



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

August 30, 2019

VIA ELECTRONIC FILING

Daniel P. Wolf
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 2019 Annual Automatic
Adjustment Report
Docket No. G999/AA-19-401

Dear Mr. Wolf:

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. This Annual Automatic Adjustment Report reflects the second report following consolidation of those two PGAs.

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. 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. 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.

Please contact me at (414) 221-2374 if you have any questions regarding the information in this filing. Thank you for your attention to this matter.

Sincerely,

A handwritten signature in blue ink that reads "Mary L. Wolter". The signature is fluid and cursive, with the first name "Mary" and last name "Wolter" clearly distinguishable.

Mary L. Wolter
Director – Gas Regulatory Planning & Policy

Enclosures
cc: Service List

August 30, 2019

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:

Mary L. Wolter
Director – Gas Regulatory Planning & Policy
Minnesota Energy Resources Corporation
2685 145th Street West
Rosemount, MN 55068
Telephone: (414) 221-2374
mary.wolter@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&showEdocket=true&userType=public>

Once on the eDockets homepage, this document can be accessed through the Search Documents link by searching docket number 19-401.

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

Katie J. Sieben
Dan Lipschultz
Valerie Means
Matthew Schuerger
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-19-401

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.

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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-19-401

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, 2018, and ending June 30, 2019, 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 and Antitrust 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
Briggs and Morgan, P.A.
2200 IDS Center
80 South 8th Street
Minneapolis, MN 55402
(612) 977-8656
KStastny@briggs.com

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

Date of filing: August 30, 2019
Proposed Effective Date: September 1, 2019

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



Mary L. Wolter
Director—Gas Regulatory Planning & Policy
Mary.Wolter@wecenergygroup.com
2685 145th Street West
Rosemount, MN 55068
(414) 221-2374

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; and required MERC to submit the results of its investigation into lost and unaccounted for ("LUF") gas with its 2019 AAA report on or before September 3, 2019.

By Order dated May 8, 2018 in Docket No. G011/M-15-895, the Commission also 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.

CONCLUSION

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

DATED: August 30, 2019

Respectfully submitted,

MINNESOTA ENERGY RESOURCES
CORPORATION

By: /s/ Mary L. Wolter
Mary L. Wolter
2685 145th Street West
Rosemount, MN 55068
Telephone: (414) 221-2374

MERC

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

August 30, 2019

1) 2018-2019 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 worth 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 2018 through March 2019), 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 2018.

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.

For a copy of the procedures, please see the Gas Supply (GS) Procedures filed in Docket No. G007,011/AI-06-1416.

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 price natural gas

MERC accomplishes this 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 purchasing 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, 2018 through June 30, 2019

The following is a list of FERC proceedings MERC has participated in over the 2018-2019 AAA period.

Company	Filing Date	Docket No.	Description
ANR	11-03-16	CP17-9	Application to Implement Wisconsin South Exp. Project Filing
ANR	06-14-18	CP18-503	Prior Notice Application for Authorization to Abandon storage wells at Winfield Storage Field
ANR	02-27-19	CP19-102	Prior Notice Application for Authorization to replace segments of mainline in Kane County, IL

Company	Filing Date	Docket No.	Description
ANR	09-28-18	RP18-1247	Tariff filing re three separate non-conforming service agreements (associated with WISE project); eff 11-01-18
ANR	11-01-18	RP19-215	Tariff filing to amend ETS negotiated rate service agreement with WEPCO to be effective 11-1-18
ANR	02-27-19	RP19-403	FERC Form 501-G filing in compliance with Order No. 849 (re 2017 Tax Reform)
ANR	02-28-19	RP19-741	Tariff Fuel Reimbursement Adjustment and EPC Charges Filing
ANR	03-01-19	RP19-766	Tariff filing re two negotiated rate service agreements with WPL (associated with WISE project); effective 04-01-19
ANR	03-01-19	RP19-769	Tariff filing re two negotiated rate service agreements with WPS; effective 4-1-19
ANR	04-08-19	RP19-1115	Compliance filing - Waiver request re Gulf Coast Project
Centra	11/15/18	RP19-294	FERC Form 501-G filing in compliance with Order No. 849
Centra	11-30-18	RP19-294-001	Revised FERC Form 501-G filing in compliance with Order No. 849 with explanation
Centra	12-19-18	RP19-294-002	Tariff filing re revised FERC Form 501-G filing
GLGT	12-06-18	RP19-399	FERC Form 501-G filing in compliance with Order No. 849
GLGT	12-06-18	RP19-409	Tariff filing re Limited Section 4 2% Tax Reduction Filing to be effective 02-01-19
GLGT	02-11-19	RP19-652	Tariff filing re FSA pressure commitment
NBPL	08-01-18	RP18-1038	Tariff filing re revisions to update firm capacity bid evaluation process effective 11-01-18
NBPL	09-24-18	RP18-1038-001	Tariff filing to comply with FERC Order subject to condition
NBPL	09-24-18	RP18-1038-002	Amended tariff filing to comply with FERC Order
NBPL	10-16-18	RP18-1038-003	Motion for Leave to Answer Request for Clarification or rehearing by indicated shippers
NBPL	12-06-18	RP19-411	FERC Form 501-G filing in compliance with Order No. 849
NBPL	12-06-18	RP19-414	Tariff filing re Limited Section 4 2% Tax Reduction Filing to be effective 02-01-19

Company	Filing Date	Docket No.	Description
NBPL	04-04-19	RP19-414-001	Compliance tariff filing re Amended Settlement
NBPL	03-26-19	RP19-886	Tariff filing re Annual Compressor Usage Surcharge 2019
NNG	08-28-17	CP09-465-002	Motion filing by Kansas Corp Com re NNG failure to comply with FERC order re Cunningham Storage Field buffer zone
NNG	06-24-16	CP16-472	Section 7 Application to Build and Operate Pipeline and Compression in Minnesota Filing
NNG	07-29-16	CP16-487	Section 7 Application to Construct and Operate 7.86 Miles of 20' Pipeline Facilities in Dakota County, MN Filing
NNG	03-15-17	CP17-76	Install and Operate New Compressor Station in Worth County, Iowa Filing
NNG	04-28-17	CP17-434	Installation and operation of pipeline loop in Iowa
NNG	06-22-17	CP17-466	Filing to install Bakersfield Compressor station in Texas
NNG	02-05-18	CP18-81	Authorization request of Marquette Branch Line Expansion Project
NNG	07-27-18	CP18-534	Section 7 Application for Northern Lights 2019 Expansion Project including Rochester Expansion component
NNG	12-29-18	CP19-35	Prior notice filing for authorization re Ventura North 2019 E-Line Extension Project
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	10-11-18	RP19-59	FERC Form 501-G filing in compliance with Order No. 849
NNG	12-31-18	RP19-529	Tariff filing re revisions to negotiated rate agreements
NNG	02-01-19	RP19-634	Tariff filing re Field Area and Storage Fuel percentages for the 4-1-19 thru 3-31-20 period as well as UAF percentages
NNG	05-01-19	RP19-1206	Filing to establish the Market Area fuel percentage for the 11-1-19 thru 3-31-20
VGT	09-28-18	RP18-1249	Semi-Annual Fuel and Loss Retention (FLRP) Percentages to become effective 11-1-18
VGT	10-03-18	RP19-37	Tariff filing re amendments to non-conforming and negotiated rate agreements with Wisconsin Gas

Company	Filing Date	Docket No.	Description
VGT	12-6-18	RP19-386	FERC Form 501-G filing in compliance with Order No. 849
VGT	02-11-19	RP19-651	Tariff filing re Refusal of Out of Quality Specifications Gas
VGT	03-01-19	RP19-782	Tariff filing re revision to Annual LMCRA eff 4-1-19
VGT	03-01-19	RP19-785	Semi-Annual Fuel and Loss Retention (FLRP) Percentages to become effective 4-1-19

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 2019 budget includes \$12,246,800 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 June 1, 2016, covering the years 2017-2019, in Docket No. G011/CIP-16-120. That plan was extended through 2020 in a decision issued April 11, 2019, and MERC filed its compliance filing related to that extension on July 1, 2019. Approval of the extension plan is pending.

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 2018 CIP Status Report was filed on May 1, 2019, in Docket No. G011/CIP-16-120.02.

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

August 30, 2019

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.

On July 3, 2019, in Docket No. G011/M-18-526, MERC requested variances from Minn. R. 7825, 2910, Minn. R. 7825.2700, subp. 7, Minn. R. 7825.2920, subp. 2, Minn. R. 7820.4000, and any other applicable rule as necessary to allow MERC to correct for over- and under collected Rochester capacity costs through the monthly PGA. That request was pending as of the date of this filing.

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.

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 42,065,488 Dth to customers under its retail transportation tariffs during the period of July 1, 2018, through June 30, 2019.

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 6.66% for this AAA period.

MERC-NNG's demand-related cost has an over recovery of 48.44% for this PGA period. The over collection of demand costs was predominantly caused by actual sales being greater than projected sales. Purchase costs are net of capacity release and curtailment penalty revenues.

MERC-NNG's commodity cost has an under recovery of 0.79% for this PGA period. The under collection was predominantly caused by higher than forecasted gas costs.

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 January 1, 2018 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, by class, and by 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 release 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, 2018 NNG Demand Entitlement filing in Docket No. G011/M-18-526, the first tranche of additional capacity resulting from the NNG upgrades related to the Rochester Project were available on November 1, 2018, resulting in MERC-NNG moving from a negative reserve margin to a positive reserve margin of 1.25 percent. As that reserve margin was still well below the target of 5-7 percent reserve, MERC did not release any of the capacity. The second, larger tranche is anticipated to be available starting November 1, 2019.

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. the 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, 2016, through June 30, 2017, that were billed on and after July 1, 2018. Page 2 shows the calculation of PGA revenues for the period July 1, 2017 through June 30, 2018 that were billed on and after July 1, 2018. This schedule is necessary in order to capture all of the PGA revenue for the 12-month period of the current AAA report.

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, 2018.
 - (2) MERC considered the market expectations of gas price volatility (implied volatility) from May 15, 2018 through June 1, 2019.
 - (3) Based on the data in (1) and (2), MERC looked at how prices changed from May 15, 2018, through June 1, 2019. 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 2018 is much smaller than in June 2019. In other words, there is more time for prices to change from the forward curve on May 15, 2018.
 - (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, 2018, there was only a 2.5% chance of the average price from July 2018 to June 2019 being higher than \$3.79/Dth. Similarly, there was only a 2.5% chance of the price in January 2019 being higher than \$4.48/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, pages 1 and 2, reflect all bills rendered by MERC during the 2018-2019 AAA period for third-party damage to MERC facilities. Per the Commission's order point issued on October 11, 2012, 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 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 are netted against the commodity cost, thereby reducing the overall gas costs for the AAA period. For the 2018-2019 gas year, MERC-NNG credited \$37,987.61 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.

During the time period of January 1, 2018, through December 31, 2018, MERC tested 6,872 meters as part of its meter testing program. Of those meters tested, 6,488 (94.4%) tested between 98% and 102% accurate. 328 meters (4.8%) tested greater than 102% accurate, 54 meters (0.80%) tested less than 98% accurate, and 2 meters (0.0%) 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, one on November 1, 2018, one on November 14, 2018, one on January 28, 2019, two on January 29, 2019, three on January 30, 2019, and one on February 8, 2019, in the NNG PGA. In total, 77 customers were called to curtail. 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*
1/28/2019	146.3	\$731.50
1/29/2019	7,288.60	\$36,443.00
1/30/2019	14,484.50	\$72,422.50
1/31/2019	15,181.60	\$75,908.00
2/1/2019	996.1	\$4,980.50

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

Commodity rates of \$0.38042 and \$0.57986 per therm were charged to transportation customers per Northern Natural Gas Pipeline January 2019 and February 2019 imbalance cash out rates. Commodity rates of \$0.46750 and \$0.41330 per therm were charged to Small and Large Volume Interruptible System Sales customers for unauthorized gas use based on the MERC-NNG January 2019 and February 2019 PGA filings.

In total, of the 77 customers called to curtail, 29 had unauthorized usage during the curtailment periods. 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 154 direct contacts with live persons, 223 voicemails, 205 faxes, 276 email, and 531 text messages were sent out during this AAA period.

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

On May 5, 2017, the Commission issued an Order Approving Rochester Project and Granting Rider Recovery with Conditions in Docket No. G011/M-15-895. Order Point 9 of the Commission's Order required MERC to take the following actions relating to seeking funding from the Destination Medical Center Corporation (DMCC):

- a. If MERC undertakes projects within established Destination Medical Center development district boundaries, the Company shall petition the DMCC for funding.
- b. MERC shall, in its annual NGEP filing and in future AAA filings, provide a discussion and supporting data explaining all work performed within the Destination Medical Center development district boundaries, with the amount of DMCC funding applied for and received.

On June 18, 2019, in Docket No. G011/M-18-182 in its Order Approving NGEP Rider Charge with Modifications, the Commission authorized MERC to discontinue applying for Destination Medical Center funding for projects within the DMCC boundaries as previously ordered in Docket No. G011/M-15-895.

Additionally, 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, at the time of this filing, no Rochester-specific capacity releases have occurred, and therefore MERC has no information to report.

Lost and Unaccounted for ("LUF") Gas Investigation Report

Order Point 15 of the Commission's February 27, 2019, Order Accepting Gas Utilities' Annual Automatic Adjustment Reports and 2016-2017 True-Up Proposals and Setting Further Requirements ("Order"), in Docket No. G999/AA-17-493 required MERC to submit, within 30 days of the Commission's Order, a compliance filing outlining a plan to investigate its lost and unaccounted for ("LUF") gas. Order Point 16 further required that MERC file a report on the results of that investigation with the Company's Fiscal Year 2019 Annual Automatic Adjustment ("AAA") Report to be filed by September 3, 2019.

MERC submitted its Compliance Filing on March 26, 2019, proposing a plan to further investigate negative LUF on the NNG-PGA. On April 25, 2019, the Department filed comments recommending that MERC conduct the investigation into negative LUF for both the NNG and Consolidated-PGA. On May 6, 2019, MERC filed reply comments in Docket No. G999/AA-18-374 agreeing that it would conduct an investigation for both the NNG and Consolidated PGAs. The results of that investigation for the NNG PGA are presented below.

Background

MERC previously evaluated its LUF in the Company's August 30, 2010 Reply Comments in Docket Nos. G999/AA-09-896, G007/AA-09-1038, and G011/AA-09-1039 regarding the 2008-

2009 AAA Report. In those Reply Comments, MERC pointed out that the formula used by the Department in monitoring LUF does not include transportation gas customer volumes. MERC, however, has a large percentage of transportation volumes that could affect the LUF calculation. In particular, gas can be lost between Town Border Stations (Gate Stations) and End Use Meters the same for transporters as for retail customers. The total system perspective for MERC is an important consideration when making comparisons of LUF between MERC and other utilities.

Subsequently, leading up to the 2014-2015 AAA filing in Docket No. G999/AA-15-612, MERC examined its LUF calculation methodology, which involved tracing of the AAA Report gas accounting procedures MERC has in place. Through that evaluation, MERC discovered a gas cost reporting procedure that impacts the LUF calculation. Specifically, MERC's monthly imbalance for each PGA system (the difference between the monthly quantity of gas delivered to MERC's distribution system and the monthly quantity of gas used by MERC customers) is reported on a one month lag. This reporting lag creates a monthly variance between purchase gas volumes and customer use volumes.

With the 2016-2017 AAA reports in Docket No. G999/AA-17-493, the Department noted that with respect to MERC-NNG's reported negative LUF, "MERC has had a long, and well-documented, history of negative LUF," and concluded that the LUF percentages reported were reasonable.¹ Below is a summary of MERC's LUF gas %'s over the last six AAA periods:

Year	LUF Gas %- MERC NNG	LUF Gas % - Albert Lea	LUF Gas % - MERC CON
2018-2019	(0.98%)	n/a	(0.90%)
2017-2018	(1.40)%	n/a	(0.84%)
2016-2017	(2.43)%	2.841%	(1.36%)
2015-2016	(1.46)%	1.78%	0.25%
2014-2015	(0.78)%	0.13%	5.37%
2013-2014	(2.82)%	n/a	0.38%

The LUF for the NNG PGA for the period July 1, 2018-June 30, 2019 is (0.98%). Considering the factors discussed above and described in MERC's prior AAA dockets, this (0.98%) LUF for NNG appears reasonable and is in line with the (0.90%) LUF reported for MERC-Consolidated. Nevertheless, 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 ("Order"), in Docket No. G999/AA-17-493, MERC undertook a further investigation of its LUF on the NNG PGA.

¹ Review of 2016-2017 Annual Automatic Adjustment Reports, Docket No. G999/AA-17-493, Department Comments at 67 (Dec. 4, 2018).

Pressure Factor Calculations

First, MERC reviewed pressure factor calculations used by NNG, comparing those calculations against those used by MERC. The pressure factor is used to adjust for gas pressures as they flow through the meter. This pressure factor is used, in conjunction with the BTU factor, to convert the volume of gas measured by the meter into the heating value of the gas, or BTU.

Based on that review, the Company determined that MERC and NNG use different atmospheric pressures in determining gas volumes. All else equal, this differential would cause MERC to show a consistently negative LUF when comparing NNG's measured throughput to MERC's sales for any given period of time. The differential in atmospheric pressure used in the correction factor accounts for a difference of approximately 1%, which translates to the volume of gas metered. Stated another way, NNG measures 1% less gas than MERC given the same meter reading and flow. This is a significant contributing factor to the negative LUF that has persisted.

Audit of TBS Purchases to Sales

MERC also audited its purchases at each Consolidated PGA Town Border Station ("TBS") against the sales made to customers behind each TBS for the July 2018 – June 2019 AAA reporting period. Purchases by TBS for a calendar month are relatively straightforward because the pipeline metering data is readily available. Sales data, however, reflects meter data that is collected in cycles throughout the month, so some measure of variances by month are expected. Variances would, therefore, be expected to be positive some months and negative in others. This was borne out in the analysis.

The sales data by TBS was determined by grouping customers by mailing address to their closest TBS. Again, some variances were to be expected here. Mailing addresses would not be a perfect match to a TBS, especially since some communities shared mailing addresses yet could be connected to different TBS on different pipelines (e.g., the towns surrounding Grand Rapids can be connected to either Great Lakes pipeline or NNG pipeline).

A similar analysis was begun for the NNG PGA area. Unlike the Consolidated PGA, however, MERC's NNG system is significantly larger and more complex, with many more communities overlapping MERC billing areas. MERC noted also that the PGA areas for NNG and Albert Lea were separated in three of the last AAA years. Albert Lea had a positive LUF in those three years and NNG a negative LUF. Without considerably more detailed mapping and study, MERC was unable to render a conclusion using this analysis.

Review of BTU Factors

MERC also considered reviewing the BTU factors obtained from NNG pipeline to determine if there may be any significant differences between stations. The BTU factor converts measured gas volumes (CCF) into the heating value of the natural gas (therm). Heating values of natural gas vary depending on the source of the gas. Because the BTU factors are directly downloaded from the pipeline to the MERC billing system, it is likely that the only way the BTU factors would be an issue is if customers were incorrectly assigned to a BTU area that was significantly different than the gas they were actually consuming. With regards to BTU factors, it is also useful to note that the daily factors are averaged to determine the monthly BTU factor to be applied to a customer's metered usage. These averages are not weighted, so some LUF variances can occur simply based upon the customer load profiles.

Based upon the inconclusive results obtained in the review of Viking Pipeline's BTU factors in the Consolidated PGA, MERC did not further evaluate the NNG BTU factors.

Meter Reading Practices

MERC's NNG PGA area includes over 1,500 farm tap customers. These customers are required to submit meter reads to MERC every month. Those reads are verified by MERC with a physical read once each year. Other MERC customers may experience periodic estimated meter reads but a physical read within the next calendar month would correct for variances due to the estimated reads. Therefore MERC determined that meter reading practices should not materially affect the annual LUF%.

Conclusions

As noted previously, the meter testing program results for MERC have tended toward accuracy readings in excess of 100% (i.e., fast meters) so a negative LUF% would tend to be more likely than a positive LUF%. Given this, and the impact of the pressure factor analysis, MERC determined that the LUF gas of (-0.98%) for the current AAA period was reasonable.

Most importantly, it should be noted that MERC does not benefit from negative LUF gas. The AAA true-up process provides that any differences between actual gas costs and the billed gas costs are shared among the sales customers.

MERC-NNG

<p>ANNUAL AUDITOR'S REPORT MINNESOTA RULE 7825.2820</p>

August 30, 2019

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 from July 1, 2018 through June 30, 2019, 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 from July 1, 2018 to June 30, 2019, 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 30, 2019

MERC-NNG

<p>STATEMENT ON GAS COST PROJECTIONS MINNESOTA RULE 7825.2830</p>

August 30, 2019

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 2018-2019 period was marked with relatively stable monthly prices. There was an increase in December 2018 monthly prices as a result of cold weather early in the winter coupled with lower than normal storage inventories. Daily prices were volatile during the late January and early March periods during extreme cold. NYMEX natural gas prices for the winter of 2019-2020 are currently trading at an average price of \$2.74, compared to average actual prices in the winter of 2018-2019 of \$3.47.

