

414 Nicollet Mall Minneapolis, Minnesota 55401

March 1, 2018

-VIA ELECTRONIC FILING-

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

RE: PETITION AND COMPLIANCE FILING STATE ENERGY POLICY RIDER DOCKET NO. G002/M-18-____

Dear Mr. Wolf:

Northern States Power Company, doing business as Xcel Energy, submits the enclosed Petition and Compliance filing for approval of our July 2018-June 2019 State Energy Policy (SEP) Rider natural gas rate factor.

Pursuant to Minn. Stat. § 216.17, subd. 3, we have electronically filed this document, and served copies on the parties on the attached service lists.

If you have any questions regarding this filing please contact Rebecca Eilers at <u>rebecca.d.eilers@xcelenergy.com</u> or (612) 330-5570, or me at (612) 330-7681 or <u>lisa.r.peterson@xcelenergy.com</u>.

Sincerely,

/s/

LISA R. PETERSON MANAGER, REGULATORY ANALYSIS

Enclosures

c: Service List

STATE OF MINNESOTA BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Nancy Lange Dan Lipschultz Matthew Schuerger Katie Sieben John Tuma

Chair Commissioner Commissioner Commissioner

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF A MODIFICATION TO OUR NATURAL GAS SEP TARIFF, 2018 SEP RATE FACTOR, AND 2017 SEP COMPLIANCE FILING

DOCKET NO. G002/M-18-____

PETITION AND COMPLIANCE FILING

OVERVIEW

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission this Petition requesting approval of our 2018 natural gas State Energy Policy (SEP) Rider rate factor, our 2017 Annual SEP compliance filing, and our proposed Customer Notice and Tariff update.

We propose a 2018 natural gas SEP rate factor of \$0.001960 per therm for the recovery of approximately \$1.8 million for the 12 month period of July 2018 – June 2019. If approved as proposed, average natural gas residential customers using 70.33 therms per month would pay approximately \$1.65 per year, compared to \$1.15 under the current rate.¹

The primary components of our 2018 natural gas SEP rate factor are:

- 1. Expenses related to the Assessment for Department Regional and National Duties (ADRND);²
- 2. Annual revenue requirements associated with the Company's natural gas Cast Iron Pipe Replacement program less proceeds from any offsets or credits associated with the program (Greenhouse Gas Infrastructure costs);

¹ We note that the current rate was set for the 2016-2017 SEP period in Docket No. G002/M-16-206. The Commission's August 24, 2017 Order in Docket No. G002/M-17-174 prohibited us from implementing a rate for the 2017-2018 SEP period until July 1, 2018, after the conclusion of the SEP test year.

² These expenses were referred to as Reliability Administrator (RA) expenses in past SEP Rider proceedings.

3. The 2017-2018 SEP Period carryover balance since no new rate was implemented for the prior SEP period.

We submit this filing in accordance with the following statutory and rule provisions:

- Minn. Stat. § 216B.16, Subd. 1 (Rate Change Notice)
- Minn. Stat. § 216B.62, Subd. 3b. (Assessment for Department Regional and National Duties)
- Minn. R. 7829.1300 (Miscellaneous Tariff Filings)
- Minn. R. 7829.0100 (Definitions)

I. SUMMARY OF FILING

Pursuant to Minn. R. 7829.1300, subp. 1, a one-paragraph summary of the filing accompanies this Petition.

II. SERVICE ON OTHER PARTIES

Pursuant to Minn. R. 7829.1300, subp. 2, Xcel Energy has served a summary of the filing on all parties on the Xcel Energy miscellaneous natural gas service list and the service list from our 2017 SEP Rider filing.³

III. GENERAL FILING INFORMATION

Pursuant to Minn. R. 7829.1300, subp. 3, the Company provides the following information.

A. Name, Address, and Telephone Number of Utility

Northern States Power Company, doing business as Xcel Energy 414 Nicollet Mall Minneapolis, MN 55401 (612) 330-5500

³ Docket No. G002/M-17-174

B. Name, Address, and Telephone Number of Utility Attorney

Mara K. Ascheman Senior Attorney Xcel Energy Services Inc. 414 Nicollet Mall, 401 - 8th Floor Minneapolis, MN 55401 (612) 215-4605

C. Date of Filing and Proposed Effective Date of Rates

The date of this filing is March 1, 2018. The Company proposes the 2018 natural gas SEP rate factor be included in the Resource Adjustment line on the Company's retail natural gas billing rates effective July 1, 2018.

D. Statutes Controlling Schedule for Processing the Filing

The tariff change proposed in this Petition falls within the definition of a "Miscellaneous Filing" under Minn. R. 7829.0100, subp. 11, because no determination of Xcel Energy's general revenue requirement is necessary. Pursuant to Minn. R. 7829.1400, initial comments on a miscellaneous filing are due within 30 days of filing, with replies due 10 days thereafter.

E. Utility Employee Responsible for Filing

Lisa R. Peterson Manager, Regulatory Analysis Xcel Energy Services Inc. 414 Nicollet Mall, 401 - 7th Floor Minneapolis, Minnesota 55401 (612) 330-7681

IV. MISCELLANEOUS INFORMATION

Pursuant to Minn. R. 7829.0700, subp. 2, Xcel Energy requests that the following persons be placed on the Commission's official service list for this matter:

Mara K. Ascheman Senior Attorney Xcel Energy 414 Nicollet Mall, 401 - 8th Floor Minneapolis, Minnesota 55401 <u>mara.k.ascheman@xcelenergy.com</u> Carl Cronin Regulatory Administrator Xcel Energy 414 Nicollet Mall, 401 - 7th Floor Minneapolis, Minnesota 55401 <u>regulatory.records@xcelenergy.com</u> Any information requests in this proceeding should be submitted to Mr. Cronin at the Regulatory Records email address above.

V. DESCRIPTION AND PURPOSE OF FILING

A. Background

The Commission first established the SEP Rider mechanism and approved recovery of eligible expenses in its April 6, 2004 Order in Docket No. E,G002/M-03-1544. Since that time, electric SEP expenses have moved into base rates. There are two types of expenses currently authorized for recovery in the SEP Rider per Minnesota statutes and Commission Orders: Assessment for Department Regional and National Duties and Cast Iron Pipe Replacement Project expenses. These two expense types are discussed in detail below. No new costs have been added for recovery through the SEP Rider, per the Commission's August 24, 2017 Order in our most recent SEP proceeding.

The Commission's August 24, 2017 Order requires the Company's annual March 1 compliance filing to contain:

- the actual and forecasted information needed to determine any true-up amount to be recovered from or returned to ratepayers as a result of the operation of the SEP rider;
- amounts anticipated to be incurred and including any true-up amounts for the operation of the SEP rider during the current year; and
- a comparison between actual and budgeted monthly costs in its future SEP rider filings, including a discussion of reasons for deviations from budgeted amounts (both higher and lower).

Attachment	Description
Attachment A1	Proposed revision to the tariff sheet.
Attachment A2	Our 24-month forecast of SEP costs and rate factors applicable to all natural gas customers, including demand billed Commercial and Industrial customers under this rider.
Attachment B	SEP Tracker
Attachment C	A comparison by month for the past twelve months of actual natural gas costs versus forecasted costs.
Attachment D1	Detailed Assessment for Department Regional and National Duties expenses.
Attachment D2	Detailed Cast Iron Replacement Project revenue requirements.
Attachment D3	Cast Iron Replacement Project O&M credit.

The following attachments support our request and meet the specified requirements:

Attachment D4	Revenue collections (Actual and Forecast).
Attachment E	Base assumptions used to calculate the cast iron pipe revenue requirements.
Attachment F	Bridge Schedule from our most recent natural gas rate case, reflecting the
	2010 test year, as filed.
Attachment G	Description of revenue requirements categories.
Attachment H	Summary report of the Company's 2016 data as reported to the EPA in
	March 2017.
Attachment I	Compliance matrix showing compliance with the August 24, 2017 Order.

B. SEP Eligible Expenses

The Commission's August 24, 2017 Order allowed the Company to continue to recover two types of expenses through the natural gas SEP Rider: Assessment for Department Regional and National Duties and Cast Iron Pipe Replacement Project expenses. These expense types are discussed below. In compliance with Ordering Point No. 8 of the Commission's August 24, 2017 Order, we have revised the labeling of the expense types throughout our filing to clarify which costs are included. The labeling revision includes the removal of references to the Sustainable Building Guidelines costs as these costs are no longer recovered through the SEP Rider.

1. Assessment for Department Regional and National Duties (ADRND)

ADRND costs are related to the expenses incurred by the Minnesota Department of Commerce, Division of Energy Resources, for services to the Commission and the public on reliability issues and other proceedings, analyses, or projects.

The April 6, 2004 Order approved recovery of Reliability Administrator (RA) expenses through the SEP Rider. The original statute authorizing the Reliability Administrator (Minn. Stat. § 216C.052, Subd. 2) was repealed by 2011 Minn. Laws Ch. 97 § 34. In the same legislative session, Minn. Stat. § 216B.62, Subd. 3b. was passed, authorizing the Assessment for Department Regional and National Duties through June 30, 2015. The 2017 legislative session extended the ADRND through June 30, 2018.

For the purposes of this filing, we have assumed that the authorization for the ADRND will be extended again during the current legislative session. In the event that it is not, we will remove those costs from our 2018-2019 SEP tracker before implementing a new rate and show the removal of these costs in compliance.

We have revised the RA labeling as shown in our past filings to ADRND in the current filing to clearly reference the Assessment for Department Regional and National Duties.

2. Cast Iron Pipe Replacement Project

The Commission first approved recovery of the Cast Iron Pipe Replacement Project costs through the SEP Rider under Minn. Stat. § 216B.1637 (Recovery of Certain Greenhouse Gas Infrastructure Costs) in its November 25, 2008 Order in Docket No. E,G002/M-08-261. After all of the Cast Iron Pipe Replacement Project costs were incurred, approved for rider recovery, and placed in-service, this statute was repealed. Currently the SEP Rider is recovering the revenue requirements for projects constructed and costs incurred before the statute was repealed in July 2013. Since the project is no longer incurring costs, we anticipate proposing the remaining depreciation expenses for the project be moved into base rates at the time the Company next files a natural gas rate case.

The November 25, 2008 Order required that we credit through the SEP Rider any proceeds received from the sale of carbon offsets or credits associated with the cast iron replacement program. To date we have made no such sales.

VI. 2018 SEP REVENUE REQUIREMENTS AND PROPOSED RATE FACTOR

We provide an overview of the 2018-2019 SEP Period revenue requirement calculations below. Attachment G provides additional description of the SEP Rider revenue requirement categories that comprise the revenue requirements.

A. Proposed 2018 Natural Gas SEP Rate Factor

Our proposed 2018 natural gas SEP rate factor compared to the current rate approved in the 2016 SEP Rider is as follows:

	Table 1 Proposed R	ate	
	2016	2017	2018
Gas	Approved	Forecast*	Forecast
Revenue Requirement	\$1,315,002	\$1,530,774	\$1,766,965
Rate/therm	\$ 0.001368	N/A	\$0.001960

* The 2017 Forecast amount includes 6 months of actuals and 6 months of forecast.

We note that no new rate has been implemented at this time for the 2017 revenue requirements as per the Commission's August 24, 2017 Order. The rate proposed for 2018 incorporates the 2017 carryover balance which was under-collected from

customers as a result of the unchanged rate. If the Commission approves our proposed rate of \$0.001960 for the 2018-2019 SEP Period, we would not implement a separate rate for the 2017-2018 SEP Period.

If approved as proposed, an average natural gas residential customer using 70.33 therms per month would pay approximately \$1.65 per year, compared to \$1.15 currently. We discuss the specific inputs to the natural gas rate factor calculations below.

A summary of 2018 SEP forecasted costs proposed for recovery and the calculation of our proposed natural gas SEP rate factor compared to the current rate approved in the 2016 SEP Rider are follows:

	Tab SEP Costs an	ole 2 d Rate Facto	r	
	2016	2017	2018	2018 vs 2016
Gas	Approved	Forecast**	Forecast	Difference
ADRND	\$31,557	\$27,030	\$31,645	\$88
Cast Iron	\$1,821,962	\$1,567,571	\$1,456,363	\$(365,599)
Cast Iron O&M Credit	\$(72,310)	\$(72,310)	\$(72,310)	\$ 0
Carryover	\$(466,208)	\$8,483	\$351,267	\$817,475
Revenue Requirement	\$1,315,002	\$1,530,774	\$1,766,965	\$451,963
Therm Sales*	961,310,996	N/A	901,480,683	(59,830,313)
Factor	\$0.001368	N/A	\$0.001960	\$0.000592

*The Sales Forecast information in Table 2 is annualized to provide a comparison of our projected factor and our approved factor.

** The 2017 Forecast amount includes 6 months of actuals and 6 months of forecast.

The monthly breakdown of our proposed 2018 natural gas SEP rate factor costs, sales, projected revenues, and anticipated Tracker balance is provided in Attachment B.⁴ In addition, we provide the projected revenue collections based on the gas sales forecast as Attachment D4 to this filing.⁵ These attachments provide period transactions, as well as beginning and ending Tracker balances, as specified in the Commission's September 23, 2010 Order in Docket No. E,G002/M-10-210.

The costs and revenues included in the proposed natural gas 2018 SEP rate factor are not included for recovery under any other tariff rate or base rate.

We provide as Attachment F to this filing, the Bridge Schedule from our most recent natural gas rate case, reflecting the 2010 test year. Please refer to Attachment F, column (5), page 1 of 3, which shows that the SEP rate base was removed from the

⁴ Includes interdepartmental sales.

⁵ Summer 2017 sales forecast.

test year rate base; Attachment F, column (5), page 2 of 3, shows that the SEP revenues and expenses were removed from the test year operating income.

We have calculated our proposed natural gas SEP rate factor assuming all components are approved for eligibility, and are effective July 1, 2018 to June 30, 2019. If actual implementation occurs after July 1, 2018, we propose that the 2018 SEP Rider rate factor be adjusted to recover the approved program costs over the remaining months of the period, through June 30, 2019. This approach ensures that the cost recovery matches the approved eligible costs.

For a breakdown of the ADRND costs, please see Attachment D1.

B. Natural Gas Cast Iron Pipe Replacement Project

We completed the Cast Iron Pipe Replacement Project in 2012, replacing 25 miles of cast iron pipe, though revenue requirements continue until the capitalized costs are fully depreciated. No additional cast iron renewal is planned. The June 3, 2013 Order in Docket No. E002/M-13-161 discontinued reporting requirements associated with specific cast iron replacement projects.

The Minnesota jurisdictional total revenue requirements associated with this project for the 2018 SEP period is approximately \$1.5 million. See Attachment D2 for the detailed calculation of the cast iron revenue requirements. Attachment E shows the base assumptions used to calculate the cast iron pipe revenue requirements.

C. O&M Credit Calculation

The September 23, 2010 Order requires that we adjust our O&M credit in this filing to reflect the outcome of our natural gas rate case in Docket No. G002/GR-09-1153.

We provide the calculation of the O&M credit calculation as Attachment D3 to this filing. Consistent with our 2012 filing and subsequent filings, we have credited the overall O&M level to reflect the portion of cast iron pipe replaced through the 2010 test year as that amount is reflected in base rates.

D. Rate of Return

Ordering Point No. 5 of the August 24, 2017 Order requires the Company to use the capital structure authorized in the Company's 2013 electric rate case (Docket No. E002/GR-13-868) to calculate the revenue requirement for the 2017-2018 SEP Period. Attachment E – Base Assumptions – shows the 2017 and 2018 capital structure as approved in the 2013 electric rate case. We have used this capital structure to calculate the revenue requirements for the 2017-2018 SEP Period and the 2018-2019 SEP Period. We note that the table at the bottom of page 5 of the August 24, 2017 Order misstates the long-term debt approved in the 2013 rate case. We have used 45.61 percent as approved in the rate case instead of the 45.01 percent shown on the table in the Order, in compliance with Ordering Point No. 5.

Ordering Point No. 5 also requires that the Company use a 9.04 percent Return on Equity (ROE) to calculate the 2017-2018 SEP Period revenue requirement, which is the ROE recommended by the Department in the Company's Gas Utility Infrastructure Cost (GUIC) Rider in Docket No. G002/M-16-891 and later approved in the Commission's February 8, 2018 Order. No additional true-up to align the ROE to the Commission's final decision in the GUIC docket is necessary since the Commission approved the 9.04 percent recommended ROE, and no SEP rate had been implemented under a different ROE. We have used the same 9.04 ROE to calculate the 2018-2019 SEP Period revenue requirements. See Attachment E.

Beginning with January 2018, the 21 percent federal tax rate was incorporated into all SEP Rider revenue requirement calculations. We will update the tracker for any decisions impacting tax treatment approved by the Commission in Docket No. E,G999/CI-17-895 or other dockets.

E. Accumulated Deferred Income Taxes (ADIT)

The August 24, 2017 Order states that the Company shall not prorate its ADIT in the SEP Rider. Further, the Order states that the effective date of the approved rate for the 2017-2018 SEP Period shall not be effective before July 1, 2018. The delay in rate implementation means that proration of ADIT is no longer necessary for that period because actuals are used to calculate the rate.

However, in recent months, the IRS has issued several Private Letter Rulings that provide additional guidance regarding the appropriate way to treat ADIT going forward without violating IRS normalization rules. As the Commission is aware, we have been in continuing discussions with the Department and other parties as more information becomes available on this issue. We believe these PLRs offer a new way to approach ADIT treatment in the riders and will provide an opportunity for additional dialogue with the interested parties to resolve this issue.

In particular, PLR #201717008, specifically addresses rate riders and true-ups and provides the basis for the Company's new position on ADIT treatment. We note that PLR #201739001 also provides key guidance for the Company's understanding of ADIT prorate, but is focused on forward-looking rate cases setting base rates and the treatment for interim rates.

