

September 11, 2019

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 280
St. Paul, Minnesota 55101-2147

RE: Comments of the Minnesota Department of Commerce, Division of Energy Resources
Docket No. G022/M-19-318

Dear Mr. Wolf:

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

A Petition by Greater Minnesota Gas, Inc. (Greater Minnesota) for a Change in Contract Demand Entitlement for the 2019-2020 Heating Season.

The *Petition* was submitted on May 13, 2019 by:

Kristine A. Anderson
Corporate Attorney
Greater Minnesota Gas, Inc.
202 South Main Street, P.O. Box 68
Le Sueur, Minnesota 56058

The Department recommends that the Minnesota Public Utilities Commission (Commission):

- Approve Greater Minnesota's proposed level of demand entitlements as shown in the Company's *Petition*; and
- Allow Greater Minnesota to recover associated demand costs through the monthly Purchased Gas Adjustment effective November 1, 2019.

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The Department also requests limited additional information from Greater Minnesota. The Department is available to answer any questions that the Commission may have.

Sincerely,

/s/ Daniel W. Beckett
Rates Analyst
651-539-1874

DWB/ar
Attachment



Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. G022/M-19-318

I. BACKGROUND

On June 13, 2019, the Minnesota Public Utilities Commission (Commission) issued its Order in Docket No. G022/M-18-232 regarding Greater Minnesota Gas, Inc.'s (GMG, Greater Minnesota, or the Company) *Petition for Approval of Changes in Contract Demand Entitlements for the 2018-2019 Heating Season*. Through its 18-232 Order, the Commission:

1. Approved the Company's proposed level of demand entitlements as shown in the Company's Petition.
2. Allowed the Company to recover associated demand costs through the monthly Purchased Gas Adjustment [PGA] effective April 1, 2018.
3. Required the Company to undertake the following in future demand entitlement filings:
 - a. Use a constant annual average residential usage estimate based on weather normalized sales for the purpose of estimating customer rate impact;
 - b. Perform separate regression analyses by service area, using area-specific weather stations, as soon as there is sufficient consumption and customer data for the results to be relied upon;
 - c. Estimate its design day using data from at least three heating seasons when appropriate. If the results of these calculations are not acceptable, the Company shall fully explain its decision to use a shorter estimation period in its initial filing;
 - d. Maintain, on a going-forward basis, a two-part design-day process involving both regression analysis and mathematical analysis based on its historical all-time peak-day send-out.

On May 13, 2019, Greater Minnesota filed its *Petition for Change in Contract Demand Entitlement for 2018-2019 Heating Season*.

On July 25, 2019, GMG filed a supplemental Attachment D to its initial *Petition* to ensure compliance with Order Point 3a listed above. GMG’s supplemental Attachment D includes an illustration of the predicted residential rate impact based on estimated residential usage of 80 Dth, which is the same average residential usage used in the Company’s previous Demand Entitlement filing for the 2018-2019 heating season.

II. SUMMARY OF PROPOSAL

Pursuant to Minnesota Rules 7825.2910, subpart 2, Greater Minnesota filed a *Petition for Approval of Changes in Contract Demand Entitlements for the 2019-2020 Heating Season (Petition)* on May 13, 2019.¹ The Company proposed that the changes in its demand entitlements be effective on November 1, 2019.

In its *Petition*, Greater Minnesota requested that the Commission accept the following changes in the Company’s overall level of contracted capacity.

Greater Minnesota’s Proposed Total Entitlement Changes	
Type of Entitlement	Proposed Increase (Decrease) (Dekatherms (Dth))
TFX-5 (Nov. – Mar.)	349
TF 12 (Nov. – Oct.)	817

Greater Minnesota’s proposal would increase the Company’s design-day (winter) capacity by 1,166 Dth/day from 14,109 Dth/day to 15,275 Dth/day.

The Department discusses the various effects of the entitlement changes on the Company’s rates for different customer classes below; however, Greater Minnesota’s proposal would increase capacity and increase demand rates for residential heating customers by \$3.32 for customers using 80 Dth per year.