Table 1: MERC Index Prices
Quote Date 6-Jun-19

Delivery Month	NYMEX NG	Emerson Viking	Northern Ventura
Jul-18	2.9960	2.5860	2.6500
Aug-18	2.8220	2.6420	2.6400
Sep-18	2.8950	2.7550	2.6800
Oct-18	3.0210	2.8110	2.8500
Nov-18	3.1850	3.1350	3.4700
Dec-18	4.7150	4.6650	5.0600
Jan-19	3.6420	3.5920	4.6900
Feb-19	2.9500	2.9000	3.2900
Mar-19	2.8550	2.8050	2.8300
Apr-19	2.7130	2.4780	2.4800
May-19	2.5660	2.2860	2.1700
Jun-19	2.6330	2.2580	2.2000
Jul-19	2.4160	2.0660	2.1335
Aug-19	2.4190	2.0290	2.1690
Sep-19	2.4110	2.0260	2.0760
Oct-19	2.4640	2.0690	2.1540
Nov-19	2.5540	2.4240	2.3815
Dec-19	2.7410	2.8410	3.2235
Jan-20	2.8490	2.9865	3.5990
Feb-20	2.8140	2.9640	3.5540
Mar-20	2.7190	2.7365	2.6590
Apr-20	2.5110	2.0985	2.3235
May-20	2.4820	2.0695	2.2045
Jun-20	2.5170	2.1045	2.2145

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 sector 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 2019-2020 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 2018 through October 2018 for each of the winter months (November 2018 through March 2019).

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 2019
SUMMARY OF BASE COST OF GAS RECOVERED

Schedule A

Page 1 of 2

NNG

8/27/2019

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*	485,112	492,830	732,107	1,889,090	3,235,780	3,853,174	4,734,989	4,624,166	3,595,283	1,977,139	1,214,846	342,683	27,177,199
Base Rate	\$4.6767	\$4.6767	\$4.6767	\$4.6767	\$4.6767	\$4.6767	\$4.6767	\$4.6767	\$4.6767	\$4.6767	\$4.6767	\$4.6767	
Total \$	\$2,268,722	\$2,304,816	\$3,423,843	\$8,834,709	\$15,132,774	\$18,020,137	\$22,144,125	\$21,625,836	\$16,814,062	\$9,246,484	\$5,681,472	\$1,602,626	\$127,099,606
SVI/LVI													
Dth*	88,741	93,759	135,486	411,899	443,978	308,283	352,257	317,921	273,674	176,023	135,051	83,876	2,820,946
Base Rate	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	
Total \$	\$331,944	\$350,714	\$506,797	\$1,540,748	\$1,660,744	\$1,153,163	\$1,317,651	\$1,189,214	\$1,023,704	\$658,433	\$505,172	\$313,747	\$10,552,031
SVJ/LVJ													
Dth*	378	394	469	2,527	1,442	1,403	1,789	1,810	1,467	905	656	506	13,746
CD Units	95	95	95	95	95	95	95	95	95	95	95	95	1,140
Base Rate-Comm	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	
Base Rate-Dem	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	
Commodity \$	\$1,413	\$1,475	\$1,754	\$9,451	\$5,393	\$5,247	\$6,693	\$6,772	\$5,487	\$3,387	\$2,454	\$1,894	\$51,420
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 \$	\$4,081	\$4,143	\$4,422	\$12,119	\$8,061	\$7,915	\$9,361	\$9,440	\$8,155	\$6,055	\$5,122	\$4,562	\$83,436
SLV													
Dth*	0	0	0	0	0	0	0	0	0	0	0	0	0
CD Units	0	0	0	0	0	0	0	0	0	0	0	0	0
Base Rate-Comm	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	\$3.7406	
Base Rate-Dem	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	\$28.0830	
Commodity \$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Demand \$	\$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
TOTAL													
Dth*	574,230	586,982	868,061	2,303,516	3,681,200	4,162,859	5,089,035	4,943,897	3,870,424	2,154,067	1,350,553	427,065	30,011,890
CD Units	95	95	95	95	95	95	95	95	95	95	95	95	1,140
Commodity \$	\$2,602,079	\$2,657,005	\$3,932,394	\$10,384,908	\$16,798,911	\$19,178,547	\$23,468,469	\$22,821,822	\$17,843,253	\$9,908,304	\$6,189,098	\$1,918,267	\$137,703,057
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 \$	\$2,604,747	\$2,659,673	\$3,935,062	\$10,387,576	\$16,801,579	\$19,181,215	\$23,471,137	\$22,824,490	\$17,845,921	\$9,910,972	\$6,191,766	\$1,920,935	\$137,735,073

*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

8/27/2019

SUMMARY OF BASE COST OF GAS RECOVERED

EFFECTIVE: January 1, 2018

I. MERC NNG BASE COMMODITY COSTS

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

Based on 5-15-17 NYMEX, 2016 forecasted sales volumes and 2018 projected demand contract rates.

A. NNG DEMAND - GS	
Total Annual Demand Costs (\$)	\$22,176,683
Annual Firm Sales (therms)	236,895,506
NNG Demand Cost (\$/therm)	\$0.09361

B. NNG COMMODITY COSTS GS, SVI, LVI, SJ, LJ, SLV	
Gas Commodity Costs	
Total Cost of Gas Commodity	\$98,879,006
Total Annual Sales less Co. Use and L & U	264,337,861 therms
Commodity Base Cost of Gas	\$0.37406 /therm
Total Base Commodity Cost	\$0.37406 /therm

C. NNG DEMAND COSTS ASSIGNED TO JOINT RATES - SJ, LJ	
Total Annual Demand Costs (\$)	\$22,176,683
Annual Firm Sales (therms)	236,895,506
Total Joint Demand Rate (\$/therms per day)	\$0.09361
Total Joint Demand Rate (\$/therms per Month)	\$2.80830

D. NNG COMMODITY BASE RATES	
Firm - GS	
Commodity Base Cost of Gas	\$0.37406 /therm
Firm Demand Base Costs	\$0.09361 /therm
Firm Commodity Base Rate	\$0.46767 /therm
Interruptible/Joint- SVI, LVI, SJ, LJ, SLV	
Commodity Base Cost of Gas	\$0.37406 /therm
Interruptible/Joint Commodity Base Rate	\$0.37406 /therm

*Per Commission Decision in Docket No. G011/GR-15-748 MERC will apply the above calculated demand charges to a Joint customers DFC beginning Mar. 1, 2017.

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2019

SUMMARY OF REVENUE BILLED AND SALES VOLUMES

NNG

NNG

8/27/2019

	Prior Period Adjustment	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	12-Month Total
GS														
Customers*		199,712	199,705	199,910	200,112	200,854	199,231	205,078	201,611	201,467	201,623	202,499	202,109	201,159
Dth**	925	485,112	492,830	732,107	1,889,090	3,235,780	3,853,174	4,734,989	4,624,166	3,595,283	1,977,139	1,214,846	342,683	27,178,123
Demand-\$	\$866	\$454,404	\$461,633	\$685,764	\$1,769,511	\$3,710,469	\$4,418,434	\$5,429,612	\$5,302,531	\$4,122,711	\$2,267,185	\$1,393,064	\$392,955	\$30,409,141
Commodity-\$	\$3,586	\$1,562,351	\$1,573,309	\$2,373,124	\$6,571,579	\$12,358,416	\$17,551,206	\$20,209,881	\$17,230,566	\$12,348,720	\$6,851,576	\$3,670,537	\$1,034,937	\$103,339,787
Transport-\$		\$10,094	\$14,300	\$13,020	\$13,327	\$13,045	\$12,553	\$14,775	\$13,281	\$11,604	\$11,131	\$10,590	\$9,547	\$147,267
Monetary Adj.-\$										\$0	\$0	\$0	\$0	\$0
GS TOTAL-\$	\$4,452	\$2,026,849	\$2,049,242	\$3,071,909	\$8,354,417	\$16,081,930	\$21,982,193	\$25,654,268	\$22,546,378	\$16,483,035	\$9,129,891	\$5,074,191	\$1,437,439	\$133,896,195
SVI														
Customers*		291	292	277	281	310	301	303	295	291	291	289	291	293
Dth**	0	88,741	93,759	135,486	411,899	443,978	308,283	352,257	317,921	273,674	176,023	135,051	83,876	2,820,946
Commodity-\$	\$0	\$285,799	\$299,315	\$439,177	\$1,432,871	\$1,695,685	\$1,404,228	\$1,503,502	\$1,184,636	\$939,987	\$609,991	\$408,043	\$253,314	\$10,456,549
Transport-\$		\$1,847	\$2,720	\$2,410	\$2,906	\$1,790	\$1,004	\$1,099	\$913	\$883	\$991	\$1,177	\$2,337	\$20,077
SVI TOTAL-\$	\$0	\$287,645	\$302,036	\$441,586	\$1,435,777	\$1,697,475	\$1,405,233	\$1,504,601	\$1,185,549	\$940,870	\$610,982	\$409,221	\$255,651	\$10,476,626
LVI														
Customers*		72	73	85	74	84	71	80	75	72	74	75	73	76
Volumes & Dollars Included with SVI														
SVJ														
Customers*		2	2	2	2	3	3	2	2	2	2	3	3	2
Dth**	378	394	469	2,527	1,442	1,403	1,789	1,810	1,467	905	656	506	13,746	
CD Units	95	95	95	95	95	95	95	95	95	95	95	95	95	1,140
Commodity-\$	\$1,217	\$1,259	\$1,520	\$8,789	\$5,506	\$6,389	\$7,637	\$6,746	\$5,038	\$3,137	\$1,982	\$1,529	\$50,749	
Demand-\$	\$2,670	\$2,670	\$2,670	\$2,670	\$3,268	\$3,268	\$3,268	\$3,268	\$3,268	\$3,268	\$3,268	\$3,268	\$3,268	\$36,823
SVJ TOTAL-\$	\$0	\$3,887	\$3,928	\$4,189	\$11,459	\$8,774	\$9,657	\$10,905	\$10,014	\$8,306	\$6,406	\$5,250	\$4,797	\$87,572
LVJ														
Customers*		8	(1)	9	9	(5)	(62)	0	0	0	0	0	1	(3)
Volumes & Dollars Included with SVJ														
SLV														
Customers*		0	0	0	0	0	0	0	0	0	0	0	0	0
Dth**		0	0	0	0	0	0	0	0	0	0	0	0	0
CD Units		0	0	0	0	0	0	0	0	0	0	0	0	0
Commodity-\$		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Demand-\$		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SLV TOTAL-\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL														
Customers*		200,086	200,071	200,283	200,477	201,246	199,543	205,462	201,983	201,831	201,989	202,866	202,477	201,526
Dth**	925	574,230	586,982	868,061	2,303,516	3,681,200	4,162,859	5,089,035	4,943,897	3,870,424	2,154,067	1,350,553	427,065	30,012,815
CD Units		95	95	95	95	95	95	95	95	95	95	95	95	1,140
Commodity-\$	3,586	1,861,307	1,890,903	2,829,250	8,029,472	14,074,442	18,975,381	21,736,895	18,436,142	13,306,233	7,476,827	4,092,329	1,301,664	\$114,014,429
Demand-\$	866	457,074	464,303	688,434	1,772,181	3,713,737	4,421,702	5,432,880	5,305,799	4,125,980	2,270,453	1,396,333	396,223	\$30,445,964
TOTAL-\$	\$4,452	\$2,318,381	\$2,355,206	\$3,517,684	\$9,801,653	\$17,788,179	\$23,397,083	\$27,169,775	\$23,741,941	\$17,432,212	\$9,747,279	\$5,488,662	\$1,697,886	\$144,460,393

*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 2019

SUMMARY OF REVENUE BILLED AND SALES VOLUMES

NNG

TRANSPORT

	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	12-Month Total
TRANSPORT													
NNG													
Balancing Service(PG4)													
Rate	\$0.0700	\$0.0700	\$0.0700	\$0.0700	\$0.0700	\$0.0700	\$0.0700	\$0.0700	\$0.0700	\$0.0700	\$0.0700	\$0.0700	
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	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
Dth	17,594	19,785	22,320	52,804	33,324	23,338	20,911	22,151	19,975	20,626	25,986	46,532	
Total Bal. Fee	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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	36,153	19,726	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	395,651	400,476	363,058	381,949	349,067	318,998	373,498	333,982	293,825	285,221	276,870	279,614	
Total Aggregation	\$11,941	\$17,020	\$15,430	\$16,233	\$14,835	\$13,557	\$15,874	\$14,194	\$12,488	\$12,122	\$11,767	\$11,884	\$167,344
Total NNG	\$11,941	\$17,020	\$15,430	\$16,233	\$14,835	\$13,557	\$15,874	\$14,194	\$12,488	\$12,122	\$11,767	\$11,884	\$167,344

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:

EFFECTIVE DATE:

01-Jul-18

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.00006	\$0.00000	\$0.00006	\$0.09367		
	Commodity	\$0.37406	(\$0.05876)	\$0.00676	(\$0.05200)	\$0.32206		
	ACA	\$0.00000	\$0.01072	\$0.00000	\$0.01072	\$0.01072		
	Total-Residential	\$0.46767	(\$0.04798)	\$0.00676	(\$0.04122)	\$0.42645	\$0.24116	\$0.66761
	Total-C&I 0-1500 therms	\$0.46767	(\$0.04798)	\$0.00676	(\$0.04122)	\$0.42645	\$0.22065	\$0.64710
	Total-C&I >1500 therms	\$0.46767	(\$0.04798)	\$0.00676	(\$0.04122)	\$0.42645	\$0.16885	\$0.59530
B. NNG SVJ	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05876)	\$0.00676	(\$0.05200)	\$0.32206	\$0.30000	\$3.11010
	ACA	\$0.00000	\$0.03642	\$0.00000	\$0.03642	\$0.03642		
	Total	\$0.37406	(\$0.02234)	\$0.00676	(\$0.01558)	\$0.35848	\$0.09740	\$0.45588
							\$0.09740	\$0.45588
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05876)	\$0.00676	(\$0.05200)	\$0.32206		
	ACA	\$0.00000	\$0.03642	\$0.00000	\$0.03642	\$0.03642		
	Total	\$0.37406	(\$0.02234)	\$0.00676	(\$0.01558)	\$0.35848	\$0.09740	\$0.45588
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05876)	\$0.00676	(\$0.05200)	\$0.32206		
	ACA	\$0.00000	\$0.03642	\$0.00000	\$0.03642	\$0.03642		
	Total	\$0.37406	(\$0.02234)	\$0.00676	(\$0.01558)	\$0.35848	\$0.05329	\$0.41177
F. NNG LVJ	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05876)	\$0.00676	(\$0.05200)	\$0.32206	\$0.30000	\$3.11010
	ACA	\$0.00000	\$0.03642	\$0.00000	\$0.03642	\$0.03642		
	Total	\$0.37406	(\$0.02234)	\$0.00676	(\$0.01558)	\$0.35848	\$0.05329	\$0.41177
							\$0.05329	\$0.41177
H. NNG SLVI	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.37406	(\$0.05876)	\$0.00676	(\$0.05200)	\$0.32206	\$0.06200	\$2.87210
	ACA	\$0.00000	\$0.03642	\$0.00000	\$0.03642	\$0.03642		
	Total Commodity	\$0.37406	(\$0.02234)	\$0.00676	(\$0.01558)	\$0.35848	\$0.03215	\$0.39063

MNM0718

NNG A3

MERC NNG

CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)

MERC NNG SUMMARY OF COST BY CLASS:

EFFECTIVE DATE:

01-Aug-18

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.00006	\$0.00000	\$0.00006	\$0.09367		
	Commodity	\$0.37406	(\$0.05200)	(\$0.00282)	(\$0.05482)	\$0.31924		
	ACA	\$0.00000	\$0.01072	\$0.00000	\$0.01072	\$0.01072		
	Total-Residential	\$0.46767	(\$0.04122)	(\$0.00282)	(\$0.04404)	\$0.42363	\$0.24116	\$0.66479
	Total-C&I 0-1500 therms	\$0.46767	(\$0.04122)	(\$0.00282)	(\$0.04404)	\$0.42363	\$0.22065	\$0.64428
	Total-C&I >1500 therms	\$0.46767	(\$0.04122)	(\$0.00282)	(\$0.04404)	\$0.42363	\$0.16885	\$0.59248
B. NNG SVJ	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05200)	(\$0.00282)	(\$0.05482)	\$0.31924	\$0.30000	\$3.11010
	ACA	\$0.00000	\$0.03642	\$0.00000	\$0.03642	\$0.03642		
	Total	\$0.37406	(\$0.01558)	(\$0.00282)	(\$0.01840)	\$0.35566	\$0.09740	\$0.45306
							\$0.09740	\$0.45306
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05200)	(\$0.00282)	(\$0.05482)	\$0.31924		
	ACA	\$0.00000	\$0.03642	\$0.00000	\$0.03642	\$0.03642		
	Total	\$0.37406	(\$0.01558)	(\$0.00282)	(\$0.01840)	\$0.35566	\$0.09740	\$0.45306
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05200)	(\$0.00282)	(\$0.05482)	\$0.31924		
	ACA	\$0.00000	\$0.03642	\$0.00000	\$0.03642	\$0.03642		
	Total	\$0.37406	(\$0.01558)	(\$0.00282)	(\$0.01840)	\$0.35566	\$0.05329	\$0.40895
F. NNG LVJ	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05200)	(\$0.00282)	(\$0.05482)	\$0.31924	\$0.30000	\$3.11010
	ACA	\$0.00000	\$0.03642	\$0.00000	\$0.03642	\$0.03642		
	Total	\$0.37406	(\$0.01558)	(\$0.00282)	(\$0.01840)	\$0.35566	\$0.05329	\$0.40895
							\$0.05329	\$0.40895
H. NNG SLVI	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.37406	(\$0.05200)	(\$0.00282)	(\$0.05482)	\$0.31924	\$0.06200	\$2.87210
	ACA	\$0.00000	\$0.03642	\$0.00000	\$0.03642	\$0.03642		
	Total Commodity	\$0.37406	(\$0.01558)	(\$0.00282)	(\$0.01840)	\$0.35566	\$0.03215	\$0.38781

MNM0818

NNG A3

MERC NNG

CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)

MERC NNG SUMMARY OF COST BY CLASS:

EFFECTIVE DATE:

01-Sep-18

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.00006	\$0.00000	\$0.00006	\$0.09367		
	Commodity	\$0.37406	(\$0.05482)	\$0.00491	(\$0.04991)	\$0.32415		
	ACA	\$0.00000	\$0.01072	\$0.01162	\$0.02234	\$0.02234		
	Total-Residential	\$0.46767	(\$0.04404)	\$0.01653	(\$0.02751)	\$0.44016	\$0.24116	\$0.68132
	Total-C&I 0-1500 therms	\$0.46767	(\$0.04404)	\$0.01653	(\$0.02751)	\$0.44016	\$0.22065	\$0.66081
	Total-C&I >1500 therms	\$0.46767	(\$0.04404)	\$0.01653	(\$0.02751)	\$0.44016	\$0.16885	\$0.60901
B. NNG SVJ	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05482)	\$0.00491	(\$0.04991)	\$0.32415	\$0.30000	\$3.11010
	ACA	\$0.00000	\$0.03642	\$0.00426	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.01840)	\$0.00917	(\$0.00923)	\$0.36483	\$0.09740	\$0.46223
							\$0.09740	\$0.46223
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05482)	\$0.00491	(\$0.04991)	\$0.32415		
	ACA	\$0.00000	\$0.03642	\$0.00426	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.01840)	\$0.00917	(\$0.00923)	\$0.36483	\$0.09740	\$0.46223
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05482)	\$0.00491	(\$0.04991)	\$0.32415		
	ACA	\$0.00000	\$0.03642	\$0.00426	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.01840)	\$0.00917	(\$0.00923)	\$0.36483	\$0.05329	\$0.41812
F. NNG LVJ	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.05482)	\$0.00491	(\$0.04991)	\$0.32415	\$0.30000	\$3.11010
	ACA	\$0.00000	\$0.03642	\$0.00426	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.01840)	\$0.00917	(\$0.00923)	\$0.36483	\$0.05329	\$0.41812
							\$0.05329	\$0.41812
H. NNG SLVI	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.37406	(\$0.05482)	\$0.00491	(\$0.04991)	\$0.32415	\$0.06200	\$2.87210
	ACA	\$0.00000	\$0.03642	\$0.00426	\$0.04068	\$0.04068		
	Total Commodity	\$0.37406	(\$0.01840)	\$0.00917	(\$0.00923)	\$0.36483	\$0.03215	\$0.39698