According to PLR #201717008, whenever a given rate is set, the months prior to that date can be treated as actuals, without proration. Since we propose to implement a new rate for the 2018-2019 SEP Period on July 1, 2018, the revenue requirement calculation excludes proration for the 2017-2018 SEP Period months, even though half of the 2017-2018 SEP Period is forecasted. The 2018-2019 SEP Period revenue requirement calculation includes proration. The key change in ADIT treatment from past filings involves the true-up of the prorated ADIT. PLR #201717008, page 11, explicitly disallows the true-up of forecasted ADIT with prorate and actuals with noprorate because it would reverse the economic effect of the proration. Consequently, the true-up of the 2018-2019 SEP Period ADIT would be the difference between the forecast ADIT un-prorated and actuals. The following chart illustrates the timing:

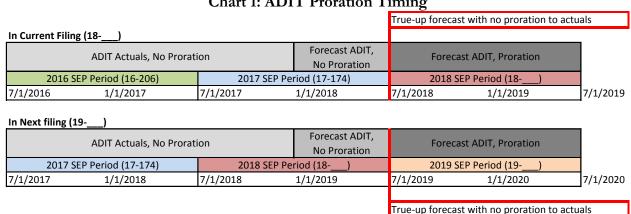


Chart 1: ADIT Proration Timing

We believe the method outlined above potentially provides a reasonable approach that abides by the IRS normalization requirements, and does not require significantly extended regulatory procedural schedules, or delay the implementation of a new rate. To better inform the record, we have calculated the SEP Rider revenues to conform to this new approach and look forward to working with parties in an effort to resolve this issue.

F. Proposed 2018 Rider Tariff and Customer Notice

Our proposed SEP Rider tariff provides that the SEP rate factor be included on each natural gas customer's monthly bill effective July 1, 2018, which is done as part of the Resource Adjustment charge on monthly bill statements.

We provide as Attachment A1 to this filing proposed changes to our Natural Gas Rate Book, Section No. 5, 15th Revised Sheet No. 63 in both redline and clean versions.

We will submit a compliance filing in this docket containing the final 2018 natural gas SEP rate factor calculations and corresponding tariff pages within 10 days of receiving the Commission's Order approving this Petition.

We propose to implement the following bill message, effective the first month the 2018 natural gas SEP rate factor takes effect, notifying customers of the change in their monthly bills:

We have updated the Resource Adjustment line item on your bill to reflect changes in the State Energy Policy (SEP) portion of the Resource Adjustment, which recovers costs for cast iron pipe replacement and to support State energy efficiency and conservation policy. The natural gas SEP portion of the Resource Adjustment increased to \$0.001960 per therm.

In compliance with Ordering Point No. 10 of the August 24, 2017 Order, the proposed customer notice reflects the customer notice approved in the Commission's May 26, 2016 Notice in Docket No. G002/M-16-206, which was the last SEP Rider rate change. We will work with Commission Staff regarding this proposed customer notice in advance of implementation.

VII. 2017 SEP COMPLIANCE INFORMATION AND TRUE-UP

A. Tracker Balance Adjustments

The estimated under-recovered amount in the 2017-2018 SEP Tracker is \$351,267. The primary driver of this true-up is lower revenue collections due to the delay in implementation of a rate for the 2017-2018 SEP period until the end of the test year, July 1, 2018, as specified in the August 24, 2017 Order. We have continued to collect at the rate set for the 2016-2017 SEP period, which was a lower rate than proposed for the 2017-2018 SEP period.

We note that this true-up adjustment is estimated, as we have used actual revenue, costs, and sales through December 2017, and forecasted the January through June 2018 period. Please see Attachment B to this filing for the supporting calculations.

B. Budget Deviations

The August 24, 2017 Order requires that we provide a comparison between actual and budgeted monthly costs, including a discussion of reasons for deviations from budgeted amounts (both higher and lower). See Attachment C for the comparison by month for the past twelve months (January 2017 – December 2017) of actual natural gas costs (revenue requirements) to the budgeted (forecast) costs excluding carryover balances. Specific deviations are explained below.

Two main factors contributed to the differences between the 2017 monthly actuals and budgeted natural gas costs. First, the ADRND costs were \$16,465 higher than forecasted due to the 2017 forecast being developed from the prior year actual billings from the Department of Commerce, which included a true-up credit of \$27,215 and thus understated the costs assessed for 2017. Second, cast iron pipe replacement costs were \$18,779 less than forecasted due primarily to a lower property tax rates compared to the forecasted rates. In summary, total actual costs for the past twelve months were \$2,314 lower than forecasted:

Tab	le 3
Budget Deviations	for Past 12 Months
ADRND	\$16,465
Cast Iron	<u>\$(18,779</u>)
Net variance	\$(2,314)

In this same twelve-month period, revenue collections were \$166,524 less than forecasted. Revenues collected at the lower 2016-2017 SEP rate during the twelve-month period contributed to the revenue shortfall.

VIII. CARBON OFFSETS

Order Point No. 1.B of the November 25, 2008 Order requires the Company to report and credit the SEP Tracker with any proceeds received from the sale of carbon offsets or credits associated with the Cast Iron Pipe Replacement project.

We have not sold any carbon offsets or credits for greenhouse gas emissions associated with the natural gas project under the SEP Rider to-date. As a result, there are no carbon offsets and/or credits to report, nor are there proceeds to credit to the SEP Rider tracker account.

In 2012, we began to report annually to the U.S. Environmental Protection Agency (EPA) on greenhouse gas emissions for all types of natural gas pipe material.⁶ In previous SEP proceedings, we committed to provide this report as an attachment in future SEP Petitions. Because we submit the data to the EPA website via electronic form, we include as Attachment H the summary report print-out of the Company's data for 2016 as reported to the EPA in March 2017.

CONCLUSION

We respectfully request that the Commission approve our 2018 natural gas SEP Rider rate factor as proposed in this Petition, our 2017 Annual SEP compliance filing, and our proposed customer notice and tariff update.

Dated: March 1, 2018

Respectfully submitted by:

Northern States Power Company

⁶ 40 C.F.R. Part 98, Subparts A and W, provide the regulatory framework for the Greenhouse Gas (GHG) Reporting Program (November 10, 2010). The GHG calculation methodologies used in the rule generally include the use of engineering estimates, emissions modeling software, and emission factors, or, when other methods are not feasible, direct measurement of emissions. The established emission factor for cast iron main is 27.67 scf/hour/mile.

STATE OF MINNESOTA BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Nancy Lange Dan Lipschultz Matthew Schuerger Katie Sieben John Tuma Chair Commissioner Commissioner Commissioner

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF A MODIFICATION TO OUR NATURAL GAS SEP TARIFF, 2018 SEP RATE FACTOR, AND 2017 SEP COMPLIANCE FILING DOCKET NO. G002/M-18-____

PETITION AND COMPLIANCE FILING

SUMMARY

Please take notice that on March 1, 2018, Northern States Power Company, doing business as Xcel Energy, filed with the Minnesota Public Utilities Commission a Petition for approval of our July 2018 – June 2019 natural gas State Energy Policy (SEP) Rider rate factor, pursuant to Minn. Stat. §§ 216B.16, subd. 1 and 216B.62 subd. 3b, Minn. R. 7829.1300 and 7829.0100, and previous Commission Orders in our SEP Rider filings. The Petition included the Company's 2017 Annual SEP Compliance Filing, including the calculation of the preliminary 2017 true-up of costs and revenues recorded in the SEP Tracker Accounts.

State Energy Policy Rider 2018 Attachment Table of Contents

SEP Tariff Sheets and Rate

Attachment A1 – Tariff Attachment A2 – Rate Factor: 2016-2019

Cost Recovery and SEP Rate Calculations

Attachment B – Tracker Attachment C – Budget Deviation Analysis

Gas Tracker Detail

Attachment D1 – Tracker Detail – Assessment of Department Regional and National Duties Attachment D2 – Tracker Detail – Cast Iron Replacement Revenue Requirement Attachment D3 – Tracker Detail – Cast Iron O&M Credit Attachment D4 – Tracker Detail – Revenue Collections

Compliance

Attachment E – Base Assumptions – Cast Iron Pipe

Attachment F – Rate Case Bridge Schedule

Attachment G - Revenue Requirement Category Descriptions

Attachment H – Reporting to the U.S. Environmental Protection Agency re. Greenhouse Gas Emissions

Attachment I – Compliance Matrix (Docket No. G002/M-17-174)

Docket No. G002/M-18-____ 2018 SEP Petition Attachment A1

Redline

PROPOSED

APPLICATION

Applicable to bills for gas service provided under the Company's retail rate schedules.

DETERMINATION OF CHARGES UNDER THIS RIDER

Customer bills under this rate will include the specific charges listed below.

RIDER

There shall be included on each customer's monthly bill a State Energy Policy Rate Rider which shall be the applicable State Energy Policy Rate Rider factor multiplied by the customer's monthly therm gas consumption.

DETERMINATION OF STATE ENERGY POLICY RATE FACTOR

The applicable State Energy Policy Rate Rider shall be the quotient obtained by dividing the annual State Energy Policy Tracker amount by the annual forecasted therm sales. The factor may be adjusted annually with approval of the Minnesota Public Utilities Commission.

Residential	\$0.001368 <u>\$0.001960</u> per therm	R
Commercial	<mark>\$0.001368<u>\$0.001960</u> per therm</mark>	R

Recoverable State Energy Policy Rate Expense

All costs appropriately charged to the State Energy Policy Tracker account shall be eligible for recovery through this Rider, and all revenues received from the State Energy Policy adjustment portion of the Resource Adjustment shall be credited to the State Energy Policy Tracker account.

Docket No. G002/M-18-____ 2018 SEP Petition Attachment A1

Clean

PROPOSED

APPLICATION

Applicable to bills for gas service provided under the Company's retail rate schedules.

DETERMINATION OF CHARGES UNDER THIS RIDER

Customer bills under this rate will include the specific charges listed below.

RIDER

There shall be included on each customer's monthly bill a State Energy Policy Rate Rider which shall be the applicable State Energy Policy Rate Rider factor multiplied by the customer's monthly therm gas consumption.

DETERMINATION OF STATE ENERGY POLICY RATE FACTOR

The applicable State Energy Policy Rate Rider shall be the quotient obtained by dividing the annual State Energy Policy Tracker amount by the annual forecasted therm sales. The factor may be adjusted annually with approval of the Minnesota Public Utilities Commission.

Residential	\$0.001960 per therm	
Commercial	\$0.001960 per therm	

Recoverable State Energy Policy Rate Expense

All costs appropriately charged to the State Energy Policy Tracker account shall be eligible for recovery through this Rider, and all revenues received from the State Energy Policy adjustment portion of the Resource Adjustment shall be credited to the State Energy Policy Tracker account.

		Gas Rat	te l	Factor		
		2016		2017	2018	2019
	note	Approved		Forecast	Forecast	Forecast
Revenue Requirement	1	\$ 1,315,002	\$	1,530,774	\$ 1,766,965	\$ 1,378,600
Forecasted Therms	2	961,310,996		-	901,480,683	892,773,230
Gas Rate/therm	3	0.001368		N/A See Note 5	0.001960	0.001544
Implemented Rate/therm		0.001368		N/A See Note 5	TBD	TBD
Residential bill impact / Month	4	\$ 0.10		N/A See Note 5	\$ 0.14	\$ 0.11
Residential bill impact / Year	4	\$ 1.15		N/A See Note 5	\$ 1.65	\$ 1.30

Notes:

(1) For 2017, 2018, and 2019, refer to Gas Tracker (Attachment B) for supporting detail. For 2016, refer to Docket No. G002/M-16-206.

(2) For 2017, 2018, and 2019, refer to Gas Tracker Detail: Revenue Collections (Attachment D4) for supporting detail. For 2016, refer to the August 24, 2017 Commission Order in Docket No. G002/M-17-174.

(3) 2016 rate approved in Docket No. G002/M-16-206. For 2017, 2018, and 2019 rates are forecasted.

(4) Assumes 844 therms per year which equates to 70.33 therms per month.

(5) 2017 rate not implemented, for 2017 the Approved 2016 rate continued in effect for July 2017 through June 2018.

