



Minnesota Energy Resources Corporation
2685 145th Street West
Rosemount, MN 55068
www.minnesotaenergyresources.com

September 1, 2020

VIA ELECTRONIC FILING

Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 Seventh Place East, Suite 350
St. Paul, MN 55101

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

Re: Minnesota Energy Resources Corporation – NNG’s 2020 Annual Automatic
Adjustment Report
Docket No. G999/AA-20-172

Dear Mr. Seuffert:

Minnesota Energy Resources Corporation – NNG (“MERC-NNG” or the “Company”) submits to the Minnesota Public Utilities Commission (the “Commission”) the following reports:

Minnesota Rule 7825.2800 – Procurement Policies of Gas Supply.

Minnesota Rule 7825.2810 – Automatic Adjustment Charges.

Minnesota Rule 7825.2820 – Annual Auditor’s Report.

Minnesota Rule 7825.2830 – Statement on Gas Cost Projection.

MERC acquired Interstate Power & Light Company’s Minnesota natural gas operations and customers in 2015. The Commission’s Order Approving Sale Subject to Conditions in Docket No. G001,011/PA-14-107, required MERC to maintain the transitioned customers on a separate PGA (MERC-NNG-Albert Lea). Pursuant to the Commission’s Order in Docket No. G011/GR-15-736, the NNG and NNG-Albert Lea PGAs were consolidated effective July 1, 2017.

In Docket No. G999/AA-14-580, MERC agreed in its Reply Comments filed May 15, 2015, to “request that its auditor review the cost allocations between PGAs for future true-up filings and address any concerns regarding cost-allocations in the audit report to be filed with the AAA report.” All gas revenues are directly assigned (not allocated) to each PGA system based on the interstate pipeline system(s) town border station that supply gas to the customers’ meter. All gas purchase costs, except for costs and credits associated with financial hedging options, are directly assigned (not allocated) to each PGA system based on the interstate pipeline system(s) and town border stations that supply each PGA system. The financial hedging option costs and credits are allocated among the two PGA systems based on each respective PGA system’s percent of total MERC sales. The monthly gas commodity costs

("Commodity \$") listed on Schedule C & D, page 1 of 1, are inclusive of any applicable financial hedging option costs and/or credits. The individual costs resulting in the total monthly Commodity \$ amounts, including financial hedging costs/credits and the allocation of those costs/credits, were included in the scope of the audit.

In its February 27, 2019, Order Accepting Gas Utilities' Annual Automatic Adjustment Reports and 2017 True-Up Proposals and Setting Further Requirements, in Docket No. G999/AA-17-493, the Commission required each utility to provide information regarding unauthorized gas use. Additionally, the Commission required that MERC include totals for Schedule Q, Third Party Damage in all future AAA Reports. MERC addresses each of these requirements. Finally, the Commission required that MERC file a report on the results of its investigation into lost and unaccounted for ("LUF") gas with its 2019 AAA report on or before September 3, 2019, which MERC addressed in Docket No. G011/AA-19-401. The Commission further required that each utility that hedges (including physical and financial) continue to provide a post-mortem analysis, in a format similar to what was provided in that docket. Finally, the Commission required that going forward, all regulated utilities identify each non-standard prior-period adjustment made in an annual true-up filing, demonstrate whether such adjustment is subject to a Minnesota rule (e.g., Billing Error Rule, Minn. R. 7820.4000, Approval for Automatic Adjustment of Charges Minn. R. 7825.2920, or some other Rule), and demonstrate the reasonableness of each such adjustment.

In its November 6, 2019, Order Approving Modification of Curtailment Penalties and Tariffs and Requiring Reports, in Docket No. G999/CI-19-160, the Commission required each utility to provide annually in their September 1 AAA report filings, complete analyses of circumstances when an interruptible customer fails to curtail twice, or a single noncompliant event is significant. MERC addresses this requirement in the attached report.

In its November 13, 2019, Order Accepting Gas Utilities' Annual Automatic Adjustment Reports and 2018 True-Up Proposals and Setting Further Requirements, in Docket No. G999/AA-18-374, the Commission required that MERC include both a discussion regarding its treatment of recovery of gas losses due to contractor main strikes, as well as totals for Schedule Q, Third Party Damage in all future AAA Reports. MERC addresses each of these requirements.

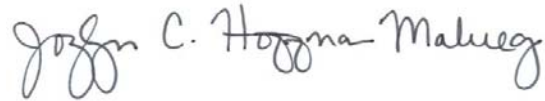
The nonpublic version of the filing contains trade secret information. Specifically, Schedules L and Q of the Automatic Adjustment Charges contain information that is not generally known to and not readily ascertainable by vendors or competitors of MERC, who could obtain economic value from its disclosure. MERC maintains this information as secret. Accordingly the attached document contains data that qualify as "Trade Secret Data" pursuant to Minnesota Statutes section 13.37, subdivision 1(b).

In accordance with Minnesota Rule 7825.2840, a notice of availability of the above reports has been sent to all intervenors in the Company's previous two rate cases.

Mr. Will Seuffert
September 1, 2020
Page 3

Please contact me at Joylyn.HoffmanMalueg@wecenergygroup.com or (414) 221-4208 if you have any questions regarding the information in this filing. Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink that reads "Joylyn C. Hoffman Malueg". The signature is written in a cursive, flowing style.

Joylyn C. Hoffman Malueg
Project Specialist 3

Enclosures
cc: Service List

September 1, 2020

To: Service List

RE: Minnesota Energy Resources Corporation – NNG's Annual Automatic Adjustment Report

Notice of Availability

Please take notice that Minnesota Energy Resources Corporation-NNG has filed with the Minnesota Public Utilities Commission ("Commission") the following reports:

1. Minnesota Rule 7825.2800 – Procurement Policies of Gas Supply.
2. Minnesota Rule 7825.2810 – Automatic Adjustment Charges.
3. Minnesota Rule 7825.2820 – Annual Auditor's Report.
4. Minnesota Rule 7825.2830 – Statement on Gas Cost Projection.

To obtain copies, or if you have any questions, please contact:

Joylyn C. Hoffman Malueg
Project Specialist 3
Minnesota Energy Resources Corporation
2685 145th Street West
Rosemount, MN 55068
Telephone: (414) 221-4208
joylyn.hoffmanmalueg@wecenergygroup.com

Please note that this filing is also available through the eDockets system maintained by the Minnesota Department of Commerce and the Minnesota Public Utilities Commission. You can access this document by going to eDockets through the websites of the Department of Commerce or the Public Utilities Commission or going to the eDockets homepage at:

<https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showeDocketsSearch&showEocket=true&userType=public>

Once on the eDockets homepage, this document can be accessed through the Search Documents link by searching Docket Number 20-172.

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

**Katie J. Sieben
Valerie Means
Matthew Schuerger
Joseph K. Sullivan
John A. Tuma**

**Chair
Commissioner
Commissioner
Commissioner
Commissioner**

In the Matter of the Annual Automatic
Adjustment Report of Minnesota Energy
Resources Corporation - NNG

ANNUAL REPORT

Docket No. G999/AA-20-172

SUMMARY OF FILING

Pursuant to Minnesota Rules 7825.2390 – 7825.2920, Minnesota Energy Resources Corporation – NNG submitted the following reports to the Minnesota Public Utilities Commission:

1. Minnesota Rule 7825.2800 – Procurement Policies of Gas Supply.
2. Minnesota Rule 7825.2810 – Automatic Adjustment Charges.
3. Minnesota Rule 7825.2820 – Annual Auditor's Report.
4. Minnesota Rule 7825.2830 – Statement on Gas Cost Projection.

**STATE OF MINNESOTA
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**Chair
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In the Matter of the Annual Automatic
Adjustment Report of Minnesota Energy
Resources Corporation - NNG

ANNUAL REPORT

Docket No. G999/AA-20-172

INTRODUCTION

Minnesota Energy Resources Corporation - NNG ("MERC-NNG" or the "Company") submits to the Minnesota Public Utilities Commission (the "Commission") the attached Annual Automatic Adjustment Report for the year beginning July 1, 2019, and ending June 30, 2020, pursuant to Minnesota Rules 7825.2390 – 7825.2920.

The following information is provided in accordance with Minn. R. 7829.1300, subp. 3:

I. Summary of Filing

Pursuant to Minn. R. 7829.1300, subp. 1, a one-paragraph summary of the filing is attached.

II. Service

Pursuant to Minn. R. 7829.1300, subp. 2, MERC-NNG has served a copy of this filing on the Department of Commerce, Division of Energy Resources (the "Department") and the Office of the Attorney General – Residential Utilities Division ("OAG"). A notice of availability has been served on all intervenors in MERC's previous two general rate cases as required by Minn. R. 7825.2840. A summary of the filing has been served on all individuals on MERC's general service list.

III. General Filing Information

A. Name, Address, and Telephone Number of Filing Party

Minnesota Energy Resources Corporation
2685 145th Street West
Rosemount, MN 55068
(651) 322-8900

B. Name, Address, Electronic Address, and Telephone Number of Attorney for the Filing Party

Kristin M. Stastny
Taft Stettinius & Hollister LLP
2200 IDS Center
80 South 8th Street
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KStastny@Taftlaw.com
(612) 977-8656

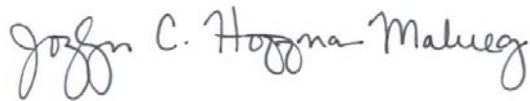
C. Date of the Filing and Date Proposed Change Will Take Effect

Date of filing: September 1, 2020
Proposed Effective Date: September 1, 2020

D. Statute Controlling Schedule for Processing the Filing

No statute establishes a schedule for processing this filing. Under Minn. R. 7829.1400, initial comments are due within 30 days of filing, with reply comments due 10 days thereafter.

E. Signature, Electronic Address, and Title of Utility Employee Responsible for the Filing



Joylyn C. Hoffman Malueg
Project Specialist 3
Joylyn.HoffmanMalueg@wecenergygroup.com
2685 145th Street West
Rosemount, MN 55068
(414) 221-4208

IV. Description and Purpose of Filing

Pursuant to Minnesota Rules 7825.2390 – 7825.2920, this report includes the following information:

1. Minnesota Rule 7825.2800 – Procurement Policies of Gas Supply.
2. Minnesota Rule 7825.2810 – Automatic Adjustment Charges.
3. Minnesota Rule 7825.2820 – Annual Auditor's Report.
4. Minnesota Rule 7825.2830 – Statement on Gas Cost Projection.

Requirements of Minnesota Rule 7825.2800

Minnesota Rule 7825.2800 requires each public utility to file annually the procurement policies for selecting sources of fuel and energy purchased, dispatching policies, if applicable, and a summary of actions taken to minimize costs, including conservation actions for gas utilities.

Requirements of Minnesota Rule 7825.2810

Minnesota Rule 7825.2810 requires each utility to submit to the Commission an annual reporting by month of automatic adjustment charges for each customer class for the previous year commencing July 1 and ending June 30.

Requirements of Minnesota Rule 7825.2820

Minnesota Rule 7825.2820 requires all gas and electric utilities to submit to the Commission an independent auditor's report evaluating accounting for automatic adjustments for the prior year commencing July 1 and ending June 30. In Docket No. G999/AA-14-580, MERC agreed in its Reply Comments filed May 15, 2015, to "request that its auditor review the cost allocations between PGAs for future true-up filings and address any concerns regarding cost-allocations in the audit report to be filed with the AAA report." All gas revenues are directly assigned (not allocated) to each PGA system based on the interstate pipeline system(s) and town border stations that supply gas to customers' meters. All gas purchase costs, except for costs and credits associated with financial hedging options, are directly assigned (not allocated)

to each PGA system based on the interstate pipeline system(s) and town border stations that supply each PGA system. The financial hedging option costs and credits are allocated among the two PGA systems based on each respective PGA system's percent of total MERC sales. The monthly gas commodity costs ("Commodity \$") listed on Schedule C & D, page 1 of 1, are inclusive of any applicable financial hedging option costs and/or credits. The individual costs resulting in the total monthly Commodity \$ amounts, including financial hedging costs/credits and the allocation of these costs/credits, were included in the scope of the audit.

Requirements of Minnesota Rule 7825.2830

Minnesota Rule 7825.2830 requires each gas utility to submit to the Commission by September 1 of each year a brief statement of its opinion on the impact of market forces on gas costs for the coming year.

Other Commission Filing Requirements

In its February 27, 2019, Order Accepting Gas Utilities' Annual Automatic Adjustment Reports and 2016-2017 True-up Proposals and Setting Further Requirements in Docket No. G999/AA-17-493, the Commission required each gas utility to provide, in the next three AAA reports, information on unauthorized gas use for each customer that did not comply with a called interruption during the heating season. In particular, the Commission required the utilities to report on (1) the volume of gas consumed by the non-compliant customer during the curtailment period; (2) the specific commodity rate charged for the unauthorized gas use and how that rate is determined; (3) the financial penalty, if any, assessed by the company to the customer, including calculations in determining the penalty or penalties; and (4) a discussion about utility communication with each customer regarding non-compliance with interruptions. The Commission also ordered that MERC provide totals for Schedule Q, Third Party Damage, in future AAA reports.

By Order dated May 8, 2018 in Docket No. G011/M-15-895, the Commission required MERC to separately track and report Rochester-specific capacity release information (e.g.,

volumes, revenue received) in future AAA filings in the same manner that it has in previous AAA filings for short-term capacity releases.

In its November 13, 2019, Order Accepting Gas Utilities' Annual Automatic Adjustment Reports and 2017-2018 True-Up Proposals and Setting Further Requirements, in Docket No. G999/AA-18-374, the Commission required that MERC include both a discussion regarding its treatment of recovery of gas losses due to contractor main strikes, as well as totals for Schedule Q, Third Party Damage in all future AAA Reports. The Commission further required that each utility that hedges (including physical and financial) continue to provide a post-mortem analysis, in a format similar to what was provided in that docket. Finally, the Commission required that going forward, all regulated utilities identify each non-standard prior-period adjustment made in an annual true-up filing, demonstrate whether such adjustment is subject to a Minnesota rule (e.g., Billing Error Rule, Minn. R. 7820.4000, Approval for Automatic Adjustment of Charges Minn. R. 7825.2920, or some other Rule), and demonstrate the reasonableness of each such adjustment.

In its November 6, 2019, Order Approving Modification of Curtailment Penalties and Tariffs and Requiring Reports in Docket No. G999/CI-19-160, the Commission required that annually, in their September 1 AAA report filings, natural gas utilities must file complete analyses of circumstances when an interruptible customer fails to curtail twice, or a single noncompliant event is significant.

MERC addresses each of these filing requirements in this report.

CONCLUSION

MERC respectfully requests that the Commission approve the Annual Automatic Adjustment Report as filed.

DATED: September 1, 2020

Respectfully submitted,

MINNESOTA ENERGY RESOURCES
CORPORATION

By: /s/ Joylyn C. Hoffman Malueg
Joylyn C. Hoffman Malueg
2685 145th Street West
Rosemount, MN 55068
Telephone: (414) 221-4208

MERC

**PROCUREMENT POLICIES OF GAS SUPPLY
MINNESOTA RULE 7825.2800**

September 1, 2020

1) **2019-2020 Gas Procurement Policies**

Minnesota Energy Resources Corporation's (MERC's) gas procurement policy is intended to provide reliable and reasonably priced natural gas to customers. MERC utilized a portfolio mix of firm supplies with varying terms purchased at:

- Fixed Price Financial (Futures)
- Pipeline Storage (NNG / ANR)
- Financial Calls (Options)
- First-of-Month Index (FOM)
- Daily Spot Market - Gas Daily Daily Index (GDD) or fixed price

For all gas supply purchases that have a term of one month or greater, a Request-For-Proposal (RFP) was emailed to all third-party suppliers that MERC has North American Energy Standards Board (NAESB) agreements with soliciting bids for supply. The RFP responses were compared and the lowest priced supply was awarded, assuming suppliers meet reliability and credit standards.

For all gas supply purchases that have a term of less than one month, a minimum of three bids were solicited from NAESB contracted suppliers utilizing lines of communication such as Instant Messaging (IM) or cold calling. The solicited bids were compared and the best price from a reliable, credit worthy supplier was awarded.

It is MERC's policy to ensure there is enough contracted interstate pipeline capacity to provide firm delivery of natural gas to firm customers on a peak day. MERC's policy is to have adequate firm transportation capacity to protect against a one (1) in twenty (20) year cold weather event, plus a positive reserve margin. Due to MERC's service territories being geographically spread throughout the state, MERC contracts for firm pipeline capacity on Northern Natural Gas (NNG), Great Lakes Gas Transmission (GLGT), Viking Gas Transmission (VGT), Centra Pipeline (Centra), Bison Pipeline (Bison), and Northern Border Pipeline (NBPL). This mix of pipelines allows purchasing supply from Canadian, Mid-Continent, and Rockies supply sources, providing a diversity of supply points and prices.

During the winter season (November 2019 through March 2020), MERC utilized a 40%/30%/30% strategy to mitigate price volatility and provide reasonably priced natural gas. The strategy consists of 40% of normal winter supply requirements purchased at a FOM index price, 30% supplied by physical storage, and 30% covered by financial hedges (10% futures and 20% call options).

Storage supply and financial products were purchased evenly from May through October 2019.

This approach provided MERC customers with 60% of the portfolio protected from increasing market prices via storage, call options, and futures. It also provided the ability to participate in a decreasing market with 60% of the portfolio comprised of call options or FOM purchases.

In non-winter months, natural gas was purchased at FOM index or in the spot market when necessary.

Gas Supply Procedures

Due to the variable daily and seasonal needs of its customers, MERC, from time to time, may have underutilized pipeline capacity available for release and/or gas supply available for resale (opportunity sales). The Gas Supply (GS) Procedures approved by the Commission in Docket No. G007,011/AI-06-1416 describe how MERC makes its capacity releases and opportunity sales available to interested parties. In addition, the procedures lay out the requirements set forth by FERC Code of Conduct and requirements for communications and/or transactions between affiliates.

On August 31, 2017, MERC filed a capacity release plan in Docket No. G011/M-15-895, related to the Rochester Natural Gas Extension Project on the NNG pipeline. The Commission approved MERC's capacity release plan as a reasonable framework to address the issue of surplus Rochester capacity on a going forward basis by Order dated May 8, 2018 in that docket.

Trading Policies

MERC traders determine supply requirements for MERC customers on a daily and monthly basis. On a monthly basis, it is MERC's policy to purchase and schedule the required flowing natural gas supply and required storage injections or withdrawals based upon the forecast monthly requirements.

On a daily basis, it is MERC's policy to purchase and schedule additional flowing gas supply and storage injections or withdrawals based upon changes from the monthly plan. In the event additional spot market supply is necessary, traders consider the most economic and operationally efficient option in deciding whether to purchase supply in the spot market, decrease injections, or increase storage withdrawals.

In the event there is more flowing supply than the daily requirement, traders consider the most economic and operationally efficient option in deciding whether to increase storage injections, decrease storage withdrawals, or sell the excess flowing supply.

Actions Taken to Minimize Gas Supply Costs

MERC has three major gas supply objectives:

- Provide reliable natural gas
- Mitigate price volatility
- Provide reasonably priced natural gas

MERC accomplishes these objectives by utilizing three approaches:

- 1) Market Forces
- 2) FERC Monitoring
- 3) Conservation Improvement Programs (CIP)

1) Market Forces

- MERC utilized an RFP process for purchases of one month or greater.

- MERC required a minimum of three bids from approved suppliers for supply purchased for a term of less than one month.
- MERC utilized a diverse hedging portfolio that has a mix of fixed price, storage, call options, FOM index, and spot market supply.
- MERC implemented a winter hedging strategy of 40% index price, 30% storage, and 30% financially protected.
- MERC used a dollar-cost-averaging approach to purchase the supply defined in the hedging strategy.
- MERC traders base their daily and monthly gas supply procurement decisions on the most economic receipt points and/or the use of storage.
- MERC traders release excess firm pipeline transportation to generate capacity release revenue to decrease the transportation capacity costs.

2) FERC Interventions

MERC continually monitors Federal Energy Regulatory Commission (FERC) proceedings related to interstate pipeline activities as well as issues related to natural gas supply and pricing. The primary focus is on the interstate pipelines that MERC uses to deliver natural gas to its customers:

- Northern Natural Gas (NNG)
- Great Lakes Gas Transmission (GLGT)
- Viking Gas Transmission (VGT)
- Centra Pipelines (Centra)
- Bison Pipeline (Bison)
- Northern Border Pipeline (NBPL)
- ANR Pipeline (ANR)

Key FERC Proceedings – July 1, 2019 through June 30, 2020

The following is a list of FERC proceedings MERC has participated in over the 2019-2020 AAA period.

Company	Filing Date	Docket No.	Description
ANR	02-27-19	CP19-102	Prior Notice Application to replace main line and loop line in Kane County, IL filing
ANR	10-01-19	CP20-01	Abbreviated 7(b) and 7(c) Application for authorization to abandon leases and acquire storage assets from Mid-Michigan Gas Storage Company
ANR	10-29-19	CP20-08	Abbreviated 7(b) and 7(c) Application for authorization to implement the Grand Chenier Project to provide open access firm transportation service in Louisiana

Company	Filing Date	Docket No.	Description
ANR	03-12-20	CP20-87	Prior Notice Authorization to increase certificate horsepower at the Grand Chenier Compressor Station located in Cameron Parish, Louisiana
ANR	12-06-18	RP19-403	Compliance filing w/Order No. 849: FERC Form 501-G filing
ANR	02-28-19	RP19-741	Tariff fuel reimbursement adjustment and EPC charges filing to be effective 04/01/19
ANR	05-28-19	RP19-741-001	Rehearing re: tariff fuel reimbursement adjustment and EPC charges filing to be effective 04/01/19
ANR	10-17-19	RP19-741-002	ANR Fuel Compliance Filing to be effective 4/1/19
ANR	10-01-19	RP20-02	Tariff filing re: negotiated service agreement with WPL to be effective 11/1/19 (ANR WISE)
ANR	10-01-19	RP20-22	Tariff filing re: ANR transporter's use backhaul revision to be effective 11/1/19
ANR	02-28-20	RP20-608	Tariff filing re: Penalty Updates to be effective 4/1/2020
ANR	03-02-20	RP20-636	Tariff fuel reimbursement adjustment and EPC charges filing to be effective 04/01/20
NBPL	11-26-19	RP19-414-002	Compliance Tariff filing: Amended Settlement Period 3 to be effective 1/1/20
NBPL	07-19-19	RP19-1390	Tariff Filing to update the Future Sales of Capacity section of Tariff to be effective 8/19/19
NBPL	08-30-19	RP19-1390-001	Compliance filing re: Future Sales of Capacity to be effective 8/19/19
NBPL	03-27-20	RP20-690	Tariff filing re: Annual Compressor Usage Surcharge 2020 to be effective 5/1/20
NNG	08-28-17	CP09-465	Motion filing by Kansas Corp Com re NNG failure to comply with FERC order re Cunningham Storage Field buffer zone
NNG	07-27-18	CP18-534	Section 7 Application for Northern Lights 2019 Expansion Project including Rochester Expansion component
NNG	01-25-19	CP19-57	Advance notice of replacement (like-for-like) of compression facilities (Mullinville Compressor Station)
NNG	06-06-19	CP19-479	Application to abandon A and J line and construction compression facilities at Tescott compressor station
NNG	02-25-20	CP20-62	Advance Notice of replacement of compression facilities at the Farmington Compressor Station located in Dakota County, MN
NNG	06-02-19	RP01-382-029	Carlton Reimbursement Report
NNG	10-11-18	RP19-59	FERC Form 501-G filing in compliance with Order No. 849
NNG	02-05-19	RP19-59-001	Order of Chief Judge Designating Settlement Judge re FERC initiated Section 5 investigation

Company	Filing Date	Docket No.	Description
NNG	07-01-19	RP19-1353-000 to RP19-1353-007	Section 4 rate case filing and tariff changes. Tariff changes to be effective 8/1/2019. Anticipated proposed rates to be placed into effect 1/1/20
NNG	08-13-19	RP19-1468	Annual Carlton Flow Obligations Filing
NNG	01-31-20	RP20-478	Tariff filing re Field Area and Storage Fuel percentages for the April 1, 2020 thru March 31, 2021 period as well as ECM commodity surcharge
NNG	02-13-20	RP20-519	Report of the penalty and daily Delivery Variance Charge (DDVC) - credited to shipper
VGT	12-6-18	RP19-386	FERC Form 501-G filing in compliance with Order No. 849
VGT	06-28-19	RP19-1340-000 to RP1340-004	Section 4 rate case filing and tariff changes. Tariff changes to be effective 8/1/2019
VGT	10-01-19	RP20-16	Semi-Annual Fuel and Loss Retention (FLRP) Percentages to become effective 11-1-19
VGT	10-01-19	RP20-26	Tariff filing to incorporate amendments to Non-Conforming Transportation Service Agreements
VGT	11-27-19	RP20-274	Correction to 10/1/19 semi-annual fuel filing to be effective 11/1/19
VGT	02-25-20	RP20-548	Tariff filing re revision to Annual LMCRA eff 4-1-20
VGT	02-26-20	RP20-562	Semi-Annual Fuel and Loss Retention (FLRP) Percentages to become effective 4-1-20

3) Energy Conservation Actions

MERC's growth in sales volumes is partially offset by conservation. Conservation occurs in four ways:

1. Customer response to higher gas prices when they occur.
2. Appliance replacement trends that occur when customers replace gas-fueled appliances with more efficient and modern equipment.
3. New construction that incorporates updated building and energy efficiency standards and more efficient appliances.
4. Conservation programs undertaken by the Company.

MERC's 2020 budget includes \$11,399,633 for conservation programs.

Minnesota Statute § 216B.241 requires MERC to invest in cost-effective conservation improvements through its Conservation Improvement Program (CIP). The company is required to file triennially with the Department of Commerce a CIP Plan outlining its goals, budgets, and cost-effectiveness analyses for the next planning cycle. MERC's most recent triennial CIP Plan was filed on July 1, 2020, covering the years 2021-2023, in Docket No. G011/CIP-20-479.

Additionally, MERC is required to file an annual CIP Status Report with the Department of Commerce, which details the cost effectiveness and spending for the prior year's CIP program.

MERC's 2019 CIP Status Report was filed on May 1, 2020, in Docket No. G011/CIP-16-120.03, and approved by the Deputy Commissioner of Commerce on August 6, 2020.

The current versions of these reports and Department decisions are available on the Department of Commerce's e-docket system.

MERC-NNG

ANNUAL REPORT

AUTOMATIC ADJUSTMENT CHARGES MINNESOTA RULE 7825.2810

September 1, 2020

I. Minnesota Rule 7825.2810, subpart 1

- A. The commission-approved base cost of fuel or gas as defined by part 7825.2400, subpart 4 or 4a;**

Schedule (A).

- B. Billing adjustment amount, such as Kwh, Mcf, Ccf, or Btu, charged customers for each type of energy cost, such as nuclear, coal, purchased power, purchased gas by major component, peak shaving gas, or manufactured gas;**

Schedules (B & E).

- C. Billing adjustment amounts, by gas supplier, that were used to bill the utility during the reporting period;**

Schedules (C & D).

- D. The total cost of fuel or gas delivered to customers including, for gas utilities, the cost of supply-related services;**

Schedules (C & D).

- E. The revenues collected from customers for energy delivered;**

Schedules (B & E).

- F. The amount of supplier refunds received as defined by part 7825.2700; and**

Schedules (F & G).

- G. The amount of refunds credited to customers.**

Schedules (F & G).

