due to fatigue.	Repair and inspect surrounding areas. The superheat is at the end of its useful life, however the unit will retire at the end of the year and no further action will be taken.	$ 20,840
BEC 2	Unplanned Outage	Boiler SH Tube Leak	1,639	7/30/18 23:32	8/1/18 6:27	Boiler Reheat Tube Leak	Fireside erosion.	Repair and inspect surrounding areas. The superheat is at the end of its useful life, however the unit will retire at the end of the year and no further action will be taken.	
BEC 4	Unplanned Outage	Boiler SH Tube Leak	34,636	7/17/18 0:02	7/19/18 11:45	Superheat Tube Leak.	Fatigue stress cracking - overheating.	The refractories were removed to inspect every tube connection on the header. During that inspection an additional crack was repaired.	$ 122,673
BEC 3	Unplanned Outage	Boiler Waterwall Leak	12,860	7/25/18 22:07	7/27/18 10:39	Waterwall tube.	Corrosion Fatigue.	Inspect and repair surrounding area. A capital project was completed in 2019 to address areas where failures occurred over the past 3 years.	$ (60)
BEC 2	Unplanned Outage	Boiler Super Heat Tube Leak	2,071	7/30/18 23:32	8/1/18 6:27	Reheater and Superheat Tube Leak.	Fatigue stress cracking - overheating.	Reheat tube was sectioned out and replaced and the superheat tube was repaired in place. These elements are near the end of life and will not be replaced due to unit retirement at year-end.	$ (2,063)
BEC 1	Unplanned Outage	Boiler Waterwall Leak	2,102	8/9/18 22:10	8/11/18 5:32	Waterwall Tube Leak.	Urea injection nozzle.	Repaired nozzle.	$ 10,095
BEC 3	Unplanned Outage	Boiler Waterwall Leak	12,596	8/14/18 23:59	8/16/18 11:46	Waterwall Tube Leak.	Corrosion Fatigue.	Inspect and repair surrounding area. Additional inspection and repairs were completed in the spring 2019 outage.	$ 80,454
BEC 3	Unplanned Outage	Boiler Waterwall Leak	16,239	9/19/18 20:21	9/21/18 18:29	Waterwall Tube Leak.	Corrosion Fatigue.	Inspect and repair surrounding area. Additional inspection and repairs were completed in the spring 2019 outage.	$ 17,190
BEC 3	Unplanned Outage	Boiler Waterwall Tube Leak	19,002	10/3/18 17:25	10/5/18 23:24	Waterwall Tube Leak.	Corrosion Fatigue.	Repaired tube leak. 2019 outage project completed to remove seal skirt, grind weld, perform 100% inspection and reattach seal skirt. 22 tubes were replaced at this time.	$ 110,721
BEC 4	Unplanned Outage	Flash Tank Piping Leak	8,700	10/14/18 21:57	10/15/18 12:57	Boiler Flash Tank Pipe Connection.	Failure from fatigue.	Pipe connection was repaired.	$ 46,402
BEC 1	Unplanned Outage	Boiler Waterwall Leak	2,478	11/9/18 0:05	11/10/1018 13:04	Waterwall Tube Leak.	Sootblower erosion caused tube failure.	Inspected surrounding areas and repaired. Unit will be retired at year-end.	$ 4,914

Unit	Event Type	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
BEC 3	Unplanned Outage	Boiler Waterwall Leak	20,340	11/12/18 18:02	11/15/18 3:49	Waterwall Tube Leak.	Sootblower erosion caused tube failure.	Inspected and repaired pad weld and other tubes in the area. Also found pinhole leak on steam cooled spacer tube.	$ 383,147
BEC 3	Unplanned Outage	Boiler Waterwall Leak	10,026	11/29/18 0:24	11/30/18 4:53	Waterwall Tube Leak.	Tube failed at a boiler connection / support. Appears to be corrosion fatigue.	2019 outage project completed to remove seal skirt, grind weld, perform 100% inspection and reattach seal skirt. 22 tubes were replaced at this time.	
BEC 3	Unplanned Outage	Condenser Tube Leak	22,540	12/22/18 0:10	12/24/18 16:12	Condenser.	Condenser tube corrosion fatigue at transition zone.	Eddy current testing of transition zone was completed in the 2019 spring outage. 7 tubes at risk of failing were identified and plugged. Condenser isolation valves were repaired in 2019 spring outage to allow isolation without taking the unit offline.	$ 26,582
BEC 4	Unplanned Outage	Condenser Tube Leak Repair	29,435	12/29/18 21:15	1/1/19 0:00	Condenser.	Use Condenser tube fatigue crack.	Plugged cracked tube.	$ 32,151
BEC 4	Unplanned Outage	Condenser Tube Leak Repair	1,692	1/1/19 0:00	1/1/19 2:55	Gas Ignitor Solenoid.	Solenoid failure.	Replaced solenoid.	$ 7,716
BEC 3	Unplanned Outage	Repair Hydrogen Leak	11,252	2/2/19 22:50	2/4/19 6:48	Generator Lead Box.	Hydrogen leak on generator lead box.	Leak was temporarily patched externally. Internal repairs were executed during the 2019 outage to eliminate the lead box leak.	$ 89,610
BEC 3	Unplanned Outage	Boiler Waterwall Leak	11,622	2/22/19 12:36	2/23/19 21:37	Waterwall Tube Leak.	Corrosion Fatigue.	Inspect and repair surrounding area. A capital project was completed in 2019 to inspect for corrosion fatigue.	
BEC 4	Unplanned Outage	Hot Reheat Line Steam Leak	313,403	2/6/19 11:39	3/27/19 11:43	Hot Reheat Steam Line.	Hot reheat line failed on longitudinal seam weld.	The failure occurred on a longitudinal seam, which had been inspected as part of a normal maintenance schedule. The entire steam line required inspection to identify potential for future failure and minimize risk to employees and equipment due to catastrophic failure of the line. The entire hot reheat line was scaffolded, insulation removed, and inspected by two different consultants. Three sections of pipe were replaced and 140' of patch plate installed on advice of consultants. The entire line will be replaced with seamless pipe in 2020.	$ 4,482,456
BEC 3	Unplanned Outage	Hydrogen Leak Repair	70,676	6/14/19 15:01	6/22/19 23:47	Generator Seal Oil System.	The generator failed the air test, losing hydrogen at an unacceptable rate. The cause was failure of the float trap valve.	Float Valve was replaced and added to inspection list for future overhauls on this Turbine.	$ 71,711