						Gas	Tracker								
	Reference	Carryover	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Total - 15/16
	Attachment	Balance	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual
ADRND (1)	D1		ş -	s -	\$ 12,911	s -	s -	\$ 1,868	ş -	s -	\$ 6,454	ş -	s -	\$ 10,646	\$ 31,879
Cast Iron	D2		\$ 158,756	\$ 158,341	\$ 157,927	\$ 157,513	\$ 157,098	\$ 156,684	\$ 155,524	\$ 155,130	\$ 154,736	\$ 154,342	\$ 153,948	\$ 153,554	\$ 1,873,555
Cast Iron O&M Credit	D3		\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (72,310)
Carryover from Prev Yr (2)		\$ (1,245,117)	\$ (103,760)	\$ (103,760)	\$ (103,760)	\$ (103,760)	\$ (103,760)	\$ (103,760)	\$ (103,760)	\$ (103,760)	\$ (103,760)	\$ (103,760)	\$ (103,760)	\$ (103,760)	\$ (1,245,117)
Revenue Requirements (3)			\$ 48,970	\$ 48,556	\$ 61,053	\$ 47,727	\$ 47,313	\$ 48,766	\$ 45,739	\$ 45,345	\$ 51,405	\$ 44,557	\$ 44,163	\$ 54,415	\$ 588,008
Revenue Collections (4)	D4		\$ 97,466	\$ 85,412	\$ 88,900	\$ 90,860	\$ 132,683	\$ 161,745	\$ 95,779	\$ 97,468	\$ 90,171	\$ 61,438	\$ 43,498	\$ 33,357	\$ 1,078,776
Carbon Offset Payments (5)			s -	s -	s -	s -	s -	s -	ş -	s -	s -	s -	s -	s -	s -
Balance (6) (7)			\$ (48,495)	\$ (85,352)	\$ (113,199)	\$ (156,331)	\$ (241,701)	\$ (354,680)	\$ (404,720)	\$ (456,843)	\$ (495,609)	\$ (512,491)	\$ (511,825)	\$ (490,768)	\$ (490,768)
	Reference	Carryover	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 - 16/17
	Attachment	Balance	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual
ADRND (1)	D1		ş -	s -	\$ 10,336	s -	ş -	\$ (16,871)	ş -	s -	\$ 13,781	ş -	s -	\$ 6,095	\$ 13,341
Cast Iron	D2		\$ 153,160	\$ 152,766	\$ 152,372	\$ 151,978	\$ 151,584	\$ 151,190	\$ 148,917	\$ 148,540	\$ 148,164	\$ 147,787	\$ 147,410	\$ 147,033	\$ 1,800,904
Cast Iron O&M Credit	D3		\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (72,310)
Carryover from Prev Yr (2)		\$ (490,768)	\$ (40,897)	\$ (40,897)	\$ (40,897)	\$ (40,897)	\$ (40,897)	\$ (40,897)	\$ (40,897)	\$ (40,897)	\$ (40,897)	\$ (40,897)	\$ (40,897)	\$ (40,897)	\$ (490,768)
Revenue Requirements (3)			\$ 106,237	\$ 105,843	\$ 115,785	\$ 105,055	\$ 104,661	\$ 87,396	\$ 101,994	\$ 101,617	\$ 115,022	\$ 100,864	\$ 100,487	\$ 106,205	\$ 1,251,167
Revenue Collections (4)	D4		\$ 53,363	\$ 72,224	\$ 46,484	\$ 55,752	\$ 81,501	\$ 126,152	\$ 216,830	\$ 158,142	\$ 166,519	\$ 112,783	\$ 87,220	\$ 65,716	\$ 1,242,685
Carbon Offset Payments (5)			ş -	ş -	ş -	ş -	ş -	ş -	ş -	s -	\$-	ş -	ş -	ş -	s -
Balance (6) (7)			\$ 52,875	\$ 86,494	\$ 155,796	\$ 205,099	\$ 228,259	\$ 189,503	\$ 74,668	\$ 18,143	\$ (33,354)	\$ (45,273)	\$ (32,006)	\$ 8,483	\$ 8,483
	Reference	Carryover	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 - 17/18
	Attachment	Balance	Actual	Actual	Actual	Actual	Actual	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
ADRND (1)	D1		ş -	ş -	\$ 5,884	s -	ş -	\$ 1,269	ş -	s -	\$ 13,781	ş -	s -	\$ 6,095	\$ 27,030
Cast Iron	D2		\$ 138,464	\$ 138,119	\$ 137,774	\$ 137,429	\$ 137,084	\$ 136,739	\$ 124,322	\$ 124,057	\$ 123,792	\$ 123,527	\$ 123,263	\$ 122,998	\$ 1,567,571
Cast Iron O&M Credit	D3		\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (6,026)	\$ (72,310)
Carryover from Prev Yr (2)		\$ 8,483	\$ 707	\$ 707	\$ 707	\$ 707	\$ 707	\$ 707	\$ 707	\$ 707	\$ 707	\$ 707	\$ 707	\$ 707	\$ 8,483
Revenue Requirements (3)			\$ 133,146	\$ 132,800	\$ 138,340	\$ 132,110	\$ 131,765	\$ 132,690	\$ 119,003	\$ 118,738	\$ 132,255	\$ 118,209	\$ 117,944	\$ 123,773	\$ 1,530,774
Revenue Collections (4)	D4		\$ 66,869	\$ 49,669	\$ 52,454	\$ 58,662	\$ 108,577	\$ 156,722	\$ 192,409	\$ 160,607	\$ 133,775	\$ 82,127	\$ 65,516	\$ 52,121	\$ 1,179,507
Carbon Offset Payments (5)			\$ -	ş -	s -	ş -	ş -	ş -	ş -	ş -	ş -	ş -	ş -	ş -	s -
Balance (6) (7)			\$ 66,277	\$ 149,408	\$ 235,294	\$ 308,742	\$ 331,931	\$ 307,899	\$ 234,493	\$ 192,625	\$ 191,105	\$ 227,186	\$ 279,614	\$ 351,267	\$ 351,267
				-	1							1			
	Reference	Carryover	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 - 18/19
	Attachment	Carryover Balance	Jul-18 Forecast	Aug-18 Forecast	Forecast	Oct-18 Forecast	Nov-18 Forecast	Forecast	Jan-19 Forecast	Feb-19 Forecast	Forecast	Apr-19 Forecast	May-19 Forecast	Forecast	Forecast
ADRND (1)			-		-				Forecast \$ -		Forecast \$ 13,781	-		5	-
ADRND (1) Cast Iron	Attachment		-		Forecast	Forecast	Forecast	Forecast	-	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
	Attachment D1	Balance	Forecast \$ -	Forecast \$ - \$ 122,512 \$ (6,026)	Forecast \$ 5,884 \$ 122,282 \$ (6,026)	Forecast \$ -	Forecast \$ -	Forecast \$ 5,884 \$ 121,616 \$ (6,026)	Forecast \$ -	Forecast \$ - \$ 120,905 \$ (6,026)	Forecast \$ 13,781 \$ 120,653 \$ (6,026)	Forecast \$ - \$ 120,404 \$ (6,026)	Forecast \$ - \$ 120,160 \$ (6,026)	Forecast \$ 6,095 \$ 119,919 \$ (6,026)	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310)
Cast Iron	Attachment D1 D2		Forecast \$ \$ 122,747	Forecast \$ - \$ 122,512	Forecast \$ 5,884 \$ 122,282	Forecast \$ - \$ 122,056	Forecast \$ - \$ 121,834	Forecast \$ 5,884 \$ 121,616	Forecast \$ - \$ 121,277	Forecast \$ - \$ 120,905	Forecast \$ 13,781 \$ 120,653	Forecast \$ - \$ 120,404	Forecast \$ - \$ 120,160	Forecast \$ 6,095 \$ 119,919	Forecast \$ 31,645 \$ 1,456,363
Cast Iron Cast Iron O&M Credit	Attachment D1 D2	Balance	Forecast \$ - \$ 122,747 \$ (6,026)	Forecast \$	Forecast \$ 5,884 \$ 122,282 \$ (6,026)	Forecast \$ - \$ 122,056 \$ (6,026)	Forecast \$ - \$ 121,834 \$ (6,026)	Forecast \$ 5,884 \$ 121,616 \$ (6,026)	Forecast \$ - \$ 121,277 \$ (6,026)	Forecast \$ - \$ 120,905 \$ (6,026)	Forecast \$ 13,781 \$ 120,653 \$ (6,026)	Forecast \$ - \$ 120,404 \$ (6,026)	Forecast \$ - \$ 120,160 \$ (6,026)	Forecast \$ 6,095 \$ 119,919 \$ (6,026)	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310)
Cast Iron Cast Iron O&M Credit Carryover from Prev Yr (2)	Attachment D1 D2	Balance	Forecast \$ \$ 122,747 \$ (6,026) \$ 29,272	Forecast \$ - \$ 122,512 \$ (6,026) \$ 29,272	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272	Forecast \$ - \$ 122,056 \$ (6,026) \$ 29,272	Forecast \$ - \$ 121,834 \$ (6,026) \$ 29,272	Forecast \$ 5,884 \$ 121,616 \$ (6,026) \$ 29,272	Forecast \$ \$ 121,277 \$ (6,026) \$ 29,272	Forecast \$ - \$ 120,905 \$ (6,026) \$ 29,272	Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272	Forecast \$ \$ 120,404 \$ (6,026) \$ 29,272	Forecast \$ - \$ 120,160 \$ (6,026) \$ 29,272	Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267
Cast Iron O&M Credit Cast Iron O&M Credit Carryover from Prev Yr (2) Revenue Requirements (3)	Attachment D1 D2 D3	Balance	Forecast \$ 122,747 (6,026) 29,272 145,993	Forecast \$	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272 \$ 151,413	Forecast \$ - \$ 122,056 \$ (6,026) \$ 29,272 \$ 145,302	Forecast \$ - \$ 121,834 \$ (6,026) \$ 29,272 \$ 145,080	Forecast \$ 5,884 \$ 121,616 \$ (6,026) \$ 29,272 \$ 150,746	Forecast \$	Forecast \$ - \$ 120,905 \$ (6,026) \$ 29,272 \$ 144,151	Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272 \$ 157,681	Forecast \$ \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651	Forecast \$ - \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406	Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,965
Cast Iron Cast Iron O&M Credit Carryover from Prev Yr (2) Revenue Requirements (3) Revenue Collections (4)	Attachment D1 D2 D3	Balance	Forecast \$ 122,747 \$ (6,026) \$ 29,272 \$ 145,993 \$ 89,421	Forecast \$	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272 \$ 151,413	Forecast \$ - \$ 122,056 \$ (6,026) \$ 29,272 \$ 145,302	Forecast \$ - \$ 121,834 \$ (6,026) \$ 29,272 \$ 145,080	Forecast \$ 5,884 \$ 121,616 \$ (6,026) \$ 29,272 \$ 150,746	Forecast \$	Forecast \$ - \$ 120,905 \$ (6,026) \$ 29,272 \$ 144,151	Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272 \$ 157,681	Forecast \$ \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651	Forecast \$ - \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406	Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,965
Cast Iron Cast Iron O&M Credit Carryover from Prev Yr (2) Revenue Requirements (3) Revenue Collections (4) Carbon Offset Payments (5)	Attachment D1 D2 D3 D4	Balance	Forecast \$ 122,747 \$ (6,026) \$ 29,272 \$ 145,993 \$ 89,421 \$ - \$ 56,572	Forecast \$ 122,512 \$ (6,026) \$ 29,272 \$ 145,759 \$ 81,057 \$ 121,274	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272 \$ 151,413 \$ 75,222 \$ \$ 197,465	Forecast \$ - \$ 122,056 \$ (6,026) \$ 29,272 \$ 145,302 \$ 97,689 \$ - \$ 245,078	Forecast \$ - \$ 121,834 \$ (6,026) \$ 29,272 \$ 145,080 \$ 169,673 \$ - \$ 220,485	Forecast \$ 5,884 \$ 121,616 \$ (6,026) \$ 29,272 \$ 150,746 \$ 253,842 \$ - \$ 117,389	Forecast \$ 121,277 \$ (6,026) \$ 29,272 \$ 144,523 \$ 280,139 \$. \$ (18,227)	Forecast \$ - \$ 120,905 \$ (6,026) \$ 29,272 \$ 144,151 \$ 227,423 \$ - \$ (101,498) \$ (101,498) \$ - \$ - \$ (101,498) \$ - \$ - \$ - \$ - \$ (101,498) > - \$ > - > </td <td>Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272 \$ 157,681 \$ 193,758 \$ - \$ (137,576)</td> <td>Forecast \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651 \$ 125,165 \$ \$ (119,091)</td> <td>Forecast \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406 \$ 96,726 \$ \$ (72,411)</td> <td>Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260 \$ 76,786 \$ - \$ 63</td> <td>Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,902 \$ 1,766,902 \$ 5 \$ 63</td>	Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272 \$ 157,681 \$ 193,758 \$ - \$ (137,576)	Forecast \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651 \$ 125,165 \$ \$ (119,091)	Forecast \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406 \$ 96,726 \$ \$ (72,411)	Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260 \$ 76,786 \$ - \$ 63	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,902 \$ 1,766,902 \$ 5 \$ 63
Cast Iron Cast Iron O&M Credit Carryover from Prev Yr (2) Revenue Requirements (3) Revenue Collections (4) Carbon Offset Payments (5)	Attachment D1 D2 D3	Balance	Forecast \$ 122,747 \$ (6,026) \$ 29,272 \$ 145,993 \$ 89,421 \$	Forecast \$ - \$ 122,512 \$ (6,026) \$ 29,272 \$ 145,759 \$ 81,057 \$ -	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272 \$ 151,413 \$ 75,222 \$ -	Forecast \$ - \$ 122,056 \$ (6,026) \$ 29,272 \$ 145,302 \$ 97,689 \$ -	Forecast \$ - \$ 121,834 \$ (6,026) \$ 29,272 \$ 145,080 \$ 169,673 \$ -	Forecast \$ 5,884 \$ 121,616 \$ (6,026) \$ 29,272 \$ 150,746 \$ 253,842 \$ -	Forecast \$ - \$ 121,277 \$ (6,026) \$ 29,272 \$ 144,523 \$ 280,139 \$ -	Forecast \$ - \$ 120,905 \$ (6,026) \$ 29,272 \$ 144,151 \$ 227,423 \$ -	Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272 \$ 157,681 \$ 193,758 \$ -	Forecast \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651 \$ 125,165 \$	Forecast \$ - \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406 \$ 96,726 \$ -	Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260 \$ 76,786 \$ -	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,905 \$ 1,766,902 \$ -
Cast Iron O&M Credit Carryover from Prev Yr (2) Revenue Requirements (3) Revenue Collections (4) Carbon Offset Payments (5) Balance (6) (7)	Attachment D1 D2 D3 D4 Reference Attachment	Balance \$ 351,267	Forecast \$ 122,747 \$ (6,026) \$ 29,272 \$ 145,993 \$ 89,421 \$ - \$ 56,572	Forecast \$ 122,512 \$ (6,026) \$ 29,272 \$ 145,759 \$ 81,057 \$ 121,274	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272 \$ 151,413 \$ 75,222 \$ 197,465 Forecast	Forecast \$ - \$ 122,056 \$ (6,026) \$ 29,272 \$ 145,302 \$ 97,689 \$ - \$ 245,078	Forecast \$ - \$ 121,834 \$ (6,026) \$ 29,272 \$ 145,080 \$ 169,673 \$ - \$ 220,485	Forecast \$ 5,884 \$ 121,616 \$ (6,026) \$ 29,272 \$ 150,746 \$ 253,842 \$ - \$ 117,389 Forecast	Forecast \$ 121,277 \$ (6,026) \$ 29,272 \$ 144,523 \$ 280,139 \$. \$ (18,227)	Forecast \$ - \$ 120,905 \$ (6,026) \$ 29,272 \$ 144,151 \$ 227,423 \$ - \$ (101,498) \$ (101,498) \$ - \$ - \$ (101,498) \$ - \$ - \$ - \$ - \$ (101,498) > - \$ > - > </td <td>Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272 \$ 157,681 \$ 193,758 \$ (137,576) Har-20 Forecast</td> <td>Forecast \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651 \$ 125,165 \$ \$ (119,091)</td> <td>Forecast \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406 \$ 96,726 \$ \$ (72,411)</td> <td>Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260 \$ 76,786 \$ - \$ 63 Forecast</td> <td>Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,902 \$ 1,766,902 \$ 63 Total - 19/20 Forecast</td>	Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272 \$ 157,681 \$ 193,758 \$ (137,576) Har-20 Forecast	Forecast \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651 \$ 125,165 \$ \$ (119,091)	Forecast \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406 \$ 96,726 \$ \$ (72,411)	Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260 \$ 76,786 \$ - \$ 63 Forecast	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,902 \$ 1,766,902 \$ 63 Total - 19/20 Forecast
Cast Iron Cast Iron O&M Credit Carryover from Prev Yr (2) Revenue Requirements (3) Revenue Collections (4) Carbon Offset Payments (5)	Attachment D1 D2 D3 D4 Reference	Balance \$ 351,267 Carryover	Forecast \$ 122,747 \$ (6,026) \$ 29,272 \$ 145,993 \$ 89,421 \$ 56,572 Jul-19	Forecast 5	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272 \$ 151,413 \$ 75,222 \$ 197,465 \$ 197,465	Forecast \$ - \$ 122,056 \$ 29,272 \$ 29,272 \$ 145,302 \$ 97,689 \$ 245,078	Forecast \$ - \$ 121,834 \$ (6,026) \$ 29,272 \$ 145,080 \$ 169,673 \$ 220,485	Forecast \$ 5,884 \$ 121,616 \$ (6,026) \$ 29,272 \$ 150,746 \$ 253,842 \$ - \$ 117,389 Dec-19	Forecast \$ 121,277 \$ (6,026) \$ 29,272 \$ 144,523 \$ 280,139 \$. \$ (18,227) \$ Jan-20	Forecast \$ - \$ 120,905 \$ (6,026) \$ 29,272 \$ 144,151 \$ 227,423 \$ - \$ (101,498) Feb-20	Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272 \$ 157,681 \$ 193,758 \$ - \$ (137,576) Mar-20	Forecast \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651 \$ 125,165 \$ \$ (119,091) Apr-20	Forecast \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406 \$ 96,726 \$ 5 \$ (72,411) May-20	Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260 \$ 76,786 \$ - \$ 63 Jun-20	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,905 \$ 1,766,902 \$ 63
Cast Iron O&M Credit Carryover from Prev Yr (2) Revenue Requirements (3) Revenue Collections (4) Carbon Offset Payments (5) Balance (6) (7)	Attachment D1 D2 D3 D4 Reference Attachment	Balance \$ 351,267 Carryover	Forecast \$ 122,747 \$ (6,026) \$ 29,272 \$ 145,993 \$ 89,421 \$ 56,572 Jul-19	Forecast 5	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272 \$ 151,413 \$ 75,222 \$ 197,465 Forecast	Forecast \$ - \$ 122,056 \$ 29,272 \$ 29,272 \$ 145,302 \$ 97,689 \$ 245,078	Forecast \$ - \$ 121,834 \$ (6,026) \$ 29,272 \$ 145,080 \$ 169,673 \$ 220,485	Forecast \$ 5,884 \$ 121,616 \$ (6,026) \$ 29,272 \$ 150,746 \$ 253,842 \$ - \$ 117,389 Forecast	Forecast \$ 121,277 \$ (6,026) \$ 29,272 \$ 144,523 \$ 280,139 \$. \$ (18,227) \$ Jan-20	Forecast \$ - \$ 120,905 \$ (6,026) \$ 29,272 \$ 144,151 \$ 227,423 \$ 227,423 \$ (101,498) Feb-20 Forecast	Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272 \$ 157,681 \$ 193,758 \$ (137,576) Har-20 Forecast	Forecast \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651 \$ 125,165 \$ \$ (119,091) Apr-20	Forecast \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406 \$ 96,726 \$ 5 \$ (72,411) May-20	Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260 \$ 76,786 \$ - \$ 63 Forecast	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,902 \$ 1,766,902 \$ 63 Total - 19/20 Forecast
Cast Iron O&M Credit Cast Iron O&M Credit Carryover from Prev Yr (2) Revenue Requirements (3) Revenue Collections (4) Carbon Offset Payments (5) Balance (6) (7) ADRND (1)	Attachment D1 D2 D3 D4 Attachment D1	Balance \$ 351,267 Carryover	Forecast \$ 122,747 \$ (6,026) \$ 29,272 \$ 145,993 \$ 89,421 \$ 5 \$ 56,572 Jul-19 Forecast \$ -	Forecast \$ \$ 122,512 \$ (6,026) \$ 29,272 \$ 145,759 \$ 145,759 \$ 121,274 Forecast \$	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272 \$ 151,413 \$ 75,222 \$ 197,465 Sep-19 Forecast \$ 5,884	Forecast \$ - \$ 122,056 \$ 29,272 \$ 145,502 \$ 97,689 \$ 245,078 Oct-19 Forecast \$ -	Forecast \$ - \$ 121,834 \$ (6,026) \$ 29,272 \$ 145,080 \$ 169,673 \$ - \$ 220,485 Nov-19 Forecast \$ - \$ 1 \$ 1 \$ 1 \$ 1 \$ 1 1 1 1 1 1 1 1 1 <th1< th=""> <th1< th=""> 1</th1<></th1<>	Forecast \$ 5,884 \$ 121,616 \$ (6,026) \$ 29,272 \$ 150,746 \$ 253,842 \$ 117,389 Forecast \$ 5,884	Forecast \$ \$ 121,277 \$ (6,026) \$ 29,272 \$ 144,523 \$ 280,139 \$ - \$ (18,227) Forecast \$ -	Forecast \$ - \$ 120,905 \$ (6,020) \$ 29,272 \$ 144,151 \$ 227,423 \$ - \$ (101,498) Feb-20 Forecast \$ -	Forecast \$ 13,781 \$ 120,653 \$ 6,026) \$ 29,272 \$ 137,768 \$ 193,758 \$ - \$ 137,5760 Forecast \$ \$ 137,781	Forecast \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651 \$ 125,165 \$ (119,091) Apr-20 Forecast \$	Forecast \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406 \$ 96,726 \$ (72,411) May-20 Forecast \$ -	Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260 \$ 76,786 \$ - \$ 63 Forecast \$ 6,095	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,905 \$ 1,766,902 \$ -63 Total - 19/20 Forecast \$ 31,645
Cast Iron Cast Iron O&M Credit Carryover from Prev Yr (2) Revenue Requirements (3) Revenue Collections (4) Carbon Offset Payments (5) Balance (6) (7) ADRND (1) Cast Iron	Attachment D1 D2 D3 D4 Attachment D1 D2	Balance \$ 351,267 Carryover	Forecast \$ -2 \$ 122,747 \$ 122,747 \$ 29,272 \$ 145,993 \$ 89,421 \$ 56,572 Jul-19 Forecast \$ - \$ 119,682	Forecast \$ - \$ 122,512 \$ (6,026) \$ 29,272 \$ 145,759 \$ 145,759 \$ 145,759 \$ 121,274 Forecast \$ - \$ 119,448	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272 \$ 151,413 \$ 75,222 \$ 197,465 Forecast \$ 5,884 \$ 119,219	Forecast \$ - \$ 122,056 \$ 22,056 \$ 22,022 \$ 29,722 \$ 97,689 \$ 245,078 Cot-19 Forecast \$ - \$ - \$ - \$ - \$ 118,993	Forecast \$ - \$ 121,834 \$	Forecast \$ 5,884 \$ 121,616 \$ (6,026) \$ 29,272 \$ 150,746 \$ 253,842 \$ \$ 117,389 Forecast \$ 5,884 \$ 118,554	Forecast \$ - \$ 121,277 \$ (6,026) \$ 29,272 \$ 144,523 \$ 280,139 \$ - \$ (18,227) Jan-20 Forecast \$ - \$ 118,172	Forecast \$ - \$ 120,905 \$ (6,026) \$ 29,272 \$ 144,151 \$ 227,423 \$ - \$ (101,498) Feb-20 Forecast \$ - \$ 117,768	Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272 \$ 157,681 \$ 193,758 \$ \$ (137,576) Forecast \$ 13,781 \$ 117,517	Forecast \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651 \$ 125,165 \$ (119,091) Forecast \$ - \$ 117,269	Forecast \$ 120,160 \$ 120,160 \$ 29,272 \$ 143,406 \$ 96,726 \$ (72,411) May-20 Forecast \$ 117,024	Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260 \$ 76,786 \$ - \$ 63 Forecast \$ 6,095 \$ 116,784	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,902 \$ 1,766,902 \$ 63 Total - 19/20 Forecast \$ 31,645 \$ 1,419,201
Cast Iron O&M Credit Cartyover from Prev Yr (2) Revenue Requirements (3) Revenue Collections (4) Carbon Offset Payments (5) Balance (6) (7) ADRND (1) Cast Iron Cast Iron O&M Credit	Attachment D1 D2 D3 D4 Attachment D1 D2	Balance \$ 351,267 Carryover Balance	Forecast \$ -2 \$ 122,747 \$ 122,747 \$ 29,272 \$ 145,993 \$ 89,421 \$ 56,572 Jul-19 Forecast \$ - \$ 119,682	Forecast \$ - \$ 122,512 \$ (6,026) \$ 29,272 \$ 145,759 \$ 81,057 \$ - \$ 121,274 Forecast \$ 119,448 \$ (6,026)	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272 \$ 151,413 \$ 75,222 \$ 197,465 Forecast \$ 5,884 \$ 119,219	Forecast \$ - \$ 122,056 \$ 22,056 \$ 22,022 \$ 29,722 \$ 97,689 \$ 245,078 Cot-19 Forecast \$ - \$ - \$ - \$ - \$ 118,993	Forecast \$ - \$ 121,834 \$	Forecast \$ 5,884 \$ 121,616 \$ (6,026) \$ 29,272 \$ 150,746 \$ 253,842 \$ \$ 117,389 Forecast \$ 5,884 \$ 118,554	Forecast \$ - \$ 121,277 \$ (6,026) \$ 29,272 \$ 144,523 \$ 280,139 \$ - \$ (18,227) Jan-20 Forecast \$ - \$ 118,172	Forecast \$ - \$ 120,905 \$ (6,026) \$ 29,272 \$ 144,151 \$ 227,423 \$ - \$ (101,498) Feb-20 Forecast \$ - \$ 117,768	Forecast \$ 13,781 \$ 120,653 \$ (6,026) \$ 29,272 \$ 157,681 \$ 193,758 \$ \$ (137,576) Forecast \$ 13,781 \$ 117,517	Forecast \$ 120,404 \$ (6,026) \$ 29,272 \$ 143,651 \$ 125,165 \$ (119,091) Forecast \$ - \$ 117,269	Forecast \$ 120,160 \$ 120,160 \$ 29,272 \$ 143,406 \$ 96,726 \$ (72,411) May-20 Forecast \$ 117,024	Forecast \$ 6,095 \$ 119,919 \$ (6,026) \$ 29,272 \$ 149,260 \$ 76,786 \$ - \$ 63 Forecast \$ 6,095 \$ 116,784	Forecast \$ 31,645 \$ 1,456,363 \$ 72,310) \$ 351,267 \$ 1,766,902 \$ 1,766,902 \$ 6,3 Total - 19/20 Forecast \$ 31,645 \$ 31,645 \$ 31,645 \$ 31,645 \$ 149,201 \$ (72,310)
Cast Iron O&M Credit Cartyover from Prev Yr (2) Revenue Requirements (3) Revenue Collections (4) Carbon Offset Payments (5) Balance (6) (7) ADRND (1) Cast Iron O&M Credit Cartyover from Prev Yr (2)	Attachment D1 D2 D3 D4 Attachment D1 D2	Balance \$ 351,267 Carryover Balance	Forecast \$ - \$ - \$ - \$ - \$ \$ - \$ \$ (6,026) \$ - \$ 29,272 \$ 145,993 \$ 99,421 \$ - \$ \$ \$ 5,6572 > 99,421 \$ - \$ 5 5,6572 > 99,421 \$ - \$ 5 5,65,752 > 99,622 \$ - \$ 5 5,65,752 > 9,623 \$ - \$ 5 5,65,752 > 9,624 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 19,682 \$ 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 <	Forecast \$ - \$ 122,512 \$ 60,203 \$ 29,272 \$ 145,759 \$ 121,274 \$ 121,274 \$ - \$ - \$ 121,274 \$ - \$ 119,448 \$ 5 \$ 121,274	Forecast \$ 5,884 \$ 122,282 \$ (6,026) \$ 29,272 \$ 151,413 \$ 75,222 \$ 197,465 Forecast \$ 5,884 \$ 119,219 \$ (6,026) \$ (6,026) \$ 5,854	Forecast \$ - \$ 122,056 \$ (6,026) \$ 29,272 \$ 29,272	Forecast \$ - \$ 121,834 \$ (6,0/26) \$ 29,272 \$ 145,080 \$ 169,673 \$ - \$ 220,485 Forecast \$ - \$ 118,772 \$ (6,0/26) \$ 5	S 5,884 \$ 121,616 \$ 6(0,02) \$ 29,272 \$ 150,746 \$ 253,842 \$ 117,398 \$ 117,398 \$ 117,598 \$ 5,884 \$ 118,554 \$ 6(0,60) \$ (5,884)	Forecast \$ - \$ 12,277 \$ 26,026 \$ 29,272 \$ 144,523 \$ 280,139 \$ - \$ 184,523 \$ 0.8227)	Forecast \$ - \$ 120,905 \$ (6,026) \$ 29,272 \$ 144,151 \$ 227,423 \$ - \$ (101,498) Feb-20 Forecast \$ - \$ (117,768 \$ - \$ (6,026) \$ 5	S 13,781 \$ 120,653 \$ 160,020 \$ 29,272 \$ 193,758 \$ - \$ 100,758 \$ 193,758 \$ 137,81 \$ 13,781 \$ 11,717 \$ 16,021 \$ 6,020,03	Forecast \$ - \$ 120,404 \$ \$ (6,026) \$ 29,272 \$ 143,651 \$ 29,272 \$ 143,651 \$ 125,165 \$ - \$ \$ (110,091) \$ \$ (110,091) \$ </td <td>Forecast \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406 \$ 96,726 \$ 96,726 \$ 72,411) Forecast \$ (72,411) Forecast \$ 117,024 \$ (6,026) \$ 5</td> <td>Forecast \$ 6,095 \$ 119,919 \$ \$ (6,026) \$ \$ 29,272 \$ 149,260 \$</td> <td>Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,905 \$ 1,766,905 \$ 1,766,905 \$ 1,766,905 \$ 31,645 \$ 31,645 \$ 31,645 \$ 31,419,201 \$ (72,310) \$ (72,310) \$ (72,310) \$ (72,310) \$ (72,310)</td>	Forecast \$ 120,160 \$ (6,026) \$ 29,272 \$ 143,406 \$ 96,726 \$ 96,726 \$ 72,411) Forecast \$ (72,411) Forecast \$ 117,024 \$ (6,026) \$ 5	Forecast \$ 6,095 \$ 119,919 \$ \$ (6,026) \$ \$ 29,272 \$ 149,260 \$	Forecast \$ 31,645 \$ 1,456,363 \$ (72,310) \$ 351,267 \$ 1,766,905 \$ 1,766,905 \$ 1,766,905 \$ 1,766,905 \$ 31,645 \$ 31,645 \$ 31,645 \$ 31,419,201 \$ (72,310) \$ (72,310) \$ (72,310) \$ (72,310) \$ (72,310)
Cast Iron Cast Iron O&M Credit Carryover from Prev Yr (2) Revenue Requirements (3) Revenue Collections (4) Carbon Offset Payments (5) Balance (6) (7) ADRND (1) Cast Iron O&M Credit Carryover from Prev Yr (2) Revenue Requirements (3)	Attachment D1 D2 D3 D4 Reference Attachment D1 D2 D3	Balance \$ 351,267 Carryover Balance	Forecast \$ - \$ 122,747 \$ 6(0.26) \$ 29,272 \$ 145,993 \$ 8 - \$ 29,272 \$ 145,993 \$ 8 - \$ \$ 5 56,572 \$ \$ 5 5 5 5 5 5 119,682 \$ \$ - \$ \$ - \$ \$ 119,682 \$ \$ \$ - \$ \$ 113,661 \$<	Forecast \$ - \$ 122,512 \$ (6,026) \$ 29,272 \$ 145,759 \$ 121,274 \$ 121,274 Forecast \$ - \$ 119,448 \$ (6,026) \$ 5 5	Forecast \$ 5,884 122,282 \$ 122,282 (6,020) \$ 29,272 151,413 \$ 75,222 (6,020) \$ 197,465 197,465 Forecast \$ 5,884 \$ 192,19 Forecast \$ 192,19 \$ (6,026) \$ 5,884 \$ 119,219 \$ 5,884 \$ 119,219 \$ 5,884 \$ 119,219 \$ 5,884 \$ 119,219 \$ 5,884 \$ 119,219	Forecast \$ - \$ \$ 122,056 \$ (6,026) \$ 29,272 \$ 145,002 \$ \$ 145,002 \$ \$ 245,078 \$ Forecast Forecast \$	Forecast - \$ -121,834 (6,026) \$ 29,272 \$ \$ 145,080 \$ \$ 145,080 \$ \$ 169,673 \$ \$ 220,485 Forecast Forecast \$ - \$ 118,772 \$ \$ 118,772 \$ \$ 118,772 \$ \$ 112,751 \$	S 5.884 \$ 121,616 \$ 25,844 \$ 20,272 \$ 150,746 \$ 25,842 \$ - \$ 117,389 Dec-19 Forecast \$ 5,884 \$ 118,554 \$ 118,554 \$ 5 \$ 118,418	Forecast \$ - \$ 121,277 \$ 121,277 \$ 60,203 \$ 29,272 \$ 144,523 \$ 29,272 \$ 144,523 \$ 29,272 \$ 144,523 \$ 29,272 \$ 144,523 \$ 0,132 \$ 12,151	Forecast \$ - \$ 120,005 \$ 120,005 \$ 120,005 \$ 29,272 \$ 144,151 \$ 2 \$ 16,002 \$ \$ 120,005 \$ \$ 102,005 \$ \$ 104,005 \$	Berecast \$ 13,781 \$ 120,653 \$ 60,202 \$ 60,202 \$ 157,681 \$ 193,758 \$ - \$ 103,758 Forecast 1(13,756) \$ 117,517 \$ 6(0,20) \$ 12,5278	Forecast \$ - \$ 120,404 \$ \$ 120,404 \$ \$ (0,20,60) \$ 29,272 \$ 143,651 \$ \$ 123,4651 \$<	Forecast \$ - \$ 120,100 \$ 16,020 \$ 29,272 \$ 143,406 \$ 9,6726 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 117,024 \$ 5 \$ 111,004	Forecast 5 6,095 5 119,919 5 5 6,026 5 5 29,272 5 149,260 5 76,786 5 - 5 6,095 5 5 5 6,095 5 5 5 116,784 5 6,095 5 5 5 5 116,784 5 6,026 5 5 5 116,858 6 6 7 6 7 <th7< th=""> 7</th7<> <th7< td="" th7<=""><td>Forecast \$ 31,645 \$ 1,456,303 \$ 0,645 \$ 1,456,303 \$ 0,2310 \$ 0,2310 \$ 1,766,905 \$ 1,766,905 \$ 1,766,905 \$ 0,7310 \$ 0,455 \$ 1,419,201 \$ 63 \$ 0,35 \$ 1,378,600</td></th7<>	Forecast \$ 31,645 \$ 1,456,303 \$ 0,645 \$ 1,456,303 \$ 0,2310 \$ 0,2310 \$ 1,766,905 \$ 1,766,905 \$ 1,766,905 \$ 0,7310 \$ 0,455 \$ 1,419,201 \$ 63 \$ 0,35 \$ 1,378,600