II. Minnesota Rule 7825.2810, subpart 2

A. Purchased gas adjustment rule variance in effect or requested during the 12-month reporting period and reasons why those variances were necessary;

Minnesota Energy Resources Corporation (“MERC” or the “Company”) requested, and the Commission approved, a four-year variance from the requirements of Minnesota Rules 7825.2400, 7825.2500, and 7825.2700 in Docket No. G011/M-17-85, to June 30, 2021. The variance was necessary to permit MERC to use the Purchased Gas Adjustment (“PGA”) to recover the incurred costs of financial instruments used for hedging purposes in securing natural gas supplies for Minnesota customers.

MERC requested, and the Commission approved, a variance from the requirements of Minnesota Rules 7825.2910; 7825.2700, subp.7; Minn. R. 7825.2920, subp. 2; Minn. R. 7820.4000; and any other applicable rule as necessary, in Docket No. G011/M-18-526. The variance was necessary to permit MERC to refund firm customers and recover from interruptible customers the approximately \$423,646 over- and under-charged amounts related to the Rochester demand entitlement error through the monthly PGA over a six-month-period following Commission approval.

B. Changes in demand contracted for during the reporting period and reasons for those revisions;

Effective November 1, 2018, MERC-NNG increased design day deliverability by 10,939 in Docket No. G011/M-18-526. This change in demand resulted from the first tranche of Rochester capacity of 15,939 Dth/day and the expiration of a 5,000 Dth/day contract. For 2018-2019, the MERC-NNG design day increased by 6,059 Dth.

Effective November 1, 2019, MERC-NNG increased design day deliverability by 37,093 in Docket No. G011/M-19-496. This change in demand resulted from the second tranche of Rochester capacity.¹ For 2019-2020, the MERC-NNG design day increased by 3,534 Dth.

C. The level of customer-owned gas volumes delivered through the utility’s distribution system under retail transportation tariffs during the reporting period; and

MERC transported 42,370,182 Dth to customers under its retail transportation tariffs during the period of July 1, 2019, through June 30, 2020.

¹ As discussed in MERC’s January 31, 2020 and July 31, 2020 Compliance Filings in Docket No. G011/M-15-895, as a result of the availability of this additional capacity, MERC has taken action to release capacity on a non-recallable basis consistent with the Capacity Release Plan filed on August 31, 2017, and approved by the Commission by Order dated May 8, 2018.

D. A brief explanation of deviations between gas cost recovery and actual gas cost during the reporting period.

The total MERC-NNG cost is an over recovery of 22.5% for this AAA period.

MERC-NNG's demand-related cost has an over recovery of 35.87% for this PGA period. The over collection of demand costs was predominantly caused by capacity release revenues and actual sales being higher than projected sales. Purchase costs are net of capacity release and curtailment penalty revenues.

MERC-NNG's commodity cost has an over recovery of 18.51% for this PGA period. The over collection was caused by capacity release revenues attributable to Bison/NBPL, lower than forecasted gas costs, and differences in actual volumes compared to forecast.

MERC is concurrently filing an Excel spreadsheet that provides an analysis of the over and under recoveries.

Summary of Schedules

Schedule (A)

Schedule A, page 1, shows the base costs recovered through sales rates for MERC-NNG. Schedule A, page 2, shows the base cost of gas submitted to the Commission in Docket No. G011/MR-17-564 effective July 1, 2019 for MERC-NNG.

Schedules (B & E)

Schedules B and E are combined on a worksheet titled "Summary of Revenue Billed and Sales Volumes." Page 1 of this schedule shows volumes, customers, and revenues billed for the 12 months in the reporting period. Transport volumes and revenue that are related to the PGA for the 12 months in the reporting period are listed at the bottom of page 1. In addition, pages 2 through 13 are the monthly PGA rates by class and component billed to customers during the reporting period.

Schedules (C & D)

Schedules C and D have been combined on a worksheet called "Summary of Purchased Volumes and Costs." Page 1 of this schedule shows total volumes and costs by demand and commodity component and by supplier.

Schedule (D.1)

Schedule D.1 shows the allocation of purchased gas costs by customer class by demand and commodity component.

Schedule (D.2)

Schedule D.2, pages 1 and 2, show the (over) under recovery by class and by demand and commodity component by month.

Schedule (D.3)

Schedule D.3, pages 1 and 2, show the recovery by demand and commodity by type, by class, and by month. Pages 3 and 4 show the cost by demand and commodity by type, class, and month. Pages 5 and 6 summarize the annual recovery as compared to cost and the (over) under collection by demand and commodity by type and by class.

Schedules (F & G)

Schedules F and G are combined on a worksheet called "Summary of Supplier Refunds and Refunds Credited to Customers." This worksheet shows supplier refunds received and distributed to customers during the reporting period. No refunds were credited to customers via the PGA during the reporting period.

Schedule H

Schedule H summarizes the (over) under recovery of purchased gas costs.

Schedule I

Schedule I summarizes the capacity released during the reporting period.

On May 8, 2018, the Commission issued an Order in Docket No. G011/M-15-895, approving MERC's capacity release plan related to the Rochester Natural Gas Extension Project, and required MERC to separately track and report Rochester-specific capacity release information (e.g., volumes, revenue received) in future AAA filings in the same manner that it has in previous filings for short-term capacity releases. The Rochester-specific data is provided in Schedule I.

As discussed in MERC's August 1, 2019 NNG Demand Entitlement filing in Docket No. G011/M-19-496, the second tranche of additional capacity resulting from the NNG upgrades related to the Rochester Project were available on November 1, 2019, resulting in MERC-NNG releasing capacity, as documented in Schedule I.²

Schedule J

Schedule J summarizes the pipeline daily scheduling charges incurred during the reporting period.

Schedule K

No Schedule K is included in this filing.

Schedule L

Schedule L sets out the information required in the Commission's orders in Docket Nos. G007,011/M-06-1358; G007,011/M-09-262; G007,011/M-13-207; G011/M-15-231; and G011/M-17-85. The orders in these dockets require MERC to include data on the relative benefits of price hedging contracts, including the average cost per dekatherm for natural gas purchased under financial instruments compared to the comparable monthly and daily spot index prices, in its annual AAA report, together with:

- a. a list of each hedging instrument entered into;
- b. the total volumes contracted for each instrument; and
- c. net gain or loss, including all transaction costs for each instrument in comparison to the appropriate monthly and daily spot prices.

Schedule M

Schedule M, page 1, shows the calculation of PGA revenues for the period July 1, 2017, through June 30, 2018, that were billed on and after July 1, 2019. Page 2 shows the calculation of PGA revenues for the period July 1, 2018 through June 30, 2019 that were billed on and after July 1, 2019. This schedule is necessary in order to capture all of the PGA revenue for the 12-month period of the current AAA report.

² See also MERC's January 31, 2020 and July 31, 2020 Bi-Annual Capacity Release Compliance Filings in Docket No. G011/M-15-895,

Schedule N

No Schedule N is included in this filing.

Schedule O

Schedule O provides information required by the Commission's orders in Docket Nos. G007,011/M-09-262; G-007,011/M-11-296; G007,011/M-13-207; G011/M-15-231; and G011/M-17-85. The orders in these dockets require MERC to provide a full post-mortem analysis of the Company's hedged volumes for the preceding heating season compared to other hedging strategies (including, but not limited to, the alternative hedging strategy discussed in the Department of Commerce, Office of Energy Security's (now the Department of Commerce, Division of Energy Resources) April 30, 2009 Comments, Attachment 2 in Docket No. G007,011/M-09-262) and the prevailing market prices strategy. An Excel spreadsheet providing the supporting information for the post-mortem analysis is being provided concurrently with this filing.

Schedule P

In Docket No. G999/AA-08-1011, the Commission also ordered MERC to provide the following information regarding its hedging program:

- (a) A clearly defined and quantified description of the risk (i.e., catastrophic or other type of event) the companies are insuring against by implementing the hedging strategies. The Company shall include a clearly defined and quantified estimate of the probability of these events occurring.

Details are provided in Schedule P, pages 1-5.

- (b) A quantitative analysis of the value of reducing price volatility and managing price risk (the cost and benefit of these programs to all customers and the companies) that includes:

- (1) A comparison of what actual low, average, and high usage customer bills (on a monthly basis) would have been with and without the use of financial hedging strategies as implemented during the relevant time period.

MERC calculated the average monthly residential usage for each PGA and then applied +/- 20% to determine high and low use customer impacts. The actual PGA rate was used to determine an alternate PGA rate without hedging by removing the actual results of the hedge portfolio. This analysis results in the tables shown in Schedule P, page 6.

- (2) A comparison of what these customer bills would have been under budget billing, assuming normal gas usage for low, average, and high usage customers, and assuming catastrophically high winter prices.

As discussed above, MERC applied a +/- 20% factor to average residential volumes and then looked at the impacts of hedging in a

catastrophic price environment. This analysis is shown on Schedule P, page 7.

Further, the difference in volatility in PGA commodity prices is shown on Schedule P, page 8.

- (c) A quantitative definition of “catastrophically high prices” (in absolute and relative terms), and a bill analysis that shows how these prices would impact low, average and high usage customer bills.

MERC took a statistical approach to calculate “catastrophically high prices” using the following steps. This approach is also summarized in Schedule P, pages 1-5. The impact of catastrophically high prices is shown in Schedule P, page 7, as discussed above.

- (1) MERC utilized the NYMEX forward curve dated May 15, 2019.
 - (2) MERC considered the market expectations of gas price volatility (implied volatility) from May 15, 2019 through June 1, 2020.
 - (3) Based on the data in (1) and (2), MERC looked at how prices changed from May 15, 2019, through June 1, 2020. As a general rule, the farther out in time, the more prices can change. The possible range of actual prices that could be experienced in July 2019 is much smaller than in June 2020. In other words, there is more time for prices to change from the forward curve on May 15, 2019.
 - (4) MERC utilized a Monte Carlo model and calculated 1,000 different price paths. MERC looked at the top 25 prices (2.5%) and used the 25th price as the catastrophic price event. There is only a 2.5% chance of prices being at that price or higher.
 - (5) The result is that on May 15, 2019, there was only a 2.5% chance of the average price from July 2019 to June 2020 being higher than \$3.16/Dth. Similarly, there was only a 2.5% chance of the price in January 2020 being higher than \$4.56/Dth.
- (d) Additional information on the embedded cost/benefit associated with physical hedges used in the procurement of gas supplies.

MERC does not purchase physical hedges; only financial products are used.

Schedule Q

Schedule Q reflects all bills rendered by MERC during the 2019-2020 AAA period for third-party damage to MERC facilities. Per the Commission’s October 11, 2012, Order in Docket No. G999/AA-10-885, Schedule Q lists the date of the incident, party responsible for the damage, gas cost amount for each incident, and the gas lost amount for each incident. In accordance with the Commission’s February 27, 2019 Order Accepting Gas Utilities’ Annual Automatic Adjustment Reports and 2016-2017 True-up

Proposals and Setting Further Requirements in Docket No. G999/AA-17-493, MERC has included totals in Schedule Q.

In its November 13, 2019, Order Accepting Gas Utilities' Annual Automatic Adjustment Reports and 2017-2018 True-Up Proposals and Setting Further Requirements, the Commission required that MERC provide both a discussion regarding the treatment of recovery of gas losses due to contractor main strikes and totals for its Schedule Q Third Party Damage, in future AAA Reports. In accordance with this requirement, MERC notes that in instances where gas losses occur due to damage, MERC bills lost gas charges to the party responsible for damages. Any revenue collected from those third parties is netted against the commodity cost, thereby reducing the overall gas costs for the AAA period. For the 2019-2020 gas year, MERC-NNG credited \$29,072.91 to commodity.

Meter Testing Program

In its October 11, 2012, Order in Docket No. G999/AA-10-885, the Commission required all natural gas utility companies to file any updates regarding meter testing within an annual period in their AAA reports. In comments filed in Docket No. G999/AA-14-580, MERC agreed to provide its meter testing results on a calendar year basis starting with the year 2014.

In 2019, MERC made a temporary modification to the meter testing program due to the Automated Meter Infrastructure ("AMI") project, which started in 2019. In 2019, MERC temporarily suspended the statistical meter sample testing program during AMI deployment, and focused meter replacement on the meters with large amounts of deficiencies and older meters that may be difficult to do an index exchange on while out in the field. During 2019, and throughout the remainder of the AMI project, MERC is replacing meters that the AMI deployment vendor finds issues with. This temporary modification provides for efficient meter testing while concurrent resources can be utilized during AMI deployment.

During the time period of January 1, 2019, through December 31, 2019, MERC tested 3,919 meters as part of its meter testing program. Of those meters tested, 3,625 (92.5%) tested between 98% and 102% accurate. 225 meters (5.7%) tested greater than 102% accurate, 61 meters (1.6%) tested less than 98% accurate, and 8 meters (0.20%) had no test due to the meter being damaged.

Unauthorized Use of Gas

In its Order dated February 27, 2019, in Docket Nos. G011/AA-17-654, G011/AA-17-655, and G011/AA-17-656, the Commission required that all utilities in the next three AAA Reports provide the following information on unauthorized gas use for each customer that did not comply with a called interruption(s) during the heating season:

- a. The volume of gas consumed by the non-compliant customer during the curtailment period;
- b. The specific commodity rate charged for the unauthorized gas used and how that rate is determined;

- c. The financial penalty, if any, assessed by the company on the customer, including calculations used to determine the penalty or penalties; and
- d. A discussion about utility communication with each customer regarding noncompliance with interruptions (excluding invoices).

MERC called nine curtailments during this AAA period, on September 13, 2019, October 30, 2019, November 5, 2019, November 10, 2019, November 11, 2019, December 10, 2019, December 11, 2019, and January 16, 2020, in the NNG PGA. In total, 118 customers were called to curtail. In total, of the 118 customers called to curtail, 12 had unauthorized usage during the curtailment periods. The chart below shows the unauthorized gas use by MERC-NNG customers during the curtailments.

Date of Unauthorized Usage	Unauthorized Usage (in therms)	Financial Penalty*
11/11/2019	2,612.21	\$13,061.05

*A financial penalty of \$5.00 per therm was assessed per MERC's Tariff.

A commodity rate of \$0.29528 per therm was charged to transportation customers per Northern Natural Gas pipeline's November 2019 imbalance cash out rates. A commodity rate of \$0.38881 per therm was charged to Class 2 Interruptible, Class 3 Interruptible, and Agricultural Grain Dryer Class 2 Interruptible System Sales customers for unauthorized gas use based on the MERC-NNG November 2019 PGA filing.

MERC maintains and operates a customer notification system that is used to contact customers via phone (voice and/or text message) and email when MERC declares a gas curtailment. The customers that used unauthorized gas were notified prior to the curtailment start time. A total of 367 direct contacts with live persons, 483 voicemails, 158 faxes, 541 emails, and 1,162 text messages were sent out during this AAA period.

In its Order dated November 6, 2019, in Docket No. G999/CI-19-160, the Commission required that all utilities provide annually in their September 1 AAA report filings, complete analyses of circumstances when an interruptible customer fails to curtail twice, or a single noncompliant event is significant. MERC did not encounter any instances where an interruptible customer failed to curtail twice, nor was there any instance of a single, significant noncompliant event during this reporting period.

Docket No. G011/M-15-895 Order Approving Rochester Project and Granting Rider Recovery with Conditions

On May 8, 2018, the Commission issued an Order in Docket No. G011/M-15-895. Order Point 2 required MERC to separately track and report Rochester-specific capacity release information (e.g., volumes, revenue received) in future AAA filings in the same manner that it has in previous AAA filings for short-term capacity releases.

As noted above, Schedule I reports on the Rochester-specific capacity releases that have occurred during this reporting period.³

Prior Period Adjustments

In its February 27, 2019, Order Accepting Gas Utilities' Annual Automatic Adjustment Reports and 2017 True-Up Proposals and Setting Further Requirements, in Docket No. G999/AA-17-493, the Commission required that going forward, all regulated utilities identify each non-standard prior-period adjustment made in an annual true-up filing, demonstrate whether such adjustment is subject to a Minnesota rule (e.g., Billing Error Rule, Minn. R. 7820.4000, Approval for Automatic Adjustment of Charges Minn. R. 7825.2920, or some other Rule), and demonstrate the reasonableness of each such adjustment.

MERC did not have any prior-period adjustments for its 2019-2020 AAA and true-up, but notes that Schedule M to MERC's AAA Report includes the calculation of PGA revenues for the prior periods that were billed on and after July 1, in order to capture all of the PGA revenue for the 12-month period of the current AAA Report. While the underlying cancel-rebills may be subject to the Natural Gas Billing Errors Rule, the adjustment calculated in Schedule M is not. Rather, this calculation reflects PGA revenue for the applicable 12-month AAA period.

³ See also MERC's January 31, 2020 and July 31, 2020 Bi-Annual Capacity Release Compliance Filings in Docket No. G011/M-15-895,

MERC-NNG

<p>ANNUAL AUDITOR'S REPORT</p> <p>MINNESOTA RULE 7825.2820</p>
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September 1, 2020

INDEPENDENT ACCOUNTANTS' REPORT

To the Board of Directors
Minnesota Energy Resources Corporation

We have examined the accompanying exhibits as listed below (collectively, "the Exhibits") of the Annual Automatic Adjustment Report prepared in accordance with Minnesota Rules 7825.2390 to 7825.3000 ("Fuel Rules") for the Northern Natural Gas PGA System for the period July 1, 2019 through June 30, 2020, to be filed by Minnesota Energy Resources Corporation ("the Company"), an indirect wholly owned subsidiary of WEC Energy Group, Inc., with the Minnesota Public Utility Commission ("the Commission").

- Schedule A: Summary of Base Cost of Gas Recovered
- Schedule B and E: Summary of Revenue Billed and Sales Volumes
- Schedule C and D: Summary of Purchased Volumes and Costs
- Schedule F and G: Summary of Supplier Refunds
- Schedule H: Over/Under Recovery of Purchased Gas Costs Summary
- Schedule I: Capacity Release Summary

The Company's management is responsible for the Exhibits. Our responsibility is to express an opinion on the Exhibits based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the Exhibits are in accordance with the Fuel Rules, in all material respects. An examination involves performing procedures to obtain evidence about the Exhibits. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the Exhibits, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

In our opinion, the Exhibits for the Northern Natural Gas PGA System for the period July 1, 2019 to June 30, 2020, are presented in accordance with the Commission Fuel Rules, in all material respects.

We did not examine any of the schedules other than those explicitly listed above. Accordingly, we do not express an opinion on any of the other schedules.

This report is intended solely for the information and use of WEC Energy Group, Inc., the Company, including its Board of Directors, and the Commission, and is not intended to be and should not be used by anyone other than these specified parties.

Deloitte & Touche LLP

August 28, 2020

MERC-NNG

<p>STATEMENT ON GAS COST PROJECTIONS</p> <p>MINNESOTA RULE 7825.2830</p>
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September 1, 2020

The major cost components of providing gas service are gas commodity, storage, and transportation. Each component is discussed below:

Gas commodity is typically the most significant component of total delivered gas cost. As Table 1 (below) shows, the 2019-2020 period was marked with relatively stable monthly prices. NYMEX natural gas prices for the winter of 2020-2021 are currently trading at an average price of \$2.93, compared to average actual prices in the winter of 2019-2020 of \$2.18.

Table 1: MERC Index Prices
Quote Date 23-Apr-20

Delivery Month	NYMEX NG	Emerson Viking	Northern Ventura
Jul-19	2.2910	1.9610	1.9900
Aug-19	2.1410	1.8110	1.9600
Sep-19	2.2510	1.9210	1.8700
Oct-19	2.4280	1.9930	1.9500
Nov-19	2.5970	2.6970	2.6000
Dec-19	2.4700	2.5700	2.8300
Jan-20	2.1580	2.2580	2.4300
Feb-20	1.8770	1.9770	1.9300
Mar-20	1.8210	1.9210	1.6300
Apr-20	1.6340	1.4590	1.3700
May-20	1.9390	1.8390	1.8190
Jun-20	2.0530	1.7880	1.8780
Jul-20	2.2360	1.9660	2.0560
Aug-20	2.3200	2.0300	2.1075
Sep-20	2.3540	2.0340	2.0815
Oct-20	2.4190	2.0540	2.1515
Nov-20	2.6370	2.4695	2.6620
Dec-20	2.9530	2.8980	3.3980
Jan-21	3.0930	3.0455	4.0055
Feb-21	3.0570	3.0170	3.9695
Mar-21	2.9220	2.8820	3.0895
Apr-21	2.6050	2.2200	2.4225
May-21	2.5730	2.1880	2.3355
Jun-21	2.6090	2.2240	2.3265

Natural gas reserves continue to be at historically high levels and this, coupled with advances in shale drilling technology, results in a well-supplied market. Increased demand for gas from the electric generation and industrial sectors will put some upward pressure on prices, but supply/potential supply is likely to continue to outpace demand.

MERC has implemented a hedging strategy for the 2020-2021 winter season (November through March). The goal of the hedging plan is to mitigate price volatility while continuing to supply reasonably priced gas. The hedge strategy utilizes financial instruments as a percentage of winter requirements at levels of about 10 percent futures and 20 percent call options. An additional 30 percent is expected to be withdrawn from storage and the remaining 40 percent will be purchased at monthly physical index prices. The hedging strategy utilizes a dollar-cost-averaging approach, whereby financial and physical (storage) supply hedges are put

in place from May 2020 through October 2020 for each of the winter months (November 2020 through March 2021).

Storage is another key component in providing overall gas service. There are three major value components of storage: seasonal price arbitrage, daily operational flexibility, and reliability. The value of seasonal price arbitrage is dependent upon the winter and summer pricing differential, which varies in value each year. Storage provides a high degree of flexibility for MERC to increase and decrease supply with weather-related demand. Storage also increases reliability because MERC controls the supply. For the most part, storage costs are controlled by long-term service agreements with pipelines, and therefore, prices do not react to changing market conditions as rapidly as gas commodity prices react.

Pipeline transportation is the final major component affecting gas cost to the city gate. Maximum transportation rates are regulated by FERC, but there are other factors that can influence transportation cost. Pipeline rates may be discounted if there is a competitive pipeline alternative in a market. Additionally, if a market area has more pipeline capacity than market demand, participants can possibly rely upon interruptible pipeline capacity, which puts downward pressure on the value of the capacity. If an area is capacity constrained, the capacity has greater value. If the market is working properly, these mismatches between demand and capacity will eventually correct; however, there may be several years before the benefit or cost of the correction will work its way into pricing.

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020

SUMMARY OF BASE COST OF GAS RECOVERED

Schedule A

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NNG

8/16/2020

NNG

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Total
GS													
Dth*	547,591	512,604	497,708	1,097,481	2,311,480	3,770,834	4,709,036	4,038,609	3,528,366	2,414,219	1,368,648	687,370	25,483,946
Base Rate	\$4.6036	\$4.6036	\$4.6036	\$4.6036	\$4.6036	\$4.6036	\$4.6036	\$4.6036	\$4.6036	\$4.6036	\$4.6036	\$4.6036	
Total \$	\$2,520,891	\$2,359,825	\$2,291,249	\$5,052,361	\$10,641,130	\$17,359,409	\$21,678,518	\$18,592,143	\$16,243,185	\$11,114,097	\$6,300,708	\$3,164,378	\$117,317,894
Interruptible													
Dth*	92,675	88,246	90,775	128,343	369,825	659,574	359,331	287,205	286,805	200,531	152,565	100,197	2,816,073
Base Rate	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	
Total \$	\$339,868	\$323,623	\$332,900	\$470,673	\$1,356,261	\$2,418,858	\$1,317,774	\$1,053,266	\$1,051,800	\$735,407	\$559,502	\$367,454	\$10,327,386
Firm/Interruptible													
Dth*	346	250	307	508	355	410	2,739	1,915	1,909	1,037	706	328	10,810
CD Units	95	95	95	95	95	95	95	95	95	95	95	95	1,140
Base Rate-Comm	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	\$3.6673	
Base Rate-Dem	\$28.0890	\$28.0890	\$28.0890	\$28.0890	\$28.0890	\$28.0890	\$28.0890	\$28.0890	\$28.0890	\$28.0890	\$28.0890	\$28.0890	
Commodity \$	\$1,270	\$917	\$1,125	\$1,865	\$1,300	\$1,504	\$10,046	\$7,022	\$7,002	\$3,803	\$2,589	\$1,202	\$39,645
Demand \$	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$32,016
Total \$	\$3,938	\$3,585	\$3,793	\$4,533	\$3,968	\$4,172	\$12,714	\$9,690	\$9,670	\$6,471	\$5,257	\$3,870	\$71,661
TOTAL													
Dth*	640,613	601,100	588,790	1,226,332	2,681,660	4,430,818	5,071,106	4,327,729	3,817,080	2,615,787	1,521,919	787,895	28,310,830
CD Units	95	95	95	95	95	95	95	95	95	95	95	95	1,140
Commodity \$	\$2,862,029	\$2,684,365	\$2,625,274	\$5,524,899	\$11,998,691	\$19,779,771	\$23,006,338	\$19,652,431	\$17,301,987	\$11,853,307	\$6,862,799	\$3,533,034	\$127,684,925
Demand \$	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$2,668	\$32,016
Total \$	\$2,864,697	\$2,687,033	\$2,627,942	\$5,527,567	\$12,001,359	\$19,782,439	\$23,009,006	\$19,655,099	\$17,304,655	\$11,855,975	\$6,865,467	\$3,535,702	\$127,716,941

*Monthly quantity, in Dths, delivered to customers.

Note: Due to rounding and other considerations, the total amounts reported may not aggregate in total for the month and/or year.

MINNESOTA ENERGY RESOURCES - NNG

SCHEDULE A

Page 2 of 2

8/16/2020

SUMMARY OF BASE COST OF GAS RECOVERED

EFFECTIVE: July 1, 2019

I. MERC NNG BASE COMMODITY COSTS

As approved in Docket No. G011/MR-17-564

Based on 5-15-18 NYMEX, 2018 forecasted sales volumes and 2018 projected demand contract rates.

