COMMERCE DEPARTMENT

January 3, 2019 **PUBLIC DOCUMENT**

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
Saint Paul, Minnesota 55101-2147

RE: **PUBLIC Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. G011/M-19-497

Dear Mr. Wolf:

Attached are the **PUBLIC** Comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

> Minnesota Energy Resources Corporation's (MERC or the Company) Request for Change in Demand Units (Petition) for its Consolidated Purchased Gas Adjustment (PGA) area.

The Petition was filed on August 1, 2019 by:

> Mary Wolter
> Director—Gas Regulatory Planning & Policy
> 2685 145th Street West
> Rosemount, MN 55068

The Petition was supplemented on November 1, 2019 by:

> Joylyn Hoffman Malueg
> Project Specialist 3
> 2685 145th Street West
> Rosemount, MN 55068

Based on its review, the Department recommends that the Minnesota Public Utilities Commission (Commission) approve recovery of MERC's demand costs through the monthly PGA effective November 1, 2019. The Department withholds recommendation regarding the Company's total entitlement level pending the provision of additional information in reply comments.

The Department is available to answer any questions that the Commission may have.

Sincerely,

/s/ ADAM J. HEINEN
Rates Analyst

AH/ar
Attachment

COMMERCE DEPARTMENT

Before the Minnesota Public Utilities Commission

TRADE SECRET Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. G011/M-19-497

I. INTRODUCTION

Pursuant to Minnesota Rules 7825.2910, subpart 2,[1] Minnesota Energy Resources Corporation (MERC or the Company) filed a petition on August 1, 2019 requesting a change in demand[2] units (Petition) for its customers served off the Consolidated Purchased Gas Adjustment (PGA) system (MERC-Consolidated). MERC requested that the Minnesota Public Utilities Commission (Commission) approve changes in the Company's recovery of the overall level of contracted capacity. MERC-Consolidated serves customers located along three interstate pipelines: Great Lakes Gas Transmission (Great Lakes or GLGT), Viking Gas Transmission Company (Viking or VGT), and Centra Minnesota Pipelines (Centra).

On November 1, 2019, MERC made its November Supplemental Filing (Supplement) detailing final entitlement levels for the 2019-2020 heating season. The Supplement includes final updated demand rates and commodity pricing. The Company did not change its total entitlement level, but the Supplement does reflect updated final futures contracts, storage positions, and call options for the 2019-2020 heating season.

Using a similar design-day calculation methodology as has been used in the past, MERC proposed to increase its total design-day by 312 Dekatherms (Dkt)/day. In terms of capacity, MERC proposed to maintain its current entitlement level of 57,949 Dkt/day approved for the last heating season, resulting in an estimated reserve margin of approximately 2.06 percent. MERC proposed no changes to non-design-day deliverable contracts such as storage and balancing contracts.

Since there are no changes to the Company's proposed entitlement level or non-design-day deliverable contracts, there are no demand rate changes proposed in this filing.

II. DEPARTMENT ANALYSIS

The Minnesota Department of Commerce, Division of Energy Resources (Department) provides the following detailed analysis of the Company's Petition and its impact on MERC's ratepayers. The Department's analysis of the Company's request includes the following:

- MERC's Proposed Changes to the Entitlement Level and to Non-Capacity Items;
- Design-Day Requirements;
- Reserve Margin;
- Distribution Planning; and
- PGA Cost Recovery Proposals.

[1] "Filing upon a change in demand. Gas utilities shall file for a change in demand to increase or decrease demand, to redistribute demand percentages among classes, or to exchange one form of demand for another."
[2] Also called entitlement, capacity, or transportation on the pipeline.

The Department discusses these topics separately below.

A. MERC'S PROPOSED CHANGES TO THE ENTITLEMENT LEVEL AND TO NON-CAPACITY ITEMS

1. Changes to the Entitlement Level

As an initial matter, the Department confirms that, as required by the Commission's Ordering Point No. 9 of its April 28, 2016 Order in Docket Nos. G011/M-15-722, G011/M-15-723, and G011/M-15-724, MERC provided separate data on its summer and winter demand entitlements. As indicated in Department Attachments 1 and 2, and noted above, the Company did not propose changes to its total entitlement level from the previous demand entitlement filing.

Based on its design-day and reserve margin analyses in Sections II.C and II.D below, the Department concludes that MERC's proposed level of demand entitlement is likely appropriate; however, the Department observed potential concerns with the Company's entitlement level for customers served off the Viking pipeline. The Department discusses these concerns in Section II.C below.

2. Changes to Non-Capacity Items

MERC did not propose changes to its non-capacity items in this demand entitlement filing. The Department notes that storage can be used as part of an integrated hedging plan to reduce baseload winter gas purchases and potentially lower the number of hedging instruments.

B. DESIGN-DAY REQUIREMENT

As indicated in Department Attachment 1 and Petition Attachment 3, the Company proposed to increase its total design-day in Dkt as follows:

Table 1: MERC-Consolidated Design-Day Levels

November 1, 2019 Filing	Previous Design Day (Dkt)	Proposed Design Day (Dkt)	Design Day Changes (Dkt)	% Change from Previous Year
Centra	9,137	9,464	327	3.58%
Great Lakes	30,186	30,025	(161)	(0.53)%
Viking	17,147	17,293	146	0.85%
Total Consolidated	56,470	56,782	312	0.55%