¹ The Department notes that, while it is customary for gas utilities to file their demand entitlements closer to the start of the next heating season in question, it is not unheard of for them to do so at an earlier time (e.g., in Docket No. G022/M-15-285, GMG filed on March 25, 2015). Further, Minnesota Rules, part 7825.2910, subpart 2 requires gas utilities to make a filing whenever there is a change to its demand-related entitlement services. Greater Minnesota’s *Petition* indicated that the Company “intends to analyze its demand entitlement needs as the 2019-2020 heating season nears, essentially to true-up its anticipated needs and make any necessary demand adjustments at that time.”

The Company described the factors contributing to the need for changing the level of demand entitlements as follows:

- Insure that the Company has sufficient reserve to meet its customers' needs;
- Account for growth on the system; and
- Account for changes in the design-day calculation method.

The Department reviews Greater Minnesota's *Petition* in detail below.

III. THE DEPARTMENT'S ANALYSIS OF THE COMPANY'S PROPOSAL

The Department's analysis of the Company's request includes the following sections:

- proposed overall demand entitlement level;
- design-day requirement;
- reserve margin; and
- Purchased Gas Adjustment (PGA) cost recovery proposal.

A. THE COMPANY'S DEMAND ENTITLEMENT LEVEL

1. Proposed Overall Demand Entitlement Level

As indicated above and in Department Attachment 2, the Company proposed to increase its total entitlement level in Dth as follows:

Previous Entitlement (Dth)	Proposed Entitlement (Dth)	Entitlement Changes (Dth)	% Change From Previous Year
14,109	15,275	1,166	8.26%

The Department analyzes below the proposed changes, the proposed design-day requirement, and the proposed reserve margin. The Department concludes that the Company's proposed recovery of overall demand costs is reasonable.

2. Design-Day Requirement

In past demand entitlement filings, Greater Minnesota employed a two-part design-day process to calculate its peak-day send-out, using an Ordinary Least Squares (OLS) regression model and a mathematical model. In its 2014-2015 and 2015-2016 demand entitlement proceedings (Docket Nos. G022/M-14-651 and G022/M-15-285, respectively), GMG relied upon regression analyses only. The Department recommended that the Company maintain, on a going-forward basis, a two-part design-day process involving both regression analysis and a mathematical analysis based on the Company's

historical all-time peak-day send-out until such time that Greater Minnesota has sufficient historical load data beyond the 2012-2013 heating season. Additionally, the Department recommended that the Company explore segregating its linear regression modeling into two components for large and small firm customers. At that time, GMG did not address the Department's two-part design-day process recommendation; however, GMG and the Department agreed that there were insufficient data available at the time to conduct separate regression analyses for large and small firm customers. The Commission's September 23, 2015 Order in Docket 15-285 adopted the recommendations of the Department, including the recommendation to conduct both a regression analysis and a mathematical analysis to determine the Company's design-day requirements.

In its 2016-2017 heating season demand entitlement filing (Docket No. G022/M-16-522), Greater Minnesota reinstated its two-part analysis, but modified the assumptions used in the part of the design-day estimation analysis employing regression analysis. This updated analysis was based on three months of daily data from the 2015-2016 heating season and employed two separate regression models, one for residential customers and one for commercial customers. Greater Minnesota explained, in the 2016-2017 heating season demand entitlement docket, that it used a shorter data stream because its initial regression results, based on data from other heating seasons, were too low and relying on those results may harm firm ratepayers. The Company surmised that these low results were driven by the addition of higher use firm customers in recent years. The Department's September 20, 2016 comments expressed concern with Greater Minnesota's design-day analysis but indicated that its concern would likely be alleviated over time as more data became available. The Department concluded that Greater Minnesota's new design-day analysis was acceptable at the time and would likely result in sufficient entitlements to serve firm customers on a peak day.

In its 2018-2019 heating season demand entitlement filing (Docket No. G022/M-18-232), Greater Minnesota conducted separate regressions for residential and commercial customers, based on historical daily consumption data from the 2015-2016, 2016-2017, and 2017-2018 heating seasons, and conducted a mathematical analysis as a check. As noted above, the Commission required GMG to continue to use at least 3 years of data to estimate the Company's design day, unless otherwise justified.