MNM0918

NNG A3

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

EFFECTIVE DATE: 01-Oct-18

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.00006	\$0.00000	\$0.00006	\$0.09367		
	Commodity	\$0.37406	(\$0.04991)	\$0.02372	(\$0.02619)	\$0.34787		
	ACA	\$0.00000	\$0.02234	\$0.00000	\$0.02234	\$0.02234		
	Total-Residential	\$0.46767	(\$0.02751)	\$0.02372	(\$0.00379)	\$0.46388	\$0.24116	\$0.70504
	Total-C&I 0-1500 therms	\$0.46767	(\$0.02751)	\$0.02372	(\$0.00379)	\$0.46388	\$0.22065	\$0.68453
	Total-C&I >1500 therms	\$0.46767	(\$0.02751)	\$0.02372	(\$0.00379)	\$0.46388	\$0.16885	\$0.63273
B. NNG SVJ	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.04991)	\$0.02372	(\$0.02619)	\$0.34787	\$0.30000	\$3.11010
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.00923)	\$0.02372	\$0.01449	\$0.38855	\$0.09740	\$0.48595
							\$0.09740	\$0.48595
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.04991)	\$0.02372	(\$0.02619)	\$0.34787		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.00923)	\$0.02372	\$0.01449	\$0.38855	\$0.09740	\$0.48595
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.04991)	\$0.02372	(\$0.02619)	\$0.34787		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.00923)	\$0.02372	\$0.01449	\$0.38855	\$0.05329	\$0.44184
F. NNG LVJ	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.04991)	\$0.02372	(\$0.02619)	\$0.34787	\$0.30000	\$3.11010
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.00923)	\$0.02372	\$0.01449	\$0.38855	\$0.05329	\$0.44184
							\$0.05329	\$0.44184
H. NNG SLVI	Demand	\$2.80830	\$0.00180	\$0.00000	\$0.00180	\$2.81010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.37406	(\$0.04991)	\$0.02372	(\$0.02619)	\$0.34787	\$0.06200	\$2.87210
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total Commodity	\$0.37406	(\$0.00923)	\$0.02372	\$0.01449	\$0.38855	\$0.03215	\$0.42070

MNM1018 NNG A3

MERC NNG

CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)

MERC NNG SUMMARY OF COST BY CLASS:

EFFECTIVE DATE:

01-Nov-18

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.00006	\$0.02100	\$0.02106	\$0.11467		
	Commodity	\$0.37406	(\$0.02619)	\$0.03406	\$0.00787	\$0.38193		
	ACA	\$0.00000	\$0.02234	\$0.00000	\$0.02234	\$0.02234		
	Total-Residential	\$0.46767	(\$0.00379)	\$0.05506	\$0.05127	\$0.51894	\$0.24116	\$0.76010
	Total-C&I 0-1500 therms	\$0.46767	(\$0.00379)	\$0.05506	\$0.05127	\$0.51894	\$0.22065	\$0.73959
	Total-C&I >1500 therms	\$0.46767	(\$0.00379)	\$0.05506	\$0.05127	\$0.51894	\$0.16885	\$0.68779
B. NNG SVJ NNG SVJ	Demand	\$2.80830	\$0.00180	\$0.63000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.30000	\$3.74010
	Commodity	\$0.37406	(\$0.02619)	\$0.03406	\$0.00787	\$0.38193		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01449	\$0.03406	\$0.04855	\$0.42261	\$0.09740	\$0.52001
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.02619)	\$0.03406	\$0.00787	\$0.38193		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01449	\$0.03406	\$0.04855	\$0.42261	\$0.09740	\$0.52001
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.02619)	\$0.03406	\$0.00787	\$0.38193		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01449	\$0.03406	\$0.04855	\$0.42261	\$0.05329	\$0.47590
F. NNG LVJ	Demand	\$2.80830	\$0.00180	\$0.63000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.30000	\$3.74010
	Commodity	\$0.37406	(\$0.02619)	\$0.03406	\$0.00787	\$0.38193		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01449	\$0.03406	\$0.04855	\$0.42261	\$0.05329	\$0.47590
H. NNG SLVI	Demand	\$2.80830	\$0.00180	\$0.63000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.06200	\$3.50210
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.37406	(\$0.02619)	\$0.03406	\$0.00787	\$0.38193		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total Commodity	\$0.37406	\$0.01449	\$0.03406	\$0.04855	\$0.42261	\$0.03215	\$0.45476

MNM1018

NNG A3

MERC NNG

CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)

MERC NNG SUMMARY OF COST BY CLASS:

EFFECTIVE DATE:

01-Dec-18

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.02106	\$0.00000	\$0.02106	\$0.11467		
	Commodity	\$0.37406	\$0.00787	\$0.07357	\$0.08144	\$0.45550		
	ACA	\$0.00000	\$0.02234	\$0.00000	\$0.02234	\$0.02234		
	Total-Residential	\$0.46767	\$0.05127	\$0.07357	\$0.12484	\$0.59251	\$0.24116	\$0.83367
	Total-C&I 0-1500 therms	\$0.46767	\$0.05127	\$0.07357	\$0.12484	\$0.59251	\$0.22065	\$0.81316
	Total-C&I >1500 therms	\$0.46767	\$0.05127	\$0.07357	\$0.12484	\$0.59251	\$0.16885	\$0.76136
B. NNG SVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.30000	\$3.74010
	Commodity	\$0.37406	\$0.00787	\$0.07357	\$0.08144	\$0.45550		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.04855	\$0.07357	\$0.12212	\$0.49618	\$0.09740	\$0.59358
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	\$0.00787	\$0.07357	\$0.08144	\$0.45550		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.04855	\$0.07357	\$0.12212	\$0.49618	\$0.09740	\$0.59358
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	\$0.00787	\$0.07357	\$0.08144	\$0.45550		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.04855	\$0.07357	\$0.12212	\$0.49618	\$0.05329	\$0.54947
F. NNG LVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.30000	\$3.74010
	Commodity	\$0.37406	\$0.00787	\$0.07357	\$0.08144	\$0.45550		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.04855	\$0.07357	\$0.12212	\$0.49618	\$0.05329	\$0.54947
H. NNG SLVI	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.06200	\$3.50210
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.37406	\$0.00787	\$0.07357	\$0.08144	\$0.45550		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total Commodity	\$0.37406	\$0.04855	\$0.07357	\$0.12212	\$0.49618	\$0.03215	\$0.52833

MNM1218

NNG A3

MERC NNG

CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)

MERC NNG SUMMARY OF COST BY CLASS:

EFFECTIVE DATE:

01-Jan-19

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.02106	\$0.00000	\$0.02106	\$0.11467		
	Commodity	\$0.37406	\$0.08144	(\$0.02868)	\$0.05276	\$0.42682		
	ACA	\$0.00000	\$0.02234	\$0.00000	\$0.02234	\$0.02234		
	Total-Residential	\$0.46767	\$0.12484	(\$0.02868)	\$0.09616	\$0.56383	\$0.24116	\$0.80499
	Total-C&I 0-1500 therms	\$0.46767	\$0.12484	(\$0.02868)	\$0.09616	\$0.56383	\$0.22065	\$0.78448
	Total-C&I >1500 therms	\$0.46767	\$0.12484	(\$0.02868)	\$0.09616	\$0.56383	\$0.16885	\$0.73268
B. NNG SVJ NNG SVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.30000	\$3.74010
	Commodity	\$0.37406	\$0.08144	(\$0.02868)	\$0.05276	\$0.42682		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.12212	(\$0.02868)	\$0.09344	\$0.46750	\$0.09740	\$0.56490
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	\$0.08144	(\$0.02868)	\$0.05276	\$0.42682		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.12212	(\$0.02868)	\$0.09344	\$0.46750	\$0.09740	\$0.56490
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	\$0.08144	(\$0.02868)	\$0.05276	\$0.42682		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.12212	(\$0.02868)	\$0.09344	\$0.46750	\$0.05329	\$0.52079
F. NNG LVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.30000	\$3.74010
	Commodity	\$0.37406	\$0.08144	(\$0.02868)	\$0.05276	\$0.42682		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.12212	(\$0.02868)	\$0.09344	\$0.46750	\$0.05329	\$0.52079
H. NNG SLVI	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.06200	\$3.50210
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.37406	\$0.08144	(\$0.02868)	\$0.05276	\$0.42682		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total Commodity	\$0.37406	\$0.12212	(\$0.02868)	\$0.09344	\$0.46750	\$0.03215	\$0.49965

MNM0119

NNG A3

MERC NNG

CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)

MERC NNG SUMMARY OF COST BY CLASS:

EFFECTIVE DATE:

01-Feb-19

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.02106	\$0.00000	\$0.02106	\$0.11467		
	Commodity	\$0.37406	\$0.05276	(\$0.05420)	(\$0.00144)	\$0.37262		
	ACA	\$0.00000	\$0.02234	\$0.00000	\$0.02234	\$0.02234		
	Total-Residential	\$0.46767	\$0.09616	(\$0.05420)	\$0.04196	\$0.50963	\$0.24116	\$0.75079
	Total-C&I 0-1500 therms	\$0.46767	\$0.09616	(\$0.05420)	\$0.04196	\$0.50963	\$0.22065	\$0.73028
	Total-C&I >1500 therms	\$0.46767	\$0.09616	(\$0.05420)	\$0.04196	\$0.50963	\$0.16885	\$0.67848
B. NNG SVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	\$0.05276	(\$0.05420)	(\$0.00144)	\$0.37262	\$0.30000	\$3.74010
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.09344	(\$0.05420)	\$0.03924	\$0.41330	\$0.09740	\$0.51070
							\$0.09740	\$0.51070
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	\$0.05276	(\$0.05420)	(\$0.00144)	\$0.37262		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.09344	(\$0.05420)	\$0.03924	\$0.41330		
							\$0.09740	\$0.51070
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	\$0.05276	(\$0.05420)	(\$0.00144)	\$0.37262		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.09344	(\$0.05420)	\$0.03924	\$0.41330	\$0.05329	\$0.46659
F. NNG LVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	\$0.05276	(\$0.05420)	(\$0.00144)	\$0.37262	\$0.30000	\$3.74010
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.09344	(\$0.05420)	\$0.03924	\$0.41330	\$0.05329	\$0.46659
H. NNG SLVI	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776	\$0.06200	\$3.50210
	Commodity	\$0.37406	\$0.05276	(\$0.05420)	(\$0.00144)	\$0.37262		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total Commodity	\$0.37406	\$0.09344	(\$0.05420)	\$0.03924	\$0.41330	\$0.03215	\$0.44545

MNM0219

NNG A3

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

EFFECTIVE DATE: **01-Mar-19**

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.02106	\$0.00000	\$0.02106	\$0.11467		
	Commodity	\$0.37406	(\$0.00144)	(\$0.02915)	(\$0.03059)	\$0.34347		
	ACA	\$0.00000	\$0.02234	\$0.00000	\$0.02234	\$0.02234		
	Total-Residential	\$0.46767	\$0.04196	(\$0.02915)	\$0.01281	\$0.48048	\$0.24116	\$0.72164
	Total-C&I 0-1500 therms	\$0.46767	\$0.04196	(\$0.02915)	\$0.01281	\$0.48048	\$0.22065	\$0.70113
	Total-C&I >1500 therms	\$0.46767	\$0.04196	(\$0.02915)	\$0.01281	\$0.48048	\$0.16885	\$0.64933
B. NNG SVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.00144)	(\$0.02915)	(\$0.03059)	\$0.34347	\$0.30000	\$3.74010
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.03924	(\$0.02915)	\$0.01009	\$0.38415	\$0.09740	\$0.48155
							\$0.09740	\$0.48155
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.00144)	(\$0.02915)	(\$0.03059)	\$0.34347		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.03924	(\$0.02915)	\$0.01009	\$0.38415		
							\$0.09740	\$0.48155
							\$0.09740	\$0.48155
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.00144)	(\$0.02915)	(\$0.03059)	\$0.34347		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.03924	(\$0.02915)	\$0.01009	\$0.38415		
							\$0.05329	\$0.43744
							\$0.05329	\$0.43744
F. NNG LVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.00144)	(\$0.02915)	(\$0.03059)	\$0.34347	\$0.30000	\$3.74010
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.03924	(\$0.02915)	\$0.01009	\$0.38415	\$0.05329	\$0.43744
							\$0.05329	\$0.43744
H. NNG SLVI	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.37406	(\$0.00144)	(\$0.02915)	(\$0.03059)	\$0.34347	\$0.06200	\$3.50210
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total Commodity	\$0.37406	\$0.03924	(\$0.02915)	\$0.01009	\$0.38415	\$0.03215	\$0.41630

MNM0319 NNG A3

MERC NNG

CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)

MERC NNG SUMMARY OF COST BY CLASS:

EFFECTIVE DATE:

01-Apr-19

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.02106	\$0.00000	\$0.02106	\$0.11467		
	Commodity	\$0.37406	(\$0.03059)	\$0.00307	(\$0.02752)	\$0.34654		
	ACA	\$0.00000	\$0.02234	\$0.00000	\$0.02234	\$0.02234		
	Total-Residential	\$0.46767	\$0.01281	\$0.00307	\$0.01588	\$0.48355	\$0.24116	\$0.72471
	Total-C&I 0-1500 therms	\$0.46767	\$0.01281	\$0.00307	\$0.01588	\$0.48355	\$0.22065	\$0.70420
	Total-C&I >1500 therms	\$0.46767	\$0.01281	\$0.00307	\$0.01588	\$0.48355	\$0.16885	\$0.65240
B. NNG SVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.30000	\$3.74010
	Commodity	\$0.37406	(\$0.03059)	\$0.00307	(\$0.02752)	\$0.34654		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01009	\$0.00307	\$0.01316	\$0.38722	\$0.09740	\$0.48462
							\$0.09740	\$0.48462
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.03059)	\$0.00307	(\$0.02752)	\$0.34654		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01009	\$0.00307	\$0.01316	\$0.38722	\$0.05329	\$0.44051
							\$0.05329	\$0.44051
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.03059)	\$0.00307	(\$0.02752)	\$0.34654		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01009	\$0.00307	\$0.01316	\$0.38722	\$0.05329	\$0.44051
							\$0.05329	\$0.44051
F. NNG LVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.30000	\$3.74010
	Commodity	\$0.37406	(\$0.03059)	\$0.00307	(\$0.02752)	\$0.34654		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01009	\$0.00307	\$0.01316	\$0.38722	\$0.05329	\$0.44051
							\$0.05329	\$0.44051
H. NNG SLVI	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.06200	\$3.50210
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.37406	(\$0.03059)	\$0.00307	(\$0.02752)	\$0.34654		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total Commodity	\$0.37406	\$0.01009	\$0.00307	\$0.01316	\$0.38722	\$0.03215	\$0.41937

MNM0419

NNG A3

MERC NNG

CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)

MERC NNG SUMMARY OF COST BY CLASS:

EFFECTIVE DATE:

01-May-19

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.02106	\$0.00000	\$0.02106	\$0.11467		
	Commodity	\$0.37406	(\$0.02752)	(\$0.04440)	(\$0.07192)	\$0.30214		
	ACA	\$0.00000	\$0.02234	\$0.00000	\$0.02234	\$0.02234		
	Total-Residential	\$0.46767	\$0.01588	(\$0.04440)	(\$0.02852)	\$0.43915	\$0.24116	\$0.68031
	Total-C&I 0-1500 therms	\$0.46767	\$0.01588	(\$0.04440)	(\$0.02852)	\$0.43915	\$0.22065	\$0.65980
	Total-C&I >1500 therms	\$0.46767	\$0.01588	(\$0.04440)	(\$0.02852)	\$0.43915	\$0.16885	\$0.60800
B. NNG SVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.02752)	(\$0.04440)	(\$0.07192)	\$0.30214	\$0.30000	\$3.74010
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01316	(\$0.04440)	(\$0.03124)	\$0.34282	\$0.09740	\$0.44022
							\$0.09740	\$0.44022
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.02752)	(\$0.04440)	(\$0.07192)	\$0.30214		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01316	(\$0.04440)	(\$0.03124)	\$0.34282	\$0.09740	\$0.44022
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.02752)	(\$0.04440)	(\$0.07192)	\$0.30214		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01316	(\$0.04440)	(\$0.03124)	\$0.34282	\$0.05329	\$0.39611
F. NNG LVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.02752)	(\$0.04440)	(\$0.07192)	\$0.30214	\$0.30000	\$3.74010
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	\$0.01316	(\$0.04440)	(\$0.03124)	\$0.34282	\$0.05329	\$0.39611
							\$0.05329	\$0.39611
H. NNG SLVI	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.37406	(\$0.02752)	(\$0.04440)	(\$0.07192)	\$0.30214	\$0.06200	\$3.50210
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total Commodity	\$0.37406	\$0.01316	(\$0.04440)	(\$0.03124)	\$0.34282	\$0.03215	\$0.37497
							\$0.03215	\$0.37497

MNM0519

NNG A3

MERC NNG

CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA)

MERC NNG SUMMARY OF COST BY CLASS:

EFFECTIVE DATE:

01-Jun-19

As approved in Docket No. G011/MR-15-748; to coincide with implementation of final rates in Docket No. G011/GR-15-736

Class	Cost Category	Base Rate (1=Pg 1,III.)	Prior Adjustments (2)	Current Adjustments (3=4-2)	Total Adjustments (4=5-1)	Current Rate (5=Pg2,VI.)	Distribution Charge	Total Billing Rate
A. NNG GS	Demand	\$0.09361	\$0.02106	\$0.00000	\$0.02106	\$0.11467		
	Commodity	\$0.37406	(\$0.07192)	(\$0.00013)	(\$0.07205)	\$0.30201		
	ACA	\$0.00000	\$0.02234	\$0.00000	\$0.02234	\$0.02234		
	Total-Residential	\$0.46767	(\$0.02852)	(\$0.00013)	(\$0.02865)	\$0.43902	\$0.24116	\$0.68018
	Total-C&I 0-1500 therms	\$0.46767	(\$0.02852)	(\$0.00013)	(\$0.02865)	\$0.43902	\$0.22065	\$0.65967
	Total-C&I >1500 therms	\$0.46767	(\$0.02852)	(\$0.00013)	(\$0.02865)	\$0.43902	\$0.16885	\$0.60787
B. NNG SVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.30000	\$3.74010
	Commodity	\$0.37406	(\$0.07192)	(\$0.00013)	(\$0.07205)	\$0.30201		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.03124)	(\$0.00013)	(\$0.03137)	\$0.34269	\$0.09740	\$0.44009
C. NNG SVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.07192)	(\$0.00013)	(\$0.07205)	\$0.30201		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.03124)	(\$0.00013)	(\$0.03137)	\$0.34269	\$0.09740	\$0.44009
D. NNG LVI	Demand	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000		
	Commodity	\$0.37406	(\$0.07192)	(\$0.00013)	(\$0.07205)	\$0.30201		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.03124)	(\$0.00013)	(\$0.03137)	\$0.34269	\$0.05329	\$0.39598
F. NNG LVJ	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.30000	\$3.74010
	Commodity	\$0.37406	(\$0.07192)	(\$0.00013)	(\$0.07205)	\$0.30201		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total	\$0.37406	(\$0.03124)	(\$0.00013)	(\$0.03137)	\$0.34269	\$0.05329	\$0.39598
H. NNG SLVI	Demand	\$2.80830	\$0.63180	\$0.00000	\$0.63180	\$3.44010		
	ACA	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.06200	\$3.50210
	TF	\$0.75776	\$0.00000	\$0.00000	\$0.00000	\$0.75776		
	Commodity	\$0.37406	(\$0.07192)	(\$0.00013)	(\$0.07205)	\$0.30201		
	ACA	\$0.00000	\$0.04068	\$0.00000	\$0.04068	\$0.04068		
	Total Commodity	\$0.37406	(\$0.03124)	(\$0.00013)	(\$0.03137)	\$0.34269	\$0.03215	\$0.37484

MNM0619

NNG A3

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2019
SUMMARY OF PURCHASED VOLUMES AND COSTS

