Minneapolis, MN 55459-0038

PUBLIC DOCUMENT Trade Secret Information Has Been Excised

September 3, 2019

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

Annual Automatic Adjustment Report - CenterPoint Energy Resources Corp. d/b/a

CenterPoint Energy Minnesota Gas

Docket No. G999/AA-19-401

Dear Mr. Wolf:

CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas (CenterPoint Energy or the Company) hereby submits its Annual Automatic Adjustment Report for the year beginning July 1, 2018 and ending June 30, 2019 pursuant to the Minnesota Public Utilities Commission (Commission) Rules governing the automatic adjustment of charges, parts 7825.2390 through 7825.2920 and by the miscellaneous tariff filing requirements in section 7829.1300. This filing fulfills the reporting requirements outlined in Minnesota Rules 7825.2800 to 7825.2840.

CenterPoint Energy designated information in Exhibits 6, 7, 9, 11, and 12 of its 2019 Annual Automatic Adjustment Report as trade secret. The identified trade secret information meets the definition of trade secret in Minn. Stat. § 13.37 subd. 1(b), as follows: (1) the information was supplied by CenterPoint Energy, the affected organization; (2) CenterPoint Energy has taken all reasonable efforts to maintain the secrecy of the information, including protecting it from disclosure in this proceeding; and (3) the protected information contains gas supply bidding and contracting information, including the identities of bidders and prices, which derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by other persons who can obtain economic value from its disclosure or use. Exhibits 9 and 12 have been identified as containing trade secret information to protect our customers names and addresses. In other words, CenterPoint Energy (and thus its customers, since gas costs are passed through to them) obtains economic value in the form of better, more competitive bids by protecting this information from disclosure to others.

If you have any questions regarding the information provided in this filing, please contact me at (612) 321-4677or Donald.Wynia@CenterPointEnergy.com.

Sincerely,

/s/ Donald Wynia Regulatory Analyst

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^{*}Exhibit contains trade secret information. The public version has the trade secret information excised.

STATE OF MINNESOTA BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Katie Sieben Chair
Dan Lipschultz Vice-Chair
Valerie Means Commissioner
Matthew Schuerger Commissioner
John Tuma Commissioner

Annual Automatic Adjustment
Report - CenterPoint Energy Minnesota Gas

Docket No. G999/AA-19-401

1. INTRODUCTION

CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Minnesota Gas (CenterPoint Energy or Company) submits to the Minnesota Public Utilities Commission (Commission) its Annual Automatic Adjustment Report. Compliance with applicable Minnesota Statutes and Rules and prior Commission Orders is demonstrated in this filing.

2. COMPLIANCE WITH MISCELLANEOUS TARIFF AND PRICE LIST FILINGS

Pursuant to Minnesota Rules Part 7829.1300, CenterPoint Energy provides the following information:

7829.1300 Miscellaneous Tariff and Price List Filings

Subp. 1 Summary.

A miscellaneous tariff filing and price list filing must include, on a separate page, a one-paragraph summary of the filing, sufficient to apprise potentially interested parties of its nature and general content.

A one-paragraph summary is attached to this filing.

Subp. 2 Service.

The filing utility shall serve copies of each miscellaneous tariff filing on which commission action is required within 60 days, and each price list filing increasing the price of a competitive service, on the persons on the applicable general service list, on the department, and on the Residential Utilities Division of the Office of the Attorney General. For other filings, the utility may serve the summary described in subpart 1 on persons on the applicable general service list. The utility shall serve with the filing or the summary a copy of its general service list for the filing.

A copy of this filing has been served on all parties on the enclosed service list.

Subp. 3 Content of filing subject to specific requirements.

In addition to complying with specific requirements imposed by statute or rule, miscellaneous tariff and price filings subject to specific filing rules must contain at least the following information:

A. the name, address, and telephone number of the utility, without abbreviation;

CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas 505 Nicollet Mall

P.O. Box 59038

Minneapolis, MN 55459-0038

(612) 321-4664

B. the name, address, and telephone number of the attorney for the utility, if the utility is using an attorney;

Steven Clay 505 Nicollet Mall P.O. Box 59038 Minneapolis, MN 55459-0038 (612) 321-4606

Steven.Clay@CenterPointEnergy.com

C. the date of the filing and the date the proposed rate or service change will

Date Filed:

September 3, 2019¹

Effective Date:

go into effect:

September 1, 2019

D. the statute that the utility believes controls the time frame for processing the filing; and

CenterPoint Energy is unaware of any statute that controls the time frame for processing this filing.

E. the signature and title of the utility employee responsible for the filing.

/s/_____ Donald Wynia Regulatory Analyst, Regulatory Services CenterPoint Energy 505 Nicollet Mall Minneapolis, MN 55402 (612) 321-4677 Donald.Wynia@CenterPointEnergy.com

Subp. 4 Content of filing not subject to specific filing rules.

In addition to complying with any specific requirements imposed by statute, miscellaneous tariff and price list filings not subject to specific filing rules must contain at least the following information:

Not	app	licable.
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¹ By rule, filing is due September 1 annually, which is a Sunday in 2019. Additionally, Monday, September 2, is Labor Day 2019.

3. OFFICIAL SERVICE LIST REQUEST

Pursuant to Minnesota Rule 7829.0700, Subpart 1, the Company requests the following persons be placed on the Commission's official service list for this proceeding:

7829.0700 Official Service List

Subp. 1 Content.

The official service list for each proceeding consists of the names of the parties and the names of participants who have filed a written request for inclusion on the service list with the executive secretary.

Donald Wynia
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Any information requests in this proceeding should be submitted to Donald Wynia.

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4. COMPLIANCE WITH ANNUAL GAS PROCUREMENT REPORTING RULE

Pursuant to Minnesota Rules Part 7825.2800, CenterPoint Energy provides the following information:

7825.2800 ANNUAL REPORTS; POLICIES AND ACTIONS.

All public utilities shall file annually on September 1 of each year the procurement policies for selecting sources of fuel and energy purchased, dispatching policies, if applicable, and a summary of actions taken to minimize cost including conservation actions for gas utilities.

4.1. GAS PROCUREMENT POLICY AND PROCEDURES

CenterPoint Energy's gas procurement policy is to provide a reliable source of natural gas supply to its customers in Minnesota, at a reasonable price. As discussed below, providing gas at a reasonable price does not imply that CenterPoint Energy will try to "beat the market." Sources of supply and procurement technique are analyzed considering reliability, flexibility, delivery logistics, and cost. CenterPoint Energy uses a mixture of third party firm base-load and swing supplies using various pricing methods to achieve diversity of its supply portfolio. CenterPoint uses contract pipeline storage, company owned storage, and other peak shaving resources to provide additional flexibility to meet fluctuating demand.

4.1.1. Pipeline Capacity

It is CenterPoint Energy's practice to contract for a level of interstate pipeline capacity that, along with system peaking capabilities, will allow for delivery of sufficient natural gas supplies to meet firm customer needs on winter peak days. CenterPoint Energy first determines the peak-day and monthly requirements of its system by projecting the number of customers by class and the associated use per customer. CenterPoint Energy then projects the appropriate mix between peaking capabilities and pipeline capacity to reliably meet those requirements. CenterPoint Energy contracts for a diverse portfolio of firm pipeline capacity, including capacity on Northern Natural Gas Company (Northern), Viking Gas Transmission Pipeline (Viking), Trailblazer Pipeline, Natural Gas Pipeline Company of America (NGPL), and Minnesota Intrastate Pipeline Company (MIPC) to allow a wider range of supply options. Because the forecasting of firm needs is not an exact science, and gas transportation and delivery equipment problems can occur in the coldest weather, it is CenterPoint Energy's practice and general industry practice to contract for pipeline capacity above expected needs to provide a reserve margin. Contracting for interstate pipeline capacity frequently requires a minimum lead time of two years, and expansions are most economical when planned to meet needs well into the future; therefore, reserve margins will vary from year to year. CenterPoint Energy will work to manage these variances through acquisition of short term capacity, if available, or through offerings of temporary releases of pipeline capacity to third parties via the pipelines' capacity release systems.

4.1.2. Gas Supplies

CenterPoint Energy establishes a diverse gas supply portfolio that efficiently uses the available pipeline capacity and other supply assets to meet its customer demand. CenterPoint Energy uses a variety of contracts to allow it to meet varying customer demand with varying contract service types. Contracts can be made to deliver gas seven days a week, on-demand as weather and price fluctuate, or other unique criteria. CenterPoint Energy's practice is to maintain contract arrangements with multiple suppliers allowing for a competitive bidding process and access to diverse supply options. For each unique supply requirement, CenterPoint Energy solicits proposals from numerous suppliers which are selected based on their reliability, price, and capability to meet CenterPoint Energy's delivery requirements.

4.1.3. Price Stabilization

CenterPoint Energy's policy is to provide price stabilization for a portion of its winter supply through hedged gas purchases and storage gas, to provide protection against volatile gas prices. The level of stabilization to be achieved is re-determined each year based on analysis that incorporates regulatory guidelines (as to volumes and costs), winter price projections, and available portfolio assets. CenterPoint Energy's policy is designed to provide upside price protection on a portion of the portfolio, yet partially taking advantage of declining prices. Each spring CenterPoint Energy estimates an expected range of prices for the upcoming winter season based on industry and government expert projections, plus internal analysis of market conditions. The Company then analyzes projected results of various levels of hedging and varying types of products to determine its portfolio approach. This analysis includes analyzing portfolio cost results under various potential price scenarios using Monte Carlo simulations. Flexibility, however, is built into the annual Gas Procurement Plan for changing the level of hedging volumes and type of products used to respond to changing market conditions. Generally, CenterPoint Energy will use hedge products that allow for some form of downward movement in price when current market pricing is high relative to the range of expected price levels and focus more on fixed price products when pricing is low relative to the expected range of prices for the upcoming winter. However, the Company will attempt to maintain the diversification inherent in the product mix generated during the planning process each spring. CenterPoint Energy also relies on advice of an industry energy advisor to help with the decision as to timing of hedge purchases.

4.1.4. Pipeline Storage

CenterPoint Energy continues to rely on its contracted interstate pipeline storage service as a valuable part of its supply portfolio. CenterPoint Energy has firm storage service under long term contracts directly from NGPL and Northern, which provides capacity to purchase and store up to 19.1 Bcf of gas during the summer months, then delivery of that gas to CenterPoint Energy's market during the heating season. The maximum per day of firm delivery from NGPL and NNG storage is 268,080 Dekatherms, along with the firm swing supply under contract, provides excellent control of swing and peak supplies during the heating season. The NGPL and NNG storage service also provides benefit in meeting significant swing requirements during the shoulder months of October and April when weather highs and lows vary greatly. These storage services allow for intra-gas day adjustments to supply levels not provided by other supplies which enables CenterPoint Energy to avoid costly daily imbalance penalties on pipelines. In addition to supply flexibility, these services provide natural gas supply price stability when stored volumes purchased in the non-heating season are withdrawn and delivered to the market during winter months at a weighted average cost of stored gas.

The Company contracts for shorter term storage services on Northern provided indirectly through marketers that provide for heating season withdrawals of 10.0 Bcf of gas on the Northern system. CenterPoint Energy sought out these additional storage services in 2014-2015 for the following reasons:

- 1. Avoid use of swing gas contracts with First-of-the-Month reservation fees which usually are not economical;
- 2. Provide protection against potential daily price fluctuations;
- 3. Allow CenterPoint Energy to capture the summer/winter price differential for more of its winter supply portfolio; and
- 4. Provide additional opportunities for price stabilization.

The current term on the Company's marketer storage expired March 31, 2019; therefore, the Company solicited bids in Summer 2018 and contracted with BP Canada effective May 1, 2019 through March 31, 2022 (3-year term) for 10 Bcf of storage service.²

4.2. REVIEW OF 2018-2019 GAS PROCUREMENT PLAN

CenterPoint Energy's 2018 Gas Procurement Plan performed well. CenterPoint Energy's gas supplies and upstream pipeline services were adequate and met the needs of CenterPoint Energy's customers. CenterPoint Energy's Minnesota customers experienced winter weather that was 10.8% colder than the 10-year normal average heating degree days. The First-of-Month Market price volatility for winter 2018-2019 averaged 64% compared to CenterPoint Energy's gas supply rate at 35%. This demonstrates that CenterPoint Energy's hedging strategy and storage capabilities have a positive effect on stabilizing gas supply costs. CenterPoint Energy's gas supplies subject to stabilized price mechanisms (that is, storage withdrawals and price hedged physical gas) amounted to 50.2 Bcf or 47.8% of all gas delivered to sales customers during the winter. The 2018 Plan met its objectives of providing adequate supplies at reasonable prices.

CenterPoint Energy continued its competitive bidding process under which it purchased base load and daily priced (Call Option) gas (also called swing gas). Based on annual analysis performed after each of the last ten winters, CenterPoint Energy continued to emphasize daily spot market purchase of gas and daily priced Call Option contracts rather than first-of-month priced Call Options for winter swing gas. CenterPoint Energy also continued its program of stabilizing prices through storage products and hedged gas purchases.

4.2.1. Discussion of Plan Performance 2018-2019

As shown in Table 1 below, actual throughput for the winter months of 2018-2019 were 122.6 Bcf, an 8.5 Bcf increase from Plan, due to weather 8.5% colder than the ten-year average. Winter system sales, excluding Transportation volumes, were 9.1 Bcf above Plan, and Transportation volumes were 0.6 Bcf below Plan.

CenterPoint Energy's planned portfolio for the winter of 2018-2019 provided for total supplies to meet 114.1 Bcf of system and transport load requirements (consisting of the following supply mix):

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² Further information can be found in the Demand Entitlement docket: G-008/M-18-462, filed on May 1, 2019.

<u>Table 1</u> 2018-2019 Winter Portfolio Mix Actual vs. Plan

	Actual		Pl	Plan	
	BCF	Percent	BCF	Percent	Dth
Baseload - Hedged	24.5	23.3%	23.0	24.0%	1.5
Baseload - Index Price	13.8	13.2%	13.0	13.5%	0.9
Daily/Swing Supply	40.8	38.8%	33.2	34.6%	7.5
Storage Supply	25.7	24.5%	26.8	27.9%	(1.1)
Peaking Supply (LNG/Propane)	0.3	0.3%	0.0	0.0%	0.3
Total System Purchases	105.1	100%	96.0	100%	9.1
Total Price Stablization	50.2	47.8%	49.8	51.9%	0.4
Transports (3rd Party)	17.5		18.1		(0.6)
Total System Supply	122.6		114.1		8.5

4.2.2. Results of Price Stabilization Efforts

CenterPoint Energy's strategy to provide gas supplies at reasonable prices includes using hedging tools to achieve price protection and stability for the portfolio. During the winter of 2018-2019, CenterPoint Energy relied on gas in contract storage and physical purchases with imbedded price protection options to stabilize prices. First-of-Month Market price volatility was the second highest over recent winters, averaging 64%. Over time, hedged purchases and storage gas have had a major effect on stabilizing gas supply costs billed to customers. The winter volatility results for each of the last ten years indicate a more stable billed gas cost than the index when the volatility of the indices is low or high. Table 2 below shows percent changes in the Ventura index vs. CenterPoint Energy's gas supply rate for a ten-year period ending March 2019. This chart indicates that, over time, CenterPoint Energy's gas supply rate is more stable than the index, particularly for the winter period when most hedge products have been in effect.

CenterPoint Energy monitors the historical impact of its hedging plans through a comparison of the price volatility of its Commodity Rate (average commodity gas cost for billing which does not include demand costs) as compared to the price volatility of a key indicator of market prices in its distribution area – the First-of-Month Index for Northern's Ventura point as published in <u>Inside F.E.R.C.'s Natural Gas Market Report</u> (FOM Ventura). Volatility, for this purpose, is defined as the absolute change in price from one month to the next and is measured using the formula:

Historical Volatility equals the standard deviation of price reports multiplied by the square root of the number of pricing samples, expressed as a percentage, where:

Price Report =
$$\frac{P_2 - P_1}{P_1}$$
 and P_1 = First Price P_2 = Second Price

Over time, the combination of hedged purchases and storage has had a major effect on stabilizing gas supply costs billed to customers. The results for each of the last five years indicate a more stable billed gas cost than the index even in prior years, when the volatility of the indices is relatively low.

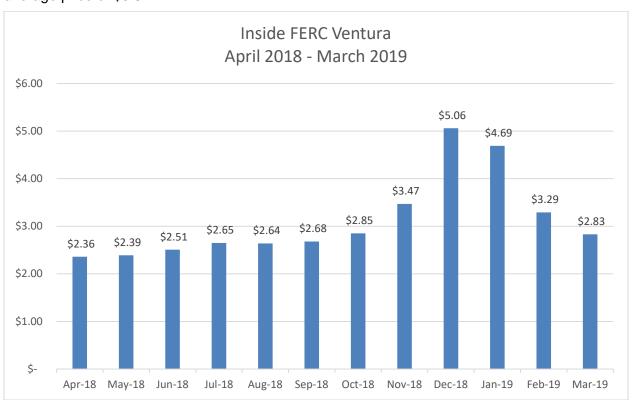
Table 2 below shows percent changes in the Ventura index versus CenterPoint Energy's gas supply rate for a ten-year period ending March 2018.

Table 2

Volatility Comparison-Minnesota						
12 Months	Ventura Index	CenterPoint Gas Supply WACOG Rate	VVC ntor	Ventura	CenterPoint Gas Supply WACOG Rate	
Ending			Winter	Index		
March 2010	70%	58%	2009-2010	34%	23%	
March 2011	44%	35%	2010-2011	34%	23%	
March 2012	18%	11%	2011-2012	9%	6%	
March 2013	40%	36%	2012-2013	12%	10%	
March 2014	71%	52%	2013-2014	48%	40%	
March 2015	58%	34%	2014-2015	59%	23%	
March 2016	34%	22%	2015-2016	28%	5%	
March 2017	68%	41%	2016-2017	56%	30%	
March 2018	70%	43%	2017-2018	74%	45%	
March 2019	63%	37%	2018-2019	64%	35%	

Table 3

The following chart represents Inside FERC Ventura monthly settled prices for April 2018 through March 2019. Summer pricing settled at an average price of \$2.58 and winter at an average price of \$3.87.



Contract storage allowed for the purchase of gas during summer months when prices are typically lower, and withdrawal for system use during winter months resulting in a natural price hedge. Storage also provided daily operational benefits for which it was purchased. Storage volumes represented 24.5% of the winter system supplies. Physical base load gas purchases containing price protections were made over several months during the summer using multiple RFP's. CenterPoint Energy purchased 24.5 Bcf of total hedged supply and, when combined with 25.7 Bcf of storage volumes, provide stabilized prices for 47.8% of winter gas supplies.

In addition to providing price stability, the price hedges also provided catastrophic price protection against price fly-ups during unforeseen events such as upstream pipeline ruptures and prolonged extremely cold weather.

As shown in Table 4 below, market prices for winter gas (futures winter strip) during 2018 stayed around \$3.00 until October when it increased to over \$3.25 for the last month.

<u>Table 4</u>
NYMEX Winter 5 Month Strip 2018-2019



CenterPoint Energy diversified its hedge portfolio purchases by spreading purchases across summer months, starting in June, and following SENDOUT® model guidance, split hedge gas purchases between collars and call options similar to Plan levels. This approach resulted in transactions that provided a balance between price stability and reasonable price and these transactions stabilized the gas supply price volatility. Hedging will not remove all exposure to gas price volatility but will trim some of the extreme pricing while allowing volatility within the boundaries.

CenterPoint Energy has analyzed the impact that would have occurred from hedging in two scenarios using different products. Those scenarios include (a) purchasing only Call options and (b) purchasing only Costless Collars. The results given actual prices that occurred last winter for those two products were compared to the results had no hedge products been purchased and to the actual results of CenterPoint Energy's portfolio. Table 5 below shows the results of those comparisons.

Table 5

2018-2019 Winter Season (In Millions)						
Market Price vs Various Hedge Strategies						
Hedge Type Total Cost \$ Over/(Under) Market % Over/(Under)						
Market (no hedges)	\$94.8					
CERC Hedges Value	\$84.7	-\$10.16	-11%			
100% Calls	\$86.5	-\$8.33	-9%			
100% Collars	\$77.5	-\$17.33	-18%			

The results indicate that CenterPoint Energy's hedge strategy resulted in costs that were 11% lower than had it purchased all gas at market priced gas. While the portfolio used by CenterPoint Energy did not result in the lowest price approach, it represents the following:

- 1. A balanced approach to upside price protection and volatility; and
- 2. Captured a storage spread between summer and winter savings of \$33.5 million to CenterPoint Energy's customer costs during the winter period.

The \$10.16 million of savings with hedges and the \$33.5 million saving on storage spreads nets to a savings of \$43.7 million.

Throughout the 2018-2019 Plan year, CenterPoint Energy's gas supply met the key supply considerations outlined in the Plan: a gas supply that is reliable, flexible, and reasonably priced. The stabilization through supply contracts with forward pricing, coupled with gas withdrawn from storage, allowed CenterPoint Energy to maintain a relatively low level of price volatility for the year.

4.2.3. Dispatching Policies

Natural gas supplies are scheduled to CenterPoint Energy's customers in the following general sequence:

- 1. Term & Monthly Base Load
- 2. NGPL, Northern, and Marketer Storage
- 3. Waterville Underground Storage
- 4. Term & Monthly Swing Purchases
- 5. Daily Spot Market Purchases
- 6. Liquefied Natural Gas (LNG)
- 7. Propane Air

This general sequence is used to minimize the cost of gas to our customers and meet contract terms; however, exceptions do occur. Generally, the costs of the supply sources listed above increase in the sequence shown (i.e., Term & Monthly Base Load gas is less expensive than swing supplies, etc.). Items 4 and Item 5 are interchangeable (i.e., Daily Spot Market supplies are purchased to meet daily requirements when priced advantageously to Swing supplies).

CenterPoint Energy applies qualifications and restrictions to our gas dispatching policy to supply lowest cost gas to the highest priority (firm) customers. These qualifications and restrictions are:

- 1. CenterPoint Energy's natural gas supply is delivered to all customers as governed by pipeline and distribution tariffs and the provisions of the contracts with our customers.
- 2. Company owned underground storage gas, LNG, and propane are generally used to serve firm customers only, and are occasionally used to manage minor daily balancing corrections and to support delivery system low pressure issues.
- 3. The utilization of gas from peak shaving sources is controlled to maintain storage inventories at a proper balance at all locations in order to meet peak intraday requirements throughout the heating season. Monthly storage inventories are managed so that they are available when needed to meet the coldest weather and for balancing, yet full cycling of storage inventory is maximized.

4.3. Actions taken to Minimize Gas Supply Costs

CenterPoint Energy works to minimize gas costs using three approaches: using market forces to its advantage, participating in Federal Energy Regulatory Commission (FERC) proceedings, and supporting conservation efforts through its Conservation Improvement Programs (CIP).

4.3.1. Market Forces

CenterPoint Energy utilizes the following market forces to attempt to minimize gas supply costs:

- CenterPoint Energy uses a competitive bid system to seek out low cost, reliable gas supplies from producers and other suppliers for periods of thirty days or more. Generally, CenterPoint Energy establishes a rank order for the bids received according to price and, provided delivery reliability and supply flexibility needs are met, selects the lowest cost supplies to match expected customer requirements.
- 2. CenterPoint Energy contracts for its hedged price supplies by purchasing a planned amount through multiple RFP's during the non-heating season to diversify the risk of buying at a market high point. The Company also incorporates the advice of an industry expert (a consulting service) to determine the appropriate timing of individual RFP's.
- 3. CenterPoint Energy monitors pricing from marketer contacts, electronic reports, Over-the-Counter markets, and the NYMEX quotes to ensure daily dispatch of reasonably priced gas supplies to meet demand in excess of monthly contracted volumes.
- 4. CenterPoint Energy maintains an ongoing relationship with varied suppliers who provide daily updates on market prices and has made use of the daily market to purchase gas to supplement peaking, fill storage, and/or meet interruptible needs. Many producers and marketers withhold gas from monthly commitments and offer the gas for sale at the highest offer on a daily basis. During times of decreased demand, this gas may be available at attractive prices.
- 5. The Company's use of the MIPC line allows CenterPoint Energy to access alternate supplies, including gas from Canadian suppliers.
- 6. CenterPoint Energy contracted for its long-range pipeline capacity and storage by exploring new pipeline additions, negotiating capacity agreements with its current suppliers, and evaluating storage opportunities.

4.3.2. FERC Interventions

CenterPoint Energy monitors and, where deemed necessary, participates in Federal Energy Regulatory Commission (FERC) proceedings related to interstate pipeline activities. CenterPoint Energy participates in FERC regulatory activities regarding general industry issues and specific pipeline proceedings through individual efforts and through participation in the American Gas Association's Federal Regulatory Committee; however, its primary focus is on the individual pipeline proceedings.

CenterPoint Energy is directly impacted by proceedings involving Northern Natural Gas Company (Northern), Natural Gas Pipeline Company of America (Natural), and Viking Gas Transmission Company (Viking). Approximately 80% of CenterPoint Energy's design-day load requirements are expected to be met through gas supplies transported on firm transportation capacity rights held on Northern's system. Northern's proceedings have the most potential to significantly impact CenterPoint Energy's gas supply costs and its ability to transport gas when needed. CenterPoint Energy utilizes its long-term storage and transport agreement on Natural's system to move up to approximately 331 MMcf per day of gas supply to its system. Viking provides CenterPoint Energy with firm peak-day transportation of approximately 76 MMcf which allows delivery of Canadian gas supplies to its system, primarily through deliveries to the Minnesota Intrastate Pipeline Company which redelivers the gas to CenterPoint Energy.

4.3.2.1. Key FERC Proceedings – July 1, 2018 to June 30, 2019

Northern, RP19-59

During October 2018 Northern filed a FERC Form No. 501-G, including its Statement Demonstrating Why No Rate Adjustment Is Warranted, which subsequently was changed to a section 5 rate investigation. CenterPoint Energy has intervened in this docket and is currently participating in the proceedings.

Natural, RP19-395

During December 2018 NGPL filed a FERC Form No. 501-G, including its Statement Demonstrating Why No Rate Adjustment Is Warranted. CenterPoint Energy has intervened in this docket and is currently monitoring the proceedings.

Northern, RP19-1353

During June 2019 Northern filed a section 4 filing to increase its jurisdictional rates for transportation and storage services and to implement system-wide reservation rates. CenterPoint Energy has intervened in this docket and is currently participating in the proceedings.

Viking, RP19-1340

During June 2019 Viking filed a section 4 filing to increase its jurisdictional rates. CenterPoint Energy has intervened in this docket and is currently participating in the proceedings.

Other Proceedings

CenterPoint Energy continues to monitor FERC proceedings on industry-wide issues, including several related to the recovery of income tax expense by interstate and intrastate pipelines. These proceedings include the policy for the recovery of income taxes by pipelines organized as Master Limited Partnerships (PL17-1) and the process to review the reasonableness of pipeline rates in light of the Tax Cuts and Jobs Act of 2017 (RP18-415 and RM 18-11).

4.3.3. Energy Conservation Actions

In January 2017, CenterPoint Energy began implementation of its 2017-2019 CIP Triennial Plan. The 2017-2019 CIP Triennial Plan was approved by the Minnesota Department of Commerce (DOC) on November 3, 2016 (Docket No. G008/CIP-16-119, et al.). The Plan includes higher energy savings goals and CIP budgets than previous years and expands and modifies the Company's CIP in many ways. The 2017-2019 Triennial Plan includes 23 approved customerfocused project offerings for CenterPoint Energy's residential and commercial/industrial market segments.

CenterPoint Energy's CIP operates on a calendar-year basis, and accordingly, two program years were represented during the period of July 1, 2018 through June 30, 2019. In 2018, CenterPoint Energy's CIP achieved just over 1.9 BCF of energy savings and had over 298,000 participants. Detailed information regarding expenditures, participation and energy savings by project was provided to the DOC and the Commission in the May 1, 2019 CIP Status Report filing (Docket No. G008/CIP-119.04). The Deputy Commissioner approved the report on August 7, 2019.

Since the end of the last period, the Company made several modifications to the 2017-2019 Triennial Plan's program offerings. In 2016, the Deputy Commissioner approved CenterPoint Energy's On-Bill Loan Repayment project as part of the Company's 2017-2019 Conservation Improvement Plan "with the understanding that [CenterPoint Energy] will file a formal modification so that the Department and interested parties can review how [CenterPoint Energy] addresses the outstanding program design questions and the program's participation goals." CenterPoint Energy complied with this requirement by filing a formal modification on July 3, 2018, which was approved by the Deputy Commissioner on October 10, 2018.

The On-Bill Loan Repayment project will provide a simple and convenient way for customers to pay for energy efficiency improvements to their property via their CenterPoint Energy gas bill. While the Company does not provide capital for the loans, CenterPoint Energy works with an implementation partner to process loan payments from customers to participating lenders. In its modification request the Company established criteria for customers, measures, trade allies, and lenders and loans. The Company also established program participation goals and evaluation metrics and requested budget modifications.