MERC used a similar approach to what it used in last year's filing for its design-day analysis. As a result of MERC's telemetry program making it possible for all interruptible customer to have daily metered data, the Company no longer estimates peak-day impact from interruptible customers served on the MERC-Consolidated system. MERC obtained the daily large volume transportation, interruptible, and joint-interruptible volumes by pipeline and weather station (Data A). In addition, MERC obtained daily small volume interruptible volumes by pipeline and weather station (Data B). MERC then calculated

daily firm volumes by subtracting both Data A and Data B from the total throughput volumes.[3] The Company's design-day analysis is based Ordinary Least Squares (OLS) regression and daily heating season (December, January, February) data over the period from December 2016 to February 2019. Since MERC's Consolidated PGA service territory serves customers on three separate pipelines and separate parts of Minnesota, the Company conducted four separate regression models for the various parts of the Consolidated-PGA area. MERC used Adjusted Heating Degree Days (AHDD)[4] and various other determinants (*e.g.,* month, day of the week, holiday) to estimate daily heating season consumption for each weather station area. The Department reviewed each of MERC's design-day regression models, and concluded that the signs of the determinant coefficients are appropriate and the scale of the coefficients appear reasonable. The Department also notes that the Commission required MERC in past demand entitlement orders to verify and make various necessary adjustments to its regression analyses. The Department reviewed the Company's models and supporting information and confirms that MERC complied with the Commission's various orders.

During the last heating season, MERC's service territory, and the entire state of Minnesota, experienced a significant cold weather outbreak in late January and early February. This cold weather event marked the coldest conditions since the 1995-1996 heating season, and the Company included information and a discussion regarding this event in its Petition.[5] On an AHDD basis, the cold weather event last heating season was the coldest weather on record for all of MERC's weather stations except Fargo and International Falls.

Table 2: January 2019 Cold Weather Data

Station	Date	Avg. Temp	Avg. Wind Speed (mph)	HDD65	AHDD65	AHDD65-1[6]
Bemidji	1/29/2019	-32	14	97	110	84
Cloquet	1/29/2019	-24	16	89	103	74
Fargo	1/18/1996	-16	34	81	109	85
International Falls	2/2/1996	-34	8	99	107	107
Minneapolis	1/29/2019	-20	17	85	100	71
Rochester	1/29/2019	-20	21	85	104	76
Worthington	1/29/2019	-20	21	85	103	81
Ortonville	1/29/2019	-23	14	88	101	77

[3] Petition, Attachment 12, Pages 2-3.
[4] AHDD incorporates the impacts of wind into the weather determinant used to estimate peak day consumption. MERC has historically used AHDD in its design-day analysis.
[5] Petition, Attachment 12, Pages 3-5.
[6] AHDD65 conditions on the day prior.

In previous demand entitlement filings, the Company's planning objective was based on the coldest day in AHDD for each of MERC's regional regression models. The Company did, however, include weather on the day prior to the coldest day in its design-day regression analysis. It appears that MERC slightly modified its planning objective in this demand entitlement filing by considering the day prior to the coldest day (AHDD65-1) when determining whether a specific date represents the planning objective for a weather station. MERC provided the following explanation in its Petition: [7]

> While the January 2019 cold weather outbreak was significant, it was not considered to be as severe as the weather conditions experienced in 1996. With the exception of Worthington, the 1996 weather conditions overall were colder when considering both the current day and the prior day weather conditions.

The Company's modification results in the following planning objective data for the various weather stations used in its design-day analysis.

Table 3: MERC Planning Objective Data

Station	Date	Avg. Temp	Avg. Wind Speed (mph)	HDD65	AHDD65	AHDD65-1
Bemidji	2/1/1996	-34	8	99	107	94
Cloquet	2/2/1996	-31	7	96	103	100
Fargo	1/18/1996	-16	34	81	109	85
International Falls	2/2/1996	-34	8	99	107	107
Minneapolis	2/2/1996	-25	8	90	97	92
Rochester	2/2/1996	-27	10	92	101	94
Worthington	1/29/2019	-20	21	85	103	81
Ortonville	1/14/2009	-21	11	86	96	86

MERC's decision to slightly modify its planning objective suggests that it is important to consider the entirety of a cold weather event as opposed to a single date in time. The Department discusses this modification and analyzes peak-day use under both planning objectives below.

As noted above, for each of the regression models the planning objective did not occur during the data period (December 2016 through February 2019), with the exception of the Worthington weather station; as such, MERC adjusted the results to approximate usage at the planning objective. The Company's combined regression analyses resulted in a design-day estimate of 53,663 Dkt/day.

[7] Petition, Attachment 12, Page 4.

However, as explained in MERC's filing, the Company modified the analysis such that the ultimate design-day estimate was based on higher throughput estimates that factor in volume risk adjustments. These adjustments resulted in a calculated design-day estimate of 56,782 Dkt/day, which is 312 Dkt/day greater than the design-day estimate in last year's demand entitlement filing. The Company stated that volume risk adjustments were incorporated into the forecast to provide a confidence level that the daily metered load under design conditions would not exceed the daily metered regression estimate.[8] In other words, the volume risk adjustment is meant to modify the results to ensure a bias toward reliability since this adjustment places the design-day estimate at the top end of expected design-day conditions based on the regressions. This post-regression adjustment is similar to what the Company used in previous demand entitlement filings.

The Department reviewed MERC's analysis and was able to replicate the Company's results. In addition to this review, the Department conducted further analysis to determine whether MERC's peak-day calculations were reasonable. First, the Department observed that the Company's regression results do not exhibit a bias either toward under-estimating or over-estimating daily historical consumption; namely, there is a relatively equal distribution between days where the model results were above actual consumption and below actual consumption.[9] This is the expected result if a regression analysis is unbiased from a results perspective.