Unit	Event Type	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
BEC 3	Unplanned Outage	Boiler Circulation Pump 3C Replacement	18,351	7/5/19 20:00	7/8/19 0:08	3C Boiler Circulation Pump.	Failed mechanical seal on the 3C Boiler Circulation Pump.	3C BCP was replaced with spare on hand.	
BEC 3	Unplanned Outage	Turbine Trip Caused by "A" Phase Bushing Failure	150,773	7/8/19 19:13	7/26/19 15:33	Generator Bushing Failure.	Unit tripped on stator ground fault.	"A" phase line side bushing failed. The OEM was brought in to diagnose and repair. The OEM had no conclusive answer as to why this particular bushing failed. Since the other bushings were of a similar age and labor and parts were already mobilized, it was decided to replace all six bushings and gaskets in the lead box area.	$ 1,736,961
BEC 3	Unplanned Outage	Boiler SH Tube Leak	15,828	8/1/19 19:17	8/3/19 16:15	Boiler Superheat Tube Leak.	Thermal fatigue.	Sectioned out and replaced. Superheat platen pendant inspection scheduled for next outage of sufficient length.	$ 217,669
BEC 4	Unplanned Outage	Condenser Cleaning	35,535	8/16/19 19:17	8/19/19 8:33	Condenser.	Mechanical failures of the online condenser cleaning system allowed for biological buildup in condenser that created excessive backpressure.	Online cleaning system was repaired. Engineering assessment initiated to evaluate options to improve the online cleaning system. Repairs planned for 2020.	$ 244,491
BEC 3	Unplanned Outage	Boiler Waterwall Leak	10,202	10/10/19 21:54	10/12/19 2:53	Boiler Waterwall Leak.	Corrosion Fatigue.	Leak was ground out and repaired following MN Power Weld Program guidelines.	$ (4,044)
BEC 3	Unplanned Outage	Boiler Waterwall Leak	22,956	12/19/19 22:19	12/22/20119 15:29	Waterwall and superheat tube leak	Dissimilar metal weld failure.	Crack repaired, dissimilar metal weld inspection to be completed at next outage of sufficient duration.	$ 28,383

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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 Nos. E999/AA-09-961 and E999/AA-10-884, dated April 6, 2012

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 2019-2020 to the capacity ratings used in its 2015 Resource Plan (See Table A which contains Trade Secret Data). The capacity values used in Minnesota Power's 2015 Resource Plan were based on MISO Planning Year 2015-2016 capacity values; therefore, there are a couple of differences between the UCAP values as noted below.

Wind Generation

There is an approximate 10 MW difference in the wind UCAP capacity values between MISO Planning Year 2019-2020 and the 2015 Resource Plan. The higher wind UCAP capacity value used in the MISO Planning Year 2019-2020 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.

Solar Generation

Since the 2015 Resource Plan, Minnesota Power has added 7.6 MW of accredited solar PV capacity, from resources located in Little Falls, Wrenshall, and Duluth, all in Minnesota. These resources were not in service nor accredited as a capacity resource

in Planning 2015-2016 and have been added to the total power supply since the 2015 Resource Plan.

Thomson Hydro

There is an approximate 59 MW difference in the pondage hydro UCAP capacity values between MISO Planning Year 2019-2020 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 is a reduced UCAP value for MISO Planning Year 2015-2016 which was used in the 2015 Resource Plan for only 2015. For MISO Planning Year 2019-2020, Thomson Hydro has been returned to full service and the UCAP value is for the entire facility.

Boswell Energy Center 1 and 2

The accredited capacity from Boswell Energy Center units 1 & 2 was included in the 2015 Resource Plan. Starting with Planning Year 2018-2019, these units were no longer accredited in MISO as a capacity resource due to their retirement at the end of 2018.

Taconite Harbor 3

The capacity of this unit has not been accredited since the unit was suspended per the MISO Attachment Y submittal in 2014 as a result of the 2013 Resource Plan. As of June 1, 2018, Taconite Harbor Unit 3 has been retired per the MISO Attachment Y process.

Bilateral Purchase Transactions

There are three bilateral power purchase agreements with Great River Energy that total 150 MW of UCAP capacity in Planning Year 2019-2020. The duration of these three bilateral contracts vary. Two of the power purchase agreements (50 MW each) are from 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. The third power purchase agreement with Great River Energy (50 MW) goes from June 1, 2017 through May 31, 2020. This purchased capacity replaced the capacity idled at Taconite Harbor units 1 & 2 per Minnesota Power short term action plan from the 2015 Resource Plan. The accredited capacity from these bilateral power purchase agreements was added as a result of the 2015 Resource Plan.