On December 20, 2018 the Deputy Commissioner approved CenterPoint Energy's October 19, 2018 request to modify its Non-Profit Affordable Housing Rebates project. In its October modification request, the Company proposed to modify the project's eligibility criteria to conform to reasonable definitions of "low-income" used by participating community organizations, to correct a budget error made in the earlier January modification request, and to provide rater incentives to RESNET® Home Energy Raters working with project participants.

On April 10, 2019, CenterPoint Energy filed a request to modify the baseline efficiency assumptions for its High-Efficiency Home and Non-Profit Affordable Housing Rebates projects. The Company requires Raters to evaluate energy savings through modeling of the participating home and comparison to a reference home design using RESNET approved software, REM/Rate or Ekotrope.³ The Company request asked that the reference home ventilation rate be improved by allowing a change to the assumed continuous ventilation rate to instead be the same rate as the proposed home design. The Deputy Commissioner approved CenterPoint Energy's request on July 2, 2019.

² The RESNET approved software Ekotrope was added as an acceptable software for evaluating new residential home, through informal notification of the Department on Nov. 11, 2018.

On May 1, 2019, CenterPoint Energy filed a request to modify the Low-Income Weatherization project to expand the available offerings. The request would allow for the installation of residential space heating/domestic hot water combination units ("combi units") in residential homes of low-income customers. This modification was awaiting approval on June 30, 2019, and the Deputy Commissioner approved CenterPoint Energy's request on July 2, 2019.

5. COMPLIANCE WITH AUTOMATIC ADJUSTMENT CHARGES

7825.2810 ANNUAL REPORTS; AUTOMATIC ADJUSTMENT CHARGES.

Subp. 1 Gas and electric utilities.

By September 1 of each year, gas and electric utilities shall submit to the commission an annual reporting by month of automatic adjustment charges for each customer class for the previous year commencing July 1 and ending June 30. This report must include:

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

See Exhibit 1.

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

See Exhibit 1.

- C. Billing adjustment amounts, by gas supplier, that were used to bill the utility during the reporting period;
- D. The total cost of fuel or gas delivered to customers including, for gas utilities, the cost of supply-related services;
- E. The revenues collected from customers for energy delivered;

See Exhibit 2, Parts A through C, for True-Up Schedules that contain information requested in parts C-E.

F. The amount of supplier refunds received as defined by part <u>7825.2700</u>; and

CenterPoint Energy received supplier refunds of \$236,243.76.

G. The amount of refunds credited to customers.

CenterPoint Energy will refund the money in the fourth quarter of 2019.

Subp. 2 Additional information from gas utilities.

In addition to the requirements in subpart 1, gas utilities are required to report:

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

Demand Smoothing - Docket G008/M-19-342

On June 21, 2019 the Company requested an extension to continue the adjustment. On August 8, 2019, the Company attended a meeting hosted by the Minnesota Public Utilities Commission. At this meeting, the Company was granted a three-year extension that includes the 25% cap. The Company is still waiting the official order as of September 3, 2019.

This year's results are analyzed in Exhibits 3 and 4. As shown in these Exhibits, the one-month lag method for the Company's demand costs would have been \$5,227,433 under-recovered. For 2018-2019, under the method used by the Company (with the one-month lag removed), the demand costs were under-recovered \$6,957,804. For the 2018-2019 Heating Season, the demand cost recovery method used by the Company improved the matching of demand costs to actual costs. As demonstrated in Exhibit 4's first summary box near the bottom, recovery without an adjustment would have resulted in an over-recovery of about \$11.8 million.

For more detailed information, see the Company's June 21, 2019 Petition of CenterPoint Energy for Approval of a Continued Variance from the Commission's Automatic Adjustment Rules Related to the Recovery of Demand Costs. Exhibit 3 of this AAA report details the impact of leaving the one-month lag which is a compliance item for the docket. Exhibit 4 of this AAA report demonstrates the impact of removing the one-month lag, which is the model currently used for the adjustment.

<u>Docket G-008/M-01-540</u> – A variance was granted to the Company in order to recover the costs associated with financial call options related to swing gas in place of reservation fees through the PGA in an order dated June 29, 2001. Exhibit 6 (Swing Gas: Swing Contracts with Reservation Fees) provides the required compliance information.

<u>Docket No. G-008/M-15-912</u> - The Company requested a four-year variance extension on October 12, 2015 to recover the costs of certain Natural Gas Financial Instruments through the PGA. The variance will allow CenterPoint Energy additional strategies in its procurement of reliable low-cost supplies for its customers. The variance was approved on February 5, 2016, with defined volume limits and reporting required. The information contained in Exhibit 7 provides a list of hedging instruments, the volumes contracted for, and the term dates. CenterPoint Energy details the results of its hedging for the past heating season in Section 4.2.1, and provides an overview of its plans for the upcoming winter season in Section 8 (Annual Five-Year Projection).

<u>Docket No. G-999/AA-17-493 and G-008/AA-17-668</u> – The Commission ordered the following in its February 27, 2019 Order regarding curtailments/use of unauthorized gas:

- 3. For the next three AAA reports (2017 2018), (2018 2019), and (2019 2020), all Minnesota regulated natural gas utilities shall provide the following information on unauthorized gas use for each customer that did not comply with a called interruption during the heating season:
 - A. The volume of gas consumed by the non-compliant customer during the curtailment period.

The Company had 658,815 Dekatherms of unauthorized gas used in the 2018 – 2019 gas year. See Exhibit 12.

B. The specific commodity rate charged for the unauthorized gas used and how that rate is determined.

The specific commodity rate charged for the unauthorized gas use was \$8.9244/Dekatherm. See Exhibit 12.

C. The financial penalty, if any, assessed by the company to the customer, including calculations in determining the penalty or penalties.

The Financial penalty assessed by the Company to the customers who used unauthorized gas was \$1,246,767.91. This amount has been credited to firm ratepayers in the true-up. See Exhibit 12.

D. A discussion about utility communication with each customer regarding noncompliance with interruptions (excluding invoices).

To follow-up with customers who used unauthorized gas in December 2018 and January 2019, Company representatives contacted each customer to discuss the incidents and emphasize the importance of complying with curtailment orders. Company representatives worked with these customers to ensure they had plans that would allow them to reliably curtail their usage in the future.

Equipment failure was the most frequently cited reason for customers' inability to discontinue gas use. In those cases, customers made repair calls and maintenance requests to rectify the situations. In about five percent of the follow up contacts, the Company learned that it had incorrect customer contact information, and those records were corrected. About a fourth of those who used unauthorized gas had staffing issues where staff either did not know they had to curtail or staff was not trained in using the backup system. Follow-up included emphasizing the one-hour response window, customers tracing equipment, and changing rate classes. The Company learned that about 11% of those contacted no longer had working backup systems and were unable to curtail. In those cases, follow-up is required to see how CNP may be able to meet the customers' changed service needs.

In early September 2019, the Company will be sending its annual Curtailment Contact Information update form to all interruptible

customers, where it asks customers to update their curtailment contact information and emphasizes the importance of interruptible customers being able to curtail their gas usage when called upon. In addition, the Energy Sales Department will be conducting seasonal energy management seminars to provide further education on customers' dual fuel service obligations.

CenterPoint Energy believes that in general it has very good compliance with curtailment requests, and its penalty structure and systems allow it to control its system flow on peaks to operate in a safe and reliable manner. The amount of unauthorized gas use in 2018-2019 did not compromise service to any of the Company's firm service customers.

In Docket No. E,G-999/CI-19-160, on August 19, 2019 CenterPoint Energy filed in its reply comments a request to increase the penalty for unauthorized gas use to encourage our customers to meet curtailment requirements. ⁴

The Company notes that the three-year requirement to provide detailed curtailment information ended with the 2016-2017 AAA Report, but since that gas year has not been completely reviewed at this time, the Company has provided the information in this report. CenterPoint Energy believes that in general its customers are compliant with curtailment requests, and its penalty structure and systems allow it to control its system flow on peaks to operate in a safe and reliable manner.

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

On November 1, 2018 CenterPoint Energy filed a request for change in demand entitlement (see Docket G-008/M-18-462). This docket remains open.

On May 1, 2019 CenterPoint Energy filed a request for change in demand entitlement (see Docket G-008/M-19-278). This docket remains open.

The Demand Entitlement filing for the 2018-2019 Heating Season (G-008/M-18-462) had an incorrect estimate of Viking Entitlement cost (20,000 units for five months instead of twelve.) The 2018-2019 Demand Entitlement remains under review with the Department of Commerce, Division of Energy Resources at this time. On July 1, 2019 the Company filed a correction in that docket to complete that record.

As referenced in CenterPoint Energy's 2017 – 2018 AAA reply comments dated May 10, 2019. CenterPoint Energy has reflected in actual incurred Demand costs \$874,120 (20,000 units x \$4.3706/unit x 10 months) from July 2018 – April 2019. For the ten months July 2018 - April 2019, billed Demand Rates only reflected \$437,060 in the annual cost estimate (20,000 units x \$4.3706/unit x 5 months). The net difference of \$437,060 unrecovered demand costs (\$874,120 minus \$437,060) will be included in the year-end

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⁴ Docket No. E,G-999/CI-19-160 addresses the Commission Inquiry into the Impact of Severe Weather in January and February 2019.

under collection of demand. The Company estimates the customer bill impact, on an average customer bill to be \$0.35 had the recovery rate reflected the full Viking Contract cost.

<u>Table 6</u> <u>Demand Units 2018-2019 Heating Season</u>

Northern Natural Gas Pipeline	
Transportation (TFX)	
Winter	1,179,602
Summer	677,762
Viking Pipeline	76,809
FT – A 12	
Trailblazer	100,000

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

For the twelve months ended June 30, 2019, the customer owned gas volumes transported through CenterPoint Energy's distribution system were 59,315,897 dekatherms.

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

Results of the Reconciliation

For the twelve months ended June 30, 2019, the Company's purchased gas costs were under recovered by \$8,613,195. The under-recovery represents 1.5% of the total purchased gas costs of \$588,145,332. Listed below is a summary of the under/over collection of purchased gas costs by major component. Further detail is provided in the Company's True-Up filing made on the same date as the present report.

Table 7

CenterPoint Energy summarizes the annual Over/(Under) below:							
	<u>Demand</u>	Commodity	Total				
Over (Under) Current Period	(\$3,937,032)	(\$4,676,163)	(\$8,613,195) (1.5%)				
Prior Year – GCR Balance			\$2,601,788				
Curtailment			\$972,724				
Balancing			\$714,054				
Off System Sales Credits			\$360,133				

Losses collected for	\$24,033
Damages	
6/30/2019 Total Balance	(\$3,940,463)

Commodity Gas Costs

Commodity gas costs (before credits) were under collected by \$4,676,163 out of the total commodity costs of \$493,065,033. Commodity-cost recovery rates are based on estimated monthly purchases prior to the start of the month, based on the assumption of "normal" weather. To the extent estimated purchases vary from actual purchases, an over or under recovery will occur. Detailed discussion can be found in Section 4.2.2. above.

Demand Costs (including Propane Costs)

Demand Costs were under collected by \$3,937,032. Weather was approximately 10.8% colder than normal. Due to demand rate being an annualized value, changes that occurred in demand costs during the True-up year resulted in timing differences between costs incurred and recovered.

This year, adjustments to demand from the "demand smoothing" factor brought the demand cost recovery much closer to the demand costs incurred, reducing recovery in the recovery period to avoid carrying over a much larger overrecovery due to weather (see explanation Section 5. Compliance with Automatic Adjustment Reports, Subp. 2, Subsection A.).

Propane Costs

Propane costs of \$1,234,131 were included in the above demand cost analysis. Propane recovery rates have been included in the monthly demand recovery rate calculations since the June 1995 PGA.

6. ADDITIONAL INFORMATION REQUIRED BY THE COMMISSION

The following information is provided in accordance with existing Commission Orders in various dockets.

6.1. DDVC Penalties / Capacity Release Credits

CenterPoint Energy provides this information in Exhibit 5.

6.2. Financial Call Options

In Docket No. G-008/M-01-540, the Commission approved a variance to PGA rules, which allowed the Company to recover the costs associated with financial call options (limited to call options related to swing gas) through the PGA. Exhibit 6 provides the information required by the order in this filing.

6.3. Variance Request to Recover the Costs of Certain Natural Gas Financial Instruments Through the PGA

In Docket Nos.G-008/M-04-368, G-008/M-08-777, G-008/M-12-166; and G-008/M-15-912, the Company requested permission to recover the costs of certain natural gas financial instruments through the PGA. The Company requested an extension of its original variance request to recover the costs of certain natural gas financial instruments thru the PGA on October 12, 2015. On February 5, 2016 the Company was granted a four-year extension to apply the variance to all

Commission-approved financial positions that the Company enters into through June 30, 2020. CenterPoint Energy used fixed priced physical gas supplies in place of an index-based purchase combined with a financial swap instrument in order to assure its gas purchasing process remains competitive (through a bidding process) and transparent to reviews and audits for most of its stabilization efforts. These physical transactions have the same end result and competitive price as combining index-priced gas and a financial swap instrument. See Exhibit 7 for a list summarizing the hedges for the heating season and Exhibit 8 for estimated impacts on customer bills as a result of the Company including hedging products in its supply portfolio during this true-up period.

6.4. Docket No. G-999/AA-08-1206 – Hedging Program Information and Orders in AAA dockets (G-999/AA-14-580 and previous year's orders)

G-999/AA-14-580, dated August 24, 2015 - The Commission requires each utility that engages in physical and financial hedging practices in the procurement of gas supplies to continue to provide in subsequent annual automatic adjustment filings a post-mortem analysis, in a format similar to what was provided in this docket.

The Commission directed CenterPoint Energy, Xcel, and MERC-PNG and MERC-NMU to provide the Office of Energy Security (i.e., Department of Commerce) with information about their hedging programs, beginning in fiscal-year 2010 and each year since:

- A clearly defined and quantified description of the risk (i.e., catastrophic or other type of
 event) the companies are insuring against by implementing the hedging strategies. The
 Company shall include a clearly defined and quantified estimate of the probability of these
 events occurring.
- A quantitative analysis of the value of reducing price volatility and managing price risk (the cost and benefit of these programs to all customers and the companies).
- A comparison of what actual low, average, and high usage customer bills (on a monthly basis) would have been with and without the use of the hedging strategies as implemented during the relevant time period.
- A comparison of what these customer bills would have been under budget billing, assuming normal gas usage for low, average, and high usage customers, and assuming catastrophically high prices.
- A quantitative definition of "catastrophically high prices" (in absolute and relative terms), and a bill analysis that shows how these prices would impact low, average and high usage customer bills.

CenterPoint Energy reviewed the impact on its Purchased Gas costs of its stabilization efforts using call options and costless collars to minimize price volatility. The results of that analysis for actual gas costs are shown below:

Table 8
CenterPoint Energy PGA Price Impact of Hedging
(Prices per Dekatherm)

Year	Month	Commodity Price ⁵	Est. PGA w/o Hedges	Difference
		(1)	(2)	(2) - (1) = (3)
2018	November	\$3.4676	\$3.4618	\$(0.0058)
	December	\$4.495	\$4.7704	\$0.2754
2019	January	\$4.0732	\$4.0801	\$0.0069
	February	\$3.5665	\$3.5665	\$0.00
	March	\$3.0557	\$3.0560	\$0.0003
Non-Weig	hted Average =			\$0.0554

Exhibit 8 shows the impact on annual customer bills.

CenterPoint Energy's hedging strategy for the 2018-2019 annual period was to hedge enough volumes to meet two objectives:

- 1. Provide price protection against catastrophic price increases. CenterPoint Energy defined a catastrophic event as prices reaching a level equal to the upper border of a 95% confidence interval around expected prices defined in its SENDOUT analysis in the spring of 2018, then re-determined the upper bound each time the Company executed another request for proposal (RFP) for hedged gas. This level was based on two standard deviations (using market indicated price volatility measures) around the expected average pricing for winter. This price level has a 2.5% probability of occurrence.
- Reduce the volatility of the gas prices paid by CenterPoint Energy's customers. CenterPoint Energy addressed this objective and the results of these efforts to reduce price volatility previously in this filing under the heading "Results of Price Stabilization Efforts" beginning on page 4.

CenterPoint Energy provides the requested comparisons in Exhibit 8: annual bills with hedges, annual bills estimated if the Company had not hedged any of its supply purchases (purchasing gas at FOM instead, and gas prices rising to its estimated "catastrophically high" price during the winter season, with and without the hedges it contracted.

6.5. Main Strikes and Meter Testing

As Ordered in Docket No. G999/AA-10-885 on October 11, 2012, the Company provides the following information:

6.5.1. Order point 5 – Contractor Main Strikes

All gas utility companies shall file, as part of their annual AAA reports, a schedule reflecting the contractor main strikes⁶. Exhibit 9 summarizes the activity required.

⁵ As filed in the Company's Monthly PGA, Schedule C commodity price.

⁶ Ordering Point 5. G-999/AA-10-885, October 11, 2012: All gas utility companies shall file, as part of their annual AAA reports, a schedule reflecting the contractor main strikes during the corresponding annual period billings to at-fault contractors. The Commission will require that the schedules reflect the date, party involved, repair cost amount, and gas lost amount for each incident.

6.5.2. Order point 7 – Meter Testing

All gas utility companies shall file any updates regarding meter testing within an annual period in their AAA reports. Test metering reports shall be incorporated into the AAA report starting in 2012.

CenterPoint Energy continued its meter testing and management program in 2018. Meter samples and tests are conducted over a two-year period and the results of current interval 2017-2018 have been reviewed. All meter lots evaluated passed the accuracy expectations.

During 2018 the Company exchanged 4,265 'failed' meters, and year to date through July 2019, 808 meters have been exchanged. Per the meter management program, the work plan for 2019 is set to target an additional 1,170 meters to be exchanged as previously identified meter groups required attention. This work is ahead of the overall replacement plan.

7. ANNUAL AUDITOR'S REPORT

7825,2820 ANNUAL AUDITOR'S REPORT.

By September 1 of each year, all gas and electric utilities shall submit to the commission an independent auditor's report evaluating accounting for automatic adjustments for the prior year commencing July 1 and ending June 30 or any other year if requested by the utility and approved by the Commission. The Commission shall approve the request unless it finds that to do so would seriously affect the administration of the automatic adjustment reporting program.

The Company has attached the Auditor's Report in Exhibit 10.

8. ANNUAL FIVE-YEAR PROJECTION

7825.2830 ANNUAL FIVE-YEAR PROJECTION.

By September 1 of each year, each gas utility shall submit to the commission a brief statement of its opinion on the impact of market forces on gas costs for the coming year.

8.1. Market Forces Impact on Pricing for the Coming Year

CenterPoint Energy included a detailed outlook in its 2019 Gas Supply Plan filed – Compliance filing to Financial Hedging Variance. The Plan contains a complete Natural Gas Market Outlook Report (Market Outlook) dated April 26, 2019, prepared by CenterPoint Energy's Strategic Planning Group. The Report is based on review of several industry and government sources and represents CenterPoint Energy's view of near and long-term supply, demand, and pricing of natural gas. Please see attached Natural Gas Market Outlook Report. (Exhibit 11)

8.2. CenterPoint Energy's Portfolio planning for 2018-2019 Period

CenterPoint Energy filed its detailed Gas Supply Plan for the 2018-2019 Heating Season on August 3, 2018 in Docket No. G-008/M-15-912 as a compliance filing. The Company included *SENDOUT*® information on this same date, as required in the previous financial instruments docket (Order issued in Docket No. G-008/M-12-166). The Company summarizes the plan below.

The goal of price stability remains a key objective of the 2019-2020 Winter Plan. CenterPoint Energy is again focused this year on maximizing protection from costs rising above reasonable levels, while minimizing the cost of that protection. This year's Plan shows hedging of purchased gas of 23.0 Bcf. The maximum volumes available to CenterPoint Energy for stabilization are 52.0 Bcf, including 29.0 Bcf of storage gas and the 23.0 Bcf of hedged gas purchases. To validate the assumption that hedging at this level would not provide unreasonable costs and to determine the product mix for these volumes, CenterPoint Energy used its *SENDOUT®* optimization software to generate simulated portfolio results under 1,500 different price scenarios. The cost results

under these scenarios were used to support the decision on hedge level.

CenterPoint Energy also uses the SENDOUT® Model to assess the mix of products used in its hedge portfolio, as well as the level of volumes to hedge. CenterPoint's results indicated an optimal plan should approximate the following product mix:

•	Call Option	4.8 Bcf
•	Collar Option	18.2 Bcf
•	Fixed Price/Storage Option	26.8 Bcf

For purposes of meeting the above mix, CenterPoint Energy considers storage gas as fixed price because the final average cost is fixed through the winter period; therefore, Fixed Price Option is made up entirely of storage gas withdrawals planned for winter. The table below shows a comparison of this year's Plan to last years.

<u>Table 9</u>
Winter 2019-2020 vs Winter 2018-2019

	2019-2020 Winter Plan		2018-2019 Winter Plan		
Purchases	DTH	Percent	DTH	Percent	% Change
Baseload - Hedged	23,000,000	23.0%	23,000,000	24.0%	-1.0%
Baseload - Index Price	17,190,000	17.2%	12,970,000	13.5%	3.7%
Daily/Swing Supply	32,888,033	32.8%	33,230,463	34.6%	-1.8%
Storage Supply	26,832,310	26.8%	26,800,682	27.9%	-1.1%
Peaking Supply (LNG/Propane)	226,097	0.2%	23,780	0.0%	0.2%
Total System Purchases	100,136,440	100.0%	96,024,925	100.0%	
Transports (3rd Party)	18,120,000	15.3%	18,120,000	15.9%	
Total System Supply	118,256,440	· •	114,144,925	- -	
	DTH	Percent	DTH	Percent	
Total Price Stablization	49,832,310	50%	49,800,682	52%	

8.3. Hedge Implementation

The plan for the portfolio of products for the 2019-2020 winter volumes is to purchase price hedges through numerous RFP's. Although a preliminary schedule for purchasing hedged gas is developed, the final timing and volume level for each bid is subject to change, which allows more flexibility to react to a changing marketplace. CenterPoint Energy anticipates re-evaluating its supply portfolio prior to the onset of winter, utilizing optimization software again, if winter price expectations change significantly. If the optimization modeling suggests a significantly different mix of products than we have outlined above, then we would consider adjusting our portfolio structure, such as increasing fixed price purchases if winter-month futures prices fall significantly. CenterPoint Energy re-runs its probability distribution for forward pricing just prior to each hedge RFP in order to price products at the appropriate level. For example, if an RFP is being sent out for a Call Option on winter gas, revised *SENDOUT®* results using current futures pricing and current market volatility would be used to set the strike price desired from the RFP bids.

9. ANNUAL NOTICE OF REPORTS

7825.2840 ANNUAL NOTICE OF REPORTS AVAILABILITY.

By September 1 of each year, all gas and electric utilities shall provide notice of the availability of the reports defined in parts 7825.2800 to 7825.2830 to all intervenors in the previous two general rate cases.

The notice detailed below was sent to parties on the attached service list requesting paper service. Those requesting electronic service will, via Edockets, receive the entire filing.

September 3, 2019

Re: CenterPoint Energy's Annual Notice of Report Availability

PLEASE TAKE NOTICE that on September 3, 2019, CenterPoint Energy filed its Annual Automatic Adjustment Report with the Minnesota Public Utilities Commission. A summary of the filing is included. True and correct copies will be on file at the Commission offices (Metro Square, Suite 350, 121 7th Place East, St. Paul, Minnesota, 55101-2147) during regular business hours, via Edockets or from CenterPoint Energy by contacting Donald Wynia.

This Notice is required per Minnesota Rule part 7825.2840.

If you have any questions, please contact Donald Wynia at (612) 321-4677 or Donald.Wynia@CenterPointEnergy.com.

CenterPoint Energy contact information:

Mail:

Donald Wynia CenterPoint Energy 505 Nicollet Mall PO Box 59038 Minneapolis, MN 55459-0038

Email: Donald.Wynia@CenterPointEnergy.com

Phone: 612-321-4677

STATE OF MINNESOTA BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Katie Sieben Chair
Dan Lipschultz Vice-Chair
Valerie Means Commissioner
Matthew Schuerger Commissioner
John Tuma Commissioner

Annual Automatic Adjustment
Report - CenterPoint Energy Minnesota Gas

Docket No. G999/AA-19-401 Summary Required in Minn. R. 7829.1300, subp. 1

The Annual Automatic Adjustment Report summarizes CenterPoint Energy's policies and procedures concerning its purchases of natural gas. This filing compares the cost of gas incurred and the cost of gas recovered in billing rates for the twelve-month period ended June 30, 2019.

AFFIDAVIT OF SERVICE DOCKET NO. G999/AA-19-401

STATE OF MINNESOTA)
) ss
COUNTY OF HENNEPIN)

Donald Wynia, being first duly sworn on oath, deposes and says he served or caused to be served on behalf of CenterPoint Energy:

• A non-public and a public version of its Annual Automatic Adjustment Report on the Minnesota Public Utilities Commission via electronic filing;

• A non-public and a public version on the Department of Commerce via efiling;

A non-public and a public version on the on the Minnesota Office of the Attorney General;

• Electronic filing of its Annual Automatic Adjustment Report on persons requesting electronic service on the enclosed service list,

And a notification only of its Annual Automatic Adjustment Report as described in Minn. Rules
pt. 7825.2840 on persons requesting paper service on the enclosed service list, by delivering by
hand at the respective addresses on the list or by placing in the U.S. Mail at the City of
Minneapolis.

/s/
Donald Wynia
Regulatory Analyst, Regulatory Services
CenterPoint Energy

Subscribed and sworn to before me this 30^{th} day of July, 2018.