Second, using the regression coefficients from the Company's design-day models, the Department estimated firm throughput at both the Company's new planning objective and a planning objective based solely on the coldest AHDD value. Based on this analysis, the Department determined that firm throughput would have been approximately 54,393 Dkt on last heating season's peak day if the average temperature was at the Company's planning objective and 54,005 Dkt at the former planning objective.[10] It appears that the Company's slight modification in its planning objective selection provides for more conservative results, from a planning perspective, by estimating greater consumption on a peak day.

As a further check, the Department compared the 54,393 Dkt throughput estimate (using the regression coefficients from this year's design-day models and at the average temperatures assumed by the new planning objective) to the results of MERC's regression-estimated design day in its last demand entitlement filing.

[8] Petition, Attachment 12, Page 6.

[9] **[Trade secret data has been excised]** Department Attachment 2.

[10] The peak day on the Northern system occurred on January 29, 2019 last heating season. The new planning objective calculation is as follows: Fargo 16,448 Dkt + Cloquet 6,320 Dkt + Bemidji 22,529 Dkt + International Falls 9,096 = 54,393 Dkt. The former planning objective calculation is as follows: Fargo 16,448 Dkt + Cloquet 5,882 Dkt + Bemidji 22,579 Dkt + International Falls 9,096 Dkt = 54,005 Dkt.

Table 4: MERC Planning Objective Data

	MERC Estimated Design-Day (2018-2019 Heating Season) (Dkt)	Department Estimated Design-Day Throughput for January 29, 2019 based on AHDD65-1 (Dkt)	Difference (Dkt)	Percentage Difference
Throughput (Dkt)	52,893	54,393	1,500	2.84%
	Volume Adjusted MERC Estimated Design-Day (2018-2019 Heating Season) (Dkt)	Department Estimated Design-Day Throughput for January 29, 2019 based on AHDD65-1 (Dkt)	Difference (Dkt)	Percentage Difference
Throughput (Dkt)	56,470	54,393	(2,077)	(3.82)%

Table 4 above compares the Company's estimated design-day consumption of 52,893 Dkt in last year's demand entitlement filing to the Department's estimated firm throughput on January 29, 2019 (peak throughput for the 2018-2019 heating season) of 54,393 Dkt. Further, since MERC's regression-estimated 2018-2019 design-day figure does not reflect the Company's volume risk adjustment, Table 6 also provides the comparison to the volume-risk-adjusted design day for 2018-2019. When the volume risk adjustment is applied to last year's estimated design-day figure of 52,893 Dkt, the Department-estimated firm throughput of 54,393 Dkt is 2,077 Dkt, or 3.82 percent, lower than the adjusted design-day estimate of 56,470 Dkt that was used by the Company to determine its total entitlement level (*i.e.,* actual planning threshold) in last year's demand entitlement filing. This analysis suggests that MERC's approach to calculating its design-day is likely sufficient to ensure reliability.

Third, the Department reviewed historical weather and throughput data for dates in which the average temperature was below zero (65 AHDD), including the cold weather event last heating season, to ascertain whether the determinant coefficients from the Company's regressions adequately estimated actual historical usage.[11] Based on this review, the Department determined that the Company's model coefficients and results did not exhibit bias toward over- or under-estimating sales on a peak day.

Based on these analyses, the Department recommends that the Commission approve the Company's peak-day analysis. The Department's analysis of use on a peak day shows that MERC's decision to use a volume risk adjustment to modify its regression estimates is reasonable and necessary to ensure firm reliability. The Department also concludes that the Company's planning objective is reasonable at this time. Since each of MERC's regression models suggests that weather on the previous day, in addition to weather on the current day, impacts consumption on the current day, the Company was correct in factoring this into its planning objective. Although January 29, 2019 marked the coldest day, on an

[11] **[Trade secret data has been excised]** Department Attachment 2.

AHDD basis, for most of the Company's weather stations, the weather conditions on January 28, 2019 were much warmer, on a comparative basis, than during the 1996 cold weather event. The Company's approach results in a slight bias toward reliability, namely that it estimates greater firm consumption on a peak day, and is a reasonable approach at this time.

C. RESERVE MARGIN

As indicated in Department Attachment 1 and Petition Attachment 3, and summarized in Table 5 below, the proposed reserve margin is 1,167 Dkt/day, or 2.06 percent.

Table 5--MERC-Consolidated Reserve Margin

Pipeline	Total Entitlement (Dkt)	Design-Day Estimate (Dkt)	Difference (Dkt)	2019/2020 Reserve Margin (%)	2018/2019 Reserve Margin (%)	Percentage Point Change From Prior Year
Centra	9,500	9,464	36	0.38%	3.97%	3.59%
Great Lakes	31,358	30,025	1,333	4.44%	3.88%	(0.56)%
Viking	17,091	17,293	(202)	(1.17)%	(0.32)%	(0.85)%
Total Consolidated	57,949	56,782	1,167	2.06%	2.62%	(0.56)%

The proposed reserve margin of 2.06 percent represents a decrease of 0.56 percentage points as compared to last year's reserve margin of 2.62 percent. The small decrease in the reserve margin is driven by the slight increase in the estimated design-day requirement. The Company's proposed reserve margin is close to its 5-year average of 2.20 percent. Although the total Consolidated system reserve margin is comparable to the 5-year average, the Department is concerned by the growing negative reserve margin on the Viking pipeline. MERC's Viking system performed well during the cold weather event during the 2018-2019 heating season and, as noted in Section II.B, estimated peak-day consumption on the Viking pipeline (16,448 Dkt/day) was below the total entitlement level for the Viking pipeline. These results suggest that sufficient capacity exists to serve Viking firm customers on a peak day; however, the negative reserve margin raises the possibility that issues exist with the Viking regression model or there are reasons that explain why customers used less during the cold weather event. The Department requests that MERC fully address the negative reserve margin for its Viking pipeline in its reply comments and, in particular, discuss whether it believes procurement of additional capacity is necessary and whether short-term capacity options are available on the Viking system in the event that consumption may exceed total procured capacity.