Notes:

(1) ADRND actual expenses are for invoiced amounts. Refer to Attachment D1 for supporting detail for amounts beginning in 2016.
 (2) The Carryover from Previous Year is the Balance (Revenue Requirements minus Revenue Collections) from the preceeding year. That total is divided by 12 to spread the Carryover evenly throughout the year.
 (3) Revenue Requirements are the total SEP revenue requirements for the year plus the Carryover from the previous year.

(a) revenue Kequirements are the total star trevenue requirements for the year puts the Carryover from the previous year.
 (d) Revenue Collections are actual through December 2016 and forecasts thereafter.
 (f) The Company does not forecast any carbon offset payments related to the gas cast iron pipe project.
 (6) Balance is the amount (over) under collected or the difference between the total revenue requirements and the amount of revenue received from customers under this Rider.

Comparison by month of actual revenue requirements versus forecasted revenue requirements

Gas Tracker

			2016-2017 \$	SEP Period					2017-2018 \$	SEP Period			
	Jan-17 <u>Forecast</u>	Feb-17 Forecast	Mar-17 Forecast	Apr-17 Forecast	May-17 Forecast	Jun-17 <u>Forecast</u>	Jul-17 <u>Forecast</u>	Aug-17 Forecast	Sep-17 Forecast	Oct-17 Forecast	Nov-17 Forecast	Dec-17 Forecast	Total
Natural Gas Revenue Requirements (Post hearing calculation Docket 17-1	144,455 74)*	144,079	145,508	143,326	142,949	145,550	134,003	133,659	136,205	132,969	132,624	135,170	1,670,497
	Jan-17 <u>Actual</u>	Feb-17 <u>Actual</u>	Mar-17 <u>Actual</u>	Apr-17 <u>Actual</u>	May-17 <u>Actual</u>	Jun-17 <u>Actual</u>	Jul-17 <u>Actual</u>	Aug-17 <u>Actual</u>	Sep-17 <u>Actual</u>	Oct-17 <u>Actual</u>	Nov-17 <u>Actual</u>	Dec-17 <u>Actual</u>	Total
Natural Gas Revenue Requirements (Docket 18)	142,891	142,515	155,919	141,761	141,384	147,102	132,439	132,094	137,633	131,404	131,059	131,983	1,668,183
Variance Forecast vs. actual-Gas Revenue Requirements	1,564	1,564	-10,412	1,565	1,565	-1,552	1,565	1,565	-1,428	1,565	1,566	3,188	2,31

			2016-2017 5	SEP Period					2017-2018 \$	SEP Period			
	Jan-17 <u>Forecast</u>	Feb-17 Forecast	Mar-17 Forecast	Apr-17 Forecast	May-17 Forecast	Jun-17 <u>Forecast</u>	Jul-17 Forecast	Aug-17 Forecast	Sep-17 Forecast	Oct-17 Forecast	Nov-17 Forecast	Dec-17 Forecast	Total
Natural Gas Revenue (Post hearing calculation Docket 17-1	184,411 74)*	153,554	138,209	84,497	63,303	49,777	87,931	74,693	71,007	114,824	178,021	266,459	1,466,68
	Jan-17 <u>Actual</u>	Feb-17 <u>Actual</u>	Mar-17 <u>Actual</u>	Apr-17 <u>Actual</u>	May-17 <u>Actual</u>	Jun-17 <u>Actual</u>	Jul-17 <u>Actual</u>	Aug-17 <u>Actual</u>	Sep-17 <u>Actual</u>	Oct-17 <u>Actual</u>	Nov-17 <u>Actual</u>	Dec-17 <u>Actual</u>	Total
Natural Gas Revenue (Docket 18)	216,830	158,142	166,519	112,783	87,220	65,716	66,869	49,669	52,454	58,662	108,577	156,722	1,300,16
Variance Forecast vs.													
actual-Gas Revenues	-32,419	-4,587	-28,310	-28,286	-23,916	-15,939	21,062	25,024	18,553	56,162	69,444	109,737	166,52

Net Result

164,210

The revenue requirements data has been adjusted to exclude the carryover balance to better compare the monthly actual costs to the equivalent forecasted costs.

* Post the Order in Docket 17-174 the Company recalculated the model to incorporate the Commission Order Points. Theses amounts were pulled from that recalculated model.