In the instant proceeding, Greater Minnesota based its design-day analysis on a two-stage process, one based on OLS regression analysis (with separate regression models for residential customers and commercial customers) and a second based on a mathematical calculation. In addition to a total system analysis, and in compliance with Order Point 3b listed above, the Company developed six separate models, for both commercial and residential customers, that correspond to the three regional areas of the Company's service area (southern, central, and northern) and included region-specific weather data in each case. All of the models were based on approximately three years of heating season data.

Greater Minnesota relied on its total system residential and commercial regression models as a basis for its design day. In its residential and commercial regression models, the Company used daily weather data from Minneapolis, which is the same weather station it used in last year's demand entitlement filing, to estimate use per customer (UPC) for each of its customer models. In previous demand entitlement filings, the Commission required that GMG perform geographically separate models, each of which would use regionally local weather, once there were sufficient consumption and customer data available. The impetus for this requirement originated in Docket No. G022/M-16-522, when the Department noted that GMG's service area was generally comprised of two distinct service areas: its "historical" area located in southcentral Minnesota, and its "newer" area located in central Minnesota along the Viking Natural Gas Pipeline. In last heating season's demand entitlement filing, the Company stated that it will continue to explore the use of geographically separate models, but that the use of Minneapolis weather is presently relevant and is consistent with the practice of larger natural gas utilities in the state.² The Department agrees with this assessment, but also requests that the Company continue looking at both sets of models – those that use Minneapolis weather and those that use geographically specific weather – in future demand entitlement filings. The Department notes that, as additional years of data are added to the sets, a clearer distinction between the models could arise. Further, while the areas served by GMG continue to grow, the areas remain somewhat geographically distinct.³ Finally, there is not a general consensus on either the use of Minneapolis or regionally local weather for purposes of modelling UPC. For the purposes of the instant *Petition*, the Department agrees with the use of the residential and commercial models that rely on Minneapolis weather for estimating a design day as those models exhibited a stronger goodness of fit when compared to the geographically separate models that relied on different weather station data.

Greater Minnesota ultimately used historical daily consumption data from the 2016-2017, 2017-2018, and 2018-2019 heating seasons in its analysis, with the exception of the month of November from each season as this usage tends to exhibit high variability due to grain drying customers. Greater Minnesota explained in its *Petition* that its regression analyses are based on a 90 heating degree day (HDD) average design-day temperature for its planning objective. Greater Minnesota's regression model resulted in estimated design-day consumption for the 2019-2020 heating season, inclusive of customer additions, of 13,643 Dth/day. However, the Company stated that its model results in a design-day estimate of 14,244 Dth/day for the 2019-2020 heating season. The discrepancy is in the UPC used. Instead of using the estimated design-day UPC of 1.5009, the Company estimated its design day by using the actual UPC that was observed from the 2018-2019 heating season, which was 1.5670. While the Department does not object to using the actual 2018-2019 UPC, as, in this instance, it is consistent with the Company's generally conservative approach in planning for the upcoming heating season, it is inconsistent with how the Company performed its econometric analysis in Docket No. G002/M-18-232. The Department requests, in Reply Comments, that the Company explain its reasoning for using the observed UPC from the 2018-2019 heating season to estimate its design day Dths, as opposed to the UPC that was derived from the econometric model.

² Docket No. G002/M-18-232, p. 4, footnote 3.

³ See Attachment 3 for maps of served areas.

As noted above, in previous demand entitlement filings, the Department discussed various concerns with the strict use of linear regression to estimate design-day consumption for the Greater Minnesota system. Greater Minnesota is a small gas utility and can be significantly impacted by customer growth and changes in the make-up of its customer base. These issues, both unexpected customer growth and changes in customer base, have occurred in the recent past; as such, the Department has consistently recommended that Greater Minnesota continue to include a mathematical design-day calculation in its demand entitlement analysis.

The use of a mathematical analysis as an accuracy check continues to be important, given the nature of GMG's operation and relative size, as well as the changes to its estimation process over the past heating seasons. The mathematical analysis uses firm use per customer on an all-time peak day multiplied by the projected number of firm customers in the upcoming heating season. The mathematical method is simple, easy to calculate, and is based on an actual, historical peak day. However, as it is based on an actual event (regardless of temperatures on that peak day), temperatures on the all-time peak day might not correspond with an exceptionally cold day. Further, if the all-time peak day happened years in the past, consumption on a present peak day may not be the same due to changes in technology and other factors affecting energy use. That said, GMG's peak day during the last heating season occurred on January 29, 2019 at 88 HDD, which also became the Company's new all-time peak day.