Based on the Department's review of MERC's historic design-day data and regression results, the Department concludes that MERC's total reserve margin appears acceptable; however, it withholds final recommendation on the Company's reserve margin pending its discussion of the negative reserve margin for the Viking pipeline.

D. Distribution Planning

In recent demand entitlement filings, the Department requested information from MERC, and conducted analysis, regarding the Company's distribution planning and the integration of electric generation onto the MERC system. In last year's demand entitlement proceeding, the Department concluded that the Company's current planning approach is reasonable and does not represent a negative impact to ratepayers or reliability.[12] In response to the cold weather event in January 2019, the Commission opened an investigation in Docket No. E,G999/CI-19-160 that also reviewed utility responses to cold weather and system reliability. As noted above, and discussed at length in Docket No. E,G999/CI-19-160, the Company did not experience reliability or deliverability issues during the cold weather event in late January 2019.

Although not typically discussed in demand entitlement filings, distribution planning is an important part of providing reliable service to ratepayers. The procurement of capacity, as reflected in the demand entitlement proceedings, is meant to satisfy total daily firm need on a peak day, while distribution planning is designed to ensure sufficient capacity is available to meet maximum gas need at a particular time and location. Given the potential for reliability issues during an extreme cold event, the Department issued new discovery in an effort to understand MERC's distribution planning assumptions. In its response to Department Information Request No. 1, the Company provided an explanation of its distribution planning method and various assumptions built into its analysis.[13] MERC stated that its distribution planning incorporates weather assumptions along with system information and customer specific information at various geographic locations to determine peak throughput. In terms of weather assumptions, the Company stated that it applies an average daily temperature, based on geographic location, of between 85HDD (-20F) and 105HDD (-40F) to its distribution assumptions. Although MERC uses an average daily temperature in its distribution model, it noted that its other planning assumptions (*i.e.,* customer flow, piping coefficients) are based on conservative estimates in an effort to ensure reliable natural gas service.

The Department appreciates the Company's explanation and clarification of its distribution planning assumptions. Based on this information, the Department concludes that MERC's planning assumptions continue to be acceptable at this time.

E. PGA COST RECOVERY PROPOSAL

As noted in Section II.A above, the Company does not propose changes to its demand entitlement levels; therefore, there are no changes to demand costs for this heating season. However, MERC did note in its Supplement that a Federal Energy Regulatory Commission (FERC) rate case is pending for Viking. Viking requested a rate increase effective January 1, 2020. The outcome of this rate case may result in an increase in demand rates but any changes will be separate from MERC's entitlement level.

[12] Docket No. G011/M-18-526, May 21, 2019 Response Comments, Page 7.
[13] Department Attachment 3. The Department notes that Department Information Request No. 1 is a new request for information that has not been asked in previous reliability, integration, or distribution planning analyses.

Further, any changes in rates associated with the pending Viking rate case will go into effect through the monthly PGA.[14]

The Department recommends that the Commission approve MERC's demand costs effective November 1, 2019.

III. DEPARTMENT CONCLUSIONS AND RECOMMENDATIONS

Based on its review, the Department recommends that the Commission approve recovery of MERC's demand costs through the monthly PGA effective November 1, 2019. The Department withholds recommendation regarding the Company's total entitlement level pending review of MERC's reply comments.

The Department requests that MERC fully address the negative reserve margin for its Viking pipeline in its reply comments and, in particular, discuss whether it believes procurement of additional capacity is necessary and whether short-term capacity options are available on the Viking system in the event that consumption may exceed total procured capacity.

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[14] Supplement, Page 6.

Department Attachment 1
Docket No. G011/M-19-497
MERC Consolidated Demand Entitlement Analysis

	Number of Firm Customers			Design-Day Requirement			Total Entitlement Plus Peak Shaving			Reserve Margin	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Heating Season	Number of Customers	Change from Previous Year	% Change From Previous Year	Design Day (Dth)	Change from Previous Year	% Change From Previous Year	Total Design-Day Capacity (Dth)	Change from Previous Year	% Change From Previous Year	Reserve (7) - (4)	% Reserve [(7)-(4)]/(4)
2019-2020	35,981	328	0.92%	56,782	312	0.55%	57,949	0	0.00%	1,167	2.06%
2018-2019	35,653	(312)	-0.87%	56,470	204	0.36%	57,949	0	0.00%	1,479	2.62%
2017-2018	35,965	466	1.31%	56,266	738	1.33%	57,949	3,050	5.56%	1,683	2.99%
2016-2017	35,499	700	2.01%	55,528	2,453	4.62%	54,899	(550)	-0.99%	(629)	-1.13%
2015-2016	34,799	402	1.17%	53,075	4,369	8.97%	55,449	3,990	7.75%	2,374	4.47%
2014-2015	34,397	390	1.15%	48,706	(1,342)	-2.68%	51,459	(1,500)	-2.83%	2,753	5.65%
2013-2014	34,007	377	1.12%	50,048	(2,241)	-4.29%	52,959	(2,000)	-3.64%	2,911	5.82%
2012-2013	33,630			52,289			54,959				
Average			1.36%			1.66%			0.07%		3.21%
5-Year Average			0.91%			3.17%			2.46%		2.20%