There was one 50 MW bilateral power purchase agreement with Minnkota Power Cooperative, Inc. in Planning Year 2019-2020. The duration of this power purchase agreement is January 1, 2014 through May 31, 2020. The purchased capacity from Minnkota 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. The accredited capacity from this bilateral power purchase agreement was included in the 2015 Resource Plan.

Minnesota Power also has two bilateral power purchase agreements with Manitoba Hydro that total 100 MW of UCAP Capacity. The duration of these two contracts vary. The first 50 MW power purchase agreement with Manitoba Hydro goes from June 1, 2015 through May 31, 2020. The purchased capacity from 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. The accredited capacity from this bilateral power purchase agreement was included in the 2015 Resource Plan.

The second 50 MW power purchase agreement with Manitoba Hydro goes from June 1, 2017 through May 31, 2020. This purchased capacity replaced the capacity idled at Taconite Harbor units 1 & 2 per Minnesota Power short term action plan from the 2015 Resource Plan. The accredited capacity from this bilateral power purchase agreement was added as a result of the 2015 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.[1]

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 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.

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.

[1] https://www.misoenergy.org/Library/Agreements/Pages/InterconnectionAgreements.aspx

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 one capacity resource that currently has ERIS interconnection service with MISO; the Taconite Ridge wind farm. Details for 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 25 MW 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.

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Table A: Planning Year 2019-2020 Compared to 2015 Resource Plan Capacity Values

MISO PY 2015-2016

MN Power Thermal Generation	Planning Year 2019-2020 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
	[TRADE SECRET DATA BEGINS		
Boswell 1 /**1**			
Boswell 2 /**1**			
Boswell 3			
Boswell 4			
Hibbard 3&4			
Laskin 1			
Laskin 2			
Young 2/Square Butte			
Taconite Harbor 1 **/4**			
Taconite Harbor 2 **/4**			
Taconite Harbor 3 /**2**			
SAPPI TG 5 **/3**			
Total			
	TRADE SECRET DATA ENDS]		

/1 Boswell Units 1 & 2 were retired at the end of 2018
/2 Taconite Harbor Unit 3 was retired effective June 1st, 2018.
/3 SAPPI TG 5 is no longer owned by Minnesota Power
/4 Zonal Resource Credits granted by MISO for use in PY 19-20 Planning Resource Auction

MN Power Hydro Generation	Planning Year 2019-2020 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
	[TRADE SECRET DATA BEGINS		
Pondage			
Run of River			
Total			
	TRADE SECRET DATA ENDS]		

Bilateral Purchase Transactions	Planning Year 2019-2020 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
	[TRADE SECRET DATA BEGINS		
MHEB			
Minnkota			
Great River Energy			
Xcel			
Total			
	TRADE SECRET DATA ENDS]		

Behind The Meter Generation (BTMG)	Planning Year 2019-2020 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
	[TRADE SECRET DATA BEGINS		
Customer Owned			
Minnesota Power Owned Non-Regulated			
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			
BTMG Modeled in Strategist (non-coincident Customer Net Generation)			
	TRADE SECRET DATA ENDS]		

Wind Generation	Planning Year 2019-2020 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
	[TRADE SECRET DATA BEGINS		
Oliver 1 & 2			
Bison 1-4			
Taconite Ridge			
Total			
	TRADE SECRET ENDS]		

Solar Generation	Planning Year 2019-2020 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
	[TRADE SECRET DATA BEGINS		
Camp Ripley			
Solar Garden			
Total			
	TRADE SECRET DATA ENDS]		

	Planning Year 2019-2020 UCAP Value	2015 Resource Plan Capacity ICAP Values	2015 Resource Plan Capacity UCAP Values
	[TRADE SECRET DATA BEGINS		
TOTAL OF ALL CAPACITY			
	TRADE SECRET DATA ENDS]		

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 /**1**	BOSWELL 1	75	75	0	
MP.BOS112 /**1**	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 /**2**	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 /**3**	TACONITE HARBOR 3	0.0	0	0	0
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	

/1 Boswell Units 1 & 2 were retired at the end of 2018
/2 SAPPI TG 5 is no longer owned by Minnesota Power and is now BTMG
/3 Taconite Harbor Unit 3 was retired effective June 1st, 2018.

Minnesota Power's
Congestion Cost Analysis

Docket No. E999/AA-08-995, dated March 15, 2010

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 2018 through December 2019. 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, 2018 through December 31, 2019. 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, 2018 through December 31, 2019. 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 LMP at the generator
DA MCC Load	Day Ahead Marginal Congestion Component of the 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, 2018 through December 31, 2019. 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. However, 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 2018 – December 2019