A. NNG DEMAND - General Service	
Total Annual Demand Costs (\$)	\$22,181,234
Annual Firm Sales (therms)	236,895,506
NNG Demand Cost (\$/therm)	\$0.09363

B. NNG COMMODITY COSTS - General Service, Interruptible, Firm/Interruptible	
Gas Commodity Costs	
Total Cost of Gas Commodity	\$96,940,865
Total Annual Sales less Co. Use and L & U	264,337,861 therms
Commodity Base Cost of Gas	\$0.36673 /therm
Total Base Commodity Cost	\$0.36673 /therm

C. NNG DEMAND COSTS ASSIGNED TO FIRM/INTERRUPTIBLE:	
Total Annual Demand Costs (\$)	\$22,181,234
Annual Firm Sales (therms)	236,895,506
Total Firm/Interruptible Demand Rate (\$/therms per day)	\$0.09363
Total Firm/Interruptible Demand Rate (\$/therms per Month)	\$2.80890

D. NNG COMMODITY BASE RATES	
Firm - General Service	
Commodity Base Cost of Gas	\$0.36673 /therm
Firm Demand Base Costs	\$0.09363 /therm
Firm Commodity Base Rate	\$0.46036 /therm
Interruptible and Firm/Interruptible:	
Commodity Base Cost of Gas	\$0.36673 /therm
Interruptible/Firm-Interr Commodity Base Rate	\$0.36673 /therm

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020
SUMMARY OF REVENUE BILLED AND SALES VOLUMES

Schedule B & E

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NNG

8/16/2020

NNG

	Prior Period Adjustment	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	12-Month Total
GS														
Customers*		201,992	200,119	200,152	200,994	202,352	206,667	207,840	201,595	198,570	203,242	204,101	203,672	202,608
Dth**	(33)	547,591	512,604	497,708	1,097,481	2,311,480	3,770,834	4,709,036	4,038,609	3,528,366	2,414,219	1,368,648	687,370	25,483,913
Demand-\$	(\$31)	\$519,828	\$486,615	\$472,474	\$1,041,838	\$2,132,803	\$3,479,348	\$7,059,787	\$6,054,683	\$5,289,726	\$3,619,397	\$2,051,877	\$780,922	\$32,989,268
Commodity-\$	(\$111)	\$1,600,007	\$1,511,260	\$1,421,902	\$3,206,070	\$8,473,193	\$14,038,813	\$17,199,283	\$13,585,075	\$11,380,039	\$7,148,743	\$4,435,104	\$2,020,457	\$86,019,833
Transport-\$		\$29,323	\$20,551	\$20,410	\$26,755	\$25,240	\$31,057	\$40,097	\$36,313	\$38,601	\$18,765	\$17,067	\$20,901	\$325,080
Monetary Adj.-\$										\$0	\$0	\$0	\$0	\$0
GS TOTAL-\$	(\$142)	\$2,149,158	\$2,018,425	\$1,914,787	\$4,274,663	\$10,631,236	\$17,549,218	\$24,299,167	\$19,676,071	\$16,708,366	\$10,786,905	\$6,504,048	\$2,822,279	\$119,334,181
Interruptible														
Customers*		383	388	375	403	397	484	699	429	410	408	384	390	429
Dth**	0	92,675	88,246	90,775	128,343	369,825	659,574	359,331	287,205	286,805	200,531	152,565	100,197	2,816,073
Commodity-\$	\$0	\$270,788	\$260,166	\$259,335	\$374,929	\$1,355,669	\$2,455,596	\$1,312,420	\$1,070,671	\$1,029,458	\$666,805	\$549,936	\$331,002	\$9,936,775
Transport-\$		\$4,963	\$3,538	\$3,723	\$3,129	\$4,038	\$5,432	\$3,060	\$2,582	\$3,138	\$1,559	\$1,902	\$3,047	\$40,110
INT TOTAL-\$	\$0	\$275,750	\$263,704	\$263,058	\$378,058	\$1,359,707	\$2,461,028	\$1,315,480	\$1,073,253	\$1,032,596	\$668,364	\$551,839	\$334,049	\$9,976,885
Firm/Interruptible														
Customers*		4	2	2	2	1	1	15	2	3	2	2	1	3
Dth**		346	250	307	508	355	410	2,739	1,915	1,909	1,037	706	328	10,810
CD Units		95	95	95	95	95	95	95	95	95	95	95	95	1,140
Commodity-\$		\$1,012	\$738	\$876	\$1,485	\$1,300	\$1,527	\$10,005	\$7,138	\$6,853	\$3,449	\$2,544	\$1,082	\$38,010
Demand-\$		\$2,706	\$2,706	\$2,706	\$2,706	\$2,630	\$2,630	\$4,273	\$4,273	\$4,273	\$4,273	\$4,273	\$3,238	\$40,683
F/I TOTAL-\$	\$0	\$3,718	\$3,443	\$3,582	\$4,191	\$3,929	\$4,156	\$14,278	\$11,411	\$11,126	\$7,721	\$6,817	\$4,320	\$78,692
TOTAL														
Customers*		202,378	200,509	200,529	201,399	202,750	207,152	208,554	202,027	198,982	203,652	204,487	204,064	203,040
Dth**	(33)	640,613	601,100	588,790	1,226,332	2,681,660	4,430,818	5,071,106	4,327,729	3,817,080	2,615,787	1,521,919	787,895	28,310,797
CD Units		95	95	95	95	95	95	95	95	95	95	95	95	1,140
Commodity-\$	(111)	1,906,092	1,796,252	1,706,247	3,612,368	9,859,440	16,532,425	18,564,865	14,701,779	12,458,088	7,839,321	5,006,554	2,376,489	\$96,359,808
Demand-\$	(31)	522,534	489,321	475,180	1,044,544	2,135,432	3,481,978	7,064,059	6,058,956	5,293,999	3,623,669	2,056,150	784,159	\$33,029,950
TOTAL-\$	(\$142)	\$2,428,626	\$2,285,572	\$2,181,427	\$4,656,912	\$11,994,872	\$20,014,403	\$25,628,924	\$20,760,736	\$17,752,087	\$11,462,990	\$7,062,704	\$3,160,648	\$129,389,759

*The number of monthly customer charges billed during the calendar month.

**Monthly quantity, in Dths, delivered to customers.

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020

SUMMARY OF REVENUE BILLED AND SALES VOLUMES

Schedule B & E

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NNG

TRANSPORT

		Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	12-Month Total
TRANSPORT														
NNG														
Balancing Service(PG4)														
Rate		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
Dth		0	0	0	0	0	0	0	0	0	0	0	0	
Total Bal. Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Scheduling Fee(DB)														
Prior Period Adj.														
Rate		\$0.2509	\$0.2509	\$0.2509	\$0.2509	\$0.6088	\$0.6088	\$0.9188	\$0.9188	\$0.9188	\$0.3674	\$0.2567	\$0.2567	
Dth		73,553	16,562	22,509	26,627	15,530	24,341	21,518	18,868	23,647	10,700	14,656	27,954	
Total Bal. Fee		\$18,454	\$4,156	\$5,648	\$6,681	\$9,455	\$14,819	\$19,771	\$17,336	\$21,727	\$3,931	\$3,762	\$7,176	\$132,915
Imbalance Fee(IMB)														
Prior Period Adj.														
Rate		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
Dth		0	0	0	0	0	0	0	0	0	0	0	0	
Total Imbal. Fee		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Aggregation(PL)														
Prior Period Adj.														
Rate		\$0.0425	\$0.0425	\$0.0425	\$0.0425	\$0.0425	\$0.0425	\$0.0425	\$0.0425	\$0.0425	\$0.0425	\$0.0425	\$0.0425	
Dth		372,496	469,007	434,952	545,953	466,450	509,885	550,247	507,295	470,857	385,711	357,804	394,642	
Total Aggregation		\$15,831	\$19,933	\$18,485	\$23,203	\$19,824	\$21,670	\$23,386	\$21,560	\$20,011	\$16,393	\$15,207	\$16,772	\$232,275
Total NNG		\$34,285	\$24,088	\$24,133	\$29,884	\$29,279	\$36,489	\$43,157	\$38,896	\$41,739	\$20,324	\$18,969	\$23,948	\$365,190

Notes: Due to rounding and other considerations, the total amounts reported may not aggregate in total for the month and/or year.
 Kansas Ad Valorem Taxes were collected via the PGA from July - Dec 2017 and are included in the Commodity numbers above.

MERC NNG

CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E

Page 3 of 14

EFFECTIVE DATE: **July 1, 2019**

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

<u>Class</u>	<u>Cost Category</u>	<u>Base Rate</u> (Pg 1,III.)	<u>Prior</u> <u>Adjustments</u>	<u>Current</u> <u>Adjustments</u>	<u>Total</u> <u>Adjustments</u>	<u>Current</u> <u>Rate</u> (Pg2,VI.)	<u>Distribution</u> <u>Charge</u>	<u>Total Billing</u> <u>Rate</u>
A. NNG GS	Demand	\$0.09363	\$0.00000	\$0.00130	\$0.00130	\$0.09493		
	Commodity	\$0.36673	\$0.00000	(\$0.07454)	(\$0.07454)	\$0.29219		
	ACA	\$0.00000	\$0.02234	\$0.00000	\$0.02234	\$0.02234		
	Total-Residential & Residential-Farm Tap	\$0.46036	(\$0.02865)	(\$0.07324)	(\$0.05090)	\$0.40946	\$0.24686	\$0.65632
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	(\$0.02865)	(\$0.07324)	(\$0.05090)	\$0.40946	\$0.22251	\$0.63197
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	(\$0.02865)	(\$0.07324)	(\$0.05090)	\$0.40946	\$0.16857	\$0.57803
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	(\$0.02865)	(\$0.07324)	(\$0.05090)	\$0.40946	\$0.12453	\$0.53399
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	(\$0.02865)	(\$0.07324)	(\$0.05090)	\$0.40946	\$0.05016	\$0.45962
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	(\$0.02865)	(\$0.07324)	(\$0.05090)	\$0.40946	\$0.03486	\$0.44432
B. NNG Firm/ Interruptible	Demand	\$2.80890	\$0.00000	\$0.03900	\$0.03900	\$2.84790		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$6.41880
	Firm/Interruptible Class 2						\$1.92120	\$6.41880
	Firm/Interruptible Class 3						\$0.90000	\$5.39760
	Firm/Interruptible Class 4						\$0.05790	\$4.55550
	Firm/Interruptible Class 5						\$0.02550	\$4.52310
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$4.52310
	Commodity	\$0.36673	\$0.00000	(\$0.07454)	(\$0.07454)	\$0.29219		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Firm/Interruptible Class 1	\$0.36673	(\$0.03137)	(\$0.07454)	(\$0.03386)	\$0.33287	\$0.15847	\$0.49134
	Firm/Interruptible Class 2	\$0.36673	(\$0.03137)	(\$0.07454)	(\$0.03386)	\$0.33287	\$0.10453	\$0.43740
	Firm/Interruptible Class 3	\$0.36673	(\$0.03137)	(\$0.07454)	(\$0.03386)	\$0.33287	\$0.09453	\$0.42740
	Firm/Interruptible Class 4	\$0.36673	(\$0.03137)	(\$0.07454)	(\$0.03386)	\$0.33287	\$0.04823	\$0.38110
	Firm/Interruptible Class 5	\$0.36673	(\$0.03137)	(\$0.07454)	(\$0.03386)	\$0.33287	\$0.03401	\$0.36688
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.03137)	(\$0.07454)	(\$0.03386)	\$0.33287	\$0.12953	\$0.46240
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.03137)	(\$0.07454)	(\$0.03386)	\$0.33287	\$0.08150	\$0.41437
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.03137)	(\$0.07454)	(\$0.03386)	\$0.33287	\$0.05860	\$0.39147
	Firm/Interruptible Power Gen - Class 1	\$0.36673	(\$0.03137)	(\$0.07454)	(\$0.03386)	\$0.33287	\$0.09953	\$0.43240
	Firm/Interruptible Power Gen - Class 2	\$0.36673	(\$0.03137)	(\$0.07454)	(\$0.03386)	\$0.33287	\$0.03401	\$0.36688
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	0.75776	\$0.00000	\$0.00000	\$0.00000	0.75776		
	Commodity	\$0.36673	(\$0.07205)	(\$0.00249)	(\$0.07454)	\$0.29219		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total - Interruptible Class 1	\$0.36673	(\$0.03137)	(\$0.00249)	(\$0.03386)	\$0.33287	\$0.15847	\$0.49134
	Total - Interruptible Class 2	\$0.36673	(\$0.03137)	(\$0.00249)	(\$0.03386)	\$0.33287	\$0.10453	\$0.43740
	Total - Interruptible Class 3	\$0.36673	(\$0.03137)	(\$0.00249)	(\$0.03386)	\$0.33287	\$0.09453	\$0.42740
	Total - Interruptible Class 4	\$0.36673	(\$0.03137)	(\$0.00249)	(\$0.03386)	\$0.33287	\$0.04823	\$0.38110
	Total - Interruptible Class 5	\$0.36673	(\$0.03137)	(\$0.00249)	(\$0.03386)	\$0.33287	\$0.03401	\$0.36688
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.03137)	(\$0.00249)	(\$0.03386)	\$0.33287	\$0.12953	\$0.46240
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.03137)	(\$0.00249)	(\$0.03386)	\$0.33287	\$0.08150	\$0.41437
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.03137)	(\$0.00249)	(\$0.03386)	\$0.33287	\$0.05860	\$0.39147
	Total - Interruptible Power Gen - Class 1	\$0.36673	(\$0.03137)	(\$0.00249)	(\$0.03386)	\$0.33287	\$0.09953	\$0.43240
	Total - Interruptible Power Gen - Class 2	\$0.36673	(\$0.03137)	(\$0.00249)	(\$0.03386)	\$0.33287	\$0.03401	\$0.36688

MERC NNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E
Page 4 of 14

EFFECTIVE DATE: **August 1, 2019**

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

<u>Class</u>	<u>Cost Category</u>	<u>Base Rate</u> (Pg 1,III.)	<u>Prior</u> <u>Adjustments</u>	<u>Current</u> <u>Adjustments</u>	<u>Total</u> <u>Adjustments</u>	<u>Current</u> <u>Rate</u> (Pg2,VI.)	<u>Distribution</u> <u>Charge</u>	<u>Total Billing</u> <u>Rate</u>
A. NNG GS	Demand	\$0.09363	\$0.00130	\$0.00000	\$0.00130	\$0.09493		
	Commodity	\$0.36673	(\$0.07454)	\$0.00263	(\$0.07191)	\$0.29482		
	ACA	\$0.00000	\$0.02234	\$0.00000	\$0.02234	\$0.02234		
	Total-Residential & Residential-Farm Tap	\$0.46036	(\$0.05090)	\$0.00263	(\$0.04827)	\$0.41209	\$0.24686	\$0.65895
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	(\$0.05090)	\$0.00263	(\$0.04827)	\$0.41209	\$0.22251	\$0.63460
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	(\$0.05090)	\$0.00263	(\$0.04827)	\$0.41209	\$0.16857	\$0.58066
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	(\$0.05090)	\$0.00263	(\$0.04827)	\$0.41209	\$0.12453	\$0.53662
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	(\$0.05090)	\$0.00263	(\$0.04827)	\$0.41209	\$0.05016	\$0.46225
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	(\$0.05090)	\$0.00263	(\$0.04827)	\$0.41209	\$0.03486	\$0.44695
B. NNG Firm/ Interruptible	Demand	\$2.80890	\$0.03900	\$0.00000	\$0.03900	\$2.84790		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$6.41880
	Firm/Interruptible Class 2						\$1.92120	\$6.41880
	Firm/Interruptible Class 3						\$0.90000	\$5.39760
	Firm/Interruptible Class 4						\$0.05790	\$4.55550
	Firm/Interruptible Class 5						\$0.02550	\$4.52310
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$4.52310
	Commodity	\$0.36673	(\$0.07454)	\$0.00263	(\$0.07191)	\$0.29482		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Firm/Interruptible Class 1	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.15847	\$0.49397
	Firm/Interruptible Class 2	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.10453	\$0.44003
	Firm/Interruptible Class 3	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.09453	\$0.43003
	Firm/Interruptible Class 4	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.04823	\$0.38373
	Firm/Interruptible Class 5	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.03401	\$0.36951
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.12953	\$0.46503
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.08150	\$0.41700
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.05860	\$0.39410
	Firm/Interruptible Power Gen - Class 1	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.09953	\$0.43503
	Firm/Interruptible Power Gen - Class 2	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.03401	\$0.36951
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	0.75776	\$0.00000	\$0.00000	\$0.00000	0.75776		
	Commodity	\$0.36673	(\$0.07454)	\$0.00263	(\$0.07191)	\$0.29482		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total - Interruptible Class 1	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.15847	\$0.49397
	Total - Interruptible Class 2	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.10453	\$0.44003
	Total - Interruptible Class 3	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.09453	\$0.43003
	Total - Interruptible Class 4	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.04823	\$0.38373
	Total - Interruptible Class 5	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.03401	\$0.36951
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.12953	\$0.46503
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.08150	\$0.41700
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.05860	\$0.39410
	Total - Interruptible Power Gen - Class 1	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.09953	\$0.43503
	Total - Interruptible Power Gen - Class 2	\$0.36673	(\$0.03386)	\$0.00263	(\$0.03123)	\$0.33550	\$0.03401	\$0.36951

MERC NNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E
Page 5 of 14

EFFECTIVE DATE: **September 1, 2019**

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

Class	Cost Category	Base Rate (Pg 1,III.)	Prior Adjustments	Current Adjustments	Total Adjustments	Current Rate (Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09363	\$0.00130	\$0.00000	\$0.00130	\$0.09493		
	Commodity	\$0.36673	(\$0.07191)	(\$0.00913)	(\$0.08104)	\$0.28569		
	ACA	\$0.00000	\$0.02234	(\$0.06361)	(\$0.04127)	(\$0.04127)		
	Total-Residential & Residential-Farm Tap	\$0.46036	(\$0.04827)	(\$0.07274)	(\$0.12101)	\$0.33935	\$0.24686	\$0.58621
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	(\$0.04827)	(\$0.07274)	(\$0.12101)	\$0.33935	\$0.22251	\$0.56186
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	(\$0.04827)	(\$0.07274)	(\$0.12101)	\$0.33935	\$0.16857	\$0.50792
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	(\$0.04827)	(\$0.07274)	(\$0.12101)	\$0.33935	\$0.12453	\$0.46388
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	(\$0.04827)	(\$0.07274)	(\$0.12101)	\$0.33935	\$0.05016	\$0.38951
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	(\$0.04827)	(\$0.07274)	(\$0.12101)	\$0.33935	\$0.03486	\$0.37421
B. NNG Firm/ Interruptible	Demand	\$2.80890	\$0.03900	\$0.00000	\$0.03900	\$2.84790		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$6.41880
	Firm/Interruptible Class 2						\$1.92120	\$6.41880
	Firm/Interruptible Class 3						\$0.90000	\$5.39760
	Firm/Interruptible Class 4						\$0.05790	\$4.55550
	Firm/Interruptible Class 5						\$0.02550	\$4.52310
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$4.52310
	Commodity	\$0.36673	(\$0.07191)	(\$0.00913)	(\$0.08104)	\$0.28569		
	ACA	\$0.00000	\$0.04068	(\$0.01844)	\$0.02224	\$0.02224		
	Firm/Interruptible Class 1	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.15847	\$0.46640
	Firm/Interruptible Class 2	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.10453	\$0.41246
	Firm/Interruptible Class 3	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.09453	\$0.40246
	Firm/Interruptible Class 4	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.04823	\$0.35616
	Firm/Interruptible Class 5	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.03401	\$0.34194
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.12953	\$0.43746
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.08150	\$0.38943
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.05860	\$0.36653
	Firm/Interruptible Power Gen - Class 1	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.09953	\$0.40746
	Firm/Interruptible Power Gen - Class 2	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.03401	\$0.34194
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	0.75776	\$0.00000	\$0.00000	\$0.00000	0.75776		
	Commodity	\$0.36673	(\$0.07191)	(\$0.00913)	(\$0.08104)	\$0.28569		
	ACA	\$0.00000	\$0.04068	(\$0.01844)	\$0.02224	\$0.02224		
	Total - Interruptible Class 1	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.15847	\$0.46640
	Total - Interruptible Class 2	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.10453	\$0.41246
	Total - Interruptible Class 3	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.09453	\$0.40246
	Total - Interruptible Class 4	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.04823	\$0.35616
	Total - Interruptible Class 5	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.03401	\$0.34194
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.12953	\$0.43746
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.08150	\$0.38943
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.05860	\$0.36653
	Total - Interruptible Power Gen - Class 1	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.09953	\$0.40746
	Total - Interruptible Power Gen - Class 2	\$0.36673	(\$0.03123)	(\$0.02757)	(\$0.05880)	\$0.30793	\$0.03401	\$0.34194

MERC NNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E
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EFFECTIVE DATE: **October 1, 2019**

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

<u>Class</u>	<u>Cost Category</u>	<u>Base Rate</u> (Pg 1,III.)	<u>Prior</u> <u>Adjustments</u>	<u>Current</u> <u>Adjustments</u>	<u>Total</u> <u>Adjustments</u>	<u>Current</u> <u>Rate</u> (Pg2,VI.)	<u>Distribution</u> <u>Charge</u>	<u>Total Billing</u> <u>Rate</u>
A. NNG GS	Demand	\$0.09363	\$0.00130	\$0.00000	\$0.00130	\$0.09493		
	Commodity	\$0.36673	(\$0.08104)	\$0.00644	(\$0.07460)	\$0.29213		
	ACA	\$0.00000	(\$0.04127)	\$0.00000	(\$0.04127)	(\$0.04127)		
	Total-Residential & Residential-Farm Tap	\$0.46036	(\$0.12101)	\$0.00644	(\$0.11457)	\$0.34579	\$0.24686	\$0.59265
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	(\$0.12101)	\$0.00644	(\$0.11457)	\$0.34579	\$0.22251	\$0.56830
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	(\$0.12101)	\$0.00644	(\$0.11457)	\$0.34579	\$0.16857	\$0.51436
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	(\$0.12101)	\$0.00644	(\$0.11457)	\$0.34579	\$0.12453	\$0.47032
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	(\$0.12101)	\$0.00644	(\$0.11457)	\$0.34579	\$0.05016	\$0.39595
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	(\$0.12101)	\$0.00644	(\$0.11457)	\$0.34579	\$0.03486	\$0.38065
B. NNG Firm/ Interruptible	Demand	\$2.80890	\$0.03900	\$0.00000	\$0.03900	\$2.84790		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$6.41880
	Firm/Interruptible Class 2						\$1.92120	\$6.41880
	Firm/Interruptible Class 3						\$0.90000	\$5.39760
	Firm/Interruptible Class 4						\$0.05790	\$4.55550
	Firm/Interruptible Class 5						\$0.02550	\$4.52310
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$4.52310
	Commodity	\$0.36673	(\$0.08104)	\$0.00644	(\$0.07460)	\$0.29213		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Firm/Interruptible Class 1	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.15847	\$0.47284
	Firm/Interruptible Class 2	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.10453	\$0.41890
	Firm/Interruptible Class 3	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.09453	\$0.40890
	Firm/Interruptible Class 4	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.04823	\$0.36260
	Firm/Interruptible Class 5	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.03401	\$0.34838
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.12953	\$0.44390
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.08150	\$0.39587
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.05860	\$0.37297
	Firm/Interruptible Power Gen - Class 1	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.09953	\$0.41390
	Firm/Interruptible Power Gen - Class 2	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.03401	\$0.34838
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	0.75776	\$0.00000	\$0.00000	\$0.00000	0.75776		
	Commodity	\$0.36673	(\$0.08104)	\$0.00644	(\$0.07460)	\$0.29213		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Total - Interruptible Class 1	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.15847	\$0.47284
	Total - Interruptible Class 2	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.10453	\$0.41890
	Total - Interruptible Class 3	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.09453	\$0.40890
	Total - Interruptible Class 4	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.04823	\$0.36260
	Total - Interruptible Class 5	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.03401	\$0.34838
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.12953	\$0.44390
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.08150	\$0.39587
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.05860	\$0.37297
	Total - Interruptible Power Gen - Class 1	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.09953	\$0.41390
	Total - Interruptible Power Gen - Class 2	\$0.36673	(\$0.05880)	\$0.00644	(\$0.05236)	\$0.31437	\$0.03401	\$0.34838

MERC NNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E
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EFFECTIVE DATE: **November 1, 2019**

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

<u>Class</u>	<u>Cost Category</u>	<u>Base Rate</u> (Pg 1,III.)	<u>Prior</u> <u>Adjustments</u>	<u>Current</u> <u>Adjustments</u>	<u>Total</u> <u>Adjustments</u>	<u>Current</u> <u>Rate</u> (Pg2,VI.)	<u>Distribution</u> <u>Charge</u>	<u>Total Billing</u> <u>Rate</u>
A. NNG GS	Demand	\$0.09363	\$0.00130	(\$0.00266)	(\$0.00136)	\$0.09227		
	Commodity	\$0.36673	\$0.07460	\$0.07444	(\$0.00016)	\$0.36657		
	ACA	\$0.00000	(\$0.04127)	\$0.00000	(\$0.04127)	(\$0.04127)		
	Total-Residential & Residential-Farm Tap	\$0.46036	(\$0.11457)	\$0.07178	(\$0.04279)	\$0.41757	\$0.24686	\$0.66443
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	(\$0.11457)	\$0.07178	(\$0.04279)	\$0.41757	\$0.22251	\$0.64008
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	(\$0.11457)	\$0.07178	(\$0.04279)	\$0.41757	\$0.16857	\$0.58614
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	(\$0.11457)	\$0.07178	(\$0.04279)	\$0.41757	\$0.12453	\$0.54210
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	(\$0.11457)	\$0.07178	(\$0.04279)	\$0.41757	\$0.05016	\$0.46773
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	(\$0.11457)	\$0.07178	(\$0.04279)	\$0.41757	\$0.03486	\$0.45243
B. NNG Firm/ Interruptible	Demand	\$2.80890	\$0.03900	(\$0.07980)	(\$0.04080)	\$2.76810		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$6.41880
	Firm/Interruptible Class 2						\$1.92120	\$6.41880
	Firm/Interruptible Class 3						\$0.90000	\$5.39760
	Firm/Interruptible Class 4						\$0.05790	\$4.55550
	Firm/Interruptible Class 5						\$0.02550	\$4.52310
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$4.52310
	Commodity	\$0.36673	(\$0.07460)	\$0.07444	(\$0.00016)	\$0.36657		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Firm/Interruptible Class 1	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.15847	\$0.54728
	Firm/Interruptible Class 2	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.10453	\$0.49334
	Firm/Interruptible Class 3	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.09453	\$0.48334
	Firm/Interruptible Class 4	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.04823	\$0.43704
	Firm/Interruptible Class 5	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.03401	\$0.42282
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.12953	\$0.51834
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.08150	\$0.47031
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.05860	\$0.44741
	Firm/Interruptible Power Gen - Class 1	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.09953	\$0.48834
	Firm/Interruptible Power Gen - Class 2	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.03401	\$0.42282
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	0.75776	\$0.00000	\$0.00000	\$0.00000	0.75776		
	Commodity	\$0.36673	(\$0.07460)	\$0.07444	(\$0.00016)	\$0.36657		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Total - Interruptible Class 1	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.15847	\$0.54728
	Total - Interruptible Class 2	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.10453	\$0.49334
	Total - Interruptible Class 3	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.09453	\$0.48334
	Total - Interruptible Class 4	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.04823	\$0.43704
	Total - Interruptible Class 5	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.03401	\$0.42282
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.12953	\$0.51834
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.08150	\$0.47031
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.05860	\$0.44741
	Total - Interruptible Power Gen - Class 1	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.09953	\$0.48834
	Total - Interruptible Power Gen - Class 2	\$0.36673	(\$0.05236)	\$0.07444	\$0.02208	\$0.38881	\$0.03401	\$0.42282

MERC NNG

CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E

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EFFECTIVE DATE:

December 1, 2019

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

Class	Cost Category	Base Rate (Pg 1,III.)	Prior Adjustments	Current Adjustments	Total Adjustments	Current Rate (Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09363	(\$0.00136)	\$0.00000	(\$0.00136)	\$0.09227		
	Commodity	\$0.36673	(\$0.00016)	\$0.00812	\$0.00557	\$0.37230		
	ACA	\$0.00000	(\$0.04127)	\$0.00000	(\$0.04127)	(\$0.04127)		
	Total-Residential & Residential-Farm Tap	\$0.46036	(\$0.04279)	\$0.00812	(\$0.03706)	\$0.42330	\$0.24686	\$0.67016
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	(\$0.04279)	\$0.00812	(\$0.03706)	\$0.42330	\$0.22251	\$0.64581
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	(\$0.04279)	\$0.00812	(\$0.03706)	\$0.42330	\$0.16857	\$0.59187
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	(\$0.04279)	\$0.00812	(\$0.03706)	\$0.42330	\$0.12453	\$0.54783
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	(\$0.04279)	\$0.00812	(\$0.03706)	\$0.42330	\$0.05016	\$0.47346
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	(\$0.04279)	\$0.00812	(\$0.03706)	\$0.42330	\$0.03486	\$0.45816
B. NNG Firm/ Interruptible	Demand	\$2.80890	(\$0.04080)	\$0.00000	(\$0.04080)	\$2.76810		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$6.41880
	Firm/Interruptible Class 2						\$1.92120	\$6.41880
	Firm/Interruptible Class 3						\$0.90000	\$5.39760
	Firm/Interruptible Class 4						\$0.05790	\$4.55550
	Firm/Interruptible Class 5						\$0.02550	\$4.52310
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$4.52310
	Commodity	\$0.36673	(\$0.00016)	(\$0.01485)	\$0.00557	\$0.37230		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Firm/Interruptible Class 1	\$0.36673	\$0.02208	(\$0.01485)	\$0.02781	\$0.39454	\$0.15847	\$0.55301
	Firm/Interruptible Class 2	\$0.36673	\$0.02208	(\$0.01485)	\$0.02781	\$0.39454	\$0.10453	\$0.49907
	Firm/Interruptible Class 3	\$0.36673	\$0.02208	(\$0.01485)	\$0.02781	\$0.39454	\$0.09453	\$0.48907
	Firm/Interruptible Class 4	\$0.36673	\$0.02208	(\$0.01485)	\$0.02781	\$0.39454	\$0.04823	\$0.44277
	Firm/Interruptible Class 5	\$0.36673	\$0.02208	(\$0.01485)	\$0.02781	\$0.39454	\$0.03401	\$0.42855
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	\$0.02208	(\$0.01485)	\$0.02781	\$0.39454	\$0.12953	\$0.52407
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	\$0.02208	(\$0.01485)	\$0.02781	\$0.39454	\$0.08150	\$0.47604
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	\$0.02208	(\$0.01485)	\$0.02781	\$0.39454	\$0.05860	\$0.45314
	Firm/Interruptible Power Gen - Class 1	\$0.36673	\$0.02208	(\$0.01485)	\$0.02781	\$0.39454	\$0.09953	\$0.49407
	Firm/Interruptible Power Gen - Class 2	\$0.36673	\$0.02208	(\$0.01485)	\$0.02781	\$0.39454	\$0.03401	\$0.42855
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	0.75776	\$0.00000	\$0.00000	\$0.00000	0.75776		
	Commodity	\$0.36673	(\$0.00016)	(\$0.01564)	\$0.00557	\$0.37230		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Total - Interruptible Class 1	\$0.36673	\$0.02208	(\$0.01564)	\$0.02781	\$0.39454	\$0.15847	\$0.55301
	Total - Interruptible Class 2	\$0.36673	\$0.02208	(\$0.01564)	\$0.02781	\$0.39454	\$0.10453	\$0.49907
	Total - Interruptible Class 3	\$0.36673	\$0.02208	(\$0.01564)	\$0.02781	\$0.39454	\$0.09453	\$0.48907
	Total - Interruptible Class 4	\$0.36673	\$0.02208	(\$0.01564)	\$0.02781	\$0.39454	\$0.04823	\$0.44277
	Total - Interruptible Class 5	\$0.36673	\$0.02208	(\$0.01564)	\$0.02781	\$0.39454	\$0.03401	\$0.42855
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	\$0.02208	(\$0.01564)	\$0.02781	\$0.39454	\$0.12953	\$0.52407
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	\$0.02208	(\$0.01564)	\$0.02781	\$0.39454	\$0.08150	\$0.47604
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	\$0.02208	(\$0.01564)	\$0.02781	\$0.39454	\$0.05860	\$0.45314
	Total - Interruptible Power Gen - Class 1	\$0.36673	\$0.02208	(\$0.01564)	\$0.02781	\$0.39454	\$0.09953	\$0.49407
	Total - Interruptible Power Gen - Class 2	\$0.36673	\$0.02208	(\$0.01564)	\$0.02781	\$0.39454	\$0.03401	\$0.42855

MERC NNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E
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EFFECTIVE DATE: **January 1, 2020**

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

<u>Class</u>	<u>Cost Category</u>	<u>Base Rate</u> (Pg 1,III.)	<u>Prior</u> <u>Adjustments</u>	<u>Current</u> <u>Adjustments</u>	<u>Total</u> <u>Adjustments</u>	<u>Current</u> <u>Rate</u> (Pg2,VI.)	<u>Distribution</u> <u>Charge</u>	<u>Total Billing</u> <u>Rate</u>
A. NNG GS	Demand	\$0.09363	(\$0.00136)	\$0.05765	\$0.05629	\$0.14992		
	Commodity	\$0.36673	\$0.00557	(\$0.00467)	(\$0.00149)	\$0.36524		
	ACA	\$0.00000	(\$0.04127)	\$0.00000	(\$0.04127)	(\$0.04127)		
	Total-Residential & Residential-Farm Tap	\$0.46036	(\$0.03706)	\$0.05298	\$0.01353	\$0.47389	\$0.24686	\$0.72075
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	(\$0.03706)	\$0.05298	\$0.01353	\$0.47389	\$0.22251	\$0.69640
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	(\$0.03706)	\$0.05298	\$0.01353	\$0.47389	\$0.16857	\$0.64246
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	(\$0.03706)	\$0.05298	\$0.01353	\$0.47389	\$0.12453	\$0.59842
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	(\$0.03706)	\$0.05298	\$0.01353	\$0.47389	\$0.05016	\$0.52405
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	(\$0.03706)	\$0.05298	\$0.01353	\$0.47389	\$0.03486	\$0.50875
B. NNG Firm/ Interruptible	Demand	\$2.80890	(\$0.04080)	\$1.72950	\$1.68870	\$4.49760		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$6.41880
	Firm/Interruptible Class 2						\$1.92120	\$6.41880
	Firm/Interruptible Class 3						\$0.90000	\$5.39760
	Firm/Interruptible Class 4						\$0.05790	\$4.55550
	Firm/Interruptible Class 5						\$0.02550	\$4.52310
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$4.52310
	Commodity	\$0.36673	\$0.00557	(\$0.02764)	(\$0.00149)	\$0.36524		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Firm/Interruptible Class 1	\$0.36673	\$0.02781	(\$0.02764)	\$0.02075	\$0.38748	\$0.15847	\$0.54595
	Firm/Interruptible Class 2	\$0.36673	\$0.02781	(\$0.02764)	\$0.02075	\$0.38748	\$0.10453	\$0.49201
	Firm/Interruptible Class 3	\$0.36673	\$0.02781	(\$0.02764)	\$0.02075	\$0.38748	\$0.09453	\$0.48201
	Firm/Interruptible Class 4	\$0.36673	\$0.02781	(\$0.02764)	\$0.02075	\$0.38748	\$0.04823	\$0.43571
	Firm/Interruptible Class 5	\$0.36673	\$0.02781	(\$0.02764)	\$0.02075	\$0.38748	\$0.03401	\$0.42149
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	\$0.02781	(\$0.02764)	\$0.02075	\$0.38748	\$0.12953	\$0.51701
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	\$0.02781	(\$0.02764)	\$0.02075	\$0.38748	\$0.08150	\$0.46898
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	\$0.02781	(\$0.02764)	\$0.02075	\$0.38748	\$0.05860	\$0.44608
	Firm/Interruptible Power Gen - Class 1	\$0.36673	\$0.02781	(\$0.02764)	\$0.02075	\$0.38748	\$0.09953	\$0.48701
	Firm/Interruptible Power Gen - Class 2	\$0.36673	\$0.02781	(\$0.02764)	\$0.02075	\$0.38748	\$0.03401	\$0.42149
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	0.75776	\$0.00000	\$0.00000	\$0.00000	0.75776		
	Commodity	\$0.36673	\$0.00557	(\$0.02843)	(\$0.00149)	\$0.36524		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Total - Interruptible Class 1	\$0.36673	\$0.02781	(\$0.02843)	\$0.02075	\$0.38748	\$0.15847	\$0.54595
	Total - Interruptible Class 2	\$0.36673	\$0.02781	(\$0.02843)	\$0.02075	\$0.38748	\$0.10453	\$0.49201
	Total - Interruptible Class 3	\$0.36673	\$0.02781	(\$0.02843)	\$0.02075	\$0.38748	\$0.09453	\$0.48201
	Total - Interruptible Class 4	\$0.36673	\$0.02781	(\$0.02843)	\$0.02075	\$0.38748	\$0.04823	\$0.43571
	Total - Interruptible Class 5	\$0.36673	\$0.02781	(\$0.02843)	\$0.02075	\$0.38748	\$0.03401	\$0.42149
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	\$0.02781	(\$0.02843)	\$0.02075	\$0.38748	\$0.12953	\$0.51701
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	\$0.02781	(\$0.02843)	\$0.02075	\$0.38748	\$0.08150	\$0.46898
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	\$0.02781	(\$0.02843)	\$0.02075	\$0.38748	\$0.05860	\$0.44608
	Total - Interruptible Power Gen - Class 1	\$0.36673	\$0.02781	(\$0.02843)	\$0.02075	\$0.38748	\$0.09953	\$0.48701
	Total - Interruptible Power Gen - Class 2	\$0.36673	\$0.02781	(\$0.02843)	\$0.02075	\$0.38748	\$0.03401	\$0.42149

MERC NNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E
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EFFECTIVE DATE: **February 1, 2020**

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

<u>Class</u>	<u>Cost Category</u>	<u>Base Rate</u> (Pg 1,III.)	<u>Prior</u> <u>Adjustments</u>	<u>Current</u> <u>Adjustments</u>	<u>Total</u> <u>Adjustments</u>	<u>Current</u> <u>Rate **</u> (Pg2,VI.)	<u>Distribution</u> <u>Charge</u>	<u>Total Billing</u> <u>Rate</u>
A. NNG GS	Demand	\$0.09363	\$0.05629	\$0.00000	\$0.05629	\$0.14992		
	Commodity	\$0.36673	(\$0.00149)	(\$0.02886)	(\$0.03035)	\$0.33638		
	ACA	\$0.00000	(\$0.04127)	\$0.00000	(\$0.04127)	(\$0.04127)		
	Total-Residential & Residential-Farm Tap	\$0.46036	\$0.01353	(\$0.02886)	(\$0.01533)	\$0.44503	\$0.24686	\$0.69189
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	\$0.01353	(\$0.02886)	(\$0.01533)	\$0.44503	\$0.22251	\$0.66754
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	\$0.01353	(\$0.02886)	(\$0.01533)	\$0.44503	\$0.16857	\$0.61360
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	\$0.01353	(\$0.02886)	(\$0.01533)	\$0.44503	\$0.12453	\$0.56956
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	\$0.01353	(\$0.02886)	(\$0.01533)	\$0.44503	\$0.05016	\$0.49519
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	\$0.01353	(\$0.02886)	(\$0.01533)	\$0.44503	\$0.03486	\$0.47989
B. NNG Firm/ Interruptible	Demand	\$2.80890	\$1.68870	\$0.00000	\$1.68870	\$4.49760		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$6.41880
	Firm/Interruptible Class 2						\$1.92120	\$6.41880
	Firm/Interruptible Class 3						\$0.90000	\$5.39760
	Firm/Interruptible Class 4						\$0.05790	\$4.55550
	Firm/Interruptible Class 5						\$0.02550	\$4.52310
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$4.52310
	Commodity	\$0.36673	(\$0.00149)	\$0.00755	\$0.00606	\$0.37279		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Firm/Interruptible Class 1	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.15847	\$0.55350
	Firm/Interruptible Class 2	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.10453	\$0.49956
	Firm/Interruptible Class 3	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.09453	\$0.48956
	Firm/Interruptible Class 4	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.04823	\$0.44326
	Firm/Interruptible Class 5	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.03401	\$0.42904
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	\$0.02830	\$0.00755	\$0.02830	\$0.39503	\$0.12953	\$0.52456
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	\$0.02830	\$0.00755	\$0.02830	\$0.39503	\$0.08150	\$0.47653
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	\$0.02830	\$0.00755	\$0.02830	\$0.39503	\$0.05860	\$0.45363
	Firm/Interruptible Power Gen - Class 1	\$0.36673	\$0.02830	\$0.00755	\$0.02830	\$0.39503	\$0.09953	\$0.49456
	Firm/Interruptible Power Gen - Class 2	\$0.36673	\$0.02830	\$0.00755	\$0.02830	\$0.39503	\$0.03401	\$0.42904
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	0.75776	0.00000	0.00000	0.00000	0.75776		
	Commodity	\$0.36673	(\$0.00149)	\$0.00755	\$0.00606	\$0.37279		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Total - Interruptible Class 1	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.15847	\$0.55350
	Total - Interruptible Class 2	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.10453	\$0.49956
	Total - Interruptible Class 3	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.09453	\$0.48956
	Total - Interruptible Class 4	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.04823	\$0.44326
	Total - Interruptible Class 5	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.03401	\$0.42904
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.12953	\$0.52456
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.08150	\$0.47653
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.05860	\$0.45363
	Total - Interruptible Power Gen - Class 1	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.09953	\$0.49456
	Total - Interruptible Power Gen - Class 2	\$0.36673	\$0.02075	\$0.00755	\$0.02830	\$0.39503	\$0.03401	\$0.42904

** Inclusive of Correction Per MPUC Final Order Point No. 3 in Docket No. 18-526.

MERC NNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E
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EFFECTIVE DATE: **March 1, 2020**

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

<u>Class</u>	<u>Cost Category</u>	<u>Base Rate</u> (Pg 1,III.)	<u>Prior</u> <u>Adjustments</u>	<u>Current</u> <u>Adjustments</u>	<u>Total</u> <u>Adjustments</u>	<u>Current</u> <u>Rate **</u> (Pg2,VI.)	<u>Distribution</u> <u>Charge</u>	<u>Total Billing</u> <u>Rate</u>
A. NNG GS	Demand	\$0.09363	\$0.05629	\$0.00000	\$0.05629	\$0.14992		
	Commodity	\$0.36673	(\$0.03035)	(\$0.01385)	(\$0.04420)	\$0.32253		
	ACA	\$0.00000	(\$0.04127)	\$0.00000	(\$0.04127)	(\$0.04127)		
	Total-Residential & Residential-Farm Tap	\$0.46036	(\$0.01533)	(\$0.01385)	(\$0.02918)	\$0.43118	\$0.24686	\$0.67804
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	(\$0.01533)	(\$0.01385)	(\$0.02918)	\$0.43118	\$0.22251	\$0.65369
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	(\$0.01533)	(\$0.01385)	(\$0.02918)	\$0.43118	\$0.16857	\$0.59975
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	(\$0.01533)	(\$0.01385)	(\$0.02918)	\$0.43118	\$0.12453	\$0.55571
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	(\$0.01533)	(\$0.01385)	(\$0.02918)	\$0.43118	\$0.05016	\$0.48134
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	(\$0.01533)	(\$0.01385)	(\$0.02918)	\$0.43118	\$0.03486	\$0.46604
B. NNG Firm/ Interruptible	Demand	\$2.80890	\$1.68870	\$0.00000	\$1.68870	\$4.49760		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$6.41880
	Firm/Interruptible Class 2						\$1.92120	\$6.41880
	Firm/Interruptible Class 3						\$0.90000	\$5.39760
	Firm/Interruptible Class 4						\$0.05790	\$4.55550
	Firm/Interruptible Class 5						\$0.02550	\$4.52310
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$4.52310
	Commodity	\$0.36673	\$0.00606	(\$0.01385)	(\$0.00779)	\$0.35894		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Firm/Interruptible Class 1	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.15847	\$0.53965
	Firm/Interruptible Class 2	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.10453	\$0.48571
	Firm/Interruptible Class 3	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.09453	\$0.47571
	Firm/Interruptible Class 4	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.04823	\$0.42941
	Firm/Interruptible Class 5	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.03401	\$0.41519
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.12953	\$0.51071
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.08150	\$0.46268
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.05860	\$0.43978
	Firm/Interruptible Power Gen - Class 1	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.09953	\$0.48071
	Firm/Interruptible Power Gen - Class 2	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.03401	\$0.41519
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	0.75776	0.00000	0.00000	0.00000	0.75776		
	Commodity	\$0.36673	\$0.00606	(\$0.01385)	(\$0.00779)	\$0.35894		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Total - Interruptible Class 1	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.15847	\$0.53965
	Total - Interruptible Class 2	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.10453	\$0.48571
	Total - Interruptible Class 3	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.09453	\$0.47571
	Total - Interruptible Class 4	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.04823	\$0.42941
	Total - Interruptible Class 5	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.03401	\$0.41519
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.12953	\$0.51071
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.08150	\$0.46268
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.05860	\$0.43978
	Total - Interruptible Power Gen - Class 1	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.09953	\$0.48071
	Total - Interruptible Power Gen - Class 2	\$0.36673	\$0.02830	(\$0.01385)	\$0.01445	\$0.38118	\$0.03401	\$0.41519

** Inclusive of Correction Per MPUC Final Order Point No. 3 in Docket No. 18-526.

MERC NNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E
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EFFECTIVE DATE: **April 1, 2020**

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

<u>Class</u>	<u>Cost Category</u>	<u>Base Rate</u> (Pg 1,III.)	<u>Prior</u> <u>Adjustments</u>	<u>Current</u> <u>Adjustments</u>	<u>Total</u> <u>Adjustments</u>	<u>Current</u> <u>Rate **</u> (Pg2,VI.)	<u>Distribution</u> <u>Charge</u>	<u>Total Billing</u> <u>Rate</u>
A. NNG GS	Demand	\$0.09363	\$0.05629	\$0.00000	\$0.05629	\$0.14992		
	Commodity	\$0.36673	(\$0.04420)	(\$0.02642)	(\$0.07062)	\$0.29611		
	ACA	\$0.00000	(\$0.04127)	\$0.00000	(\$0.04127)	(\$0.04127)		
	Total-Residential & Residential-Farm Tap	\$0.46036	(\$0.02918)	(\$0.02642)	(\$0.05560)	\$0.40476	\$0.24686	\$0.65162
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	(\$0.02918)	(\$0.02642)	(\$0.05560)	\$0.40476	\$0.22251	\$0.62727
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	(\$0.02918)	(\$0.02642)	(\$0.05560)	\$0.40476	\$0.16857	\$0.57333
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	(\$0.02918)	(\$0.02642)	(\$0.05560)	\$0.40476	\$0.12453	\$0.52929
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	(\$0.02918)	(\$0.02642)	(\$0.05560)	\$0.40476	\$0.05016	\$0.45492
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	(\$0.02918)	(\$0.02642)	(\$0.05560)	\$0.40476	\$0.03486	\$0.43962
B. NNG Firm/ Interruptible	Demand	\$2.80890	\$1.68870	\$0.00000	\$1.68870	\$4.49760		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$6.41880
	Firm/Interruptible Class 2						\$1.92120	\$6.41880
	Firm/Interruptible Class 3						\$0.90000	\$5.39760
	Firm/Interruptible Class 4						\$0.05790	\$4.55550
	Firm/Interruptible Class 5						\$0.02550	\$4.52310
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$4.52310
	Commodity	\$0.36673	(\$0.00779)	(\$0.02642)	(\$0.03421)	\$0.33252		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Firm/Interruptible Class 1	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.15847	\$0.51323
	Firm/Interruptible Class 2	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.10453	\$0.45929
	Firm/Interruptible Class 3	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.09453	\$0.44929
	Firm/Interruptible Class 4	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.04823	\$0.40299
	Firm/Interruptible Class 5	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.03401	\$0.38877
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.12953	\$0.48429
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.08150	\$0.43626
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.05860	\$0.41336
	Firm/Interruptible Power Gen - Class 1	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.09953	\$0.45429
	Firm/Interruptible Power Gen - Class 2	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.03401	\$0.38877
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	0.75776	\$0.00000	\$0.00000	\$0.00000	0.75776		
	Commodity	\$0.36673	(\$0.00779)	(\$0.02642)	(\$0.03421)	\$0.33252		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Total - Interruptible Class 1	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.15847	\$0.51323
	Total - Interruptible Class 2	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.10453	\$0.45929
	Total - Interruptible Class 3	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.09453	\$0.44929
	Total - Interruptible Class 4	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.04823	\$0.40299
	Total - Interruptible Class 5	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.03401	\$0.38877
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.12953	\$0.48429
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.08150	\$0.43626
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.05860	\$0.41336
	Total - Interruptible Power Gen - Class 1	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.09953	\$0.45429
	Total - Interruptible Power Gen - Class 2	\$0.36673	\$0.01445	(\$0.02642)	(\$0.01197)	\$0.35476	\$0.03401	\$0.38877

** Inclusive of Correction Per MPUC Final Order Point No. 3 in Docket No. 18-526.

MERC NNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E
Page 13 of 14

EFFECTIVE DATE: **May 1, 2020**

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

<u>Class</u>	<u>Cost Category</u>	<u>Base Rate</u> (Pg 1,III.)	<u>Prior</u> <u>Adjustments</u>	<u>Current</u> <u>Adjustments</u>	<u>Total</u> <u>Adjustments</u>	<u>Current</u> <u>Rate **</u> (Pg2,VI.)	<u>Distribution</u> <u>Charge</u>	<u>Total Billing</u> <u>Rate</u>
A. NNG GS	Demand	\$0.09363	\$0.05629	\$0.00000	\$0.05629	\$0.14992		
	Commodity	\$0.36673	(\$0.07062)	\$0.02794	(\$0.04268)	\$0.32405		
	ACA	\$0.00000	(\$0.04127)	\$0.00000	(\$0.04127)	(\$0.04127)		
	Total-Residential & Residential-Farm Tap	\$0.46036	(\$0.05560)	\$0.02794	(\$0.02766)	\$0.43270	\$0.24686	\$0.67956
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	(\$0.05560)	\$0.02794	(\$0.02766)	\$0.43270	\$0.22251	\$0.65521
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	(\$0.05560)	\$0.02794	(\$0.02766)	\$0.43270	\$0.16857	\$0.60127
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	(\$0.05560)	\$0.02794	(\$0.02766)	\$0.43270	\$0.12453	\$0.55723
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	(\$0.05560)	\$0.02794	(\$0.02766)	\$0.43270	\$0.05016	\$0.48286
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	(\$0.05560)	\$0.02794	(\$0.02766)	\$0.43270	\$0.03486	\$0.46756
B. NNG Firm/ Interruptible	Demand	\$2.80890	\$1.68870	\$0.00000	\$1.68870	\$4.49760		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$6.41880
	Firm/Interruptible Class 2						\$1.92120	\$6.41880
	Firm/Interruptible Class 3						\$0.90000	\$5.39760
	Firm/Interruptible Class 4						\$0.05790	\$4.55550
	Firm/Interruptible Class 5						\$0.02550	\$4.52310
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$4.52310
	Commodity	\$0.36673	(\$0.03421)	\$0.02794	(\$0.00627)	\$0.36046		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Firm/Interruptible Class 1	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.15847	\$0.54117
	Firm/Interruptible Class 2	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.10453	\$0.48723
	Firm/Interruptible Class 3	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.09453	\$0.47723
	Firm/Interruptible Class 4	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.04823	\$0.43093
	Firm/Interruptible Class 5	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.03401	\$0.41671
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.12953	\$0.51223
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.08150	\$0.46420
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.05860	\$0.44130
	Firm/Interruptible Power Gen - Class 1	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.09953	\$0.48223
	Firm/Interruptible Power Gen - Class 2	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.03401	\$0.41671
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	0.75776	0.00000	0.00000	0.00000	0.75776		
	Commodity	\$0.36673	(\$0.03421)	\$0.02794	(\$0.00627)	\$0.36046		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Total - Interruptible Class 1	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.15847	\$0.54117
	Total - Interruptible Class 2	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.10453	\$0.48723
	Total - Interruptible Class 3	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.09453	\$0.47723
	Total - Interruptible Class 4	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.04823	\$0.43093
	Total - Interruptible Class 5	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.03401	\$0.41671
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.12953	\$0.51223
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.08150	\$0.46420
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.05860	\$0.44130
	Total - Interruptible Power Gen - Class 1	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.09953	\$0.48223
	Total - Interruptible Power Gen - Class 2	\$0.36673	(\$0.01197)	\$0.02794	\$0.01597	\$0.38270	\$0.03401	\$0.41671

** Inclusive of Correction Per MPUC Final Order Point No. 3 in Docket No. 18-526.

MERC NNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)
MERC NNG SUMMARY OF COST BY CLASS:

SCHEDULE B&E
Page 14 of 14

EFFECTIVE DATE: **June 1, 2020**

As approved in Docket No. G011/MR-17-564; to coincide with implementation of final rates in Docket No. G011/GR-17-563

<u>Class</u>	<u>Cost Category</u>	<u>Base Rate</u> (Pg 1,III.)	<u>Prior</u> <u>Adjustments</u>	<u>Current</u> <u>Adjustments</u>	<u>Total</u> <u>Adjustments</u>	<u>Current</u> <u>Rate **</u> (Pg2,VI.)	<u>Distribution</u> <u>Charge</u>	<u>Total Billing</u> <u>Rate</u>
A. NNG GS	Demand	\$0.09363	\$0.05629	(\$0.03631)	\$0.01998	\$0.11361		
	Commodity	\$0.36673	(\$0.04268)	(\$0.03011)	(\$0.07279)	\$0.29394		
	ACA	\$0.00000	(\$0.04127)	\$0.00000	(\$0.04127)	(\$0.04127)		
	Total-Residential & Residential-Farm Tap	\$0.46036	(\$0.02766)	(\$0.06642)	(\$0.09408)	\$0.36628	\$0.24686	\$0.61314
	Total C&I Firm-Class 1 and C&I Farm Tap-Class 1	\$0.46036	(\$0.02766)	(\$0.06642)	(\$0.09408)	\$0.36628	\$0.22251	\$0.58879
	Total C&I Firm-Class 2 and C&I Farm Tap-Class 2	\$0.46036	(\$0.02766)	(\$0.06642)	(\$0.09408)	\$0.36628	\$0.16857	\$0.53485
	Total C&I Firm-Class 3 and C&I Farm Tap-Class 3	\$0.46036	(\$0.02766)	(\$0.06642)	(\$0.09408)	\$0.36628	\$0.12453	\$0.49081
	Total C&I Firm-Class 4 and C&I Farm Tap-Class 4	\$0.46036	(\$0.02766)	(\$0.06642)	(\$0.09408)	\$0.36628	\$0.05016	\$0.41644
	Total C&I Firm-Class 5 and C&I Farm Tap-Class 5	\$0.46036	(\$0.02766)	(\$0.06642)	(\$0.09408)	\$0.36628	\$0.03486	\$0.40114
B. NNG Firm/ Interruptible	Demand	\$2.80890	\$1.68870	(\$1.08930)	\$0.59940	\$3.40830		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Firm/Interruptible Class 1						\$1.92120	\$5.32950
	Firm/Interruptible Class 2						\$1.92120	\$5.32950
	Firm/Interruptible Class 3						\$0.90000	\$4.30830
	Firm/Interruptible Class 4						\$0.05790	\$3.46620
	Firm/Interruptible Class 5						\$0.02550	\$3.43380
	Firm/Interruptible Power Gen - Class 2						\$0.02550	\$3.43380
	Commodity	\$0.36673	(\$0.00627)	(\$0.03011)	(\$0.03638)	\$0.33035		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Firm/Interruptible Class 1	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.15847	\$0.51106
	Firm/Interruptible Class 2	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.10453	\$0.45712
	Firm/Interruptible Class 3	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.09453	\$0.44712
	Firm/Interruptible Class 4	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.04823	\$0.40082
	Firm/Interruptible Class 5	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.03401	\$0.38660
	Firm/Interruptible Ag Dryer - Class 1	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.12953	\$0.48212
	Firm/Interruptible Ag Dryer - Class 2	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.08150	\$0.43409
	Firm/Interruptible Ag Dryer - Class 3	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.05860	\$0.41119
	Firm/Interruptible Power Gen - Class 1	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.09953	\$0.45212
	Firm/Interruptible Power Gen - Class 2	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.03401	\$0.38660
C. NNG Interruptible	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.36673	(\$0.00627)	(\$0.03011)	(\$0.03638)	\$0.33035		
	ACA	\$0.00000	\$0.02224	\$0.00000	\$0.02224	\$0.02224		
	Total - Interruptible Class 1	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.15847	\$0.51106
	Total - Interruptible Class 2	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.10453	\$0.45712
	Total - Interruptible Class 3	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.09453	\$0.44712
	Total - Interruptible Class 4	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.04823	\$0.40082
	Total - Interruptible Class 5	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.03401	\$0.38660
	Total - Interruptible Ag Dryer - Class 1	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.12953	\$0.48212
	Total - Interruptible Ag Dryer - Class 2	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.08150	\$0.43409
	Total - Interruptible Ag Dryer - Class 3	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.05860	\$0.41119
	Total - Interruptible Power Gen - Class 1	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.09953	\$0.45212
	Total - Interruptible Power Gen - Class 2	\$0.36673	\$0.01597	(\$0.03011)	(\$0.01414)	\$0.35259	\$0.03401	\$0.38660