	Firm Peak-Day Sendout			Per Customer Metrics			
	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Heating Season	Firm Peak-Day Sendout (Dth)	Change from Previous Year	% Change From Previous Year	Excess per Customer [(7) - (4)]/(1)	Design Day per Customer (4)/(1)	Entitlement per Customer (7)/(1)	Peak-Day Send per Customer (12)/(1)
2019-2020	unknown			0.0324	1.5781	1.6105	unknown
2018-2019	53,653	7,215	15.54%	0.0415	1.5839	1.6254	1.5049
2017-2018	46,438	(2,358)	-4.83%	0.0468	1.5645	1.6113	1.2912
2016-2017	48,796	6,117	14.33%	-0.0177	1.5642	1.5465	1.3746
2015-2016	42,679	(3,072)	-6.71%	0.0682	1.5252	1.5934	1.2264
2014-2015	45,751	6,845	17.59%	0.0800	1.4160	1.4960	1.3301
2013-2014	38,906			0.0856	1.4717	1.5573	1.1441
Average			7.18%	0.0481	1.5291	1.5772	1.2371
5-Year Average			7.18%	0.0342	1.5632	1.5974	1.3454

Bemidji Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Dec	Feb	Weekday	Adjusted Weekday	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag	MERC_Planning	MERC_Planning_Lag
TRADE SECRET DATA BEGINS																		
12/1/2016																		
12/2/2016																		
12/3/2016																		
12/4/2016																		
12/5/2016																		
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Bemidji Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Dec	Feb	Weekday	Adjusted Weekday	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag	MERC_Planning	MERC_Planning_Lag
TRADE SECRET DATA BEGINS																		
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Bemidji Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Dec	Feb	Weekday	Adjusted Weekday	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag	MERC_Planning	MERC_Planning_Lag
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Observations	270.00
Under-Estimate	115.00
Over-Estimate	155.00

Bemidji Regression

DOC_Planning	DOC_Planning_Lag	MP_Difference	MPL_Difference	DP_Difference	DPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	MERC AHDD Impact	MERC AHDD-1 Impact	DOC AHDD Impact	DOC AHDD-1 Impact	MERC Design Day	DOC Design Day

Bemidji Regression

DOC_Planning	DOC_Planning_Lag	MP_Difference	MPL_Difference	DP_Difference	DPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	MERC AHDD Impact	MERC AHDD-1 Impact	DOC AHDD Impact	DOC AHDD-1 Impact	MERC Design Day	DOC Design Day

Bemidji Regression

DOC_Planning	DOC_Planning_Lag	MP_Difference	MPL_Difference	DP_Difference	DPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	MERC AHDD Impact	MERC AHDD-1 Impact	DOC AHDD Impact	DOC AHDD-1 Impact	MERC Design Day	DOC Design Day

TRADE SECRET DATA ENDS

Centra Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Prior Month	Next Month	Weekday	Adjusted Weekday	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag
TRADE SECRET DATA BEGINS																
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Centra Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Prior Month	Next Month	Weekday	Adjusted Weekday	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag
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Centra Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Prior Month	Next Month	Weekday	Adjusted Weekday	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag
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Observations	270.00
Under-Estima	135.00
Over-Estimat	135.00

Centra Regression

MERC_Planning	MERC_Planning_Lag	MP_Difference	MPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	Fri	Sat	Sun	MERC AHDD Impact	MERC AHDD-1 Impact	MERC Design Day

Centra Regression

MERC_Planning	MERC_Planning_Lag	MP_Difference	MPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	Fri	Sat	Sun	MERC AHDD Impact	MERC AHDD-1 Impact	MERC Design Day

Centra Regression

MERC_Planning	MERC_Planning_Lag	MP_Difference	MPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	Fri	Sat	Sun	MERC AHDD Impact	MERC AHDD-1 Impact	MERC Design Day

TRADE SECRET DATA ENDS

Cloquet Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Dec	Feb	Weekday	Adjusted Weekday	FirstTwoYears	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag	MERC_Planning	MERC_Planning_Lag
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Cloquet Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Dec	Feb	Weekday	Adjusted Weekday	FirstTwoYears	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag	MERC_Planning	MERC_Planning_Lag
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Cloquet Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Dec	Feb	Weekday	Adjusted Weekday	FirstTwoYears	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag	MERC_Planning	MERC_Planning_Lag
TRADE SECRET DATA BEGINS																			
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Observations	223.00
Under-Estimate	102.00
Over-Estimate	121.00

Cloquet Regression

DOC_Planning	DOC_Planning_Lag	MP_Difference	MPL_Difference	DP_Difference	DPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	Dec	MERC AHDD Impact	MERC AHDD-1 Impact	DOC AHDD Impact	DOC AHDD-1 Impact	MERC Design Day	DOC Design Day

Cloquet Regression

DOC_Planning	DOC_Planning_Lag	MP_Difference	MPL_Difference	DP_Difference	DPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	Dec	MERC AHDD Impact	MERC AHDD-1 Impact	DOC AHDD Impact	DOC AHDD-1 Impact	MERC Design Day	DOC Design Day

Cloquet Regression

DOC_Planning	DOC_Planning_Lag	MP_Difference	MPL_Difference	DP_Difference	DPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	Dec	MERC AHDD Impact	MERC AHDD-1 Impact	DOC AHDD Impact	DOC AHDD-1 Impact	MERC Design Day	DOC Design Day

TRADE SECRET DATA ENDS

Viking Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Dec	Feb	Weekday	Adjusted Weekday	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag
TRADE SECRET DATA BEGINS																
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Viking Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Dec	Feb	Weekday	Adjusted Weekday	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag
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Viking Regression