/s/

Kristen S Ruud, Notary Public My Commission Expires 1/31/2020

0.43877 0.40410 (0.07233) (0.06917) (0.04239)	0.43877 0.40410 (0.07233)	0.35893 0.32426 (0.06199) (0.05883) (0.05228)	0.56090 0.56090 0.00600 0.00600	0.35893	0.35893 0.32426 (0.08408) (0.08092)
(0.07233) (0.06917)	(0.07233) (0.06917)	0.32426 (0.06199) (0.05883)	0.56090 0.00600 0.00600	0.32426 (0.07301) (0.06985)	(0.08408)
(0.07233) (0.06917)	(0.07233) (0.06917)	0.32426 (0.06199) (0.05883)	0.56090 0.00600 0.00600	0.32426 (0.07301) (0.06985)	(0.08408) (0.08092)
(0.07233) (0.06917)	(0.07233) (0.06917)	(0.06199) (0.05883)	0.00600	(0.07301) (0.06985)	(0.08408
(0.06917)	(0.06917)	(0.05883)	0.00600	(0.06985)	(0.08092
(0.06917)	(0.06917)	(0.05883)	0.00600	(0.06985)	(0.08092)
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(0.04239)	(0.04239)	(0.05228)	0.00600	(0.05710)	(0 0E 40E
				(0.037 10)	(0.05495
(0.01714)	(0.01714)	(0.04313)	0.00600	(0.04795)	(0.04580
0.04214	0.04214	0.04773	0.04435	0.06009	0.04506
0.14529	0.14529	0.15088	0.04435	0.16324	0.14821
0.10350	0.10350	0.10909	0.04435	0.12145	0.10642
0.05211	0.05211	0.05770	0.04435	0.07005	0.05503
0.01217	0.01217	0.00638	0.04435	0.01874	0.00371
(0.01286)	(0.01286)	(0.03480)	0.04435	(0.03962)	(0.03747
(0.03820)	(0.03820)	(0.07716)	0.05315	(0.08198)	(0.07983
	(0.04439)	(0.06154)	0.05315	(0.06636)	(0.06421
,	, ,	(0.03820) (0.03820)	(0.03820) (0.03820) (0.07716)	(0.03820) (0.03820) (0.07716) 0.05315	(0.03820) (0.03820) (0.07716) 0.05315 (0.08198)

Annual Purchased Gas True-Up (GCR)

Effective: 09/01/2019

Current GCR (2018-2019) Difference

\$0.03620	\$0.03620	\$0.03620	\$0.02643
(0.03486)	(0.03486)	(0.03486)	(0.02892)

\$0.00134

\$0.00134

\$0.00134

0.00056	0.00644

0.02161	0.02376
(0.02105)	(0.01733)

Summary of Gas Costs Incurred and Gas Costs Recovered

WITHOUT UNBILLED

Gas Costs Incurred														
	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	
Line No.														
1 Commodity	\$9,882,642	\$9,020,798	\$10,324,630	\$30,249,609	\$67,331,912	\$81,032,374	\$99,084,808	\$73,545,389	\$66,471,812	\$25,795,839	\$13,673,843	\$6,651,378	\$493,065,033	
2 Demand	\$2,221,454	\$2,229,438	\$2,225,828	\$2,117,682	\$14,075,835	\$16,582,558	\$16,723,378	\$16,810,158	\$14,771,146	\$2,578,654	\$1,141,560	\$2,368,477	\$93,846,169	
3 Propane _	\$8,040	\$3,237	(\$15,403)	(\$2,382)	\$6,605	\$25,198	\$1,015,536	\$44,567	\$24,258	\$48,826	\$55,159	\$20,490	\$1,234,131	
4 Total	\$12,112,136	\$11,253,472	\$12,535,055	\$32,364,910	\$81,414,352	\$97,640,129	\$116,823,721	\$90,400,114	\$81,267,216	\$28,423,319	\$14,870,562	\$9,040,345	\$588,145,332	
Gas Costs Recovered in	Billing Rates													
	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	Difference
Line No.														
5 Commodity	\$9,681,073	\$8,562,493	\$7,992,783	\$17,167,386	\$38,216,928	\$69,838,902	\$94,455,195	\$94,347,285	\$76,377,302	\$39,613,655	\$21,997,921	\$10,137,948	\$488,388,870	(\$4,676,163
6 Demand	\$1,787,993	\$1,961,967	\$1,622,692	\$4,138,887	\$8,450,964	\$10,256,219	\$12,738,680	\$14,271,170	\$14,370,015	\$9,863,631	\$7,736,068	\$3,944,981	\$91,143,267	(\$2,702,901
7 Propane	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$1,234,131)
8 Total	\$11,469,066	\$10,524,460	\$9,615,475	\$21,306,273	\$46,667,892	\$80,095,121	\$107,193,874	\$108,618,455	\$90,747,317	\$49,477,286	\$29,733,989	\$14,082,929	\$579,532,137	(\$8,613,195)
Over/(Under)														
9 Recovery	(\$643,070)	(\$729,013)	(\$2,919,580)	(\$11,058,637)	(\$34,746,460)	(\$17,545,008)	(\$9,629,847)	\$18,218,341	\$9,480,101	\$21,053,967	\$14,863,427	\$5,042,584	(\$8,613,195)	-1.5%
Differences:														
10 Commodity	(\$201,569)	(\$458,305)	(\$2,331,847)	(\$13,082,223)	(\$29,114,984)	(\$11,193,472)	(\$4,629,613)	\$20,801,896	\$9,905,490	\$13,817,816	\$8,324,078	\$3,486,570	(\$4,676,163)	-0.9%
11 Demand/Propane	(\$441,501)	(\$270,708)	(\$587,733)	\$2,023,586	(\$5,631,476)	(\$6,351,537)	(\$5,000,234)	(\$2,583,555)	(\$425,388)	\$7,236,150	\$6,539,349	\$1,556,014	(\$3,937,032)	-4.19
											Annual Credits		\$2,070,945	
											Prior Period Balar NET True-Up	nce _	\$1,151,969 (\$5,390,281)	-0.9%

Distribution of Over/Under Recovery by class

		Total			
Line		Cost	Cost	Over/Under	
No.	Cost by Class	Recovered	Incurred	Recovery	
		(pages 5 and 6)	(page 3)	(to page 11)	
	Desidential				
	Residential	6070 040 044	0075 000 440	(#O OO4 OOO)	4.40/
1	Commodity Costs	\$273,043,311	\$275,968,118	(\$2,924,808)	-1.1%
2	Demand Costs	\$57,484,637	\$59,166,021	(\$1,681,384)	-2.8%
3	Propane Costs Total Over/(Under)	\$0 \$330,527,948	\$778,068 \$335,912,207	(\$778,068) (\$5,384,260)	-100.0% -1.6%
4	Total Over/(Orider)	φ330,32 <i>1</i> ,946	φ333,912,201	(\$5,364,260)	-1.0%
	Com-A and Com/Ind-B				
5	Commodity Costs	\$31,173,306	\$31,456,326	(\$283,020)	-0.9%
6	Demand Costs	\$6,349,095	\$6,651,672	(\$302,577)	-4.5%
7	Propane Costs	\$0	\$87,473	(\$87,473)	-100.0%
8	Total Over/(Under)	\$37,522,401	\$38,195,471	(\$673,070)	-1.8%
	•				
	Com/Ind C				
9	Commodity Costs	\$126,363,507	\$127,069,245	(\$705,738)	-0.6%
10	Demand Costs	\$26,944,411	\$27,598,248	(\$653,838)	-2.4%
11	Propane Costs	\$0	\$362,933	(\$362,933)	-100.0%
12	Total Over/(Under)	\$153,307,918	\$155,030,427	(\$1,722,509)	-1.1%
ı	Large General Service				
13	Commodity Costs	\$2,977,843	\$2,971,837	\$6,006	0.2%
14	Demand Costs	\$365,124	\$430,228	(\$65,103)	-15.1%
15	Propane Costs	\$005,124	\$5,655	(\$5,655)	-100.0%
16	Total Over/(Under)	\$3,342,967	\$3,407,720	(\$64,752)	-1.9%
10	Total Ovol/(Gridor)	φο,ο 12,οο1	ψο, τοτ ,τ 2ο	(ψο 1,1 σ2)	1.070
;	Small Volume Dual Fuel				
17	Commodity Costs	\$29,957,139	\$30,143,246	(\$186,107)	-0.6%
18	Demand Costs	\$0	\$0	\$0	#DIV/0!
19	Propane Costs	\$0	\$0	\$0	#DIV/0!
20	Total Over/(Under)	\$29,957,139	\$30,143,246	(\$186,107)	-0.6%
	Large Volume Dual Fuel	#04.070.704	#05 450 004	(#500.407)	0.00/
21	Commodity Costs	\$24,873,764	\$25,456,261	(\$582,497)	-2.3%
22	Demand Costs	\$0	\$0 \$0	\$0	#DIV/0!
23	Propane Costs	\$0 \$0	\$0	\$0 (\$500,407)	#DIV/0!
24	Total Over/(Under)	\$24,873,764	\$25,456,261	(\$582,497)	-2.3%
	TOTAL				
25	Commodity Costs	\$488,388,870	\$493,065,033	(\$4,676,163)	-0.9%
26	Demand Costs	\$91,143,267	\$93,846,169	(\$2,702,901)	-2.9%
27	Propane Costs	\$0	\$1,234,131	(\$1,234,131)	-100.0%
28	Total Over/(Under)	\$579,532,137	\$588,145,332	(\$8,613,195)	-1.5%
		. , - ,	, -,	· ,,,	2,75

Note: Base propane rate is incorporated with the demand cost recovery rate.

Line Explanation:

Lines 1,5,9,13,17,21, 25 Lines 2,3,6,7,10,11,14,15,18,19, 22,23,26, and 27 Lines 4,8,12,16,20, 24 and 28 Commodity costs incurred and recovered from pages 4 & 5 Demand and propane costs recovered from page 6 Demand and propane costs incurred from page 3 Sum Total by class

Twelve-Month Gas Cost Reconciliation Factor (GCR)

Line			Com-A		Small	Large		Small	Large	
No.	· _	Residential Firm	Com/Ind-B Firm	Com/Ind-C Firm		General Service		Volume Dual Fuel	Volume Dual Fuel	Total
1 2 3	Commodity Demand	(\$2,924,808) (\$2,459,452)	(\$283,020) (\$390,050)	(\$705,738) (\$1,016,771)			(\$3,907,559) (\$3,937,032)	,	(\$582,497) \$0	(\$4,676,163) (\$3,937,032)
4	2017-2018 Over/(Under) TOTAL	(\$5,384,260)	(\$673,070)	(\$1,722,509)	(\$7,779,838)	(\$64,752)	(\$7,844,591)	(\$186,107)	(\$582,497)	(\$8,613,195)
5	Previous GCR (2017-2018)	\$3,500,090	(\$2,065,667)	\$2,908,555	\$4,342,978	\$66,973	\$4,409,951	\$75,650	\$136,222	\$4,621,823
6 7 8 9 10	Other Adjustments Curtailment Balancing Off System Sales Gas Loss Damage	\$612,185 \$398,043 \$200,753 \$13,397	\$68,787 \$44,725 \$22,557 \$1,505	\$284,829 \$185,196 \$93,404 \$6,233	\$965,801 \$627,965 \$316,714 \$21,135	\$6,924 \$4,502 \$2,270 \$152	\$972,724 \$632,467 \$318,985 \$21,287	\$0 \$43,269 \$21,823 \$1,456	\$0 \$38,319 \$19,326 \$1,290	\$972,724 \$714,054 \$360,133 \$24,033
11	2017-2018 Over/(Under)	(\$659,791)	(\$2,601,163)	\$1,755,708	(\$1,505,245)	\$16,068	(\$1,489,177)	(\$43,909)	(\$387,341)	(\$1,920,427)
12 13	Sales in Dekatherms Sales Service - Blizzard Forecast (9/19-8/20)	72,568,898	8,391,189	31,543,255	112,503,342	645,336	i	7,801,917	6,018,979	126,969,575
14	True-Up Factors (\$/DT)				0.0134	(\$0.0249)		\$0.0056	\$0.0644	

- NOTES:
 Commodity Cost Over/(Under) recovery (from page 7)
 Demand Cost Over/(Under) recovery (from page 7)
- 4 Current Year Gas Cost Balance (sum of lines 1 and 2)
- 5 Previous year GCR balance thru 8-2017 (July/Aug Estimated) from page 8

- 6 Other Adjustments
 7 Curtailment credits see page 12
 8 Balancing credits see page 12
 9 Off System Sales See allocation detail on page 13
- 10 Gas Loss Damage see Exhibit 9, CPE filing for Docket G-008/AA-17-493
- 11 Sum of Lines 4 10
- 12,13 Sales volume estimates Uses 2017 Rate Case Regression Models output Sept 2017 to August 2018
- 14 Line 11 divided by Line 13 change sign to indicate surcharge of under recovery or credit for over recovery

CenterPoint Energy

Gas Year 2018-2019

DEMAND COST ADJUSTMENT

Compliance Information: Docket Nos. G-008/M-00-980,G-008/M-03-782 and G-008/M-05-1196, G-008/M-07-1063, G008/M-10-857, G008/M-13-728

In this program, CenterPoint Energy proposed to reduce the over/under recovery of demand costs due to actual sales varying from normal sales (primarily due to weather) during the current gas year by making adjustments to the demand cost recovery rate during the months of October through May. In compliance with the Commission's Order, CenterPoint Energy is to provide in its AAA report a summary of what the total annual demand cost recovery for the company would have been, absent the Demand Adjustment, what the total amount of the Demand Adjustment collected was, and the total amount of demand costs that will be trued-up. The analysis below was developed by the DOC in Docket No. G-008/M-05-1196. In Docket No. G-008/M-07-1063, an additional adjustment designed to reflect changes in recovery of demand costs other than weather related adjustments was approved. This method was not used since 2013-2014, other model (Ex. 4) was authorized.

	(a)	(b)	(c)	(d) axc	(e) bxc	(f)	(g)	(h)	(i)	(j)
	Calendar Month	Calendar Month	Calendar Firm	Recovery	Recovery	Actual Monthly	Over(Under)	Over(Under)	Over(Under)	Over(Under)
	Demand Recovery	Demand Recovery	Sales	without	with	Demand Costs	without	with	without	with
	Rate without Adj.	Rate with Adj.	Therms	Adjustment	Adjustment	with propane	Adjustment	Adjustment	Adjustment	Adjustment
	2/	2a/	3/			4/			%	%
Jul. 2018	0.07996	0.07996	18,285,500	\$1,462,109	\$1,462,109	\$2,229,494	(\$767,385)	(\$767,385)	-34.4%	-34.4%
Aug.	0.07996	0.07996	22,785,960	\$1,821,965	\$1,821,965	\$2,232,675	(\$410,709)	(\$410,709)	-18.4%	-18.4%
Sep.	0.07996	0.07996	28,657,910	\$2,291,486	\$2,291,486	\$2,210,425	\$81,061	\$81,061	3.7%	3.7%
Oct.	0.07996	0.09830	81,260,200	\$6,497,566	\$7,988,148	\$2,115,301	\$4,382,265	\$5,872,848	207.2%	277.6%
Nov.	0.08597	0.09378	159,039,980	\$13,672,667	\$14,915,380	\$14,082,440	(\$409,773)	\$832,939	-2.9%	5.9%
Dec.	0.08597	0.06448	176,320,770	\$15,158,297	\$11,369,163	\$16,607,756	(\$1,449,459)	(\$5,238,592)	-8.7%	-31.5%
Jan. 2019	0.08597	0.06448	238,465,490	\$20,500,878	\$15,375,659	\$17,738,913	\$2,761,965	(\$2,363,255)	15.6%	-13.3%
Feb.	0.08597	0.06448	207,929,700	\$17,875,716	\$13,406,787	\$16,854,725	\$1,020,991	(\$3,447,938)	6.1%	-20.5%
Mar.	0.08597	0.06448	157,568,550	\$13,546,168	\$10,159,626	\$14,795,404	(\$1,249,235)	(\$4,635,777)	-8.4%	-31.3%
Apr.	0.08597	0.06448	74,735,640	\$6,425,023	\$4,818,767	\$2,627,480	\$3,797,543	\$2,191,287	144.5%	83.4%
May	0.08722	0.06542	61,564,640	\$5,369,668	\$4,027,251	\$1,196,719	\$4,172,949	\$2,830,532	348.7%	236.5%
Jun.	0.08722	0.08722	25,413,030	<u>\$2,216,524</u>	\$2,216,524	\$2,388,967	(\$172,443)	<u>(\$172,443)</u>	-7.2%	-7.2%
Total			1,252,027,370	\$106,838,068	\$89,852,866	\$95,080,299	\$11,757,769	(\$5,227,433) <u>1/</u>	12.4%	-5.5%
Wtd. Ave. Rate				\$0.08533	\$0.07177	\$0.07594				
Subtotal OctMay	,			\$99,045,983	\$82,060,781	\$86,018,738	\$13,027,244	(\$3,957,957)	15.1%	-4.6%
Subtotal JulSep.				\$7,792,085	\$7,792,085	\$9,061,561	(\$1,269,476)	(\$1,269,476)	-14.0%	-14.0%

Since the over-recovery without the Demand Adjustment is calculated by applying unadjusted calendar month rates to monthly sales volumes, the Under-recovery with the Demand Adjustment as shown here for comparative purposes is based on calendar month adjusted demand rates.(i.e., Col.(b)). This produces a different over/(under)-recovery, which reflects prorated monthly adjusted demand rates and cycle sales.

4/ See page 1 of CenterPoint Energy's true-up filing.

Summary: Estimated under recovery with the adjustment: (\$5,227,433)
Estimated OVER recovery without the adjustment: \$11,757,769

Note: The modelled demand costs adjustment provided a better match between demand costs incurred and demand costs recovered for this period

^{2/, 2}a/ From Schedule D of CenterPoint Energy's PGA filings. - adjusted all months, including Oct - Dec which did not have authority

^{3/} Calendar sales from Company reports

CenterPoint Energy

Gas Year 2018-2019

NO LAG / Estimate sales current month

Compliance Information: Docket No. G-008/M-07-1063, Docket No. G-008/M-10-857, and Docket No. G-008/M-13-728

On December 11, 2013, the PUC approved CenterPoint Energy's request to continue implementing the Demand Cost Adjustment. As part of its Order, the PUC required CNP to compare and adjustment with and without a one-month lag, and comparing calculations with and without a mid-year monthly demand adjustment and the effect on demand cost recovery.

The summary below is the analysis when the one-month lag is removed. THIS IS THE CURRENTLY APPROVED METHOD.

	(a)	(b)	(c)	(d) a x c	(e) b x c	(†)	(g)	(h)	(i)	(j)
	Calendar Month	Calendar Month	Calendar Firm	Recovery	Recovery	Actual Monthly	Over(Under)	Over(Under)	Over(Under)	Over(Under)
	Demand Recovery	Demand Recovery	Sales	without	with	Demand Costs	without	with	without	with
	Rate without Adj.	Rate with Adj.	Therms	Adjustment	Adjustment	with propane	Adjustment	Adjustment	Adjustment	Adjustment
	1/	2/	3/			4/			%	%
Jul.2018	0.07996	0.07996	18,285,500	\$1,462,109	\$1,462,109	\$2,229,494	(\$767,385)	(\$767,385)	-34.4%	-34.4%
Aug.	0.07996	0.07996	22,785,960	\$1,821,965	\$1,821,965	\$2,232,675	(\$410,709)	(\$410,709)	-18.4%	-18.4%
Sep.	0.07996	0.07996	28,657,910	\$2,291,486	\$2,291,486	\$2,210,425	\$81,061	\$81,061	3.7%	3.7%
Oct.	0.07996	0.09606	81,260,200	\$6,497,566	\$7,805,967	\$2,115,301	\$4,382,265	\$5,690,666	207.2%	269.0%
Nov.	0.08597	0.06448	159,039,980	\$13,672,667	\$10,254,500	\$14,082,440	(\$409,773)	(\$3,827,940)	-2.9%	-27.2%
Dec.	0.08597	0.06448	176,320,770	\$15,158,297	\$11,369,163	\$16,607,756	(\$1,449,459)	(\$5,238,592)	-8.7%	-31.5%
Jan.2019	0.08597	0.05012	238,465,490	\$20,500,878	\$11,951,890	\$17,738,913	\$2,761,965	(\$5,787,023)	15.6%	-32.6%
Feb.	0.08597	0.06448	207,929,700	\$17,875,716	\$13,406,787	\$16,854,725	\$1,020,991	(\$3,447,938)	6.1%	-20.5%
Mar.	0.08597	0.07586	157,568,550	\$13,546,168	\$11,953,695	\$14,795,404	(\$1,249,235)	(\$2,841,708)	-8.4%	-19.2%
Apr.	0.08597	0.09201	74,735,640	\$6,425,023	\$6,876,322	\$2,627,480	\$3,797,543	\$4,248,842	144.5%	161.7%
May	0.08722	0.10903	61,564,640	\$5,369,668	\$6,712,085	\$1,196,719	\$4,172,949	\$5,515,366	348.7%	460.9%
Jun.	0.08722	0.08722	25,413,030	\$2,216,524	\$2,216,524	<u>\$2,388,967</u>	(\$172,443)	(\$172,443)	-7.2%	-7.2%
Total			1,252,027,370	\$106,838,068	\$88,122,495	\$95,080,299	\$11,757,769	(\$6,957,804)	12.4%	-7.3%
Wtd. Ave. Rate	е			\$0.08533	\$0.07038	\$0.07594		,		
Subtotal OctM	Лаy			\$99,045,983	\$80,330,410	\$86,018,738	\$13,027,244	(\$5,688,328)	15.1%	-6.6%
Subtotal JulSe	ep. and June			\$7,792,085	\$7,792,085	\$9,061,561	(\$1,269,476)	(\$1,269,476)	-14.0%	-14.0%

1	/	From	Schedule D of	f CenterPoint	Energy's PGA	filinas - rate	without adjustment

^{2/} Recovery rate with adjustment

^{4/} See page 1 of CenterPoint Energy's true-up filing. (Demand + Propane)

Summary:	Estimated UNDER recovery with the adjustment:	(\$6,957,804)
	Estimated over recovery without the adjustment:	\$11,757,769
Note:	The demand cost adjustment was more successful in providing a m	atch between demand costs incurred and demand costs recovered this year
Summary:	Estimated under recovery without the one-month lag adjustment:	(\$6,957,804)
	Estimated under recovery with the one-month lag adjustment:	(\$5,227,433) See Exhibit 3

The No-lag method better matched the actual costs than the lagged calculation this heating season, since the absolute value of the difference is smaller for the method demonstrated in Exhibit 3.

^{3/} Calendar sales from Company reports.

CENTERPOINT ENERGY July 2017 - June 2018

Interstate Pipeline Penalties

	-	NNG/Viking	NNG	Viking
	Volume(DT)	Imbal Penalties	Credit	Credit
Jul-18	0	\$0		
Aug-18	0	\$0		
Sep-18	1,130	\$284		
Oct-18	24,912	\$6,251		
Nov-18	41,169	\$25,061		
Dec-18	4,207	\$2,565		
Jan-19	56,449	\$45,035		
Feb-19	14,945	\$9,110		
Mar-19	43,284	\$26,386		
Apr-19	113,950	\$28,714		
May-19	91,362	\$23,041		
Jun-19	8,180	\$2,019		
	399,588	\$168,467	\$0	\$0

^{*} Pursuant to NN's latest FERC approved rate case, NN will return DDVC charges collected from all companies once a year. This is CenterPoint Energy's share.

Capacity Release Credits

	<u>Credits</u>
Jul-18	\$49,688
Aug-18	\$49,688
Sep-18	\$49,688
Oct-18	\$49,688
Nov-18	\$40,508
Dec-18	\$0
Jan-19	\$0
Feb-19	\$0
Mar-19	\$0
Apr-19	\$0
May-19	\$0
Jun-19	\$55,366_
	\$294.626

The monthly capacity release revenues are credited to Demand costs for the calculation of the over/under recovery of gas costs. Capacity release credits are booked to FERC Account 805.

CENTERPOINT ENERGY COMPLIANCE REPORT - Docket No. G-008/M-01-540

In this Docket CenterPoint Energy was granted an open ended variance to recover the costs associated with financial call options related to swing contracts only, through the Purchased Gas Adjustment. CenterPoint Energy is required to report information concerning its swing contracts in its Automatic Adjustment Report. This Information is outlined below:

- a. Include information on call options and swing contracts with reservation fees utilized during the year and the price paid for natural gas through each of these types of contractural arrangements, and:
- b. Compare the cost of swing gas actually used with the cost for natural gas in the spot market for the day on which the swing gas was actually used.

Responses:

See the attached workpapers which detail the actual commodity cost of gas generated from swing contracts used this true-up period and a comparison of daily spot market costs based on the daily index at Demarcation. Listed below is a summary of the swing contracts used. CenterPoint Energy Minnesota Gas did not purchase financial call options.

CenterPoint Energy
Swing Contracts with Reservation Fee Information
July 2018 - June 2019

		Volumes	Annual Swing or	Index
Name	Term	(MMBtu / Day)	Reservation Fee ¹	Pricing
[Trade Secret Data Begins				

...Trade Secret Data Ends]

Notes:

1 - Total annual cost is allocated 75% Demand, 25% Commodity per Commission Order.

CENTERPOINT ENERGY COMPLIANCE REPORT - Docket No. G-008/M-15-912

In this Docket CenterPoint Energy was granted a four-year variance to recover the costs associtated with certain financial intruments through the Purchased Gas Adjustment.

CenterPoint Energy is required to report information concerning its contracts in its Automatic Adjustment Report. This Information is outlined below:

Responses:

Data on the specifics of any price hedging contracts, including a list of each hedging instrument entered into, the total Dkt contracted for, for each instrument and the net gain or loss, including all transaction costs.

CenterPoint Energy Minnesota Gas Hedged Gas Contracts July 2018 - June 2019

Purchase			
Date	Name	Term Dates	Volumes
	[Trade Secret Data Begins		
EMBEDDED F	INANCIAL OPTIONS - COSTLES	SS COLLAR	
Collars:			
6/16/2018	Shell	Nov-Mar	755,000
6/16/2018	Tenaska	Nov-Mar	2,718,000
6/16/2018	Twin Eagle	Nov-Mar	1,510,000
Call Options:			
7/25/2018	UET	Nov-Mar	5,058,500
8/8/2018	BP Canada	Nov-Mar	5,058,500
8/22/2018	Shell	Nov-Mar	1,510,000
8/22/2018	Twin Eagle	Nov-Mar	755,000
8/22/2018	BP Canada	Nov-Mar	4,952,800
8/22/2018	Macquarie	Dec-Feb	2,205,000
FIXED PRICE	GAS		
			0
PURCHASED	FINANCIAL OPTIONS - COSTLE	SS COLLAR	
			0
PURCHASED	FINANCIAL OPTIONS - CALL O	PTIONS	
			0
	Trade Secret Data Ends]		
		Total	24,522,800

Exhibit 8

CenterPoint Energy:

Estimated Annual Bill for 2018-2019: G-999/AA-18-374

- uses DOC AAA IR #1 format to calculate annual bill
- uses actual Use-Per Customer
- uses PGA rate estimates
- WIthout Hedging estimate replaces hedged purchases with First-of-Month pricing
- low bills assume use-per-customer at 80% of Average, High bills are 120% of Average

	PGA w/ Hedge				PGA Withou	t Hedges		Difference: Cost				% Premium		
	(assumes norma	al weather purcha	ises)	W/Hedge	(assumes normal weather purchases)									
	Low	Average	High	Average	Low	Average	High		Low	Average	High	Low	Average	High
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i=c-e)	(j=b-f)	(k=c-g)	(l=d-h)			
Residential	\$646.64	\$778.55	\$910.46	\$776.11	\$626.91	\$753.89	\$880.87	\$2.44	\$19.72	\$24.66	\$29.59	3.1%	3.2%	3.2%
C - A	\$657.62	\$775.05	\$892.48	\$775.30	\$640.68	\$753.87	\$867.06	(\$0.25)	\$16.95	\$21.18	\$25.42	2.6%	2.7%	2.8%
	*													
C/I - B	\$1,880.26	\$2,284.56	\$2,688.86	\$2,283.44	\$1,818.61	\$2,207.49	\$2,596.38	\$1.12	\$61.65	\$77.07	\$92.48	3.3%	3.4%	3.4%
C/I - C	\$9.125.32	\$11.262.97	\$13.400.62	\$11.243.18		\$10.851.35		\$19.80		\$411.62			3.7%	
Large General Service	,	\$109,470.58	\$127.665.31	\$108,790,44		ψ.ο,οοοο		ψ.σ.σσ		ψ····ο <u>-</u>			0 70	
Small Dual Fuel - A	\$19.637.58	\$24,379.37	\$29,121,17	\$23,749,99		\$23,528.44				\$850.94			3.5%	
Small Dual Fuel - B	\$64.025.19	\$79,763.92	\$95,502.66	\$77.909.93		\$76,658.69				\$3.105.23			3.9%	
Large Dual Fuel	\$127,105.05	\$156,175,71	\$185,246,38	\$156,726,30		\$151,132.02				\$5,043.69			3.2%	
. 3	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	,=	,,.		/				,				

CATASTROPHIC ESTIMATE:

- Assumes Market Commodity Price rises to \$5.98 all winter
- leaves Storage Gas cost unchanged.
- does not assume any change in actual average volume used

	PGA w/ Hedge				PGA Without Hedges				Difference: Cost			% Saving		
(a) Residential	Low (b) \$647.15	Average (c) \$779.18	High (d) \$911.22	(e)	Low (f) \$650.30	Average (g) \$783.13	High (h) \$915.96	(i=c-e)	Low (j=b-f) -\$3.16	Average (k=c-g) -\$3.95	High (l=d-h) -\$4.74	Low -0.5%	Average -0.5%	High -0.5%
C - A C/I - B	\$658.15 \$1,882.05	\$775.70 \$2,286.79	\$893.26 \$2,691.54		\$661.50 \$1,893.46	\$779.90 \$2,301.06	\$898.30 \$2,708.65		-\$3.36 -\$11.41	-\$4.20 -\$14.27	-\$5.04 -\$17.12	-0.5% -0.6%	-0.5% -0.6%	-0.6% -0.6%
C/I - C		\$11,274.02				\$11,342.06				-\$68.04			-0.6%	
Large General Service Small Dual Fuel - A Small Dual Fuel - B Large Dual Fuel		\$24,401.64 \$79,837.13 \$156,330.23				\$24,569.16 \$80,405.10 \$157,358.85				-\$167.52 -\$567.97 -\$1,028.62			-0.7% -0.7% -0.7%	