** Inclusive of Correction Per MPUC Final Order Point No. 3 in Docket No. 18-526.

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020
SUMMARY OF PURCHASED VOLUMES AND COSTS

Schedule C & D

Page 1 of 1

NNG

8/20/2020

NNG

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Total
Dth	565,776	567,651	601,337	2,182,106	4,066,994	4,272,895	4,724,891	4,239,451	2,980,716	2,098,551	1,069,582	661,332	28,031,282
Demand \$	\$ 618,114	\$ 620,228	\$ 627,788	\$ 656,860	\$ 2,925,693	\$ 2,967,233	\$ 4,660,949	\$ 4,630,208	\$ 4,624,418	\$ 888,056	\$ 434,353	\$ 642,623	\$24,296,523
Curtailment Penalty Revenue \$	\$ -	\$ -	\$ -	\$ -	\$ 13,061	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,061
Total Demand \$	\$ 618,114	\$ 620,228	\$ 627,788	\$ 656,860	\$ 2,938,754	\$ 2,967,233	\$ 4,660,949	\$ 4,630,208	\$ 4,624,418	\$ 888,056	\$ 434,353	\$ 642,623	\$24,309,584
Commodity \$	\$ 3,500,026	\$ 3,476,329	\$ 3,449,555	\$ 6,743,039	\$ 12,460,266	\$ 13,290,347	\$ 13,420,672	\$ 11,133,700	\$ 8,214,257	\$ 5,846,791	\$ 4,505,300	\$ 4,287,869	\$90,328,151
NBPL Capacity Release	\$ (790,833)	\$ (790,833)	\$ (790,833)	\$ (790,833)	\$ (790,833)	\$ (790,833)	\$ (790,833)	\$ (790,833)	\$ (790,833)	\$ (632,667)	\$ (632,667)	\$ (632,667)	(\$9,015,501)
Total Commodity \$	\$ 2,709,193	\$ 2,685,496	\$ 2,658,722	\$ 5,952,205	\$ 11,669,433	\$ 12,499,513	\$ 12,629,838	\$ 10,342,867	\$ 7,423,423	\$ 5,214,124	\$ 3,872,633	\$ 3,655,202	\$ 81,312,650
NNG Total \$	\$ 3,327,307	\$ 3,305,724	\$ 3,286,510	\$ 6,609,065	\$ 14,608,187	\$ 15,466,746	\$ 17,290,788	\$ 14,973,075	\$ 12,047,842	\$ 6,102,179	\$ 4,306,985	\$ 4,297,825	\$105,622,234

Notes:

Cost recovery of Bison and Northern Border Pipeline costs being shifted from demand rate factor to commodity rate factor per Docket No. G-007/M-10-1166 and G-011/M-10-1168 dated January 21, 2015

Cost recovery of various Rochester costs are being shifted from demand rate factor to commodity rate factor per Docket No. M-15-895 dated May 5, 2017

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020
PURCHASES BY CLASS

Schedule D.1

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NNG

8/20/2020

NNG

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Total
GS-Demand	\$ 615,409	\$ 617,523	\$ 625,082	\$ 654,155	\$ 2,936,124	\$ 2,964,603	\$ 4,656,677	\$ 4,625,936	\$ 4,620,146	\$ 883,783	\$ 430,080	\$ 639,385	\$24,268,901
GS-Commodity	\$2,315,798	\$2,290,129	\$2,247,436	\$5,326,802	\$10,058,569	\$10,637,671	\$11,728,085	\$9,651,898	\$6,861,935	\$4,812,333	\$3,482,623	\$3,188,847	\$72,602,125
GS TOTAL	\$2,931,207	\$2,907,651	\$2,872,518	\$5,980,957	\$12,994,693	\$13,602,274	\$16,384,761	\$14,277,834	\$11,482,080	\$5,696,115	\$3,912,703	\$3,828,232	\$96,871,026
Interruptible	\$391,930	\$394,250	\$409,901	\$622,935	\$1,609,321	\$1,860,686	\$894,931	\$686,392	\$557,776	\$399,724	\$388,213	\$464,835	\$8,680,895
Firm/Interruptible Commodity	\$1,465	\$1,118	\$1,385	\$2,468	\$1,543	\$1,157	\$6,822	\$4,576	\$3,713	\$2,067	\$1,796	\$1,520	\$29,631
Firm/Interruptible Demand	\$2,706	\$2,706	\$2,706	\$2,706	\$2,630	\$2,630	\$4,273	\$4,273	\$4,273	\$4,273	\$4,273	\$3,238	\$40,683
TOTAL-Dem	\$618,114	\$620,228	\$627,788	\$656,860	\$2,938,754	\$2,967,233	\$4,660,949	\$4,630,208	\$4,624,418	\$888,056	\$434,353	\$642,623	\$24,309,584
TOTAL-Com	\$2,709,193	\$2,685,496	\$2,658,722	\$5,952,205	\$11,669,433	\$12,499,513	\$12,629,838	\$10,342,867	\$7,423,423	\$5,214,124	\$3,872,633	\$3,655,202	\$81,312,650
NNG TOTAL	\$3,327,307	\$3,305,724	\$3,286,510	\$6,609,065	\$14,608,187	\$15,466,746	\$17,290,788	\$14,973,075	\$12,047,842	\$6,102,179	\$4,306,985	\$4,297,825	\$105,622,234

Notes:

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020

GAS COST RECOVERY AND PURCHASES COMPARISON

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Class	Jul-19			Aug-19			Sep-19			Oct-19		
	Gas Cost Recovery	Gas Purchases	(Over) Under	Gas Cost Recovery	Gas Purchases	(Over) Under	Gas Cost Recovery	Gas Purchases	(Over) Under	Gas Cost Recovery	Gas Purchases	(Over) Under
GS-Dem	\$519,797	\$ 615,409	\$95,612	\$486,615	\$ 617,523	\$130,907	\$472,474	\$ 625,082	\$152,608	\$1,041,838	\$ 654,155	(\$387,684)
GS-Comm	\$1,629,218	\$2,315,798	\$686,580	\$1,531,810	\$2,290,129	\$758,318	\$1,442,313	\$2,247,436	\$805,123	\$3,232,825	\$5,326,802	\$2,093,978
GS-TOTAL	\$2,149,016	\$2,931,207	\$782,191	\$2,018,425	\$2,907,651	\$889,226	\$1,914,787	\$2,872,518	\$957,731	\$4,274,663	\$5,980,957	\$1,706,294
Interruptible	\$275,750	\$391,930	\$116,179	\$263,704	\$394,250	\$130,546	\$263,058	\$409,901	\$146,843	\$378,058	\$622,935	\$244,877
Firm/Interruptible Comm	\$1,012	\$1,465	\$453	\$738	\$1,118	\$380	\$876	\$1,385	\$509	\$1,485	\$2,468	\$983
Firm/Interruptible Dem	\$2,706	\$2,706	\$0	\$2,706	\$2,706	\$0	\$2,706	\$2,706	\$0	\$2,706	\$2,706	\$0
TOTAL-Dem	\$522,503	\$618,114	\$95,612	\$489,321	\$620,228	\$130,907	\$475,180	\$627,788	\$152,608	\$1,044,544	\$656,860	(\$387,684)
TOTAL-Com	\$1,905,981	\$2,709,193	\$803,212	\$1,796,252	\$2,685,496	\$889,244	\$1,706,247	\$2,658,722	\$952,475	\$3,612,368	\$5,952,205	\$2,339,837
NNG TOTAL	\$2,428,484	\$3,327,307	\$898,823	\$2,285,572	\$3,305,724	\$1,020,152	\$2,181,427	\$3,286,510	\$1,105,083	\$4,656,912	\$6,609,065	\$1,952,154

Class	Nov-19			Dec-19			Jan-20			Feb-20		
	Gas Cost Recovery	Gas Purchases	(Over) Under	Gas Cost Recovery	Gas Purchases	(Over) Under	Gas Cost Recovery	Gas Purchases	(Over) Under	Gas Cost Recovery	Gas Purchases	(Over) Under
GS-Dem	\$2,132,803	\$ 2,936,124	\$803,322	\$3,479,348	\$ 2,964,603	(\$514,745)	\$7,059,787	\$ 4,656,677	(\$2,403,110)	\$6,054,683	\$ 4,625,936	(\$1,428,748)
GS-Comm	\$8,498,433	\$10,058,569	\$1,560,136	\$14,069,870	\$10,637,671	(\$3,432,199)	\$17,239,380	\$11,728,085	(\$5,511,295)	\$13,621,388	\$9,651,898	(\$3,969,490)
GS-TOTAL	\$10,631,236	\$12,994,693	\$2,363,458	\$17,549,218	\$13,602,274	(\$3,946,944)	\$24,299,167	\$16,384,761	(\$7,914,405)	\$19,676,071	\$14,277,834	(\$5,398,237)
Interruptible	\$1,359,707	\$1,609,321	\$249,614	\$2,461,028	\$1,860,686	(\$600,342)	\$1,315,480	\$894,931	(\$420,549)	\$1,073,253	\$686,392	(\$386,861)
Firm/Interruptible Comm	\$1,300	\$1,543	\$243	\$1,527	\$1,157	(\$370)	\$10,005	\$6,822	(\$3,183)	\$7,138	\$4,576	(\$2,562)
Firm/Interruptible Dem	\$2,630	\$2,630	\$0	\$2,630	\$2,630	\$0	\$4,273	\$4,273	\$0	\$4,273	\$4,273	\$0
TOTAL-Dem	\$2,135,432	\$2,938,754	\$803,322	\$3,481,978	\$2,967,233	(\$514,745)	\$7,064,059	\$4,660,949	(\$2,403,110)	\$6,058,956	\$4,630,208	(\$1,428,748)
TOTAL-Com	\$9,859,440	\$11,669,433	\$1,809,993	\$16,532,425	\$12,499,513	(\$4,032,912)	\$18,564,865	\$12,629,638	(\$5,935,026)	\$14,701,779	\$10,342,867	(\$4,358,913)
NNG TOTAL	\$11,994,872	\$14,608,187	\$2,613,315	\$20,014,403	\$15,466,746	(\$4,547,657)	\$25,628,924	\$17,290,788	(\$8,338,137)	\$20,760,736	\$14,973,075	(\$5,787,660)

Class	Mar-20			Apr-20			May-20			Jun-20			Annual		
	Gas Cost Recovery	Gas Purchases	(Over) Under	Gas Cost Recovery	Gas Purchases	(Over) Under	Gas Cost Recovery	Gas Purchases	(Over) Under	Gas Cost Recovery	Gas Purchases	(Over) Under	Gas Cost Recovery	Gas Purchases	(Over) Under
GS-Dem	\$5,289,726	\$ 4,620,146	(\$669,580)	\$3,619,397	\$ 883,783	(\$2,735,614)	\$2,051,877	\$ 430,080	(\$1,621,797)	\$780,922	\$ 639,385	(\$141,537)	\$32,989,268	\$24,268,901	(\$8,720,366)
GS-Comm	\$11,418,640	\$6,861,935	(\$4,556,705)	\$7,167,508	\$4,812,333	(\$2,355,176)	\$4,452,171	\$3,482,623	(\$969,547)	\$2,041,358	\$3,188,847	\$1,147,489	\$86,344,913	\$72,602,125	(\$13,742,789)
GS-TOTAL	\$16,708,366	\$11,482,080	(\$5,226,286)	\$10,786,905	\$5,696,115	(\$5,090,789)	\$6,504,048	\$3,912,703	(\$2,591,345)	\$2,822,279	\$3,828,232	\$1,005,953	\$119,334,181	\$96,871,026	(\$22,463,155)
Interruptible	\$1,032,596	\$557,776	(\$474,820)	\$668,364	\$399,724	(\$268,640)	\$551,839	\$388,213	(\$163,626)	\$334,049	\$464,835	\$130,787	\$9,976,885	\$8,680,895	(\$1,295,991)
Firm/Interruptible Comm	\$6,853	\$3,713	(\$3,140)	\$3,449	\$2,067	(\$1,381)	\$2,544	\$1,796	(\$748)	\$1,082	\$1,520	\$438	\$38,010	\$29,631	(\$8,379)
Firm/Interruptible Dem	\$4,273	\$4,273	\$0	\$4,273	\$4,273	\$0	\$4,273	\$4,273	\$0	\$3,238	\$3,238	\$0	\$40,683	\$40,683	\$0
TOTAL-Dem	\$5,293,999	\$4,624,418	(\$669,580)	\$3,623,669	\$888,056	(\$2,735,614)	\$2,056,150	\$434,353	(\$1,621,797)	\$784,159	\$642,623	(\$141,537)	\$33,029,950	\$24,309,584	(\$8,720,366)
TOTAL-Com	\$12,458,088	\$7,423,423	(\$5,034,665)	\$7,839,321	\$5,214,124	(\$2,625,197)	\$5,006,554	\$3,872,633	(\$1,133,921)	\$2,376,489	\$3,855,202	\$1,278,714	\$96,359,808	\$81,312,650	(\$15,047,159)
NNG TOTAL	\$17,752,087	\$12,047,842	(\$5,704,245)	\$11,462,990	\$6,102,179	(\$5,360,811)	\$7,062,704	\$4,306,985	(\$2,755,719)	\$3,160,648	\$4,297,825	\$1,137,177	\$129,389,759	\$105,622,234	(\$23,767,525)

Notes:

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020

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Annual

SUMMARY

ACA Class	Gas Cost Recovery	Gas Purchases	(Over) Under
(A)	(B)	(C)	(D)=(C)-(B)

GS-Demand	\$32,989,268	\$24,268,901	(\$8,720,366)
GS-Commodity	\$86,344,913	\$72,602,125	(\$13,742,789)
GS TOTAL	\$119,334,181	\$96,871,026	(\$22,463,155)
Interruptible	\$9,976,885	\$8,680,895	(\$1,295,991)
Firm/Interruptible Commodity	\$38,010	\$29,631	(\$8,379)
Firm/Interruptible Demand	\$40,683	\$40,683	\$0

TOTAL-Dem	\$33,029,950	\$24,309,584	(\$8,720,366)
TOTAL-Com	\$96,359,808	\$81,312,650	(\$15,047,159)
NNG TOTAL	\$129,389,759	\$105,622,234	(\$23,767,525)

Notes:

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020
RECOVERY BY TYPE, BY MONTH, BY CLASS

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NNG		Jul-19		Aug-19		Sep-19		Oct-19		Nov-19		Dec-19		Jan-20		Feb-20		Mar-20		Apr-20		May-20		Jun-20		Total Annual
Recovery		factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	
CS																										
TF12-B (Max Rate) Winter-112495 (46,506/46,580)		\$0.1004	54,975	\$0.1004	51,465	\$0.1004	49,970	\$0.1004	110,187	\$0.1006	232,459	\$0.1006	379,222	\$0.1780	838,208	\$0.1780	718,872	\$0.1780	628,049	\$0.1780	429,731	\$0.1780	243,619	\$0.1292	88,829	3,825,588
TF12-B (Max Rate) Summer-112495 (46,506/46,580)		\$0.0781	42,764	\$0.0781	40,034	\$0.0781	38,871	\$0.0781	85,713	\$0.0782	180,799	\$0.0782	294,947	\$0.1384	651,919	\$0.1384	559,105	\$0.1384	488,467	\$0.1384	334,224	\$0.1384	199,476	\$0.1005	69,094	2,975,414
TF12-V (Max Rate)-112495 (33,033/32,929)		\$0.1520	83,229	\$0.1520	77,916	\$0.1520	75,652	\$0.1520	166,817	\$0.1517	350,573	\$0.1517	571,907	\$0.2684	1,264,094	\$0.2684	1,084,124	\$0.2684	947,155	\$0.2684	648,073	\$0.2684	367,400	\$0.1949	133,968	5,770,907
TF5 (Max Rate)-112495 (36,275)		\$0.1160	63,517	\$0.1160	59,462	\$0.1160	57,734	\$0.1160	127,308	\$0.1160	268,171	\$0.1160	437,480	\$0.2054	967,048	\$0.2054	829,369	\$0.2054	724,585	\$0.2054	495,784	\$0.2054	281,066	\$0.1491	102,473	4,413,996
TF12B (Discount-Winter)-112495 (5,200)		\$0.0197	10,787	\$0.0197	10,098	\$0.0197	9,805	\$0.0197	21,620	\$0.0197	45,627	\$0.0197	74,434	\$0.0197	92,956	\$0.0197	79,722	\$0.0197	69,650	\$0.0197	47,657	\$0.0197	27,017	\$0.0197	13,569	502,943
TFX12 (Max Rate)-112486 (16,261/10,822)		\$0.0793	43,421	\$0.0793	40,650	\$0.0793	39,468	\$0.0793	87,030	\$0.0528	121,997	\$0.0528	199,019	\$0.0934	439,965	\$0.0934	377,327	\$0.0934	329,655	\$0.0934	225,560	\$0.0934	127,873	\$0.0678	46,624	2,078,591
TFX Apr (Max Rate)-112486 (2,000)		\$0.0005	274	\$0.0005	256	\$0.0005	249	\$0.0005	549	\$0.0005	1,109	\$0.0005	1,810	\$0.0009	4,003	\$0.0009	3,433	\$0.0009	2,999	\$0.0009	2,052	\$0.0009	1,163	\$0.0006	426	18,323
TFX Oct (Max Rate)-112486 (2,000)		\$0.0005	274	\$0.0005	256	\$0.0005	249	\$0.0005	549	\$0.0005	1,109	\$0.0005	1,810	\$0.0009	4,003	\$0.0009	3,433	\$0.0009	2,999	\$0.0009	2,052	\$0.0009	1,163	\$0.0006	426	18,323
TFX5 (Max Rate)-112486 (77,688)		\$0.2485	136,068	\$0.2485	127,382	\$0.2485	123,680	\$0.2485	272,724	\$0.2485	574,329	\$0.2485	936,932	\$0.4398	2,071,034	\$0.4398	1,776,180	\$0.4398	1,551,775	\$0.4398	1,061,773	\$0.4398	601,931	\$0.3193	219,457	9,453,268
TFX5 (Discount)-112486 (1,800)		\$0.0038	2,081	\$0.0038	1,948	\$0.0038	1,891	\$0.0038	4,170	\$0.0038	8,807	\$0.0038	14,366	\$0.0038	17,941	\$0.0038	15,387	\$0.0038	13,443	\$0.0038	9,198	\$0.0038	5,215	\$0.0038	2,619	97,067
TFX12 (Discount)-111866 (1,283)		\$0.0032	1,752	\$0.0032	1,640	\$0.0032	1,593	\$0.0032	3,512	\$0.0032	7,304	\$0.0032	11,916	\$0.0032	14,881	\$0.0032	12,762	\$0.0032	11,150	\$0.0032	7,629	\$0.0032	4,325	\$0.0032	2,172	80,635
TFX12 (Discount)-111866 (6,271)		\$0.0229	12,539	\$0.0229	11,739	\$0.0229	11,398	\$0.0229	25,132	\$0.0229	53,001	\$0.0229	86,463	\$0.0229	107,978	\$0.0229	92,605	\$0.0229	80,905	\$0.0229	55,358	\$0.0229	31,383	\$0.0229	15,761	584,263
TFX12 (Discount)-111866 (11,921)		\$0.0459	25,133	\$0.0459	23,529	\$0.0459	22,845	\$0.0459	50,374	\$0.0459	106,117	\$0.0459	173,114	\$0.0459	216,192	\$0.0459	185,413	\$0.0459	161,987	\$0.0459	110,837	\$0.0459	62,835	\$0.0459	31,557	1,169,932
TFX5 (Discount)-111866 (379)		\$0.0004	219	\$0.0004	205	\$0.0004	199	\$0.0004	439	\$0.0004	901	\$0.0004	1,471	\$0.0004	1,837	\$0.0004	1,575	\$0.0004	1,376	\$0.0004	942	\$0.0004	534	\$0.0004	268	9,965
TFX5 (Discount)-111866 (2,445)		\$0.0028	1,533	\$0.0028	1,435	\$0.0028	1,394	\$0.0028	3,073	\$0.0028	6,518	\$0.0028	10,633	\$0.0028	13,279	\$0.0028	11,389	\$0.0028	9,950	\$0.0028	6,808	\$0.0028	3,860	\$0.0028	1,938	71,811
TFX5 (Discount)-111866 (22,189)		\$0.0709	38,822	\$0.0709	36,344	\$0.0709	35,288	\$0.0709	77,811	\$0.0709	163,879	\$0.0709	267,345	\$0.0709	333,871	\$0.0709	286,337	\$0.0709	250,161	\$0.0709	171,168	\$0.0709	97,037	\$0.0709	48,735	1,806,798
Windom-118657 (2,500)		\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	0
Northwestern Energy (1,035)		\$0.0044	2,409	\$0.0044	2,255	\$0.0044	2,190	\$0.0044	4,829	\$0.0044	10,101	\$0.0044	16,478	\$0.0044	20,578	\$0.0044	17,649	\$0.0044	15,419	\$0.0044	10,550	\$0.0044	5,981	\$0.0044	3,004	111,444
Total Demand		\$0.9493	519,797	\$0.9493	486,615	\$0.9493	472,474	\$0.9493	1,041,838	\$0.9227	2,132,803	\$0.9227	3,479,348	\$1.4992	7,059,787	\$1.4992	6,054,683	\$1.4992	5,289,726	\$1.4992	3,619,397	\$1.4992	2,051,877	\$1.1361	780,922	32,989,268
COMM COST OF GAS		\$2.9219	1,629,218	\$2.9482	1,531,810	\$2.8569	1,442,313	\$2.9213	3,232,825	\$3.6657	8,498,433	\$3.7230	14,069,870	\$3.6524	17,239,380	\$3.3638	13,621,388	\$3.2253	11,418,640	\$2.9611	7,167,508	\$3.2405	4,452,171	\$2.9394	2,041,358	86,344,913
DDVC																										0
Total Commodity		\$2.9219	1,629,218	\$2.9482	1,531,810	\$2.8569	1,442,313	\$2.9213	3,232,825	\$3.6657	8,498,433	\$3.7230	14,069,870	\$3.6524	17,239,380	\$3.3638	13,621,388	\$3.2253	11,418,640	\$2.9611	7,167,508	\$3.2405	4,452,171	\$2.9394	2,041,358	86,344,913
Total Recovery		2,149,016		2,018,425		1,914,787		4,274,663		10,631,236		17,549,218		24,299,167		19,676,071		16,708,366		10,786,905		6,504,048		2,822,279		119,334,181
Interruptible																										
COMM COST OF GAS		\$2.9219	275,750	\$2.9482	263,704	\$2.8569	263,058	\$2.9213	378,058	\$3.6657	1,359,707	\$3.7230	2,461,028	\$3.6524	1,315,480	\$3.7279	1,073,253	\$3.5894	1,032,596	\$3.3252	668,364	\$3.6046	551,839	\$3.3035	334,049	9,976,885
Interruptible - Commodity		\$2.9219	275,750	\$2.9482	263,704	\$2.8569	263,058	\$2.9213	378,058	\$3.6657	1,359,707	\$3.7230	2,461,028	\$3.6524	1,315,480	\$3.7279	1,073,253	\$3.5894	1,032,596	\$3.3252	668,364	\$3.6046	551,839	\$3.3035	334,049	9,976,885
Firm/Interruptible - COMM																										0
COMM COST OF GAS		\$2.9219	1,012	\$2.9482	738	\$2.8569	876	\$2.9213	1,485	\$3.6657	1,300	\$3.7230	1,527	\$3.6524	10,005	\$3.7279	7,138	\$3.5894	6,853	\$3.3252	3,449	\$3.6046	2,544	\$3.3035	1,082	38,010
Firm/Interruptible - Comm		\$2.9219	1,012	\$2.9482	738	\$2.8569	876	\$2.9213	1,485	\$3.6657	1,300	\$3.7230	1,527	\$3.6524	10,005	\$3.7279	7,138	\$3.5894	6,853	\$3.3252	3,449	\$3.6046	2,544	\$3.3035	1,082	38,010

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020
RECOVERY BY TYPE, BY MONTH, BY CLASS