Date	Throughput	Net Throughput	AHDD65	AHDD65-1	Fri	Sat	Sun	Dec	Feb	Weekday	Adjusted Weekday	Predicted	Difference	Under/Over Recovery	ColdAHDD	ColdAHDDLag
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Observations	270.00
Under-Estimate	142.00
Over-Estimate	128.00

					Viking Regression									
MERC_Planning	MERC_Planning_Lag	MP_Difference	MPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	Sat	Sun	Dec	Feb	MERC AHDD Impact	MERC AHDD-1 Impact	MERC Design Day

					Viking Regression									
MERC_Planning	MERC_Planning_Lag	MP_Difference	MPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	Sat	Sun	Dec	Feb	MERC AHDD Impact	MERC AHDD-1 Impact	MERC Design Day

Viking Regression

MERC_Planning	MERC_Planning_Lag	MP_Difference	MPL_Difference	Intercept	AHDD Coefficient	AHDDLag Coefficient	Sat	Sun	Dec	Feb	MERC AHDD Impact	MERC AHDD-1 Impact	MERC Design Day

TRADE SECRET DATA ENDS

Minnesota Department of Commerce
Division of Energy Resources
Information Request

Docket Number:	G011/M-19-496 and G011/M-19-497	☐Nonpublic ☒Public
Requested From:	Minnesota Energy Resources Corp.	Date of Request: 9/25/2019
Type of Inquiry:	General	Response Due: 10/7/2019

Requested by:	Adam Heinen
Email Address(es):	adam.heinen@state.mn.us
Phone Number(s):	651-539-1825

Request Number: **1**
Topic: Distribution Planning
Reference(s): Click or tap here to enter text.

Request:

Please fully explain how the utility arrives at its weather assumption (*e.g.,* HDD, temperature) for distribution system planning purposes. As part of this explanation, please also identify the weather assumption used for each Town Border Station or City Gate on the utility's system.

If this information has already been provided in initial petition or in response to an earlier Department-DER information request, please identify the specific cite(s) or Department-DER information request number(s).

MERC Response:

MERC utilizes distribution system flow modeling in conjunction with other tools such as pressure monitoring and engineering analysis and expertise to plan its distribution system and identify the need for any distribution reinforcement projects to address system pressure or other operational issues and to ensure adequate distribution capacity to reliably serve firm customers in the event of a distribution system peak. MERC designs its distribution system (and any upgrades) to serve projected firm load and does not design the system for interruptible load. This is because MERC is able to call geographic and customer-class specific curtailments of its interruptible service customers to ensure continued reliable service to firm customers.

Distribution planning models incorporate geographic data related to customers, usage, pressure data, system details (including pipe size, route, and length of distribution pipes), and weather, and are calibrated based on regularly conducted pressure testing (both through supervisory control and data acquisition (SCADA) equipment and routine manual pressure testing). These models are also scalable, such that MERC is able to evaluate a range of potential

planning assumptions based on various system-specific considerations. MERC applies different usage factors for residential and commercial customer load since the profile of natural gas usage is much different for different types of customers when the model is scaled to colder temperatures. For larger customers MERC evaluates how their load is affected by temperature. If they are not a heat load, the modeling utilizes their peak hourly usage, regardless of temperature. This information is pulled from the hourly information we pull based on telemetry. Customer usage data is input based on the type of scalability that is needed for customer usage that is weather dependent and scaled for temperature.

Distribution flow modeling analyzes peak hour requirements based on the specific area of the distribution system being served. These models are designed to analyze the capability of the distribution system to maintain adequate pressure at the furthest point of the system, considering variables such as the distance of the furthest customer from a main supply pipe and whether there is a second source of supply from a different part of the system.

When MERC evaluates a portion of its distribution system for new load or potential system improvements, the models are scaled to a HDD day, which is determined based on average daily temperature, not peak temperature. Dependent on geographic location, MERC applies an average ranging from 85HDD to 105HDD. The average preliminary HDD by model area are provided in Attachment A to this response. The models are then reviewed using a range of -20 to -40 average daily temperature assumptions.

Various inputs and assumptions into the distribution flow model ensure these models are sufficiently conservative to ensure reliable firm natural gas service. In particular,

- Larger customers are entered with highest hourly flow, not necessarily the peak hour when it is cold;
- The roughness factor coefficient on piping is set to a more conservative factor;
- The models are scaled to the highest flow on a peak day, which in reality may not be temperature related, due to non-heat load and other considerations.

In addition to distribution flow modeling, MERC utilizes data from regular pressure testing to identify any potential problem areas that could require system reinforcement. Pressure checks are completed manually for points on the system not directly tied to the electronic pressure recorders. Remote and manual pressure data are utilized in determining areas to watch or that require system reinforcement. In general, MERC monitors system pressure to ensure no portion of the system drops more than 50%, at which point the need for system reinforcements is evaluated. Lesser drops in pressure (30% or greater) also trigger areas to be monitored to more closely evaluate the potential need for system upgrades.

The combination of distribution flow modeling assumptions, pressure checks, and ongoing engineering evaluation, ensure that MERC is able to provide reliable service to firm customers in the event of temperatures that are colder than normal.