Month	Date of Invoice	Event Date	Claimant Full Name	Damage Address	Gas (MCF)	Gas Rate / (MCF)	Gas Cost	Total Invoice	Paid Sum
month	Buto di mirolo		TRADE SECRET DATA BEGINS	Juniago Address	Gub (illor)	ous ruis / (iiioi /	ous soot	rotal involoc	T did Sam
July-18	6/12/2018	5/16/2018			.386	2.41	\$ 0.93	\$ 1,743.02	\$ 1,743.02
July-18	5/30/2018	5/8/2018			2.323	2.41	\$ 5.60	\$ 1,964.02	\$ 1,964.02
July-18	5/31/2018	5/3/2018			0.430	2.41	\$ 1.04	\$ 1,315.47	\$ 1,315.47
July-18	6/1/2018	5/9/2018			0.839831549694202	2.41	\$ 2.02	\$ 704.05	\$ 704.05
July-18	6/1/2018	5/9/2018			40.911	2.41	\$ 98.60	\$ 2,444.63	\$ 2,444.63
July-18	6/20/2018	5/31/2018			2.369	2.4132	\$ 5.72	\$ 585.87	\$ 585.87
July-18	6/21/2018	5/9/2018			.441	2.41	\$ 1.06	\$ 2,355.27	\$ 2,355.27
July-18	6/11/2018	5/21/2018			1.033	2.4132	\$ 2.49	\$ 669.38	\$ 669.38
July-18	6/7/2018	5/15/2018			6.318	2.41	\$ 15.23	\$ 1,148.52	\$ 1,148.52
July-18	6/19/2018	5/30/2018			233.131	2.4132		\$ 9,921.02	\$ 9,921.02
July-18	7/2/2018	5/14/2018			59.2436196538532	2.4132		\$ 1,414.76	
July-18	7/9/2018	6/8/2018			1.077	2.57		\$ 1,423.31	
July-18	12/29/2015	9/23/2015			2.4	2.8		\$ 1,517.72	
July-18	8/16/2016	6/8/2016			6	2.01		\$ 1,574.53	
July-18	12/13/2016	10/13/2016			2.1	2.98		\$ 1,452.46	
July-18	12/14/2016	10/12/2016			4.9	2.98		\$ 802.00	
July-18 July-18	7/11/2017	6/1/2017 8/11/2017			10.202 40.3834564999505	2.85		\$ 1,671.60 \$ 3,393.82	
July-18 July-18	12/5/2017	8/11/2017			40.3834564999505	2.81		\$ 3,259.42	
July-18	12/3/2017	9/6/2017			8.146	2.82		\$ 1,155.92	
July-18	5/29/2018	5/9/2018			0.220	2.4132		\$ 326.46	
July-18	5/29/2018	5/10/2018			0.507	2.41		\$ 178.28	
July-18	6/5/2018	5/11/2018			6.401	2.41		\$ 16,615.09	
July-18	6/12/2018	5/24/2018			19.202	2.4132		\$ 547.24	
August-18	9/27/2017	8/31/2017			.176	2.81	\$ 0.49	\$ 546.65	\$ 606.78
August-18	6/26/2018	6/4/2018			0.338	2.5792	\$ 0.87	\$ 823.76	\$ 914.37
August-18	7/13/2018	6/22/2018			.858	2.57	\$ 2.21	\$ 2,263.13	\$ 2,512.07
August-18	7/19/2018	3/20/2018			59	3.1300	\$ 184.67	\$ 1,305.21	\$ 1,305.21
August-18	7/27/2018	6/12/2018			.214	2.57	\$ 0.55	\$ 1,668.87	\$ 1,668.87
August-18	9/5/2017	6/26/2017			3.416	2.95	\$ 10.08	\$ 1,197.84	\$ 110.80
August-18	11/27/2017	9/29/2017			17.3841661814864	2.82	\$ 49.02	\$ 2,238.13	\$ 2,048.21
August-18	3/23/2018	2/3/2018			2.223	4.7097	\$ 10.47	\$ 1,904.81	\$ 500.00
August-18	5/22/2018	5/4/2018			20.763	2.41	\$ 50.04	\$ 2,316.56	\$ 2,571.38
August-18	6/12/2018	5/24/2018			0.0840536692040521	2.41		\$ 759.18	
August-18	6/14/2018	5/24/2018			5.03898929816521	2.41		\$ 877.88	
August-18	6/15/2018	5/21/2018			13.533	2.41		\$ 550.18	
August-18	6/18/2018	5/28/2018			35.276	2.4132		\$ 1,056.33	
August-18	6/20/2018	5/29/2018			42.055	2.4132		\$ 1,225.84	
August 18	7/9/2018 7/9/2018	6/6/2018			47.365 0.686	2.57 2.5792		\$ 675.08 \$ 443.83	
August-18 August-18	7/31/2018	6/25/2018			0.629890277457369	2.5792	\$ 1.77	\$ 1337.24	
August-18	12/1/2017	11/5/2017			23.625	3.00	ų 1.02	\$ 1,156.87	ų 1,007.E1
August-18	1/17/2018	12/19/2017			9.186	5.0580		\$ 1,404.90	
August-18	6/1/2018	5/9/2018			10.523	2.41		\$ 641.40	
August-18	6/10/2018	5/18/2018			0.758350506637463	5.2380		\$ 2,099.47	
August-18	6/15/2018	5/30/2018			13.807	2.41			
August-18	6/27/2018	5/30/2018			5.036	2.4132			
August-18	11/13/2017	8/8/2017			4.528	2.81	\$ 12.72	\$ 1,554.45	\$ 1,420.96
August-18	5/30/2018	5/14/2018			0.911	2.41	\$ 2.20	\$ 477.75	\$ 530.30
August-18	6/6/2018	5/15/2018			0.286	2.4132	\$ 0.69	\$ 2,185.46	\$ 1,995.91
August-18	6/18/2018	5/26/2018			.627	2.41	\$ 1.51	\$ 1,341.22	\$ 1,488.75
August-18	6/22/2018	6/4/2018			1.51275203987973	2.5792	\$ 3.90	\$ 1,175.87	\$ 1,305.22
August-18	7/2/2018	4/18/2018			22.517	2.4132	\$ 54.34	\$ 866.76	\$ 962.10
August-18	7/2/2018	5/10/2018			2.132	2.4132	\$ 5.14	\$ 1,362.50	\$ 1,512.38
August-18	7/24/2018	6/28/2018			.383	2.57	\$ 0.98	\$ 578.15	\$ 578.15
August-18	8/7/2018	5/29/2018			7.71922142275912	2.4132	\$ 18.63	\$ 791.83	\$ 791.83
August-18	8/8/2018	6/20/2018			1.94468653321911	2.5792	\$ 5.02	\$ 2,273.30	
August-18	7/17/2018	6/11/2018			9.499	2.5792		\$ 3,451.86	
August-18	8/8/2018	7/12/2018			.523	2.70		\$ 1,005.92	
August-18	7/23/2018	6/11/2018			4.675	2.5792		\$ 7,297.03	
August-18	7/23/2018	6/15/2018			0.839	2.5792		\$ 5,527.55	
August-18	8/10/2018	7/20/2018			8.10966948930056 3.416	2.70		\$ 1,744.94	
August-18	9/5/2017	6/26/2017				2.95	\$ 10.08	\$ 1,197.84	

			999/AA-19-401							
gust-18	10/3/2017	9/5/2017		7.6			21.57	\$	850.19	
gust-18	6/7/2018	5/23/2018		1.67966309938				\$	1,190.99	
gust-18	6/8/2018	5/18/2018		9.2			22.18	\$	172.62	
gust-18	6/12/2018	5/21/2018		0.4			1.11	\$	1,250.02	
gust-18	6/13/2018	5/23/2018		34.1			82.28	\$	6,071.63	
gust-18	6/20/2018	5/31/2018		5.5		\$	13.44	\$	1,512.56	
gust-18	6/28/2018	6/6/2018		0.0		\$	0.19	\$	715.97	
gust-18	6/30/2018	5/2/2018		1.0				\$	1,252.66	
gust-18	7/6/2018	6/5/2018		8.8	06 2.5792	\$	22.71	\$	929.52	\$ 1,031
gust-18	7/9/2018	6/5/2018		80.4	03 2.57	\$:	206.64	\$	2,198.66	\$ 2,440
gust-18	7/10/2018	6/20/2018		0.5	72 2.5792	\$	1.48	\$	536.20	\$ 595
gust-18	7/11/2018	6/19/2018		.5	2.57	\$	1.45	\$	401.17	\$ 445
gust-18	7/19/2018	5/16/2018		2.518783103558	14 2.4132	\$	6.08	\$	372.00	\$ 412
gust-18	7/19/2018	6/26/2018		1.8	40 2.5792	\$	4.75	\$	603.94	\$ 670
otember-18	7/27/2018	5/21/2018		270.3957050653	5.4132	\$ 1,	163.71	\$	9,563.90	\$ 9,563
otember-18	8/21/2018	7/18/2018		1.7	32 2.7399	\$	4.75	\$	847.99	\$ 847
otember-18	7/30/2018	7/11/2018		2.1	52 2.57	\$	5.53	\$	518.92	\$ 518
otember-18	8/6/2018	5/17/2018		0.1557912450061	33 2.4132	\$	0.38	\$	1,965.27	\$ 1,965
otember-18	8/7/2018	5/24/2018		37.1	76 2.4132	\$	89.71	\$	2,229.94	\$ 2,229
otember-18	7/25/2018	6/27/2018		0.9675766795315	01 2.5792	\$	2.50	\$	668.45	\$ 741
otember-18	8/29/2018	8/2/2018		.9	13 2.73	\$	2.49	\$	527.65	\$ 527
otember-18	8/14/2018	7/13/2018		0.8	77 2.7083	\$	2.38	\$	2,455.25	\$ 2,455
otember-18	8/29/2018	7/26/2018		4.3	43 2.7083	\$	11.76	\$	719.32	\$ 719
tember-18	11/28/2017	10/4/2017			45 2.75		0.40	\$	616.17	
tember-18	12/1/2017	11/5/2017		23.6			70.88	\$	1,156.87	
otember-18	12/6/2017	10/8/2017			47 2.82		1.33	\$	1,012.90	
otember-18	12/7/2017	10/11/2017		1.1	74 2.75	\$	3.23	\$	1,398.10	\$ 1,551
tember-18	3/13/2018	2/17/2018		6.0			28.61	\$	1,216.71	
tember-18	5/9/2018	4/26/2018		8.294381274563			19.99	s	2,626.05	
tember-18	5/30/2018	5/8/2018		11.3			27.38	\$	3,632.02	
tember-18	5/31/2018	5/7/2018		3.4			8.33	\$	1,639.14	
tember-18	5/31/2018	5/7/2018		2.5			6.13	\$	1,889.85	
tember-18	6/1/2018	5/16/2018		3.0			7.29	s	484.38	
tember-18	6/4/2018	5/14/2018		0.2				s	338.90	
tember-18	6/11/2018	5/31/2018		1.0			2.48	s	307.07	
tember-18	6/18/2018	5/28/2018		35.2			85.13		1,056.33	
tember-18	7/2/2018	5/11/2018		2.6			6.45	s	551.79	
tember-18	7/10/2018	6/15/2018		47.0				\$	4,712.91	
tember-18	7/13/2018	6/25/2018		0.0			0.15	\$	735.60	
tember-18	7/16/2018	6/15/2018		7.2			18.74	\$	373.71	
tember-18	7/23/2018	6/20/2018		14.7				\$	909.99	_
tember-18	7/23/2018	6/27/2018			24 2.57		2.37	\$	3,255.10	\$ 3,613
tember-18	7/27/2018	6/8/2018			52 2.57		2.45		396.47	•
tember-18	7/30/2018	7/3/2018		5.0			13.65		452.94	
tember-18	7/30/2018	7/3/2018		2.5			6.47		347.76	
tember-18	7/30/2018	7/10/2018			30 2.70			\$	816.89	
tember-18	8/1/2018	7/8/2018		6.559117316358			17.76		720.08	
tember-18	8/7/2018	6/13/2018		5.9			15.46	\$	1,427.86	
tember-18	8/7/2018	7/18/2018		0.167966309938	34 2.70	\$	0.45	\$	354.76	
tember-18	8/8/2018	7/15/2018		.3		\$	0.87	\$	739.43	
tember-18	8/10/2018	7/23/2018		5.038989298165	21 2.7083	\$	13.65	\$	694.23	\$ 693
ember-18	8/16/2018	7/11/2018		2.6	5.238	\$	13.93	\$	640.03	\$ 640
ember-18	9/11/2018	8/17/2018		55.5	57 2.7399	\$	152.22	\$	1,144.53	\$ 1,144
ber-18	9/12/2018	8/15/2018		.3	20 2.73	\$	0.87	\$	382.36	\$ 382
ber-18	7/27/2018	7/6/2018		0.6724034342569	46 2.7083	\$	1.82	\$	383.61	\$ 425
per-18	7/30/2018	5/30/2018		1.3	95 2.4132	\$	3.37	\$	1,426.90	\$ 1,583
ber-18	8/8/2018	6/25/2018		0.9601089637737	51 2.5792	\$	2.48	\$	1,049.51	\$ 1,164
ber-18	8/14/2018	7/23/2018		.7	30 2.57	\$	1.88	\$	321.11	\$ 356
ber-18	8/16/2018	7/12/2018		0.4500898306425	59 2.7083	\$	1.22	\$	705.79	\$ 783
ober-18	9/5/2017	6/26/2017		3.4	16 2.95	\$	10.08	\$	1,197.84	\$ 110
tober-18	6/12/2018	5/21/2018		0.4			1.11	\$	1,250.02	
tober-18	6/13/2018	5/25/2018		10.0			24.32		719.29	
tober-18	7/2/2018	5/18/2018		0.2			0.71		833.00	
tober-18	7/19/2018	6/27/2018		6.718652397553				\$	858.19	
ober-18	7/23/2018	6/18/2018		47.58518843999			122.73		2,463.06	
	1,20/2010	5, 13/2010		47.30310043333	2.0/32	Ť		_	941.37	- 2,134

October-18 7/26/2018 6/4/2018 1.513 2.70 \$ October-18 8/7/2018 6/18/2018 1.488 2.5790 \$ October-18 8/7/2018 5.397 5.0300 \$ October-18 8/8/2018 6/26/2018 0.603585297411028 2.5792 \$ October-18 8/10/2018 7/3/2018 34.9430413999821 2.7083 \$ October-18 8/13/2018 7/23/2018 2.252 2.70 \$ October-18 8/22/2018 7/25/2018 7.0174740206901 2.70 \$ October-18 8/27/2018 0.577061232815489 2.7083 \$ October-18 8/27/2018 0.577061232815489 2.7083 \$ October-18 8/31/2018 7/31/2018 0.275 2.7083 \$ October-18 8/31/2018 7/28/2018 0.275 2.7083 \$ October-18 8/31/2018 7/28/2018 0.275 2.7083 \$ October-18 9/8/2018	3.84 27.15 1.56 94.64 6.08 18.95	\$ 3.84 \$ 27.15 \$ 1.56 \$ 94.64 \$ 6.08		497.96 265.60	\$	552.74
October-18 8/7/2018 7/2/2018 5.397 5.0300 \$ October-18 8/8/2018 6/26/2018 0.603585297411028 2.5792 \$ October-18 8/10/2018 7/3/2018 34.9430413999821 2.7083 \$ October-18 8/13/2018 7/23/2018 2.252 2.70 \$ October-18 8/22/2018 7/25/2018 7.0174740206901 2.70 \$ October-18 8/27/2018 7/26/2018 0.577061232815489 2.7083 \$ October-18 8/27/2018 7/31/2018 2.14 2.73 \$ October-18 8/31/2018 7/28/2018 0.275 2.7083 \$	27.15 1.56 94.64 6.08 18.95	\$ 27.15 \$ 1.56 \$ 94.64 \$ 6.08	\$	265.60		
October-18 8/8/2018 6/26/2018 0.603585297411028 2.5792 \$ October-18 8/10/2018 7/3/2018 34.9430413999821 2.7083 \$ October-18 8/13/2018 7/23/2018 2.252 2.70 \$ October-18 8/22/2018 7/25/2018 7.0174740206901 2.70 \$ October-18 8/27/2018 7/25/2018 0.577061232815489 2.7083 \$ October-18 8/27/2018 7/31/2018 2.14 2.73 \$ October-18 8/31/2018 7/28/2018 0.275 2.7083 \$	1.56 94.64 6.08 18.95	\$ 1.56 \$ 94.64 \$ 6.08			\$	294.82
October-18 8/8/2018 6/26/2018 0.603585297411028 2.5792 \$ October-18 8/10/2018 7/3/2018 34.9430413999821 2.7083 \$ October-18 8/13/2018 7/23/2018 2.252 2.70 \$ October-18 8/22/2018 7/25/2018 7.0174740206901 2.70 \$ October-18 8/27/2018 7/25/2018 0.577061232815489 2.7083 \$ October-18 8/27/2018 7/31/2018 2.14 2.73 \$ October-18 8/31/2018 7/28/2018 0.275 2.7083 \$	1.56 94.64 6.08 18.95	\$ 1.56 \$ 94.64 \$ 6.08		810.53		899.69
October-18 8/10/2018 7/3/2018 34.9430413999821 2.7083 \$ October-18 8/13/2018 7/23/2018 2.252 2.70 \$ October-18 8/22/2018 7/25/2018 7.0174740206901 2.70 \$ October-18 8/27/2018 7/26/2018 0.577061232815489 2.7083 \$ October-18 8/27/2018 7/31/2018 2.14 2.73 \$ October-18 8/31/2018 7/28/2018 0.275 2.7083 \$	94.64 6.08 18.95	\$ 94.64 \$ 6.08	Ф			
October-18 8/13/2018 7/23/2018 2.252 2.70 \$ October-18 8/22/2018 7/25/2018 7.0174740206901 2.70 \$ October-18 8/27/2018 7/26/2018 0.577061232815489 2.7083 \$ October-18 8/27/2018 7/31/2018 .214 2.73 \$ October-18 8/31/2018 7/28/2018 0.275 2.7083 \$	6.08 18.95	\$ 6.08		309.92		309.92
October-18 8/22/2018 7/25/2018 7.0174740206901 2.70 \$ October-18 8/27/2018 7/26/2018 0.577061232815489 2.7083 \$ October-18 8/27/2018 7/31/2018 .214 2.73 \$ October-18 8/31/2018 7/28/2018 0.275 2.7083 \$	18.95		\$	2,844.94	\$	3,157.88
October-18 8/27/2018 7/26/2018 0.577061232815489 2.7083 \$ October-18 8/27/2018 7/31/2018 .214 2.73 \$ October-18 8/31/2018 7/28/2018 0.275 2.7083 \$			\$	219.65	\$	243.81
October-18 8/27/2018 7/31/2018 2.14 2.73 \$ October-18 8/31/2018 7/28/2018 0.275 2.7083 \$	1.56	\$ 18.95	\$	720.92	\$	800.22
October-18 8/31/2018 7/28/2018 0.275 2.7083 \$		\$ 1.56	\$	344.98	\$	382.93
	0.58	\$ 0.58	\$	501.25	\$	556.39
				1,035.09		1,035.09
October-18 9/6/2018 //28/2018 15.452 2.7399 \$						
			\$	910.27		910.27
October-18 9/11/2018 8/9/2018 2.527 2.73 \$	6.90	\$ 6.90	\$	900.51	\$	900.51
October-18 9/14/2018 8/17/2018 2.734 2.73 \$	7.46	\$ 7.46	\$	1,114.31	\$	1,236.88
October-18 8/15/2018 7/5/2018 3.35932619877681 2.7083 \$	9.10	\$ 9.10	\$	374.44	\$	415.63
October-18 9/5/2018 7/30/2018 0.867 2.7083 \$	2.35	\$ 2.35	\$	468.96	\$	468.96
October-18 9/11/2018 8/10/2018 .107 2.73 \$	0.29	\$ 0.29	\$	988.36	s	988.36
October-18 9/14/2018 8/8/2018 1.145 2.7399 \$				916.95	\$	916.95
October-18 10/10/2018 9/11/2018 31.1330044505838 2.8022 \$				1,349.87		1,349.87
October-18 8/14/2018 7/11/2018 20.0566125959729 2.7083 \$	54.32	\$ 54.32	\$	2,189.50	\$	2,189.50
October-18 10/19/2017 8/9/2017 10.388 2.81 \$	29.19	\$ 29.19	\$	2,477.63	\$	3,000.00
October-18 12/1/2017 11/5/2017 23.625 3.00 \$	70.88	\$ 70.88	\$	1,156.87	\$	100.00
October-18 6/18/2018 5/28/2018 35.276 2.4132 \$	85.13	\$ 85.13	\$	1,056.33	\$	97.71
October-18 7/30/2018 7/9/2018 6.837 2.70 \$	18.46	\$ 18.46	\$	576.44	\$	639.85
October-18 8/9/2018 7/6/2018 27.066 2.70 \$			\$	901.91		200.00
October-18 8/15/2018 7/14/2018 10.0779785983304 2.7083 \$				649.67		721.13
October-18 8/16/2018 7/26/2018 0.321 2.7083 \$	0.87	\$ 0.87	\$	753.44	\$	836.32
October-18 8/28/2018 7/24/2018 2.677 2.7083 \$	7.25	\$ 7.25	\$	157.79	\$	175.15
October-18 8/28/2018 8/1/2018 .767 2.73 \$	2.09	\$ 2.09	\$	256.46	\$	284.67
October-18 6/27/2017 5/24/2017 8.959 2.95 \$	26.43	\$ 26.43	\$	443.99	\$	286.34
October-18 6/28/2017 4/27/2017 36.643 2.77 \$	101.50	\$ 101.50	\$	3,694.88	\$	4,101.32
October-18 8/28/2017 6/12/2017 14.696 2.95 \$				480.65		490.79
October-18 9/20/2017 7/5/2017 28.293 2.95 \$				387.96		262.83
October-18 7/10/2018 6/21/2018 13.0118540525203 2.5792 \$	33.56	\$ 33.56	\$	922.14	\$	1,023.58
October-18 7/27/2018 7/5/2018 1.13072547474467 2.7083 \$	3.06	\$ 3.06	\$	778.82	\$	864.49
October-18 7/31/2018 7/5/2018 1.21020163190378 2.7083 \$	3.28	\$ 3.28	\$	507.08	\$	562.86
October-18 8/1/2018 7/13/2018 0.307 2.7083 \$	0.83	\$ 0.83	\$	828.77	\$	919.93
October-18 8/7/2018 7/20/2018 .078 2.73 \$	0.21	\$ 0.21	\$	384.63	s	426.94
October-18 8/24/2018 7/30/2018 5.03898929816521 2.7083 \$			s	913.75		1,014.26
			-			
			\$	7,501.21		7,501.21
November-18 9/25/2018 7/17/2018 2.952 2.7083 \$	7.99	\$ 7.99	\$	128.78	\$	128.78
November-18 10/15/2018 9/21/2018 13.841 2.80 \$	38.75	\$ 38.75	\$	2,563.57	\$	2,563.57
November-18 8/1/2018 7/12/2018 0.723 2.7083 \$	1.96	\$ 1.96	\$	925.25	\$	1,027.03
November-18 9/12/2018 8/2/2018 0.782 2.8022 \$	2.19	\$ 2.19	\$	758.46	\$	841.89
November-18 9/24/2018 8/21/2018 7.43793137350159 2.73 \$	20.31	\$ 20.31	\$	1,468.33	\$	1,629.85
November-18 10/23/2018 9/25/2018 0.804 2.8022 \$				967.42		967.42
November-18 10/5/2018 8/23/2018 3.002 2.7399 \$				5,603.60		5,603.60
				2,010.67		2,010.67
November-18 10/15/2018 8/8/2018 13.221 2.7083 \$			\$	2,739.67		2,739.67
November-18 10/15/2018 9/11/2018 6.40615773865186 2.8022 \$	17.95	\$ 17.95	\$	1,050.66	\$	1,050.66
November-18 10/15/2018 9/24/2018 24.2589442895133 2.80 \$	67.93	\$ 67.93	\$	3,907.97	\$	3,907.97
November-18 10/17/2018 9/26/2018 2.232 2.73 \$	6.09	\$ 6.09	\$	1,035.02	\$	1,035.02
November-18 10/17/2018 9/28/2018 1.513 2.73 \$	4.13	\$ 4.13	\$	587.39	\$	587.39
	3.35			744.25		744.25
November-18 8/8/2018 6/22/2018 1 3.00 2.5792 \$						
November 18 8/8/2018 6/22/2018 1.300 2.5792 \$				1,165.28		1,165.28
November-18 8/20/2018 5/9/2018 5/9/2018 3.721 2.4132 \$	205 55	\$ 395.55	\$	4,894.73	\$	4,894.73
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$		¢ 57.04	\$	2,710.12	\$	2,406.52
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$		70.1C w	\$	1,197.84	\$	110.80
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$	57.61		Ψ.	4 450 07	s	
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$ November-18 6/19/2017 5/4/2017 19.530 2.95 \$	57.61 10.08	\$ 10.08		1,156.87	Ψ.	100.00
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$ November-18 6/19/2017 5/4/2017 19.530 2.95 \$ November-18 9/5/2017 6/26/2017 3.416 2.95 \$ November-18 12/1/2017 11/5/2017 23.625 3.00 \$	57.61 10.08 70.88	\$ 10.08 \$ 70.88	\$			
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$: November-18 6/19/2017 5/4/2017 19.530 2.95 \$ November-18 9/5/2017 6/26/2017 3.416 2.95 \$ November-18 12/1/2017 11/5/2017 23.625 3.00 \$ November-18 1/15/2018 10/25/2017 1.916 2.89 \$	57.61 10.08 70.88 5.54	\$ 10.08 \$ 70.88 \$ 5.54	\$	497.98	\$	50.00
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$: November-18 6/19/2017 5/4/2017 19.530 2.95 \$ November-18 9/5/2017 6/26/2017 3.416 2.95 \$ November-18 12/1/2017 11/5/2017 23.625 3.00 \$ November-18 1/15/2018 10/25/2017 1.916 2.89 \$ November-18 4/19/2018 3/27/2018 0.338 2.4237 \$	57.61 10.08 70.88 5.54 0.82	\$ 10.08 \$ 70.88 \$ 5.54 \$ 0.82	\$ \$	497.98 382.07	\$	50.00 424.10
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$ November-18 6/19/2017 5/4/2017 19.530 2.95 \$ November-18 9/5/2017 6/26/2017 3.416 2.95 \$ November-18 12/1/2017 11/5/2017 23.625 3.00 \$ November-18 1/15/2018 10/25/2017 1.916 2.89 \$ November-18 4/19/2018 3/27/2018 0.338 2.4237 \$ November-18 5/29/2018 5/13/2018 0.797 2.41 \$	57.61 10.08 70.88 5.54 0.82 1.92	\$ 10.08 \$ 70.88 \$ 5.54 \$ 0.82 \$ 1.92	\$ \$ \$	497.98 382.07 1,578.38	\$ \$ \$	50.00 424.10 350.00
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$ November-18 6/19/2017 5/4/2017 19.530 2.95 \$ November-18 9/5/2017 6/26/2017 3.416 2.95 \$ November-18 12/1/2017 11/5/2017 23.625 3.00 \$ November-18 1/15/2018 10/25/2017 1.916 2.89 \$ November-18 4/19/2018 3/27/2018 0.338 2.4237 \$ November-18 5/29/2018 5/13/2018 0.797 2.41 \$	57.61 10.08 70.88 5.54 0.82 1.92	\$ 10.08 \$ 70.88 \$ 5.54 \$ 0.82 \$ 1.92	\$ \$	497.98 382.07	\$ \$ \$	50.00 424.10
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$ November-18 6/19/2017 5/4/2017 19.530 2.95 \$ November-18 9/5/2017 6/26/2017 3.416 2.95 \$ November-18 12/1/2017 11/5/2017 23.625 3.00 \$ November-18 1/15/2018 10/25/2017 1.916 2.89 \$ November-18 4/19/2018 3/27/2018 0.338 2.4237 \$ November-18 5/29/2018 5/13/2018 0.797 2.41 \$	57.61 10.08 70.88 5.54 0.82 1.92 069.27	\$ 10.08 \$ 70.88 \$ 5.54 \$ 0.82 \$ 1.92 \$ 1,069.27	\$ \$ \$ \$	497.98 382.07 1,578.38	s s s	50.00 424.10 350.00
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$ November-18 6/19/2017 5/4/2017 19.530 2.95 \$ November-18 9/5/2017 6/26/2017 3.416 2.95 \$ November-18 12/1/2017 11/5/2017 23.625 3.00 \$ November-18 1/15/2018 10/25/2017 1.916 2.89 \$ November-18 4/19/2018 3/27/2018 0.338 2.4237 \$ November-18 5/29/2018 5/13/2018 0.797 2.41 \$ November-18 5/30/2018 4/17/2018 461.288741614953 2.3180 \$ 1,1	57.61 10.08 70.88 5.54 0.82 1.92 069.27	\$ 10.08 \$ 70.88 \$ 5.54 \$ 0.82 \$ 1.92 \$ 1,069.27 \$ 0.82	\$ \$ \$ \$ \$	497.98 382.07 1,578.38 5,201.03	\$ \$ \$ \$	50.00 424.10 350.00 5,484.49
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$ November-18 6/19/2017 5/4/2017 19.530 2.95 \$ November-18 9/5/2017 6/26/2017 3.416 2.95 \$ November-18 12/1/2017 11/5/2017 23.625 3.00 \$ November-18 1/15/2018 10/25/2017 1.916 2.89 \$ November-18 4/19/2018 3/27/2018 0.338 2.4237 \$ November-18 5/29/2018 5/13/2018 0.797 2.41 \$ November-18 5/30/2018 4/17/2018 461.288741614953 2.3180 \$ November-18 6/4/2018 4/3/2018 0.338 2.4237 \$	57.61 10.08 70.88 5.54 0.82 1.92 069.27 0.82 1.11	\$ 10.08 \$ 70.88 \$ 5.54 \$ 0.82 \$ 1.92 \$ 1,069.27 \$ 0.82 \$ 1.11	\$ \$ \$ \$ \$	497.98 382.07 1,578.38 5,201.03 1,085.43	\$ \$ \$ \$ \$	50.00 424.10 350.00 5,484.49 1,085.43
November-18 8/20/2018 5/9/2018 3.721 2.4132 \$ November-18 11/9/2018 8/26/2018 144.367 2.7399 \$ November-18 6/19/2017 5/4/2017 19.530 2.95 \$ November-18 9/5/2017 6/26/2017 3.416 2.95 \$ November-18 12/1/2017 11/5/2018 3.416 2.95 \$ November-18 1/15/2018 10/25/2017 23.625 3.00 \$ November-18 1/15/2018 10/25/2017 1.916 2.89 \$ November-18 4/19/2018 3/27/2018 0.338 2.4237 \$ November-18 5/29/2018 5/13/2018 0.797 2.41 \$ November-18 5/30/2018 4/17/2018 4/61.288741614953 2.3180 \$ November-18 6/4/2018 4/3/2018 0.338 2.4237 \$ November-18 6/12/2018 5/21/2018 0.429 2.5792 \$	57.61 10.08 70.88 5.54 0.82 1.92 069.27 0.82 1.11 85.13	\$ 10.08 \$ 70.88 \$ 5.54 \$ 0.82 \$ 1.92 \$ 1,069.27 \$ 0.82 \$ 1.11 \$ 85.13	\$ \$ \$ \$ \$ \$	497.98 382.07 1,578.38 5,201.03 1,085.43 1,250.02	\$ \$ \$ \$ \$	50.00 424.10 350.00 5,484.49 1,085.43 116.00