		Gas Tracker I ADRND																						
Part A: M	Ionthly % of A	ADRND costs AS IF		been made																				
		ADRND Invoice	ADRND w/o Adjustment (1)	Monthly % w/o Adjustment (2)																				
Jan-16	Actual	-																						
Feb-16	Actual	-	-																					
Mar-16	Actual	6,454	6,454	17%																				
Apr-16	Actual	-	-																					
May-16	Actual	-	-																					
Jun-16	Actual	10,646	10,646	28%																				
Jul-16	Actual	-	-																					
Aug-16	Actual	-	-																					
Sep-16	Actual	10,336	10,336	27%																				
Oct-16	Actual	-	-																					
Nov-16	Actual	-	-	270																				
Dec-16 nnual	Actual	(16,871) \$ 10,565	10,337 \$ 37,773	27%																				
Jan-17	Actual	\$ 10,565																						
Feb-17	Actual	-	-	<u> </u>																				
Mar-17	Actual	13,781	13,781	17%																				
Apr-17	Actual	-	-	1//																				
May-17	Actual	-	-																					
Jun-17	Actual	6,095	6,095	28%																				
Jul-17	Actual	-	-																					
Aug-17	Actual	-	-																					
Sep-17	Actual	5,884	5,884	27%																				
Oct-17	Actual	-	-																					
Nov-17	Actual	-	-																					
Dec-17	Actual	1,269	5,884	27%																				
	of Monthly P	\$ 27,030 ayments based on p % w/o Adjustm		ce total * Monthly																				
	of Monthly P	ayments based on p % w/o Adjustm Previous Annual	revious year's Invoi	ce total * Monthly																				
art B: Forecast	-	ayments based on p % w/o Adjustm Previous Annual Invoice	revious year's Invoi nent Monthly % w/o Adjustment (2)	Monthly Payment																				
Part B: Forecast Jan-18	Forecast	ayments based on p % w/o Adjustm Previous Annual Invoice \$ -	revious year's Invoi tent Monthly % w/o Adjustment (2) 0%	Monthly Payment \$-																				
Part B: Forecast Jan-18 Feb-18	Forecast	ayments based on p % w/o Adjustm Previous Annual Invoice \$ - \$ -	revious year's Invoi tent Monthly % w/o Adjustment (2) 0% 0%	Monthly Payment \$ - \$ -																				
art B: Forecast Jan-18 Feb-18 Mar-18	Forecast Forecast Forecast	ayments based on p % w/o Adjustm Previous Annual Invoice \$ - \$ - \$ - \$ - \$ - \$ -	revious year's Invoi tent Monthly % w/o Adjustment (2) 0% 0% 17%	Monthly Payment \$ - \$ - \$ 2,355																				
Jan-18 Jeb-18 Mar-18 Apr-18	Forecast Forecast Forecast Forecast	ayments based on p % w/o Adjustm Previous Annual Invoice \$ - \$ - \$ - \$ 13,781 \$ -	revious year's Invoi eent Monthly % w/o Adjustment (2) 0% 17% 0%	Monthly Payment \$ - \$ - \$ 2,355 \$ -																				
Jan-18 Feb-18 Mar-18 Apr-18 May-18	Forecast Forecast Forecast Forecast Forecast	ayments based on p % w/o Adjustm Previous Annual Invoice \$ - \$ - \$ 13,781 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	revious year's Invoi eent Monthly % w/o Adjustment (2) 0% 0% 17% 0% 0%	Monthly Payment																				
Jan-18 Feb-18 Mar-18 Apr-18 May-18 Jun-18	Forecast Forecast Forecast Forecast Forecast Forecast	ayments based on p % w/o Adjustm Previous Annual Invoice \$ - \$ 13,781 \$ - \$ 13,781 \$ - \$ 3,781 \$ - \$ 5,781 \$ - \$ 5,781\$ - \$ - \$ 5,791\$ - \$ - \$ - \$ 5,781\$ - \$ - \$ - \$ 5,781\$ - \$ - \$ - \$ - \$ - \$ 5,781\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	revious year's Invoi eent Monthly % w/o Adjustment (2) 0% 0% 17% 0% 0% 0% 28%	Monthly Payment \$ - \$ 2,355 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -																				
Jan-18 Feb-18 Mar-18 Apr-18 May-18 Jun-18 Jul-18	Forecast Forecast Forecast Forecast Forecast Forecast Forecast	ayments based on p % w/o Adjustm Previous Annual Invoice \$ - \$ 13,781 \$ - \$ 13,781 \$ - \$ 13,781 \$ - \$ 5 \$ - \$ 5 \$ - \$ 5 \$ - \$ 5 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	revious year's Invoi eent Monthly % w/o Adjustment (2) 0% 0% 17% 0% 0% 0% 28% 0%	Monthly Payment \$ - \$ 2,355 \$ - \$ - \$ - \$ 1,718 \$ -																				
Jan-18 Feb-18 Mar-18 Apr-18 Jun-18 Jul-18 Aug-18	Forecast Forecast Forecast Forecast Forecast Forecast Forecast	ayments based on p % w/o Adjustn Previous Annual Invoice \$ - \$ 13,781 \$ - \$ 6,095 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	revious year's Invoi tent Monthly % w/o Adjustment (2) 0% 0% 17% 0% 0% 0% 28% 0% 0%	Monthly Payment \$ - \$ 2,355 \$ - \$ - \$ 1,718 \$ - \$ 1,718 \$ - \$ -																				
Jan-18 Feb-18 Mar-18 May-18 Jun-18 Jun-18 Jul-18 Aug-18 Sep-18	Forecast Forecast Forecast Forecast Forecast Forecast Forecast Forecast	ayments based on p % w/o Adjustm Previous Annual Invoice \$ - \$ 13,781 \$ - \$ 6,095 \$ - \$ - \$ 5,884	revious year's Invoi tent Monthly % w/o Adjustment (2) 0% 0% 17% 0% 0% 28% 0% 0% 0% 27%	Monthly Payment \$ - \$ 2,355 \$ - \$ 1,718 \$ - \$ - \$ 1,610																				
Jan-18 Feb-18 Mar-18 May-18 Jun-18 Jul-18 Jul-18 Aug-18 Sep-18 Oct-18	Forecast Forecast Forecast Forecast Forecast Forecast Forecast Forecast Forecast	ayments based on p % w/o Adjustm Previous Annual Invoice \$ \$ \$ 13,781 \$ \$ 6,095 \$ \$ \$ 5,884 \$	revious year's Invoi tent Monthly % w/o Adjustment (2) 0% 0% 17% 0% 28% 0% 0% 28% 0% 0% 27% 0%	Monthly Payment \$ \$ 2,355 \$ \$ \$ 1,718 \$ \$ \$ 1,610 \$																				
Jan-18 Feb-18 Mar-18 May-18 Jun-18 Jun-18 Jul-18 Aug-18 Sep-18 Oct-18 Nov-18	Forecast Forecast Forecast Forecast Forecast Forecast Forecast Forecast Forecast Forecast	ayments based on p % w/o Adjustm Previous Annual Invoice \$ - \$ - \$ - \$ 13,781 \$ - \$ 6,095 \$ - \$ - \$ 5,884 \$ - \$ 5,884 \$ - \$ - \$ 5,884	revious year's Invoi ent Monthly % w/o Adjustment (2) 0% 17% 0% 28% 0% 0% 28% 0% 0% 0% 0%	Monthly Payment \$ - \$ 2,355 \$ - \$ - \$ 1,718 \$ - \$ - \$ 1,610 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -																				
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Notes (1) An adjustment is made each December by the Department of Commerce so that the Company is paying only its required portion of indirect costs. (2) In order to smooth the forecast the Company calculates the percentage of costs AS IF an adjustment had not been made and then applies that percentage to the annual invoice.

						ker Detail							
	1.1.15			Replacen Oct-15	nent Reve Nov-15	Dec-15	lirement l	oy Month Feb-16	Mar-16	A 16	M. 17	1 - 16	Annual-15/16
Rate Base	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Annual-15/16
Plus CWIP Ending Balance	0	0	0	0	0	0	0	0	0	0	0	0	C
Plus Plant In-Service	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108
Less Book Depreciation Reserve Less Accum Deferred Taxes	1,431,998 951,229	1,461,251 965,885	1,490,504 980,541	1,519,757 995,197	1,549,009 1,009,853	1,578,262 1,024,509	1,607,515 1,037,182	1,636,768 1,049,854	1,666,021 1,062,527	1,695,274 1,075,199	1,724,526 1,087,872	1,753,779 1,100,544	1,753,779 1,100,544
End Of Month Rate Base	11,352,881	11,308,972	11,265,063	11,221,154	11,177,246	11,133,337	11,091,411	11,049,486	11,007,561	10,965,636	10,923,710	10,881,785	10,881,785
Average Rate Base (BOM/EOM)	11,374,836	11,330,927	11,287,018	11,243,109	11,199,200	11,155,291	11,112,374	11,070,449	11,028,523	10,986,598	10,944,673	10,902,748	11,136,312
<u>Calculation of Return</u> Plus Debt Return	21,328	21,245	21,163	21,081	20,999	20,916	20,558	20,480	20,403	20,325	20,248	20,170	248,916
Plus Equity Return	50,428	50,234	50,039	49,844	49,650	49,455	49,172	48,987	48,801	48,616	48,430	48,245	591,901
Total Return	71,756	71,479	71,202	70,925	70,648	70,371	69,730	69,467	69,204	68,941	68,678	68,415	840,817
Income Statement Items													
Plus Property Taxes	22,532	22,532	22,532	22,532	22,532	22,532	22,122	22,122	22,122	22,122	22,122	22,122	267,922
Plus Book Depreciation Plus Deferred Taxes	29,253 14,656	29,253 14,656	29,253 14,656	29,253 14,656	29,253 14,656	29,253 14,656	29,253 12,672	29,253 12,672	29,253 12,672	29,253 12,672	29,253 12,672	29,253 12,672	351,034 163,971
Plus Current Taxes	20,559	20,421	20,284	20,147	20,009	19,872	21,747	21,616	21,485	21,354	21,224	21,093	249,811
Total Income Statement Expense	87,000	86,862	86,725	86,587	86,450	86,313	85,794	85,663	85,532	85,401	85,270	85,140	1,032,738
Total Revenue Requirements	158,756	158,341	157,927 157,927	157,513	157,098	156,684	155,524	155,130	154,736	154,342	153,948	153,554	1,873,555
Jurisdictional Revenue Requirement	158,756	158,341	157,927	157,513	157,098	156,684	155,524	155,130	154,736	154,342	153,948	153,554	1,873,555
Rate Base	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Annual-16/17
Plus CWIP Ending Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
Plus Plant In-Service	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108
Less Book Depreciation Reserve	1,783,032	1,812,285 1,125,889	1,841,538 1,138,562	1,870,790 1,151,234	1,900,043 1,163,907	1,929,296 1,176,579	1,958,549 1,187,554	1,987,802 1,198,529	2,017,055 1,209,504	2,046,307 1,220,479	2,075,560 1,231,454	2,104,813 1,242,429	2,104,813
Less Accum Deferred Taxes End Of Month Rate Base	1,113,217 10,839,860	1,125,889 10,797,934	1,138,562 10,756,009	1,151,234 10,714,084	1,163,907	1,176,579 10,630,233	1,187,554	1,198,529 10,549,778	1,209,504 10,509,550	1,220,479	1,231,454	1,242,429 10,388,867	1,242,429
Average Rate Base (BOM/EOM)	10,860,822	10,818,897	10,776,972	10,735,046	10,693,121	10,651,196	10,610,119	10,569,892	10,529,664	10,489,436	10,449,208	10,408,981	10,632,779
Calculation of Return													
Plus Debt Return	20,093	20,015	19,937	19,860	19,782	19,705	19,452	19,378	19,304	19,231	19,157	19,083	234,997
Plus Equity Return	48,059	47,874	47,688	47,503	47,317	47,132	46,861	46,684	46,506	46,328	46,151	45,973	564,075
Total Return	68,152	67,889	67,625	67,362	67,099	66,836	66,313	66,062	65,810	65,559	65,308	65,056	799,072
Income Statement Items													
Plus Property Taxes	22,122	22,122	22,122	22,122	22,122	22,122	20,525	20,525	20,525	20,525	20,525	20,525	255,880
Plus Book Depreciation Plus Deferred Taxes	29,253 12,672	29,253 12,672	29,253 12,672	29,253 12,672	29,253 12,672	29,253 12,672	29,253 10,975	29,253 10,975	29,253 10,975	29,253 10,975	29,253 10,975	29,253 10,975	351,034 141,884
Plus Current Taxes	20,962	20,831	20,700	20,569	20,438	20,307	21,851	21,726	21,600	21,475	21,350	21,224	253,034
Total Income Statement Expense	85,009	84,878	84,747	84,616	84,485	84,354	82,604	82,479	82,353	82,228	82,103	81,977	1,001,832
Total Revenue Requirements Jurisdictional Revenue Requirement	153,160 153,160	152,766 152,766	152,372 152,372	151,978 151,978	151,584 151,584	151,190 151,190	148,917 148,917	148,540 148,540	148,164 148,164	147,787 147,787	147,410 147,410	147,033 147,033	1,800,904 1,800,904
Junseleuonai Revenue Requirement													
Rate Base	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Annual-17/18
Plus CWIP Ending Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
Plus Plant In-Service	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108
Less Book Depreciation Reserve Less Accum Deferred Taxes	2,134,066 1,253,404	2,163,319 1,264,378	2,192,572 1,275,353	2,221,824 1,286,328	2,251,077 1,297,303	2,280,330 1,308,278	2,309,583 1,314,924	2,338,836 1,321,570	2,368,088 1,328,216	2,397,341 1,334,862	2,426,594 1,341,508	2,455,847 1,348,154	2,455,847 1,348,154
End Of Month Rate Base	10,348,639	10,308,411	10,268,183	10,227,956	10,187,728	10,147,500	10,111,601	10,075,703	10,039,804	10,003,905	9,968,006	9,932,107	9,932,107
Average Rate Base (BOM/EOM)	10,368,753	10,328,525	10,288,297	10,248,070	10,207,842	10,167,614	10,129,551	10,093,652	10,057,753	10,021,854	9,985,956	9,950,057	10,153,994
Calculation of Return													
Plus Debt Return Plus Equity Return	18,923 41,043	18,850 40,884	18,776 40,725	18,703 40,565	18,629 40,406	18,556 40,247	18,486 40,096	18,421 39,954	18,355 39,812	18,290 39,670	18,224 39,528	18,159 39,386	222,372 482,315
Total Return	59,966	59,733	59,501	59,268	59,035	58,803	58,583	58,375	58,167	57,960	57,752	57,544	704,687
Income Statement Items													
Plus Property Taxes	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	246,300
Plus Book Depreciation	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	351,034
Plus Deferred Taxes Plus Current Taxes	10,975 17,746	10,975 17,633	10,975 17,521	10,975 17,409	10,975 17,296	10,975 17,184	6,646 9,316	6,646 9,258	6,646 9,201	6,646 9,144	6,646 9,087	6,646 9,029	105,725 159,824
Total Income Statement Expense	78,498	78,386	78,274	78,161	78,049	77,937	65,740	65,682	65,625	65,568	65,510	65,453	862,884
Total Revenue Requirements	138,464	138,119	137,774	137,429	137,084	136,739	124,322	124,057	123,792	123,527	123,263	122,998	1,567,571
Jurisdictional Revenue Requirement	138,464	138,119	137,774	137,429	137,084	136,739	124,322	124,057	123,792	123,527	123,263	122,998	1,567,571
	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Annual-18/19
Rate Base													
Plus CWIP Ending Balance Plus Plant In-Service	0 13,736,108	0 13,736,108	0 13,736,108	0 13,736,108	0 13,736,108	0 13,736,108	0 13,736,108	0 13,736,108	0 13,736,108	0 13,736,108	0 13,736,108	0 13,736,108	0 13,736,108
Less Book Depreciation Reserve	2,485,100	2,514,353	2,543,605	2,572,858	2,602,111	2,631,364	2,660,617	2,689,869	2,719,122	2,748,375	2,777,628	2,806,881	2,806,881
Less Accum Deferred Taxes	1,350,958	1,353,198	1,354,873	1,356,002	1,356,566	1,356,584	1,393,717	1,398,878	1,403,564	1,407,723	1,411,373	1,414,496	1,414,496
End Of Month Rate Base Average Rate Base (BOM/EOM)	9,900,050	9,868,558	9,837,630	9,807,248	9,777,431	9,748,160	9,681,774	9,647,361	9,613,422	9,580,010	9,547,108	9,514,731	9,514,731 9,727,681
riverage nate base (DOM/EOM)	9,916,079	9,884,304	9,853,094	9,822,439	9,792,340	9,762,795	9,714,967	9,664,568	9,630,392	9,596,716	9,563,559	9,530,919	9,727,681
Calculation of Return	40.00=	40.000	47.007	17.007	47.074	47.045	47 730	47 494	47 -7-	477.547	47.450	17 20 4	ata 07.
	18,097 39,251	18,039 39,125	17,982 39,002	17,926 38,880	17,871 38,761	17,817 38,644	17,730 38,455	17,638 38,256	17,575 38,120	17,514 37,987	17,453 37,856	17,394 37,727	213,036 462,065
Plus Debt Return Plus Equity Return		57,164	56,984	56,806	56,632	56,462	56,185	55,893	55,696	55,501	55,309	55,120	675,101
Plus Debt Return Plus Equity Return Total Return	57,348												
Plus Equity Return Total Return	57,348												
Plus Equity Return	57,348 20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	246,300
Plus Equity Return Total Return <u>Income Statement Items</u> Plus Property Taxes Plus Book Depreciation	20,525 29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	351,034
Plus Equity Return Total Return Income Statement Items Plus Property Taxes Plus Book Depreciation Plus Deferred Taxes	20,525 29,253 6,646	29,253 6,646	29,253 6,646	29,253 6,646	29,253 6,646	29,253 6,646	29,253 6,196	29,253 6,196	29,253 6,196	29,253 6,196	29,253 6,196	29,253 6,196	351,034 77,054
Plus Equity Return Total Return <u>Income Statement Items</u> Plus Property Taxes Plus Book Depreciation	20,525 29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	351,034 77,054 106,874
Plus Equity Return Total Return Incorne Statement Items Plus Property Taxes Plus Book Depreciation Plus Deferred Taxes Plus Current Taxes	20,525 29,253 6,646 8,975	29,253 6,646 8,924	29,253 6,646 8,874	29,253 6,646 8,825	29,253 6,646 8,777	29,253 6,646 8,730	29,253 6,196 9,118	29,253 6,196 9,037	29,253 6,196 8,983	29,253 6,196 8,929	29,253 6,196 8,876	29,253 6,196 8,824	246,300 351,034 77,054 106,874 781,262 1,456,363

	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Annual-19/20
Rate Base													
Plus CWIP Ending Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
Plus Plant In-Service	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108
Less Book Depreciation Reserve	2,836,134	2,865,386	2,894,639	2,923,892	2,953,145	2,982,398	3,011,651	3,040,903	3,070,156	3,099,409	3,128,662	3,157,915	3,157,915
Less Accum Deferred Taxes	1,417,111	1,419,199	1,420,761	1,421,813	1,422,339	1,422,356	1,468,013	1,473,119	1,477,741	1,481,843	1,485,443	1,488,523	1,488,523
End Of Month Rate Base	9,482,864	9,451,523	9,420,708	9,390,403	9,360,624	9,331,354	9,256,445	9,222,085	9,188,211	9,154,856	9,122,004	9,089,670	9,089,670
Average Rate Base (BOM/EOM)	9,498,798	9,467,194	9,436,116	9,405,556	9,375,514	9,345,989	9,293,900	9,239,265	9,205,148	9,171,534	9,138,430	9,105,837	9,306,940
Calculation of Return													
Plus Debt Return	17,335	17,278	17,221	17,165	17,110	17,056	16,961	16,862	16,799	16,738	16,678	16,618	203,822
Plus Equity Return	37,599	37,474	37,351	37,230	37,111	36,995	36,788	36,572	36,437	36,304	36,173	36,044	442,080
Total Return	54,935	54,752	54,572	54,395	54,222	54,051	53,750	53,434	53,236	53,042	52,851	52,662	645,902
Income Statement Items													
Plus Property Taxes	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	20,525	246,300
Plus Book Depreciation	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	29,253	351,034
Plus Deferred Taxes	6,196	6,196	6,196	6,196	6,196	6,196	6,128	6,128	6,128	6,128	6,128	6,128	73,947
Plus Current Taxes	8,773	8,722	8,673	8,624	8,576	8,529	8,516	8,429	8,374	8,321	8,268	8,216	102,018
Total Income Statement Expense	64,747	64,696	64,647	64,598	64,550	64,503	64,422	64,335	64,280	64,227	64,174	64,122	773,300
Total Revenue Requirements	119,682	119,448	119,219	118,993	118,772	118,554	118,172	117,768	117,517	117,269	117,024	116,784	1,419,201
Jurisdictional Revenue Requirement	119,682	119,448	119,219	118,993	118,772	118,554	118,172	117,768	117,517	117,269	117,024	116,784	1,419,201

Notes Updates to 2016 balances included in Docket No. G002/M-17-174 (2017 Filing) result from revised MN Composite Income Tax Rates based upon 2016 income tax returns, effective January 1, 2016.