Schedule C & D

Page 1 of 1

NNG

8/27/2019

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
Dth	537,357	541,752	736,562	2,259,251	3,882,009	4,048,156	5,366,182	4,766,004	3,685,675	2,069,595	1,262,823	566,296	29,721,664
Demand \$	\$ 592,371	\$ 592,379	\$ 595,761	\$ 633,877	\$ 3,277,722	\$ 3,264,420	\$ 3,354,497	\$ 3,345,339	\$ 3,335,087	\$ 650,763	\$ 438,900	\$ 619,957	\$20,701,073
Curtailment Penalty Revenue \$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (185,505)	\$ (4,981)	\$ -	\$ -	\$ -	\$ -	\$ (190,486)
Total Demand \$	\$ 592,371	\$ 592,379	\$ 595,761	\$ 633,877	\$ 3,277,722	\$ 3,264,420	\$ 3,168,992	\$ 3,340,359	\$ 3,335,087	\$ 650,763	\$ 438,900	\$ 619,957	\$20,510,588
Commodity \$	\$ 3,340,828	\$ 3,304,764	\$ 3,764,823	\$ 8,315,929	\$ 14,183,835	\$ 18,518,742	\$ 20,791,873	\$ 15,684,504	\$ 13,780,475	\$ 7,322,293	\$ 4,755,479	\$ 3,534,220	\$117,297,765
NBPL Capacity Release	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (790,833)	\$ (790,833)	\$ (790,833)	(\$2,372,500)
Total Commodity \$	\$ 3,340,828	\$ 3,304,764	\$ 3,764,823	\$ 8,315,929	\$ 14,183,835	\$ 18,518,742	\$ 20,791,873	\$ 15,684,504	\$ 13,780,475	\$ 6,531,459	\$ 3,964,645	\$ 2,743,387	\$ 114,925,265
NNG Total \$	\$ 3,933,199	\$ 3,897,143	\$ 4,360,585	\$ 8,949,806	\$ 17,461,557	\$ 21,783,162	\$ 23,960,865	\$ 19,024,863	\$ 17,115,562	\$ 7,182,222	\$ 4,403,545	\$ 3,363,344	\$135,435,852

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 26, 2015

Notes:

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2019

PURCHASES BY CLASS

Schedule D.1

Page 1 of 1

NNG

8/27/2019

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-Demand	\$ 589,702	\$ 589,709	\$ 593,092	\$ 631,207	\$ 3,274,454	\$ 3,261,152	\$ 3,165,724	\$ 3,337,091	\$ 3,331,819	\$ 647,495	\$ 435,632	\$ 616,689	\$20,473,765
GS-Commodity	\$2,822,342	\$2,774,675	\$3,175,183	\$6,819,812	\$12,467,612	\$17,141,086	\$19,345,375	\$14,670,158	\$12,800,849	\$5,994,984	\$3,566,268	\$2,201,331	\$103,779,675
GS TOTAL	\$3,412,044	\$3,364,384	\$3,768,274	\$7,451,019	\$15,742,066	\$20,402,238	\$22,511,099	\$18,007,249	\$16,132,668	\$6,642,479	\$4,001,899	\$2,818,020	\$124,253,440
SVI/LVI	\$516,287	\$527,870	\$587,608	\$1,486,996	\$1,710,668	\$1,371,416	\$1,439,188	\$1,008,602	\$974,403	\$533,730	\$396,452	\$538,804	\$11,092,023
SVJ/LVJ/SLV													
Commodity	\$2,198	\$2,220	\$2,033	\$9,121	\$5,555	\$6,240	\$7,311	\$5,743	\$5,223	\$2,745	\$1,926	\$3,252	\$53,566
SVJ/LVJ/SLV													
Demand	\$2,670	\$2,670	\$2,670	\$2,670	\$3,268	\$3,268	\$3,268	\$3,268	\$3,268	\$3,268	\$3,268	\$3,268	\$36,823
TOTAL-Dem	\$592,371	\$592,379	\$595,761	\$633,877	\$3,277,722	\$3,264,420	\$3,168,992	\$3,340,359	\$3,335,087	\$650,763	\$438,900	\$619,957	\$20,510,588
TOTAL-Com	\$3,340,828	\$3,304,764	\$3,764,823	\$8,315,929	\$14,183,835	\$18,518,742	\$20,791,873	\$15,684,504	\$13,780,475	\$6,531,459	\$3,964,645	\$2,743,387	\$114,925,265
NNG TOTAL	\$3,933,199	\$3,897,143	\$4,360,585	\$8,949,806	\$17,461,557	\$21,783,162	\$23,960,865	\$19,024,863	\$17,115,562	\$7,182,222	\$4,403,545	\$3,363,344	\$135,435,852

Notes:

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2019

GAS COST RECOVERY AND PURCHASES COMPARISON

Schedule D.2

Page 1 of 2

NNG

8/27/2019

Class	Jul-18			Aug-18			Sep-18			Oct-18		
	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	\$455,270	\$ 589,702	\$134,432	\$461,633	\$ 589,709	\$128,076	\$685,764	\$ 593,092	(\$92,673)	\$1,769,511	\$ 631,207	(\$1,138,304)
GS-Comm	\$1,576,030	\$2,822,342	\$1,246,312	\$1,587,609	\$2,774,675	\$1,187,066	\$2,386,144	\$3,175,183	\$789,038	\$6,584,906	\$6,819,812	\$234,906
GS-TOTAL	\$2,031,301	\$3,412,044	\$1,380,743	\$2,049,242	\$3,364,384	\$1,315,142	\$3,071,909	\$3,768,274	\$696,366	\$8,354,417	\$7,451,019	(\$903,398)
SVI/LVI	\$287,645	\$516,287	\$228,642	\$302,036	\$527,870	\$225,834	\$441,586	\$587,608	\$146,022	\$1,435,777	\$1,486,996	\$51,219
SVJ/LVJ/ SLV-Comm	\$1,217	\$2,198	\$981	\$1,259	\$2,220	\$961	\$1,520	\$2,033	\$514	\$8,789	\$9,121	\$332
SVJ/LVJ/ SLV-Dem	\$2,670	\$2,670	\$0	\$2,670	\$2,670	\$0	\$2,670	\$2,670	\$0	\$2,670	\$2,670	\$0
TOTAL-Dem	\$457,940	\$592,371	\$134,432	\$464,303	\$592,379	\$128,076	\$688,434	\$595,761	(\$92,673)	\$1,772,181	\$633,877	(\$1,138,304)
TOTAL-Com	\$1,864,893	\$3,340,828	\$1,475,935	\$1,890,903	\$3,304,764	\$1,413,861	\$2,829,250	\$3,764,823	\$935,573	\$8,029,472	\$8,315,929	\$286,457
NNG TOTAL	\$2,322,832	\$3,933,199	\$1,610,367	\$2,355,206	\$3,897,143	\$1,541,937	\$3,517,684	\$4,360,585	\$842,901	\$9,801,653	\$8,949,806	(\$851,846)

Class	Nov-18			Dec-18			Jan-19			Feb-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	\$3,710,469	\$ 3,274,454	(\$436,016)	\$4,418,434	\$ 3,261,152	(\$1,157,282)	\$5,429,612	\$ 3,165,724	(\$2,263,888)	\$5,302,531	\$ 3,337,091	(\$1,965,440)
GS-Comm	\$12,371,461	\$12,467,612	\$96,151	\$17,563,759	\$17,141,086	(\$422,673)	\$20,224,656	\$19,345,375	(\$879,281)	\$17,243,848	\$14,670,158	(\$2,573,689)
GS-TOTAL	\$16,081,930	\$15,742,066	(\$339,864)	\$21,982,193	\$20,402,238	(\$1,579,955)	\$25,654,268	\$22,511,099	(\$3,143,170)	\$22,546,378	\$18,007,249	(\$4,539,129)
SVI/LVI	\$1,697,475	\$1,710,668	\$13,193	\$1,405,233	\$1,371,416	(\$33,817)	\$1,504,601	\$1,439,188	(\$65,414)	\$1,185,549	\$1,008,602	(\$176,946)
SVJ/LVJ/ SLV-Comm	\$5,506	\$5,555	\$49	\$6,389	\$6,240	(\$149)	\$7,637	\$7,311	(\$327)	\$6,746	\$5,743	(\$1,002)
SVJ/LVJ/ SLV-Dem	\$3,268	\$3,268	\$0	\$3,268	\$3,268	\$0	\$3,268	\$3,268	\$0	\$3,268	\$3,268	\$0
TOTAL-Dem	\$3,713,737	\$3,277,722	(\$436,016)	\$4,421,702	\$3,264,420	(\$1,157,282)	\$5,432,880	\$3,168,992	(\$2,263,888)	\$5,305,799	\$3,340,359	(\$1,965,440)
TOTAL-Com	\$14,074,442	\$14,183,835	\$109,393	\$18,975,381	\$18,518,742	(\$456,639)	\$21,736,895	\$20,791,673	(\$945,021)	\$18,436,142	\$15,684,504	(\$2,751,638)
NNG TOTAL	\$17,788,179	\$17,461,557	(\$326,623)	\$23,397,083	\$21,783,162	(\$1,613,922)	\$27,169,775	\$23,960,865	(\$3,208,910)	\$23,741,941	\$19,024,863	(\$4,717,078)

Class	Mar-19			Apr-19			May-19			Jun-19			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	\$4,122,711	\$ 3,331,819	(\$790,893)	\$2,267,185	\$ 647,495	(\$1,619,690)	\$1,393,064	\$ 435,632	(\$957,433)	\$392,955	\$ 616,689	\$223,734	\$30,409,141	\$20,473,765	(\$9,935,376)
GS-Comm	\$12,360,324	\$12,800,849	\$440,525	\$6,862,707	\$5,994,984	(\$867,722)	\$3,681,127	\$3,566,268	(\$114,859)	\$1,044,484	\$2,201,331	\$1,156,847	\$103,487,054	\$103,779,675	\$292,621
GS-TOTAL	\$16,483,035	\$16,132,668	(\$350,368)	\$9,129,891	\$6,642,479	(\$2,487,412)	\$5,074,191	\$4,001,899	(\$1,072,292)	\$1,437,439	\$2,818,020	\$1,380,581	\$133,896,195	\$124,253,440	(\$9,642,755)
SVI/LVI	\$940,870	\$974,403	\$33,533	\$610,982	\$533,730	(\$77,253)	\$409,221	\$396,452	(\$12,769)	\$255,651	\$538,804	\$283,153	\$10,476,626	\$11,092,023	\$615,397
SVJ/LVJ/ SLV-Comm	\$5,038	\$5,223	\$184	\$3,137	\$2,745	(\$392)	\$1,982	\$1,926	(\$56)	\$1,529	\$3,252	\$1,723	\$50,749	\$53,566	\$2,817
SVJ/LVJ/ SLV-Dem	\$3,268	\$3,268	\$0	\$3,268	\$3,268	\$0	\$3,268	\$3,268	\$0	\$3,268	\$3,268	\$0	\$36,823	\$36,823	\$0
TOTAL-Dem	\$4,126,980	\$3,335,087	(\$790,893)	\$2,270,453	\$650,763	(\$1,619,690)	\$1,396,333	\$438,900	(\$957,433)	\$396,223	\$619,957	\$223,734	\$30,445,964	\$20,510,588	(\$9,935,376)
TOTAL-Com	\$13,306,233	\$13,780,475	\$474,242	\$7,476,827	\$6,531,459	(\$945,367)	\$4,092,329	\$3,964,645	(\$127,684)	\$1,301,664	\$2,743,387	\$1,441,723	\$114,014,429	\$114,925,265	\$910,835
NNG TOTAL	\$17,432,212	\$17,115,562	(\$316,650)	\$9,747,279	\$7,182,222	(\$2,565,057)	\$5,488,662	\$4,403,545	(\$1,085,117)	\$1,697,886	\$3,363,344	\$1,665,458	\$144,460,393	\$135,435,852	(\$9,024,541)

Notes:

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2019

Schedule D.2

Page 2 OF 2

NNG

8/27/2019

NNG

Annual

SUMMARY

NNGD2SUM

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

GS-Demand	\$30,409,141	\$20,473,765	(\$9,935,376)
GS-Commodity	\$103,487,054	\$103,779,675	\$292,621
GS TOTAL	\$133,896,195	\$124,253,440	(\$9,642,755)
SVI/LVI	\$10,476,626	\$11,092,023	\$615,397
SVJ/LVJ/ SLV-Commodity	\$50,749	\$53,566	\$2,817
SVJ/LVJ/ SLV-Demand	\$36,823	\$36,823	\$0

TOTAL-Dem	\$30,445,964	\$20,510,588	(\$9,935,376)
TOTAL-Com	\$114,014,429	\$114,925,265	\$910,835
NNG TOTAL	\$144,460,393	\$135,435,852	(\$9,024,541)

Notes:

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2019
RECOVERY BY TYPE, BY MONTH, BY CLASS

Schedule D.3

NNG

Page 1 of 6

8/27/2019 10:00

NNG		NNGD3R																								8/27/2019 10:00	
Recovery	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 Annual		
	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$			
GS																											
TF12-B (Max Rate) Winter	\$0.1062	51,617	\$0.1062	52,338	\$0.1062	77,750	\$0.1062	200,621	\$0.1004	324,872	\$0.1004	386,859	\$0.1004	475,393	\$0.1004	464,266	\$0.1004	360,966	\$0.1004	198,505	\$0.1004	121,971	\$0.1004	34,405	2,749,564		
TF12-B (Max Rate) Summer	\$0.0827	40,195	\$0.0827	40,757	\$0.0827	60,545	\$0.0827	156,228	\$0.0781	252,714	\$0.0781	300,933	\$0.0781	369,803	\$0.0781	361,147	\$0.0781	280,792	\$0.0781	154,415	\$0.0781	94,880	\$0.0781	26,764	2,139,172		
TF12-V (Max Rate)	\$0.1395	67,802	\$0.1395	68,750	\$0.1395	102,129	\$0.1395	263,528	\$0.1520	491,839	\$0.1520	585,682	\$0.1520	719,718	\$0.1520	702,873	\$0.1520	546,483	\$0.1520	300,525	\$0.1520	184,657	\$0.1520	52,088	4,086,074		
TF5 (Max Rate)	\$0.1160	56,380	\$0.1160	57,168	\$0.1160	84,924	\$0.1160	219,134	\$0.1160	375,351	\$0.1160	446,968	\$0.1160	549,259	\$0.1160	536,403	\$0.1160	417,053	\$0.1160	229,348	\$0.1160	140,922	\$0.1160	39,751	3,152,662		
TF12B (Discount-Winter)	\$0.0197	9,575	\$0.0197	9,709	\$0.0197	14,423	\$0.0197	37,215	\$0.0197	63,745	\$0.0197	75,908	\$0.0197	93,279	\$0.0197	91,096	\$0.0197	70,827	\$0.0197	38,950	\$0.0197	23,932	\$0.0197	6,751	535,409		
TF5 (Discount)	\$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		
TFX12 (Max Rate)	\$0.0528	25,663	\$0.0528	26,021	\$0.0528	38,655	\$0.0528	99,744	\$0.0793	256,597	\$0.0793	305,557	\$0.0793	375,485	\$0.0793	366,696	\$0.0793	285,106	\$0.0793	156,787	\$0.0793	96,337	\$0.0793	27,175	2,059,824		
TFX Apr (Max Rate)	\$0.0005	243	\$0.0005	246	\$0.0005	366	\$0.0005	945	\$0.0005	1,618	\$0.0005	1,927	\$0.0005	2,367	\$0.0005	2,312	\$0.0005	1,798	\$0.0005	989	\$0.0005	607	\$0.0005	171	13,589		
TFX Oct (Max Rate)	\$0.0005	243	\$0.0005	246	\$0.0005	366	\$0.0005	945	\$0.0005	1,618	\$0.0005	1,927	\$0.0005	2,367	\$0.0005	2,312	\$0.0005	1,798	\$0.0005	989	\$0.0005	607	\$0.0005	171	13,589		
TFX5 (Max Rate)	\$0.2645	128,557	\$0.2645	130,353	\$0.2645	193,642	\$0.2645	499,664	\$0.2485	804,091	\$0.2485	957,514	\$0.2485	1,176,645	\$0.2485	1,149,105	\$0.2485	893,428	\$0.2485	491,319	\$0.2485	301,889	\$0.2485	85,157	6,811,365		
TFX5 (Discount)	\$0.0038	1,847	\$0.0038	1,873	\$0.0038	2,782	\$0.0038	7,179	\$0.0038	12,296	\$0.0038	14,642	\$0.0038	17,993	\$0.0038	17,572	\$0.0038	13,662	\$0.0038	7,513	\$0.0038	4,616	\$0.0038	1,302	103,277		
TFX12 (Discount)	\$0.0032	1,555	\$0.0032	1,577	\$0.0032	2,343	\$0.0032	6,045	\$0.0032	10,354	\$0.0032	12,330	\$0.0032	15,152	\$0.0032	14,797	\$0.0032	11,505	\$0.0032	6,327	\$0.0032	3,888	\$0.0032	1,097	86,970		
TFX12 (Discount)	\$0.0229	11,130	\$0.0229	11,286	\$0.0229	16,765	\$0.0229	43,260	\$0.0229	74,099	\$0.0229	88,238	\$0.0229	108,431	\$0.0229	105,893	\$0.0229	82,332	\$0.0229	45,276	\$0.0229	27,820	\$0.0229	7,847	622,379		
TFX12 (Discount)	\$0.0459	22,309	\$0.0459	22,621	\$0.0459	33,604	\$0.0459	86,709	\$0.0459	148,522	\$0.0459	176,861	\$0.0459	217,336	\$0.0459	212,249	\$0.0459	165,024	\$0.0459	90,751	\$0.0459	55,761	\$0.0459	15,729	1,247,476		
TFX5 (Discount)	\$0.0004	194	\$0.0004	197	\$0.0004	293	\$0.0004	756	\$0.0004	1,294	\$0.0004	1,541	\$0.0004	1,894	\$0.0004	1,850	\$0.0004	1,438	\$0.0004	791	\$0.0004	486	\$0.0004	137	10,871		
TFX5 (Discount)	\$0.0028	1,361	\$0.0028	1,380	\$0.0028	2,050	\$0.0028	5,289	\$0.0028	9,060	\$0.0028	10,789	\$0.0028	13,258	\$0.0028	12,948	\$0.0028	10,067	\$0.0028	5,536	\$0.0028	3,402	\$0.0028	960	76,099		
TFX5 (Discount)	\$0.0709	34,460	\$0.0709	34,942	\$0.0709	51,906	\$0.0709	133,937	\$0.0709	229,417	\$0.0709	273,190	\$0.0709	335,711	\$0.0709	327,853	\$0.0709	254,906	\$0.0709	140,179	\$0.0709	86,133	\$0.0709	24,296	1,926,929		
TFX5 (Max Rate)	\$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		
TFX12 (Rochester)									\$0.1974	638,743	\$0.1974	760,616	\$0.1974	934,687	\$0.1974	912,810	\$0.1974	709,709	\$0.1974	390,287	\$0.1974	239,811	\$0.1974	67,646	4,654,309		
Windom	\$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	\$0.0044	2,139	\$0.0044	2,168	\$0.0044	3,221	\$0.0044	8,312	\$0.0044	14,237	\$0.0044	16,954	\$0.0044	20,834	\$0.0044	20,346	\$0.0044	15,819	\$0.0044	8,699	\$0.0044	5,345	\$0.0044	1,508	119,584		
NNG Zone GDD Call Option	\$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		
Total Demand	\$0.9367	455,270	\$0.9367	461,633	\$0.9367	685,764	\$0.9367	1,769,511	\$1.1467	3,710,469	\$1.1467	4,418,434	\$1.1467	5,429,612	\$1.1467	5,302,531	\$1.1467	4,122,711	\$1.1467	2,267,185	\$1.1467	1,393,064	\$1.1467	392,955	30,409,141		
COMM COST OF GAS	\$3.2206	1,576,030	\$3.1924	1,587,609	\$3.2415	2,386,144	\$3.4787	6,584,906	\$3.8193	12,371,461	\$4.5550	17,563,759	\$4.2682	20,224,656	\$3.7262	17,243,848	\$3.4347	12,360,324	\$3.4654	6,862,707	\$3.0214	3,681,127	\$3.0201	1,044,484	103,487,054		
DDVC																									0		
Total Commodity	\$3.2206	1,576,030	\$3.1924	1,587,609	\$3.2415	2,386,144	\$3.4787	6,584,906	\$3.8193	12,371,461	\$4.5550	17,563,759	\$4.2682	20,224,656	\$3.7262	17,243,848	\$3.4347	12,360,324	\$3.4654	6,862,707	\$3.0214	3,681,127	\$3.0201	1,044,484	103,487,054		
Total Recovery		2,031,301		2,049,242		3,071,909		8,354,417		16,081,930		21,982,193		25,654,268		22,546,378		16,483,035		9,129,891		5,074,191		1,437,439	133,896,195		
SVILVI																											
COMM COST OF GAS	\$3.2206	287,645	\$3.1924	302,036	\$3.2415	441,586	\$3.4787	1,435,777	\$3.8193	1,697,475	\$4.5550	1,405,233	\$4.2682	1,504,601	\$3.7262	1,185,549	\$3.4347	940,870	\$3.4654	610,982	\$3.0214	409,221	\$3.0201	255,651	10,476,626		
SVILVI - Commodity	\$3.2206	287,645	\$3.1924	302,036	\$3.2415	441,586	\$3.4787	1,435,777	\$3.8193	1,697,475	\$4.5550	1,405,233	\$4.2682	1,504,601	\$3.7262	1,185,549	\$3.4347	940,870	\$3.4654	610,982	\$3.0214	409,221	\$3.0201	255,651	10,476,626		
SVJLVJ/SLV - COMM																											
COMM COST OF GAS	\$3.2206	1,217	\$3.1924	1,259	\$3.2415	1,520	\$3.4787	8,789	\$3.8193	5,506	\$4.5550	6,389	\$4.2682	7,637	\$3.7262	6,746	\$3.4347	5,038	\$3.4654	3,137	\$3.0214	1,982	\$3.0201	1,529	50,749		
SVJLVJ/SLV - Comm	\$3.2206	1,217	\$3.1924	1,259	\$3.2415	1,520	\$3.4787	8,789	\$3.8193	5,506	\$4.5550	6,389	\$4.2682	7,637	\$3.7262	6,746	\$3.4347	5,038	\$3.4654	3,137	\$3.0214	1,982	\$3.0201	1,529	50,749		