Model area	Region	Initial Model Input *
Camp Ripley	Central	90HDD
Cannon Falls	Central	85HDD
Castle Rock	Central	85HDD
Eagan	Central	85HDD
Finlayson	Central	90HDD
Hinckley	Central	90HDD
Lakeville/New Market/Rosemount/Spring Lake	Central	85HDD
Mayhew Lake	Central	90HDD
Mora	Central	90HDD
North Branch/Harris	Central	90HDD
Pine City	Central	90HDD
Pokegama Lake	Central	90HDD
Rosemount/Farmington	Central	85HDD
Rush City	Central	90HDD
Sandstone	Central	90HDD
Scandia	Central	90HDD
Willow River	Central	90HDD
Aurora	Northeast	95HDD
Barnum	Northeast	95HDD
Biwabik	Northeast	95HDD
Buhl	Northeast	95HDD
Calumet/Marble	Northeast	95HDD
Carlton	Northeast	95HDD
Chisholm	Northeast	95HDD
Cloquet	Northeast	95HDD
Coleraine/Bovey	Northeast	95HDD
Crosby/Ironton	Northeast	95HDD
Deer River/Zemple	Northeast	95HDD
Deerwood/Aitkin	Northeast	95HDD
Esko	Northeast	95HDD
Eveleth	Northeast	95HDD
Floodwood	Northeast	95HDD
Gilbert	Northeast	95HDD
Grand Rapids	Northeast	95HDD
Hermantown	Northeast	95HDD
Hoyt Lakes	Northeast	95HDD
International Falls	Northeast	95HDD
Keewatin	Northeast	95HDD
Kettle River	Northeast	95HDD
Moose Lake	Northeast	95HDD
Mountain Iron	Northeast	95HDD
Nashwauk	Northeast	95HDD
Pengilly	Northeast	95HDD
Proctor	Northeast	95HDD
Silver Bay	Northeast	95HDD
Ada	Northwest	90HDD

Model area	Region	Initial Model Input *
Audubon	Northwest	90HDD
Baudette	Northwest	105HDD
Bemidji	Northwest	95HDD
Bertha/Hewitt/Verndale	Northwest	90HDD
Detroit Lakes	Northwest	90HDD
Frazee	Northwest	90HDD
Roseau	Northwest	100HDD
Staples/Motley	Northwest	90HDD
Thief River Falls	Northwest	100HDD
Wadena/Menahga/Sebeka/Park Rapids	Northwest	90HDD
Warroad	Northwest	105HDD
Altura	Southeast	85HDD
Brownsdale	Southeast	85HDD
Byron	Southeast	85HDD
Caldeonia	Southeast	85HDD
Canton	Southeast	85HDD
Chatfield	Southeast	85HDD
Claremont	Southeast	85HDD
Dodge Center	Southeast	85HDD
Dover	Southeast	85HDD
Elgin	Southeast	85HDD
Eyota	Southeast	85HDD
Fountain	Southeast	85HDD
Harmony	Southeast	85HDD
Hayfield	Southeast	85HDD
Hayward	Southeast	85HDD
Houston	Southeast	85HDD
Kasson	Southeast	85HDD
Kenyon	Southeast	85HDD
LaCrescent	Southeast	85HDD
Lanesboro	Southeast	85HDD
Lansing	Southeast	85HDD
Lewiston	Southeast	85HDD
Lyle	Southeast	85HDD
Mabel	Southeast	85HDD
Peterson	Southeast	85HDD
Pine Island	Southeast	85HDD
Plainview	Southeast	85HDD
Preston	Southeast	85HDD
Rochester	Southeast	85HDD
Rose Creek	Southeast	85HDD
Rushford	Southeast	85HDD
Spring Grove	Southeast	85HDD
Spring Valley/Wykoff	Southeast	85HDD
St Charles	Southeast	85HDD
Stewartville	Southeast	85HDD

Model area	Region	Initial Model Input *
Utica	Southeast	85HDD
Viola	Southeast	85HDD
Waltham	Southeast	85HDD
Wanamingo	Southeast	85HDD
West Concord	Southeast	85HDD
Zumbrota	Southeast	85HDD
Adams/LeRoy/Taopi	Southesat	85HDD
Albert Lea	Southwest	85HDD
Alden	Southwest	85HDD
Appleton	Southwest	85HDD
Blooming Prairie	Southwest	85HDD
Brewster	Southwest	85HDD
Canby/Hendrick/Ivanhoe	Southwest	85HDD
Clarks Grove	Southwest	85HDD
Conger	Southwest	85HDD
Cottonwood	Southwest	85HDD
Dunnell	Southwest	85HDD
Ellendale	Southwest	85HDD
Emmons	Southwest	85HDD
Fairmont	Southwest	85HDD
Freeborn	Southwest	85HDD
Hollandale	Southwest	85HDD
Jackson	Southwest	85HDD
Lakefield	Southwest	85HDD
Madison	Southwest	85HDD
Marshall	Southwest	85HDD
Mountain Lake	Southwest	85HDD
New Richland	Southwest	85HDD
Northrop	Southwest	85HDD
Oakland	Southwest	85HDD
Ortonville	Southwest	85HDD
Revere	Southwest	85HDD
Sanborn	Southwest	85HDD
Sherburn	Southwest	85HDD
Tracy	Southwest	85HDD
Trimont	Southwest	85HDD
Truman	Southwest	85HDD
Twin Lakes	Southwest	85HDD
Walnut Grove	Southwest	85HDD
Welcome	Southwest	85HDD
Wells	Southwest	85HDD
Windom	Southwest	85HDD
Worthington	Southwest	85HDD

* as discussed in MERC's Response to Department Information Request No. 1,
each model is reviewed using a range of -20 to -40 average daily temperature.