			G	as Tracker	Detail							
	Cast Ir	on Replac	cement R	evenue Re	quirement	by Year (July - June	e)				
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Rate Base												
Plus CWIP Ending Balance	0	0	0	0	0	0	0	0	0	0	0	0
Plus Plant In-Service	74,612	1,642,890	6,204,585	10,782,150	13,736,109	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108	13,736,108
Less Book Depreciation Reserve	79	32,575	141,240	367,414	700,678	1,051,711	1,402,745	1,753,779	2,104,813	2,455,847	2,806,881	3,157,915
Less Accum Deferred Taxes	104	31,775	117,324	296,641	531,982	747,645	936,573	1,100,544	1,242,429	1,348,154	1,414,496	1,488,523
End Of Month Rate Base	74,429	1,578,540	5,946,022	10,118,095	12,503,449	11,936,752	11,396,790	10,881,785	10,388,867	9,932,107	9,514,731	9,089,670
Average Rate Base (BOM/EOM)	3,101	1,241,969	4,103,512	8,400,586	12,097,994	12,216,681	11,663,507	11,136,312	10,632,779	10,153,994	9,727,681	9,306,940
Calculation of Return												
Plus Debt Return	103	38,829	120,101	233,763	303,346	278,611	261,249	248,916	234,997	222,372	213,036	203,822
Plus Equity Return	157	64,177	216,849	446,979	642,934	649,295	621,089	591,901	564,075	482,315	462,065	442,080
Total Return	260	103,005	336,950	680,742	946,280	927,907	882,338	840,817	799,072	704,687	675,101	645,902
Income Statement Items												
Plus Property Taxes	0	11,491	44,887	117,456	228,825	288,830	279,257	267,922	255,880	246,300	246,300	246,300
Plus Book Depreciation	79	32,496	108,665	226,174	333,264	351,034	351,034	351,034	351,034	351,034	351,034	351,034
Plus Deferred Taxes	104	31,672	85,548	179,317	235,341	215,663	188,928	163,971	141,884	105,725	77,054	73,947
Plus Current Taxes	5	12,955	65,757	132,542	213,293	237,495	244,716	249,811	253,034	159,824	106,874	102,018
Total Income Statement Expense	188	88,613	304,858	655,489	1,010,722	1,093,022	1,063,935	1,032,738	1,001,832	862,884	781,262	773,300
Total Revenue Requirements	447	191,619	641,808	1,336,231	1,957,002	2,020,928	1,946,272	1,873,555	1,800,904	1,567,571	1,456,363	1,419,201
MN Jurisdictional Revenue Requirement	447	191,619	641,808	1,336,231	1,957,002	2,020,928	1,946,272	1,873,555	1,800,904	1,567,571	1,456,363	1,419,201

Notes

Updates to 2016 balances included in Docket No. G002/M-17-174 (2017 Filing) result from revised MN Composite Income Tax Rates based upon 2016 income tax returns, effective January 1, 2016.

Gas Tracker Detail Cast Iron O&M Credit

	Part A: Derivation of the Annual Credit Amount	
1	Overall O&M Expenses (1)	\$ 39,980,000
2	Total Gas Distribution Main in Minnesota (miles)	8,864
3	Average Test Year O&M Expenses per Mile of Gas Distribution Main (Line 1/Line 2)	\$ 4,510
4	Potential Percentage Reduction in O&M Expenses Associated with Gas Cast Iron (2)	93.48%
5	Potential O&M Expense Associated with Gas Cast Iron Pipe to be Replaced per Mile (Line 3*Line 4)	\$ 4,216
6	Gas Cast Iron Pipe to be Replaced (miles)	25
7	Potential Annual O&M Expenses Reduction due to Gas Cast Iron Replacement (Line 5*Line 6)	\$ 105,408
	Part B: Derivation of the Recovery in Base Rates	
8	Miles replaced in 2009	5.0
9	Miles replaced in 2010	5.7
10	Total Miles reflected in reduced O&M in base rates (Line 8 + Line 9*50%)	7.9
11	Expense Reduction per line mile (Line 5)	\$ 4,216
12	Annual Credit reflected in base rates (Line 10*Line 11)	\$ 33,098
-	Part C: Derivation of 2012 Credit	
13	Miles to be replaced in 2010	5.7
14	Miles to be replaced in 2011	7.6
15	Miles to be replaced in 2012	6.7
16	Total Miles included in 2012 SEP O&M Credit (Lines 13*50% + Line 14 + Line 15)	17.2
17	Expense Reduction per line mile (Line 5)	\$ 4,216
18	SEP O&M Credit in 2012 (Line 16*Line 17)	\$ 72,310
	Part D: Reconciliation	
19	Credit reflected in base rates (Line 12)	\$ 33,098
20	SEP O&M Credit in 2012 (Line 18)	\$ 72,310
21	Potential Expense Reduction (Line 7) = Recovery in Base Rates (Line 12) + 2012 Credit (18)	\$ 105,408

Notes:

(1) Docket No. G002/GR-09-1153

Average of 0.28571 leaks per mile associated with the gas cast iron minus an average of 0.01986 leaks per mile for overall gas distribution system piping. (0.28571-0.01986)/0.28571=93.48%. As of 2012, all cast iron had been removed and the leak rate cannot be reported. The average leak rate for the overall system was 0.01421 leaks/mile. The O&M credit approved in Docket No. E,G002/M-13-161 is assumed in 2013 and beyond, since all replacement work has been completed.

							Gas Tracker De	tail						
					Re	venue Collection	ns (SEP Rider Fi	scal Period July	- June)					
	Actual Revenues Through December 2017 and Forecast Revenues (Therm Sales * Gas Factor) through June 2020													
2015 Rider Year		Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Total-15/16
		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	
Revenue Collections	\$	97,466 \$	85,412 \$	88,900 \$	\$ 90,860 \$	132,683 \$	161,745 \$	95,779 \$	97,468 \$	90,171 \$	61,438 \$	43,498 \$	33,357	\$ 1,078,776
2016 Rider Year		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-16/17
		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	
Revenue Collections	\$	53,363 \$	72,224 \$	46,484 \$	\$ 55,752 \$	81,501 \$	126,152 \$	216,830 \$	158,142 \$	166,519 \$	112,783 \$	87,220 \$	65,716	\$ 1,242,685
2017 Rider Year		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-17/18
		Actual	Actual	Actual	Actual	Actual	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	
Forecast S	ales							140,649,623	117,402,968	97,788,439	60,034,380	47,891,836	38,099,839	501,867,086
	Rate							0.001368	0.001368	0.001368	0.001368	0.001368	0.001368	
Revenue Collections	\$	66,869 \$	49,669 \$	52,454	58,662 \$	108,577 \$	156,722 \$	192,409 \$	160,607 \$	133,775 \$	82,127 \$	65,516 \$	52,121	\$ 1,179,507

		Bas	e Assump	tions - Ga	s Cast Ir	on Pipe				
Capital Structure		2016			2017 *		1	2018 *		
Capital Structure	Percent	Cost	Weighted Cost	Percent	Cost	Weighted Cost	Percent	Cost	Weighted Cost	
Long Term Debt %	46.54%	4.74%	2.21%	45.61%	4.71%	0	45.61%	4.71%	2.15%	
Short Term Debt %	0.85%	1.22%	0.01%	1.89%	1.91%	0.04%	1.89%	1.91%	0.04%	
Preferred Stock %	0.00%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	0.00%	
Common Stock %	52.61%	10.09%	5.31%	52.50%	9.04%		52.50%	9.04%		
Common Stock 70	100.00%	10.0770	7.53%	100.00%	2.0470	6.94%	100.00%	2.0470	6.94%	
* Conjul Statute and and in Double N									0.0 1/-	
* Capital Structure as ordered in Docket No	5. G002/M-1/-1/4									
T T D (
Income Tax Rates		2016	2017	2018			2016	2017	2018**	
Income Tax Rates	MN Jur	2010 9.8000%	2017 9.8000%	2018 9.8000%		Federal	35.0000%	35.0000%	2018	
MN Composite Income Tax Rate	MN Jur MN Jur	41.3700%	9.8000 % 41.3700%	28.7420%		MN Co	40.8468%	40.8468%	21.0000 %	
1		11.57 0070	11.57 0070	2017 12070			101010070	101010070	201100170	
** Federal Tax Rate effective 1/1/2018										
Property Tax Rates				2017	2017	2010				
	100.00	% Taxable		2016 1.716%	2017 1.701%	2018 1.701%				
Property Tax Rate = Goodhue										
Property Tax Rate = Ramsey		% Taxable		1.981%	1.826%	1.826%				
Property Tax Rate = Rice		% Taxable		1.738%	1.634%	1.634%				
Property Tax Rate = Stearns		% Taxable		1.774%	1.792%	1.792%				
Property Tax Rate = Washington		% Taxable		1.758%	1.680%	1.680%				
Property Tax Rate = Winona	100.00	% Taxable		1.539%	1.525%	1.525%				
State of MN Allocator										
Gas Distribution			Minnesota							
		Total	Company	Minnesota						
Direct Assigned - Minnesota		100.000%	100.000%							

Updates to 2016 MN Composite Tax Rate included in Docket No. G002/M-17-174 (2017 Filing) based upon 2016 income tax returns, effective January 1, 2016.

Docket No. G002/M-18-____ 2018 SEP Petition Attachment F Page 1 of 3

Northern States Power Company, a Minnesota corporation Gas Operations - State of Minnesota RATE BASE SCHEDULES RATE BASE ADJUSTMENT SCHEDULES 2010 Unadjusted Test Year versus 2010 Adjusted Test Year (\$000's) Docket No. G002/GR-09-1153 Exhibit____(AEH-1), Schedule 3A Page 1 of 3

Line <u>No.</u>	<u>Description</u>	Unadjusted	Projected Gas <u>Storage</u>		Rate Case	Rate Case	SEP Rider <u>Adjustment</u>	New Area <u>Surcharge</u>	Income Statement	Adjusted
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	
	Gas Plant as Booked									
1	Production	\$15,537								\$15,537
2	Storage	\$30,880								\$30,880
3	Transmission	\$63,410								\$63,410
4	Distribution	\$739,803		(\$2,366)	(\$82)	(\$105)	(\$3,261)			\$733,991
5	General	\$33,543								\$33,543
6	Common	\$62,221								\$62,221
7	TBT Investment	\$0								\$0
8	TOTAL Utility Plant in Service	\$945,395		(\$2,366)	(\$82)	(\$105)	(\$3,261)	\$0		\$939,582
	Reserve for Depreciation									
9	Production	\$11,942								\$11,942
10	Storage	\$23,142								\$23,142
11	Transmission	\$24,423								\$24,423
12	Distribution	\$333,684		(\$465)	(\$10)	(\$2)	(\$48)	(\$1,036)		\$332,123
13	General	\$12,567								\$12,567
14	Common	\$41,876								\$41,876
15	TOTAL Reserve for Depreciation	\$447,634		(\$465)	(\$10)	(\$2)	(\$48)	(\$1,036)		\$446,074
	Net Utility Plant in Service									
16	Production	\$3,595								\$3,595
17	Storage	\$7,738								\$7,738
18	Transmission	\$38,987								\$38,987
19	Distribution	\$406,119		(\$1,901)	(\$72)	(\$103)	(\$3,213)	\$1,036		\$401,867
20	General	\$20,976								\$20,976
21	Common	\$20,345								\$20,345
22	TBT Investment	\$0								\$0
23	Net Utility Plant in Service	\$497,760		(\$1,901)	(\$72)	(\$103)	(\$3,213)	\$1,036		\$493,508
24	Utility Plant Held for Future Use	\$0								\$0
25	Construction Work in Progress	\$4,337								\$4,337
26	Less: Accumulated Deferred Income Taxe	\$92,687		(\$473)	(\$4)	(\$1)	(\$52)	(\$26)		\$92,132
27	Cash Working Capital	(\$4,321)							\$379	(\$3,942)
	Other Rate Base Items:									
28	Materials and Supplies	\$1,037								\$1,037
29	Gas In Storage	\$40,566	\$2,133							\$42,699
30	Non-Plant Assets & Liabilities	(\$9,805)								(\$9,805)
31	Prepayments	\$5,651								\$5,651
32	Customer Advances	(\$1,653)								(\$1,653)
33	Other Working Capital	\$897								\$897
34	Total Other Rate Base Items	\$36,693	\$2,133	\$0	\$0	\$0	\$0	\$0	\$0	\$38,826
35	Total Average Rate Base	\$441,783	\$2,133	(\$1,428)	(\$69)	(\$102)	(\$3,161)	\$1,062	\$379	\$440,597

Gas Op INCOM INCOM	n States Power Company, a Minnesota corpora erations - State of Minnesota E STATEMENT SCHEDULES E STATEMENT ADJUSTMENT SCHEDULES adjusted Test Year versus 2010 Adjusted Test											6002/GR-09-1153 -1), Schedule 3A Page 2 of 3
Line <u>No.</u>		2010 Unadjusted(1)	Projected Gas Storage Adjustment 1	CIAC 2004 Rate Case Adjustment 2	CIAC 2007 Rate Case Adjustment 3	CIAC 2010 Rate Case Adjustment 4	SEP Rider Adjustment 5	New Area Surcharge Adjustment 6	Charitable Contributions Adjustment 7	Interest on Customer Deposits Adjustment 8	Advertising Adjustment 9	Professional & Association Dues Adjustment 10
1 2 3 4 5	perating Revenues Retail Weather Impact Net Margin Adjustment Interdepartmental & Transportation Other Operating Gross Eamings Tax	\$580,760 0 9,050 5,382 0					(\$269)					
7 8 9 10 11 12 13	otal Operating Revenues <u>xpenses</u> Purchased Gas Other Production Transmission Distribution Customer Accounting Customer Service & Information Administrative & General	\$595,192 \$426,919 4,305 1,261 28,447 15,700 14,896 17,213	\$0	\$0	\$0	\$0	(\$269)	\$0	\$0 153	\$0 16	\$0 (254)	\$0 (2)
14 15	Sales, Econ Dvlp & Other Total Operating Expenses	47 \$508,787	\$0	\$0	\$0	\$0	\$0	\$0	\$153	\$16	(19)	(\$2)
16 17	Depreciation Amortizations	\$32,877 (99)		(\$72)	(\$3)	(\$3)	(\$70) 99	\$128	•		()	()
18 19 20 21 22 23	Taxes: Property Gross Earnings Deferred Income Tax & ITC Federal & State Income Tax Payroll & Other Total Taxes	\$12,798 0 2,764 6,511 <u>1,946</u> \$24,019	(27)	6 42 \$48	(1) 3 \$2	(1) 4 \$3	(\$22) (70) (4) (\$96)	(52) (13)	(63)	(7)	\$113	1
	otal Expenses	\$565,584	(\$27)	(\$24)	(\$1)	(\$0)	(\$67)	\$63	\$90	\$9	(\$160)	(\$1)
25 26 T	Allowance for Funds Used During Construction	\$414	\$27	\$24	\$1	\$0	(\$202)	(\$63)	(\$90)	(\$9)	\$160	\$1
R 27 28 29 30	evenue Requirement Total Rate Base Require Operating Inc (RB * Req Return) Operating Income Operating Income Deficiency evenue Requirement	\$441,783 \$38,877 \$30,022 \$8,855 \$15,103	\$2,133 \$188 \$27 \$161 \$275	(\$1,428) (\$126) \$24 (\$150) (\$256)	(\$69) (\$6) \$1 (\$7) (\$12)	(\$102) (\$9) \$0 (\$9) (\$16)	(\$3,161) (\$278) (\$202) (\$76) (\$130)	\$1,062 \$33 (\$63) \$156 \$266	\$0 \$0 (\$90) \$90 \$153	\$0 \$0 (\$9) \$9 \$16	\$0 \$0 \$160 (\$160) (\$273)	\$0 \$0 \$1 (\$1) (\$2)
Tax Add	ise Adjustment Debt	42,771 136 441,783 3.03% 0.4137	2,133 3.03% 0.4137	(58) - (1,428) 3.03% 0.4137	(5) - (69) 3.03% 0.4137	(6) (102) 3.03% 0.4137	(240) - (3,161) 3.03% 0.4137	- 1,062 3.03% 0.4137	- - 3.03% 0.4137	- 3.03% 0.4137	- - 3.03% 0.4137	- 3.03% 0.4137
Calculat	ion of Federal And State Income Tax Operating Revenue Less Operating Expenses Operating Income before Adjustments Additions to Income Debustions from Income Debt Synchronization Operating Income After Adjustments Federal & State Income Tax	595,192 508,787 86,405 136 57,416 13,386 15,739 6,511	0 0 0 65 (65) (27)	0 0 (58) (43) 101 42	0 0 (5) (2) 7 3	0 0 (6) (3) 9 4	(269) 0 (269) 0 (163) (96) (10) (4)	0 0 0 0 32 (32) (13)	0 153 (153) 0 0 0 (153) (63)	0 (16) 0 0 (16) (7)	0 (273) 273 0 0 0 273 113	0 (2) 2 0 0 0 0 2 1