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2019
RECOVERY BY TYPE, BY MONTH, BY CLASS

Schedule D.3

NNG

Page 2 of 6

8/27/2019 10:00

NNG		NNGD3R																								8/27/2019 10:00	
Recovery	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 Annual		
	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$			
SVJ/LVJ/SLV - Dem																											
TF12-B (Max Rate) Winter	\$3.1860	303	\$3.1860	303	\$3.1860	303	\$3.1860	303	\$3.0120	286	\$3.0120	286	\$3.0120	286	\$3.0120	286	\$3.0120	286	\$3.0120	286	\$3.0120	286	\$3.0120	286	\$3.0120	286	3,500
TF12-B (Max Rate) Summer	\$2.4810	236	\$2.4810	236	\$2.4810	236	\$2.4810	236	\$2.3430	223	\$2.3430	223	\$2.3430	223	\$2.3430	223	\$2.3430	223	\$2.3430	223	\$2.3430	223	\$2.3430	223	\$2.3430	223	2,723
TF12-V (Max Rate)	\$4.1850	398	\$4.1850	398	\$4.1850	398	\$4.1850	398	\$4.5600	433	\$4.5600	433	\$4.5600	433	\$4.5600	433	\$4.5600	433	\$4.5600	433	\$4.5600	433	\$4.5600	433	\$4.5600	433	5,056
TF5 (Max Rate)	\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4800	331	\$3.4800	331	3,967
TF12B (Discount-Winter)	\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5910	56	\$0.5910	56	674
TF5 (Discount)	\$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	\$0.0000	0	0
TFX12 (Max Rate)	\$1.5840	150	\$1.5840	150	\$1.5840	150	\$1.5840	150	\$2.3790	226	\$2.3790	226	\$2.3790	226	\$2.3790	226	\$2.3790	226	\$2.3790	226	\$2.3790	226	\$2.3790	226	\$2.3790	226	2,410
TFX Apr (Max Rate)	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	17
TFX Oct (Max Rate)	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	\$0.0150	1	17
TFX5 (Max Rate)	\$7.9350	754	\$7.9350	754	\$7.9350	754	\$7.9350	754	\$7.4550	708	\$7.4550	708	\$7.4550	708	\$7.4550	708	\$7.4550	708	\$7.4550	708	\$7.4550	708	\$7.4550	708	\$7.4550	708	8,681
TFX5 (Discount)	\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1140	11	\$0.1140	11	130
TFX12 (Discount)	\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0960	9	\$0.0960	9	109
TFX12 (Discount)	\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6870	65	\$0.6870	65	783
TFX12 (Discount)	\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3770	131	\$1.3770	131	1,570
TFX5 (Discount)	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	14
TFX5 (Discount)	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	96
TFX5 (Discount)	\$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	\$2.1270	202	2,425
TFX5 (Max Rate)	\$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	\$0.0000	0	0
TFX12 (Rochester)	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$0.0000	0	\$5.9220	563	\$5.9220	563	\$5.9220	563	\$5.9220	563	\$5.9220	563	\$5.9220	563	\$5.9220	563	\$5.9220	563	\$5.9220	563	4,501
Windom	\$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	\$0.0000	0	0
Northwestern Energy	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	150
NNG Zone GDD Call Option	\$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	\$0.0000	0	0
Demand Recovery	\$28.1010	2,670	\$28.1010	2,670	\$28.1010	2,670	\$28.1010	2,670	\$34.4010	3,268	\$34.4010	3,268	\$34.4010	3,268	\$34.4010	3,268	\$34.4010	3,268	\$34.4010	3,268	\$34.4010	3,268	\$34.4010	3,268	\$34.4010	3,268	36,823
TOTAL																											
TF12-B (Max Rate) Winter		51,920		52,641		78,052		200,924		325,158		387,145		475,679		464,552		361,253		198,791		122,257		34,692		2,753,064	
TF12-B (Max Rate) Summer		40,431		40,993		60,781		156,463		252,937		301,155		370,025		361,370		281,014		154,637		95,102		26,986		2,141,895	
TF12-V (Max Rate)		68,200		69,147		102,526		263,926		492,272		586,116		720,152		703,306		546,916		300,958		185,090		52,521		4,091,130	
TF5 (Max Rate)		56,711		57,499		85,255		219,465		375,681		447,299		549,589		536,734		417,383		229,679		141,253		40,082		3,156,630	
TF12B (Discount-Winter)		9,631		9,765		14,479		37,271		63,801		75,964		93,335		91,152		70,883		39,006		23,989		6,807		536,083	
TF5 (Discount)		0		0		0		0		0		0		0		0		0		0		0		0		0	
TFX12 (Max Rate)		25,813		26,172		38,806		99,894		256,823		305,783		375,711		366,922		285,332		157,013		96,563		27,401		2,062,233	
TFX Apr (Max Rate)		244		248		367		946		1,619		1,928		2,369		2,314		1,799		990		609		173		13,606	
TFX Oct (Max Rate)		244		248		367		946		1,619		1,928		2,369		2,314		1,799		990		609		173		13,606	
TFX5 (Max Rate)		129,310		131,107		194,396		500,418		804,800		958,222		1,177,353		1,149,813		894,136		492,027		302,598		85,865		6,820,046	
TFX5 (Discount)		1,858		1,884		2,793		7,189		12,307		14,653		18,004		17,583		13,673		7,524		4,627		1,313		103,407	
TFX12 (Discount)		1,564		1,586		2,352		6,054		10,364		12,339		15,161		14,806		11,514		6,336		3,897		1,106		87,079	
TFX12 (Discount)		11,195		11,351		16,831		43,325		74,165		88,303		108,497		105,959		82,397		45,342		27,885		7,913		623,162	
TFX12 (Discount)		22,440		22,752		33,735		86,840		148,653		176,991		217,467		212,380		165,154		90,881		55,892		15,860		1,249,046	
TFX5 (Discount)		196		198		294		757		1,295		1,542		1,895		1,851		1,439		792		487		138		10,885	
TFX5 (Discount)		1,369		1,388		2,058		5,297		9,068		10,797		13,266		12,956		10,075		5,544		3,410		967		76,195	
TFX5 (Discount)		34,662		35,144		52,108		134,139		229,619		273,392		335,913		328,055		255,108		140,381		86,335		24,498		1,929,354	
TFX5 (Max Rate)		0		0		0		0		0		0		0		0		0		0		0		0		0	
TFX5 (Max Rate)		0		0		0		0		0		0		0		0		0		0		0		0		0	
TFX5 (Max Rate)		0		0		0		0		0		0		0		0		0		0		0		0		0	
Windom		0		0		0		0		0		0		0		0		0		0		0		0		0	
Northwestern Energy		2,151		2,181		3,234		8,325		14,250		16,967		20,846		20,359		15,832	</								

12 MONTHS ENDED JUNE 2019

Schedule D.3

NING

8/27/2019 10:00

Page 3 of 6

NNGD3C

COSTS BY TYPE, BY MONTH, BY CLASS

NNG		COST OF GAS MONTHLY BREAKDOWN																								Page 3 of 6	
Cost	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 Annual		
	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$			
GS	2,785,384	626,650	2,737,733	626,650	3,141,808	626,656	6,812,865	638,154	12,167,021	3,075,045	16,827,268	3,575,030	19,121,490	3,389,680	14,437,113	12,557,562	3,575,106	5,974,090	668,389	3,508,380	493,519	2,181,104	656,516				
TF12-B (Max Rate) Winter	11.34%	71,048	11.34%	71,048	11.34%	71,048	11.34%	71,048	8.76%	313,015	8.76%	313,014	8.76%	286,779	8.76%	312,585	8.76%	313,021	8.76%	58,521	8.76%	43,210	8.76%	57,517	1,993,159		
TF12-B (Max Rate) Summer	8.83%	55,328	8.83%	55,328	8.83%	55,328	8.83%	55,328	6.81%	243,491	6.81%	243,490	6.81%	230,861	6.81%	243,157	6.81%	243,495	6.81%	45,523	6.81%	33,613	6.81%	44,742	1,550,692		
TF12-B (Max Rate)	14.89%	93,325	14.89%	93,325	14.89%	93,325	14.89%	93,328	13.26%	473,887	13.26%	473,886	13.26%	449,307	13.26%	473,237	13.26%	473,896	13.26%	88,598	13.26%	65,418	13.26%	87,077	2,960,326		
TF5 (Max Rate)	12.38%	77,604	12.38%	77,604	12.38%	77,604	12.38%	77,606	10.12%	361,651	10.12%	361,649	10.12%	342,892	10.12%	361,154	10.12%	361,657	10.12%	67,614	10.12%	49,924	10.12%	66,453	2,284,838		
TF12B (Discount-Winter)	2.10%	13,179	2.10%	13,179	2.10%	13,180	2.10%	13,421	1.72%	61,418	1.72%	61,418	1.72%	58,233	1.72%	61,334	1.72%	61,419	1.72%	11,483	1.72%	8,479	1.72%	11,286	388,029		
TF5 (Discount)	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		
TFX12 (Max Rate)	5.64%	35,323	5.64%	35,323	5.64%	35,324	5.64%	35,972	6.92%	247,232	6.92%	247,231	6.92%	234,408	6.92%	246,893	6.92%	247,236	6.92%	46,222	6.92%	34,129	6.92%	45,429	1,490,723		
TFX Apr (Max Rate)	0.05%	334	0.05%	334	0.05%	335	0.05%	341	0.04%	1,559	0.04%	1,559	0.04%	1,478	0.04%	1,557	0.04%	1,559	0.04%	291	0.04%	215	0.04%	286	9,848		
TFX Oct (Max Rate)	0.05%	334	0.05%	334	0.05%	335	0.05%	341	0.04%	1,559	0.04%	1,559	0.04%	1,478	0.04%	1,557	0.04%	1,559	0.04%	291	0.04%	215	0.04%	286	9,848		
TFX5 (Max Rate)	28.24%	176,950	28.24%	176,950	28.24%	176,954	28.24%	180,198	21.67%	774,744	21.67%	774,741	21.67%	734,558	21.67%	773,680	21.67%	774,757	21.67%	144,846	21.67%	106,950	21.67%	142,359	4,937,687		
TFX5 (Discount)	0.41%	2,542	0.41%	2,542	0.41%	2,542	0.41%	2,589	0.33%	11,847	0.33%	11,847	0.33%	11,233	0.33%	11,831	0.33%	11,847	0.33%	2,215	0.33%	1,635	0.33%	2,177	74,844		
TFX12 (Discount)	0.34%	2,141	0.34%	2,141	0.34%	2,141	0.34%	2,180	0.28%	9,977	0.28%	9,977	0.28%	9,459	0.28%	9,963	0.28%	9,977	0.28%	1,865	0.28%	1,377	0.28%	1,833	63,030		
TFX12 (Discount)	2.44%	15,320	2.44%	15,320	2.44%	15,320	2.44%	15,601	2.00%	71,395	2.00%	71,395	2.00%	67,692	2.00%	71,297	2.00%	71,396	2.00%	13,348	2.00%	9,856	2.00%	13,119	451,059		
TFX12 (Discount)	4.90%	30,707	4.90%	30,707	4.90%	30,708	4.90%	31,271	4.00%	143,102	4.00%	143,101	4.00%	135,679	4.00%	142,905	4.00%	143,104	4.00%	26,754	4.00%	19,755	4.00%	26,295	904,087		
TFX5 (Discount)	0.04%	268	0.04%	268	0.04%	268	0.04%	273	0.03%	1,247	0.03%	1,247	0.03%	1,182	0.03%	1,245	0.03%	1,247	0.03%	233	0.03%	172	0.03%	229	7,870		
TFX5 (Discount)	0.30%	1,873	0.30%	1,873	0.30%	1,873	0.30%	1,908	0.24%	8,730	0.24%	8,729	0.24%	8,277	0.24%	8,718	0.24%	8,730	0.24%	1,632	0.24%	1,205	0.24%	1,604	55,151		
TFX5 (Discount)	7.57%	47,432	7.57%	47,432	7.57%	47,433	7.57%	48,303	6.18%	221,044	6.18%	221,043	6.18%	209,578	6.18%	220,740	6.18%	221,047	6.18%	41,326	6.18%	30,514	6.18%	40,617	1,396,509		
TFX5 (Max Rate)	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		
TFX12 (Rochester)	0.00%	0	0.00%	0	0.00%	0	0.00%	0	17.21%	615,430	17.21%	615,428	17.21%	583,508	17.21%	614,585	17.21%	615,441	17.21%	115,061	17.21%	84,967	17.21%	113,086	3,357,495		
Windom	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	0.47%	2,944	0.47%	2,944	0.47%	2,944	0.47%	2,998	0.38%	13,718	0.38%	13,718	0.38%	13,006	0.38%	13,699	0.38%	13,718	0.38%	2,565	0.38%	1,894	0.38%	2,521	86,666		
NNG Zone GDD Call Option	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		
Total Demand	100%	589,702	100%	589,709	100%	593,092	100%	631,207	100%	3,274,454	100%	3,261,152	100%	3,165,724	100%	3,337,091	100%	3,331,819	100%	647,495	100%	435,632	100%	616,689	20,473,765		
COMM COST OF GAS	2,822,342		2,774,675		3,175,183		6,819,709		12,467,612		17,141,086		19,321,597		14,670,158		12,800,849		5,994,984		3,566,268		2,201,331		103,779,675		
Capacity Release	(36,948)		(36,941)		(33,574)		(6,947)		(300,591)		(313,879)		(223,885)		(233,045)		(243,287)		(20,895)		(57,887)		(40,227)		(1,548,106)		
DDVC's					102								23,778					9,403						33,283			
					0								0					0						0			
					0								0					0						0			
					0								0					0						0			
					0								0					0						0			
					0								0					0						0			
					0								0					0						0			
Total Commodity	2,822,342		2,774,675		3,175,183		6,819,812		12,467,612		17,141,086		19,345,375		14,670,158		12,800,849		5,994,984		3,566,268		2,201,331		103,779,675		
Total GS Costs	3,412,044		3,364,384		3,768,274		7,451,019		15,742,066		20,402,238		22,511,099		18,007,249		16,132,668		6,642,479		4,001,899		2,818,020		124,253,440		
SVILVI	516,287		527,870		587,608		1,486,996		1,710,668		1,371,416		1,439,188		1,008,602		974,403		533,730		396,452		538,804				
COMM COST OF GAS	516,287		527,870		587,608		1,486,996		1,710,668		1,371,416		1,439,188		1,008,602		974,403		533,730		396,452		538,804		11,092,023		
PRODUCER DEMAND																								0			
Capacity Release																								0			
DDVCs																								0			
STORAGE																								0			
SVILVI - Commodity	516,287		527,870		587,608		1,486,996		1,710,668		1,371,416		1,439,188		1,008,602		974,403		533,730		396,452		538,804		11,092,023		
SVJLVJ/SLV - COMM	2,198		2,220		2,033		9,121		5,555		6,240		7,311		5,743		5,223		2,745		1,926		3,252		53,566		
COMM COST OF GAS	2,198		2,220		2,033		9,121		5,555		6,240		7,311		5,743		5,223		2,745		1,926		3,252		53,566		
PRODUCER DEMAND																								0			
Capacity Release																								0			
DDVCs																								0			
STORAGE																								0			
SVJLVJ/SLV - Comm	0	2,198	0	2,220	0	2,033	9,121	0	5,555	0	6,240	0	7,311	0	5,743	0	5,223	0	2,745	0	1,926	0	3,252	53,566			