November-18	7/2/2018	5/15/2018		1.490	2.4132	\$ 3.60	\$ 757.55	\$ 840.8
November-18	7/10/2018	6/20/2018		18.800	2.5792	\$ 48.49	\$ 657.42	\$ 656.0
November-18	7/23/2018	6/7/2018		5.587	2.7083	\$ 15.13	\$ 250.97	\$ 278.5
November-18	7/26/2018	6/2/2018		1.041	2.57	\$ 2.68	\$ 398.77	\$ 442.6
November-18	8/9/2018	7/2/2018	g	9.03806033157432	2.7083	\$ 24.48	\$ 3,982.57	\$ 3,978.5
November-18	8/9/2018	7/6/2018		27.066	2.70	\$ 73.08	\$ 901.91	\$ 200.0
November-18	8/14/2018	7/24/2018		5.897	2.70	\$ 15.92	\$ 680.02	\$ 679.3
November-18	9/6/2018	7/30/2018		0.240	2.7083	\$ 0.65	\$ 657.62	\$ 729.9
November-18	9/10/2018	8/8/2018	0.9	.919647330329895	2.73		\$ 601.00	\$ 667.1
November-18	9/10/2018	8/9/2018		122.089	2.73		\$ 2,052.57	
November-18	9/14/2018	8/6/2018		6.2147534677371	2.8022		\$ 724.02	
November-18	10/3/2018	8/16/2018		1.852	2.7399		\$ 442.92	
November-18	10/4/2018	9/8/2018		0.892	2.7399		\$ 1,004.06	\$ 1,003.0
December-18	3/12/2018	2/22/2018		1.843	5.270			\$ 1,425.8
December-18	6/12/2018	5/21/2018		0.429	2.5792		,	
December-18	7/10/2018	6/15/2018		1.6796630993884	2.57		\$ 1,132.65	\$ 1,000.0
December-18 December-18	8/8/2018 8/29/2018	6/26/2018 7/26/2018		148.129 4.314	2.5792 2.7083		\$ 4,593.20 \$ 388.25	\$ 5,098.4
							•	
December-18	9/11/2018	7/31/2018 8/9/2018		0.147	2.7399			\$ 1,163.3 \$ 855.5
December-18	9/11/2018	8/8/2018	0.0	.919647330329895	2.73		\$ 770.79	
December-18	9/21/2018	8/9/2018	0.5	2.359	2.8022			
December-18	9/26/2018	7/18/2018		20.1559571926609	2.7083			\$ 793.5
December-18	9/27/2018	7/30/2018	, and a second second	6.476	5.7083		\$ 908.87	\$ 1,008.8
December-18	10/3/2018	8/21/2018		2.479	2.7339		\$ 971.49	
December-18	10/3/2018	8/20/2018	0.:	.738011450440889	2.7399		\$ 465.57	
December-18	10/31/2018	10/1/2018		4.80041123238867	2.73		\$ 4,315.95	\$ 4,315.9
December-18	11/20/2018	10/15/2018		0.052	2.8937		\$ 508.97	
December-18	10/4/2018	8/30/2018		5.933	2.7399	\$ 16.26	\$ 1,910.33	\$ 2,120.4
December-18	9/25/2017	8/19/2017	4	44.1414727195589	2.81	\$ 124.04	\$ 3,203.29	\$ 1,755.6
December-18	12/5/2017	10/8/2017		2.345	2.82	\$ 6.61	\$ 1,170.44	\$ 300.0
December-18	7/9/2018	6/12/2018		1.164	2.57	\$ 2.99	\$ 447.64	\$ 496.8
December-18	7/24/2018	6/21/2018		1.086	2.5792	\$ 2.80	\$ 146.51	\$ 146.5
December-18	10/24/2018	9/13/2018		1.175	2.8937	\$ 3.40	\$ 2,503.41	\$ 2,778.7
December-18	11/16/2018	10/15/2018		18.788	2.89	\$ 54.30	\$ 3,106.66	\$ 3,106.6
December-18	9/27/2018	8/15/2018		1.562	2.8022	\$ 4.38	\$ 154.44	\$ 171.4
December-18	11/7/2018	10/11/2018		3.239	2.8937	\$ 9.37	\$ 787.02	\$ 787.0
December-18	11/26/2018	10/22/2018	0.	756376019939863	2.8937	\$ 2.19	\$ 698.81	\$ 698.8
December-18	11/28/2018	10/24/2018		0.865	2.8937	\$ 2.50	\$ 970.97	\$ 970.9
December-18	11/7/2018	10/2/2018		0.643	2.8937	\$ 1.86	\$ 637.45	\$ 707.5
December-18	11/16/2018	10/15/2018		1.513	2.89	\$ 4.37	\$ 659.49	\$ 732.0
December-18	11/13/2018	8/21/2018	3	31.5007771492186	2.7399	\$ 86.31	\$ 1,171.00	\$ 1,171.0
December-18	11/13/2018	10/25/2018	1	1.45137034932007	2.89	\$ 4.19	\$ 1,406.41	\$ 1,406.4
December-18	11/14/2018	8/16/2018		0.578	2.7399			
December-18	12/1/2017	11/5/2017		23.625	3.00			\$ 84.1
December-18	1/15/2018	10/25/2017		1.916	2.89			
December-18	2/27/2018	2/6/2018	2	2.26912805981959	4.70			
December-18 December-18	6/18/2018 7/10/2018	5/28/2018 6/12/2018		35.276 .936	2.4132			\$ 97.7 \$ 2,253.9
December-18	7/10/2018	6/19/2018		0.372	2.5792			
December-18	7/25/2018	6/27/2018		0.738	2.5792			
December-18	8/6/2018	7/18/2018		1.810	2.7083			\$ 874.6
December-18	8/9/2018	7/6/2018		27.066	2.70			
December-18	8/10/2018	7/6/2018		0.743	2.7083		\$ 679.85	
December-18	8/10/2018	7/9/2018		70.566	2.7083			\$ 2,731.0
December-18	8/14/2018	7/12/2018		0.391	2.7083			\$ 643.9
December-18	8/15/2018	7/11/2018		0.921	2.7083	\$ 2.49	\$ 631.78	\$ 701.2
December-18	8/16/2018	7/13/2018		0.799	2.7083	\$ 2.16	\$ 974.90	\$ 973.7
December-18	8/29/2018	8/2/2018		.193	2.73	\$ 0.53	\$ 582.57	\$ 646.6
December-18	8/31/2018	8/6/2018		0.332	2.7399	\$ 0.91	\$ 408.76	\$ 453.7
December-18	9/13/2018	8/16/2018		43.937	2.73	\$ 119.95	\$ 1,815.44	\$ 2,015.1
December-18	9/14/2018	8/7/2018		1.703	2.8022	\$ 4.77	\$ 341.15	\$ 378.6
December-18	9/19/2018	8/30/2018		57.220	2.73	\$ 156.21	\$ 1,528.65	\$ 1,409.5
December-18	9/25/2018	8/13/2018		0.338	2.8022	\$ 0.95	\$ 1,085.79	\$ 1,084.7
December-18	9/26/2018	8/30/2018		4.778	2.7399	\$ 13.09	\$ 794.77	\$ 882.1
December-18	9/28/2018	9/5/2018	g	9.17989926331037	2.80	\$ 25.70	\$ 1,119.34	\$ 1,242.4

December-18 10/1/2018 7/31/2018 0.531 2.7083 \$ 1.44 \$ December-18 10/3/2018 8/20/2018 0.524 2.7399 \$ 1.44 \$ December-18 10/4/2018 8/22/2018 0.653 2.7399 \$ 1.79 \$ December-18 10/8/2018 9/11/2018 22.1834550560027 2.80 \$ 62.11 \$ 2 December-18 10/9/2018 8/20/2018 15.205 2.73 \$ 41.51 \$ December-18 10/9/2018 8/20/2018 4.29 2.80 \$ 12.0 \$ December-18 10/9/2018 8/20/2018 2.8022 \$ 58.99 \$ \$ 2.8022 \$ 58.99 \$ December-18 10/1/2018 8/16/2018 2.48.487 2.73 \$ 678.37 \$ \$ \$ \$ \$ 2.8022 \$ 58.99 \$ \$ \$ \$ 2.8022 \$ 58.99 \$ \$ \$ 2.8022 \$ 58.97 \$ 2.8022 \$ 58.97 \$ 2.8022 \$ 5.803 \$ \$ 2			ŀ
December-18	,043.12	\$ 1,15	57.86
December-18 104/2018 8/22/2018 0.655 2.7399 \$ 1.79 \$ December-18 10/8/2018 9/11/2018 22.1834550600027 2.80 \$ 62.11 \$ 2 December-18 10/9/2018 8/20/2018 15.205 2.73 \$ 41.51 \$ December-18 10/9/2018 9/17/2018 2.80 \$ 1.20 \$	740.06		21.47
December-18 10/8/2018 9/11/2018 22.183450560007 2.80 \$ 62.11 \$ 2.183450560007 2.80 \$ 62.11 \$ 2.183450560007 2.80 \$ 62.11 \$ 2.183450560007 2.80 \$ 62.11 \$ 2.183450560007 2.80 \$ 62.11 \$ 2.183450560007 2.80 \$ 1.50 \$ 2.73 \$ 41.51 \$ 2.183450560007 2.80 \$ 1.20 \$ 2.80 \$ 1.20 \$ 2.80 \$ 1.20 \$ 2.80 \$ 1.20 \$ 2.80 \$ 1.20 \$ 2.80 \$	722.34		01.80
December-18 10/9/2018 8/20/2018 15.205 2.73 \$ 41.51 \$ December-18 10/9/2018 9/17/2018 4.29 2.80 \$ 1.20 \$ December-18 10/10/2018 8/23/2018 21.0524/20620700 2.8022 \$ 58.99 \$ December-18 10/11/2018 8/16/2018 248.487 2.73 \$ 678.37 \$ December-18 10/15/2018 9/24/2018 4.006 2.80 \$ 11.22 \$ December-18 10/17/2018 9/27/2018 19.7406213233873 2.80 \$ 55.27 \$ December-18 10/17/2018 9/27/2018 19.7406213233873 2.80 \$ 55.27 \$ December-18 10/17/2018 9/27/2018 0.224 2.8022 \$ 0.63 \$ December-18 10/19/2018 9/18/2018 0.440 2.8937 \$ 1.27 \$ December-18 10/30/2018 9/18/2018 0.768 2.8937 \$ 2.28 \$ December-18 11/14/2018 10/30/20	900.00		99.00
December-18 10/9/2018 9/17/2018 4.29 2.80 \$ 1.20 \$ December-18 10/10/2018 8/23/2018 21.0524/220620703 2.8022 \$ 58.99 \$ December-18 10/11/2018 8/16/2018 248.487 2.73 \$ 678.37 \$ December-18 10/15/2018 9/24/2018 4.006 2.80 \$ 11.22 \$ December-18 10/15/2018 9/27/2018 19.7406213233873 2.80 \$ 55.27 \$ December-18 10/18/2018 9/19/2018 0.224 2.8022 \$ 0.63 \$ December-18 10/18/2018 9/19/2018 0.440 2.8937 \$ 1.27 \$ December-18 10/30/2018 9/18/2018 0.440 2.8937 \$ 1.27 \$ December-18 10/30/2018 0.788 2.8937 \$ 9.56 \$ December-18 11/14/2018 10/30/2018 0.788 2.8937 \$ 2.28 \$ December-18 11/14/2018 10/30/2018 0.788 2.8937 \$ 2.28 \$ December-18 11/14/2018			91.01
December-18 10/10/2018 8/23/2018 21.0524220620703 2.8022 \$ 56.99 \$ December-18 10/11/2018 8/16/2018 248.487 2.73 \$ 678.37 \$ December-18 10/15/2018 9/24/2018 4.006 2.80 \$ 11.22 \$ December-18 10/17/2018 9/27/2018 19.7406213233873 2.80 \$ 55.27 \$ December-18 10/18/2018 9/19/2018 0.224 2.8022 \$ 0.63 \$ December-18 10/29/2018 9/19/2018 0.440 2.8937 \$ 1.27 \$ December-18 10/30/2018 9/18/2018 0.788 2.8937 \$ 9.56 \$ December-18 11/8/2018 10/30/2018 0.788 2.8937 \$ 2.28 \$ December-18 11/14/2018 10/30/2018 0.788 2.8937 \$ 2.28 \$ December-18 11/14/2018 10/30/2018 0.788 2.8937 \$ 2.28 \$ December-18 11/14/2018 10/30/2018<	488.52		42.26
December-18			94.80 53.09
December-18 10/15/2018 9/24/2018 11/27/2018 19.7406213233873 2.80 \$ 55.27 \$ 19.7406213233873 2.80 \$ 19.7406213233873 2.80 2.	,727.92		47.99
December-18	,422.17		78.61
December-18 10/18/2018 9/19/2018 0.224 2.8022 \$ 0.63 \$ December-18 10/29/2018 9/15/2018 0.440 2.8937 \$ 1.27 \$ December-18 10/30/2018 9/18/2018 3.303 2.8937 \$ 9.56 \$ December-18 11/18/2018 10/3/2018 0.788 2.8937 \$ 2.28 \$ December-18 11/14/2018 10/30/2018 35.870 2.89 \$ 103.66 \$ - January-19 11/12/2018 8/22/2018 1.50763396632622 2.7399 \$ 4.13 \$ January-19 11/19/2018 10/4/2018 127.409155972444 2.8937 \$ 368.68 \$ - January-19 11/20/2018 9/27/2018 2.8022 2.521 \$ 7.06 \$ January-19 12/17/2018 11/14/2018 26.413 3.4556 \$ 91.27 \$ - January-19 12/3/2018 10/22/2018 80.8877622319959 2.89 233.77 \$ 2 January-19 12/4/2018 10/30/2018 8.75266643350658 2.70 \$ 3.365 \$ 5 </td <td>838.02</td> <td></td> <td>30.20</td>	838.02		30.20
December-18 10/29/2018 9/15/2018 0.440 2.8937 \$ 1.27 \$ December-18 10/30/2018 9/18/2018 3.303 2.8937 \$ 9.56 \$ December-18 11/8/2018 10/3/2018 0.788 2.8937 \$ 2.28 \$ December-18 11/14/2018 10/3/2018 35.870 2.89 \$ 103.66 \$ - January-19 11/12/2018 8/22/2018 1.50763396632622 2.7399 \$ 4.13 \$ January-19 11/19/2018 10/4/2018 127.409155972444 2.8937 \$ 368.68 \$ - January-19 11/20/2018 9/27/2018 12/20/2018 2.8022 2.521 \$ 7.06 \$ January-19 12/17/2018 11/14/2018 26.413 3.4556 \$ 91.27 \$ - January-19 12/2/2018 10/22/2018 80.8877622319959 2.89 233.77 \$ 2 January-19 12/4/2018 10/30/2018 0.144 3.4556 \$ 0.50 \$ January-19 10/22/2018 7/18/2018 8.75266643350658 2.70 \$ 23.63 \$	794.80		82.23
December-18 11/8/2018 10/3/2018 0.788 2.8937 \$ 2.28 \$ December-18 11/14/2018 10/30/2018 35.870 2.89 \$ 103.66 \$ January-19 11/12/2018 8/22/2018 1.50763396632622 2.7399 \$ 4.13 \$ January-19 11/19/2018 10/4/2018 127.409155972444 2.8937 \$ 368.68 \$ 7 January-19 11/20/2018 9/27/2018 2.8022 2.521 \$ 7.06 \$ January-19 12/17/2018 11/14/2018 26.413 3.4556 \$ 91.27 \$ January-19 12/2/2018 10/22/2018 80.8877622319959 2.89 \$ 233.77 \$ 2 January-19 12/4/2018 10/30/2018 0.144 3.4556 \$ 0.50 \$ January-19 10/22/2018 7/18/2018 8.75266643350658 2.70 \$ 23.63 \$	929.04		31.23
December-18 11/14/2018 10/30/2018 35.870 2.89 \$ 103.66 \$ January-19 11/12/2018 8/22/2018 1.50763396632622 2.7399 \$.4.13 \$ January-19 11/19/2018 10/4/2018 127.409155972444 2.8937 \$ 36.868 \$ January-19 11/20/2018 9/27/2018 2.221 \$ 7.06 \$	411.10	\$ 41	11.00
January-19 11/12/2018 8/22/2018 1.50763396632622 2.7399 \$ 4.13 \$ January-19 11/19/2018 10/4/2018 127.409155972444 2.8937 \$ 368.68 \$ 7 January-19 11/20/2018 9/27/2018 2.521 \$ 7.06 \$ January-19 12/17/2018 11/14/2018 26.413 3.4556 \$ 91.27 \$ January-19 12/3/2018 10/22/2018 80.8877622319959 2.89 \$ 23.77 \$ 2 January-19 12/4/2018 10/30/2018 0.144 3.4556 \$ 0.50 \$ January-19 10/22/2018 7/18/2018 8.75266643350658 2.70 \$ 23.63 \$	827.46	\$ 91	18.48
January-19 11/19/2018 10/4/2018 127.409155972444 2.8937 \$ 368.68 \$ 1 January-19 11/20/2018 9/27/2018 2.8022 2.51 \$ 7.06 \$ January-19 12/17/2018 11/14/2018 26.413 3.4556 \$ 91.27 \$ 7 January-19 12/3/2018 10/22/2018 2.89 23.3.77 \$ 2 January-19 12/4/2018 10/30/2018 0.144 3.4556 \$ 0.50 \$ January-19 10/22/2018 7/18/2018 8.75266643350658 2.70 \$ 23.63 \$,742.10	\$ 1,93	33.73
January-19 11/20/2018 9/27/2018 2.8022 2.521 \$ 7.06 \$ January-19 12/17/2018 11/14/2018 26.413 3.4556 \$ 91.27 \$ January-19 12/3/2018 10/22/2018 80.8877622319959 2.89 \$ 23.77 \$ 2 January-19 12/4/2018 10/30/2018 0.144 3.4556 \$ 0.50 \$ January-19 10/22/2018 7/18/2018 8.75266643350658 2.70 \$ 23.63 \$	841.93	\$ 93	34.54
January-19 12/17/2018 11/14/2018 26.413 3.4556 \$ 91.27 \$ - January-19 12/3/2018 10/22/2018 80.8877622319959 2.89 \$ 233.77 \$ 2 January-19 12/4/2018 10/30/2018 0.144 3.4556 \$ 0.50 \$ January-19 10/22/2018 7/18/2018 8.75266643350658 2.70 \$ 23.63 \$,734.20	\$ 1,73	34.20
January-19 12/3/2018 10/22/2018 80.8877622319959 2.89 \$ 233.77 \$ 2 January-19 12/4/2018 10/30/2018 0.144 3.4556 \$ 0.50 \$ January-19 10/22/2018 7/18/2018 8.75266643350658 2.70 \$ 23.63 \$	387.80	\$ 38	87.80
January-19 12/4/2018 10/30/2018 0.144 3.4556 \$ 0.50 \$ January-19 10/22/2018 7/18/2018 8.75266643350658 2.70 \$ 23.63 \$,849.25	\$ 1,84	49.25
January-19 10/22/2018 7/18/2018 8.75266643350658 2.70 \$ 23.63 \$,965.97	\$ 2,96	65.97
	739.67	\$ 73	39.67
January-19 10/31/2018 10/2/2018 2 2837 8 64 8	827.04		27.04
2.6037 00007 2.6037 0 0.01 0	934.63	\$ 93	34.63
January-19 11/13/2018 10/29/2018 0.328509795341781 2.89 \$ 0.95 \$	883.19	\$ 88	83.19
January-19 11/16/2018 10/17/2018 10/17/2018 10/17/2018	,315.45	\$ 3,31	15.45
			05.65
January-19 12/11/2018 11/6/2018 0.840146186566553 3.4556 \$ 2.90 \$	946.90		46.90
	,762.51		62.51
January-19 11/20/2018 10/16/2018 6.04678715779826 2.8937 \$ 17.50 \$	850.72		44.30
January-19 12/10/2018 11/28/2018 .448 3.45 \$ 1.55 \$	877.37		77.37
January-19 12/27/2018 12/12/2018 5.520 4.48 \$ 2.33 \$ 1	,545.27 673.18		45.27 73.18
	,501.57		86.74
			02.00
	,492.90		25.60
January-19 6/8/2018 5/17/2018 0.215 2.4132 \$ 0.52 \$			42.78
	,250.02	\$ 11	16.00
January-19 7/18/2018 6/15/2018 1.732 5.0300 \$ 8.71 \$	782.71	\$ 86	68.81
January-19 7/30/2018 7/13/2018 2.39146262840098 2.57 \$ 6.15 \$ 1	,265.65	\$ 1,40	04.87
January-19 8/1/2018 7/11/2018 2.67276311952351 2.7083 \$ 7.24 \$	582.08	\$ 51	17.00
January-19 9/12/2018 8/15/2018 6.904 2.73 \$ 18.85 \$	801.49	\$ 88	89.65
January-19 9/19/2018 8/4/2018 3.594 2.7399 \$ 9.85 \$	683.14	\$ 60	06.83
January-19 10/2/2018 9/8/2018 1.17063949221243 2.8022 \$ 3.28 \$	665.65	\$ 70	01.93
January-19 10/4/2018 8/2/2018 7.5330498199806 2.7083 \$ 20.40 \$ 1	,204.24	\$ 1,33	36.71
January-19 10/8/2018 9/11/2018 1.16831677064566 2.80 \$ 3.27 \$	283.27		14.43
January-19 10/9/2018 9/11/2018 1.16831677064566 2.8022 \$ 3.27 \$	144.60		60.51
January-19 10/9/2018 9/15/2018 .718 2.80 \$ 2.01 \$	624.56		93.26
January-19 11/1/2018 10/3/2018 1.079 2.89 \$ 3.12 \$	763.96		48.00
	,218.00		61.98
	,372.48		23.45
January-19 11/5/2018 9/27/2018 4.87438525412876 2.8022 \$ 13.66 \$ January-19 11/6/2018 10/1/2018 7.015 2.8937 \$ 20.30 \$	604.94 459.71		71.48
January-19 11/7/2018 9/13/2018 9.383 2.80 \$ 26.27 \$ January-19 11/14/2018 10/6/2018 10.0779785963304 2.8937 \$ 29.16 \$	670.51 569.33		44.27 31.96
January-19 1/7/4/2018 1/00/2018 4/23/2018 4/23/2018 4/23/2018 4/23/2018 4/23/2018 4/23/2018	805.11		04.30
	,496.11		86.65
	,056.33		97.71
January-19 8/9/2018 7/6/2018 27.066 2.70 \$ 73.08 \$	901.91		00.00
January-19 8/16/2018 7/11/2018 5.03898929816521 2.7083 \$ 13.65 \$	541.47		40.95
			25.76
	,087.03		27.30
January-19 9/27/2018 8/15/2018 1.562 2.8022 \$ 4.38 \$	154.44		71.43
January-19 9/28/2018 8/29/2018 0.856 2.7399 \$ 2.35 \$			19.87
January-19 10/4/2018 8/25/2018 0.0273758162784818 \$ - \$	738.62	\$ 81	
January-19 10/4/2018 9/13/2018 2.80 \$ 0.68 \$	738.62 533.39		92.06

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January-19	10/9/2018	8/22/2018		1.261	2.80	\$ 3.53	\$ 292.79	\$ 325.0
January-19	10/11/2018	8/22/2018		0.172	2.7399			
January-19	11/7/2018	9/14/2018		13.807	2.80		\$ 1,599.04	
January-19	11/12/2018	9/22/2018		.841	2.80		\$ 1,079.30	\$ 1,198.0
January-19	11/12/2018	10/12/2018		5.026 108.473	2.8937		\$ 289.59 \$ 2,922.34	
January-19 January-19	11/16/2018	10/23/2018		2.121	2.89		\$ 2,922.34	\$ 1,021.8
January-19	11/26/2018	10/22/2018		3.698	2.8937		\$ 511.55	
January-19	11/27/2018	10/23/2018		1.612	2.8937		\$ 1,837.48	
January-19	11/28/2018	11/1/2018		0.191	3.4556			
January-19	9/25/2018	8/13/2018		1.024	2.8022	\$ 2.87	\$ 1,087.03	\$ 558.6
January-19	2/19/2018	1/13/2018		0.700	3.0200	\$ 2.11	\$ 8,486.63	\$ 8,486.6
January-19	12/14/2018	11/12/2018		30.476	3.4556	\$ 105.31	\$ 3,641.54	\$ 3,641.5
January-19	12/18/2018	11/15/2018		23.7134681261109	3.4556	\$ 81.94	\$ 4,897.79	\$ 4,897.7
February-19	12/27/2018	12/13/2018		11.238	4.48	\$ 50.35	\$ 2,069.05	\$ 2,069.0
February-19	1/23/2019	1/15/2019		136.356	4.06	\$ 553.61	\$ 3,191.16	\$ 3,191.1
February-19	12/8/2016	10/4/2016		76.5	2.98	\$ 227.97	\$ 2,885.95	\$ 1,838.7
February-19	1/2/2019	12/19/2018		15.7718612306284	4.48		\$ 2,638.21	\$ 1,918.2
February-19	1/3/2019	12/13/2018		0.084	4.4871		\$ 928.23	
February-19	1/8/2019	12/6/2018		41.194289656916	4.4871		\$ 4,303.63	
February-19	1/10/2019	10/25/2018		0.252125339979954	2.8937			
February-19	6/18/2018	8/5/2017 5/28/2018		.433	2.81			
February-19 February-19	7/2/2018	5/15/2018		0.565	2.4132		\$ 599.02	
February-19	8/27/2018	5/31/2018		1.826			\$ 4,426.19	\$ 4,042.5
February-19	8/29/2018	7/26/2018		0.451	2.7083		\$ 1,582.19	\$ 1,404.9
February-19	9/17/2018	8/28/2018		2.149	2.73		\$ 2,548.39	
February-19	9/24/2018	8/23/2018		10.5818775261469	2.73	\$ 28.89	\$ 984.90	\$ 1,093.2
February-19	10/3/2018	8/15/2018		0.187	2.7399	\$ 0.51	\$ 587.01	\$ 536.1
February-19	10/4/2018	9/12/2018		1.703	2.80	\$ 4.77	\$ 3,831.69	\$ 4,253.1
February-19	10/15/2018	9/5/2018		47.429	2.7083	\$ 128.45	\$ 1,751.02	\$ 1,943.6
February-19	11/2/2018	10/12/2018		1.766	2.89	\$ 5.10	\$ 1,407.59	\$ 1,562.4
February-19	11/5/2018	10/9/2018		0.144	2.8937	\$ 0.42	\$ 719.39	\$ 798.5
February-19	12/4/2018	11/9/2018		1.37333234720104	3.4556	\$ 4.75	\$ 965.54	\$ 988.3
February-19	12/18/2018	11/20/2018		14.738	3.4556			
February-19	5/29/2018	5/13/2018		0.797	2.41		\$ 1,578.38	\$ 400.0
February-19	6/12/2018	5/21/2018		0.429 2.16419311876267	2.5792			
February-19 February-19	8/10/2018 9/25/2018	7/10/2018		2.16419311876267	2.7083 5.0300		\$ 860.81 \$ 524.17	
February-19	9/30/2018	8/17/2018		2.246	2.8022		\$ 692.13	\$ 768.2
February-19	10/12/2018	8/6/2018		1.656	2.73		\$ 1,672.12	
February-19	11/8/2018	10/21/2018		17.259	2.89		\$ 834.37	
February-19	11/14/2018	10/30/2018		1.3756250392349	2.80	\$ 3.85	\$ 778.53	\$ 864.1
February-19	11/19/2018	10/3/2018		34.7683323629728	2.8937	\$ 100.61	\$ 4,043.25	\$ 4,488.0
February-19	12/7/2018	11/1/2018		1.288	2.8937	\$ 3.73	\$ 773.94	\$ 775.0
February-19	12/10/2018	10/3/2018		1.51209545059055	2.8937	\$ 4.38	\$ 912.52	\$ 1,012.9
February-19	12/10/2018	10/29/2018		1.832	2.8937	\$ 5.30	\$ 1,971.57	\$ 2,188.4
February-19	11/26/2018	10/23/2018		2.9335846420153	2.8937	\$ 8.49		
February-19	12/17/2018	11/27/2018		0.245				
February-19	1/3/2019	12/13/2018		0.181	4.4871		\$ 1,592.21	
March-19	1/17/2019	11/13/2018		0.837	3.4556			
March-19 March-19	1/21/2019	10/10/2018		3.206 142.941	2.8937 2.8937			
March-19	1/21/2019	11/17/2018		2.786	4.4871		\$ 1,842.85	
March-19	1/21/2019	11/20/2018		1.37051239720374				
March-19	9/10/2018	7/31/2018		5.120				
March-19	5/29/2018	5/13/2018		0.797	2.41		\$ 1,578.38	
March-19	6/12/2018	5/21/2018		0.429				
March-19	8/9/2018	7/6/2018		27.066	2.70		\$ 901.91	
March-19	10/22/2018	7/5/2018		234.247	2.70	\$ 632.47	\$ 7,867.01	\$ 7,239.3
March-19	11/1/2018	9/23/2018		130.653	2.8937	\$ 378.07	\$ 1,777.78	\$ 1,973.3
March-19	12/7/2018	11/1/2018		6.286	2.8937	\$ 18.19	\$ 491.39	\$ 545.4
March-19	12/31/2018	12/13/2018		6.904	4.48	\$ 30.93	\$ 704.69	\$ 782.2
March-19	1/8/2019	12/4/2018		6.132	4.4871	\$ 27.51	\$ 1,017.65	\$ 1,129.5
March-19	1/11/2019	12/13/2018		0.294	4.4871	\$ 1.32	\$ 1,414.91	\$ 1,570.5
March-19	1/17/2019	10/27/2018		0.321	4.4871	\$ 1.44	\$ 892.90	\$ 892.0