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NNG		Jul-19		Aug-19		Sep-19		Oct-19		Nov-19		Dec-19		Jan-20		Feb-20		Mar-20		Apr-20		May-20		Jun-20		Total Annual
Recovery		factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	
Firm/Interruptible - Dem																										
TF12-B (Max Rate) Winter-112495 (46,506/46,580)		\$3.0120	286	\$3.0120	286	\$3.0120	286	\$3.0120	286	\$3.0171	287	\$3.0171	287	\$5.3400	507	\$5.3400	507	\$5.3400	507	\$5.3400	507	\$5.3400	507	\$3.8769	368	4,623
TF12-B (Max Rate) Summer-112495 (46,506/46,580)		\$2.3430	223	\$2.3430	223	\$2.3430	223	\$2.3430	223	\$2.3466	223	\$2.3466	223	\$4.1532	395	\$4.1532	395	\$4.1532	395	\$4.1532	395	\$4.1532	395	\$3.0156	286	3,595
TF12-V (Max Rate)-112495 (33,033/32,929)		\$4.5600	433	\$4.5600	433	\$4.5600	433	\$4.5600	433	\$4.5501	432	\$4.5501	432	\$8.0532	765	\$8.0532	765	\$8.0532	765	\$8.0532	765	\$8.0532	765	\$5.8470	555	6,978
TF5 (Max Rate)-112495 (36,275)		\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4806	331	\$3.4806	331	\$6.1608	585	\$6.1608	585	\$6.1608	585	\$6.1608	585	\$6.1608	585	\$4.4724	425	5,335
TF12B (Discount-Winter)-112495 (5,200)		\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5922	56	\$0.5922	56	\$0.5922	56	\$0.5922	56	\$0.5922	56	\$0.5922	56	\$0.5922	56	\$0.5922	56	675
TFX12 (Max Rate)-112486 (16,261/10,822)		\$2.3790	226	\$2.3790	226	\$2.3790	226	\$2.3790	226	\$1.5834	150	\$1.5834	150	\$2.8029	266	\$2.8029	266	\$2.8029	266	\$2.8029	266	\$2.8029	266	\$2.0349	193	2,730
TFX Apr (Max Rate-112486 (2,000))		\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0144	1	\$0.0144	1	\$0.0255	2	\$0.0255	2	\$0.0255	2	\$0.0255	2	\$0.0255	2	\$0.0186	2	22
TFX Oct (Max Rate)-112486 (2,000)		\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0144	1	\$0.0144	1	\$0.0255	2	\$0.0255	2	\$0.0255	2	\$0.0255	2	\$0.0255	2	\$0.0186	2	22
TFX5 (Max Rate)-112486 (77,688)		\$7.4550	708	\$7.4550	708	\$7.4550	708	\$7.4550	708	\$7.4543	708	\$7.4543	708	\$13.1940	1,253	\$13.1940	1,253	\$13.1940	1,253	\$13.1940	1,253	\$13.1940	1,253	\$9.5781	910	11,426
TFX5 (Discount)-112486 (1,800)		\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1143	11	\$0.1143	11	\$0.1143	11	\$0.1143	11	\$0.1143	11	\$0.1143	11	\$0.1143	11	\$0.1143	11	130
TFX12 (Discount)-111866 (1,283)		\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0948	9	\$0.0948	9	\$0.0948	9	\$0.0948	9	\$0.0948	9	\$0.0948	9	\$0.0948	9	\$0.0948	9	109
TFX12 (Discount)-111866 (8,271)		\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6879	65	\$0.6879	65	\$0.6879	65	\$0.6879	65	\$0.6879	65	\$0.6879	65	\$0.6879	65	\$0.6879	65	784
TFX12 (Discount)-111866 (11,921)		\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3773	131	\$1.3773	131	\$1.3773	131	\$1.3773	131	\$1.3773	131	\$1.3773	131	\$1.3773	131	\$1.3773	131	1,570
TFX5 (Discount)-111866 (379)		\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0117	1	\$0.0117	1	\$0.0117	1	\$0.0117	1	\$0.0117	1	\$0.0117	1	\$0.0117	1	\$0.0117	1	13
TFX5 (Discount)-111866 (2,445)		\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0846	8	\$0.0846	8	\$0.0846	8	\$0.0846	8	\$0.0846	8	\$0.0846	8	\$0.0846	8	\$0.0846	8	96
TFX5 (Discount)-111866 (22,189)		\$2.1270	202	\$2.1270	202	\$2.1270	202	\$2.1270	202	\$2.1270	202	\$2.1270	202	\$2.1270	202	\$2.1270	202	\$2.1270	202	\$2.1270	202	\$2.1270	202	\$2.1270	202	2,425
Windom-118657 (2,500)		\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	0
Northwestern Energy (1,035)		\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1311	12	\$0.1311	12	\$0.1311	12	\$0.1311	12	\$0.1311	12	\$0.1311	12	\$0.1311	12	\$0.1311	12	150
Demand Recovery		\$28.4790	2,706	\$28.4790	2,706	\$28.4790	2,706	\$28.4790	2,706	\$27.6818	2,630	\$27.6818	2,630	\$44.9760	4,273	\$44.9760	4,273	\$44.9760	4,273	\$44.9760	4,273	\$44.9760	4,273	\$34.0830	3,238	40,683
TOTAL																										
TF12-B (Max Rate) Winter-112495 (46,506/46,580)		55,261		51,752		50,256		110,473		232,746		379,509		838,716		719,380		628,556		430,238		244,127		89,197		3,830,211
TF12-B (Max Rate) Summer		42,987		40,257		39,094		85,936		181,022		295,170		652,313		559,500		488,862		334,619		189,870		69,381		2,979,010
TF12-V (Max Rate)-112495 (33,033/32,929)		83,662		78,349		76,085		167,250		351,005		572,339		1,264,859		1,084,889		947,920		648,838		368,165		134,524		5,777,885
TF5 (Max Rate)-112495 (36,275)		63,847		59,793		58,065		127,638		268,501		437,811		967,633		829,954		725,171		496,369		281,651		102,898		4,419,331
TF12B (Discount-Winter)-112495 (5,200)		10,843		10,154		9,861		21,677		45,684		74,490		93,013		79,778		69,706		47,713		27,073		13,625		503,618
TFX12 (Max Rate)-112486 (16,261/10,822)		43,647		40,876		39,694		87,256		122,147		199,170		440,232		377,594		329,922		225,827		128,139		46,818		2,081,320
TFX Apr (Max Rate-112486 (2,000))		275		258		250		550		1,111		1,811		4,005		3,435		3,002		2,055		1,166		428		18,346
TFX Oct (Max Rate)-112486 (2,000)		275		258		250		550		1,111		1,811		4,005		3,435		3,002		2,055		1,166		428		18,346
TFX5 (Max Rate)-112486 (77,688)		136,776		128,090		124,389		273,432		575,038		937,641		2,072,287		1,777,434		1,553,029		1,063,027		603,185		220,367		9,464,694
TFX5 (Discount)-112486 (1,800)		2,092		1,959		1,902		4,181		8,817		14,377		17,952		15,398		13,454		9,209		5,225		2,630		97,197
TFX12 (Discount)-111866 (1,283)		1,761		1,649		1,602		3,521		7,313		11,925		14,890		12,771		11,159		7,638		4,334		2,181		80,743
TFX12 (Discount)-111866 (8,271)		12,604		11,463		11,463		25,198		53,066		86,528		108,044		92,671		80,971		55,423		31,448		15,827		585,047
TFX12 (Discount)-111866 (11,921)		25,264		23,659		22,976		50,505		106,248		173,245		216,323		185,543		162,118		110,968		62,965		31,688		1,171,502
TFX5 (Discount)-111866 (379)		220		206		200		440		903		1,472		1,838		1,576		1,377		943		535		269		9,979
TFX5 (Discount)-111866 (2,445)		1,541		1,443		1,402		3,081		6,526		10,641		13,288		11,397		9,958		6,816		3,868		1,946		71,907
TFX5 (Discount)-111866 (22,189)		39,024		36,546		35,490		78,013		164,082		267,547		334,073		286,539		250,363		171,370		97,239		48,937		1,809,223
Windom-118657 (2,500)		0		0		0		0		0		0		0		0		0		0		0		0		0
Northwestern Energy (1,035)		2,422		2,268		2,202		4,841		10,113		16,491		20,591		17,661		15,431		10,563		5,993		3,016		111,593
Demand Recovery		522,503		489,321		475,180		1,044,544		2,135,432		3,481,978		7,064,059		6,058,956		5,293,999		3,623,669		2,056,150		784,159		33,029,950
COMM COST OF GAS		1,905,981		1,796,252		1,706,247		3,612,368		9,859,440		16,532,425		18,564,865		14,701,779		12,458,088		7,839,321		5,006,554		2,376,489		96,359,808
		0		0		0		0		0		0		0		0		0		0		0		0		0
		0		0		0		0		0		0		0		0		0		0		0		0		0
		0		0		0		0		0		0		0		0		0		0		0		0		0
Commodity Recovery		1,905,981		1,796,252		1,706,247		3,612,368		9,859,440		16,532,425		18,564,865		14,701,779		12,458,088		7,839,321		5,006,554		2,376,489		96,359,808
Total Recovery \$		2,428,484		2,285,572		2,181,427		4,656,912		11,994,872		20,014,403		25,628,924		20,760,736		17,752,087		11,462,990		7,062,704		3,160,648		129,389,759

*Per Commission Decision in Docket No. G011/GR-15-748 the calculation of the rate charged to DFC was changed beginning Mar. 1, 2017.

MINNESOTA ENERGY RESOURCES - NNG																								Schedule D.3		
12 MONTHS ENDED JUNE 2020																								NNG		
COSTS BY TYPE, BY MONTH, BY CLASS																								NNGD3C		
Page 3 of 6																										
NNG		Jul-19		Aug-19		Sep-19		Oct-19		Nov-19		Dec-19		Jan-20		Feb-20		Mar-20		Apr-20		May-20		Jun-20		Total Annual
Cost	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$		
GS	2,273,700	667,590	2,250,135	667,516	2,214,967	667,551	5,311,961	688,999	9,403,271	3,571,453	10,940,870	3,558,459	11,140,327	5,244,434	5,033,432	5,244,402	6,537,685	5,244,399	4,706,982	969,135	3,362,359	550,344	3,595,760	732,473		
TF12-B (Max Rate) Winter-112495 (46,506/46,580)	10.58%	69,539	10.58%	69,540	10.58%	69,544	10.58%	70,754	10.90%	389,258	10.90%	387,839	11.87%	622,672	11.87%	622,667	11.87%	622,667	11.87%	115,065	11.87%	65,342	11.37%	83,318	3,188,207	
TF12-B (Max Rate) Summer	8.23%	54,094	8.23%	54,095	8.23%	54,097	8.23%	55,039	8.48%	302,752	8.48%	301,648	9.23%	484,285	9.23%	484,282	9.23%	484,281	9.23%	89,492	9.23%	50,820	8.85%	64,808	2,479,693	
TF12-V (Max Rate)-112495 (33,033/32,929)	16.01%	105,279	16.01%	105,280	16.01%	105,286	16.01%	107,118	16.44%	587,041	16.44%	584,901	17.91%	939,045	17.91%	939,038	17.91%	939,038	17.91%	173,529	17.91%	98,542	17.16%	125,657	4,809,755	
TF5 (Max Rate)-112495 (36,275)	12.22%	80,344	12.22%	80,345	12.22%	80,350	12.22%	81,748	12.57%	449,057	12.57%	447,420	13.70%	718,381	13.70%	718,377	13.70%	718,376	13.70%	132,752	13.70%	75,386	13.12%	96,116	3,678,652	
TF12B (Discount-Winter)-112495 (5,200)	2.08%	13,645	2.08%	13,645	2.08%	13,646	2.08%	13,883	2.14%	76,404	2.14%	76,125	1.32%	69,054	1.32%	69,053	1.32%	69,053	1.32%	12,761	1.32%	7,246	1.74%	12,727	447,241	
TFX12 (Max Rate)-112486 (16,261/10,822)	8.35%	54,925	8.35%	54,926	8.35%	54,929	8.35%	55,885	5.72%	204,286	5.72%	203,541	6.23%	326,833	6.23%	326,831	6.23%	326,830	6.23%	60,396	6.23%	34,297	5.97%	43,732	1,747,410	
TFX Apr (Max Rate-112486 (2,000))	0.05%	346	0.05%	346	0.05%	346	0.05%	352	0.05%	1,858	0.05%	1,851	0.06%	2,973	0.06%	2,973	0.06%	2,973	0.06%	549	0.06%	312	0.05%	400	15,282	
TFX Oct (Max Rate)-112486 (2,000)	0.05%	346	0.05%	346	0.05%	346	0.05%	352	0.05%	1,858	0.05%	1,851	0.06%	2,973	0.06%	2,973	0.06%	2,973	0.06%	549	0.06%	312	0.05%	400	15,282	
TFX5 (Max Rate)-112486 (77,688)	26.18%	172,117	26.18%	172,119	26.18%	172,128	26.18%	175,124	26.93%	961,727	26.93%	958,221	29.34%	1,538,489	29.34%	1,538,479	29.34%	1,538,477	29.34%	284,302	29.34%	161,447	28.10%	205,842	7,878,471	
TFX5 (Discount)-112486 (1,800)	0.40%	2,632	0.40%	2,632	0.40%	2,632	0.40%	2,678	0.41%	14,747	0.41%	14,693	0.25%	13,328	0.25%	13,328	0.25%	13,328	0.25%	2,463	0.25%	1,399	0.34%	2,456	86,315	
TFX12 (Discount)-111866 (1,283)	0.34%	2,216	0.34%	2,216	0.34%	2,217	0.34%	2,255	0.34%	12,231	0.34%	12,186	0.21%	11,054	0.21%	11,054	0.21%	11,054	0.21%	2,043	0.21%	1,160	0.28%	2,037	71,724	
TFX12 (Discount)-111866 (8,271)	2.41%	15,861	2.41%	15,862	2.41%	15,861	2.41%	16,138	2.49%	88,751	2.49%	88,427	1.53%	80,213	1.53%	80,212	1.53%	80,212	1.53%	14,823	1.53%	8,417	2.02%	14,784	519,562	
TFX12 (Discount)-111866 (11,921)	4.84%	31,791	4.84%	31,792	4.84%	31,794	4.84%	32,347	4.98%	177,695	4.98%	177,048	3.06%	160,600	3.06%	160,599	3.06%	160,599	3.06%	29,678	3.06%	16,853	4.04%	29,599	1,040,396	
TFX5 (Discount)-111866 (379)	0.04%	277	0.04%	277	0.04%	277	0.04%	282	0.04%	1,510	0.04%	1,504	0.03%	1,364	0.03%	1,364	0.03%	1,364	0.03%	252	0.03%	143	0.03%	251	8,866	
TFX5 (Discount)-111866 (2,445)	0.29%	1,939	0.29%	1,939	0.29%	1,939	0.29%	1,973	0.31%	10,915	0.31%	10,875	0.19%	9,865	0.19%	9,865	0.19%	9,865	0.19%	1,823	0.19%	1,035	0.25%	1,818	63,852	
TFX5 (Discount)-111866 (22,189)	7.47%	49,107	7.47%	49,108	7.47%	49,110	7.47%	49,965	7.68%	274,420	7.68%	273,419	4.73%	248,019	4.73%	248,018	4.73%	248,017	4.73%	45,832	4.73%	26,027	6.24%	45,711	1,606,753	
Windom-118657 (2,500)	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0	
Northwestern Energy (1,035)	0.46%	3,048	0.46%	3,048	0.46%	3,048	0.46%	3,101	0.47%	16,914	0.47%	16,853	0.29%	15,287	0.29%	15,287	0.29%	15,287	0.29%	2,825	0.29%	1,604	0.38%	2,817	99,117	
Total Demand	100%	615,409	100%	617,523	100%	625,082	100%	654,155	100%	2,936,124	100%	2,964,603	100%	4,656,677	100%	4,625,936	100%	4,620,146	100%	883,783	100%	430,080	100%	639,385	24,268,901	
COMM COST OF GAS		2,315,798		2,290,129		2,247,436		5,326,420		10,058,569		10,637,671		11,731,435		9,651,898		6,861,935		4,811,165		3,482,623		3,188,847	72,603,925	
Capacity Release	(42,098)		(39,994)		(32,469)		(14,842)		(635,298)		(593,801)		(587,758)		(618,466)		(624,250)		(85,350)		(120,264)		(93,088)		(3,487,677)	
DDVCs	0		0		0		382		0		0		(3,350)		0		0		1,168		0		0		(1,800)	
Total Commodity	2,315,798		2,290,129		2,247,436		5,326,802		10,058,569		10,637,671		11,728,085		9,651,898		6,861,935		4,812,333		3,482,623		3,188,847		72,602,125	
Total GS Costs	2,931,207		2,907,651		2,872,518		5,980,957		12,994,693		13,602,274		16,384,761		14,277,834		11,482,080		5,696,115		3,912,703		3,828,232		96,871,026	
Interruptible																										
COMM COST OF GAS		391,930		394,250		409,901		622,935		1,609,321		1,860,686		894,931		686,392		557,776		399,724		388,213		464,835	8,680,895	
PRODUCER DEMAND																								0		
Capacity Release																								0		
DDVCs																								0		
STORAGE																								0		
Interruptible - Commodity		391,930		394,250		409,901		622,935		1,609,321		1,860,686		894,931		686,392		557,776		399,724		388,213		464,835	8,680,895	
Firm/Interruptible - COMM																										
COMM COST OF GAS		1,465		1,118		1,385		2,468		1,543		1,157		6,822		4,576		3,713		2,067		1,796		1,520	29,631	
PRODUCER DEMAND																								0		
Capacity Release																								0		
DDVCs																								0		
STORAGE																								0		
Firm/Interruptible - Comm		0	1,465	0	1,118	0	1,385	0	2,468	0	1,543	0	1,157	0	6,822	0	4,576	0	3,713	0	2,067	0	1,796	0	1,520	29,631

12 MONTHS ENDED JUNE 2020
COSTS BY TYPE, BY MONTH, BY CLASS

NNG

NNGD3C

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NNG		Page 4 of 6																									
Cost	Jul-19		Aug-19		Sep-19		Oct-19		Nov-19		Dec-19		Jan-20		Feb-20		Mar-20		Apr-20		May-20		Jun-20		Total Annual		
	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$			
FirmInterruptible - Dem																											
TF12-B (Max Rate) Winter-112495 (46,506/46,580)	\$3,0120	308	\$3,0120	305	\$3,0120	301	\$3,0120	293	\$3,0171	349	\$3,0171	344	\$5,3400	571	\$5,3400	575	\$5,3400	578	\$5,3400	556	\$5,3400	649	\$3,8769	422	5,246		
TF12-B (Max Rate) Summer-112495 (46,506/46,580)	\$2,3430	238	\$2,3430	237	\$2,3430	234	\$2,3430	228	\$2,3466	271	\$2,3466	268	\$4,1532	444	\$4,1532	447	\$4,1532	446	\$4,1532	433	\$4,1532	505	\$3,0156	328	4,081		
TF12-V (Max Rate)-112495 (33,033/32,929)	\$4,5600	463	\$4,5600	461	\$4,5600	456	\$4,5600	443	\$4,5501	526	\$4,5501	519	\$8,0532	862	\$8,0532	867	\$8,0532	868	\$8,0532	839	\$8,0532	979	\$5,8470	636	7,919		
TF5 (Max Rate)-112495 (36,275)	\$3,4800	353	\$3,4800	352	\$3,4800	348	\$3,4800	338	\$3,4806	402	\$3,4806	397	\$6,1608	659	\$6,1608	664	\$6,1608	664	\$6,1608	642	\$6,1608	749	\$4,4724	487	6,055		
TF12B (Discount-Winter)-112495 (5,200)	\$0,5910	60	\$0,5910	60	\$0,5910	59	\$0,5910	57	\$0,5922	68	\$0,5922	68	\$0,5922	63	\$0,5922	64	\$0,5922	64	\$0,5922	62	\$0,5922	72	\$0,5922	64	761		
TFX12 (Max Rate)-112486 (16,261/10,822)	\$2,3790	241	\$2,3790	241	\$2,3790	238	\$2,3790	231	\$1,5834	183	\$1,5834	181	\$2,8029	300	\$2,8029	302	\$2,8029	302	\$2,8029	292	\$2,8029	341	\$2,0349	221	3,073		
TFX Apr (Max Rate)-112486 (2,000)	\$0,0150	2	\$0,0150	2	\$0,0150	1	\$0,0150	1	\$0,0144	2	\$0,0144	2	\$0,0255	3	\$0,0255	3	\$0,0255	3	\$0,0255	3	\$0,0255	3	\$0,0186	2	25		
TFX Oct (Max Rate)-112486 (2,000)	\$0,0150	2	\$0,0150	2	\$0,0150	1	\$0,0150	1	\$0,0144	3	\$0,0144	3	\$0,0255	3	\$0,0255	3	\$0,0255	3	\$0,0255	3	\$0,0255	3	\$0,0186	3	25		
TFX5 (Max Rate)-112486 (77,688)	\$7,4550	757	\$7,4550	754	\$7,4550	745	\$7,4550	724	\$7,4543	861	\$7,4543	850	\$13,1940	1,412	\$13,1940	1,421	\$13,1940	1,423	\$13,1940	1,374	\$13,1940	1,604	\$9,5781	1,042	12,968		
TFX5 (Discount)-112486 (1,800)	\$0,1140	12	\$0,1140	12	\$0,1140	11	\$0,1140	13	\$0,1143	13	\$0,1143	13	\$0,1143	12	\$0,1143	12	\$0,1143	12	\$0,1143	12	\$0,1143	14	\$0,1143	12	147		
TFX12 (Discount)-111866 (1,283)	\$0,0960	10	\$0,0960	10	\$0,0960	10	\$0,0960	10	\$0,0948	10	\$0,0948	11	\$0,0948	10	\$0,0948	10	\$0,0948	10	\$0,0948	10	\$0,0948	12	\$0,0948	10	122		
TFX12 (Discount)-111866 (8,271)	\$0,6870	70	\$0,6870	69	\$0,6870	69	\$0,6870	67	\$0,6879	79	\$0,6879	78	\$0,6879	74	\$0,6879	74	\$0,6879	74	\$0,6879	72	\$0,6879	84	\$0,6879	75	885		
TFX12 (Discount)-111866 (11,921)	\$1,3770	140	\$1,3770	139	\$1,3770	138	\$1,3770	134	\$1,3773	159	\$1,3773	157	\$1,3773	147	\$1,3773	148	\$1,3773	149	\$1,3773	143	\$1,3773	167	\$1,3773	150	1,772		
TFX5 (Discount)-111866 (379)	\$0,0120	1	\$0,0120	1	\$0,0120	1	\$0,0120	1	\$0,0117	1	\$0,0117	1	\$0,0117	1	\$0,0117	1	\$0,0117	1	\$0,0117	1	\$0,0117	1	\$0,0117	1	15		
TFX5 (Discount)-111866 (2,445)	\$0,0840	9	\$0,0840	8	\$0,0840	8	\$0,0840	8	\$0,0846	10	\$0,0846	10	\$0,0846	9	\$0,0846	9	\$0,0846	9	\$0,0846	9	\$0,0846	10	\$0,0846	8	169		
TFX5 (Discount)-111866 (22,189)	\$2,1270	216	\$2,1270	215	\$2,1270	213	\$2,1270	207	\$2,1270	246	\$2,1270	243	\$2,1270	228	\$2,1270	229	\$2,1270	229	\$2,1270	222	\$2,1270	259	\$2,1270	231	2,736		
Windom-118657 (2,500)	\$0,0000	0	\$0,0000	0	\$0,0000	0	\$0,0000	0	\$0,0000	0	\$0,0000	0	\$0,0000	0	\$0,0000	0	\$0,0000	0	\$0,0000	0	\$0,0000	0	\$0,0000	0	0		
Northwestern Energy (1,035)	\$0,1320	13	\$0,1320	13	\$0,1320	13	\$0,1320	13	\$0,1311	15	\$0,1311	15	\$0,1311	14	\$0,1311	14	\$0,1311	14	\$0,1311	14	\$0,1311	14	\$0,1311	16	\$0,1311	14	169
Demand Costs	\$28,4790	2,706	\$28,4790	2,706	\$28,4790	2,706	\$28,4790	2,706	\$27,6818	2,638	\$27,6818	2,638	\$44,9760	4,273	\$44,9760	4,273	\$44,9760	4,273	\$44,9760	4,273	\$44,9760	4,273	\$44,9760	4,273	\$43,0830	3,238	40,683
Capacity Release		(1,85)		(1,73)		(1,41)		(8,1)		(58,9)		(5,2)		(5,9)		(6,1)		(5,7)		(4,1)		(1,195)		(4,7)		(5,425)	
TOTAL																											
TF12-B (Max Rate) Winter-112495 (46,506/46,580)	69,845		69,845		69,845		69,845		71,047		389,607		388,183		623,243		623,243		623,243		115,621		65,992		83,740		3,193,453
TF12-B (Max Rate) Summer	54,332		54,332		54,332		54,332		55,267		303,023		301,916		484,729		484,729		484,729		89,925		51,325		2,483,773		
TF12-V (Max Rate)-112495 (33,033/32,929)	105,741		105,741		105,741		105,741		587,567		585,420		939,906		939,906		939,906		939,906		174,368		126,293		4,817,574		
TF5 (Max Rate)-112495 (36,275)	80,697		80,697		80,697		80,697		82,086		449,460		447,817		719,040		719,040		719,040		133,393		76,135		96,602		3,684,707
TF12B (Discount-Winter)-112495 (5,200)	13,705		13,705		13,705		13,705		13,941		76,472		76,193		69,117		69,117		69,117		12,822		7,318		12,791		448,003
TFX12 (Max Rate)-112486 (16,261/10,822)	55,166		55,166		55,166		55,166		56,116		204,469		203,722		327,133		327,132		327,132		60,688		34,638		43,953		1,750,483
TFX Apr (Max Rate)-112486 (2,000)	348		348		348		348		354		1,860		1,853		2,976		2,976		2,976		552		315		402		15,307
TFX Oct (Max Rate)-112486 (2,000)	348		348		348		348		354		1,860		1,853		2,976		2,976		2,976		552		315		402		15,307
TFX5 (Max Rate)-112486 (77,688)	172,873		172,873		172,873		172,873		175,849		962,580		959,071		1,539,900		1,539,900		1,539,900		285,676		163,051		206,894		7,891,439
TFX5 (Discount)-112486 (1,800)	2,644		2,644		2,644		2,644		2,689		14,760		13,340		13,340		13,340		13,340		2,475		1,413		2,469		86,462
TFX12 (Discount)-111866 (1,283)	2,266		2,266		2,266		2,266		2,264		12,242		11,064		11,064		11,064		11,064		2,053		1,172		2,048		71,846
TFX12 (Discount)-111866 (8,271)	15,931		15,931		15,931		15,931		16,205		88,830		88,506		80,286		80,286		80,286		29,821		14,858		5,204,46		
TFX12 (Discount)-111866 (11,921)	31,931		31,931		31,931		31,931		32,481		177,855		177,205		160,748		160,748		160,748		29,749		17,021		29,749		1,042,167
TFX12 (Discount)-111866 (379)	278		278		278		278		283		1,511		1,506		1,366		1,366		1,366		253		145		253		8,881
TFX5 (Discount)-111866 (2,445)	1,948		1,948		1,948		1,948		1,981		10,925		10,885		9,874		9,874		9,874		1,832		1,045		1,827		63,960
TFX5 (Discount)-111866 (22,189)	49,323		49,323		49,323		49,323		50,172		274,665		273,662		248,247		248,247		248,247		46,054		26,285		45,943		1,609,489
Windom-118657 (2,500)	0		0		0		0		0		0		0		0		0		0		0		0		0		0
Northwestern Energy (1,035)	3,061		3,061		3,061		3,061		3,114		16,929		16,867		15,301		15,301		15,301		2,839		1,620		2,832		99,286
Capacity Release	(42,283)		(40,169)		(32,610)		(14,903)		(635,867)		(594,328)		(588,297)		(619,037)		(624,827)		(624,827)		(85,763)		(121,459)		(93,559)		(3,493,102)
Demand Costs	618,114		620,228		627,788		656,860		2,938,574		2,967,233		4,660,949		4,630,208		4,624,418		4,638,056		4,324,653		4,366,985		4,297,825		105,622,234
COMM COST OF GAS	2,709,193		2,685,496		2,658,722		5,951,823		11,669,433		12,499,513		12,633,189		10,342,867		7,423,423		5,212,956		3,872,633		3,655,202		81,314,450		
PRODUCER DEMAND	0		0		0		0		0		0		0		0		0		0		0		0		0		0
DDVCs	0		0		0		382		0		0		(3,350)		0		0		0		1,168		0		0		(1,800)
STORAGE	0		0		0		0		0		0		0		0		0		0		0		0		0		0
All Credits	0		0		0		0		0		0		0		0		0		0		0		0		0		0
Commodity Costs	2,709,193		2,685,496		2,658,722		5,952,205		11,669,433		12,499,513		12,629,838		10,342,867		7,423,423		5,214,124		3,872,633		3,655,202		81,312,650		
Total Costs	3,327,307		3,305,724		3,286,510		6,609,065		14,608,187		15,466,746		17,290,788		14,973,075		12,047,842		6,102,179		4,306,985		4,297,825		105,622,234		

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020

RECOVERY VS COSTS BY TYPE, BY MONTH, BY CLASS

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GS

	Cost Recovery	Cost Incurred	(Over) Under	(Over) Under	
					%
TF12-B (Max Rate) Winter-112495 (46,506/46,580)	3,825,588	3,188,207	(637,381)		
TF12-B (Max Rate) Summer-112495 (46,506/46,580)	2,975,414	2,479,693	(495,722)		
TF12-V (Max Rate)-112495 (33,033/32.929)	5,770,907	4,809,755	(961,152)		
TF5 (Max Rate)-112495 (36,275)	4,413,996	3,678,652	(735,344)		
TF12B (Discount-Winter)-112495 (5,200)	502,943	447,241	(55,702)		
TFX12 (Max Rate)-112486 (16,261/10,822)	2,078,591	1,747,410	(331,180)		
TFX Apr (Max Rate-112486 (2,000))	18,323	15,282	(3,042)		
TFX Oct (Max Rate)-112486 (2,000)	18,323	15,282	(3,042)		
TFX5 (Max Rate)-112486 (77,688)	9,453,268	7,878,471	(1,574,797)		
TFX5 (Discount)-112486 (1,800)	97,067	86,315	(10,751)		
TFX12 (Discount)-111866 (1,283)	80,635	71,724	(8,911)		
TFX12 (Discount)-111866 (8,271)	584,263	519,562	(64,701)		
TFX12 (Discount)-111866 (11,921)	1,169,932	1,040,396	(129,537)		
TFX5 (Discount)-111866 (379)	9,965	8,866	(1,099)		
TFX5 (Discount)-111866 (2,445)	71,811	63,852	(7,959)		
TFX5 (Discount)-111866 (22,189)	1,806,798	1,606,753	(200,045)		
Windom-118657 (2,500)	0	0	0		
Northwestern Energy (1,035)	111,444	99,117	(12,326)		
Capacity Release		(3,487,677)	(3,487,677)		
Total Demand	32,989,268	24,268,901	(8,720,366)		-35.93%
COMM COST OF GAS	86,344,913	72,603,925	(13,740,989)		
PRODUCER DEMAND	0	0	0		
DDVCs	0	(1,800)	(1,800)		
All Credits		0	0		
Total Commodity	86,344,913	72,602,125	(13,742,789)		-18.93%
Total GS	119,334,181	96,871,026	(22,463,155)		-23.19%
Interruptible					
COMM COST OF GAS	9,976,885	8,680,895	(1,295,991)		
PRODUCER DEMAND	0	0	0		
UPSTREAM PIPELINE	0	0	0		
DDVCs	0	0	0		
Interruptible - Commodity	9,976,885	8,680,895	(1,295,991)		-14.93%
Firm/Interruptible - Commodity					
COMM COST OF GAS	38,010	29,631	(8,379)		
PRODUCER DEMAND	0	0	0		
UPSTREAM PIPELINE	0	0	0		
DDVCs	0	0	0		
Firm/Interruptible - Commodity	38,010	29,631	(8,379)		-28.28%