12 MONTHS ENDED JUNE 2019

Schedule D.3

NING

8/27/2019 10:00

Page 4 of 6

NNGD3C

COSTS BY TYPE, BY MONTH, BY CLASS

NNG		Page 4 of 6																							
Cost	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 Annual
	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	factors	\$	
SVJLVJ/SLV - Dem	2,837		2,837		2,821		2,699		3,568		3,583		3,499		3,496		3,507		3,374		3,702		3,481		
TF12-B (Max Rate) Winter	\$3,1860	322	\$3,1860	322	\$3,1860	320	\$3,1860	306	\$3,0120	377	\$3,0120	379	\$3,0120	370	\$3,0120	370	\$3,0120	371	\$3,0120	357	\$3,0120	382	\$3,0120	368	4,253
TF2-B (Max Rate) Summer	\$2,4810	250	\$2,4810	250	\$2,4810	249	\$2,4810	238	\$2,3430	294	\$2,3430	289	\$2,3430	288	\$2,3430	288	\$2,3430	289	\$2,3430	278	\$2,3430	305	\$2,3430	286	3,309
TF12-V (Max Rate)	\$4,1850	422	\$4,1850	422	\$4,1850	420	\$4,1850	402	\$4,5600	571	\$4,5600	574	\$4,5600	560	\$4,5600	560	\$4,5600	561	\$4,5600	540	\$4,5600	593	\$4,5600	557	6,184
TF5 (Max Rate)	\$3,4800	351	\$3,4800	351	\$3,4800	349	\$3,4800	334	\$3,4800	436	\$3,4800	438	\$3,4800	428	\$3,4800	427	\$3,4800	429	\$3,4800	412	\$3,4800	452	\$3,4800	425	4,833
TF12B (Discount-Winter)	\$0.5910	60	\$0.5910	60	\$0.5910	59	\$0.5910	57	\$0.5910	74	\$0.5910	74	\$0.5910	73	\$0.5910	73	\$0.5910	73	\$0.5910	70	\$0.5910	77	\$0.5910	72	821
TF5 (Discount)	\$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
TFX12 (Max Rate)	\$1.5840	160	\$1.5840	160	\$1,5840	159	\$1.5840	152	\$2.3790	298	\$2.3790	299	\$2.3790	292	\$2.3790	292	\$2.3790	293	\$2.3790	282	\$2.3790	309	\$2.3790	291	2,987
TFX Apr (Max Rate)	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	1	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	2	21
TFX Oct (Max Rate)	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	1	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	2	\$0.0150	2	21
TFX5 (Max Rate)	\$7.9350	801	\$7.9350	801	\$7.9350	796	\$7.9350	762	\$7.4550	934	\$7.4550	938	\$7.4550	916	\$7.4550	918	\$7.4550	918	\$7.4550	883	\$7.4550	969	\$7.4550	915	10,545
TFX5 (Discount)	\$0.1140	12	\$0.1140	12	\$0.1140	11	\$0.1140	11	\$0.1140	14	\$0.1140	14	\$0.1140	14	\$0.1140	14	\$0.1140	14	\$0.1140	14	\$0.1140	15	\$0.1140	14	158
TFX12 (Discount)	\$0.0960	10	\$0.0960	10	\$0.0960	10	\$0.0960	9	\$0.0960	12	\$0.0960	12	\$0.0960	12	\$0.0960	12	\$0.0960	12	\$0.0960	12	\$0.0960	12	\$0.0960	12	133
TFX12 (Discount)	\$0.6870	69	\$0.6870	69	\$0.6870	69	\$0.6870	66	\$0.6870	86	\$0.6870	86	\$0.6870	84	\$0.6870	84	\$0.6870	85	\$0.6870	81	\$0.6870	89	\$0.6870	84	954
TFX12 (Discount)	\$1.3770	139	\$1.3770	139	\$1.3770	138	\$1.3770	132	\$1.3770	173	\$1.3770	173	\$1.3770	169	\$1.3770	169	\$1.3770	170	\$1.3770	163	\$1.3770	179	\$1.3770	168	1,912
TFX5 (Discount)	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	2	\$0.0120	2	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	1	\$0.0120	2	\$0.0120	1	17
TFX5 (Discount)	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	8	\$0.0840	11	\$0.0840	11	\$0.0840	10	\$0.0840	10	\$0.0840	10	\$0.0840	10	\$0.0840	11	\$0.0840	11	117
TFX5 (Discount)	\$2.1270	215	\$2.1270	215	\$2.1270	214	\$2.1270	204	\$2.1270	266	\$2.1270	268	\$2.1270	261	\$2.1270	261	\$2.1270	262	\$2.1270	252	\$2.1270	277	\$2.1270	260	2,954
TFX5 (Max Rate)	\$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
Windom	\$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	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	13	\$0.1320	17	\$0.1320	17	\$0.1320	16	\$0.1320	16	\$0.1320	16	\$0.1320	16	\$0.1320	17	\$0.1320	16	183
NNG Zone GDD Call Option	\$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
Demand Costs	\$28.1010	2,670	\$28.1010	2,670	\$28.1010	2,670	\$28.1010	2,670	\$28.1010	2,670	\$28.4790	2,268	\$28.4790	2,268	\$28.4790	2,268	\$28.4790	2,268	\$28.4790	2,268	\$28.4790	2,268	\$28.4790	2,268	36,873
Capacity Release	(167)		(167)		(151)		(129)		(300)		(315)		(231)		(228)		(239)		(105)		(434)		(213)		(2,580)
TOTAL																									
TF12-B (Max Rate) Winter	71,369		71,369		71,369		72,658		313,393		313,393		297,149		312,955		313,391		58,878		43,602		57,885		1,397,411
TF2-B (Max Rate) Summer	55,577		55,577		55,577		56,580		243,784		243,784		231,149		243,784		45,884		45,028		45,028		57,885		1,397,411
TF12-V (Max Rate)	93,748		93,748		93,748		95,440		474,459		474,459		449,867		473,797		474,457		89,138		66,011		87,634		2,966,506
TF5 (Max Rate)	77,955		77,955		77,955		79,363		362,087		362,087		343,320		361,582		362,086		68,026		50,377		66,879		2,289,671
TF12B (Discount-Winter)	13,239		13,239		13,239		13,478		61,492		61,492		58,305		61,407		11,553		11,553		8,555		11,358		388,849
TF5 (Discount)	0		0		0		0		0		0		0		0		0		0		0		0		0
TFX12 (Max Rate)	35,483		35,483		35,483		36,124		247,530		247,530		234,701		247,185		247,529		46,504		34,439		45,720		1,493,710
TFX Apr (Max Rate)	336		336		336		342		1,561		1,561		1,480		1,559		1,561		293		217		288		9,869
TFX Oct (Max Rate)	336		336		336		342		1,561		1,561		1,480		1,559		1,561		293		217		288		9,869
TFX5 (Max Rate)	177,751		177,751		177,751		180,960		775,678		775,678		735,474		774,595		775,675		145,729		107,919		143,271		4,948,232
TFX5 (Discount)	2,554		2,554		2,554		2,600		11,861		11,861		11,247		11,845		11,861		2,228		1,650		2,191		75,006
TFX12 (Discount)	2,150		2,150		2,150		2,189		9,989		9,989		9,471		9,989		9,975		1,877		1,390		1,645		63,163
TFX12 (Discount)	15,389		15,389		15,389		15,667		71,481		71,481		67,776		71,481		71,481		13,203		9,945		13,203		452,013
TFX12 (Discount)	30,846		30,846		31,403		143,274		143,274		143,274		135,848		143,274		143,274		26,917		19,934		28,463		905,999
TFX5 (Discount)	269		269		269		274		1,249		1,249		1,184		1,247		1,249		235		174		231		7,895
TFX5 (Discount)	1,882		1,882		1,882		1,916		8,740		8,740		8,287		8,740		8,740		1,642		1,216		1,614		55,268
TFX5 (Discount)	47,647		47,647		47,647		48,507		221,310		221,310		209,839		221,001		221,309		41,578		30,791		40,877		1,399,463
TFX5 (Max Rate)	0		0		0		0		0		0		0		0		0		0		0		0		0
TFX12 (Rochester)	0		0		0		0		615,430		615,428		583,506		614,585		615,441		115,061		84,957		113,086		3,357,499
Windom	0		0		0		0		0		0		0		0		0		0		0		0		0
Northwestern Energy	2,957		2,957		2,957		3,010		13,734		13,734		13,022		13,715		13,734		2,580		1,911		2,537		86,850
NNG Zone GDD Call Option	0		0		0		0		0		0		0		0		0		0		0		0		0
Capacity Release	(37,116)		(37,109)		(33,726)		(6,976)		(300,891)		(314,193)		(224,116)		(233,273)		(243,526)		(21,000)		(58,322)		(40,440)		(1,550,686)
Demand Costs	592,371		592,379		595,761		633,877		3,277,722		3,264,420		3,168,992		3,340,359		3,335,087		650,763		438,900		619,957		20,510,588
COMM COST OF GAS	3,340,828		3,304,764		3,764,823		8,315,827		14,183,835		18,518,742		20,768,095		15,684,504		13,780,475		6,522,057		3,964,645		2,743,387		114,891,982
PRODUCER DEMAND	0		0		0		0		0		0		0		0		0		0		0		0		0
DDVCs	0		0		102		0		0		0		23,778		0		0		9,403		0		0		33,283
STORAGE	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
Commodity Costs	3,340,828		3,304,764		3,764,823		8,315,929		14,183,835		18,518,742		20,791,873		15,684,504		13,780,475		6,531,459		3,964,645		2,743,387		114,925,265
Total Costs	3,933,199		3,897,143		4,360,585		8,949,806		17,461,557		21,783,152		23,960,865		19,024,863		17,115,562		7,182,222		4,403,545		3,363,344		135,435,855

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2019

RECOVERY VS COSTS BY TYPE, BY MONTH, BY CLASS

Schedule D.3

Page 5 of 6

NNG

8/27/2019

NNG

GS

	Cost Recovery	Cost Incurred	(Over) Under	(Over) Under	
					%
TF12-B (Max Rate) Winter	2,749,564	1,993,159	(756,405)		
TF12-B (Max Rate) Summer	2,139,172	1,550,692	(588,479)		
TF12-V (Max Rate)	4,086,074	2,960,322	(1,125,752)		
TF5 (Max Rate)	3,152,662	2,284,838	(867,824)		
TF12B (Discount-Winter)	535,409	388,029	(147,381)		
TF5 (Discount)	0	0	0		
TFX12 (Max Rate)	2,059,824	1,490,723	(569,101)		
TFX Apr (Max Rate)	13,589	9,848	(3,741)		
TFX Oct (Max Rate)	13,589	9,848	(3,741)		
TFX5 (Max Rate)	6,811,365	4,937,687	(1,873,678)		
TFX5 (Discount)	103,277	74,848	(28,429)		
TFX12 (Discount)	86,970	63,030	(23,940)		
TFX12 (Discount)	622,379	451,059	(171,320)		
TFX12 (Discount)	1,247,476	904,087	(343,389)		
TFX5 (Discount)	10,871	7,879	(2,992)		
TFX5 (Discount)	76,099	55,151	(20,947)		
TFX5 (Discount)	1,926,929	1,396,509	(530,420)		
TFX5 (Max Rate)	0	0	0		
TFX12 (Rochester)	4,654,309	3,357,495	(1,296,814)		
Windom	0	0	0		
Northwestern Energy	119,584	86,666	(32,917)		
NNG Zone GDD Call Option	0	0	0		
Capacity Release		(1,548,106)	(1,548,106)		
Total Demand	30,409,141	20,473,765	(9,935,376)		-48.53%
COMM COST OF GAS	103,487,054	103,746,392	259,338		
PRODUCER DEMAND	0	0	0		
DDVCs	0	33,283	33,283		
All Credits		0	0		
Total Commodity	103,487,054	103,779,675	292,621		0.28%
Total GS	133,896,195	124,253,440	(9,642,755)		-7.76%
SVI/LVI					
COMM COST OF GAS	10,476,626	11,092,023	615,397		
PRODUCER DEMAND	0	0	0		
UPSTREAM PIPELINE	0	0	0		
DDVCs	0	0	0		
SVI/LVI - Commodity	10,476,626	11,092,023	615,397		5.55%
SVJ/LVJ/SLV - COMM					
COMM COST OF GAS	50,749	53,566	2,817		
PRODUCER DEMAND	0	0	0		
UPSTREAM PIPELINE	0	0	0		
DDVCs	0	0	0		
SVJ/LVJ/SLV - Comm	50,749	53,566	2,817		5.26%

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2019

RECOVERY VS COSTS BY TYPE, BY MONTH, BY CLASS

Schedule D.3

Page 6 of 6

NNG

8/27/2019

NNG

SVJ/LVJ/SLV - Dem

	Cost Recovery	Cost Incurred	(Over) Under	(Over) Under
TF12-B (Max Rate) Winter	3,500	4,253	753	
TF12-B (Max Rate) Summer	2,723	3,309	586	
TF12-V (Max Rate)	5,056	6,184	1,128	
TF5 (Max Rate)	3,967	4,833	866	
TF12B (Discount-Winter)	674	821	147	
TF5 (Discount)	0	0	0	
TFX12 (Max Rate)	2,410	2,987	578	
TFX Apr (Max Rate)	17	21	4	
TFX Oct (Max Rate)	17	21	4	
TFX5 (Max Rate)	8,681	10,545	1,864	
TFX5 (Discount)	130	158	28	
TFX12 (Discount)	109	133	24	
TFX12 (Discount)	783	954	171	
TFX12 (Discount)	1,570	1,912	343	
TFX5 (Discount)	14	17	3	
TFX5 (Discount)	96	117	21	
TFX5 (Discount)	2,425	2,954	529	
TFX5 (Max Rate)	0	0	0	
TFX12 (Rochester)	4,501	0	(4,501)	
Windom	0	0	0	
Northwestern Energy	150	183	33	
NNG Zone GDD Call Option	0	0	0	
Capacity Release		(2,580)		
Demand	36.823	36.823	0	0%

TOTAL

TF12-B (Max Rate) Winter	2,753,064	1,997,411	(755,652)	
TF12-B (Max Rate) Summer	2,141,895	1,554,002	(587,894)	
TF12-V (Max Rate)	4,091,130	2,966,506	(1,124,624)	
TF5 (Max Rate)	3,156,630	2,289,671	(866,958)	
TF12B (Discount-Winter)	536,083	388,849	(147,233)	
TF5 (Discount)	0	0	0	
TFX12 (Max Rate)	2,062,233	1,493,710	(568,523)	
TFX Apr (Max Rate)	13,606	9,869	(3,737)	
TFX Oct (Max Rate)	13,606	9,869	(3,737)	
TFX5 (Max Rate)	6,820,046	4,948,232	(1,871,813)	
TFX5 (Discount)	103,407	75,006	(28,400)	
TFX12 (Discount)	87,079	63,163	(23,916)	
TFX12 (Discount)	623,162	452,013	(171,150)	
TFX12 (Discount)	1,249,046	905,999	(343,046)	
TFX5 (Discount)	10,885	7,895	(2,990)	
TFX5 (Discount)	76,195	55,268	(20,927)	
TFX5 (Discount)	1,929,354	1,399,463	(529,891)	
TFX5 (Max Rate)	0	0	0	
TFX12 (Rochester)	4,658,810	3,357,495	(1,301,314)	
Windom	0	0	0	
Northwestern Energy	119,734	86,850	(32,885)	
NNG Zone GDD Call Option	0	0	0	
Capacity Release		(1,550,686)	(1,550,686)	
Demand	30.445.964	20.510.588	(9.935.376)	-48.44%
COMM COST OF GAS	114,014,429	114,891,982	877,553	
PRODUCER DEMAND	0	0	0	
DDVCs	0	33,283	33,283	
All Credits		0	0	
Commodity	114.014.429	114.925.265	910.835	0.79%
Total	144.460.393	135.435.852	(9.024.541)	-6.66%

Notes:

MINNESOTA ENERGY RESOURCES - NNG**12 MONTHS ENDED JUNE 2019****Schedule F & G****Page 1 of 1**

8/22/2019

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

Northern Natural Gas	\$ (338,379.46)
Northwestern Energy	\$ (1,148.68)
Total Refunds Received	<u>\$ (339,528.14)</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 2019

(OVER) UNDER RECOVERY OF GAS COSTS SUMMARY

Schedule H

Page 1 of 1

NNG

8/27/2019

NNG

1. Total Rate Schedule Purchases	\$135,435,852
(Schedules C & D, Page 1)	
2. Rate Schedule Base Costs Recovered through Sales Rates	
(Schedule A, Page 1)	<u>\$137,735,073</u>
3. Difference to be Collected (Distributed) through PGA	(\$2,299,221)
(Line 1 - Line 2)	
4. Actual PGA Collected (Distributed)	
(Schedule B & E, Page 1 - Schedule A, Page 1)	<u>\$6,725,320</u>
5. Gas Costs (Over) Under Recovered	(\$9,024,541)
(Line 3 - Line 4)	

Notes:

MINNESOTA ENERGY RESOURCES - NNG
12 MONTHS ENDED JUNE 2019
Capacity Release Summary

Schedule I
Page 1 of 1
8/29/2019

Month	NNG		Northern Border Pipeline		Totals	
	Dth	\$	Dth	\$	Dth	\$
Jul-18	872,774	\$ 37,115.75	-	\$ -	872,774	\$ 37,115.75
Aug-18	872,774	\$ 37,108.55	-	\$ -	872,774	\$ 37,108.55
Sep-18	784,620	\$ 33,725.75	-	\$ -	784,620	\$ 33,725.75
Oct-18	135,504	\$ 6,976.20	-	\$ -	135,504	\$ 6,976.20
Nov-18	1,689,750	\$ 300,890.85	-	\$ -	1,689,750	\$ 300,890.85
Dec-18	1,329,280	\$ 314,192.59	-	\$ -	1,329,280	\$ 314,192.59
Jan-19	916,839	\$ 224,115.75	-	\$ -	916,839	\$ 224,115.75
Feb-19	895,120	\$ 233,273.35	-	\$ -	895,120	\$ 233,273.35
Mar-19	1,002,839	\$ 243,525.75	-	\$ -	1,002,839	\$ 243,525.75
Apr-19	420,000	\$ 21,000.00	1,200,000	\$ 790,833.33	1,620,000	\$ 811,833.33
May-19	1,209,000	\$ 58,321.50	1,240,000	\$ 790,833.33	2,449,000	\$ 849,154.83
Jun-19	900,000	\$ 40,440.00	1,200,000	\$ 790,833.33	2,100,000	\$ 831,273.33
Total	11,028,500	\$ 1,550,686.04	3,640,000	\$ 2,372,499.99	14,668,500	\$ 3,923,186.03

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-18	-	\$ -
Aug-18	-	\$ -
Sep-18	-	\$ -
Oct-18	-	\$ -
Nov-18	-	\$ -
Dec-18	-	\$ -
Jan-19	-	\$ -
Feb-19	-	\$ -
Mar-19	-	\$ -
Apr-19	-	\$ -
May-19	-	\$ -
Jun-19	-	\$ -
Total	-	\$ -

MINNESOTA ENERGY RESOURCES - NNG

Schedule J

Page 1 of 1

8/22/2019

PIPELINE DAILY SCHEDULING SUMMARY

NNG 2018-2019

Month	Type	Volume Dth	NNG Amount	Sales Dth	ddvc Dth %
July	Negative ddvc	-	\$ -		
July	Positive ddvc	-	\$ -		
July	total	-	\$ -	574,230	0.00%
August	Negative ddvc	-	\$ -		
August	Positive ddvc	-	\$ -		
August	total	-	\$ -	586,982	0.00%
September	Negative ddvc	-	\$ -		
September	Positive ddvc	-	\$ -		
September	total	-	\$ -	868,061	0.00%
October	Negative ddvc	-	\$ -		
October	Positive ddvc	407	\$ 102.44		
October	total	407	\$ 102.44	2,303,516	0.02%
November	Negative ddvc	-	\$ -		
November	Positive ddvc	-	\$ -		
November	total	-	\$ -	3,681,200	0.00%
December	Negative ddvc	-	\$ -		
December	Positive ddvc	-	\$ -		
December	total	-	\$ -	4,162,859	0.00%
January	Negative ddvc	-	\$ -		
January	Annual Credit Allocation	23,778	\$ 23,778.00		
January	total	23,778	\$ 23,778.00	5,089,035	0.47%
February	Negative ddvc	-	\$ -		
February	Positive ddvc	-	\$ -		
February	total	-	\$ -	4,943,897	0.00%
March	Negative ddvc	-	\$ -		
March	Positive ddvc	-	\$ -		
March	total	-	\$ -	3,870,424	0.00%
April	Negative ddvc	-	\$ -		
April	Positive ddvc	37,282	\$ 9,402.52		
April	total	37,282	\$ 9,402.52	2,154,067	1.73%
May	Negative ddvc	-	\$ -		
May	Positive ddvc	-	\$ -		
May	total	-	\$ -	1,350,553	0.00%
June	Negative ddvc	-	\$ -		
June	Positive ddvc	-	\$ -		
June	total	-	\$ -	1,186,529	0.00%
	total	61,467	\$ 33,282.96	30,771,354	0.20%

Notes:

MERC

Financial Hedging Report

July 1, 2018 through June 30, 2019

I. Futures

Delivery period	Contracts	Average purchase price, \$/MMBTU	Average sale price, \$/MMBTU	Average gain (loss), \$/MMBTU	Net realized gain (loss)
(TRADE SECRET DATA BEGINS... Nov-18 Dec-18 Jan-19 Feb-19 Mar-19					
Futures subtotal					

II. Options

Option type	delivery period	Strike price	Contracts	Premium Paid \$	Sale Proceeds \$	Average gain (loss), \$/MMBTU	Net realized gain (loss)
Call Call Call Call Call							
Options subtotal							
Futures and Options total							

	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
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 2019

CALCULATION OF PRIOR PERIOD REVENUES BILLED AFTER JUNE 30, 2017

Schedule M

Page 1 of 2

8/22/2019

NNG	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Total
GS													
Dth	8					(1)	(0)	-	(46)	8	(0)	(0)	(32)
Demand													
Rate	\$0.9317	\$0.9317	\$0.9317	\$0.9317	\$0.9319	\$0.9319	\$0.9319	\$0.9319	\$0.9319	\$0.9319	\$0.9319	\$0.9319	
Revenue	\$7	\$0	\$0	\$0	\$0	(\$1)	(\$0)	\$0	(\$43)	\$8	(\$0)	(\$0)	(\$30)
Commodity													
Rate	\$2.8907	\$2.9648	\$3.3260	\$3.3533	\$3.0682	\$3.3599	\$3.9364	\$3.4512	\$2.9745	\$3.0764	\$3.1779	\$3.3954	
Revenue	\$22	\$0	\$0	\$0	\$0	(\$3)	(\$1)	\$0	(\$137)	\$26	(\$1)	(\$1)	(\$95)
ACA													
Rate	-\$0.1703	-\$0.1703	\$0.0000	\$0.0301	\$0.0301	\$0.0301	\$0.0301	\$0.0301	\$0.0301	\$0.0301	\$0.0301	\$0.0301	
Revenue	(\$1)	\$0	\$0	\$0	\$0	(\$0)	(\$0)	\$0	(\$1)	\$0	(\$0)	(\$0)	(\$2)
Total \$	\$28	\$0	\$0	\$0	\$0	(\$4)	(\$1)	\$0	(\$181)	\$34	(\$2)	(\$2)	(\$127)
\$ w/o ACA	\$29	\$0	\$0	\$0	\$0	(\$4)	(\$1)	\$0	(\$179)	\$34	(\$2)	(\$2)	(\$124)
	\$0.36521	\$0.37262	\$0.42577	\$0.43151	\$0.40302	\$0.43219	\$0.48984	\$0.44132	\$0.39365	\$0.40384	\$0.41399	\$0.43574	
IS													
Dth													0
Commodity													
Rate	\$2.8907	\$2.9648	\$3.3260	\$3.3533	\$3.0682	\$3.3599	\$3.9364	\$3.4512	\$2.9745	\$3.0764	\$3.1779	\$3.3954	
Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ACA													
Rate	\$0.4343	\$0.4343	\$0.0000	\$0.3906	\$0.3906	\$0.3906	\$0.3906	\$0.3906	\$0.3906	\$0.3906	\$0.3906	\$0.3906	
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	8	-	-	-	-	(1)	(0)	-	(46)	8	(0)	(0)	(32)
Demand	7	0	0	0	0	(1)	(0)	0	(43)	8	(0)	(0)	(30)
Commodity	22	0	0	0	0	(3)	(1)	0	(137)	26	(1)	(1)	(95)
ACA	(1)	0	0	0	0	(0)	(0)	0	(1)	0	(0)	(0)	(2)
Total \$	\$28	\$0	\$0	\$0	\$0	(\$4)	(\$1)	\$0	(\$181)	\$34	(\$2)	(\$2)	(\$127)
\$ w/o ACA	\$29	\$0	\$0	\$0	\$0	(\$4)	(\$1)	\$0	(\$179)	\$34	(\$2)	(\$2)	(\$124)

Notes:

MINNESOTA ENERGY RESOURCES - NNG

12 MONTHS ENDED JUNE 2019

CALCULATION OF PRIOR PERIOD REVENUES BILLED AFTER JUNE 30, 2017

Schedule M

Page 2 of 2

8/22/2019

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)				53	260	439	204					956
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	\$50	\$243	\$412	\$191	\$0	\$0	\$0	\$896
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	\$195	\$877	\$1,969	\$640	\$0	\$0	\$0	\$3,680
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	\$6	\$28	\$47	\$22	\$0	\$0	\$0	\$103
Total \$	(\$0)	\$0	\$0	\$0	\$0	\$250	\$1,148	\$2,428	\$853	\$0	\$0	\$0	\$4,679
\$ w/o ACA	(\$0)	\$0	\$0	\$0	\$0	\$244	\$1,120	\$2,381	\$831	\$0	\$0	\$0	\$4,576
	\$0.40927	\$0.40404	\$0.43360	\$0.41106	\$0.42881	\$0.46915	\$0.44225	\$0.55263	\$0.41747	\$0.41107	\$0.42095	\$0.41969	
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	\$3.5156	\$3.4633	\$3.6554	\$3.4300	\$3.6123	\$4.0157	\$3.7428	\$4.8466	\$3.4950	\$3.4310	\$3.5298	\$3.5172	
Dth	(0)	-	-	-	-	53	260	439	204	-	-	-	956
Demand	(0)	0	0	0	0	50	243	412	191	0	0	0	896
Commodity	(0)	0	0	0	0	195	877	1,969	640	0	0	0	3,680
ACA	(0)	0	0	0	0	6	28	47	22	0	0	0	103
Total \$	(\$0)	\$0	\$0	\$0	\$0	\$250	\$1,148	\$2,428	\$853	\$0	\$0	\$0	\$4,679
\$ w/o ACA	(\$0)	\$0	\$0	\$0	\$0	\$244	\$1,120	\$2,381	\$831	\$0	\$0	\$0	\$4,576

Notes:

PGAC Hedging Rate Comparison: MERC NNG
Schedule O

	No Hedge	Hedge Plan	50% Futures	50% Options
Jul-18	\$ 6.7300	\$ 6.7300	\$ 6.7300	\$ 6.7300
Aug-18	\$ 6.7018	\$ 6.7018	\$ 6.7018	\$ 6.7018
Sep-18	\$ 6.7509	\$ 6.7509	\$ 6.7509	\$ 6.7509
Oct-18	\$ 6.9881	\$ 6.9881	\$ 6.9881	\$ 6.9881
Nov-18	\$ 7.5943	\$ 7.5387	\$ 7.4275	\$ 7.5387
Dec-18	\$ 8.9465	\$ 8.2744	\$ 7.3269	\$ 8.0760
Jan-19	\$ 8.0738	\$ 7.9876	\$ 7.4970	\$ 8.1468
Feb-19	\$ 7.3854	\$ 7.4456	\$ 7.5031	\$ 7.4770
Mar-19	\$ 7.1092	\$ 7.1541	\$ 7.1860	\$ 7.1830
Apr-19	\$ 7.1848	\$ 7.1848	\$ 7.1848	\$ 7.1848
May-19	\$ 6.7408	\$ 6.7408	\$ 6.7408	\$ 6.7408
Jun-19	\$ 6.7395	\$ 6.7395	\$ 6.7395	\$ 6.7395
Average	\$ 7.2454	\$ 7.1864	\$ 7.0647	\$ 7.1881

PGAC Hedging Rate Comparison: MERC CONSOLIDATED

	No Hedge	Hedge Plan	50% Futures	50% Options
Jul-18	\$ 6.1272	\$ 6.1272	\$ 6.1272	\$ 6.1272
Aug-18	\$ 6.2309	\$ 6.2309	\$ 6.2309	\$ 6.2309
Sep-18	\$ 6.2825	\$ 6.2825	\$ 6.2825	\$ 6.2825
Oct-18	\$ 6.3157	\$ 6.3157	\$ 6.3157	\$ 6.3157
Nov-18	\$ 6.6072	\$ 6.5516	\$ 6.4404	\$ 6.5516
Dec-18	\$ 8.1963	\$ 7.5242	\$ 6.5767	\$ 7.3258
Jan-19	\$ 7.0488	\$ 6.9626	\$ 6.4720	\$ 7.1218
Feb-19	\$ 6.4155	\$ 6.4757	\$ 6.5332	\$ 6.5071
Mar-19	\$ 6.3124	\$ 6.3573	\$ 6.3892	\$ 6.3862
Apr-19	\$ 6.0417	\$ 6.0417	\$ 6.0417	\$ 6.0417
May-19	\$ 5.8533	\$ 5.8533	\$ 5.8533	\$ 5.8533
Jun-19	\$ 5.8714	\$ 5.8714	\$ 5.8714	\$ 5.8714
Average	\$ 6.4419	\$ 6.3828	\$ 6.2612	\$ 6.3846

Input Data

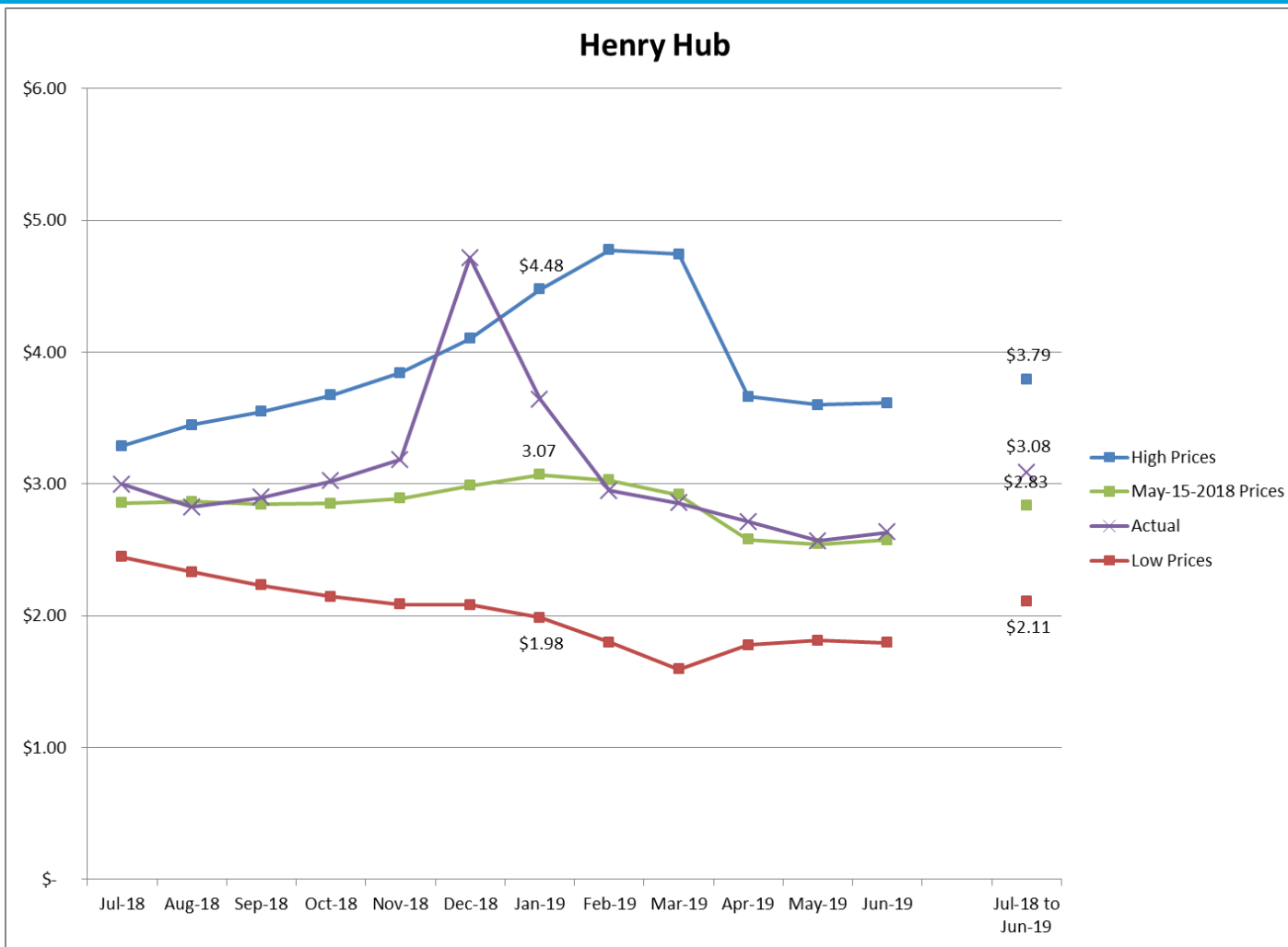
- Forward Curve as of May 15, 2018
- Implied Volatility Curve as of May 15, 2018
 - *In financial mathematics, the implied volatility of an option contract is the volatility implied by the market price of the option based on an option pricing model. In other words, it is the volatility that, when used 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)*

Example of Input Data

- Jan-2019 Forward Price was \$3.07
- Jan-2019 Implied Volatility was 27%

- Once an implied volatility curve is known, we can build changes to the forward curve.
 - From May 15, 2018 to Jan 1, 2019 the forward curve for Jan-2019 changes as follows:
 - $Price_2 = Price_1(\$3.07) * e^{-(Implied\ Volatility(27\%)^2)/2 * (16/365)} + Random\ Variable_1 * Implied\ Volatility(27\%) * Square\ Root\ of\ (16/365)}$
 - $Price_3 = Price_2 * e^{-(Implied\ Volatility(27\%)^2)/2 * (30/365)} + Random\ Variable_2 * Implied\ Volatility(27\%) * Square\ Root\ of\ (30/365)}$
 - $Price_4 = Price_3 * e^{-(Implied\ Volatility(27\%)^2)/2 * (31/365)} + Random\ Variable_3 * Implied\ Volatility(27\%) * Square\ Root\ of\ (31/365)}$
 - Et cetera
 - $Price_9 = Price_8 * e^{-(Implied\ Volatility(27\%)^2)/2 * (31/365)} + Random\ Variable_8 * Implied\ Volatility(27\%) * Square\ Root\ of\ (31/365)}$

- *Jan-2019*
 - Catastrophic High Price is \$4.48
 - *2.5% chance of price greater than this price*
 - May-15-2018 Price is \$3.07
 - Low Price is \$1.98
 - *2.5% chance of price less than this price*
- *Jul-2018 to Jun-2019*
 - Catastrophic High Average Price is \$3.79
 - *2.5% chance of average price greater than this price*
 - May-15-2018 Average Price is \$2.83
 - Low Average Price is \$2.11
 - *2.5% chance of average price less than this price*



Average Residential Volumes			
	NNG	Con	
Jul-18	1.7597	0.8417	
Aug-18	1.2590	0.7570	
Sep-18	1.8638	1.0118	
Oct-18	3.1241	3.6881	
Nov-18	7.6230	8.5511	
Dec-18	15.1213	13.2633	
Jan-19	12.9371	14.8972	
Feb-19	17.8320	18.4342	
Mar-19	15.6260	15.5445	
Apr-19	8.7201	10.2386	
May-19	6.0485	6.1137	
Jun-19	2.9863	2.8904	
Average	7.9084	8.0193	

Total Cost in Monthly PGA Filings w/ hedging			
	NNG	Con	
Jul-18	\$ 11.84	\$ 5.16	
Aug-18	\$ 8.44	\$ 4.72	
Sep-18	\$ 12.58	\$ 6.36	
Oct-18	\$ 21.83	\$ 23.29	
Nov-18	\$ 57.47	\$ 56.02	
Dec-18	\$ 125.12	\$ 99.80	
Jan-19	\$ 103.34	\$ 103.72	
Feb-19	\$ 132.77	\$ 119.37	
Mar-19	\$ 111.79	\$ 98.82	
Apr-19	\$ 62.65	\$ 61.86	
May-19	\$ 40.77	\$ 35.79	
Jun-19	\$ 20.13	\$ 16.97	
Average	\$ 59.06	\$ 52.66	

Total Cost in Monthly PGA Filings w/o hedging			
	NNG	Con	
Jul-18	\$ 11.84	\$ 5.16	
Aug-18	\$ 8.44	\$ 4.72	
Sep-18	\$ 12.58	\$ 6.36	
Oct-18	\$ 21.83	\$ 23.29	
Nov-18	\$ 57.89	\$ 56.50	
Dec-18	\$ 135.28	\$ 108.71	
Jan-19	\$ 104.45	\$ 105.01	
Feb-19	\$ 131.70	\$ 118.27	
Mar-19	\$ 111.09	\$ 98.12	
Apr-19	\$ 62.65	\$ 61.86	
May-19	\$ 40.77	\$ 35.79	
Jun-19	\$ 20.13	\$ 16.97	
Average	\$ 59.89	\$ 53.40	

Average Residential Volumes - 120%			
	NNG	Con	
Jul-18	2.1117	1.0100	
Aug-18	1.5108	0.9084	
Sep-18	2.2366	1.2141	
Oct-18	3.7489	4.4257	
Nov-18	9.1476	10.2613	
Dec-18	18.1456	15.9160	
Jan-19	15.5245	17.8766	
Feb-19	21.3984	22.1211	
Mar-19	18.7512	18.6534	
Apr-19	10.4641	12.2864	
May-19	7.2582	7.3364	
Jun-19	3.5836	3.4685	
Average	9.4901	9.6232	

Total Cost in Monthly PGA Filings w/ hedging - 120%			
	NNG	Con	
Jul-18	\$ 14.21	\$ 6.19	
Aug-18	\$ 10.13	\$ 5.66	
Sep-18	\$ 15.10	\$ 7.63	
Oct-18	\$ 26.20	\$ 27.95	
Nov-18	\$ 68.96	\$ 67.23	
Dec-18	\$ 150.14	\$ 119.76	
Jan-19	\$ 124.00	\$ 124.47	
Feb-19	\$ 159.32	\$ 143.25	
Mar-19	\$ 134.15	\$ 118.59	
Apr-19	\$ 75.18	\$ 74.23	
May-19	\$ 48.93	\$ 42.94	
Jun-19	\$ 24.15	\$ 20.36	
Average	\$ 70.87	\$ 63.19	

Total Cost in Monthly PGA Filings w/o hedging - 120%			
	NNG	Con	
Jul-18	\$ 14.21	\$ 6.19	
Aug-18	\$ 10.13	\$ 5.66	
Sep-18	\$ 15.10	\$ 7.63	
Oct-18	\$ 26.20	\$ 27.95	
Nov-18	\$ 69.47	\$ 67.80	
Dec-18	\$ 162.34	\$ 130.45	
Jan-19	\$ 125.34	\$ 126.01	
Feb-19	\$ 158.04	\$ 141.92	
Mar-19	\$ 133.31	\$ 117.75	
Apr-19	\$ 75.18	\$ 74.23	
May-19	\$ 48.93	\$ 42.94	
Jun-19	\$ 24.15	\$ 20.36	
Average	\$ 71.87	\$ 64.07	

Average Residential Volumes - 80%			
	NNG	Con	
Jul-18	1.4078	0.6733	
Aug-18	1.0072	0.6056	
Sep-18	1.4911	0.8094	
Oct-18	2.4993	2.9505	
Nov-18	6.0984	6.8408	
Dec-18	12.0971	10.6107	
Jan-19	10.3497	11.9177	
Feb-19	14.2656	14.7474	
Mar-19	12.5008	12.4356	
Apr-19	6.9761	8.1909	
May-19	4.8388	4.8909	
Jun-19	2.3891	2.3123	
Average	6.3267	6.4154	

Total Cost in Monthly PGA Filings w/ hedging - 80%			
	NNG	Con	
Jul-18	\$ 9.47	\$ 4.13	
Aug-18	\$ 6.75	\$ 3.77	
Sep-18	\$ 10.07	\$ 5.09	
Oct-18	\$ 17.47	\$ 18.63	
Nov-18	\$ 45.97	\$ 44.82	
Dec-18	\$ 100.10	\$ 79.84	
Jan-19	\$ 82.67	\$ 82.98	
Feb-19	\$ 106.22	\$ 95.50	
Mar-19	\$ 89.43	\$ 79.06	
Apr-19	\$ 50.12	\$ 49.49	
May-19	\$ 32.62	\$ 28.63	
Jun-19	\$ 16.10	\$ 13.58	
Average	\$ 47.25	\$ 42.13	

Total Cost in Monthly PGA Filings w/o hedging - 80%			
	NNG	Con	
Jul-18	\$ 9.47	\$ 4.13	
Aug-18	\$ 6.75	\$ 3.77	
Sep-18	\$ 10.07	\$ 5.09	
Oct-18	\$ 17.47	\$ 18.63	
Nov-18	\$ 46.31	\$ 45.20	
Dec-18	\$ 108.23	\$ 86.97	
Jan-19	\$ 83.56	\$ 84.01	
Feb-19	\$ 105.36	\$ 94.61	
Mar-19	\$ 88.87	\$ 78.50	
Apr-19	\$ 50.12	\$ 49.49	
May-19	\$ 32.62	\$ 28.63	
Jun-19	\$ 16.10	\$ 13.58	
Average	\$ 47.91	\$ 42.72	

Average Residential Volumes			
	NNG	Con	
Jul-18	1.7597	0.8417	
Aug-18	1.2590	0.7570	
Sep-18	1.8638	1.0118	
Oct-18	3.1241	3.6881	
Nov-18	7.6230	8.5511	
Dec-18	15.1213	13.2633	
Jan-19	12.9371	14.8972	
Feb-19	17.8320	18.4342	
Mar-19	15.6260	15.5445	
Apr-19	8.7201	10.2386	
May-19	6.0485	6.1137	
Jun-19	2.9863	2.8904	
Average	7.9084	8.0193	

Total Cost in Monthly PGA Filings w/ hedging at Catastrophic Prices			
	NNG	Con	
Jul-18	\$ 11.84	\$ 5.16	
Aug-18	\$ 8.44	\$ 4.72	
Sep-18	\$ 12.58	\$ 6.36	
Oct-18	\$ 21.83	\$ 23.29	
Nov-18	\$ 47.43	\$ 54.15	
Dec-18	\$ 116.82	\$ 96.43	
Jan-19	\$ 94.99	\$ 110.24	
Feb-19	\$ 134.99	\$ 135.86	
Mar-19	\$ 124.86	\$ 114.86	
Apr-19	\$ 62.65	\$ 61.86	
May-19	\$ 40.77	\$ 35.79	
Jun-19	\$ 20.13	\$ 16.97	
Average	\$ 58.11	\$ 55.47	

Total Cost in Monthly PGA Filings no hedging at Catastrophic Prices			
	NNG	Con	
Jul-18	\$ 11.84	\$ 5.16	
Aug-18	\$ 8.44	\$ 4.72	
Sep-18	\$ 12.58	\$ 6.36	
Oct-18	\$ 21.83	\$ 23.29	
Nov-18	\$ 68.25	\$ 68.10	
Dec-18	\$ 147.98	\$ 125.87	
Jan-19	\$ 128.45	\$ 141.58	
Feb-19	\$ 153.19	\$ 160.96	
Mar-19	\$ 150.10	\$ 134.59	
Apr-19	\$ 62.65	\$ 61.86	
May-19	\$ 40.77	\$ 35.79	
Jun-19	\$ 20.13	\$ 16.97	
Average	\$ 68.85	\$ 65.44	

Average Residential Volumes - 120%			
	NNG	Con	
Jul-18	2.11	1.01	
Aug-18	1.51	0.91	
Sep-18	2.24	1.21	
Oct-18	3.75	4.43	
Nov-18	9.15	10.26	
Dec-18	18.15	15.92	
Jan-19	15.52	17.88	
Feb-19	21.40	22.12	
Mar-19	18.75	18.65	
Apr-19	10.46	12.29	
May-19	7.26	7.34	
Jun-19	3.58	3.47	
Average	9.49	9.62	

Total Cost in Monthly PGA Filings w/ hedging at Catastrophic Prices			
	NNG	Con	
Jul-18	\$ 14.21	\$ 6.19	
Aug-18	\$ 10.13	\$ 5.66	
Sep-18	\$ 15.10	\$ 7.63	
Oct-18	\$ 26.20	\$ 27.95	
Nov-18	\$ 56.91	\$ 64.98	
Dec-18	\$ 140.18	\$ 115.72	
Jan-19	\$ 113.99	\$ 132.29	
Feb-19	\$ 161.99	\$ 163.03	
Mar-19	\$ 149.83	\$ 137.84	
Apr-19	\$ 75.18	\$ 74.23	
May-19	\$ 48.93	\$ 42.94	
Jun-19	\$ 24.15	\$ 20.36	
Average	\$ 69.73	\$ 66.57	