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March-19	1/17/2019	10/30/2018	5.49	4.4871	\$ 24.67	\$ 611.60	\$ 678.88
March-19	1/17/2019	11/7/2018	2.39	4.4871	\$ 10.76	\$ 2,527.19	
March-19	11/7/2018	9/18/2018	30.15		\$ 84.50	\$ 851.82	\$ 851.82
March-19	1/8/2019	12/4/2018	9.3502139742079				\$ 2,959.81
March-19	1/17/2019	10/29/2018	11.74			\$ 3,994.91	
March-19	1/17/2019	12/21/2018	0.51			\$ 1,380.72	
March-19	2/12/2019	1/14/2019	11.757641695718			\$ 1,028.09	
March-19	10/1/2018	7/19/2018	84.209688248281			\$ 5,089.16	
March-19 March-19	6/18/2018 8/28/2018	5/28/2018 8/1/2018	35.27 0.18			\$ 1,056.33 \$ 613.35	
March-19	9/24/2018	8/23/2018	12.76			\$ 627.80	\$ 696.86
March-19	11/16/2018	10/23/2018	108.47			\$ 2,922.34	
March-19	11/27/2018	10/21/2018	110.86			\$ 3,293.46	\$ 2,783.21
March-19	12/10/2018	11/18/2018	4.48			\$ 822.84	
March-19	12/21/2018	11/30/2018	0.15	3.4556	\$ 0.53	\$ 869.80	\$ 965.48
April-19	1/21/2019	12/27/2018	26.572959469225	4.4871	\$ 119.24	\$ 2,288.41	\$ 2,288.41
April-19	10/3/2018	8/10/2018	3.05	2 2.7399	\$ 8.36	\$ 784.55	\$ 784.55
April-19	2/11/2019	1/3/2019	10.077978596330	4.0692	\$ 41.01	\$ 954.08	\$ 954.08
April-19	5/29/2018	5/13/2018	0.79	2.41	\$ 1.92	\$ 1,578.38	\$ 300.00
April-19	6/12/2018	5/21/2018	0.42	2.5792	\$ 1.11	\$ 1,250.02	\$ 116.00
April-19	11/6/2018	9/27/2018	10.18	2.8937	\$ 29.46	\$ 3,440.92	\$ 1,792.45
pril-19	11/19/2018	10/5/2018	.85	2.89	\$ 2.47	\$ 1,535.08	\$ 952.19
April-19	11/19/2018	10/15/2018	44.50			\$ 2,099.32	
April-19	1/17/2019	11/7/2018	2.04	4.4871	\$ 9.19	\$ 1,123.97	\$ 1,247.61
April-19	1/17/2019	11/14/2018	3.5375363551031			\$ 1,005.76	
April-19	2/4/2019	1/16/2019	14.01			\$ 2,047.06	
April-19	1/21/2019	10/5/2018	14.04			\$ 565.84	
pril-19	3/1/2019 7/3/2017	2/11/2019	0.34				
pril-19 pril-19	6/18/2018	5/28/2018	35.27			\$ 3,196.74 \$ 1,056.33	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
pril-19	11/13/2018	10/25/2018	16.80			\$ 1,229.58	
pril-19	11/26/2018	10/17/2018	0.53697939281606			\$ 1,885.09	\$ 1,883.00
pril-19	12/5/2018	11/15/2018	5.89				\$ 795.02
April-19	12/10/2018	11/18/2018	4.48	3.4556	\$ 15.51	\$ 822.84	\$ 100.00
April-19	1/17/2019	11/10/2018	6.83	3.4556	\$ 23.62	\$ 918.91	\$ 1,019.99
pril-19	1/21/2019	12/4/2018	72.427420999651	4.4871	\$ 324.99	\$ 3,513.99	\$ 3,900.53
April-19	1/22/2019	10/23/2018	0.92	2.8937	\$ 2.67	\$ 1,366.68	\$ 1,517.01
April-19	12/10/2018	11/18/2018	4.48	3.4556	\$ 15.51	\$ 822.84	\$ 100.00
April-19	3/15/2019	2/28/2019	21.814050938490	3.5553	\$ 77.56	\$ 1,454.03	\$ 1,454.03
April-19	6/11/2018	5/30/2018	.14	2.41	\$ 0.35	\$ 2,067.27	\$ 2,180.97
April-19	6/12/2018	5/21/2018	0.42	2.5792	\$ 1.11	\$ 1,250.02	
April-19	9/6/2018	8/13/2018	5.03	2.70		\$ 1,168.79	
April-19	11/13/2018	8/20/2018	35.61		\$ 97.59	\$ 3,352.87	\$ 3,721.69
April-19	1/8/2019	12/4/2018	9.27				
April-19	1/17/2019	11/14/2018	3.5375363551031				
pril-19 pril-19	1/28/2019 3/5/2019	12/27/2018	3.8609857473648				
pril-19	3/11/2019	2/14/2019	1.47				
May-19	6/18/2018	5/28/2018	35.27				
May-19	9/19/2018	8/30/2018	21.532057207650				
May-19	10/22/2018	9/8/2018	15.681878554726				
May-19	12/10/2018	11/18/2018	4.48				
lay-19	12/21/2018	11/27/2018	0.15220909318692	3.4556			\$ 1,370.43
ay-19	1/14/2019	12/19/2018	1.82	4.4871	\$ 8.17	\$ 7,830.12	\$ 8,012.8
lay-19	1/17/2019	11/14/2018	3.5375363551031	3.4556	\$ 12.22	\$ 1,005.76	\$ 416.39
ay-19	4/3/2019	2/23/2019	3.19	3.5553	\$ 11.34	\$ 789.02	\$ 832.03
ay-19	4/9/2019	10/16/2018	60.229996782847	2.8937	\$ 174.29	\$ 2,698.42	\$ 2,698.42
ay-19	4/9/2019	1/16/2019	118.96297109999	2 4.9900	\$ 593.63	\$ 3,561.65	\$ 3,561.65
ay-19	6/12/2018	5/21/2018	0.42	2.5792	\$ 1.11	\$ 1,250.02	\$ 116.00
ay-19	11/27/2018	9/14/2018	11.33	2.8022	\$ 31.77	\$ 3,996.45	\$ 3,773.51
lay-19	12/31/2018	12/11/2018	214.28	4.48	\$ 960.00	\$ 14,527.96	\$ 11,435.99
lay-19	2/21/2019	2/8/2019	3.12				
ay-19	3/26/2019	2/21/2019	66.752779651243				
ine-19	4/24/2019	3/20/2019	6.9072633555248				
une-19	6/18/2018	5/28/2018	35.27	2.4132	\$ 85.13 \$ 1.37	\$ 1,056.33	\$ 97.71

Exhibit 9 PUBLIC DATA Data has been Excised

Trade Secret Data has been Excised
Page 8 of 8

June-19	12/10/2018	11/18/2018		4.488	3.4556	\$ 15.51	\$ 822.84	\$ 100.00
June-19	1/17/2019	11/15/2018		0.332	3.4556	\$ 1.15	\$ 1,028.41	\$ 1,141.53
June-19	1/22/2019	12/11/2018		132.654	3.4556	\$ 458.40	\$ 2,170.93	\$ 2,409.73
June-19	5/6/2019	4/15/2019		1.222	2.6303	\$ 3.21	\$ 401.64	\$ 401.64
June-19	6/3/2019	4/19/2019		2.716	2.6303	\$ 7.14	\$ 861.72	\$ 861.72
			 TRADE SECRET DATA ENDS					

CenterPoint Energy Minnesota Gas

Schedule of Monthly and Annual Purchased Gas Adjustment Factors of CenterPoint Energy Minnesota Gas For the period from July 1, 2018 to June 30, 2019, and Independent Accountants' Report



Deloitte & Touche LLP

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INDEPENDENT ACCOUNTANTS' REPORT

CenterPoint Energy Minnesota Gas:

We have examined the accompanying Schedule of Monthly and Annual Purchased Gas Adjustment Factors ("the Schedule") of CenterPoint Energy Minnesota Gas (the "Company"), for the period from July 1, 2018 to June 30, 2019 to determine whether it has been calculated in accordance with the criteria established by the Minnesota Public Utilities Commission ("the Commission") Rules 7825.2810 to 7825.2820 and with PGA Clause Riders and Dockets ("Riders and Dockets") approved by the Commission. The Company's management is responsible for calculating the Schedule. Our responsibility is to express an opinion on the Schedule based on our examination.

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

In our opinion, the Schedule presents the monthly and annual purchased gas adjustment factors of the Company for the period from July 1, 2018 to June 30, 2019, as calculated in accordance with the criteria established by the Minnesota Public Utilities Commission Rules 7825.2810 to 7825.2820 governing the information presented, in all material respects.

This report is intended solely for the information and use of the management and board of directors of the Company and the Minnesota Public Utilities Commission and is not intended to be and should not be used by anyone other than these specified parties.

Deloite & Touche LLP

August 28, 2019

CENTERPOINT ENERGY MINNESOTA GAS

SCHEDULE OF MONTHLY AND ANNUAL PURCHASED GAS ADJUSTMENT FACTORS FACTORS (\$/THERM)

YEAR ENDED JUNE 30, 2019

Effective Date	Danidantial	Com-A &	Commercial	Large Genera		Small Volume	•
Effective Date	Residential	Com/Ind B	& Industrial-C	Commodity	Demand	Dual Fuel	Dual Fuel
July 1, 2018	(0.07233)	(0.07233)	(0.07233)	(0.06199)	0.00600	(0.07301)	(0.08408)
August 1, 2018	(0.06917)	(0.06917)	(0.06917)	(0.05883)	0.00600	(0.06985)	(0.08092)
September 1, 2018	(0.04239)	(0.04239)	(0.04239)	(0.05228)	0.00600	(0.05710)	(0.05495)
October 1, 2018	(0.01714)	(0.01714)	(0.01714)	(0.04313)	0.00600	(0.04795)	(0.04580)
November 1, 2018	0.04214	0.04214	0.04214	0.04773	0.04435	0.06009	0.04506
December 1, 2018	0.14529	0.14529	0.14529	0.15088	0.04435	0.16324	0.14821
January 1, 2019	0.10350	0.10350	0.10350	0.10909	0.04435	0.12145	0.10642
February 1, 2019	0.05211	0.05211	0.05211	0.05770	0.04435	0.07005	0.05503
March 1, 2019	0.01217	0.01217	0.01217	0.00638	0.04435	0.01874	0.00371
April 1, 2019	(0.01286)	(0.01286)	(0.01286)	(0.03480)	0.04435	(0.03962)	(0.03747)
May 1, 2019	(0.03820)	(0.03820)	(0.03820)	(0.07716)	0.05315	(0.08198)	(0.07983)
June 1, 2019	(0.04439)	(0.04439)	(0.04439)	(0.06154)	0.05315	(0.06636)	(0.06421)
Annual True-Up Filing June 30, 2019	0.00134	0.00134	0.00134	(0.00249))	0.00056	0.00644

Exhibit 11 – 2019 Natural Gas Market Outlook

CenterPoint Energy has designated this entire document as trade secret. The document meets the definition of trade secret in Minn. Stat. § 13.37, subd. 1(b), as follows: (1) the document was supplied by CenterPoint Energy, the affected organization; (2) CenterPoint Energy has taken all reasonable efforts to maintain the secrecy of the document, including protecting it from disclosure in this proceeding; and (3) the document derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.

In accordance with Minn. Rule 7829.0500, Subp. 3, CenterPoint Energy furnishes the following description of the document:

Nature of the Material: PowerPoint.PDF - summary presentation the Company's Gas Supply plan. Contains market considerations used in preparing 2019 Gas Supply Plan (21 pages). The Gas Supply Plan is filed annually as required in the Company' Financial Instruments docket (The complete 2019 Gas Supply Plan was filed on July 22, 2019 - Docket No. G-008/M-15-912).

<u>Author</u>: CenterPoint Energy Gas Supply Department – inputs from Industry experts, as noted.

Industry advice and opinions are proprietary and confidential - purchased, used internally only with permission

General Import: Provides information on future pricing assumptions, as required.

Date the Document was Prepared: April 26, 2019

Report not included in Public version

	Guile 2010 Booket & 000//						
	Gas Cost 2018 - 2019						
THACK SECRET DATA BEGINS 1042 \$929.90 \$1,042.00 \$1,071.00 \$20.00 \$2,000 \$2	Unauthorized Gas Use		(therms)		Penalty - \$	Total -\$	Highest COG Per Therm *
1,042 980-00 3 1,040-00 15,040-00 15,040-00 16,000-00 16	LTDADE GEORET DATA REGINO	(a)	(b)	(c)	(d)	(e=c+d))	
18 \$10.00 \$310.00 \$34.00 \$30.00	TRADE SECRET DATA BEGINS		–				
2,600 2,388.10 2,574.00 24,000.10 50,000.10							\$0.89244 \$0.89244
Fig. 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,							\$0.89244
S2			87	\$77.64	\$87.00	\$164.64	\$0.89244
1883 51.510.00 51.883.00 53.203.00 50.006 1895 58.585.00 51.785.00 50.006 1895 58.585.00 51.006 52.006 1895 58.585.00 51.006 52.006 1895 58.585.00 51.006 52.006 1895 51.500.00 52.006 52.006 1895 51.500.00 52.006 52.006 1895 51.500.00 52.006 52.006 1895 51.500.00 52.006 52.006 1895 51.500.00 52.006 52.006 1895 51.500.00 52.006 52.006 1895 51.500.00 52.006 52.006 1895 51.500.00 52.006 52.006 1895 51.500.00 52.006 52.006 1895 51.500.00 52.006 1895 51.500.00 52.006 1895 51.500.00 52.006 1895 51.500.00 52.006 1895 51.500.00 52.006 1895 51.500.00 52.006 1895 51.500.00 52.006 1895 51.500.00 52.006 1895 51.500.00 52.006 1895 51.500.00 52.006 1895 51.500.00 52.006 1895 51.500.00 52.006 1895 52.006							\$0.89244 \$0.89244
11			1,693	\$1,510.90	\$1,693.00	\$3,203.90	\$0.89244
96 \$6.67 \$90.00 \$110.07 \$10.00							\$0.89244 \$0.89244
338 228-87 \$335.00 \$383.97 \$305.00 \$383.97 \$305.00				\$4,774.55	\$5,350.00	\$10,124.55	\$0.89244
2,2861 \$2,553.27 \$2,286.10 \$5,414.27 \$60.00			335	\$298.97	\$335.00	\$633.97	\$0.89244
1.00 1.00							\$0.89244 \$0.89244
88 375-88 855-07 \$78.50.00 \$19.01.11 100.00			87	\$77.64	\$87.00	\$164.64	\$0.89244
7.383							\$0.89244 \$0.89244
97 \$86.57 \$7 207.00 \$183.57 \$0.00 \$194.54 \$0.00 \$1,000 \$1,			7,353	\$6,562.11	\$7,353.00	\$13,915.11	\$0.89244
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Both			1,507	\$1,344.91	\$1,507.00	\$2,851.91	\$0.89244
2,253 \$2,010 \$2,253.00 \$4,233.67 \$50.60							\$0.89244 \$0.89244
45 \$40,16 \$45,00 \$81,6			2,253	\$2,010.67	\$2,253.00	\$4,263.67	\$0.89244
							\$0.89244 \$0.89244
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5,163							\$0.89244 \$0.89244
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348 \$310.57 \$348.00 \$656.57 \$0.985 1677 \$1.496.62 \$1.677.00 \$3.173.62 \$0.985 2.299 \$2.051.72 \$2.299.00 \$4.350.72 \$0.985 2.299 \$2.051.72 \$2.299.00 \$4.350.72 \$0.985 2.299 \$2.051.72 \$2.299.00 \$4.350.72 \$0.985 2.214 \$1,083.42 \$1.214.00 \$2.297.42 \$0.985 1107 \$9.817 \$110.00 \$2.297.42 \$0.985 1119 \$106.20 \$119.00 \$2.22.50 \$0.985 119 \$106.20 \$119.00 \$2.22.50 \$0.985 128 \$114.23 \$128.00 \$2.22.50 \$0.985 128 \$144.23 \$128.00 \$2.02.49 \$0.985 3.979 \$3.551.02 \$3.979.00 \$7.530.02 \$0.985 3.979 \$3.551.02 \$3.979.00 \$7.530.02 \$0.985 3.989 \$3.551.02 \$3.979.00 \$7.530.02 \$0.985 3.989 \$3.551.02 \$3.979.00 \$7.530.02 \$0.985 3.989 \$3.551.02 \$3.979.00 \$7.530.02 \$0.985 3.989 \$3.551.02 \$3.979.00 \$7.530.02 \$0.985 3.989 \$3.551.02 \$3.979.00 \$7.530.02 \$0.985 3.989 \$3.551.02 \$3.979.00 \$7.530.02 \$0.985 3.989 \$3.551.02 \$3.979.00 \$7.530.02 \$0.985 3.989 \$3.551.02 \$3.979.00 \$7.530.02 \$0.985 3.989 \$3.551.02 \$3.979.00 \$7.530.02 \$0.985 3.989 \$3.551.02 \$3.979.00 \$7.530.02 3.989 \$3.551.02 \$3.989.00 \$5.65.84 \$0.985 3.989 \$3.566.84 \$2.990.00 \$5.65.84 \$0.985 3.989 \$3.566.84 \$2.990.00 \$5.65.84 \$0.985 3.989 \$3.566.84 \$2.990.00 \$5.65.84 \$0.985 3.989 \$3.566.84 \$3.990.00 \$5.65.84 \$0.985 3.989 \$3.566.84 \$3.990.00 \$5.65.84 \$0.985 3.989 \$3.566.84 \$3.990.00 \$5.65.84 \$0.985 3.980 \$3.989 \$3.560.00 \$3.989 \$3.989 \$3.989 3.980 \$3.989							\$0.89244 \$0.89244
2,299			348	\$310.57	\$348.00	\$658.57	\$0.89244
288 \$265.95 \$298.00 \$563.95 \$0.985 1,214 \$1,083.42 \$1,214.00 \$2,297.42 \$0.865 110 \$88.17 \$110.00 \$208.17 \$0.865 1119 \$106.20 \$119.00 \$225.20 \$0.985 1190 \$106.20 \$119.00 \$225.20 \$0.985 1197 \$95.49 \$107.00 \$202.49 \$0.865 128 \$114.23 \$128.00 \$242.23 \$0.895 288 \$114.23 \$128.00 \$242.23 \$0.895 288 \$3,979.00 \$7,530.02 \$0.895 3,979 \$3,551.02 \$3,979.00 \$7,530.02 \$0.895 536 \$478.35 \$558.00 \$1,014.35 \$0.895 54 \$48.19 \$54.00 \$102.19 \$0.895 54 \$48.19 \$54.00 \$102.19 \$0.895 54 \$48.19 \$54.00 \$102.19 \$0.895 54 \$48.19 \$54.00 \$102.19 \$0.895 55 \$136.54 \$153.00 \$213.85 \$0.895 51 \$136.54 \$153.00 \$223.30 \$0.895 52 \$9 \$266.84 \$299.00 \$565.84 \$0.895 52 \$9 \$266.84 \$299.00 \$565.84 \$0.895 52 \$107.7 \$12.00 \$22.77 \$0.995 52 \$10.77 \$12.00 \$22.77 \$0.995 53 \$33.90 \$52.45 \$33.00 \$52.25 \$0.895 54 \$13.20 \$140.00 \$279.80 \$0.895 55 \$140.71 \$12.00 \$22.71 \$0.895 55 \$140.71 \$12.00 \$22.71 \$0.895 55 \$140.71 \$12.00 \$22.71 \$0.895 55 \$140.71 \$12.00 \$22.71 \$0.895 55 \$140.71 \$12.00 \$22.71 \$0.895 55 \$140.71 \$12.00 \$22.71 \$0.895 55 \$140.71 \$12.00 \$22.71 \$0.895 55 \$140.71 \$1.20 \$22.71 \$0.895 55 \$140.71 \$1.20 \$22.71 \$0.895 55 \$140.71 \$1.20 \$22.71 \$0.895 55 \$140.71 \$1.20 \$22.71 \$0.895 55 \$140.71 \$1.20 \$22.71 \$0.895 55 \$140.71 \$1.20 \$22.71 \$0.895 56 \$15.30 \$146.00 \$276.30 \$0.895 57 \$140.85 \$271.00 \$277.00 \$0.895 58 \$160.71 \$1.40 \$1.20 \$1.40 \$0.895 50 \$140.00 \$3.50.00 \$1.45.01 \$0.895 50 \$140.00 \$3.50.00 \$1.45.01 \$0.895 50 \$140.00 \$3.50.00 \$1.895 50 \$140.00 \$3.50.00 \$1.45.01 \$0.895 50 \$140.00 \$1.45.00 \$1.45.01 \$0.895 50 \$1.20 \$1.45.01 \$							\$0.89244 \$0.89244
110			298	\$265.95	\$298.00	\$563.95	\$0.89244
107 \$95.49 \$107.00 \$202.49 \$0.865 128 \$114.23 \$128.00 \$242.23 \$0.865 128 \$114.23 \$128.00 \$242.23 \$0.865 128 \$114.23 \$128.00 \$242.23 \$0.865 128 \$6,815 \$6,081.98 \$6,815.00 \$12,896.98 \$0.895 3,979 \$3,551.02 \$3,979.00 \$7,530.02 \$0.895 536 \$478.35 \$536.00 \$1,014.35 \$0.895 536 \$478.35 \$536.00 \$101.43 \$50.895 54 \$48.19 \$54.00 \$102.19 \$0.895 54 \$48.19 \$54.00 \$102.19 \$0.895 54 \$48.19 \$54.00 \$39.74 \$0.895 54 \$48.19 \$54.00 \$39.74 \$0.895 51 \$100.85 \$113.00 \$39.74 \$0.895 51 \$100.85 \$113.00 \$39.74 \$0.895 51 \$100.85 \$113.00 \$289.54 \$0.895 51 \$136.64 \$299.00 \$565.84 \$0.895 51 \$102 \$91.03 \$102.00 \$799.03 \$0.895 52 \$2423.87 \$2.716.00 \$579.99 \$0.895 52 \$2423.87 \$2.716.00 \$513.97 \$0.895 51 \$148 \$132.08 \$148.00 \$280.08 \$0.895 51 \$148 \$132.08 \$148.00 \$220.08 \$0.895 51 \$150.74 \$12.00 \$2.291.74 \$0.895 51 \$11.00 \$2.291.74 \$0.895 51 \$146 \$130.30 \$146.00 \$2.291.74 \$0.895 51 \$146 \$130.30 \$146.00 \$2.291.74 \$0.895 52 \$241.85 \$271.00 \$0.513.65 \$0.895 52 \$244.80 \$527.00 \$0.895 53 \$316.03 \$353.00 \$66.83 \$0.895 50 \$448.00 \$502.00 \$0.895 50 \$448.00 \$502.00 \$0.895 50 \$448.00 \$502.00 \$0.895 50 \$448.00 \$502.00 \$0.895 50 \$448.00 \$502.00 \$0.895 50 \$448.00 \$502.00 \$0.895 50 \$448.00 \$502.00 \$0.895 50 \$448.00 \$502.00 \$0.895 50 \$448.00 \$502.00 \$0.895 50 \$448.00 \$502.00 \$0.895 50 \$448.00 \$502.00 \$0.895 50 \$665 \$611.32 \$0.895 50 \$665 \$695.00 \$1.296.32 \$0.895 50 \$665 \$695.00 \$1.425.01 \$0.895 50 \$665 \$695.00 \$1.425.01 \$0.895 50 \$665 \$695.00 \$1.425.01 \$0.895 50 \$665 \$695.00 \$1.425.01 \$0.895 50 \$665 \$695.00 \$1.425.01 \$0.895 50 \$66							\$0.89244 \$0.89244
128			119	\$106.20	\$119.00		\$0.89244
3,979 \$3,551.02 \$3,979.00 \$7,530.02 \$0.890			128	\$114.23	\$128.00	\$242.23	\$0.89244
S36 \$478.35 \$536.00 \$1,014.35 \$1,089.50							\$0.89244 \$0.89244
313 \$279.33 \$313.00 \$592.33 \$0.892			536	\$478.35	\$536.00	\$1,014.35	\$0.89244
21 \$18.74 \$21.00 \$39.74 \$0.89;							\$0.89244 \$0.89244
153			21	\$18.74	\$21.00	\$39.74	\$0.89244
299 \$266.84 \$299.00 \$565.84 \$0.892 102 \$91.03 \$102.00 \$193.03 \$0.892 412 \$367.69 \$412.00 \$779.69 \$0.892 2716 \$2,423.87 \$2,716.00 \$5,139.87 \$0.892 2716 \$2,423.87 \$2,716.00 \$5,139.87 \$0.892 281.071 \$12.00 \$22.71 \$0.892 33 \$29.45 \$33.00 \$62.45 \$0.892 33 \$29.45 \$33.00 \$62.45 \$0.892 34 \$103.03 \$146.00 \$2,291.74 \$0.892 381 \$340.02 \$381.00 \$721.02 \$0.892 381 \$340.02 \$381.00 \$721.02 \$0.892 381 \$340.02 \$381.00 \$721.02 \$0.892 381 \$1,232.46 \$1,381.00 \$2,613.46 \$0.892 502 \$448.00 \$502.00 \$950.00 \$0.892 503 \$448.00 \$502.00 \$950.00 \$0.892 504 \$449.00 \$350.00 \$668.03 \$0.892 505 \$448.00 \$502.00 \$850.00 \$0.892 507 \$449.00 \$449.00 \$449.00 \$449.11 \$0.892 508 \$87.46 \$98.00 \$1425.40 \$0.892 509 \$87.46 \$98.00 \$145.46 \$0.892 500 \$667.7 \$30.00 \$56.77 \$0.892 500 \$867.7 \$30.00 \$1,425.01 \$0.892 501 \$1,888 \$1,684.93 \$1,888.00 \$3,572.93 \$0.892 502 \$488.00 \$3,572.93 \$0.892 503 \$26.77 \$30.00 \$1,425.01 \$0.892 504 \$83.89 \$94.00 \$177.89 \$0.892 505 \$96.00 \$181.67 \$0.892 506 \$85.67 \$96.00 \$181.67 \$0.892 507 \$96 \$85.67 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$96.00 \$181.67 \$0.892 508 \$0.892 \$0.00 \$181.67 \$0.892 508 \$0.892 \$0.892 508 \$0.892 \$0.00 \$181.67 \$0.892 508 \$0.892 \$0.00 \$1.892 508 \$0.892 \$0.00 \$1							\$0.89244 \$0.89244
412			299	\$266.84	\$299.00	\$565.84	\$0.89244 \$0.89244
148			412	\$367.69	\$412.00	\$779.69	\$0.89244
12							\$0.89244 \$0.89244
1,211			12	\$10.71	\$12.00	\$22.71	\$0.89244
146 \$130.30 \$146.00 \$276.30 \$0.892 \$381 \$340.02 \$381.00 \$721.02 \$0.892 \$271 \$241.85 \$271.00 \$512.85 \$0.892 \$271.00 \$512.85 \$0.892 \$271.00 \$512.85 \$0.892 \$271.00 \$512.85 \$0.892 \$271.00 \$512.85 \$0.892 \$271.00 \$512.85 \$0.892 \$0							\$0.89244 \$0.89244
271 \$241.85 \$271.00 \$512.85 \$0.892 1,381 \$1,232.46 \$1,381.00 \$2,613.46 \$0.892 502 \$448.00 \$502.00 \$950.00 \$0.892 685 \$611.32 \$685.00 \$1,296.32 \$0.892 353 \$315.03 \$353.00 \$668.03 \$0.892 449 \$400.71 \$449.00 \$849.71 \$0.892 343 \$306.11 \$343.00 \$649.11 \$0.892 98 \$87.46 \$98.00 \$185.46 \$0.892 98 \$87.46 \$98.00 \$185.46 \$0.892 30 \$26.77 \$30.00 \$56.77 \$0.892 31 \$3672.01 \$753.00 \$56.77 \$0.892 32 \$1,888 \$1,684.93 \$1,886.00 \$3,572.93 \$0.892 33 \$1,684.93 \$1,886.00 \$3,572.93 \$0.892 96 \$85.67 \$990.00 \$181.67 \$0.892 94 \$83.89 \$94.00 \$177.89 \$0.892 95 \$67 \$90.00 \$181.67 \$0.892 96 \$85.67 \$990.00 \$187.69 \$0.892 97 \$83.89 \$94.00 \$177.89 \$0.892 98 \$87.46 \$990.00 \$177.89 \$0.892 99 \$83.89 \$94.00 \$177.89 \$0.892 90 \$85.89 \$94.00 \$177.89 \$0.892 90 \$85.89 \$94.00 \$177.89 \$0.892 90 \$85.90 \$94.00 \$177.80 90 \$85.90 \$9			146	\$130.30	\$146.00	\$276.30	\$0.89244
1,381 \$1,232.46 \$1,381.00 \$2,613.46 \$0.89; 502 \$448.00 \$502.00 \$950.00 \$0.89; 685 \$611.32 \$685.00 \$1,296.32 \$0.89; 353 \$315.03 \$353.00 \$668.03 \$0.89; 449 \$400.71 \$449.00 \$849.71 \$0.89; 343 \$306.11 \$343.00 \$649.11 \$0.89; 98 \$87.46 \$98.00 \$185.46 \$0.89; 753 \$672.01 \$753.00 \$1,425.01 \$0.89; 30 \$26.77 \$30.00 \$56.77 \$0.89; 1,888 \$1,684.93 \$1,886.00 \$3,572.93 \$0.89; 96 \$85.67 \$96.00 \$181.67 \$0.89; 94 \$83.89 \$94.00 \$177.89 \$0.89;			271	\$241.85	\$271.00	\$512.85	\$0.89244 \$0.89244
685					\$1,381.00	\$2,613.46	\$0.89244 \$0.89244
449 \$400.71 \$449.00 \$849.71 \$0.892			685	\$611.32	\$685.00	\$1,296.32	\$0.89244
343 \$306.11 \$343.00 \$649.11 \$0.892 98 \$87.46 \$98.00 \$185.46 \$0.892 753 \$672.01 \$753.00 \$1.425.01 \$0.892 30 \$26.77 \$30.00 \$56.77 \$0.892 1,888 \$1,684.93 \$1,886.00 \$3,572.93 \$0.892 96 \$85.67 \$96.00 \$181.67 \$0.892 99 \$83.89 \$94.00 \$177.89 \$0.892							\$0.89244 \$0.89244
753 \$672.01 \$753.00 \$1,425.01 \$0.892 30 \$26.77 \$30.00 \$56.77 \$0.892 1,888 \$1,684.93 \$1,880.00 \$56.77 \$0.892 96 \$85.67 \$96.00 \$181.67 \$0.892 96 \$83.89 \$94.00 \$177.89 \$0.892			343	\$306.11	\$343.00	\$649.11	\$0.89244
30 \$26.77 \$30.00 \$56.77 \$0.892 1,888 \$1,684.93 \$1,886.00 \$3,572.93 \$0.892 96 \$85.67 \$96.00 \$181.67 \$0.892 94 \$83.89 \$94.00 \$177.89 \$0.892							\$0.89244 \$0.89244
96 \$85.67 \$96.00 \$181.67 \$0.892 94 \$83.89 \$94.00 \$177.89 \$0.892			30	\$26.77	\$30.00	\$56.77	\$0.89244
			96	\$85.67	\$96.00	\$181.67	\$0.89244 \$0.89244
1 114 EDD1 ED E1 444 DD E2 400 E0 E0 000							\$0.89244 \$0.89244