	Path Node to MP.MP	Total DA Congestion	HVDC Utilization	FTR Revenues	Net Congestion
1	MP.BISON1	7,306,681.79	(4,835,769.26)	(388,498.34)	2,082,414.19
2	OTP.Y2ACGEN.MP	2,692,436.99	(1,781,931.17)	26,342.18	936,848.00
3	MP.OLIVER12	1,428,086.56	(945,148.19)	(184,808.93)	298,129.44
4	MP.BOS233	1,085,560.59		(1,170,009.98)	(84,449.39)
5	MP.MP_BOS4	615,349.57		(2,209,747.78)	(1,594,398.21)
6	MP.THOMSON	202,898.41			202,898.41
7	MP.BLNCHR123	171,877.09		(121,985.38)	49,891.71
8	MP.FONDLA1	33,923.53			33,923.53
9	MP.BOS112	29,951.44		(23,404.74)	6,546.70
10	MP.BOS111	28,604.04		(27,348.12)	1,255.92
	Subtotal of top 10	**13,595,370.01**	**(7,562,848.62)**	**(4,099,461.09)**	**1,933,060.30**
	WPS.OCONTO.MP	1,854.80			1,854.80
	MP.TACHB1	0.00			0.00
	MP.TACHB2	0.00			0.00
	MP.TACHB3	0.00			0.00
	MP.TACRIDGE1	(12,778.85)			(12,778.85)
	MP.HIBBAR3	(17,550.46)			(17,550.46)
	MP.LASKIN1	(57,064.67)			(57,064.67)
	MP.LAKSIN2	(68,742.46)			(68,742.46)
	MP.HIBBAR4	(97,153.97)			(97,153.97)
	Grand Total	**13,343,934.41**	**(7,562,848.62)**	**(4,099,461.09)**	**1,681,624.70**

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 2018-December 2019:

1. Identification for the period of July 2018-December 2019 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 EXCISED

Oliver I and II Wind Curtailment Reporting

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

PUBLIC DOCUMENT
TRADE SECRET DATA EXCISED

	Oliver County I			
	FPL Wind Energy in FAC (MWh)	Curtailments of Wind Energy MWh	Curtailment Payments by MP	Reason Codes
	[TRADE SECRET DATA BEGINS			
July 2018	[redacted]			2
August 2018				2
September 2018				2
October 2018				2
November 2018				2
December 2018				2
Januray 2019				2
February 2019				None
March 2019				2
April 2019				2
May 2019				2
June 2019				2
July 2019				2
August 2019				2
September 2019				2
October 2019				2
November 2019				2
December 2019				2
Total				

TRADE SECRET DATA ENDS]

Reason Codes:

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 EXCISED

	Oliver County II			
	FPL Wind Energy in FAC (MWh)	Curtailments of Wind Energy MWh	Curtailment Payments by MP	Reason Codes
	[TRADE SECRET DATA BEGINS			
July 2018	[redacted]			2
August 2018				2
September 2018				2
October 2018				2
November 2018				2
December 2018				2
Januray 2019				2
February 2019				None
March 2019				2
April 2019				2
May 2019				2
June 2019				2
July 2019				2
August 2019				2
September 2019				2
October 2019				2
November 2019				2
December 2019				2
Total				

TRADE SECRET DATA ENDS]

Reason Codes:

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.

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

PUBLIC DOCUMENT
TRADE SECRET DATA EXCISED

Minnesota Power
Bison Wind Energy Curtailment Reporting
Reporting Period: July 1, 2018 - December 31, 2019

	Delivered MWh	Lost MWh
	[TRADE SECRET DATA BEGINS	
Jul-18		
Aug-18		
Sep-18		
Oct-18		
Nov-18		
Dec-18		
Jan-19		
Feb-19		
Mar-19		
Apr-19		
May-19		
Jun-19		
Jul-19		
Aug-19		
Sep-19		
Oct-19		
Nov-19		
Dec-19		
Total		
	TRADE SECRET DATA ENDS]	

Attachment No. 21

Notice of Report Availability, Certificate of Service, and Service Lists

Minn. Rule 2840

minnesota power
AN ALLETE COMPANY

30 West Superior Street
Duluth, MN 55802-2093
www.mnpower.com

Notice of Reports Availability

To: All Interveners in Minnesota Power
Retail Rate Proceedings
Docket Nos. E015/GR-16-664 and E015/GR-19-442

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 report filed includes the following:

a) Independent auditor's report with regard to monthly fuel adjustments
b) Procurement policies for selecting fuel and energy purchased
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. A copy of the above report is

available for public inspection at the MPUC offices, 121 East 7th Place, Suite 350, St. Paul, MN 55101-2147, on the Minnesota Department of Commerce edockets website (https://www.edockets.state.mn.us/EFiling), or upon written request to the following:

Minnesota Power
Hillary A. Creurer
Regulatory Compliance Administrator
30 West Superior Street
Duluth, MN 55802

Please note that certain information contained in these reports is considered trade secret and is unavailable to the public.

Certificate of Service

It is hereby certified that the foregoing Notice of Report Availability, along with a copy of the report, was delivered to the Minnesota Department of Commerce and the Office of the Attorney General, and the interveners in Minnesota Power's previous two general rate cases.

Minnesota Power

By:

/s/ Hillary A. Creurer

Hillary A. Creurer
Regulatory Compliance Administrator

Dated: March 2, 2020

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Lori	Andresen	info@sosbluewaters.org	Save Our Sky Blue Waters	P.O. Box 3661 Duluth, Minnesota 55803	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Peter	Beithon	pbeithon@otpco.com	Otter Tail Power Company	P.O. Box 496 215 South Cascade Street Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Sundra	Bender	sundra.bender@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 Saint Paul, MN 55101-2147	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Sara	Bergan	sebergan@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
David F.	Boehm	dboehm@bkllawfirm.com	Boehm, Kurtz & Lowry	36 E 7th St Ste 1510 Cincinnati, OH 45202	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Elizabeth	Brama	ebrama@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Jon	Brekke	jbrekke@grenergy.com	Great River Energy	12300 Elm Creek Boulevard Maple Grove, MN 553694718	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Christina	Brusven	cbrusven@fredlaw.com	Fredrikson Byron	200 S 6th St Ste 4000 Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Michael J.	Bull	mbull@mncee.org	Center for Energy and Environment	212 Third Ave N Ste 560 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
David	Cartella	David.Cartella@cliffsnr.com	Cliffs Natural Resources Inc.	200 Public Square Ste 3300 Cleveland, OH 44114-2315	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Greg	Chandler	greg.chandler@upm.com	UPM Blandin Paper	115 SW First St Grand Rapids, MN 55744	Paper Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Steve W.	Chriss	Stephen.chriss@walmart.com	Wal-Mart	2001 SE 10th St. Bentonville, AR 72716-5530	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Lisa	Daniels	lisadaniels@windustry.org	Windustry	201 Ridgewood Ave Minneapolis, MN 55403	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Ron	Elwood	relwood@mnlsap.org	Mid-Minnesota Legal Aid	2324 University Ave Ste 101 Saint Paul, MN 55114	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Edward	Garvey	garveyed@aol.com	Residence	32 Lawton St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
John R.	Gasele	jgasele@fryberger.com	Fryberger Buchanan Smith & Frederick PA	700 Lonsdale Building 302 W Superior St Ste 700 Duluth, MN 55802	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Bruce	Gerhardson	bgerhardson@otpco.com	Otter Tail Power Company	PO Box 496 215 S Cascade St Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Barbara	Gervais	toftemn@boreal.org	Town of Tofte	P O Box 2293 7240 Tofte Park Road Tofte, MN 55615	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
J Drake	Hamilton	hamilton@fresh-energy.org	Fresh Energy	408 St Peter St Saint Paul, MN 55101	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Robert	Harding	robert.harding@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Annete	Henkel	mui@mnutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St.Paul, MN 55101	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Shane	Henriksen	shane.henriksen@enbridge.com	Enbridge Energy Company, Inc.	1409 Hammond Ave FL 2 Superior, WI 54880	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Valerie	Herring	vherring@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 S. Eighth Street Minneapolis, MN 55402	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Lori	Hoyum	lhoyum@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
James	Jarvi	N/A	Minnesota Ore Operations - U S Steel	P O Box 417 Mountain Iron, MN 55768	Paper Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2950 Yellowtail Ave. Marathon, FL 33050	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Linda	Jensen	linda.s.jensen@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Kelsey	Johnson	info@taconite.org	Iron Mining Association	324 West Superior St Ste 502 Duluth, MN 55802	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Travis	Kolari	N/A	Keetac	PO Box 217 Keewatin, MN 55753	Paper Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Michael	Krikava	mkrikava@taftlaw.com	TAFT Stettinius & Hollister, LLP	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Ganesh	Krishnan	ganesh.krishnan@state.mn.us	Public Utilities Commission	Suite 350121 7th Place East St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Becky	Lammi	cityclerk@ci.aurora.mn.us	City of Aurora	16 W 2nd Ave N PO Box 160 Aurura, MN 55705	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
David	Langmo	david.langmo@sappi.com	Sappi North America	P O Box 511 2201 Avenue B Cloquet, MN 55720	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Emily	Larson	eLarson@duluthmn.gov	City of Duluth	411 W 1st St Rm 403 Duluth, MN 55802	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Douglas	Larson	dlarson@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
James D.	Larson	james.larson@avantenergy.com	Avant Energy Services	220 S 6th St Ste 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Annie	Levenson Falk	annielf@cubminnesota.org	Citizens Utility Board of Minnesota	332 Minnesota Street, Suite W1360 St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