Using the use-per-customer from Greater Minnesota's all-time peak day (1.567 Dth/customer), adjusted for consumption on a 90 HDD planning objective and expected firm customer counts for the 2019-2020 heating season, the mathematical approach results in an estimated design-day of 14,570 Dth/day. This number is 326 Dth/day, or 2.3 percent, larger than Greater Minnesota's estimated result (14,244 Dth/day) based on its regression analysis. Further, the result using the mathematical method is 705 Dth/day less than the proposed total entitlement procured by the Company (15,275 Dth), which suggests that the Company has sufficient entitlements to serve firm customers. The Department concludes that the mathematical calculation result supports the estimates from the Company's regression models.

In the past,⁴ the Commission was concerned regarding the accuracy of Greater Minnesota's estimate of customer additions, such that the accuracy of the design-day calculation could be called into question. In particular, if the Company overstates its projected customer additions, then it follows that it will overestimate design-day requirements. To the extent that these customer additions are over-projected to a point where a utility must procure additional capacity, it will result in demand costs that are too high. Given these concerns, the Commission required Greater Minnesota to provide monthly compliance filings detailing customer additions.

⁴ See Docket Nos. G022/M-15-285 and G022/M-16-522.

In an effort to determine whether Greater Minnesota over-projected customer additions, the Department compared forecasted customer additions from last year’s demand entitlement filing to actual customer additions provided in this demand entitlement. In last year’s filing, Greater Minnesota forecasted customer additions during the 2018-2019 heating season of 500, which was 91 less than actual additions of 591, which is approximately 1.08 percent higher than forecasted. Greater Minnesota forecasts adding 589 firm customers for the upcoming heating season, an approximately 6.93 percent year-over-year increase. The average increase in customer base over the previous five heating seasons for the Company has been approximately 9.91 percent. Given the fact that the Company under-projected customer additions for its 2018-2019 heating season, and that it expects to add customers at a lower rate than its five-year average, the Department concludes that GMG’s customer growth projection for the 2019-2020 heating season appears to be reasonable.

Based on its analysis, the Department concludes that Greater Minnesota’s design-day analysis is acceptable at this time and will likely result in sufficient entitlements to serve firm customers on a peak day. Additionally, the Department notes that GMG complied with the Commission’s June 13, 2019 Order in Docket No. G002/M-18-232 to use at least three years of heating season data, separate its analysis by service area, and maintain a two-part analysis (econometric and mathematical).

3. Reserve Margin

As indicated in Department Attachment 2, the reserve margin, as proposed by the Company, is as follows:

Total Entitlement (Dth)	Design-day Estimate (Dth)	Difference (Dth)	Reserve Margin %	2018-2019 Proposed Reserve Margin	2017-2018 Proposed Reserve Margin
15,275	14,244	1,301	7.24%	11.06%	5.99%

The figures in the above table include design-day estimates from the Company’s two customer-type (customer class) regression models. The reserve margin is necessary as it provides an extra cushion that helps ensure firm reliability on a peak day; however, carrying too great a reserve margin results in customers paying higher demand costs than are necessary to provide reasonable service.

The Department has generally used a 5 percent reserve margin as an indicator of adequacy, and the Company proposed a reserve margin that is above 5 percent, specifically 7.24 percent. However, for Greater Minnesota, the Department has recommended, in previous demand entitlement filings, that the Commission accept higher reserve margins given the system dynamics, the higher level of growth experienced by this utility, and the fact that Greater Minnesota is a small utility with limited operational history. The Department concludes that the Company’s proposed reserve margin is acceptable in this proceeding. The Department notes that the design-day estimate using the mathematical peak day analysis produced a reserve margin of 4.8 percent, which is closer to the generally used 5 percent.