CenterPoint Energy
Minnesota Rule 7825.2810
July 2018 - June 2019 Docket G-999/AA-19-401

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228	\$203.48	\$228.00	\$431.48	\$0.89244
670	\$597.93	\$670.00	\$1,267.93	\$0.89244
56 880	\$49.98 \$785.35	\$56.00 \$880.00	\$105.98 \$1,665.35	\$0.89244 \$0.89244
314	\$280.23	\$314.00	\$594.23	\$0.89244
32	\$28.56	\$32.00	\$60.56	\$0.89244
3,899	\$3,479.62	\$3,899.00	\$7,378.62	\$0.89244
311	\$277.55	\$311.00	\$588.55	\$0.89244
3,703	\$3,304.71	\$3,703.00	\$7,007.71	\$0.89244
8,110	\$7,237.69	\$8,110.00	\$15,347.69	\$0.89244
41 332	\$36.59 \$296.29	\$41.00 \$332.00	\$77.59 \$628.29	\$0.89244 \$0.89244
343	\$306.11	\$343.00	\$649.11	\$0.89244
24	\$21.42	\$24.00	\$45.42	\$0.89244
613	\$547.07	\$613.00	\$1,160.07	\$0.89244
34	\$30.34	\$34.00	\$64.34	\$0.89244
721	\$643.45	\$721.00	\$1,364.45	\$0.89244
409	\$365.01 \$1.561.77	\$409.00 \$1.750.00	\$774.01	\$0.89244 \$0.89244
1,750 64	\$1,561.77	\$1,750.00	\$3,311.77 \$121.12	\$0.89244
72	\$64.25	\$72.00	\$136.25	\$0.89244
1,543	\$1,377.03	\$1,543.00	\$2,920.03	\$0.89244
25	\$22.31	\$25.00	\$47.31	\$0.89244
1,256	\$1,120.90	\$1,256.00	\$2,376.90	\$0.89244
224	\$199.91	\$224.00	\$423.91	\$0.89244
588 812	\$524.75	\$588.00	\$1,112.75 \$1,536.66	\$0.89244
53	\$724.66 \$47.30	\$812.00 \$53.00	\$1,00.30	\$0.89244 \$0.89244
170	\$151.71	\$170.00	\$321.71	\$0.89244
10,429	\$9,307.26	\$10,429.00	\$19,736.26	\$0.89244
974	\$869.24	\$974.00	\$1,843.24	\$0.89244
34	\$30.34	\$34.00	\$64.34	\$0.89244
663	\$591.69	\$663.00	\$1,254.69	\$0.89244
727 527	\$648.80 \$470.32	\$727.00 \$527.00	\$1,375.80 \$997.32	\$0.89244 \$0.89244
103	\$91.92	\$103.00	\$194.92	\$0.89244
574	\$512.26	\$574.00	\$1,086.26	\$0.89244
40	\$35.70	\$40.00	\$75.70	\$0.89244
3,035	\$2,708.55	\$3,035.00	\$5,743.55	\$0.89244
133	\$118.69	\$133.00	\$251.69	\$0.89244
322 534	\$287.37	\$322.00	\$609.37	\$0.89244 \$0.89244
717	\$476.56 \$639.88	\$534.00 \$717.00	\$1,010.56 \$1,356.88	\$0.89244 \$0.89244
2,108	\$1,881.26	\$2,108.00	\$3,989.26	\$0.89244
320	\$285.58	\$320.00	\$605.58	\$0.89244
457	\$407.85	\$457.00	\$864.85	\$0.89244
142	\$126.73	\$142.00	\$268.73	\$0.89244
37	\$33.02	\$37.00	\$70.02	\$0.89244
35 519	\$31.24	\$35.00	\$66.24	\$0.89244
100	\$463.18 \$89.24	\$519.00 \$100.00	\$982.18 \$189.24	\$0.89244 \$0.89244
117	\$104.42	\$117.00	\$221.42	\$0.89244
46	\$41.05	\$46.00	\$87.05	\$0.89244
116	\$103.52	\$116.00	\$219.52	\$0.89244
278	\$248.10	\$278.00	\$526.10	\$0.89244
1,558 85	\$1,390.42 \$75.86	\$1,558.00 \$85.00	\$2,948.42 \$160.86	\$0.89244 \$0.89244
302	\$269.52	\$302.00	\$571.52	\$0.89244
313	\$279.33	\$313.00	\$592.33	\$0.89244
35	\$31.23	\$35.00	\$66.23	\$0.89244
74	\$66.04	\$74.00	\$140.04	\$0.89244
1,716	\$1,531.43	\$1,716.00	\$3,247.43	\$0.89244
160	\$142.79	\$160.00	\$302.79	\$0.89244
148 1,755	\$132.08 \$1,566.23	\$148.00 \$1,755.00	\$280.08 \$3,321.23	\$0.89244 \$0.89244
504	\$449.79	\$504.00	\$953.79	\$0.89244
11	\$9.82	\$11.00	\$20.82	\$0.89244
25	\$22.31	\$25.00	\$47.31	\$0.89244
28	\$24.99	\$28.00	\$52.99	\$0.89244
1,151	\$1,027.20	\$1,151.00	\$2,178.20	\$0.89244
311 459	\$277.55 \$409.63	\$311.00 \$459.00	\$588.55 \$868.63	\$0.89244 \$0.89244
439	\$391.78	\$439.00	\$830.78	\$0.89244
39	\$34.81	\$39.00	\$73.81	\$0.89244
1,478	\$1,319.03	\$1,478.00	\$2,797.03	\$0.89244
47	\$41.94	\$47.00	\$88.94	\$0.89244
12	\$10.71	\$12.00	\$22.71	\$0.89244
282	\$251.67	\$282.00	\$533.67	\$0.89244
21 641	\$18.74 \$572.05	\$21.00 \$641.00	\$39.74 \$1,213.05	\$0.89244 \$0.89244
238	\$212.40	\$238.00	\$450.40	\$0.89244
1,041	\$929.03	\$1,041.00	\$1,970.03	\$0.89244
39	\$34.81	\$39.00	\$73.81	\$0.89244
401	\$357.87	\$401.00	\$758.87	\$0.89244
4,410	\$3,935.66 \$65.15	\$4,410.00 \$73.00	\$8,345.66 \$138.15	\$0.89244
73 938	\$65.15 \$837.11	\$73.00 \$938.00	\$138.15 \$1,775.11	\$0.89244 \$0.89244
334	\$298.07	\$334.00	\$632.07	\$0.89244
16	\$14.28	\$16.00	\$30.28	\$0.89244
26	\$23.20	\$26.00	\$49.20	\$0.89244
1,136	\$1,013.81	\$1,136.00	\$2,149.81	\$0.89244
136	\$121.37	\$136.00	\$257.37	\$0.89244
51 463	\$45.51 \$413.20	\$51.00 \$463.00	\$96.51 \$876.20	\$0.89244 \$0.89244
2,311	\$413.20	\$463.00	\$4,373.43	\$0.89244 \$0.89244
14	\$2,002.43	\$14.00	\$26.49	\$0.89244
442	\$394.46	\$442.00	\$836.46	\$0.89244
359	\$320.39	\$359.00	\$679.39	\$0.89244
13,728	\$12,251.42	\$13,728.00	\$25,979.42	\$0.89244
13	\$11.60	\$13.00	\$24.60	\$0.89244
692 32	\$617.57 \$28.56	\$692.00 \$32.00	\$1,309.57 \$60.56	\$0.89244 \$0.89244
32 1,468	\$28.56 \$1,310.10	\$32.00 \$1,468.00	\$60.56 \$2,778.10	\$0.89244 \$0.89244
796	\$710.38	\$796.00	\$1,506.38	\$0.89244
695	\$620.25	\$695.00	\$1,315.25	\$0.89244

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209	\$186.52	\$209.00	\$395.52	\$0.89244
325	\$290.04	\$325.00	\$615.04	\$0.89244
467 32	\$416.77	\$467.00	\$883.77	\$0.89244
1,261	\$28.56 \$1,125.37	\$32.00 \$1,261.00	\$60.56 \$2,386.37	\$0.89244 \$0.89244
1,201	\$10.71	\$12.00	\$22.71	\$0.89244
55	\$49.08	\$55.00	\$104.08	\$0.89244
2,458	\$2,193.62	\$2,458.00	\$4,651.62	\$0.89244
36	\$32.13	\$36.00	\$68.13	\$0.89244
104	\$92.81	\$104.00	\$196.81	\$0.89244
1,304 1,365	\$1,163.74 \$1,218.18	\$1,304.00 \$1,365.00	\$2,467.74 \$2,583.18	\$0.89244 \$0.89244
411	\$366.79	\$411.00	\$777.79	\$0.89244
926	\$826.40	\$926.00	\$1,752.40	\$0.89244
1,016	\$906.72	\$1,016.00	\$1,922.72	\$0.89244
95	\$84.78	\$95.00	\$179.78	\$0.89244
1,875	\$1,673.33	\$1,875.00	\$3,548.33	\$0.89244
420 700	\$374.82 \$624.71	\$420.00 \$700.00	\$794.82	\$0.89244 \$0.89244
34	\$30.34	\$34.00	\$1,324.71 \$64.34	\$0.89244
1,900	\$1,695.64	\$1,900.00	\$3,595.64	\$0.89244
225	\$200.80	\$225.00	\$425.80	\$0.89244
426	\$380.18	\$426.00	\$806.18	\$0.89244
316	\$282.01	\$316.00	\$598.01	\$0.89244
15	\$13.39	\$15.00 \$18.00	\$28.39	\$0.89244
18 160	\$16.06 \$142.79	\$18.00 \$160.00	\$34.06 \$302.79	\$0.89244 \$0.89244
45	\$40.16	\$45.00	\$85.16	\$0.89244
3,842	\$3,428.75	\$3,842.00	\$7,270.75	\$0.89244
4,012	\$3,580.47	\$4,012.00	\$7,592.47	\$0.89244
3,349	\$2,988.78	\$3,349.00	\$6,337.78	\$0.89244
50	\$44.62	\$50.00	\$94.62	\$0.89244
26 250	\$23.20 \$223.11	\$26.00 \$250.00	\$49.20 \$473.11	\$0.89244 \$0.89244
77	\$68.72	\$77.00	\$145.72	\$0.89244
46	\$41.05	\$46.00	\$87.05	\$0.89244
21	\$18.74	\$21.00	\$39.74	\$0.89244
85	\$75.86	\$85.00	\$160.86	\$0.89244
107	\$95.49	\$107.00	\$202.49	\$0.89244
1,120	\$999.53 \$555.10	\$1,120.00	\$2,119.53 \$1,177.10	\$0.89244 \$0.89244
622 2,088	\$1,863.41	\$622.00 \$2,088.00	\$3,951.41	\$0.89244
7,150	\$6,380.95	\$7,150.00	\$13,530.95	\$0.89244
374	\$333.77	\$374.00	\$707.77	\$0.89244
60	\$53.55	\$60.00	\$113.55	\$0.89244
973	\$868.34	\$973.00	\$1,841.34	\$0.89244
106	\$94.60	\$106.00	\$200.60	\$0.89244
41 46	\$36.59 \$41.05	\$41.00 \$46.00	\$77.59 \$87.05	\$0.89244 \$0.89244
1,088	\$970.97	\$1,088.00	\$2,058.97	\$0.89244
445	\$397.14	\$445.00	\$842.14	\$0.89244
754	\$672.90	\$754.00	\$1,426.90	\$0.89244
446	\$398.03	\$446.00	\$844.03	\$0.89244
42	\$37.48	\$42.00	\$79.48	\$0.89244
455 11	\$406.06 \$9.82	\$455.00 \$11.00	\$861.06 \$20.82	\$0.89244 \$0.89244
1,411	\$1,259.23	\$1,411.00	\$2,670.23	\$0.89244
1,427	\$1,273.51	\$1,427.00	\$2,700.51	\$0.89244
1,908	\$1,702.78	\$1,908.00	\$3,610.78	\$0.89244
2,127	\$1,898.22	\$2,127.00	\$4,025.22	\$0.89244
23	\$20.53	\$23.00	\$43.53	\$0.89244
2,174 75	\$1,940.16 \$66.93	\$2,174.00 \$75.00	\$4,114.16 \$141.93	\$0.89244 \$0.89244
28	\$24.99	\$28.00	\$52.99	\$0.89244
3,505	\$3,128.00	\$3,505.00	\$6,633.00	\$0.89244
225	\$200.80	\$225.00	\$425.80	\$0.89244
166	\$148.15	\$166.00	\$314.15	\$0.89244
394	\$351.62	\$394.00	\$745.62	\$0.89244
196 209	\$174.92 \$186.52	\$196.00 \$209.00	\$370.92 \$395.52	\$0.89244 \$0.89244
1,278	\$1,140.54	\$1,278.00	\$2,418.54	\$0.89244
12	\$10.71	\$12.00	\$22.71	\$0.89244
1,230	\$1,097.70	\$1,230.00	\$2,327.70	\$0.89244
557	\$497.09	\$557.00	\$1,054.09	\$0.89244
149	\$132.97 \$880.84	\$149.00 \$987.00	\$281.97 \$1.867.84	\$0.89244
987 70	\$880.84 \$62.47	\$987.00 \$70.00	\$1,867.84 \$132.47	\$0.89244 \$0.89244
6,453	\$5,758.92	\$6,453.00	\$12,211.92	\$0.89244
193	\$172.24	\$193.00	\$365.24	\$0.89244
60	\$53.55	\$60.00	\$113.55	\$0.89244
151	\$134.76	\$151.00	\$285.76	\$0.89244
158	\$141.01	\$158.00	\$299.01	\$0.89244
64 800	\$57.12 \$713.95	\$64.00 \$800.00	\$121.12 \$1,513.95	\$0.89244 \$0.89244
1,273	\$1,136.08	\$1,273.00	\$2,409.08	\$0.89244
1,536	\$1,370.79	\$1,536.00	\$2,906.79	\$0.89244
5,622	\$5,017.30	\$5,622.00	\$10,639.30	\$0.89244
364	\$324.85	\$364.00	\$688.85	\$0.89244
28,033	\$25,017.77	\$28,033.00	\$53,050.77	\$0.89244
12,462 185	\$11,121.59 \$165.10	\$12,462.00 \$185.00	\$23,583.59 \$350.10	\$0.89244 \$0.89244
56	\$49.98	\$56.00	\$350.10 \$105.98	\$0.89244
20	\$17.85	\$20.00	\$37.85	\$0.89244
53	\$47.30	\$53.00	\$100.30	\$0.89244
38	\$33.91	\$38.00	\$71.91	\$0.89244
806	\$719.31	\$806.00	\$1,525.31	\$0.89244
349 11	\$311.46 \$9.82	\$349.00 \$11.00	\$660.46 \$20.82	\$0.89244 \$0.89244
66	\$9.82 \$58.90	\$11.00 \$66.00	\$20.82 \$124.90	\$0.89244 \$0.89244
12	\$10.71	\$12.00	\$22.71	\$0.89244
150	\$133.87	\$150.00	\$283.87	\$0.89244
826	\$737.16	\$826.00	\$1,563.16	\$0.89244
124	\$110.67	\$124.00	\$234.67	\$0.89244
3,333	\$2,974.50	\$3,333.00	\$6,307.50 \$1,612.36	\$0.89244
852	\$760.36	\$852.00	\$1,612.36	\$0.89244

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80	\$71.40	\$80.00	\$151.40	\$0.89244
1,159	\$1,034.34	\$1,159.00	\$2,193.34	\$0.89244
173 202	\$154.39 \$180.27	\$173.00 \$202.00	\$327.39 \$382.27	\$0.89244 \$0.89244
15	\$13.39	\$15.00	\$28.39	\$0.89244
17	\$15.17	\$17.00	\$32.17	\$0.89244
56	\$49.98	\$56.00	\$105.98	\$0.89244
69 639	\$61.58 \$570.27	\$69.00 \$639.00	\$130.58 \$1,209.27	\$0.89244 \$0.89244
163	\$145.47	\$163.00	\$308.47	\$0.89244
1,105	\$986.15	\$1,105.00	\$2,091.15	\$0.89244
76	\$67.83	\$76.00	\$143.83	\$0.89244
49 32	\$43.73 \$28.56	\$49.00 \$32.00	\$92.73 \$60.56	\$0.89244 \$0.89244
326	\$290.94	\$326.00	\$616.94	\$0.89244
29	\$25.88	\$29.00	\$54.88	\$0.89244
77 29	\$68.71 \$25.88	\$77.00	\$145.71	\$0.89244
313	\$25.66	\$29.00 \$313.00	\$54.88 \$592.33	\$0.89244 \$0.89244
45	\$40.16	\$45.00	\$85.16	\$0.89244
901	\$804.09	\$901.00	\$1,705.09	\$0.89244
741 860	\$661.30 \$767.50	\$741.00 \$860.00	\$1,402.30 \$1,627.50	\$0.89244 \$0.89244
375	\$334.67	\$375.00	\$709.67	\$0.89244
55	\$49.09	\$55.00	\$104.09	\$0.89244
165	\$147.25	\$165.00	\$312.25	\$0.89244
43 56	\$38.37 \$49.98	\$43.00 \$56.00	\$81.37 \$105.98	\$0.89244 \$0.89244
528	\$471.21	\$528.00	\$999.21	\$0.89244
116	\$103.52	\$116.00	\$219.52	\$0.89244
45	\$40.16	\$45.00	\$85.16	\$0.89244
140 731	\$124.94 \$652.37	\$140.00 \$731.00	\$264.94 \$1,383.37	\$0.89244 \$0.89244
618	\$551.53	\$618.00	\$1,169.53	\$0.89244
2,925	\$2,610.39	\$2,925.00	\$5,535.39	\$0.89244
562	\$501.55	\$562.00	\$1,063.55	\$0.89244
101 58	\$90.14 \$51.76	\$101.00 \$58.00	\$191.14 \$109.76	\$0.89244 \$0.89244
21	\$18.74	\$21.00	\$39.74	\$0.89244
34	\$30.34	\$34.00	\$64.34	\$0.89244
150	\$133.87	\$150.00	\$283.87	\$0.89244
663 2,098	\$591.69 \$1,872.34	\$663.00 \$2,098.00	\$1,254.69 \$3,970.34	\$0.89244 \$0.89244
11	\$9.82	\$11.00	\$20.82	\$0.89244
24	\$21.42	\$24.00	\$45.42	\$0.89244
183	\$163.32 \$455.14	\$183.00	\$346.32	\$0.89244
510 446	\$455.14 \$398.03	\$510.00 \$446.00	\$965.14 \$844.03	\$0.89244 \$0.89244
23	\$20.53	\$23.00	\$43.53	\$0.89244
672	\$599.72	\$672.00	\$1,271.72	\$0.89244
70 2,046	\$62.47 \$1,825.93	\$70.00 \$2,046.00	\$132.47 \$3,871.93	\$0.89244 \$0.89244
832	\$742.51	\$832.00	\$1,574.51	\$0.89244
71	\$63.36	\$71.00	\$134.36	\$0.89244
107	\$95.49	\$107.00	\$202.49	\$0.89244
236 21	\$210.62 \$18.74	\$236.00 \$21.00	\$446.62 \$39.74	\$0.89244 \$0.89244
112	\$99.95	\$112.00	\$211.95	\$0.89244
59	\$52.65	\$59.00	\$111.65	\$0.89244
730 232	\$651.48 \$207.05	\$730.00 \$232.00	\$1,381.48 \$439.05	\$0.89244 \$0.89244
481	\$429.26	\$481.00	\$910.26	\$0.89244
733	\$654.16	\$733.00	\$1,387.16	\$0.89244
84	\$74.96	\$84.00	\$158.96	\$0.89244
564 84	\$503.34 \$74.96	\$564.00 \$84.00	\$1,067.34 \$158.96	\$0.89244 \$0.89244
27	\$24.10	\$27.00	\$51.10	\$0.89244
823	\$734.48	\$823.00	\$1,557.48	\$0.89244
815	\$727.34	\$815.00	\$1,542.34	\$0.89244
201 2,561	\$179.38 \$2,285.54	\$201.00 \$2,561.00	\$380.38 \$4,846.54	\$0.89244 \$0.89244
15	\$13.39	\$15.00	\$28.39	\$0.89244
43	\$38.37	\$43.00	\$81.37	\$0.89244
32 9,383	\$28.56 \$8,373.76	\$32.00 \$9,383.00	\$60.56 \$17,756.76	\$0.89244 \$0.89244
68	\$60.69	\$68.00	\$128.69	\$0.89244
33	\$29.45	\$33.00	\$62.45	\$0.89244
556	\$496.20	\$556.00	\$1,052.20	\$0.89244
1,368 3,163	\$1,220.86 \$2,822.79	\$1,368.00 \$3,163.00	\$2,588.86 \$5,985.79	\$0.89244 \$0.89244
265	\$236.50	\$265.00	\$501.50	\$0.89244
1,142	\$1,019.17	\$1,142.00	\$2,161.17	\$0.89244
963	\$859.42	\$963.00	\$1,822.42	\$0.89244
649 712	\$579.19 \$635.42	\$649.00 \$712.00	\$1,228.19 \$1,347.42	\$0.89244 \$0.89244
1,419	\$1,266.37	\$1,419.00	\$2,685.37	\$0.89244
36	\$32.13	\$36.00	\$68.13	\$0.89244
1,092	\$974.54 \$824.61	\$1,092.00 \$924.00	\$2,066.54 \$1,748.61	\$0.89244 \$0.89244
924 132	\$824.61 \$117.80	\$924.00 \$132.00	\$1,748.61 \$249.80	\$0.89244 \$0.89244
991	\$884.41	\$991.00	\$1,875.41	\$0.89244
5,571	\$4,971.78	\$5,571.00	\$10,542.78	\$0.89244
291 3,566	\$259.70 \$3,182.44	\$291.00 \$3,566.00	\$550.70 \$6,748.44	\$0.89244 \$0.89244
1,285	\$3,182.44 \$1,146.79	\$3,566.00	\$5,748.44 \$2,431.79	\$0.89244 \$0.89244
576	\$514.05	\$576.00	\$1,090.05	\$0.89244
1,375	\$1,227.11	\$1,375.00	\$2,602.11	\$0.89244
378 2,874	\$337.34 \$2,564.87	\$378.00 \$2,874.00	\$715.34 \$5,438.87	\$0.89244 \$0.89244
4,682	\$4,178.40	\$4,682.00	\$8,860.40	\$0.89244
621	\$554.21	\$621.00	\$1,175.21	\$0.89244
417	\$372.15	\$417.00	\$789.15 \$4.400.20	\$0.89244
2,330 1,752	\$2,079.39 \$1,563.55	\$2,330.00 \$1,752.00	\$4,409.39 \$3,315.55	\$0.89244 \$0.89244
2,444	\$2,181.12	\$2,444.00	\$4,625.12	\$0.89244