Gas Ope INCOME INCOME	n States Power Company, a Minnesota corpora prations - State of Minnesota STATEMENT SCHEDULES STATEMENT ADJUSTMENT SCHEDULES									Docket Exhibit(No. G002/GR-09-115 AEH-1), Schedule 3 Page 3 of
2010 Un (\$000's)	adjusted Test Year versus 2010 Adjusted Test	Year									
Line	Description	Incentive Compensation Adjustment 11	Employee Expense Adjustment 12	2009 Wage Increase Adjustment 13	Gas Affordability Program Adjustment 14	CIP Adjustment 15	CIP Incentive Bonus Removal 16	Economic Development Adjustment 17	Rate Case Expense Amortization 18	CWC 19	2010 Adjusted(1)
Qp	erating Revenues										
	Retail Weather Impact Net Margin Adjustment					(9,286)					\$571,205
3	Interdepartmental & Transportation										9,050
4	Other Operating						(1,027)				4,355
	Gross Earnings Tax tal Operating Revenues	\$0	\$0	\$0	\$0	(\$9,286)	(\$1,027)	\$0	\$0	\$0	\$584,610
Ex	penses										
	Operating Expenses:										
7 8	Purchased Gas Other Production										\$426,919
9	Transmission										4,30
10	Distribution										28,447
11	Customer Accounting				(20)	(0.000)					15,680
12 13	Customer Service & Information Administrative & General	(625)	(108)	236		(9,286)					5,610 16,629
14	Sales, Econ Dvlp & Other	(020)	(100)	200				3			31
15	Total Operating Expenses	(\$625)	(\$108)	\$236	(\$20)	(\$9,286)	\$0	\$3	\$0	\$0	\$498,882
	Depreciation Amortizations								532		\$32,857 532
	Taxes:										
18	Property										\$12,776
19 20	Gross Earnings Deferred Income Tax & ITC										2,646
20	Federal & State Income Tax	259	45	(98)	8	0	(425)	(1)	(220)	(5)	6,122
22	Payroll & Other										1,946
	Total Taxes	\$259	\$45	(\$98)	\$8	\$0	(\$425)	(\$1)	(\$220)	(\$5)	\$23,490
24 To	tal Expenses	(\$366)	(\$63)	\$138	(\$12)	(\$9,286)	(\$425)	\$2	\$312	(\$5)	\$555,761
25	Allowance for Funds Used During Construction										\$414
26 To	tal Operating Income	\$366	\$63	(\$138)	\$12	\$0	(\$602)	(\$2)	(\$312)	\$5	\$29,263
P	evenue Requirement										
27	Total Rate Base	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$379	\$440.597
28	Require Operating Inc (RB * Reg Return)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33	\$38,773
29	Operating Income	\$366	\$63	(\$138)	\$12	\$0	(\$602)	(\$2)	(\$312)	\$5	\$29,263
30	Operating Income Deficiency	(\$366)	(\$63)	\$138	(\$12)	\$0	\$602	\$2	\$312	\$28	\$9,510
31 R e	evenue Requirement	(\$625)	(\$108)	\$236	(\$20)	\$0	\$1,027	\$3	\$532	\$48	\$16,220
Schedule											
Tax Addi						-		-		-	
	e Adjustment									379	440,597
Cost of E		3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03
Tax Rate	1	0.4137	0.4137	0.4137	0.4137	0.4137	0.4137	0.4137	0.4137	0.4137	0.4137
Calculati	on of Federal And State Income Tax										
	Operating Revenue	0	0	0	0	(9,286)	(1,027)	0	0	0	584,610
	Less Operating Expenses	(625)	(108)	236	(20)	(9,286)	0	3	0	0	498,882
	Operating Income before Adjustments Additions to Income	625	108	(236) 0	20 0	0	(1,027)	(3)	0	0	85,728
	Additions to Income Deductions from Income	0	0	0	0	0	0	0	532	0	(14,722
	Debt Synchronization	0	0	0	0	0	0	0	0	11	13,350
	Operating Income After Adjustments	625	108	(236)	20	0	(1,027)	(3)	(532)	(11)	57,656
	Federal & State Income Tax	259	45	(98)	8	0	(425)	(1)	(220)	(5)	6,122

Revenue Requirements Category Descriptions

This attachment explains the three categories (Rate Base, Calculation of Return and Income Statement Items) and each component of these categories used to determine the Revenue Requirement. The calculation of the Revenue Requirement for the Cast Iron Replacement project is shown on Attachment D2.

I. Rate Base

The following section explains each component of the Rate Base category and the rationale for including or excluding the cost.

Plant in Service - This is an addition to rate base. This category reflects the original cost of gas plant that has been put into service. In the specific case of the annual 2018 plant in service for the natural gas Cast Iron Pipe Replacement project, the \$13,736,108 shown on Attachment D2 of this filing reflect the dollar value portion of the project in service as of June 30, 2019. Standard ratemaking methodology calls for the inclusion of this item in the determination of rate base.

Book Depreciation Reserve - This is a reduction to rate base. It reflects the accumulated recovery of the amount invested in plant in service. In the specific case of the 2018 book depreciation reserve for the natural gas Cast Iron Pipe Replacement project, the \$2,806,881 shown on Attachment D2 of this filing reflects the amount of the plant in service that has been recovered as of June 30, 2019, which results in a decrease to rate base. Standard ratemaking methodology calls for the inclusion of this credit balance (contra-asset) as a reduction in the determination of rate base.

Accumulated Deferred Taxes - This is a reduction to rate base. It reflects the tax timing differences between book and tax depreciation lives and other non-plant book/tax timing differences, multiplied by the tax rate. Over the life of an asset, the Accumulated Deferred Tax is zero. In the specific case of the 2018 accumulated deferred taxes for the natural gas Cast Iron Pipe Replacement project, the \$1,414,496 shown on Attachment D2 of this filing reflects the accumulation of tax timing differences between book and tax depreciation through June 2019, which results in a decrease to rate base. The ADIT deduction from rate base has been developed in accordance with IRS tax regulation Sec. 1.167(l). The regulation requires the use of a pro-rate schedule for accumulated deferred income taxes used to reduce rate base to comply with

the tax normalization requirements of the Code when forecast information is used to set rates. Standard ratemaking methodology calls for the inclusion of this timing-related credit balance (contra-asset) as a reduction in the determination of rate base.

II. Calculation of Return

The following section explains both components of the Calculation of Return category. Note that for both items below, standard ratemaking methodology calls for the inclusion of these items in the calculation of revenue requirements.

Debt Return - This category reflects the return the Company is allowed in order to recover its weighted cost of debt for financing its capital investments. In the specific case of the annual 2018 debt return for the natural gas Cast Iron Pipe Replacement project, the \$213,173 shown on Attachment D2 of this filing reflect the amount of debt return the Company is allowed for July 2018 - June 2019 based on the overall weighted cost of debt.

Equity Return - This category reflects the return the Company is allowed in order to recover its weighted cost of equity for financing its capital investments. In the specific case of the annual 2018 equity return for the natural gas Cast Iron Pipe Replacement project, the \$462,360 shown on Attachment D2 of this filing reflect the amount of return on equity the Company is allowed for July 2018 - June 2019 based on the overall weighted cost of equity.¹

III. Income Statement Items

The following section explains each component of the Income Statement Items category. Note that for each item below, standard ratemaking methodology calls for the inclusion of these items in the calculation of revenue requirements.

Property Taxes - This category reflects the estimated property taxes billed from local taxing authorities that the Company must pay based on the original cost of the Company's assets. Property taxes accrued are based on the original cost at December 31 from the prior year, and then are paid the following year. In the specific case of the annual 2018 property tax amount for the natural gas Cast Iron Pipe Replacement project, the \$246,300 shown on Attachment D2 of

¹ In the August 24, 2017 Order in Docket No. G002/M-17-174, we were ordered to use the return on equity approved in the Gas Utility Infrastructure Costs (GUIC) Rider (Docket No. G002/M-16-891) and the weighted cost of debt approved in the 2013 electric rate case (Docket No. E002/GR-13-868).

this filing reflect one half of the amount of property taxes the Company is anticipating to accrue in calendar year 2018 for the plant in service as of December 31, 2018, plus one-half of calendar year 2019. We reflect one-half of each year, since the 2018-2019 SEP period is split evenly across both calendar periods.

Book Depreciation - This category reflects the monthly/annual depreciation expense that is accumulated in the book depreciation reserve defined in part a) subsection ii). In the specific case of the annual 2018 book depreciation for the natural gas Cast Iron Pipe Replacement project, the \$351,034 shown on Attachment D2 reflect the amount of plant in service that is being recovered through depreciation expense from July 2018 - June 2019 and included in the annual revenue requirement.

Deferred Taxes - This category reflects the monthly/annual deferred tax expense that is accumulated in the accumulated deferred reserve defined in part a) subsection iii). In the specific case of the annual 2018 deferred taxes for the natural gas Cast Iron Pipe Replacement project, the \$77,054 shown on Attachment D2 reflect the July 2018 - June 2019 tax timing difference when book expense differs from tax expense and is included in the annual revenue requirement.

Current Taxes - This category reflects the current income taxes the Company is anticipated to pay based on its taxable income. In the specific case of the annual 2018 current taxes for the natural gas Cast Iron Pipe Replacement project, the \$106,993 shown on Attachment D2 reflect the amount of current income taxes the Company is anticipating to pay as a result of the taxable income being generated by the Cast Iron Pipe Replacement project.

Certification Statement:

The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.

Facility Name: Northern States Power Company, A Minnesota Corporation Facility Identifier: 524615 Facility Reporting Year: 2016

Facility Location:

Address: 414 Nicollet Mall City: Minneapolis State: MN Postal Code: 55401

Facility Site Details:

CO2 equivalent emissions from facility subparts C-II, SS, and TT (metric tons): 56321.2

CO2 equivalent emissions from supplier subparts LL-QQ (metric tons): 3497071.2 Biogenic CO2 emissions from facility subparts C-II, SS, and TT (metric tons): 0 Cogeneration Unit Emissions Indicator: N GHG Report Start Date: 2016-01-01

GHG Report End Date: 2016-12-31

Description of Changes to Calculation Methodology:

Part 75 Biogenic Emissions Indication:

Plant Code Indicator: N Primary NAICS Code: 221210

Second Primary NAICS Code:

Parent Company Details:

Parent Company Name: XCEL ENERGY Address: 414 Nicollet Mall, Minneapolis, MN 55401 Percent Ownership Interest: 100

Subpart W: Petroleum and Natural Gas Systems

Gas Information Details

Gas Name	Other Gas Name	Other Gas GHG Group	Gas Quantity	Own Result?
Methane			2232.4 (Metric Tons)	
Nitrous Oxide			0 (Metric Tons)	
Carbon Dioxide			511.2 (Metric Tons)	

SubpartWSummaryDetails:

Industry Segment Number	8

Industry Segment Name	Natural gas distribution [98.230(a) (8)]
Total Reported CO2 Emissions (mt CO2)	511.2
Total CO2e Emissions (mt CO2e)	56321.2
Total Reported CH4 Emissions (mt CH4)	2232.40
Total Reported N2O Emissions (mt N2O)	0.000

$\underline{SubpartWSourceReportingFormRowDetails:}$

Source Reporting Form	Onshore Production [98.236(aa) (1)]
Required for Selected Industry Segment	No
Source Reporting Form	Facility Overview [98.236(aa) (2-11)]
Required for Selected Industry Segment	Yes
Source Reporting Form	Natural Gas Pneumatic Devices [98.236(b)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Source Reporting Form	Natural Gas Driven Pneumatic Pumps [98.236(c)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Source Reporting Form	Acid Gas Removal Units [98.236 (d)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Source Reporting Form	Dehydrators [98.236(e)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Well Venting for Liquids Unloading [98.236(f)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Source Reporting Form	Completions and Workovers with Hydraulic Fracturing [98.236(g)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Completions and Workovers without Hydraulic Fracturing [98.236(h)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0

Total Reported CH4 Emissions (mt CH4)	Page 3 o
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Blowdown Vent Stacks [98.236(i)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Source Reporting Form	Atmospheric Storage Tanks [98.236 (j)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Transmission Storage Tanks [98.236(k)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Well Testing [98.236(I)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
	Associated Gas Venting and Flaring
Source Reporting Form	[98.236(m)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Flare Stacks [98.236(n)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Centrifugal Compressors [98.236 (o)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Reciprocating Compressors [98.236 (p)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000

	Page 4 of
Required for Selected Industry Segment	Yes
Total Reported CO2 Emissions (mt CO2)	67.2
Total Reported CH4 Emissions (mt CH4)	2232.40
Source Reporting Form	Offshore Petroleum and Natural Gas Production [98.236(s)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Enhanced Oil Recovery Injection Pumps [98.236(w)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Source Reporting Form	Enhanced Oil Recovery Hydrocarbon Liquids [98.236(x)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Source Reporting Form	Combustion Equipment at Onshore Petroleum and Natural Gas Production Facilities, Onshore Petroleum and Natural Gas Gathering and Boosting Facilities, and Natural gas Distribution Facilities [98.236(z)]
Required for Selected Industry Segment	Yes
Total Reported CO2 Emissions (mt CO2)	444.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000

FacilityOverviewDetails:

FacilityOverviewNaturalGasDistributionRowDetails:

Quantity of natural gas received at all custody transfer stations in the calendar year (thousand standard cubic feet) [98.236(aa)(9)(i)]	89700554
Quantity of natural gas withdrawn from in-system storage in the calendar year (thousand standard cubic feet) [98.236(aa)(9)(ii)]	47232
Quantity of natural gas added to in-system storage in the calendar year (thousand standard cubic feet) [98.236(aa)(9)(iii)]	98146
Quantity of natural gas delivered to end users (thousand standard cubic feet) [98.236(aa)(9)(iv)]	91839499
Quantity of natural gas transferred to third parties such as other LDCs or pipelines (thousand standard cubic feet) [98.236(aa)(9)(v)]	0
Quantity of natural gas consumed by the LDC for operational purposes (thousand standard cubic feet) [98.236(aa)(9)(vi)]	44724.1458
	1

OtherEmissionsFromEquipmentLeaksDetails:

OtherEmissionsFromEquipmentLeaksDetails:	
mt CO2	67.2
mt CH4	2232.40
Is this facility required to report equipment leaks via surveys under 98.236(a) [98.236(q)]?	Yes
Is this facility required to report equipment leaks via population counts under 98.236(a) [98.236(r)]?	Yes
Were missing data procedures used for any parameters to calculate GHG emissions? [98.235]	No
Number of complete equipment leak surveys performed during the calendar year [98.236(q)(1)(i)]	42
For Natural gas distribution facilities conducting multi- year surveys, number of years in the leak survey cycle [98.236(q)(1)(ii)]	1
Total number of above grade T-D transfer stations surveyed in the calendar year [98.236(q)(3)(i)]	42
Number of meter/regulator runs at above grade T-D transfer stations surveyed in the calendar year, CountMR,y [98.236(q)(3)(ii)]	54
Average time meter/regulator runs surveyed in calendar year were operational, Average of calendar year Tw,y (hours) [98.236(q)(3)(iii)]	8784
Number of above grade T-D transfer stations surveyed in current leak survey cycle [98.236(q)(3) (iv)]	42
Number of meter/regulator runs at above grade T-D transfer stations surveyed in current leak survey cycle, Sum of CountMR,y [98.236(q)(3)(v)]	54
Average time that meter/regulator runs surveyed in the current leak survey cycle were operational, Average of current survey Tw,y (hours) [98.236(q)(3) (vi)]	8784
Meter/regulator run CO2 emission factor based on all surveyed T-D transfer stations in current leak cycle, Average of current survey EFS,MR,i (standard cubic feet per operational hour of all meter/regulator runs) [98.236(q)(3)(vii)]	0
Meter/regulator run CH4 emission factor based on all surveyed T-D transfer stations in current leak cycle, Average of current survey EFS,MR,i (standard cubic feet per operational hour of all meter/regulator runs) [98.236(q)(3)(viii)]	0
Does the facility perform equipment leak surveys across a multiple year leak survey cycle (Yes/No) [98.236(q)(3)(ix)]	No
Number of above grade T-D transfer stations at the facility [98.236(r)(2)(i)]	42
	198
I	1

Number of above grade metering-regulating stations that are not T-D transfer stations [98.236(r)(2)(ii)]	Page 6 of 1
Total number of meter/regulator runs at above grade metering-regulating stations that are not above grade T-D transfer stations, CountMR [98.236(r)(2)(iii)]	214
Average estimated time that each meter/regulator run at above grade metering-regulating stations that are not above grade T-D transfer stations was operational in the calendar year, Tw,avg (hours) [98.236(r)(2)(iv)]	8784
Annual CO2 emissions from above grade metering- regulating stations that are not above grade T-D transfer stations [98.236(r)(2)(v)(A)]	0
Annual CH4 emissions from above grade metering- regulating stations that are not above grade T-D transfer stations [98.236(r)(2)(v)(B)]	0

GasProcessingEmissionsFactorsRowDetails:

Component Type [98.236(q)(2)(i)]	Compressor Components, Gas Service - Valve
Component Type [98.236(q)(2)(i)]	Compressor Components, Gas Service - Connector
Component Type [98.236(q)(2)(i)]	Compressor Components, Gas Service - Open-ended Line
Component Type [98.236(q)(2)(i)]	Compressor Components, Gas Service - Pressure Relief Valve
Component Type [98.236(q)(2)(i)]	Compressor Components, Gas Service - Meter
Component Type [98.236(q)(2)(i)]	Non-Compressor Components, Gas Service - Valve
Component Type [98.236(q)(2)(i)]	Non-Compressor Components, Gas Service - Connector
Component Type [98.236(q)(2)(i)]	Non-Compressor Components, Gas Service - Open-ended Line
Component Type [98.236(q)(2)(i)]	Non-Compressor components, Gas Service - Pressure Relief Valve
Component Type [98.236(q)(2)(i)]	Non-Compressor components, Gas Service - Meter

GasTransmissionCompressionEmissionFactorsRowDetails:

Component Type [98.236(q)(2)(i)]	Compressor Components, Gas Service - Valve
Component Type [98.236(q)(2)(i)]	Compressor Components, Gas Service - Connector
Component Type [98.236(q)(2)(i)]	Compressor Components, Gas Service - Open-ended Line
Component Type [98.236(q)(2)(i)]	Compressor Components, Gas Service - Pressure Relief Valve
Component Type [98.236(q)(2)(i)]	Compressor Components, Gas Service - Meter

Component Type [98.236(q)(2)(i)]	Non-Compressor Components, Gas Service - Valve
Component Type [98.236(q)(2)(i)]	Non-Compressor Components, Gas Service - Connector
Component Type [98.236(q)(2)(i)]	Non-Compressor Components, Gas Service - Open-ended Line
Component Type [98.236(q)(2)(i)]	Non-Compressor components, Gas Service - Pressure Relief Valve
Component Type [98.236(q)(2)(i)]	Non-Compressor components, Gas Service - Meter