LeRoger	Lind	llind@yahoo.com	Save Lake Superior Association	P.O. Box 101 Two Harbors, MN 55616	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Eric	Lindberg	elindberg@mncenter.org	Minnesota Center for Environmental Advocacy	1919 University Avenue West Suite 515 Saint Paul, MN 55104-3435	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Patrick	Loupin	PatrickLoupin@PackagingCorp.com	Packaging Corporation of America	PO Box 990050 Boise, ID 83799-0050	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Susan	Ludwig	sludwig@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Kavita	Maini	kmaini@wi.rr.com	KM Energy Consulting, LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Sarah	Manchester	sarah.manchester@sappi.com	Sappi North American	255 State Street Floor 4 Boston, MA 02109-2617	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Tony	Mancuso	mancusot@stlouiscountymn.gov	Saint Louis County Property Mgmt Dept	Duluth Courthouse 100 N 5th Ave W Rm 515 Duluth, MN 55802-1209	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Keith	Matzdorf	keith.matzdorf@sappi.com	Sappi Fine Paper North America	PO Box 511 2201 Avenue B Cloquet, MN 55720	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Daryl	Maxwell	dmaxwell@hydro.mb.ca	Manitoba Hydro	360 Portage Ave FL 16 PO Box 815, Station Main Winnipeg, Manitoba R3C 2P4 Canada	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Matthew	McClincy	MMcClincy@usg.com	USG	35 Arch Street Clouqet, MN 55720	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Craig	McDonnell	Craig.McDonnell@state.mn.us	MN Pollution Control Agency	520 Lafayette Road St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Natalie	McIntire	natalie.mcintire@gmail.com	Wind on the Wires	570 Asbury St Ste 201 Saint Paul, MN 55104-1850	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
James	Mortenson	james.mortenson@state.mn.us	Office of Administrative Hearings	PO BOX 64620 St. Paul, MN 55164-0620	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Michael	Noble	noble@fresh-energy.org	Fresh Energy	Hamm Bldg., Suite 220 408 St. Peter Street St. Paul, MN 55102	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Rolf	Nordstrom	rnordstrom@gpisd.net	Great Plains Institute	2801 21ST AVE S STE 220 Minneapolis, MN 55407-1229	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Kate	O'Connell	kate.oconnell@state.mn.us	Department of Commerce	Suite 50085 Seventh Place East St. Paul, MN 551012198	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Kevin	O'Grady	kevin.ogrady@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Christopher J.	Oppitz	N/A	-	110 1/2 1ST ST E Park Rapids, MN 56470-1695	Paper Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Elanne	Palcich	epalcich@cpinternet.com	Save Our Sky Blue Waters	P.O. Box 3661 Duluth, MN 55803	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Max	Peters	maxp@cohasset-mn.com	City of Cohasset	305 NW First Ave Cohasset, MN 55721	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Jennifer	Peterson	jjpeterson@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
William	Phillips	wphillips@aarp.org	AARP	30 E. 7th St Suite 1200 St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Marcia	Podratz	mpodratz@mnpower.com	Minnesota Power	30 W Superior S Duluth, MN 55802	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Tolaver	Rapp	Tolaver.Rapp@cliffsnr.com	Cliffs Natural Resources	200 Public Square Suite 3400 Cleveland, OH 441142318	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Ralph	Riberich	rriberich@uss.com	United States Steel Corp	600 Grant St Ste 2028 Pittsburgh, PA 15219	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Buddy	Robinson	buddy@citizensfed.org	Minnesota Citizens Federation NE	2110 W. 1st Street Duluth, MN 55806	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Santi	Romani	N/A	United Taconite	PO Box 180 Eveleth, MN 55734	Paper Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Susan	Romans	sromans@allete.com	Minnesota Power	30 West Superior Street Legal Dept Duulth, MN 55802	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Thomas	Scharff	thomas.scharff@versoco.com	Verso Corp	600 High Street Wisconsin Rapids, WI 54495	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Larry L.	Schedin	Larry@LLSResources.com	LLS Resources, LLC	332 Minnesota St, Ste W1390 St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Ann	Schweiger	ann.schwieger@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 55101	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN 55423	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Doug	Shoemaker	dougs@charter.net	Minnesota Renewable Energy	2928 5th Ave S Minneapolis, MN 55408	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Brett	Skyles	Brett.Skyles@co.itasca.mn.us	Itasca County	123 NE Fourth Street Grand Rapids, MN 557442600	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
James M	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	200 S 6th St Ste 470 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Lynnette	Sweet	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Robert	Tammen	bobtammen@frontiernet.net	Wetland Action Group	PO Box 398 Soudan, MN 55782	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Jim	Tieberg	jtieberg@polymetmining.com	PolyMet Mining, Inc.	PO Box 475 County Highway 666 Hoyt Lakes, MN 55750	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Jessica	Tritsch	jessica.tritsch@sierraclub.org	Sierra Club	2327 E Franklin Ave Minneapolis, MN 55406	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Karen	Turnboom	karen.turnboom@versoco.com	Verso Corporation	100 Central Avenue Duluth, MN 55807	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Kodi	Verhalen	kverhalen@taftlaw.com	Taft Stettinius & Hollister LLP	80 S 8th St Ste 2200 Minneapolis, MN 55402	Electronic Service	Yes	OFF_SL_16-664_PUC Offical Service List General Rate Case
Kevin	Walli	kwalli@fryberger.com	Fryberger, Buchanan, Smith & Frederick	380 St. Peter St Ste 710 St. Paul, MN 55102	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case
Scott	Zahorik	scott.zahorik@aeoa.org	Arrowhead Economic Opportunity Agency	702 S. 3rd Avenue Virginia, MN 55792	Electronic Service	No	OFF_SL_16-664_PUC Offical Service List General Rate Case