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20	\$17.85	\$20.00	\$37.85	\$0.89244
11	\$9.82	\$11.00	\$20.82	\$0.89244
106	\$94.60	\$106.00	\$200.60	\$0.89244
1,659 27	\$1,480.56 \$24.10	\$1,659.00 \$27.00	\$3,139.56 \$51.10	\$0.89244 \$0.89244
574	\$512.26	\$574.00	\$1,086.26	\$0.89244
998	\$890.66	\$998.00	\$1,888.66	\$0.89244
649	\$579.19	\$649.00	\$1,228.19	\$0.89244
2,567 73	\$2,290.89 \$65.15	\$2,567.00 \$73.00	\$4,857.89 \$138.15	\$0.89244 \$0.89244
1,056	\$942.42	\$1,056.00	\$1,998.42	\$0.89244
9,205	\$8,214.91	\$9,205.00	\$17,419.91	\$0.89244
3,002	\$2,679.10	\$3,002.00	\$5,681.10	\$0.89244
30	\$26.77	\$30.00	\$56.77	\$0.89244
3,570 522	\$3,186.01 \$465.85	\$3,570.00 \$522.00	\$6,756.01 \$987.85	\$0.89244 \$0.89244
1,079	\$962.94	\$1,079.00	\$2,041.94	\$0.89244
274	\$244.53	\$274.00	\$518.53	\$0.89244
450	\$401.60	\$450.00	\$851.60	\$0.89244
575 6,139	\$513.15 \$5,478.69	\$575.00 \$6,139.00	\$1,088.15 \$11,617.69	\$0.89244 \$0.89244
1,213	\$1,082.53	\$1,213.00	\$2,295.53	\$0.89244
8,002	\$7,141.30	\$8,002.00	\$15,143.30	\$0.89244
1,195	\$1,066.47	\$1,195.00	\$2,261.47	\$0.89244
11 618	\$9.82 \$551.53	\$11.00 \$618.00	\$20.82 \$1,169.53	\$0.89244 \$0.89244
19	\$16.96	\$618.00 \$19.00	\$35.96	\$0.89244
674	\$601.50	\$674.00	\$1,275.50	\$0.89244
2,892	\$2,580.94	\$2,892.00	\$5,472.94	\$0.89244
234	\$208.83	\$234.00 \$492.00	\$442.83	\$0.89244
492 67	\$439.08 \$59.79	\$67.00	\$931.08 \$126.79	\$0.89244 \$0.89244
1,732	\$1,545.71	\$1,732.00	\$3,277.71	\$0.89244
1,467	\$1,309.21	\$1,467.00	\$2,776.21	\$0.89244
235	\$209.72	\$235.00	\$444.72	\$0.89244
99 293	\$88.35 \$261.48	\$99.00 \$293.00	\$187.35 \$554.48	\$0.89244 \$0.89244
103	\$91.92	\$103.00	\$194.92	\$0.89244
1,428	\$1,274.40	\$1,428.00	\$2,702.40	\$0.89244
871	\$777.32	\$871.00	\$1,648.32	\$0.89244
843 1 180	\$752.33 \$1.053.08	\$843.00 \$1.180.00	\$1,595.33 \$2,233.08	\$0.89244 \$0.89244
1,180 2,414	\$1,053.08 \$2,154.35	\$1,180.00 \$2,414.00	\$2,233.08 \$4,568.35	\$0.89244 \$0.89244
271	\$241.85	\$271.00	\$512.85	\$0.89244
757	\$675.58	\$757.00	\$1,432.58	\$0.89244
10,328	\$9,217.12	\$10,328.00	\$19,545.12	\$0.89244
473 554	\$422.12 \$494.41	\$473.00 \$554.00	\$895.12 \$1,048.41	\$0.89244 \$0.89244
479	\$427.48	\$479.00	\$906.48	\$0.89244
700	\$624.71	\$700.00	\$1,324.71	\$0.89244
1,135	\$1,012.92	\$1,135.00	\$2,147.92	\$0.89244
394 2,024	\$351.62 \$1,806.30	\$394.00 \$2,024.00	\$745.62 \$3,830.30	\$0.89244 \$0.89244
1,571	\$1,402.02	\$1,571.00	\$2,973.02	\$0.89244
1,370	\$1,222.64	\$1,370.00	\$2,592.64	\$0.89244
2,125	\$1,896.44	\$2,125.00	\$4,021.44	\$0.89244
1,591 438	\$1,419.87 \$390.89	\$1,591.00 \$438.00	\$3,010.87 \$828.89	\$0.89244 \$0.89244
82	\$73.18	\$82.00	\$155.18	\$0.89244
293	\$261.48	\$293.00	\$554.48	\$0.89244
1,329	\$1,186.05	\$1,329.00	\$2,515.05	\$0.89244
15 537	\$13.39 \$479.24	\$15.00 \$537.00	\$28.39 \$1,016.24	\$0.89244 \$0.89244
172	\$153.50	\$172.00	\$325.50	\$0.89244
765	\$682.72	\$765.00	\$1,447.72	\$0.89244
237	\$211.51	\$237.00	\$448.51	\$0.89244
697 1,476	\$622.03 \$1,317.24	\$697.00 \$1,476.00	\$1,319.03 \$2,793.24	\$0.89244 \$0.89244
82	\$73.18	\$82.00	\$155.18	\$0.89244
519	\$463.18	\$519.00	\$982.18	\$0.89244
1,827	\$1,630.49	\$1,827.00	\$3,457.49	\$0.89244
1,153 13	\$1,028.98 \$11.60	\$1,153.00 \$13.00	\$2,181.98 \$24.60	\$0.89244 \$0.89244
41	\$36.59	\$41.00	\$77.59	\$0.89244
1,644	\$1,467.17	\$1,644.00	\$3,111.17	\$0.89244
740	\$660.41	\$740.00	\$1,400.41	\$0.89244
1,287 36	\$1,148.57 \$32.13	\$1,287.00 \$36.00	\$2,435.57 \$68.13	\$0.89244 \$0.89244
267	\$238.28	\$267.00	\$505.28	\$0.89244
8,777	\$7,832.95	\$8,777.00	\$16,609.95	\$0.89244
822 559	\$733.59 \$498.87	\$822.00	\$1,555.59 \$1,057.97	\$0.89244 \$0.89244
1,556	\$496.67 \$1,388.64	\$559.00 \$1,556.00	\$1,057.87 \$2,944.64	\$0.89244
2,356	\$2,102.59	\$2,356.00	\$4,458.59	\$0.89244
311	\$277.55	\$311.00	\$588.55	\$0.89244
394	\$351.62	\$394.00	\$745.62 \$5.234.40	\$0.89244
2,766 28	\$2,468.49 \$24.99	\$2,766.00 \$28.00	\$5,234.49 \$52.99	\$0.89244 \$0.89244
610	\$544.39	\$610.00	\$1,154.39	\$0.89244
1,454	\$1,297.61	\$1,454.00	\$2,751.61	\$0.89244
1,856	\$1,656.37 \$1,277.07	\$1,856.00 \$1,432.00	\$3,512.37	\$0.89244
1,432 584	\$1,277.97 \$521.18	\$1,432.00 \$584.00	\$2,709.97 \$1,105.18	\$0.89244 \$0.89244
20	\$17.85	\$20.00	\$37.85	\$0.89244
603	\$538.14	\$603.00	\$1,141.14	\$0.89244
194 151	\$173.13 \$134.76	\$194.00 \$151.00	\$367.13 \$285.76	\$0.89244
151 514	\$134.76 \$458.71	\$151.00 \$514.00	\$285.76 \$972.71	\$0.89244 \$0.89244
4,297	\$3,834.81	\$4,297.00	\$8,131.81	\$0.89244
111	\$99.06	\$111.00	\$210.06	\$0.89244
11 1 357	\$9.82 \$1.211.04	\$11.00 \$1.357.00	\$20.82 \$2.568.04	\$0.89244
1,357 25	\$1,211.04 \$22.31	\$1,357.00 \$25.00	\$2,568.04 \$47.31	\$0.89244 \$0.89244
400	\$356.98	\$400.00	\$756.98	\$0.89244
847	\$755.90	\$847.00	\$1,602.90	\$0.89244

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		8,423	\$7,517.02	\$8,423.00	\$15,940.02	\$0.89244
		21	\$18.74	\$21.00	\$39.74	\$0.89244
		11,371	\$10,147.94	\$11,371.00	\$21,518.94	\$0.89244
		212	\$189.20	\$212.00	\$401.20	\$0.89244
		9,003	\$8,034.64	\$9,003.00	\$17,037.64	\$0.89244
		216	\$192.77	\$216.00	\$408.77	\$0.89244
		87	\$77.64	\$87.00	\$164.64	\$0.89244
		936	\$835.32	\$936.00	\$1,771.32	\$0.89244
		29	\$25.88	\$29.00	\$54.88	\$0.89244
		436	\$389.10	\$436.00	\$825.10	\$0.89244
		140	\$124.94	\$140.00	\$264.94	\$0.89244
		968	\$863.88	\$968.00	\$1,831.88	\$0.89244
		267	\$238.28	\$267.00	\$505.28	\$0.89244
		14	\$12.49	\$14.00	\$26.49	\$0.89244
		51	\$45.51	\$51.00	\$96.51	\$0.89244
		202	\$180.27	\$202.00	\$382.27	\$0.89244
		53				
			\$47.30	\$53.00	\$100.30	\$0.89244
		45	\$40.16	\$45.00	\$85.16	\$0.89244
		9,272	\$8,274.70	\$9,272.00	\$17,546.70	\$0.89244
		2,772	\$2,473.84	\$2,772.00	\$5,245.84	\$0.89244
		6,870		\$6,870.00	\$13,001.06	
			\$6,131.06			\$0.89244
		743	\$663.08	\$743.00	\$1,406.08	\$0.89244
		122	\$108.88	\$122.00	\$230.88	\$0.89244
		11,795	\$10,526.33	\$11,795.00	\$22,321.33	\$0.89244
		185	\$165.10	\$185.00	\$350.10	\$0.89244
		2,474	\$2,207.90	\$2,474.00	\$4,681.90	\$0.89244
		80	\$71.40	\$80.00	\$151.40	\$0.89244
		1,198	\$1,069.14	\$1,198.00	\$2,267.14	\$0.89244
		4,526	\$4,039.18	\$4,526.00	\$8,565.18	\$0.89244
		817	\$729.12	\$817.00	\$1,546.12	\$0.89244
		2,202	\$1,965.15	\$2,202.00	\$4,167.15	\$0.89244
		318	\$283.80	\$318.00	\$601.80	\$0.89244
		452	\$403.38	\$452.00	\$855.38	\$0.89244
		1,040	\$928.14	\$1,040.00	\$1,968.14	\$0.89244
		109	\$97.28	\$109.00	\$206.28	\$0.89244
		1,316	\$1,174.45	\$1,316.00	\$2,490.45	\$0.89244
		36	\$32.13	\$36.00	\$68.13	\$0.89244
		1,074	\$958.48	\$1,074.00	\$2,032.48	\$0.89244
		1,810	\$1,615.32	\$1,810.00	\$3,425.32	\$0.89244
		115	\$102.63	\$115.00	\$217.63	\$0.89244
		443	\$395.35	\$443.00	\$838.35	\$0.89244
		198	\$176.70	\$198.00	\$374.70	\$0.89244
		1,374	\$1,226.21	\$1,374.00	\$2,600.21	\$0.89244
		4,020	\$3,587.61	\$4,020.00	\$7,607.61	\$0.89244
		180	\$160.64	\$180.00	\$340.64	\$0.89244
		1,115	\$995.07	\$1,115.00	\$2,110.07	\$0.89244
		5,038	\$4,496.11	\$5,038.00	\$9,534.11	\$0.89244
		128	\$114.23	\$128.00	\$242.23	\$0.89244
		2,422	\$2,161.49	\$2,422.00	\$4,583.49	\$0.89244
		48	\$42.84	\$48.00	\$90.84	\$0.89244
		1,271	\$1,134.29	\$1,271.00	\$2,405.29	\$0.89244
		10,201	\$9,103.78	\$10,201.00	\$19,304.78	\$0.89244
		21	\$18.74	\$21.00	\$39.74	\$0.89244
		25	\$22.31	\$25.00	\$47.31	\$0.89244
		548	\$489.06	\$548.00	\$1,037.06	\$0.89244
		21	\$18.74	\$21.00	\$39.74	\$0.89244
		344	\$307.00	\$344.00	\$651.00	\$0.89244
-		327	\$291.83	\$327.00	\$618.83	\$0.89244
		1,025	\$914.75	\$1,025.00	\$1,939.75	\$0.89244
		1,447	\$1,291.36	\$1,447.00	\$2,738.36	\$0.89244
		385	\$343.59	\$385.00	\$728.59	\$0.89244
		117	\$104.42	\$117.00	\$221.42	\$0.89244
					*··-	******
		43	\$38.37	\$43.00	\$81.37	\$0.89244
		2,329	\$2,078.49	\$2,329.00	\$4,407.49	\$0.89244
		1,950	\$1,740.26	\$1,950.00	\$3,690.26	\$0.89244
		647	\$577.41	\$647.00	\$1,224.41	\$0.89244
		768	\$685.39	\$768.00	\$1,453.39	\$0.89244
		1,914	\$1,708.13	\$1,914.00	\$3,622.13	\$0.89244
		217	\$193.66	\$217.00	\$410.66	\$0.89244
		697	\$622.03	\$697.00	\$1,319.03	\$0.89244
		1,569	\$1,400.24	\$1,569.00	\$2,969.24	\$0.89244
		15	\$13.39	\$15.00	\$28.39	\$0.89244
		1,990	\$1,775.96	\$1,990.00	\$3,765.96	\$0.89244
		1,094	\$976.33	\$1,094.00	\$2,070.33	\$0.89244
		16	\$14.28	\$16.00	\$30.28	\$0.89244
	TRADE SECRET DATA ENDS]	l ·š	J20	4.0.00	400.20	, J.002 14
	IRADE SECREI DATA ENDS J	L				
Total		658.815	\$ 587,952.91	\$658.815.00	\$ 1,246,767.91	

CenterPoint Energy Minnesota Rule 7825.2810 July 20 #8st Mane 2019 Docke

FBst Nume 2019 Docket	G-299/MAn 29-401	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
David	Aafedt	daafedt@winthrop.com	Winthrop & Weinstine, P.A.	Suite 3500, 225 South Sixth Street Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_15-424_PUC Official
Tamie A.	Aberle	tamie.aberle@mdu.com	Great Plains Natural Gas Co.	400 North Fourth Street Bismarck, ND 585014092	Electronic Service	No	OFF_SL_15-424_PUC Official
Kenneth	Baker	Ken.Baker@walmart.com	Wal-Mart Stores, Inc.	2001 SE 10th St. Bentonville, AR 72716-5530	Electronic Service	No	OFF_SL_15-424_PUC Official
Ryan	Barlow	Ryan.Barlow@ag.state.mn. us	Office of the Attorney General-RUD	445 Minnesota Street Bremer Tower, Suite 1 St. Paul, Minnesota 55101	Electronic Service 400	No	OFF_SL_15-424_PUC Official
James J.	Bertrand	james.bertrand@stinson.co m	Stinson Leonard Street LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-424_PUC Official
Brenda A.	Bjorklund	brenda.bjorklund@centerp ointenergy.com	CenterPoint Energy	505 Nicollet Mall Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-424_PUC Official
William A.	Blazar	bblazar@mnchamber.com	Minnesota Chamber Of Commerce	Suite 1500 400 Robert Street Nor St. Paul, MN 55101	Electronic Service th	No	OFF_SL_15-424_PUC Official
C. lan	Brown	office@gasworkerslocal340 .com	United Association	Gas Workers Local 340 312 Central Ave SW Minneapolis, MN 55414	Electronic Service	No	OFF_SL_15-424_PUC Official
James	Canaday	james.canaday@ag.state. mn.us	Office of the Attorney General-RUD	Suite 1400 445 Minnesota St. St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_15-424_PUC Official
Steve W.	Chriss	Stephen.chriss@walmart.c	Wal-Mart	2001 SE 10th St. Bentonville, AR 72716-5530	Electronic Service	No	OFF_SL_15-424_PUC Official

1F8ist Alume 2019 Docket G	- 229/MAn 19-401	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.st ate.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1800	Electronic Service	Yes	OFF_SL_15-424_I Official
				St. Paul, MN 55101			
Leigh	Currie	lcurrie@mncenter.org	Minnesota Center for Environmental Advocacy	26 E. Exchange St., Suite 206 St. Paul,	Electronic Service	No	OFF_SL_15-424_P Official
				Minnesota 55101			
lan	Dobson	residential.utilities@ag.stat e.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_15-424_P Official
Marie	Doyle	marie.doyle@centerpointen ergy.com	CenterPoint Energy	505 Nicollet Mall P O Box 59038 Minneapolis, MN 554590038	Electronic Service	No	OFF_SL_15-424_P Official
Ronald B.	Edelstein	ron.edelstein@gastechnolo gy.org	GTI	1700 S Mount Prospect Rd Des Plains, IL 60018	Electronic Service	No	OFF_SL_15-424_P Official
Sharon	Ferguson	sharon.ferguson@state.mn .us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_15-424_P Official
Edward	Garvey	garveyed@aol.com	Residence	32 Lawton St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_15-424_P Official
Kimberly	Hellwig	kimberly.hellwig@stoel.co m	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-424_P Official
Annete	Henkel	mui@mnutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St.Paul, MN 55101	Electronic Service	No	OFF_SL_15-424_P Official

First Number 2019 Doc	ocket G- <u>999/M-Am</u> 19-401	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Bruce L.	Hoffarber	bhoffarber@usenergyservic es.com	U.S. Energy Services, Inc.	605 Highway 169 N Ste 1200 Plymouth, MN 55441	Electronic Service	No	OFF_SL_15-424 Official
Mary	Holly	mholly@winthrop.com	Winthrop & Weinstine, P.A.	225 S Sixth St Ste 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-424 Official
Linda	Jensen	linda.s.jensen@ag.state.m n.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_15-424 Official
Nicolle	Kupser	nkupser@greatermngas.co m	Greater Minnesota Gas, Inc.	202 South Main Street P.O. Box 68 Le Sueur, MN 56058	Electronic Service	No	OFF_SL_15-424_ Official
Roger	Leider	roger@mnpropane.org	Minnesota Propane Association	PO Box 220 209 N Run River Dr Princeton, MN 55371	Electronic Service	No	OFF_SL_15-424_ Official
Eric	Lipman	eric.lipman@state.mn.us	Office of Administrative Hearings	PO Box 64620 St. Paul, MN 551640620	Electronic Service	No	OFF_SL_15-424_ Official
Michael	Loeffler	mike.loeffler@nngco.com	Northern Natural Gas Co.	CORP HQ, 714 1111 So. 103rd Stree Omaha, NE 681241000	Electronic Service	No	OFF_SL_15-424 Official
Peter	Madsen	peter.madsen@ag.state.m n.us	Office of the Attorney General-DOC	Bremer Tower, Suite 1800 445 Minnesota Street St. Paul, Minnesota 55101	Electronic Service	Yes	OFF_SL_15-424_ Official
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_15-424_ Official

F&rst Numbe 2019 Docket (3- 229 /Man 19-401	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Joseph	Meyer	joseph.meyer@ag.state.mn .us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St Paul, MN 55101-2131	Electronic Service	No	OFF_SL_15-424_F Official
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_15-424_P Official
Andrew	Moratzka	andrew.moratzka@stoel.co m	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-424_P Official
Mike	OConnor	moconnor@ibewlocal949.o rg	Local 949 IBEW	12908 Nicollet Ave S Burnsville, MN 55337	Electronic Service	No	OFF_SL_15-424_P Official
Greg	Palmer	gpalmer@greatermngas.co m	Greater Minnesota Gas, Inc.	PO Box 68 202 South Main Street Le Sueur, MN 56058	Electronic Service	No	OFF_SL_15-424_P Official
LauraSue	Schlatter	LauraSue.Schlatter@state. mn.us	Office of Administrative Hearings	PO Box 64620 St. Paul, MN 55164-0620	Paper Service	Yes	OFF_SL_15-424_P Official
Janet	Shaddix Elling	jshaddix@janetshaddix.co m	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN 55423	Paper Service	Yes	OFF_SL_15-424_Pl Official
Peggy	Sorum	peggy.sorum@centerpointe nergy.com	CenterPoint Energy	505 Nicollet Mall Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-424_Pl Official
James M.	Strommen	jstrommen@kennedy- graven.com	Kennedy & Graven, Chartered	470 U.S. Bank Plaza 200 South Sixth Stree Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-424_Pl Official
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_15-424_P Official

CenterPoint Energy Minne<u>sota Rule 7825.2810</u>

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1≓8ist Numbe 2019 Docket 0	3- 239 / Mah 19-401	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Samantha	Williams	swilliams@nrdc.org	Natural Resources Defense Council	20 N. Wacker Drive Ste 1600 Chicago, IL 60606	Electronic Service	No	OFF_SL_15-424_PUC Official
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_15-424_PUC Official
Jonathan	Wolfgram	Jonathan.Wolfgram@state. mn.us	Office of Pipeline Safety	Minnesota Department of Public Safety 445 Minnesota Street 147 St. Paul, MN 55101-1547	Electronic Service Suite	No	OFF_SL_15-424_PUC Official
Scott	Zemke	szemke@capsh.org	Community Action Partnership	of Suburban Hennepin 8800 Highway 7, Ste. St. Louis Park, MN 55426	Electronic Service 401	No	OFF_SL_15-424_PUC Official

CenterPoint Energy Minnesota Rule 7825.2810 July 20 First Mane 2019 Docke

#8 _{st} Nume 2019 Docket (3- 999/MAn e9-401	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Tamie A.	Aberle	tamie.aberle@mdu.com	Great Plains Natural Gas Co.	400 North Fourth Street Bismarck, ND 585014092	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
Kristine	Anderson	kanderson@greatermngas. com	Greater Minnesota Gas, Inc.	202 S. Main Street Le Sueur, MN 56058	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
Kenneth	Baker	Ken.Baker@walmart.com	Wal-Mart Stores, Inc.	2001 SE 10th St. Bentonville, AR 72716-5530	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
Ryan	Barlow	Ryan.Barlow@ag.state.mn. us	Office of the Attorney General-RUD	445 Minnesota Street Bremer Tower, Suite 1 St. Paul, Minnesota 55101	Electronic Service 400	Yes	OFF_SL_17-285_17-285 Official CC Service List
Carolyn	Berninger	cberninger@mncenter.org	Minnesota Center for Environmental Advocacy	26 E. Exchange St., Suite 206 St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
James J.	Bertrand	james.bertrand@stinson.co m	Stinson Leonard Street LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
Brenda A.	Bjorklund	brenda.bjorklund@centerp ointenergy.com	CenterPoint Energy	505 Nicollet Mall Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
William A.	Blazar	bblazar@mnchamber.com	Minnesota Chamber Of Commerce	Suite 1500 400 Robert Street Nor St. Paul, MN 55101	Electronic Service th	No	OFF_SL_17-285_17-285 Official CC Service List
Lizzie	Brodeen Kuo	lbrodeen-kuo@kennedy- graven.com	Kennedy & Graven	470 US Bank Plaza 200 S Sixth St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
C. lan	Brown	office@gasworkerslocal340 .com	United Association	Gas Workers Local 340 312 Central Ave SW Minneapolis, MN 55414	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List

CenterPoint Energy Minnesota Rule 7825.2810 July 20 #8st Mane 2019 Docke

ø ‡	Bst Nume 2019 Docket G	- 229 /Mah-19-401	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
J	ames	Canaday	james.canaday@ag.state. mn.us	Office of the Attorney General-RUD	Suite 1400 445 Minnesota St. St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_17-285_17-285 Official CC Service List
S	Steve W.	Chriss	Stephen.chriss@walmart.c	Wal-Mart	2001 SE 10th St. Bentonville, AR 72716-5530	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
C	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_17-285_17-285 Official CC Service List
li	an	Dobson	residential.utilities@ag.stat e.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_17-285_17-285 Official CC Service List
N	Marie	Doyle	marie.doyle@centerpointen ergy.com	CenterPoint Energy	505 Nicollet Mall P O Box 59038 Minneapolis, MN 554590038	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
F	Ronald B.	Edelstein	ron.edelstein@gastechnology.org	GTI	1700 S Mount Prospect Rd Des Plains, IL 60018	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
S	Sharon	Ferguson	sharon.ferguson@state.mn .us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	Yes	OFF_SL_17-285_17-285 Official CC Service List
E	dward	Garvey	garveyed@aol.com	Residence	32 Lawton St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
F	Robert	Harding	robert.harding@state.mn.u s	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_17-285_17-285 Official CC Service List

#Brst Aldanne 2019 Doci	ket G- 299/M-M-1 9-401	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Kimberly	Hellwig	kimberly.hellwig@stoel.co m	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-285_17-28 Official CC Service List
Annete	Henkel	mui@mnutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St.Paul, MN 55101	Electronic Service	No	OFF_SL_17-285_17-28 Official CC Service List
Katherine	Hinderlie	katherine.hinderlie@ag.stat e.mn.us	Office of the Attorney General-DOC	445 Minnesota St Suite 1800 St. Paul, MN 55101-2134	Electronic Service	Yes	OFF_SL_17-285_17-28 Official CC Service List
Bruce L.	Hoffarber	bhoffarber@usenergyservic es.com	U.S. Energy Services, Inc.	605 Highway 169 N Ste 1200 Plymouth, MN 55441	Electronic Service	No	OFF_SL_17-285_17-28 Official CC Service List
Mary	Holly	mholly@winthrop.com	Winthrop & Weinstine, P.A.	225 S Sixth St Ste 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-285_17-28 Official CC Service List
Linda	Jensen	linda.s.jensen@ag.state.m n.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_17-285_17-28 Official CC Service List
Nicolle	Kupser	nkupser@greatermngas.co m	Greater Minnesota Gas, Inc.	202 South Main Street P.O. Box 68 Le Sueur, MN 56058	Electronic Service	No	OFF_SL_17-285_17-28 Official CC Service List
Roger	Leider	roger@mnpropane.org	Minnesota Propane Association	PO Box 220 209 N Run River Dr Princeton, MN 55371	Electronic Service	No	OFF_SL_17-285_17-28 Official CC Service List
Eric	Lindberg	elindberg@mncenter.org	Minnesota Center for Environmental Advacacy	26 E Exchange St Ste 206 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_17-285_17-2 Official CC Service List

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201=18 _{st} Number 20	019 Docket G-299/M-19-401	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Michael	Loeffler	mike.loeffler@nngco.com	Northern Natural Gas Co.	CORP HQ, 714 1111 So. 103rd Street Omaha, NE 681241000	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
Peter	Madsen	peter.madsen@ag.state.m n.us	Office of the Attorney General-DOC	Bremer Tower, Suite 1800 445 Minnesota Street St. Paul, Minnesota 55101	Electronic Service	Yes	OFF_SL_17-285 Official CC Service List
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
Joseph	Meyer	joseph.meyer@ag.state.mn .us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St Paul, MN 55101-2131	Electronic Service	Yes	OFF_SL_17-285_17-285 Official CC Service List
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_17-285 Official CC Service List
Andrew	Moratzka	andrew.moratzka@stoel.co m	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
Samantha	Norris	samanthanorris@alliantene rgy.com	Interstate Power and Light Company	200 1st Street SE PO Box 351 Cedar Rapids, IA 524060351	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
Mike	OConnor	moconnor@ibewlocal949.org	Local 949 IBEW	12908 Nicollet Ave S Burnsville, MN 55337	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
Jeff	Oxley	jeff.oxley@state.mn.us	Office of Administrative Hearings	600 North Robert Street St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_17-285_17-285 Official CC Service List
Greg	Palmer	gpalmer@greatermngas.co m	Greater Minnesota Gas, Inc.	PO Box 68 202 South Main Stree Le Sueur, MN 56058	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List

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July 20	#86st Number 2019	Doc

FBst Nume 2019 Docket C	- 239 / Man 19-401	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Adam	Pyles	adam.pyles@centerpointen ergy.com	CenterPoint Energy	800 LaSalle Avenue PO Box 59038 Minneapolis, MN 554590038	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
LauraSue	Schlatter	LauraSue.Schlatter@state. mn.us	Office of Administrative Hearings	PO Box 64620 St. Paul, MN 55164-0620	Electronic Service	Yes	OFF_SL_17-285_17-285 Official CC Service List
Elizabeth	Schmiesing	eschmiesing@winthrop.co m	Winthrop & Weinstine, P.A.	225 South Sixth Street Suite 3500 Minneapolis, MN 55402	Electronic Service	Yes	OFF_SL_17-285_17-285 Official CC Service List
Janet	Shaddix Elling	jshaddix@janetshaddix.co m	Shaddix And Associates	7400 Lyndale Ave S Ste 190 Richfield, MN 55423	Paper Service	Yes	OFF_SL_17-285_17-285 Official CC Service List
Peggy	Sorum	peggy.sorum@centerpointe nergy.com	CenterPoint Energy	505 Nicollet Mall Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
James M.	Strommen	jstrommen@kennedy- graven.com	Kennedy & Graven, Chartered	470 U.S. Bank Plaza 200 South Sixth Stree Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	Yes	OFF_SL_17-285_17-285 Official CC Service List
Samantha	Williams	swilliams@nrdc.org	Natural Resources Defense Council	20 N. Wacker Drive Ste 1600 Chicago, IL 60606	Electronic Service	No	OFF_SL_17-285_17-285 Official CC Service List

CenterPoint Energy Minne<u>sota Rule 7825.2810</u>

July 2

20	#8ist Nume 2019 Docket G	- 229 /Man 19-401	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
	Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine	225 South Sixth Street, Suite 3500 Minneapolis, MN 55402	Electronic Service		OFF_SL_17-285_17-285 Official CC Service List
	Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service		OFF_SL_17-285_17-285 Official CC Service List
	Jonathan	Wolfgram	Jonathan.Wolfgram@state. mn.us	Office of Pipeline Safety	Minnesota Department of Public Safety 445 Minnesota Street 147 St. Paul, MN 55101-1547			OFF_SL_17-285_17-285 Official CC Service List
	Scott	Zemke	szemke@capsh.org	Community Action Partnership	of Suburban Hennepin 8800 Highway 7, Ste. St. Louis Park, MN 55426			OFF_SL_17-285_17-285 Official CC Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Tamie A.	Aberle	tamie.aberle@mdu.com	Great Plains Natural Gas Co.	400 North Fourth Street Bismarck, ND 585014092	Electronic Service	No	OFF_SL_19-401_AA-19- 401
Kristine	Anderson	kanderson@greatermngas. com	Greater Minnesota Gas, Inc.	202 S. Main Street Le Sueur, MN 56058	Electronic Service	No	OFF_SL_19-401_AA-19- 401
Steven	Clay	Steven.Clay@CenterPoint Energy.com	CenterPoint Energy Minnesota Gas	505 Nicollet Mall Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-401_AA-19- 401
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_19-401_AA-19- 401
Marie	Doyle	marie.doyle@centerpointen ergy.com	CenterPoint Energy	505 Nicollet Mall P O Box 59038 Minneapolis, MN 554590038	Electronic Service	No	OFF_SL_19-401_AA-19- 401
Sharon	Ferguson	sharon.ferguson@state.mn .us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_19-401_AA-19- 401
Brian	Gardow	bgardow@greatermngas.c om	Greater Minnesota Gas, Inc.	PO Box 68 Le Sueur, MN 56058	Electronic Service	No	OFF_SL_19-401_AA-19- 401
Nicolle	Kupser	nkupser@greatermngas.co m	Greater Minnesota Gas, Inc.	202 South Main Street P.O. Box 68 Le Sueur, MN 56058	Electronic Service	No	OFF_SL_19-401_AA-19- 401
Greg	Palmer	gpalmer@greatermngas.co m	Greater Minnesota Gas, Inc.	PO Box 68 202 South Main Street Le Sueur, MN 56058	Electronic Service	No	OFF_SL_19-401_AA-19- 401
Lisa	Peterson	lisa.r.peterson@xcelenergy .com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-401_AA-19- 401

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