B. THE COMPANY'S PGA COST RECOVERY PROPOSAL

The demand entitlement amounts listed in Department Attachment 1 represent the demand entitlements for which the Company's firm customers will pay. In Attachment D, page 1 of 5 to its supplemental filing, the Company compared its April 2019 PGA to its expected November 2019 PGA with the Company's proposed changes as a means of calculating the bill impact. According to the Company, Greater Minnesota's demand entitlement proposal would result in the following annual rate impacts:

- Annual bill increase of \$3.32, or approximately 1.22 percent, for the average Residential customer consuming 80.0 Dth annually; and
- Annual bill increase of \$23.53, or approximately 1.22 percent, for the average Commercial and Industrial Firm customer consuming 567.5 Dth annually.

The Department recommends that the Commission allow recovery of associated demand costs effective November 1, 2019 through the monthly PGA.

IV. THE DEPARTMENT'S RECOMMENDATIONS

The Department requests that the Company provide the following in Reply Comments:

- An explanation as to why the UPC observed from the 2018-2019 heating season was used to derive an estimated design-day Dth requirement as opposed to the UPC that was produced by the model.

The Department recommends that the Commission:

- Approve Greater Minnesota's proposed level of demand entitlements as shown in the Company's *Petition*; and
- Allow Greater Minnesota to recover associated demand costs through the monthly Purchased Gas Adjustment effective November 1, 2019.

The Department also recommends that the Commission require Greater Minnesota to undertake the following in future demand entitlement filings:

- Use a constant annual average residential usage estimate based on weather normalized sales for the purpose of estimating customer rate impact;
- Perform separate regression analyses by service area, using area-specific weather stations;
- Estimate its design day using data from at least 3 heating seasons when appropriate. If the results of these calculations are not acceptable, the Department recommends that the Company fully explain its decision to use a shorter estimation period in its initial filing; and
- Maintain, on a going-forward basis, a two-part design-day process involving both regression analysis and mathematical analysis based on the Company's historical all-time peak-day send-out.

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Department Attachment 1
Details of Greater Minnesota Gas's Demand Entitlements Historical and Current Proposal

2015-2016 Heating Season			2016-2017 Heating Season (FINAL)			2017-2018 Heating Season (FINAL)			2018-2019 Heating Season (FINAL)			2019-2020 Heating Season (FINAL)		
	Quantity (Dth)	Change in Quantity		Quantity (Dth)	Change in Quantity		Quantity (Dth)	Change in Quantity		Quantity (Dth)	Change in Quantity		Quantity (Dth)	Change in Quantity
TF-7 (Apr.-Oct.)	0	0	TF-7 (Apr.-Oct.)	0	0	TF-7 (Apr.-Oct.)	0	0	TF-7 (Apr.-Oct.)	0	0	TF-7 (Apr.-Oct.)	0	0
TF12 (Nov.-Oct.)	210	0	TF12 (Nov.-Oct.)	710	500	TF12 (Nov.-Oct.)	710	0	TF12 (Nov.-Oct.)	1,210	500	TF12 (Nov.-Oct.)	2,027	817
TFX-5 (Nov.-Mar.)	0	0	TFX-5 (Nov.-Mar.)	0	0	TFX-5 (Nov.-Mar.)	0	0	TFX-5 (Nov.-Mar.)	0	0	TFX-5 (Nov.-Mar.)	349	349
TFX-5 (Nov.-Mar.)	6,344	0	TFX-5 (Nov.-Mar.)	6,344	0	TFX-5 (Nov.-Mar.)	6,344	0	TFX-5 (Nov.-Mar.)	6,344	0	TFX-5 (Nov.-Mar.)	6,344	0
Viking Zone 1	2,000	0	Viking Zone 1	2,000	0	Viking Zone 1	2,000	0	Viking Zone 1	0	(2,000)	Viking Zone 1	0	0
Delivery Contract	0	(950)	Delivery Contract	0	0	FT-1 Viking	2,200	2,200	FT-1 Viking	3,200	1,000	FT-1 Viking	3,200	0
Non-Recallable Capacity Release	2,600	2,600	Non-Recallable Capacity Release	2,600	0	Non-Recallable Capacity Release	0	2,600	Non-Recallable Capacity Release	0	0	Non-Recallable Capacity Release	0	0
TFX (Apr. and Oct.)	665	0	TFX (Apr. and Oct.)	665	0	TFX (Apr. and Oct.)	665	0	TFX (Apr. and Oct.)	665	0	TFX (Apr. and Oct.)	665	0
Viking Forward Haul	1,200	0	Viking Forward Haul	1,200	0	Viking Forward Haul	1,200	0	Viking Forward Haul	1,200	0	Viking Forward Haul	1,200	0
TFS (Nov.-Mar.)	90	0	TFS (Nov.-Mar.)	90	0	TFS (Nov.-Mar.)	90	0	TFS (Nov.-Mar.)	90	0	TFS (Nov.-Mar.)	90	0
Viking Forward Haul/Emerson	1,400	0	Viking Forward Haul/Emerson	1,400	0	Viking Forward Haul/Emerson	1,400	0	Viking Forward Haul/Emerson	1,400	0	Viking Forward Haul/Emerson	1,400	0
SMS	2,000	0	SMS	2,000	0	SMS	2,000	0	SMS	2,500	500	SMS	2,500	0
Total Demand Entitlement	12,509	1,650	Total Demand Entitlement	13,009	500	Total Demand Entitlement	12,609	(400)	Total Demand Entitlement	14,109	1,500	Total Demand Entitlement	15,275	1,166
Total Transportation	14,509	1,650	Total Transportation	15,009	500	Total Transportation	12,609	(2,400)	Total Transportation	14,109	1,500	Total Transportation	15,275	1,166
Total Annual Transportation	0	0	Total Annual Transportation	0	0	Total Annual Transportation	0	0	Total Annual Transportation	0	0	Total Annual Transportation	0	0
Total Seasonal Transport	14,509	1,650	Total Seasonal Transport	15,009	500	Total Seasonal Transport	14,609	(400)	Total Seasonal Transport	14,109	(500)	Total Seasonal Transport	15,275	1,166
Percent Annual on Greater Minnesota System	0.00%	0.00%	Percent Annual on Greater Minnesota System	0.00%	0.00%	Percent Annual on Greater Minnesota System	0.00%	0.00%	Percent Annual on Greater Minnesota System	0.00%	0.00%	Percent Annual on Greater Minnesota System	0.00%	0.00%
Percent Seasonal on Greater Minnesota System	100.00%	0.00%	Percent Seasonal on Greater Minnesota System	100.00%	0.00%	Percent Seasonal on Greater Minnesota System	115.86%	15.86%	Percent Seasonal on Greater Minnesota System	100.00%	-15.86%	Percent Seasonal on Greater Minnesota System	100.00%	0.00%