CERTIFICATE OF SERVICE

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

Minnesota Department of Commerce
Public Comments

Docket No. G011/M-19-497

Dated this **3rd** day of **January 2020**

/s/Sharon Ferguson

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_19-497_M-19-497
Michael	Ahern	ahern.michael@dorsey.com	Dorsey & Whitney, LLP	50 S 6th St Ste 1500 Minneapolis, MN 554021498	Electronic Service	No	OFF_SL_19-497_M-19-497
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	No	OFF_SL_19-497_M-19-497
Kristine	Anderson	kanderson@greatermngas.com	Greater Minnesota Gas, Inc.& Greater MN Transmission, LLC	1900 Cardinal Lane PO Box 798 Faribault, MN 55021	Electronic Service	No	OFF_SL_19-497_M-19-497
Mara	Ascheman	mara.k.ascheman@xcelenergy.com	Xcel Energy	414 Nicollet Mall Fl 5 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-497_M-19-497
Gail	Baranko	gail.baranko@xcelenergy.com	Xcel Energy	414 Nicollet Mall7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-497_M-19-497
Ryan	Barlow	ryan.barlow@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 55101214	Electronic Service	Yes	OFF_SL_19-497_M-19-497
Elizabeth	Brama	ebrama@briggs.com	Briggs and Morgan	2200 IDS Center 80 South 8th Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-497_M-19-497
Robert S.	Carney, Jr.			4232 Colfax Ave. S. Minneapolis, MN 55409	Paper Service	No	OFF_SL_19-497_M-19-497
John	Coffman	john@johncoffman.net	AARP	871 Tuxedo Blvd. St, Louis, MO 63119-2044	Electronic Service	No	OFF_SL_19-497_M-19-497

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1800 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_19-497_M-19-497
Riley	Conlin	riley.conlin@stoel.com	Stoel Rives LLP	33 S. 6th Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-497_M-19-497
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174 Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_19-497_M-19-497
Rebecca	Eilers	rebecca.d.eilers@xcelenergy.com	Xcel Energy	414 Nicollet Mall - 401 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-497_M-19-497
Darcy	Fabrizius	Darcy.fabrizius@constellation.com	Constellation Energy	N21 W23340 Ridgeview Pkwy Waukesha, WI 53188	Electronic Service	No	OFF_SL_19-497_M-19-497
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_19-497_M-19-497
Daryll	Fuentes	dfuentes@usg.com	USG Corporation	550 W Adams St Chicago, IL 60661	Electronic Service	No	OFF_SL_19-497_M-19-497
Edward	Garvey	garveyed@aol.com	Residence	32 Lawton St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_19-497_M-19-497
Edward	Garvey	edward.garvey@AESLconsulting.com	AESL Consulting	32 Lawton St Saint Paul, MN 55102-2617	Electronic Service	No	OFF_SL_19-497_M-19-497

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Todd J.	Guerrero	todd.guerrero@kutakrock.com	Kutak Rock LLP	Suite 1750 220 South Sixth Street Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_19-497_M-19-497
Robert	Harding	robert.harding@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-497_M-19-497
Annete	Henkel	mui@mnutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St.Paul, MN 55101	Electronic Service	No	OFF_SL_19-497_M-19-497
Michael	Hoppe	il23@mtn.org	Local Union 23, I.B.E.W.	932 Payne Avenue St. Paul, MN 55130	Electronic Service	No	OFF_SL_19-497_M-19-497
Gregory	Jenner	greg.jenner@stoel.com	Stoel Rives LLP	33 South Sixth Street Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-497_M-19-497
Linda	Jensen	linda.s.jensen@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134	Electronic Service	No	OFF_SL_19-497_M-19-497
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-497_M-19-497
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-497_M-19-497
Michael	Krikava	mkrikava@briggs.com	Briggs And Morgan, P.A.	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-497_M-19-497

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Nicolle	Kupser	nkupser@greatermngas.com	Greater Minnesota Gas, Inc. & Greater MN Transmission, LLC	1900 Cardinal Ln PO Box 798 Faribault, MN 55021	Electronic Service	No	OFF_SL_19-497_M-19-497
Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.	8300 Norman Center Drive Suite 1000 Bloomington, MN 55437	Electronic Service	No	OFF_SL_19-497_M-19-497
Eric	Lipman	eric.lipman@state.mn.us	Office of Administrative Hearings	PO Box 64620 St. Paul, MN 551640620	Electronic Service	No	OFF_SL_19-497_M-19-497
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_19-497_M-19-497
Mary	Martinka	mary.a.martinka@xcelenergy.com	Xcel Energy Inc	414 Nicollet Mall 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_19-497_M-19-497
Brian	Meloy	brian.meloy@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-497_M-19-497
Joseph	Meyer	joseph.meyer@ag.state.mn.us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St Paul, MN 55101-2131	Electronic Service	No	OFF_SL_19-497_M-19-497
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_19-497_M-19-497
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-497_M-19-497
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_19-497_M-19-497

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company	200 1st Street SE PO Box 351 Cedar Rapids, IA 524060351	Electronic Service	No	OFF_SL_19-497_M-19-497
Greg	Palmer	gpalmer@greatermngas.com	Greater Minnesota Gas, Inc. & Greater MN Transmission, LLC	1900 Cardinal Ln PO Box 798 Faribault, MN 55021	Electronic Service	No	OFF_SL_19-497_M-19-497
Catherine	Phillips	catherine.phillips@we-energies.com	We Energies	231 West Michigan St Milwaukee, WI 53203	Electronic Service	No	OFF_SL_19-497_M-19-497
Lauren	Pockl	lpockl@briggs.com	Briggs and Morgan, PA	80 South 8th Street #2200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-497_M-19-497
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_19-497_M-19-497
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-497_M-19-497
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