 ${\it UndergroundStorageEmissionsFactorsRowDetails:}$

Component Type [98.236(q)(2)(i)]	Storage Station, Gas Service - Valve
Component Type [98.236(q)(2)(i)]	Storage Station, Gas Service - Connector
Component Type [98.236(q)(2)(i)]	Storage Station, Gas Service - Open-ended Line
Component Type [98.236(q)(2)(i)]	Storage Station, Gas Service - Pressure Relief Valve
Component Type [98.236(q)(2)(i)]	Storage Station, Gas Service - Meter

LngStorageEmissionsFactorsRowDetails:

Component Type [98.236(q)(2)(i)]	LNG Storage, LNG Service - Valve
Component Type [98.236(q)(2)(i)]	LNG Storage, LNG Service - Connector
Component Type [98.236(q)(2)(i)]	LNG Storage, LNG Service - Pump Seal
Component Type [98.236(q)(2)(i)]	LNG Storage, LNG Service - Other

ImportExportEmissionsFactorsRowDetails:

Component Type [98.236(q)(2)(i)]	LNG Terminal, LNG Service - Valve
	LNG Terminal, LNG Service - Connector
Component Type [98.236(q)(2)(i)]	LNG Terminal, LNG Service - Pump Seal
Component Type [98.236(q)(2)(i)]	LNG Terminal, LNG Service - Other

GasDistributionEmissionsFactorsRowDetails:

Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Connector
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236 (q)(2)(iii)]	0

	Attachment
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	O Page 8 of
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Block Valve
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236 (q)(2)(iii)]	0
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Control Valve
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236 (q)(2)(iii)]	0
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Pressure Relief Valve
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236 (q)(2)(iii)]	0
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Orifice Meter
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236 (q)(2)(iii)]	0
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0

	Attachment F
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Regulator
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236 (q)(2)(iii)]	0
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Open-ended line
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236 (q)(2)(iii)]	0
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0

GasEstimatingEmissionsRowDetails:

Gasestiniatingennissionskowbetans.	
Emission Source Type (Eq. W-32A) [98.232] [98.233	Storage wellheads, Gas Service -
(r)(1)]	Valves
Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	Storage wellheads, Gas Service - Connector
Emission Source Type (Eq. W-32A) [98.232] [98.233	
	Open-ended line
	Storage wellheads, Gas Service - Pressure Relief Valve

LngStorageEstimatingEmissionsRowDetails:

Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	LNG Storage Compressor, Gas Service - Vapor Recovery Compressor
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LngImportExportEstimatingEmissionsRowDetails:

Emission Source Type (Eq. W-32A) [98.232] [98.233	LNG Terminals Compressor, Gas
[c](1)	Service - Vapor Recovery
	Compressor

GasDistributionTDEstimatingEmissionsRowDetails:

Case is a local sector of the case of the	
Emission Source Type (Eq. W-32A) [98.232] [98.233	Below Grade T-D Station, Gas
(r)(1)]	Service, Inlet Pressure > 300 psig

	Page 10 of 17
Total number of emission source type, Counte [98.236(r)(1)(ii)]	0
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8784
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0
Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	Below Grade T-D Station, Gas Service, Inlet Pressure 100 to 300 psig
Total number of emission source type, Counte [98.236(r)(1)(ii)]	6
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8784
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0.2
Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	Below Grade T-D Station, Gas Service, Inlet Pressure < 100 psig
Total number of emission source type, Counte [98.236(r)(1)(ii)]	0
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8784
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0

GasDistributionMREstimatingEmissionsRowDetails:

GasDistributionini Restinating Emissions Row Details.	
Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	Below Grade M-R Station, Gas Service, Inlet Pressure > 300 psig
Total number of emission source type, Counte [98.236(r)(1)(ii)]	0
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8784
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0
Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	Below Grade M-R Station, Gas Service, Inlet Pressure 100 to 300 psig
Total number of emission source type, Counte [98.236(r)(1)(ii)]	35
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8784
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	1.2
Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	Below Grade M-R Station, Gas Service, Inlet Pressure < 100 psig
	30

Total number of emission source type, Counte [98.236(r)(1)(ii)]	
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8784
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0.5

MainGasDistributionEstimatingEmissionsRowDetails:

Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	Distribution Mains, Gas Service - Unprotected Steel
Total number of emission source type, Counte [98.236(r)(1)(ii)]	110
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8784
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	7.1
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	234
Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	Distribution Mains, Gas Service - Protected Steel
Total number of emission source type, Counte [98.236(r)(1)(ii)]	848
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8784
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	1.5
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	50.1
Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	Distribution Mains, Gas Service - Plastic
Total number of emission source type, Counte [98.236(r)(1)(ii)]	8261
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8784
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	47.4
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	1574.3
Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	Distribution Mains, Gas Service - Cast Iron
Total number of emission source type, Counte [98.236(r)(1)(ii)]	0
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8784
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0

ServicesGasDistributionEstimatingEmissionsRowDetails:

Emission Source Type (Eq. W-32A) [98.232] [98.233 (r)(1)]	Distribution Services, Gas Service - Unprotected Steel

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Total number of emission source type, Counte	8498
[98.236(r)(1)(ii)]	
Average estimated time that the emission source type	
was operational in the calendar year, Te (hours)	8784
[98.236(r)(1)(iii)]	
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	8.2
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	272.3
Emission Source Type (Eq. W-32A) [98.232] [98.233	Distribution Services, Gas Service -
(r)(1)]	Protected Steel
Total number of emission source type, Counte [98.236(r)(1)(ii)]	7843
Average estimated time that the emission source type	
was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8784
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0.8
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	25.2
Emission Source Type (Eq. W-32A) [98.232] [98.233	Distribution Services, Gas Service -
(r)(1)]	Plastic
Total number of emission source type, Counte	410056
[98.236(r)(1)(ii)]	419956
Average estimated time that the emission source type	
was operational in the calendar year, Te (hours)	8784
[98.236(r)(1)(iii)]	
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	2.1
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	70.8
Emission Source Type (Eq. W-32A) [98.232] [98.233	Distribution Services, Gas Service -
(r)(1)]	Copper
Total number of emission source type, Counte	760
[98.236(r)(1)(ii)]	/00
Average estimated time that the emission source type	
was operational in the calendar year, Te (hours)	8784
[98.236(r)(1)(iii)]	
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0.1
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	3.8

MajorGasEquipmentTypeRowDetails:

Major Equipment Type [98.236(r)(3)(ii)]	Wellhead	
Major Equipment Type [98.236(r)(3)(ii)]	Separators	
Major Equipment Type [98.236(r)(3)(ii)]	Meters/piping	
Major Equipment Type [98.236(r)(3)(ii)]	Compressors	
Major Equipment Type [98.236(r)(3)(ii)]	In-line heaters	
Major Equipment Type [98.236(r)(3)(ii)]	Dehydrators	

MajorOilEquipmentTypeRowDetails:

Major Equipment Type [98.236(r)(3)(ii)]	Wellhead	
Major Equipment Type [98.236(r)(3)(ii)]	Separators	
Major Equipment Type [98.236(r)(3)(ii)]	Heater-treater	
Major Equipment Type [98.236(r)(3)(ii)]	Header	

CombustionEmissionsDetails:	Comb	ustionE	missior	sDetails:
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mt CO2	444.0
mt CH4	0.00
mt N2O	0.000
Does the Facility have combustion units subject to reporting under 98.232?	Yes
Were missing data procedures used for any parameters to calculate GHG emissions? [98.235]	No
Are there external fuel combustion units with a rated heat capacity less than or equal to 5 mmBtu/hr? [98.236(z)(1)(i)]	Yes
Are there internal fuel combustion units that are not compressor-drivers, with a rated heat capacity less than or equal to 1 mmBtu/hr? [98.236(z)(1)(i)]	No
Total Number of combustion units meeting the above criteria [98.236(z)(1)(ii)]	5
Are there external fuel combustion units with a rated heat capacity greater than 5 mmBtu/hr? [98.236(z) (2)(i)]	Yes
Are there internal fuel combustion units that are not compressor-drivers, with a rated heat capacity greater than 1 mmBtu/hr? [98.236(z)(2)(i)]	No
Are there Internal fuel combustion units of any heat capacity that are compressor-drivers? [98.236(z)(2) (i)]	No

LargeCombustionUnitEmissionsRowDetails:

Type of combustion unit [98.236(z)(2)(i)]	External fuel combustion units with a rated heat capacity greater than 5 mmBtu/hr
Type of fuel combusted [98.236(z)(2)(ii)]	Natural gas
Quantity of fuel combusted in calendar year [98.236 (z)(2)(iii)]	8151
Unit of measure [98.236(z)(2)(iii)	thousand standard cubic feet
CO2 Emissions (mt CO2) [98.236(z)(2)(iv)]	444
CH4 Emissions (mt CH4) [98.236(z)(2)(v)]	0
N2O Emissions (mt N2O) [98.236(z)(2)(vi)]	0

Subpart NN: Suppliers of Natural Gas and Natural Gas Liquids

Gas Information Details

Gas Name	Gas Quantity	Own Result?
Carbon Dioxide 3497071.2 (Metric Tons)		

Name	Value	Times Substituted
AnnualVolumeGasReceived	89700554 (Mscf)	0
Industry Standard for Volur ANSI standard	me:	
Other Industry Standard fo	r Volume:	

NameValueTimes SubstitutedAnnualVolumeGasStored98146 (Mscf)0

NameValueTimes SubstitutedAnnualVolumeLNGforDelivery47232 (Mscf)0

NameValueTimes SubstitutedAnnualVolumeGasfromStorageforDelivery0 (Mscf)0

NameValueTimes SubstitutedAnnualVolumeGasDeliveredtoOtherLDC/Pipe0 (Mscf)0

NameValueTimes SubstitutedAnnualVolumeGasBypassedCityGate0 (Mscf)0

Name	Value	Own Result?
NN1CO2MassTotal	4883258.7 (Metric Tons)	N

Name	Value	Own Result?
NN3CO2MassTotal	0 (Metric Tons)	N

Name	Value	Own Result?
NN4CO2MassTotal	1383417.8 (Metric Tons)	N

Name	Value	Own	Result?
NN5aCO2MassTotal	2769.7 (Metric Tons)	Ν	

Name	Value	Own	Result?
NN5bCO2MassTotal	0 (Metric Tons)	Ν	

NN1 Equation Details:

Name	Value	Times Substituted
DevelopedHHV	1.026 (MMBtu/Mscf)	

Name	Value	Times Substituted
DevelopedEF	53.06 (kg CO2/MMBtu)	

Industry Standard for HHV: Other Industry Standard for HHV:

Industry Standard for EF: Other Industry Standard for EF:

NN3 Equation Details:

Name	Value	Times Substituted
DevelopedEF	0.0544 (MT CO2/Mscf)	

Industry Standard for EF:

NN4 Equation Details:

Name	Value	Times Substituted
DevelopedEF	0.0544 (MT CO2/Mscf)	

Industry Standard for EF:

NN5a Equation Details:

Name	Value	Times Substituted
DevelopedEF	0.0544 (MT CO2/Mscf)	

Industry Standard for EF:

NN5b Equation Details:

Name	Value	Times Substituted
DevelopedEF	0.0544 (MT CO2/Mscf)	

Industry Standard for EF:

Large End-User Details

Name: St Paul Park Refining Co LLC
Address: 360 3rd Ave W, Saint Paul Park, MN, 55071
Meter Number: 10007438, 711401, 712496
EIA Number:
Total quantity of natural gas reported is the total quantity delivered to: Large end-user's facility

Name	Value
AnnualVolumeGasDeliveredtoMet	er 4938295 (Mscf)

Name: Waldorf Corporation/Rock-Tenn

Address: 2241 Wabash Ave, St. Paul, MN, 55114

Meter Number: 477095

EIA Number:

Total quantity of natural gas reported is the total quantity delivered to: Specific meter located at the facility

Name	Value
AnnualVolumeGasDeliveredtoMeter	2263693 (Mscf)

Name: American Crystal Sugar

Address: 2500 11th St N, Moorhead, MN, 56560

Meter Number: 684836

EIA Number:

Total quantity of natural gas reported is the total quantity delivered to: Specific meter located at the facility

Name	Value
AnnualVolumeGasDeliveredtoMeter	558872 (Mscf)

Name: High Bridge Combined Cycle Plant Address: 155 Randolph Ave, St. Paul, MN, 55102 Meter Number: 925955, 684727 EIA Number: 1912 Total quantity of natural gas reported is the total quantity delivered to: Large end-user's facility

Name	Value
AnnualVolumeGasDeliveredtoMeter	14145670 (Mscf)

Name: Mom Brands Company LLC Address: 705 5th St W, Northfield, MN, 55057 Meter Number: 711058, 10011686 EIA Number: Total quantity of natural gas reported is the total quantity delivered to: Large end-user's facility

Name	Value
AnnualVolumeGasDeliveredtoMeter	671100 (Mscf)

Name: 3M - MN

Address: 2400 Conway St, Maplewood, MN, 55119

Meter Number: 492363

EIA Number:

Total quantity of natural gas reported is the total quantity delivered to: Specific meter located at the facility Value

Name

Name	value
AnnualVolumeGasDeliveredtoMete	r 1376697 (Mscf)

Name: District Energy of St Paul

Address: 76 Kellogg Blvd, St. Paul, MN, 55102

Meter Number: 712497

EIA Number:

Total quantity of natural gas reported is the total quantity delivered to: Specific meter located at the facility

Value

Name

AnnualVolumeGasDeliveredtoMeter 832907 (Mscf)

Name: Gerdeau Ameristeel US Inc - MN

Address: 1678 Red Rock Road, St. Paul, MN, 55119

Meter Number: 710553

EIA Number:

Total quantity of natural gas reported is the total quantity delivered to: Specific meter located at the facility

Value

Name

AnnualVolumeGasDeliveredtoMeter	643241 (Mscf)

NG Delivery Details

Name: Residential consumers

Name Value VolumeofNaturalGas 32646934 (Mscf)

Name: Commercial consumers

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Name	Value
VolumeofNaturalGas	18649919 (Mscf)

Name: Industrial consumers

Name	Value
VolumeofNaturalGas	23405335 (Mscf)

Name: Electricity generating facilities

Name	Value
VolumeofNaturalGas	17137311 (Mscf)

Compliance Matrix

Petition Requirements	Reference
In the Matter of the Petition of Northern States Power Company for Approval of a Modification to its Natural Gas State Energy Policy Rider (SEP) Tariff, 2017 SEP Rate Factor, and 2016 SEP Compliance Filing Minnesota Public Utilities Commission ORDER CONTINUING RECOVERY OF COSTS THROUGH THE	
STATE ENERGY POLICY RIDER AND OTHER ACTION August 24, 2017 Docket G002/M-17-174	
 Xcel Gas may continue to recover approximately \$1.83 million of costs through its State Energy Policy (SEP) rider until all costs are recovered or the Company files a general rate case, with the understanding that no new costs will be added or recovered through the SEP Rider. 	Attachment B shows that no new cost categories have been added, and that Cast Iron revenue requirements decrease year over year. Petition page 4.
 Xcel Gas may include the assessment costs for Department Regional and National Duties in the SEP rider. 	Shown on the Attachment B tracker and detailed in Attachment D1. Petition page 5.
3. Xcel Gas shall not prorate its accumulated deferred income taxes in the SEP rider.	Petition pages 9-10.
 The effective date of the SEP rider shall not be before July 1, 2018. 	Attachment A2 shows that no rate was implemented for the 2017-2018 SEP Period. Petition pages 1 and 6.
5. The Commission approves the capital structure authorized in Xcel Electric's 2013 electric rate case for use in this docket along with the 9.04 percent Return on Equity (ROE) the Department recommended in Xcel's Gas Utility Infrastructure Cost (GUIC) in Docket No. G- 002/M-16-891. A true up to align the ROE to the Commission's final decision in the GUIC docket shall be made at the next SEP filing.	Attachment E shows the base assumptions used in the rider calculations, including ROE and capital structure. Petition pages 8-9.

Compliance Matrix

	Petition Requirements	Reference
6.	Xcel Gas shall submit an annual compliance filing by each March 1 containing the actual and forecasted information needed to determine any true-up amount to be recovered from or returned to ratepayers as a result of the operation of the SEP rider. Xcel shall submit a miscellaneous filing to establish new SEP rider rates for the subsequent fiscal year, incorporating amounts anticipated to be incurred and including any true-up amounts for the operation of the SEP rider during the current year.	The filing date for this Petition is March 1, 2018. Attachment B and Petition page 4.
7.	Xcel Gas shall provide a comparison between actual and budgeted monthly costs in its future SEP rider filings, including a discussion of reasons for deviations from budgeted amounts (both higher and lower).	Attachment C and Petition pages 4 and 12.
8.	Xcel Gas shall revise labeling and provide correct descriptions in its SEP rider petition in future years to clarify exactly which costs are included and not included in its proposed SEP rate.	Attachments B and D1 and Petition page 5.
9.	Xcel Gas shall recalculate the 2017 SEP rider revenue requirements and factor, to incorporate all of the Commission's decisions herein and shall submit revised schedules and factors reflecting these modifications, highlighting the values that differ from the initial filing's schedules.	Petition page 6, and a compliance filing to be filed in Docket No G002/M-17-174.
10.	Xcel Gas shall include the most recent billing message language approved by the Commission, along with any proposed modifications, in future SEP Rider petitions.	Petition page 11.

CERTIFICATE OF SERVICE

I, Carl Cronin, hereby certify that I have this day served copies of the foregoing document on the attached list of persons.

- <u>xx</u> by depositing a true and correct copy thereof, properly enveloped with postage paid in the United States mail at Minneapolis, Minnesota
- \underline{xx} electronic filing

DOCKET NO. G002/M-17-174 MISCELLANEOUS NATURAL GAS SERVICE LIST

Dated this 1st day of March 2018

/s/

Carl Cronin

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Generic Notice	Commerce Attorneys	commerce.attorneys@ag.st ate.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1800 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_17-174_M-17-174
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