Department Attachment 2
Details of Greater Minnesota Gas's Demand Entitlements Historical and Current Proposal

Heating Season	Number of Firm Customers			Design Day Requirement			Total Entitlement + Peak Shaving + Peak Shaving			Reserve Margin
	(1) Number of Design Day Customers	(2) Change from Previous Year	(3) % Change From Previous Year	(4) Design Day (Mcf)	(5) Change from Previous Year	(6) % Change From Previous Year	Heating Season Total Entitlement (Mcf)	(8) Change from Previous Year	(9) % Change From Previous Year	(10) % of Reserve Margin [(7)-(4)]/(4)
2019-2020	9,090	589	6.93%	14,244	1,540	12.12%	15,275	1,166	8.26%	7.24%
2018-2019	8,501	591	7.47%	12,704	808	6.79%	14,109	1,500	11.90%	11.06%
2017-2018	7,910	532	7.21%	11896	1,078	9.96%	12,609	(400)	-3.07%	5.99%
2016-2017	7,378	735	11.06%	10,818	(308)	-2.77%	13,009	500	4.00%	20.25%
2015-2016	6,643	791	13.52%	11,126	2,157	24.05%	12,509	2,850	29.51%	12.43%
2014-2015	5,852	547	10.31%	8,969	52	0.58%	9,659	100	1.05%	7.69%
2013-2014	5,305	531	11.12%	8,917	3,953	79.63%	9,559	4,350	83.51%	7.20%
2012-2013	4,774	558	13.24%	4,964	514	11.55%	5,209	165	3.27%	4.94%
2011-2012	4,216	296	7.55%	4,450	0	0.00%	5,044	0	0.00%	13.35%
2010-2011	3,920	198	5.32%	4,450	239	5.68%	5,044	500	11.00%	13.35%
2009-2010	3,722	162	4.55%	4,211	(71)	-1.66%	4,544	300	7.07%	7.91%
2008-2009	3,560	182	5.39%	4,282	566	15.23%	4,244	244	6.10%	-0.89%
2007-2008	3,378	170	5.30%	3,716	166	4.68%	4,000	350	9.59%	7.64%
2006-2007	3,208	237	7.98%	3,550	583	19.65%	3,650	350	10.61%	2.82%
2005-2006	2,971	290	10.82%	2,967	270	10.01%	3,300	300	10.00%	11.22%
2004-2005	2,681	336	14.33%	2,697	697	34.85%	3,000	600	25.00%	11.23%
2003-2004	2,345	181	8.36%	2,000	(200)	-9.09%	2,400	(200)	-7.69%	20.00%
2002-2003	2,164	300	16.09%	2,200	400	22.22%	2,600	400	18.18%	18.18%
2001-2002	1,864	301	19.26%	1,800	400	28.57%	2,200	500	29.41%	22.22%
2000-2001	1,563	393	33.59%	1,400	300	27.27%	1,700	300	21.43%	21.43%
1999-2000	1,170	279	31.31%	1,100	250	29.41%	1,400	150	12.00%	27.27%
1998-1999	891	289	48.01%	850	350	70.00%	1,250	750	150.00%	47.06%
1997-1998	602	339	128.90%	500	200	66.67%	500	200	66.67%	0.00%
1996-1997	263	263		300	300		300	300		
Average Change Per Year:			18.59%			20.24%			22.08%	13.03%