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Lori	Andresen	info@sosbluewaters.org	Save Our Sky Blue Waters	P.O. Box 3661 Duluth, Minnesota 55803	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Jessica L	Bayles	Jessica.Bayles@stoel.com	Stoel Rives LLP	1150 18th St NW Ste 325 Washington, DC 20036	Electronic Service	Yes	OFF_SL_19-442_Official CC Service List
Peter	Beithon	pbeithon@otpco.com	Otter Tail Power Company	P.O. Box 496 215 South Cascade Street Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Sara	Bergan	sebergan@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Kristin	Berkland	kristin.berkland@ag.state.mn.us	Office of the Attorney General-RUD	445 Minnesota Street Bremer Tower, Suite 1400 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-442_Official CC Service List
David F.	Boehm	dboehm@bkllawfirm.com	Boehm, Kurtz & Lowry	36 E 7th St Ste 1510 Cincinnati, OH 45202	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Elizabeth	Brama	ebrama@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Jon	Brekke	jbrekke@grenergy.com	Great River Energy	12300 Elm Creek Boulevard Maple Grove, MN 553694718	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Christina	Brusven	cbrusven@fredlaw.com	Fredrikson Byron	200 S 6th St Ste 4000 Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_19-442_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Michael J.	Bull	mbull@mncee.org	Center for Energy and Environment	212 Third Ave N Ste 560 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-442_Official CC Service List
David	Cartella	David.Cartella@cliffsnr.com	Cliffs Natural Resources Inc.	200 Public Square Ste 3300 Cleveland, OH 44114-2315	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Greg	Chandler	greg.chandler@upm.com	UPM Blandin Paper	115 SW First St Grand Rapids, MN 55744	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Steve W.	Chriss	Stephen.chriss@walmart.com	Wal-Mart	2001 SE 10th St. Bentonville, AR 72716-5530	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_19-442_Official CC Service List
Riley	Conlin	riley.conlin@stoel.com	Stoel Rives LLP	33 S. 6th Street Suite 4200 Minneapolis, MN 55402	Electronic Service	Yes	OFF_SL_19-442_Official CC Service List
Hillary	Creurer	hcreurer@allete.com	Minnesota Power	30 W Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Lisa	Daniels	lisadaniels@windustry.org	Windustry	201 Ridgewood Ave Minneapolis, MN 55403	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Richard	Dornfeld	Richard.Dornfeld@ag.state.mn.us	Office of the Attorney General-DOC	Minnesota Attorney General's Office 445 Minnesota Street, Suite 1800 Saint Paul, Minnesota 55101	Electronic Service	No	OFF_SL_19-442_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Ron	Elwood	relwood@mnlsap.org	Mid-Minnesota Legal Aid	2324 University Ave Ste 101 Saint Paul, MN 55114	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Edward	Garvey	garveyed@aol.com	Residence	32 Lawton St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_19-442_Official CC Service List
John R.	Gasele	jgasele@fryberger.com	Fryberger Buchanan Smith & Frederick PA	700 Lonsdale Building 302 W Superior St Ste 700 Duluth, MN 55802	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Bruce	Gerhardson	bgerhardson@otpco.com	Otter Tail Power Company	PO Box 496 215 S Cascade St Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Barbara	Gervais	toftemn@boreal.org	Town of Tofte	P O Box 2293 7240 Tofte Park Road Tofte, MN 55615	Electronic Service	No	OFF_SL_19-442_Official CC Service List
J Drake	Hamilton	hamilton@fresh-energy.org	Fresh Energy	408 St Peter St Saint Paul, MN 55101	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Kimberly	Hellwig	kimberly.hellwig@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	Yes	OFF_SL_19-442_Official CC Service List
Annete	Henkel	mui@mnutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St.Paul, MN 55101	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Shane	Henriksen	shane.henriksen@enbridge.com	Enbridge Energy Company, Inc.	1409 Hammond Ave FL 2 Superior, WI 54880	Electronic Service	No	OFF_SL_19-442_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Valerie	Herring	vherring@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 S. Eighth Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Katherine	Hinderlie	katherine.hinderlie@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota St Suite 1400 St. Paul, MN 55101-2134	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Lori	Hoyum	lhoyum@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_19-442_Official CC Service List
James	Jarvi	N/A	Minnesota Ore Operations - U S Steel	P O Box 417 Mountain Iron, MN 55768	Paper Service	No	OFF_SL_19-442_Official CC Service List
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2950 Yellowtail Ave. Marathon, FL 33050	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Linda	Jensen	linda.s.jensen@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_19-442_Official CC Service List
Kelsey	Johnson	info@taconite.org	Iron Mining Association	324 West Superior St Ste 502 Duluth, MN 55802	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Travis	Kolari	N/A	Keetac	PO Box 217 Keewatin, MN 55753	Paper Service	No	OFF_SL_19-442_Official CC Service List
Michael	Krikava	mkrikava@taftlaw.com	TAFT Stettinius & Hollister, LLP	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Becky	Lammi	cityclerk@ci.aurora.mn.us	City of Aurora	16 W 2nd Ave N PO Box 160 Aurura, MN 55705	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Carmel	Laney	carmel.laney@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List
David	Langmo	david.langmo@sappi.com	Sappi North America	P O Box 511 2201 Avenue B Cloquet, MN 55720	Electronic Service	No	OFF_SL_19-442_Official CC Service List
James D.	Larson	james.larson@avantenergy.com	Avant Energy Services	220 S 6th St Ste 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Douglas	Larson	dlarson@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Emily	Larson	eLarson@duluthmn.gov	City of Duluth	411 W 1st St Rm 403 Duluth, MN 55802	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Annie	Levenson Falk	annielf@cubminnesota.org	Citizens Utility Board of Minnesota	332 Minnesota Street, Suite W1360 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-442_Official CC Service List
LeRoger	Lind	llind@yahoo.com	Save Lake Superior Association	P.O. Box 101 Two Harbors, MN 55616	Electronic Service	No	OFF_SL_19-442_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Eric	Lindberg	elindberg@mncenter.org	Minnesota Center for Environmental Advocacy	1919 University Avenue West Suite 515 Saint Paul, MN 55104-3435	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Eric	Lipman	eric.lipman@state.mn.us	Office of Administrative Hearings	PO Box 64620 St. Paul, MN 551640620	Electronic Service	Yes	OFF_SL_19-442_Official CC Service List