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020

RECOVERY VS COSTS BY TYPE, BY MONTH, BY CLASS

Schedule D.3

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	Cost Recovery	Cost Incurred	(Over) Under	(Over) Under
Firm/Interruptible - Demand				%
TF12-B (Max Rate) Winter-112495 (46,506/46,580)	4,623	5,246	624	
TF12-B (Max Rate) Summer-112495 (46,506/46,580)	3,595	4,081	485	
TF12-V (Max Rate)-112495 (33,033/32,929)	6,978	7,919	941	
TF5 (Max Rate)-112495 (36,275)	5,335	6,055	720	
TF12B (Discount-Winter)-112495 (5,200)	675	761	87	
TFX12 (Max Rate)-112486 (16,261/10,822)	2,730	3,073	343	
TFX Apr (Max Rate-112486 (2,000))	22	25	3	
TFX Oct (Max Rate)-112486 (2,000)	22	25	3	
TFX5 (Max Rate)-112486 (77,688)	11,426	12,968	1,541	
TFX5 (Discount)-112486 (1,800)	130	147	17	
TFX12 (Discount)-111866 (1,283)	109	122	14	
TFX12 (Discount)-111866 (8,271)	784	885	101	
TFX12 (Discount)-111866 (11,921)	1,570	1,772	202	
TFX5 (Discount)-111866 (379)	13	15	2	
TFX5 (Discount)-111866 (2,445)	96	109	12	
TFX5 (Discount)-111866 (22,189)	2,425	2,736	311	
Windom-118657 (2,500)	0	0	0	
Northwestern Energy (1,035)	150	169	19	
Capacity Release		(5,425)		
Firm/Interruptible - Demand	40,683	40,683	0	0%
TOTAL				
TF12-B (Max Rate) Winter-112495 (46,506/46,580)	3,830,211	3,193,453	(636,758)	
TF12-B (Max Rate) Summer	2,979,010	2,483,773	(495,236)	
TF12-V (Max Rate)-112495 (33,033/32,929)	5,777,885	4,817,674	(960,211)	
TF5 (Max Rate)-112495 (36,275)	4,419,331	3,684,707	(734,624)	
TF12B (Discount-Winter)-112495 (5,200)	503,618	448,003	(55,615)	
TFX12 (Max Rate)-112486 (16,261/10,822)	2,081,320	1,750,483	(330,837)	
TFX Apr (Max Rate-112486 (2,000))	18,346	15,307	(3,039)	
TFX Oct (Max Rate)-112486 (2,000)	18,346	15,307	(3,039)	
TFX5 (Max Rate)-112486 (77,688)	9,464,694	7,891,439	(1,573,255)	
TFX5 (Discount)-112486 (1,800)	97,197	86,462	(10,734)	
TFX12 (Discount)-111866 (1,283)	80,743	71,846	(8,897)	
TFX12 (Discount)-111866 (8,271)	585,047	520,446	(64,600)	
TFX12 (Discount)-111866 (11,921)	1,171,502	1,042,167	(129,335)	
TFX5 (Discount)-111866 (379)	9,979	8,881	(1,097)	
TFX5 (Discount)-111866 (2,445)	71,907	63,960	(7,947)	
TFX5 (Discount)-111866 (22,189)	1,809,223	1,609,489	(199,733)	
Windom-118657 (2,500)	0	99,286	99,286	
Northwestern Energy (1,035)	111,593	0	(111,593)	
Capacity Release		(3,493,102)	(3,493,102)	
Demand	33,029,950	24,309,584	(8,720,366)	-35.87%
COMM COST OF GAS	96,359,808	81,314,450	(15,045,358)	
PRODUCER DEMAND	0	0	0	
DDVCs	0	(1,800)	(1,800)	
All Credits		0	0	
Commodity	96,359,808	81,312,650	(15,047,159)	-18.51%
Total	129,389,759	105,622,234	(23,767,525)	-22.50%

Notes:

MINNESOTA ENERGY RESOURCES - NNG**12 MONTHS ENDED JUNE 2020****Schedule F & G****Page 1 of 1**

8/16/2020

SUMMARY OF SUPPLIER REFUNDS AND REFUNDS CREDITED TO CUSTOMERS**F. Supplier Refunds Received**

Northern Natural Gas	\$ (194,688.05)
Northwestern Energy	\$ (2,602.28)
Total Refunds Received	<u>\$ (197,290.33)</u>

G. Refunds Credited to Customers by PGA system

Total Credits to Customers	<u>\$ 0.00</u>
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Notes:

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020

(OVER) UNDER RECOVERY OF GAS COSTS SUMMARY

Schedule H

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NNG

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NNG

1. Total Rate Schedule Purchases	\$105,622,234
(Schedules C & D, Page 1)	
2. Rate Schedule Base Costs Recovered through Sales Rates	
(Schedule A, Page 1)	<u>\$127,716,941</u>
3. Difference to be Collected (Distributed) through PGA	(\$22,094,707)
(Line 1 - Line 2)	
4. Actual PGA Collected (Distributed)	
(Schedule B & E, Page 1 - Schedule A, Page 1)	<u>\$1,672,818</u>
5. Gas Costs (Over) Under Recovered	(\$23,767,525)
(Line 3 - Line 4)	

Notes:

MINNESOTA ENERGY RESOURCES - NNG
12 MONTHS ENDED JUNE 2020
Capacity Release Summary

Schedule I
Page 1 of 1
8/27/2020

Month	NNG		Northern Border Pipeline		Totals	
	Dth	\$	Dth	\$	Dth	\$
Jul-19	959,500	\$ 42,282.75	1,240,000	\$ 790,833.33	2,199,500	\$ 833,116.08
Aug-19	992,000	\$ 40,169.00	1,240,000	\$ 790,833.33	2,232,000	\$ 831,002.33
Sep-19	744,000	\$ 32,609.50	1,200,000	\$ 790,833.33	1,944,000	\$ 823,442.83
Oct-19	308,000	\$ 14,903.00	1,240,000	\$ 790,833.33	1,548,000	\$ 805,736.33
Nov-19	2,299,320	\$ 635,867.23	1,200,000	\$ 790,833.33	3,499,320	\$ 1,426,700.56
Dec-19	1,958,132	\$ 594,327.56	1,240,000	\$ 790,833.33	3,198,132	\$ 1,385,160.89
Jan-20	1,945,506	\$ 588,297.09	1,240,000	\$ 790,833.33	3,185,506	\$ 1,379,130.42
Feb-20	1,954,006	\$ 619,037.24	1,160,000	\$ 790,833.33	3,114,006	\$ 1,409,870.57
Mar-20	2,127,964	\$ 624,827.23	1,240,000	\$ 790,833.33	3,367,964	\$ 1,415,660.56
Apr-20	1,321,120	\$ 85,763.10	1,200,000	\$ 632,667.00	2,521,120	\$ 718,430.10
May-20	1,801,224	\$ 121,459.10	1,240,000	\$ 632,667.00	3,041,224	\$ 754,126.10
Jun-20	1,443,120	\$ 93,559.10	1,200,000	\$ 632,667.00	2,643,120	\$ 726,226.10
Total	17,853,892	\$ 3,493,101.90	14,640,000	\$ 9,015,500.97	32,493,892	\$ 12,508,602.87

Notes:

Included in the above totals for NNG Pipeline are capacity releases specific to the Rochester expansion project. In compliance with the Capacity Release Plan approved by the Commission on May 8, 2018 (Docket G011/GP-15-895), below are the details of the monthly capacity releases related to that specific additional capacity.

Month	Rochester	
	Dth	\$
Jul-19	-	\$ -
Aug-19	-	\$ -
Sep-19	-	\$ -
Oct-19	-	\$ -
Nov-19	23,104	\$ 269,397.08
Dec-19	23,104	\$ 269,397.08
Jan-20	23,104	\$ 269,397.08
Feb-20	23,104	\$ 269,397.08
Mar-20	23,104	\$ 269,397.08
Apr-20	23,104	\$ 43,931.10
May-20	23,104	\$ 43,931.10
Jun-20	23,104	\$ 43,931.10
Total	184,832	\$ 1,478,778.71

MINNESOTA ENERGY RESOURCES - NNG

Schedule J

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PIPELINE DAILY SCHEDULING SUMMARY

8/16/2020

NNG 2019-2020

Month	Type	Volume Dth	NNG Amount	Sales Dth	ddvc Dth %
July	Negative ddvc	-	\$ -		
July	Positive ddvc	-	\$ -		
July	total	-	\$ -	640,613	0.00%
August	Negative ddvc	-	\$ -		
August	Positive ddvc	-	\$ -		
August	total	-	\$ -	601,100	0.00%
September	Negative ddvc	-	\$ -		
September	Positive ddvc	-	\$ -		
September	total	-	\$ -	588,790	0.00%
October	Negative ddvc	-	\$ -		
October	Positive ddvc	1,515	\$ 382.08		
October	total	1,515	\$ 382.08	1,226,332	0.12%
November	Negative ddvc	-	\$ -		
November	Positive ddvc	-	\$ -		
November	total	-	\$ -	2,681,660	0.00%
December	Negative ddvc	-	\$ -		
December	Positive ddvc	-	\$ -		
December	total	-	\$ -	4,430,818	0.00%
January	Negative ddvc	-	\$ -		
January	Annual Credit Allocation	-	\$ (3,350.22)		
January	total	-	\$ (3,350.22)	5,071,106	0.00%
February	Negative ddvc	-	\$ -		
February	Positive ddvc	-	\$ -		
February	total	-	\$ -	4,327,729	0.00%
March	Negative ddvc	-	\$ -		
March	Positive ddvc	-	\$ -		
March	total	-	\$ -	3,817,080	0.00%
April	Negative ddvc	-	\$ -		
April	Positive ddvc	3,168	\$ 1,168.04		
April	total	3,168	\$ 1,168.04	2,615,787	0.12%
May	Negative ddvc	-	\$ -		
May	Positive ddvc	-	\$ -		
May	total	-	\$ -	1,521,919	0.00%
June	Negative ddvc	-	\$ -		
June	Positive ddvc	-	\$ -		
June	total	-	\$ -	787,895	0.00%
	total	4,683	\$ (1,800.10)	28,310,830	0.02%

Notes:

MERC**Financial Hedging Report****July 1, 2019 through June 30, 2020****I. Futures**

[TRADE SECRET DATA BEGINS....

Delivery period	Contracts	Average purchase price \$/MMBTU	Average sale price, \$/MMBTU	Average gain (loss), \$/MMBTU	Net realized gain (loss)
Nov-19					
Dec-19					
Jan-20					
Feb-20					
Mar-20					
Futures subtotal					

II. Options

Option type	delivery period	Contracts	Premium Paid \$	Sale Proceeds \$	Average gain (loss), \$/MMBTU	Net realized gain (loss)
Call	Nov-19					
Call	Dec-19					
Call	Jan-20					
Call	Feb-20					
Call	Mar-20					
Options subtotal						
Futures and Options total						

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Total
Total Realized gain (loss)													
NNG													
Allocation %													
Gain (Loss)													
Consolidated													
Allocation %													
Gain (Loss)													
Total Realized Gain (Loss)													

....TRADE SECRET DATA ENDS]

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020

CALCULATION OF PRIOR PERIOD REVENUES BILLED AFTER JUNE 30, 2017

Schedule M

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8/16/2020

NNG	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Total
GS													
Dth	0						(32)						(32)
Demand Rate	\$0.9376	\$0.9376	\$0.9376	\$0.9376	\$0.9328	\$0.9328	\$0.9367	\$0.9367	\$0.9367	\$0.9367	\$0.9367	\$0.9367	
Revenue	\$0	\$0	\$0	\$0	\$0	\$0	(\$30)	\$0	\$0	\$0	\$0	\$0	(\$30)
Commodity Rate	\$3.1250	\$3.0727	\$3.2912	\$3.0658	\$3.2481	\$3.6515	\$3.3786	\$4.4824	\$3.1308	\$3.0668	\$3.1656	\$3.1530	
Revenue	\$1	\$0	\$0	\$0	\$0	\$0	(\$110)	\$0	\$0	\$0	\$0	\$0	(\$109)
ACA Rate	\$0.0301	\$0.0301	\$0.1072	\$0.1072	\$0.1072	\$0.1072	\$0.1072	\$0.1072	\$0.1072	\$0.1072	\$0.1072	\$0.1072	
Revenue	\$0	\$0	\$0	\$0	\$0	\$0	(\$3)	\$0	\$0	\$0	\$0	\$0	(\$3)
Total \$	\$1	\$0	\$0	\$0	\$0	\$0	(\$143)	\$0	\$0	\$0	\$0	\$0	(\$142)
\$ w/o ACA	\$1	\$0	\$0	\$0	\$0	\$0	(\$140)	\$0	\$0	\$0	\$0	\$0	(\$139)
IS													
Dth													0
Commodity Rate	\$3.1250	\$3.0727	\$3.2912	\$3.0658	\$3.2481	\$3.6515	\$3.3786	\$4.4824	\$3.1308	\$3.0668	\$3.1656	\$3.1530	
Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ACA Rate	\$0.3906	\$0.3906	\$0.3642	\$0.3642	\$0.3642	\$0.3642	\$0.3642	\$0.3642	\$0.3642	\$0.3642	\$0.3642	\$0.3642	
Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total \$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$ w/o ACA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL													
Dth	0	-	-	-	-	-	(32)	-	-	-	-	-	(32)
Demand	0	0	0	0	0	0	(30)	0	0	0	0	0	(30)
Commodity	1	0	0	0	0	0	(110)	0	0	0	0	0	(109)
ACA	0	0	0	0	0	0	(3)	0	0	0	0	0	(3)
Total \$	\$1	\$0	\$0	\$0	\$0	\$0	(\$143)	\$0	\$0	\$0	\$0	\$0	(\$142)
\$ w/o ACA	\$1	\$0	\$0	\$0	\$0	\$0	(\$140)	\$0	\$0	\$0	\$0	\$0	(\$139)

Notes:

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2020

CALCULATION OF PRIOR PERIOD REVENUES BILLED AFTER JUNE 30, 2017

Schedule M

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8/16/2020

NNG	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Total
GS													
Dth			(0)	(0)					3	(3)	(1)		(1)
Demand													
Rate	\$0.9367	\$0.9367	\$0.9367	\$0.9367	\$1.1467	\$1.1467	\$1.1467	\$1.1467	\$1.1467	\$1.1467	\$1.1467	\$1.1467	
Revenue	\$0	\$0	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$4	(\$3)	(\$1)	\$0	(\$1)
Commodity													
Rate	\$3.2206	\$3.1924	\$3.2415	\$3.4787	\$3.8193	\$4.5550	\$4.2682	\$3.7262	\$3.4347	\$3.4654	\$3.0214	\$3.0201	
Revenue	\$0	\$0	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$12	(\$10)	(\$4)	\$0	(\$2)
ACA													
Rate	\$0.1072	\$0.1072	\$0.2234	\$0.2234	\$0.2234	\$0.2234	\$0.2234	\$0.2234	\$0.2234	\$0.2234	\$0.2234	\$0.2234	
Revenue	\$0	\$0	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$1	(\$1)	(\$0)	\$0	(\$0)
Total \$	\$0	\$0	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$16	(\$13)	(\$6)	\$0	(\$3)
\$ w/o ACA	\$0	\$0	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$16	(\$13)	(\$5)	\$0	(\$3)
IS													
Dth													0
Commodity													
Rate	\$3.2206	\$3.1924	\$3.2415	\$3.4787	\$3.8193	\$4.5550	\$4.2682	\$3.7262	\$3.4347	\$3.4654	\$3.0214	\$3.0201	
Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ACA													
Rate	\$0.3642	\$0.3642	\$0.4068	\$0.4068	\$0.4068	\$0.4068	\$0.4068	\$0.4068	\$0.4068	\$0.4068	\$0.4068	\$0.4068	
Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total \$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$ w/o ACA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL	\$3.5848	\$3.5566	\$3.6483	\$3.8855	\$4.2261	\$4.9618	\$4.6750	\$4.1330	\$3.8415	\$3.8722	\$3.4282	\$3.4269	
Dth	-	-	(0)	(0)	-	-	-	-	3	(3)	(1)	-	(1)
Demand	0	0	(0)	(0)	0	0	0	0	4	(3)	(1)	0	(1)
Commodity	0	0	(0)	(0)	0	0	0	0	12	(10)	(4)	0	(2)
ACA	0	0	(0)	(0)	0	0	0	0	1	(1)	(0)	0	(0)
Total \$	\$0	\$0	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$16	(\$13)	(\$6)	\$0	(\$3)
\$ w/o ACA	\$0	\$0	(\$0)	(\$0)	\$0	\$0	\$0	\$0	\$16	(\$13)	(\$5)	\$0	(\$3)

Notes:

PGAC Hedging Rate Comparison: MERC NNG

Schedule O

	<i>No Hedge</i>	<i>Hedge Plan</i>	<i>50% Futures</i>	<i>50% Options</i>
Jul-19	\$ 6.3398	\$ 6.3398	\$ 6.3398	\$ 6.3398
Aug-19	\$ 6.3661	\$ 6.3661	\$ 6.3661	\$ 6.3661
Sep-19	\$ 6.2748	\$ 6.2748	\$ 6.2748	\$ 6.2748
Oct-19	\$ 6.3392	\$ 6.3392	\$ 6.3392	\$ 6.3392
Nov-19	\$ 7.0533	\$ 7.0570	\$ 6.9838	\$ 7.0973
Dec-19	\$ 7.0356	\$ 7.1143	\$ 7.2375	\$ 7.1313
Jan-20	\$ 7.4473	\$ 7.6202	\$ 8.0966	\$ 7.5549
Feb-20	\$ 7.1361	\$ 7.3316	\$ 7.9235	\$ 7.2311
Mar-20	\$ 7.0404	\$ 7.1931	\$ 7.6548	\$ 7.1149
Apr-20	\$ 6.9289	\$ 6.9289	\$ 6.9289	\$ 6.9289
May-20	\$ 7.2083	\$ 7.2083	\$ 7.2083	\$ 7.2083
Jun-20	\$ 6.5441	\$ 6.5441	\$ 6.5441	\$ 6.5441
Average	\$ 6.8095	\$ 6.8598	\$ 6.9915	\$ 6.8442

PGAC Hedging Rate Comparison: MERC CONSOLIDATED

	<i>No Hedge</i>	<i>Hedge Plan</i>	<i>50% Futures</i>	<i>50% Options</i>
Jul-19	\$ 5.5202	\$ 5.5202	\$ 5.5202	\$ 5.5202
Aug-19	\$ 5.2938	\$ 5.2938	\$ 5.2938	\$ 5.2938
Sep-19	\$ 5.4576	\$ 5.4576	\$ 5.4576	\$ 5.4576
Oct-19	\$ 5.4602	\$ 5.4602	\$ 5.4602	\$ 5.4602
Nov-19	\$ 6.0716	\$ 6.0753	\$ 6.0021	\$ 6.1156
Dec-19	\$ 5.9884	\$ 6.0671	\$ 6.1903	\$ 6.0841
Jan-20	\$ 5.6680	\$ 5.8409	\$ 6.3173	\$ 5.7756
Feb-20	\$ 5.4453	\$ 5.6408	\$ 6.2327	\$ 5.5403
Mar-20	\$ 5.3584	\$ 5.5111	\$ 5.9728	\$ 5.4329
Apr-20	\$ 4.9406	\$ 4.9406	\$ 4.9406	\$ 4.9406
May-20	\$ 5.1684	\$ 5.1684	\$ 5.1684	\$ 5.1684
Jun-20	\$ 5.1393	\$ 5.1393	\$ 5.1393	\$ 5.1393
Average	\$ 5.4593	\$ 5.5096	\$ 5.6413	\$ 5.4941

- Forward Curve as of May 15, 2019
- Implied Volatility Curve as of May 15, 2019
 - *In financial mathematics, the implied volatility of an option contract is the volatility implied by the market price of the option based on an option pricing model. In other words, it is the volatility that, when used in a particular pricing model, yields a theoretical value for the option equal to the current market price of that option. Implied volatility, a forward-looking measure, differs from historical volatility because the latter is calculated from known past returns of a security. (Source: http://en.wikipedia.org/wiki/Implied_volatility)*

Examples of Input Data

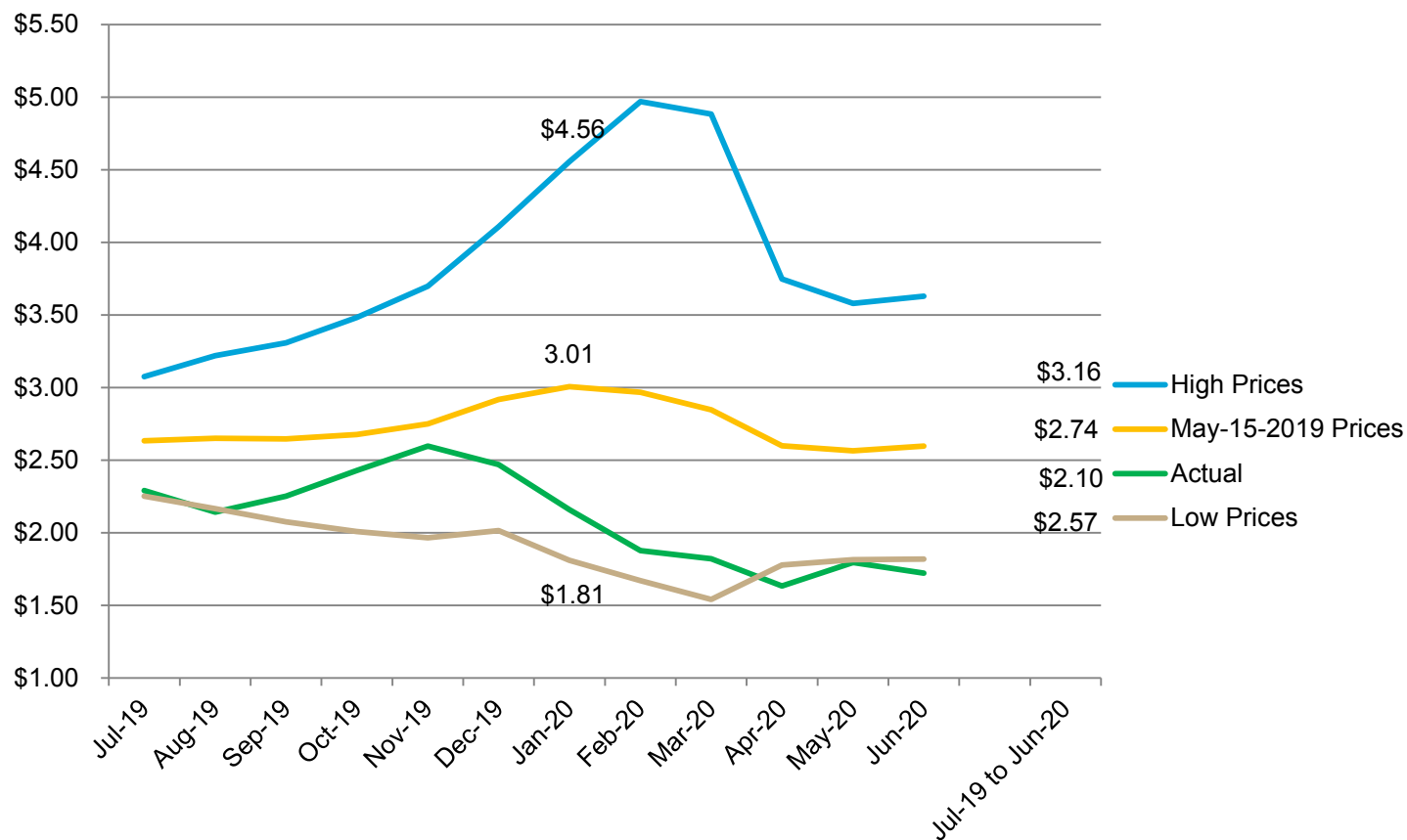
Jan-2020 Forward Price was \$3.01

Jan-2020 Implied Volatility was 30%

- Once an implied volatility curve is known, we can build changes to the forward curve.
 - From May 15, 2019 to Jan 1, 2020 the forward curve for Jan-2020 changes as follows:
 - $Price_2 = Price_1(\$3.01) * e^{-(Implied\ Volatility(30\%)^2)/2 * (16/365)} + Random\ Variable_1 * Implied\ Volatility(30\%) * Square\ Root\ of\ (16/365)}$
 - $Price_3 = Price_2 * e^{-(Implied\ Volatility(30\%)^2)/2 * (30/365)} + Random\ Variable_2 * Implied\ Volatility(30\%) * Square\ Root\ of\ (30/365)}$
 - $Price_4 = Price_3 * e^{-(Implied\ Volatility(30\%)^2)/2 * (31/365)} + Random\ Variable_3 * Implied\ Volatility(30\%) * Square\ Root\ of\ (31/365)}$
 - Et cetera
 - $Price_9 = Price_8 * e^{-(Implied\ Volatility(30\%)^2)/2 * (31/365)} + Random\ Variable_8 * Implied\ Volatility(30\%) * Square\ Root\ of\ (31/365)}$

- *Jan-2020*
 - Catastrophic High Price is \$4.56
 - *2.5% chance of price greater than this price*
 - May-15-2019 Price is \$2.16
 - Low Price is \$1.81
 - *2.5% chance of price less than this price*
- *Jul-2019 to Jun-2020*
 - Catastrophic High Average Price is \$3.16
 - *2.5% chance of average price greater than this price*
 - May-15-2019 Average Price is \$2.74
 - Low Average Price is \$2.57
 - *2.5% chance of average price less than this price*

Henry Hub



Average Residential Volumes			
	NNG	Con	
Jul-19	1.7001	1.0104	
Aug-19	1.2476	0.7959	
Sep-19	1.5472	1.1343	
Oct-19	2.5178	2.7142	
Nov-19	7.6522	8.1905	
Dec-19	12.5177	13.0824	
Jan-20	14.6055	15.2137	
Feb-20	14.4454	14.4419	
Mar-20	12.1278	13.2959	
Apr-20	8.9613	9.9955	
May-20	6.2036	6.8741	
Jun-20	2.7828	2.5772	
Average	7.1924	7.4438	