Firm Peak Day Sendout

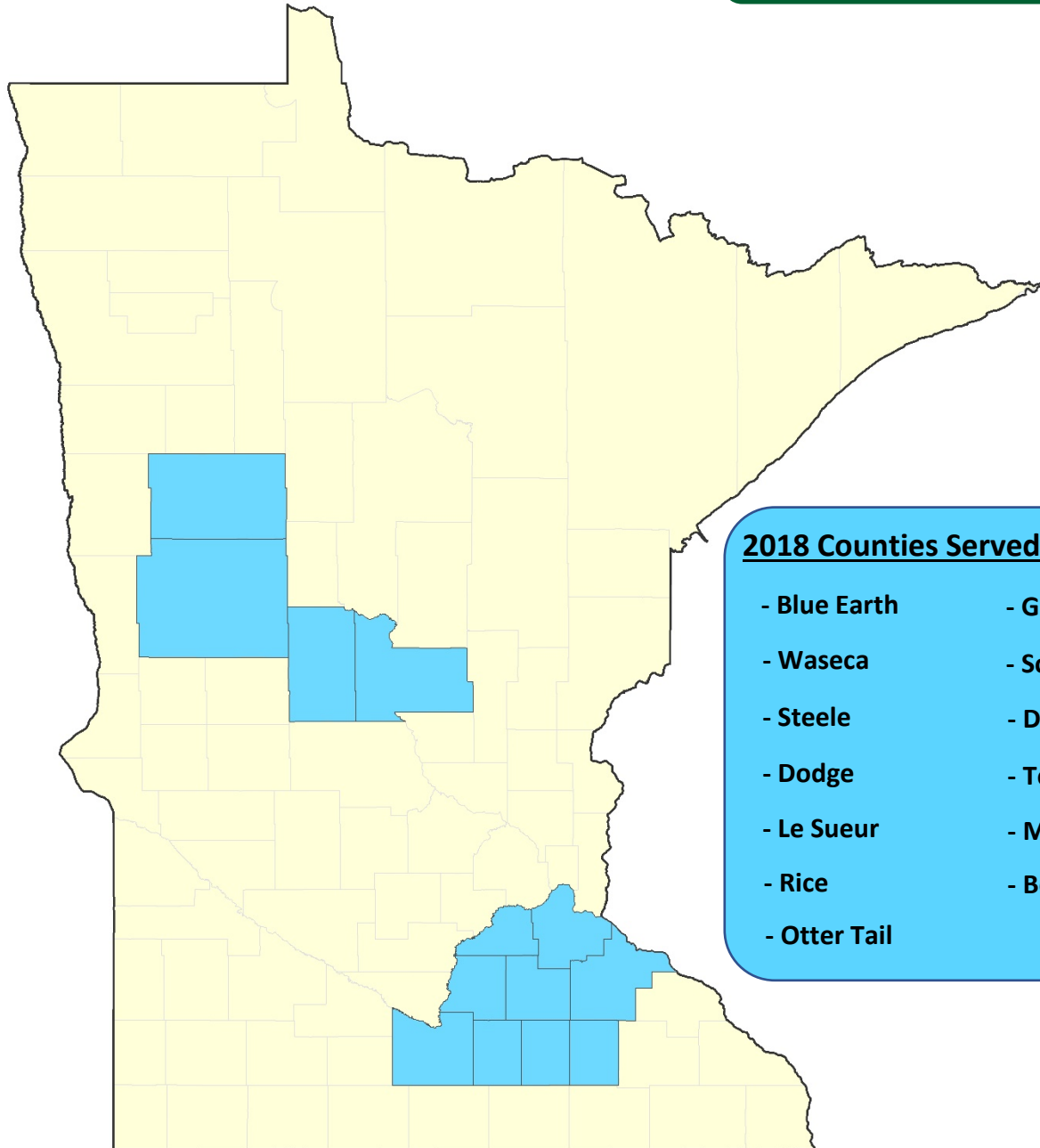
Heating Season *	(11) Firm Peak Day Send out (Mcf)	Change from Previous Year	% Change From Previous Year	Excess per Customer [(7) - (4)]/(1)	Design Day per Customer (4)/(1)	Entitlement per DD Customer (7)/(1)	Peak Day Sendout per DD Customer (11)/(1)
2019-2020				0.1134	1.5670	1.6804	
2018-2019	13,323	2,963	28.60%	0.1653	1.4944	1.6597	1.5672
2017-2018	10,360	1,114	12.05%	0.0901	1.5039	1.5941	1.3097
2016-2017	9,246	(249)	-2.62%	0.2970	1.4663	1.7632	1.2532
2015-2016	9,495	1,126	13.45%	0.2082	1.6748	1.8830	1.4293
2014-2015	8,369	489	6.21%	0.1179	1.5326	1.6505	1.4301
2013-2014	7,880	2,855	56.82%	0.1210	1.6809	1.8019	1.4854
2012-2013	5,025	1,368	37.41%	0.0513	1.0398	1.0911	1.0526
2011-2012	3,657	(248)	-6.35%	0.1409	1.0555	1.1964	0.8674
2010-2011	3,905	251	6.87%	0.1515	1.1352	1.2867	0.9962
2009-2010	3,654	(374)	-9.29%	0.0895	1.1314	1.2208	0.9817
2008-2009	4,028	(72)	-1.76%	(0.0107)	1.2028	1.1921	1.1315
2007-2008	4,100	550	15.49%	0.0841	1.1001	1.1841	1.2137
2006-2007	3,550	738	26.24%	0.0312	1.1066	1.1378	1.1066