Total Cost in Monthly PGA Filings no hedging at Catastrophic Prices			
	NNG	Con	
Jul-18	\$ 14.21	\$ 6.19	
Aug-18	\$ 10.13	\$ 5.66	
Sep-18	\$ 15.10	\$ 7.63	
Oct-18	\$ 26.20	\$ 27.95	
Nov-18	\$ 81.90	\$ 81.72	
Dec-18	\$ 177.58	\$ 151.04	
Jan-19	\$ 154.14	\$ 169.90	
Feb-19	\$ 183.83	\$ 193.15	
Mar-19	\$ 180.12	\$ 161.51	
Apr-19	\$ 75.18	\$ 74.23	
May-19	\$ 48.93	\$ 42.94	
Jun-19	\$ 24.15	\$ 20.36	
Average	\$ 82.62	\$ 78.52	

Average Residential Volumes - 80%			
	NNG	Con	
Jul-18	1.41	0.67	
Aug-18	1.01	0.61	
Sep-18	1.49	0.81	
Oct-18	2.50	2.95	
Nov-18	6.10	6.84	
Dec-18	12.10	10.61	
Jan-19	10.35	11.92	
Feb-19	14.27	14.75	
Mar-19	12.50	12.44	
Apr-19	6.98	8.19	
May-19	4.84	4.89	
Jun-19	2.39	2.31	
Average	6.33	6.42	

Total Cost in Monthly PGA Filings w/ hedging at Catastrophic Prices			
	NNG	Con	
Jul-18	\$ 9.47	\$ 4.13	
Aug-18	\$ 6.75	\$ 3.77	
Sep-18	\$ 10.07	\$ 5.09	
Oct-18	\$ 17.47	\$ 18.63	
Nov-18	\$ 37.94	\$ 43.32	
Dec-18	\$ 93.45	\$ 77.15	
Jan-19	\$ 75.99	\$ 88.19	
Feb-19	\$ 107.99	\$ 108.69	
Mar-19	\$ 99.89	\$ 91.89	
Apr-19	\$ 50.12	\$ 49.49	
May-19	\$ 32.62	\$ 28.63	
Jun-19	\$ 16.10	\$ 13.58	
Average	\$ 46.49	\$ 44.38	

Total Cost in Monthly PGA Filings no hedging at Catastrophic Prices			
	NNG	Con	
Jul-18	\$ 9.47	\$ 4.13	
Aug-18	\$ 6.75	\$ 3.77	
Sep-18	\$ 10.07	\$ 5.09	
Oct-18	\$ 17.47	\$ 18.63	
Nov-18	\$ 54.60	\$ 54.48	
Dec-18	\$ 118.38	\$ 100.69	
Jan-19	\$ 102.76	\$ 113.27	
Feb-19	\$ 122.55	\$ 128.77	
Mar-19	\$ 120.08	\$ 107.67	
Apr-19	\$ 50.12	\$ 49.49	
May-19	\$ 32.62	\$ 28.63	
Jun-19	\$ 16.10	\$ 13.58	
Average	\$ 55.08	\$ 52.35	

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-18	\$ 3.7250	\$ 3.2707					\$ 3.7250	\$ 3.2707			
Jul-18	\$ 2.3899	\$ 2.6166		-0.4438	-0.2231		\$ 2.3899	\$ 2.6166		-0.4438	-0.2231
Aug-18	\$ 2.3620	\$ 2.7253		-0.0117	0.0407		\$ 2.3620	\$ 2.7253		-0.0117	0.0407
Sep-18	\$ 2.4455	\$ 2.6238		0.0347	-0.0380		\$ 2.4455	\$ 2.6238		0.0347	-0.0380
Oct-18	\$ 2.2187	\$ 2.6081		-0.0973	-0.0060		\$ 2.2187	\$ 2.6081		-0.0973	-0.0060
Nov-18	\$ 2.4265	\$ 2.4286		0.0895	-0.0713		\$ 2.4821	\$ 2.4842		0.1122	-0.0487
Dec-18	\$ 2.5911	\$ 2.1373		0.0656	-0.1278		\$ 3.2632	\$ 2.8094		0.2736	0.1230
Jan-19	\$ 2.5356	\$ 1.9352		-0.0217	-0.0993		\$ 2.6218	\$ 2.0214		-0.2189	-0.3292
Feb-19	\$ 3.6277	\$ 2.5172		0.3582	0.2629		\$ 3.5675	\$ 2.4570		0.3080	0.1952
Mar-19	\$ 2.2905	\$ 2.4410		-0.4598	-0.0307		\$ 2.2456	\$ 2.3961		-0.4629	-0.0251
Apr-19	\$ 2.2376	\$ 2.3237		-0.0234	-0.0492		\$ 2.2376	\$ 2.3237		-0.0036	-0.0307
May-19	\$ 2.3354	\$ 2.4780		0.0428	0.0643		\$ 2.3354	\$ 2.4780		0.0428	0.0643
Jun-19	\$ 2.3230	\$ 2.4704		-0.0053	-0.0031		\$ 2.3230	\$ 2.4704		-0.0053	-0.0031
Annual Volatility				73.77%	39.28%					79.72%	46.48%
Volatility Reduction Due to Hedging				8.08%	18.34%						

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

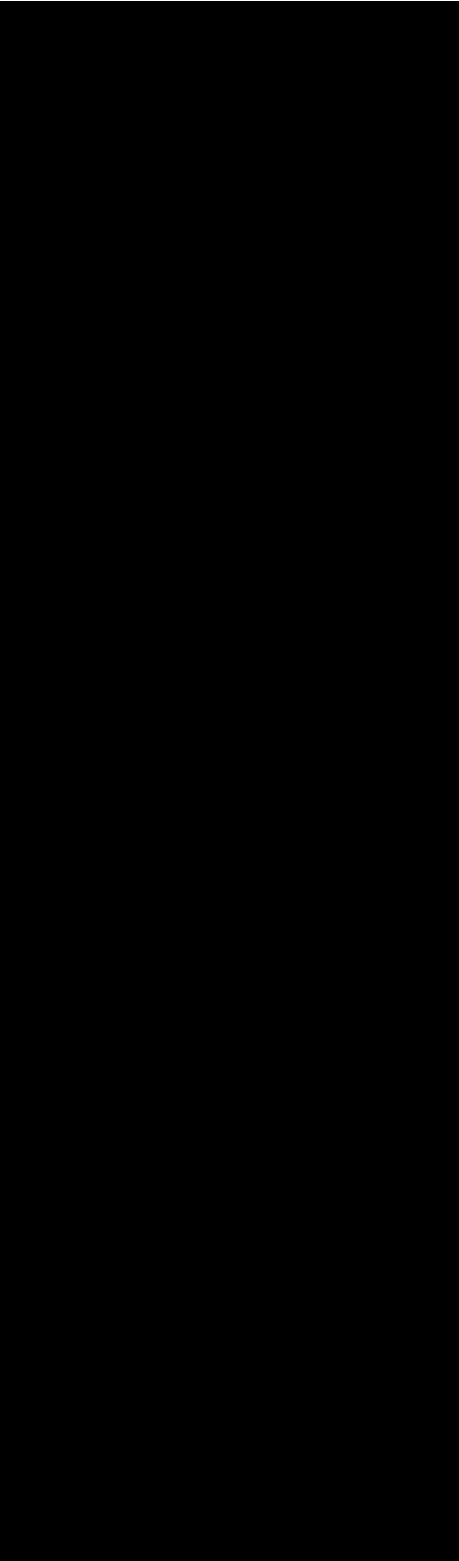
PUBLIC DOCUMENT
TRADE SECRET DATA HAS BEEN EXCISED

MINNESOTA ENERGY RESOURCES - NNG

Schedule Q

Third Party Damage Bills July 2018 - June 2019

[TRADE SECRET DATA BEGINS...

Responsible Party	Pipeline	Gas Loss Billed	Gas Loss Dths	Date of Damage
	NNG	-\$11.54	2.81	4/4/2018
	NNG	-\$82.83	24.79	5/9/2018
	NNG	-\$121.60	28.09	5/14/2018
	NNG	-\$21.67	5.15	5/14/2018
	NNG	-\$1.13	0.27	5/15/2018
	NNG	-\$223.40	66.86	5/16/2018
	NNG	-\$23.82	7.13	5/16/2018
	NNG	-\$82.83	24.79	5/20/2018
	NNG	-\$77.54	23.21	5/24/2018
	NNG	-\$131.72	39.42	5/29/2018
	NNG	-\$24.05	5.73	6/11/2018
	NNG	-\$283.63	67.58	6/12/2018
	NNG	-\$5.10	1.53	6/13/2018
	NNG	-\$3.78	1.14	6/14/2018
	NNG	-\$82.72	19.71	6/21/2018
	NNG	\$302.18	72.00	6/21/2018
	NNG	-\$321.88	96.57	6/25/2018
	NNG	-\$4.18	1.20	6/25/2018
	NNG	-\$31.00	9.30	6/27/2018
	NNG	-\$105.38	25.11	6/27/2018
	NNG	-\$17.21	4.10	6/28/2018
	NNG	-\$18.19	4.34	6/28/2018
	NNG	-\$0.69	0.16	6/29/2018
	NNG	-\$1.21	0.29	6/29/2018
	NNG	-\$43.19	12.40	7/2/2018
	NNG	-\$27.98	6.56	7/2/2018
	NNG	-\$5.33	1.53	7/2/2018
	NNG	-\$5.25	1.23	7/2/2018
	NNG	-\$1.32	0.31	7/3/2018
	NNG	-\$10.66	3.06	7/3/2018
	NNG	-\$917.93	215.25	7/5/2018
	NNG	-\$0.64	0.15	7/16/2018
	NNG	-\$110.46	31.71	7/17/2018
	NNG	-\$352.08	82.56	7/17/2018
	NNG	-\$26.65	7.65	7/18/2018
	NNG	-\$93.95	26.97	7/19/2018
	NNG	-\$1,208.47	283.38	7/23/2018
	NNG	-\$473.56	111.05	7/24/2018
	NNG	-\$22.23	5.25	7/25/2018
	NNG	-\$3.05	0.72	7/25/2018
	NNG	-\$1.29	0.36	7/25/2018
	NNG	-\$24.67	5.79	7/26/2018
	NNG	-\$59.49	13.95	7/31/2018

...TRADE SECRET DATA ENDS]

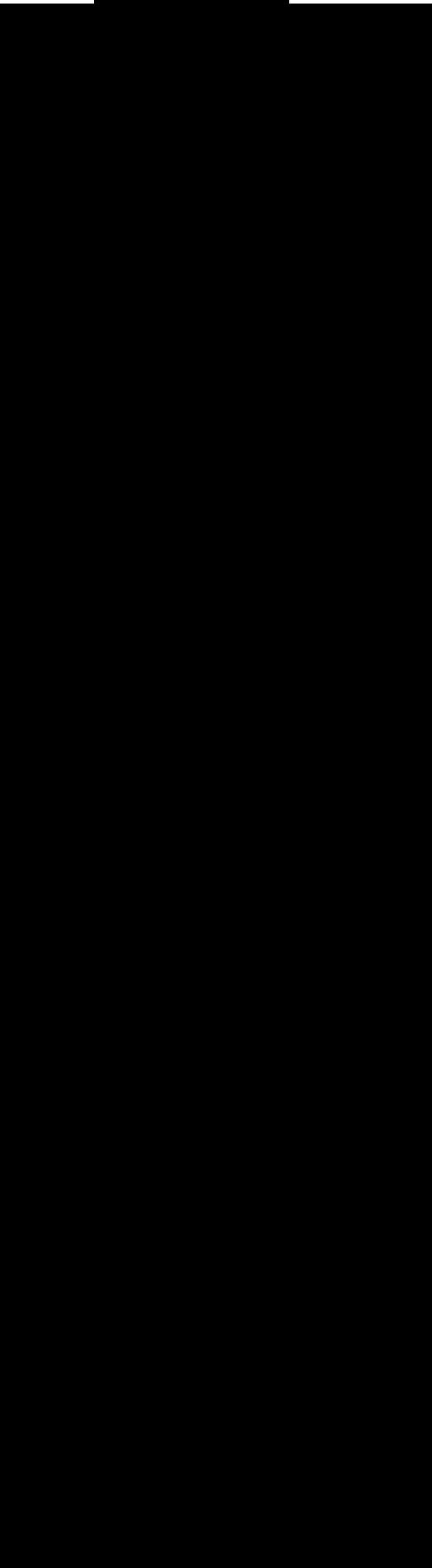
[TRADE SECRET DATA BEGINS...

NNG	-\$18.29	4.29	7/31/2018
NNG	-\$10.80	2.55	8/7/2018
NNG	-\$0.61	0.14	8/8/2018
NNG	-\$6.57	1.55	8/9/2018
NNG	-\$4.55	1.07	8/9/2018
NNG	-\$2.74	0.77	8/15/2018
NNG	-\$5.11	1.43	8/19/2018
NNG	-\$16.68	4.65	8/23/2018
NNG	-\$22.71	5.36	8/24/2018
NNG	-\$207.58	49.00	8/27/2018
NNG	-\$12,304.95	2,904.65	8/28/2018
NNG	-\$5.68	1.34	8/28/2018
NNG	-\$7.82	1.85	8/29/2018
NNG	-\$1,278.44	356.40	8/31/2018
NNG	-\$7.32	2.04	8/31/2018
NNG	-\$70.78	16.08	9/1/2018
NNG	-\$1.57	0.40	9/5/2018
NNG	-\$6,072.89	1,379.70	9/6/2018
NNG	-\$1,029.66	233.93	9/10/2018
NNG	-\$236.64	60.44	9/11/2018
NNG	-\$45.85	10.42	9/11/2018
NNG	-\$996.33	254.49	9/13/2018
NNG	-\$102.34	23.25	9/14/2018
NNG	-\$35.39	8.04	9/14/2018
NNG	-\$62.52	14.20	9/16/2018
NNG	-\$2.36	0.54	9/21/2018
NNG	-\$0.45	0.10	9/24/2018
NNG	-\$64.88	14.74	9/25/2018
NNG	-\$64.97	14.76	9/25/2018
NNG	-\$63.01	16.10	9/25/2018
NNG	-\$5.46	1.24	9/25/2018
NNG	-\$1.27	0.29	9/26/2018
NNG	-\$97.92	24.80	9/26/2018
NNG	-\$520.34	118.22	9/27/2018
NNG	-\$1.00	0.26	9/28/2018
NNG	-\$12.61	2.87	9/28/2018
NNG	-\$43.38	10.23	9/29/2018
NNG	-\$45.48	10.33	9/29/2018
NNG	-\$24.40	6.18	10/1/2018
NNG	-\$678.00	4.29	10/2/2018
NNG	-\$9.79	2.48	10/3/2018
NNG	-\$20.11	4.34	10/4/2018
NNG	-\$6.53	1.41	10/4/2018
NNG	-\$55.08	13.95	10/5/2018
NNG	-\$36.72	0.31	10/9/2018
NNG	-\$5.71	1.23	10/10/2018
NNG	-\$13.69	2.95	10/10/2018
NNG	-\$54.01	13.68	10/11/2018
NNG	-\$5.71	1.23	10/12/2018

...TRADE SECRET DATA ENDS]


PUBLIC DOCUMENT
TRADE SECRET DATA HAS BEEN EXCISED

[TRADE SECRET DATA BEGINS...

	NNG	-\$63.55	1.07	10/13/2018
	NNG	-\$67.99	17.22	10/15/2018
	NNG	-\$146.88	37.20	10/15/2018
	NNG	-\$86.28	18.60	10/16/2018
	NNG	-\$391.14	84.32	10/16/2018
	NNG	-\$7.61	1.64	10/16/2018
	NNG	-\$56.64	12.21	10/17/2018
	NNG	-\$3.34	0.72	10/18/2018
	NNG	-\$95.23	0.27	10/21/2018
	NNG	-\$13.93	3.00	10/23/2018
	NNG	-\$41.49	9.92	10/30/2018
	NNG	-\$2.85	0.60	10/31/2018
	NNG	-\$414.89	105.08	10/31/2018
	NNG	-\$16.82	0.27	11/1/2018
	NNG	-\$715.49	137.88	11/6/2018
	NNG	-\$9.57	1.85	11/9/2018
	NNG	-\$173.74	33.48	11/13/2018
	NNG	-\$77.83	18.60	11/29/2018
	NNG	-\$122.26	23.56	11/29/2018
	NNG	-\$387.82	65.45	12/3/2018
	NNG	-\$0.85	0.14	12/4/2018
	NNG	-\$1,212.88	235.2	12/5/2018
	NNG	-\$82.47	19.71	12/6/2018
	NNG	-\$918.39	155	12/13/2018
	NNG	-\$22.83	4.43	12/19/2018
	NNG	-\$27.18	5.27	12/20/2018
	NNG	-\$58.73	11.52	2/12/2019
	NNG	-\$47.37	9.3	2/13/2019
	NNG	-\$99.53	19.53	2/16/2019
	NNG	-\$35.57	6.98	2/28/2019
	NNG	-\$2.95	0.62	3/3/2019
	NNG	-\$0.12	0.036	3/4/2019
	NNG	-\$1.20	0.3	3/7/2019
	NNG	-\$26.81	5.58	3/15/2019
	NNG	-\$0.02	0	3/15/2019
	NNG	-\$980.18	204	3/22/2019
	NNG	-\$2.17	0.45	4/24/2019
	NNG	-\$20.89	4.32	4/26/2019
	NNG	-\$54.45	12.4	5/2/2019
	NNG	-\$23.56	5.37	5/2/2019
	NNG	-\$29.42	6.7	5/3/2019
	NNG	-\$32.42	9.3	5/6/2019
	NNG	-\$571.77	130.2	5/6/2019
	NNG	-\$471.21	107.3	5/7/2019
	NNG	-\$3.82	0.87	5/13/2019
	NNG	-\$129.64	29.52	5/14/2019
	NNG	-\$102.76	29.48	5/21/2019
	NNG	-\$19.44	4.02	5/22/2019
	NNG	-\$49.49	11.27	5/23/2019

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[TRADE SECRET DATA BEGINS...

	NNG	-\$22.69	6.51	5/24/2019
	NNG	-\$5.40	1.23	5/25/2019
	NNG	-\$29.12	6.63	5/29/2019
	NNG	-\$6.12	1.39	6/2/2019
	NNG	-\$565.28	128.76	6/3/2019
	NNG	-\$285.71	65.08	6/6/2019
		<u>-\$37,987.61</u>	<u>8,757.09</u>	

...TRADE SECRET DATA ENDS]

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

Docket No. G011/AA-19-401

CERTIFICATE OF SERVICE

I, Kristin M. Stastny, hereby certify that on the 30th day of August, 2019, 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 30th day of August, 2019.

/s/ Kristin M. Stastny
Kristin M. Stastny

[illegible]

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Catherine	Phillips	catherine.phillips@we-energies.com	We Energies	231 West Michigan St Milwaukee, WI 53203	Electronic Service	No	OFF_SL_19-401_AA-19-401
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_19-401_AA-19-401
Peggy	Sorum	peggy.sorum@centerpointenergy.com	CenterPoint Energy	505 Nicollet Mall Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-401_AA-19-401
Kristin	Stastny	kstastny@briggs.com	Briggs and Morgan, P.A.	2200 IDS Center 80 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-401_AA-19-401
Lynnette	Sweet	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_19-401_AA-19-401
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_19-401_AA-19-401
Mary	Wolter	mary.wolter@wecenergygroup.com	Minnesota Energy Resources Corporation (HOLDING)	231 West Michigan St Milwaukee, WI 53203	Electronic Service	No	OFF_SL_19-401_AA-19-401

[illegible]

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Richard	Eichstadt	richard.eichstadt@poet.com	Poet Biorefining - Preston	701 Industrial Dr N PO Box 440 Preston, MN 55965	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
Daryll	Fuentes	dfuentes@usg.com	USG Corporation	550 W Adams St Chicago, IL 60661	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
Kimberly	Hellwig	kimberly.hellwig@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
Annete	Henkel	mui@mutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St. Paul, MN 55101	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Linda	Jensen	linda.s.jensen@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
Michael	Krikava	mkrikava@briggs.com	Briggs And Morgan, P.A.	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
David	Kyto	djkyto@integrysgroup.com	Integrus Business Support	700 North Adams PO Box 19001 Green Bay, WI 543079001	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
Peter	Madsen	peter.madsen@ag.state.mn.us	Office of the Attorney General-DOC	Bremer Tower, Suite 1800 445 Minnesota Street St. Paul, Minnesota 551017741	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Mike	McGlone	N/A	Heat Share - Salvation Army	2445 Prior Avenue Roseville, MN 55113	Paper Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
Catherine	Phillips	Catherine.Phillips@wecenergygroup.com	Minnesota Energy Resources Corporation (HOLDING)	231 West Michigan St Milwaukee, WI 53203	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
Catherine	Phillips	catherine.phillips@we-energies.com	We Energies	231 West Michigan St Milwaukee, WI 53203	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
Lauren	Pockl	lpockl@briggs.com	Briggs and Morgan, PA	80 South 8th Street #2200 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation (HOLDING)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports
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)_2018-2019 AAA and True Up Reports

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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