Total Cost in Monthly PGA Filings w/ hedging			
	NNG	Con	
Jul-19	\$ 10.78	\$ 5.58	
Aug-19	\$ 7.94	\$ 4.21	
Sep-19	\$ 9.71	\$ 6.19	
Oct-19	\$ 15.96	\$ 14.82	
Nov-19	\$ 54.00	\$ 49.76	
Dec-19	\$ 89.06	\$ 79.37	
Jan-20	\$ 111.30	\$ 88.86	
Feb-20	\$ 105.91	\$ 81.46	
Mar-20	\$ 87.24	\$ 73.27	
Apr-20	\$ 62.09	\$ 49.38	
May-20	\$ 44.72	\$ 35.53	
Jun-20	\$ 18.21	\$ 13.24	
Average	\$ 51.41	\$ 41.81	

Total Cost in Monthly PGA Filings w/o hedging			
	NNG	Con	
Jul-19	\$ 10.78	\$ 5.58	
Aug-19	\$ 7.94	\$ 4.21	
Sep-19	\$ 9.71	\$ 6.19	
Oct-19	\$ 15.96	\$ 14.82	
Nov-19	\$ 53.97	\$ 49.73	
Dec-19	\$ 88.07	\$ 78.34	
Jan-20	\$ 108.77	\$ 86.23	
Feb-20	\$ 103.08	\$ 78.64	
Mar-20	\$ 85.39	\$ 71.24	
Apr-20	\$ 62.09	\$ 49.38	
May-20	\$ 44.72	\$ 35.53	
Jun-20	\$ 18.21	\$ 13.24	
Average	\$ 50.72	\$ 41.10	

Average Residential Volumes - 120%			
	NNG	Con	
Jul-19	2.0401	1.2125	
Aug-19	1.4971	0.9551	
Sep-19	1.8567	1.3612	
Oct-19	3.0214	3.2570	
Nov-19	9.1826	9.8286	
Dec-19	15.0213	15.6989	
Jan-20	17.5266	18.2564	
Feb-20	17.3344	17.3303	
Mar-20	14.5534	15.9550	
Apr-20	10.7536	11.9946	
May-20	7.4443	8.2489	
Jun-20	3.3394	3.0926	
Average	8.6309	8.9326	

Total Cost in Monthly PGA Filings w/ hedging - 120%			
	NNG	Con	
Jul-19	\$ 12.93	\$ 6.69	
Aug-19	\$ 9.53	\$ 5.06	
Sep-19	\$ 11.65	\$ 7.43	
Oct-19	\$ 19.15	\$ 17.78	
Nov-19	\$ 64.80	\$ 59.71	
Dec-19	\$ 106.87	\$ 95.25	
Jan-20	\$ 133.56	\$ 106.63	
Feb-20	\$ 127.09	\$ 97.76	
Mar-20	\$ 104.68	\$ 87.93	
Apr-20	\$ 74.51	\$ 59.26	
May-20	\$ 53.66	\$ 42.63	
Jun-20	\$ 21.85	\$ 15.89	
Average	\$ 61.69	\$ 50.17	

Total Cost in Monthly PGA Filings w/o hedging - 120%			
	NNG	Con	
Jul-19	\$ 12.93	\$ 6.69	
Aug-19	\$ 9.53	\$ 5.06	
Sep-19	\$ 11.65	\$ 7.43	
Oct-19	\$ 19.15	\$ 17.78	
Nov-19	\$ 64.77	\$ 59.67	
Dec-19	\$ 105.68	\$ 94.01	
Jan-20	\$ 130.53	\$ 103.48	
Feb-20	\$ 123.70	\$ 94.37	
Mar-20	\$ 102.46	\$ 85.49	
Apr-20	\$ 74.51	\$ 59.26	
May-20	\$ 53.66	\$ 42.63	
Jun-20	\$ 21.85	\$ 15.89	
Average	\$ 60.87	\$ 49.31	

Average Residential Volumes - 80%			
	NNG	Con	
Jul-19	1.3601	0.8083	
Aug-19	0.9981	0.6367	
Sep-19	1.2378	0.9074	
Oct-19	2.0142	2.1714	
Nov-19	6.1218	6.5524	
Dec-19	10.0142	10.4659	
Jan-20	11.6844	12.1709	
Feb-20	11.5563	11.5535	
Mar-20	9.7023	10.6367	
Apr-20	7.1691	7.9964	
May-20	4.9629	5.4993	
Jun-20	2.2263	2.0617	
Average	5.7539	5.9551	

Total Cost in Monthly PGA Filings w/ hedging - 80%			
	NNG	Con	
Jul-19	\$ 8.62	\$ 4.46	
Aug-19	\$ 6.35	\$ 3.37	
Sep-19	\$ 7.77	\$ 4.95	
Oct-19	\$ 12.77	\$ 11.86	
Nov-19	\$ 43.20	\$ 39.81	
Dec-19	\$ 71.24	\$ 63.50	
Jan-20	\$ 89.04	\$ 71.09	
Feb-20	\$ 84.73	\$ 65.17	
Mar-20	\$ 69.79	\$ 58.62	
Apr-20	\$ 49.67	\$ 39.51	
May-20	\$ 35.77	\$ 28.42	
Jun-20	\$ 14.57	\$ 10.60	
Average	\$ 41.13	\$ 33.45	

Total Cost in Monthly PGA Filings w/o hedging - 80%			
	NNG	Con	
Jul-19	\$ 8.62	\$ 4.46	
Aug-19	\$ 6.35	\$ 3.37	
Sep-19	\$ 7.77	\$ 4.95	
Oct-19	\$ 12.77	\$ 11.86	
Nov-19	\$ 43.18	\$ 39.78	
Dec-19	\$ 70.46	\$ 62.67	
Jan-20	\$ 87.02	\$ 68.98	
Feb-20	\$ 82.47	\$ 62.91	
Mar-20	\$ 68.31	\$ 57.00	
Apr-20	\$ 49.67	\$ 39.51	
May-20	\$ 35.77	\$ 28.42	
Jun-20	\$ 14.57	\$ 10.60	
Average	\$ 40.58	\$ 32.88	

Average Residential Volumes			
	NNG	Con	
Jul-19	1.7001	1.0104	
Aug-19	1.2476	0.7959	
Sep-19	1.5472	1.1343	
Oct-19	2.5178	2.7142	
Nov-19	7.6522	8.1905	
Dec-19	12.5177	13.0824	
Jan-20	14.6055	15.2137	
Feb-20	14.4454	14.4419	
Mar-20	12.1278	13.2959	
Apr-20	8.9613	9.9955	
May-20	6.2036	6.8741	
Jun-20	2.7828	2.5772	
Average	7.1924	7.4438	

Total Cost in Monthly PGA Filings w/ hedging at Catastrophic Prices				
	NNG	Con		
Jul-19	\$ 10.78	\$ 5.58		
Aug-19	\$ 7.94	\$ 4.21		
Sep-19	\$ 9.71	\$ 6.19		
Oct-19	\$ 15.96	\$ 14.82		
Nov-19	\$ 47.55	\$ 44.71		
Dec-19	\$ 78.51	\$ 74.38		
Jan-20	\$ 103.47	\$ 95.29		
Feb-20	\$ 106.00	\$ 94.28		
Mar-20	\$ 89.07	\$ 90.96		
Apr-20	\$ 62.09	\$ 49.38		
May-20	\$ 44.72	\$ 35.53		
Jun-20	\$ 18.21	\$ 13.24		
Average	\$ 49.50	\$ 44.05		

Total Cost in Monthly PGA Filings no hedging at Catastrophic Prices				
	NNG	Con		
Jul-19	\$ 10.78	\$ 5.58		
Aug-19	\$ 7.94	\$ 4.21		
Sep-19	\$ 9.71	\$ 6.19		
Oct-19	\$ 15.96	\$ 14.82		
Nov-19	\$ 54.25	\$ 57.25		
Dec-19	\$ 93.88	\$ 96.81		
Jan-20	\$ 124.48	\$ 119.38		
Feb-20	\$ 129.12	\$ 119.32		
Mar-20	\$ 107.33	\$ 108.68		
Apr-20	\$ 62.09	\$ 49.38		
May-20	\$ 44.72	\$ 35.53		
Jun-20	\$ 18.21	\$ 13.24		
Average	\$ 56.54	\$ 52.53		

Average Residential Volumes - 120%			
	NNG	Con	
Jul-19	2.04	1.21	
Aug-19	1.50	0.96	
Sep-19	1.86	1.36	
Oct-19	3.02	3.26	
Nov-19	9.18	9.83	
Dec-19	15.02	15.70	
Jan-20	17.53	18.26	
Feb-20	17.33	17.33	
Mar-20	14.55	15.96	
Apr-20	10.75	11.99	
May-20	7.44	8.25	
Jun-20	3.34	3.09	
Average	8.63	8.93	

Total Cost in Monthly PGA Filings w/ hedging at Catastrophic Prices				
	NNG	Con		
Jul-19	\$ 12.93	\$ 6.69		
Aug-19	\$ 9.53	\$ 5.06		
Sep-19	\$ 11.65	\$ 7.43		
Oct-19	\$ 19.15	\$ 17.78		
Nov-19	\$ 57.06	\$ 53.66		
Dec-19	\$ 94.21	\$ 89.25		
Jan-20	\$ 124.17	\$ 114.35		
Feb-20	\$ 127.20	\$ 113.14		
Mar-20	\$ 106.89	\$ 109.15		
Apr-20	\$ 74.51	\$ 59.26		
May-20	\$ 53.66	\$ 42.63		
Jun-20	\$ 21.85	\$ 15.89		
Average	\$ 59.40	\$ 52.86		

Total Cost in Monthly PGA Filings no hedging at Catastrophic Prices				
	NNG	Con		
Jul-19	\$ 12.93	\$ 6.69		
Aug-19	\$ 9.53	\$ 5.06		
Sep-19	\$ 11.65	\$ 7.43		
Oct-19	\$ 19.15	\$ 17.78		
Nov-19	\$ 65.10	\$ 68.70		
Dec-19	\$ 112.65	\$ 116.17		
Jan-20	\$ 149.38	\$ 143.25		
Feb-20	\$ 154.94	\$ 143.18		
Mar-20	\$ 128.80	\$ 130.41		
Apr-20	\$ 74.51	\$ 59.26		
May-20	\$ 53.66	\$ 42.63		
Jun-20	\$ 21.85	\$ 15.89		
Average	\$ 67.85	\$ 63.04		

Average Residential Volumes - 80%			
	NNG	Con	
Jul-19	1.36	0.81	
Aug-19	1.00	0.64	
Sep-19	1.24	0.91	
Oct-19	2.01	2.17	
Nov-19	6.12	6.55	
Dec-19	10.01	10.47	
Jan-20	11.68	12.17	
Feb-20	11.56	11.55	
Mar-20	9.70	10.64	
Apr-20	7.17	8.00	
May-20	4.96	5.50	
Jun-20	2.23	2.06	
Average	5.75	5.96	

Total Cost in Monthly PGA Filings w/ hedging at Catastrophic Prices				
	NNG	Con		
Jul-19	\$ 8.62	\$ 4.46		
Aug-19	\$ 6.35	\$ 3.37		
Sep-19	\$ 7.77	\$ 4.95		
Oct-19	\$ 12.77	\$ 11.86		
Nov-19	\$ 38.04	\$ 35.77		
Dec-19	\$ 62.81	\$ 59.50		
Jan-20	\$ 82.78	\$ 76.23		
Feb-20	\$ 84.80	\$ 75.43		
Mar-20	\$ 71.26	\$ 72.77		
Apr-20	\$ 49.67	\$ 39.51		
May-20	\$ 35.77	\$ 28.42		
Jun-20	\$ 14.57	\$ 10.60		
Average	\$ 39.60	\$ 35.24		

Total Cost in Monthly PGA Filings no hedging at Catastrophic Prices				
	NNG	Con		
Jul-19	\$ 8.62	\$ 4.46		
Aug-19	\$ 6.35	\$ 3.37		
Sep-19	\$ 7.77	\$ 4.95		
Oct-19	\$ 12.77	\$ 11.86		
Nov-19	\$ 43.40	\$ 45.80		
Dec-19	\$ 75.10	\$ 77.44		
Jan-20	\$ 99.59	\$ 95.50		
Feb-20	\$ 103.29	\$ 95.45		
Mar-20	\$ 85.86	\$ 86.94		
Apr-20	\$ 49.67	\$ 39.51		
May-20	\$ 35.77	\$ 28.42		
Jun-20	\$ 14.57	\$ 10.60		
Average	\$ 45.23	\$ 42.03		

WACOG Projection in Monthly PGA Filings w/ Hedging			Natural Log of Price Change			WACOG Projections in Monthly PGA Filings w/o Hedging			Natural Log of Price Change		
	NNG	CONS		NNG	CONS		NNG	CONS		NNG	CONS
Jun-19	\$ 3.7250	\$ 3.2707					\$ 3.7250	\$ 3.2707			
Jul-19	\$ 2.9219	\$ 2.2287		-0.2428	-0.3836		\$ 2.9219	\$ 2.2287		-0.2428	-0.3836
Aug-19	\$ 2.9482	\$ 2.0023		0.0090	-0.1071		\$ 2.9482	\$ 2.0023		0.0090	-0.1071
Sep-19	\$ 2.8569	\$ 2.1661		-0.0315	0.0786		\$ 2.8569	\$ 2.1661		-0.0315	0.0786
Oct-19	\$ 2.9213	\$ 2.1687		0.0223	0.0012		\$ 2.9213	\$ 2.1687		0.0223	0.0012
Nov-19	\$ 3.6657	\$ 2.7838		0.2270	0.2497		\$ 3.6620	\$ 2.7801		0.2260	0.2484
Dec-19	\$ 3.7230	\$ 2.7756		0.0155	-0.0029		\$ 3.6443	\$ 2.6969		-0.0048	-0.0304
Jan-20	\$ 3.6524	\$ 2.5494		-0.0191	-0.0850		\$ 3.4795	\$ 2.3765		-0.0463	-0.1265
Feb-20	\$ 3.3638	\$ 2.3493		-0.0823	-0.0817		\$ 3.1683	\$ 2.1538		-0.0937	-0.0984
Mar-20	\$ 3.2253	\$ 2.2196		-0.0420	-0.0568		\$ 3.0726	\$ 2.0669		-0.0307	-0.0412
Apr-20	\$ 2.9611	\$ 1.6491		-0.0855	-0.2971		\$ 2.9611	\$ 1.6491		-0.0370	-0.2258
May-20	\$ 3.2405	\$ 1.8769		0.0902	0.1294		\$ 3.2405	\$ 1.8769		0.0902	0.1294
Jun-20	\$ 2.9394	\$ 1.8478		-0.0975	-0.0156		\$ 2.9394	\$ 1.8478		-0.0975	-0.0156
Annual Volatility				37.61%	56.78%					37.12%	54.37%
Volatility Reduction Due to Hedging				-1.30%	-4.24%						

Definition:

The relative rate at which the price of a security moves up and down.

Equation:

*Annual price volatility (v_a) is calculated as the standard deviation of **monthly price changes times the square root of 12**.*

Where:

v_a = Standard Deviation ($c_{1 to n}$) x **Square root of 12**

c_i = $\ln(p_i/p_{i-1})$ \ln = Natural Logarithm

p_i = Price for **month i**

Source: *Options, Futures and Other Derivatives*, John C. Hull, pages 232-234

MINNESOTA ENERGY RESOURCES - NNG

Third Party Damage Bills July 2019 - June 2020

[TRADE SECRET DATA BEGINS....

Responsible Party	Pipeline	Gas Loss Billed	Gas Loss Dths	Date of Damage
	NNG	\$ (6.18)	1.50	8/22/2019
	NNG	\$ (2.84)	0.82	10/7/2019
	NNG	\$ (28.06)	6.81	8/26/2019
	NNG	\$ (29.45)	7.05	11/8/2019
	NNG	\$ (3.38)	0.82	8/14/2019
	NNG	\$ (14.47)	3.72	10/11/2019
	NNG	\$ (0.49)	0.14	9/30/2019
	NNG	\$ (282.84)	83.35	9/3/2019
	NNG	\$ (128.34)	37.82	9/7/2019
	NNG	\$ (0.88)	0.25	6/29/2019
	NNG	\$ (1.26)	0.31	8/16/2019
	NNG	\$ (21.25)	4.84	5/3/2019
	NNG	\$ (58.49)	14.45	4/1/2020
	NNG	\$ (42.65)	15.81	9/30/2019
	NNG	\$ (67.65)	20.77	7/2/2019
	NNG	\$ (185.46)	64.38	2/24/2020
	NNG	\$ (66.11)	21.46	1/6/2020
	NNG	\$ (6.26)	1.85	9/23/2019
	NNG	\$ (450.57)	104.13	5/8/2020
	NNG	\$ (483.56)	45.07	6/12/2019
	NNG	\$ (952.76)	225.08	12/4/2019
	NNG	\$ (0.47)	0.14	7/18/2019
	NNG	\$ (198.46)	41.88	1/11/2020
	NNG	\$ (3,835.88)	1,094.72	6/11/2019
	NNG	\$ (17.53)	8.04	4/16/2020
	NNG	\$ (44.00)	12.87	7/25/2019
	NNG	\$ (59.96)	1.34	10/21/2019
	NNG	\$ (1.41)	0.42	9/25/2019
	NNG	\$ (26.19)	8.04	7/8/2019
	NNG	\$ (435.51)	99.20	6/27/2019
	NNG	\$ (4.36)	0.99	6/18/2019
	NNG	\$ (414.84)	99.20	10/17/2019
	NNG	\$ (88.14)	18.60	1/30/2020
	NNG	\$ (158.65)	-	10/16/2019
	NNG	\$ (116.38)	26.90	5/13/2020
	NNG	\$ (2.78)	0.82	9/10/2019
	NNG	\$ (1.56)	0.36	5/4/2020
	NNG	\$ (10.14)	2.46	8/15/2019
	NNG	\$ (39.19)	11.26	6/26/2019
	NNG	\$ (272.19)	62.00	6/28/2019
	NNG	\$ (10.84)	3.19	9/24/2019
	NNG	\$ (1,092.83)	360.61	8/1/2019
	NNG	\$ (7.00)	1.17	7/12/2019
	NNG	\$ (53.41)	19.80	9/18/2019
	NNG	\$ (277.79)	66.53	11/13/2019
	NNG	\$ (122.94)	27.63	2/4/2020
	NNG	\$ (884.55)	214.65	8/6/2019
	NNG	\$ (1.61)	0.47	10/21/2019
	NNG	\$ (2.78)	1.03	10/18/2019

....TRADE SECRET DATA ENDS]

MINNESOTA ENERGY RESOURCES - NNG
Third Party Damage Bills July 2019 - June 2020

Schedule Q
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[TRADE SECRET DATA BEGINS....]

Responsible Party	Pipeline	Gas Loss Billed	Gas Loss Dths	Date of Damage
	NNG	\$ (55.01)	15.91	10/9/2019
	NNG	\$ (34.91)	10.72	7/27/2019
	NNG	\$ (1,259.09)	103.93	10/14/2019
	NNG	\$ (18.92)	1.64	9/5/2019
	NNG	\$ (79.53)	23.44	9/23/2019
	NNG	\$ (488.20)	103.02	1/13/2020
	NNG	\$ (7.97)	1.68	1/3/2020
	NNG	\$ (167.10)	47.70	8/28/2019
	NNG	\$ (47.68)	11.57	8/20/2019
	NNG	\$ (97.74)	23.87	7/31/2019
	NNG	\$ (7.46)	2.46	8/20/2019
	NNG	\$ (33.57)	8.04	11/2/2019
	NNG	\$ (0.76)	0.25	8/12/2019
	NNG	\$ (10.14)	2.46	10/25/2019
	NNG	\$ (57.41)	17.63	7/16/2019
	NNG	\$ (20.67)	6.82	8/6/2019
	NNG	\$ (131.60)	31.52	11/21/2019
	NNG	\$ -	0.66	4/8/2020
	NNG	\$ (25.03)	9.27	10/1/2019
	NNG	\$ (809.84)	244.28	11/15/2019
	NNG	\$ (50.16)	12.25	7/18/2019
	NNG	\$ (75.29)	18.60	4/15/2020
	NNG	\$ (38.17)	8.69	5/23/2019
	NNG	\$ (1,255.86)	-	11/9/2019
	NNG	\$ (572.24)	139.76	7/18/2019
	NNG	\$ (1.85)	0.45	8/29/2019
	NNG	\$ (371.43)	80.00	5/13/2020
	NNG	\$ (16.08)	-	10/16/2019
	NNG	\$ (1,154.66)	427.64	10/4/2019
	NNG	\$ (112.79)	32.19	6/13/2019
	NNG	\$ (18.29)	5.10	8/31/2018
	NNG	\$ (1,442.66)	328.60	5/31/2019
	NNG	\$ (82.17)	17.34	1/10/2020
	NNG	\$ (5.60)	1.36	8/15/2019
	NNG	\$ (5.96)	1.34	2/5/2020
	NNG	\$ (264.39)	62.58	11/25/2019
	NNG	\$ (23.49)	7.75	8/2/2019
	NNG	\$ (914.84)	222.00	8/30/2019
	NNG	\$ (800.84)	209.07	7/15/2019
	NNG	\$ (304.64)	74.40	7/30/2019
	NNG	\$ (64.32)	18.60	10/29/2019
	NNG	\$ (82.67)	19.53	12/1/2019
	NNG	\$ (66.89)	19.71	9/10/2019
	NNG	\$ (1.84)	0.45	7/12/2019
	NNG	\$ (25.38)	10.54	5/23/2020
	NNG	\$ (2,254.07)	550.50	7/30/2019
	NNG	\$ (1.12)	0.32	10/21/2019
	NNG	\$ (125.89)	28.68	6/10/2019
	NNG	\$ (3.52)	0.86	8/1/2019
	NNG	\$ (20.00)	5.79	10/25/2019

....TRADE SECRET DATA ENDS]

MINNESOTA ENERGY RESOURCES - NNG
Third Party Damage Bills July 2019 - June 2020

Schedule Q
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[TRADE SECRET DATA BEGINS....

Responsible Party	Pipeline	Gas Loss Billed	Gas Loss Dths	Date of Damage
	NNG	\$ (118.68)	28.80	8/13/2019
	NNG	\$ (16.46)	4.02	7/10/2019
	NNG	\$ (124.71)	36.75	9/20/2019
	NNG	\$ (5.00)	1.45	10/28/2019
	NNG	\$ (2,781.09)	917.70	8/14/2019
	NNG	\$ (2.37)	0.54	6/30/2019
	NNG	\$ (13.92)	3.22	5/27/2020
	NNG	\$ (55.00)	12.71	5/13/2020
	NNG	\$ (94.17)	21.45	6/29/2019
	NNG	\$ (1.84)	0.42	6/20/2019
	NNG	\$ (442.17)	107.30	8/27/2019
	NNG	\$ (12.04)	4.46	9/11/2019
	NNG	\$ (116.02)	33.55	10/31/2019
	NNG	\$ (3.41)	1.01	9/16/2019
	NNG	\$ (0.62)	0.15	8/21/2019
	NNG	\$ (1.10)	371.65	7/9/2019
	NNG	\$ (7.19)	2.12	9/23/2019
	NNG	\$ (304.64)	74.40	7/11/2019
	NNG	\$ (2.09)	0.62	9/23/2019
	NNG	\$ (20.12)	4.65	5/28/2020
	NNG	\$ (5.99)	1.71	6/18/2019
	NNG	\$ (17.85)	5.89	8/7/2019
	NNG	\$ (77.53)	18.81	8/27/2019
	NNG	\$ (7.56)	1.79	12/23/2019
	NNG	\$ (6.19)	1.43	5/12/2020
	NNG	\$ (31.00)	10.23	8/8/2019
	NNG	\$ (2.70)	0.66	7/2/2019
	NNG	\$ (17.09)	4.15	8/22/2019
	NNG	\$ (248.95)	82.15	8/23/2019
	NNG	\$ (0.67)	0.25	9/5/2019
	NNG	\$ (10.66)	2.60	8/5/2019
		<u>- \$29,072.91</u>	<u>\$7,572.36</u>	

....TRADE SECRET DATA ENDS]

In the Matter of the Annual Automatic
Adjustment Report of Minnesota Energy
Resources Corporation, MERC-NNG and
MERC-Consolidated

Docket No. G011/AA-20-655

CERTIFICATE OF SERVICE

I, Colleen T. Sipiorski, hereby certify that on the 1st day of September, 2020, on behalf of Minnesota Energy Resources Corporation ("MERC"), I electronically filed a true and correct copy of the enclosed Annual Automatic Adjustment Report of MERC – NNG on www.edockets.state.mn.us. Said documents were also served via U.S. mail and electronic service as designated on the attached service list.

Dated this 1st day of September, 2020.

/s/ Colleen T. Sipiorski
Colleen T. Sipiorski

[illegible]

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Lisa	Peterson	lisa.r.peterson@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_20-172_AA-20-172
Catherine	Phillips	Catherine.Phillips@wecenergygroup.com	Minnesota Energy Resources	231 West Michigan St Milwaukee, WI 53203	Electronic Service	No	OFF_SL_20-172_AA-20-172
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_20-172_AA-20-172
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_20-172_AA-20-172
Kristin	Stastny	kstastny@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 South 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-172_AA-20-172
Andrew	Sudbury	Andrew.Sudbury@CenterPointEnergy.com	CenterPoint Energy Minnesota Gas	505 Nicollet Mall PO Box 59038 Minneapolis, MN 55459-0038	Electronic Service	No	OFF_SL_20-172_AA-20-172
Lynnette	Sweet	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_20-172_AA-20-172
Mary	Wolter	mary.wolter@wecenergygroup.com	Minnesota Energy Resources Corporation (HOLDING)	231 West Michigan St Milwaukee, WI 53203	Electronic Service	No	OFF_SL_20-172_AA-20-172
Donald	Wynia	donald.wynia@centerpointenergy.com	CenterPoint Energy	CenterPoint Energy 505 Nicollet Mall Minneapolis, MN 55402	Electronic Service	No	OFF_SL_20-172_AA-20-172

[illegible]

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Darcy	Fabrizius	Darcy.fabrizius@constellation.com	Constellation Energy	N21 W23340 Ridgeview Pkwy Waukesha, WI 53188	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Daryll	Fuentes	dfuentes@usg.com	USG Corporation	550 W Adams St Chicago, IL 60661	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
David P.	Geschwind	dp.geschwind@smmpa.org	Southern Minnesota Municipal Power Agency	500 First Avenue SW Rochester, MN 55902	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Robert	Harding	robert.harding@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 55101	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Annete	Henkel	mui@mnutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St.Paul, MN 55101	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Gregory	Jenner	greg.jenner@stoel.com	Stoel Rives LLP	33 South Sixth Street Ste 4200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Michael	Krikava	mkrikava@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
David	Kyto	djkyto@integrysgroup.com	Integrays Business Support	700 North Adams PO Box 19001 Green Bay, WI 543079001	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
James D.	Larson	james.larson@avantenergy.com	Avant Energy Services	220 S 6th St Ste 1300 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Eric	Lipman	eric.lipman@state.mn.us	Office of Administrative Hearings	PO Box 64620 St. Paul, MN 551640620	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Michael	Loeffler	mike.loeffler@nngco.com	Northern Natural Gas Co.	CORP HQ, 714 1111 So. 103rd Street Omaha, NE 681241000	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Mike	McGlone	N/A	Heat Share - Salvation Army	2445 Prior Avenue Roseville, MN 55113	Paper Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Brian	Meloy	brian.meloy@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
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	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company	200 1st Street SE PO Box 351 Cedar Rapids, IA 524060351	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Catherine	Phillips	Catherine.Phillips@wecenergygroup.com	Minnesota Energy Resources	231 West Michigan St Milwaukee, WI 53203	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
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	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Jeff	Sande		Bemidji State University	Box 1 Deputy Hall 1500 Birchmont Drive Bemidji, MN 566012699	Paper Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2019-2020 MERC AAA True Up
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