2005-2006	2,812	285	11.28%	0.1121	0.9987	1.1107	0.9465
2004-2005	2,527	185	7.90%	0.1130	1.0060	1.1190	0.9426
2003-2004	2,342	587	33.45%	0.1706	0.8529	1.0235	0.9987
2002-2003	1,755	747	74.11%	0.1848	1.0166	1.2015	0.8110
2001-2002	1,008	(180)	-15.15%	0.2146	0.9657	1.1803	0.5408
2000-2001	1,188	291	32.44%	0.1919	0.8957	1.0877	0.7601
1999-2000	897	95	11.85%	0.2564	0.9402	1.1966	0.7667
1998-1999	802	397	98.02%	0.4489	0.9540	1.4029	0.9001
1997-1998	405	233	135.47%	0.0000	0.8306	0.8306	0.6728
1996-1997	172	172		0.0000	1.1407	1.1407	0.6540
Average Change Per Year:			26.02%	0.1404	1.1469	1.2861	0.9972

Greater Minnesota Gas, Inc.

2018 Service Territory



GREATER MINNESOTA
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2018 Counties Served by GMG:

- Blue Earth
- Waseca
- Steele
- Dodge
- Le Sueur
- Rice
- Otter Tail
- Goodhue
- Scott
- Dakota
- Todd
- Morrison
- Becker

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2018 Distribution Map



GREATER MINNESOTA
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