Patrick	Loupin	PatrickLoupin@PackagingCorp.com	Packaging Corporation of America	PO Box 990050 Boise, ID 83799-0050	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Susan	Ludwig	sludwig@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Kavita	Maini	kmaini@wi.rr.com	KM Energy Consulting, LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Sarah	Manchester	sarah.manchester@sappi.com	Sappi North American	255 State Street Floor 4 Boston, MA 02109-2617	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Tony	Mancuso	mancusot@stlouiscountymn.gov	Saint Louis County Property Mgmt Dept	Duluth Courthouse 100 N 5th Ave W Rm 515 Duluth, MN 55802-1209	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Keith	Matzdorf	keith.matzdorf@sappi.com	Sappi Fine Paper North America	PO Box 511 2201 Avenue B Cloquet, MN 55720	Electronic Service	No	OFF_SL_19-442_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Daryl	Maxwell	dmaxwell@hydro.mb.ca	Manitoba Hydro	360 Portage Ave FL 16 PO Box 815, Station Main Winnipeg, Manitoba R3C 2P4 Canada	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Matthew	McClincy	MMcClincy@usg.com	USG	35 Arch Street Clouqet, MN 55720	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Craig	McDonnell	Craig.McDonnell@state.mn.us	MN Pollution Control Agency	520 Lafayette Road St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Natalie	McIntire	natalie.mcintire@gmail.com	Wind on the Wires	570 Asbury St Ste 201 Saint Paul, MN 55104-1850	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Joseph	Meyer	joseph.meyer@ag.state.mn.us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St Paul, MN 55101-2131	Electronic Service	No	OFF_SL_19-442_Official CC Service List
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	Yes	OFF_SL_19-442_Official CC Service List
James	Mortenson	james.mortenson@state.mn.us	Office of Administrative Hearings	PO BOX 64620 St. Paul, MN 55164-0620	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Heidi	Nelson	Heidi.nelson@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Michael	Noble	noble@fresh-energy.org	Fresh Energy	Hamm Bldg., Suite 220 408 St. Peter Street St. Paul, MN 55102	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Rolf	Nordstrom	rnordstrom@gpisd.net	Great Plains Institute	2801 21ST AVE S STE 220 Minneapolis, MN 55407-1229	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Christopher J.	Oppitz	N/A	-	110 1/2 1ST ST E Park Rapids, MN 56470-1695	Paper Service	No	OFF_SL_19-442_Official CC Service List
Elanne	Palcich	epalcich@cpinternet.com	Save Our Sky Blue Waters	P.O. Box 3661 Duluth, MN 55803	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Max	Peters	maxp@cohasset-mn.com	City of Cohasset	305 NW First Ave Cohasset, MN 55721	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Jennifer	Peterson	jjpeterson@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_19-442_Official CC Service List
William	Phillips	wphillips@aarp.org	AARP	30 E. 7th St Suite 1200 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Marcia	Podratz	mpodratz@mnpower.com	Minnesota Power	30 W Superior S Duluth, MN 55802	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Tolaver	Rapp	Tolaver.Rapp@cliffsnr.com	Cliffs Natural Resources	200 Public Square Suite 3400 Cleveland, OH 441142318	Electronic Service	No	OFF_SL_19-442_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_19-442_Official CC Service List
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Ralph	Riberich	rriberich@uss.com	United States Steel Corp	600 Grant St Ste 2028 Pittsburgh, PA 15219	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Buddy	Robinson	buddy@citizensfed.org	Minnesota Citizens Federation NE	2110 W. 1st Street Duluth, MN 55806	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Santi	Romani	N/A	United Taconite	PO Box 180 Eveleth, MN 55734	Paper Service	No	OFF_SL_19-442_Official CC Service List
Susan	Romans	sromans@allete.com	Minnesota Power	30 West Superior Street Legal Dept Duulth, MN 55802	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Thomas	Scharff	thomas.scharff@versoco.com	Verso Corp	600 High Street Wisconsin Rapids, WI 54495	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Larry L.	Schedin	Larry@LLSResources.com	LLS Resources, LLC	332 Minnesota St, Ste W1390 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-442_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
LauraSue	Schlatter	LauraSue.Schlatter@state.mn.us	Office of Administrative Hearings	PO Box 64620 St. Paul, MN 55164-0620	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Robert H.	Schulte	rhs@schulteassociates.com	Schulte Associates LLC	1742 Patriot Rd Northfield, MN 55057	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_19-442_Official CC Service List
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN 55423	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Doug	Shoemaker	dougs@charter.net	Minnesota Renewable Energy	2928 5th Ave S Minneapolis, MN 55408	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Brett	Skyles	Brett.Skyles@co.itasca.mn.us	Itasca County	123 NE Fourth Street Grand Rapids, MN 557442600	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Richard	Staffon	rcstaffon@msn.com	W. J. McCabe Chapter, Izaak Walton League of America	1405 Lawrence Road Cloquet, Minnesota 55720	Electronic Service	No	OFF_SL_19-442_Official CC Service List
James M	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	200 S 6th St Ste 470 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Lynnette	Sweet	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_19-442_Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Robert	Tammen	bobtammen@frontiernet.net	Wetland Action Group	PO Box 398 Soudan, MN 55782	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Jim	Tieberg	jtieberg@polymetmining.com	PolyMet Mining, Inc.	PO Box 475 County Highway 666 Hoyt Lakes, MN 55750	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Jessica	Tritsch	jessica.tritsch@sierraclub.org	Sierra Club	2327 E Franklin Ave Minneapolis, MN 55406	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Karen	Turnboom	karen.turnboom@versoco.com	Verso Corporation	100 Central Avenue Duluth, MN 55807	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Kodi	Verhalen	kverhalen@taftlaw.com	Taft Stettinius & Hollister LLP	80 S 8th St Ste 2200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Kevin	Walli	kwalli@fryberger.com	Fryberger, Buchanan, Smith & Frederick	380 St. Peter St Ste 710 St. Paul, MN 55102	Electronic Service	No	OFF_SL_19-442_Official CC Service List
Scott	Zahorik	scott.zahorik@aeoa.org	Arrowhead Economic Opportunity Agency	702 S. 3rd Avenue Virginia, MN 55792	Electronic Service	No	OFF_SL_19-442_Official CC Service List

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

Tiana Heger of the City of Duluth, County of St. Louis, State of Minnesota, says that on the 2nd day of March, 2020, she served Minnesota Power's Compliance Filing in **Docket No. E015/AA-20-171** on the Minnesota Public Utilities Commission and the Energy Resources Division via electronic filing. The persons on E-Docket's Official Service List for this Docket were served as requested.

Tiana Heger