

June 2, 2015

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

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. G022/M-15-285

Dear Mr. Wolf:

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

A Request by Greater Minnesota Gas, Inc. (Greater Minnesota or the Company) for Approval by the Minnesota Public Utilities Commission (Commission) of a Change in Contract Demand Entitlement Units Effective November 1, 2015.

The filing was submitted on March 25, 2015. The petitioner is:

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 Commission:

- Approve Greater Minnesota's proposed level of demand entitlements, subject to any possible changes in anticipated entitlements between the filing of these *Comments* and November 1, 2015, as shown in the Company's *Petition*; and
- Withhold decision of Greater Minnesota cost recovery proposal until the Company provides additional discussion regarding its proposed storage contract and associated cost recovery proposal.

The Department also recommends that the Commission:

- require Greater Minnesota to 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 sendout until such time that Greater Minnesota has sufficient historical load data beyond the 2012-2013 heating season;

- explore segregating its linear regression modeling into two components, for larger and smaller firm customers; and
- if the Company does not provide additional clarifying information or an alternative cost recovery proposal, require Greater Minnesota to recover storage costs, beyond firm customers, from any interruptible customer that used gas, at any point, during the then-most recent heating season. Further, require GMG to charge any new interruptible customer for the cost of the storage contract until such point that either actual data on the customer's use of gas during a heating season is available or, the prospective customer provides evidence that they will not consume gas during the heating season.

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

Sincerely,

/s/ ADAM J. HEINEN
Rates Analyst
651-539-1825

AJH/ja
Attachment

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS OF THE
MINNESOTA DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

DOCKET No. G022/M-15-285

I. BACKGROUND

Pursuant to Minnesota Rules 7825.2910, subpart 2, Greater Minnesota Gas, Inc. (Greater Minnesota, GMG, or the Company) filed a *Petition for Approval of Changes in Contract Demand Entitlements (Petition)* on March 25, 2015 with the Minnesota Public Utilities Commission (Commission). The Company proposed that the changes in its demand entitlements be effective on November 1, 2015. The filing date of March 25, 2015 is prior to August 1; as such, it complies with Ordering Point No. 3 of the Commission's April 25, 2014 *Order* in Docket No. G022/M-13-730 which required the Company to file demand entitlements by August 1 of each year.

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

Table 1: Greater Minnesota's Proposed Total Entitlement Changes	
Type of Entitlement	Proposed Changes Increase (decrease) (Dekatherms (Dth))¹
Delivery Contract	(950)
FT-A Capacity Release, Non-recallable	2,600

The Company's proposal in the instant docket would add to GMG's proposed level of firm supplies in Docket No. G022/M-14-651 (Docket 14-651), which has not yet been brought to the Commission for resolution.² Specifically, GMG's proposal in the instant docket would increase the Company's proposed design-day (winter) capacity by 1,650 Dth/day from 10,859 Dth/day to 12,509 Dth/day. GMG's proposed base entitlement level, 10,859 Dth/day, includes both the 100 Dth/day that GMG requested and the Department

¹ Dekatherms (Dth).

² The Commission has scheduled this docket for the agenda meeting on June 12, 2015.

recommended for approval plus 1,200 Dth/day of Viking Forward Haul entitlements that the Company added beginning February 1, 2015.³ Greater Minnesota's requested changes in entitlements, including the 100 Dth/day from Docket 14-651, are as follows:

Type of Entitlement	Proposed Changes Increase (decrease) (Dekatherms (Dth))
Viking Forward Contract	1,200
Delivery Contract	(950)
FT-A Capacity Release, Non-recallable	2,600
Total	2,850

That is, as shown in Table 2, the Company's proposals would increase the Company's proposed design-day (winter) capacity over the beginning of the last heating season (November 1, 2014) by 2,850 Dth/day, or 30 percent from 9,659 Dth/day to 12,509 Dth/day.⁴

While the Company did not add capacity specifically for non-peak periods, the contracts that Greater Minnesota added are 12-month contracts, meaning these volumes are available for the entire calendar year, and the Company can call on these volumes to serve both peak and non-peak demand. Greater Minnesota also entered into a storage contract that began on April 1, 2015.

The Department discusses the various effects of the proposed entitlement changes on the Company's rates for different customer classes below; however, Greater Minnesota's proposal, as filed,⁵ would increase capacity and increase bills for residential heating

³ In Docket 14-651, while the Department recommended approval of GMG's proposed 100 Dth/day of Viking Forward Haul entitlements, totaling 9.659 Dth/day, the Department was not able to recommend approval in that docket of Greater Minnesota proposal in its *Supplemental Filing* on February 13, 2015 to add 1,200 Dth/day more of Viking Forward Haul entitlements, since "the Company's Viking forward haul contract decision took place in late January 2015 and was not considered while Greater Minnesota was planning for the 2014-2015 heating season" and since "the information and analyses in the instant docket [14-651] do not provide a comprehensive assessment of the need for, or impact of, the additional capacity." Instead, in our April 1, 2015 *Response Comments* in Docket 14-651, the Department concluded that analysis of this proposed contract could occur in the instant docket, 15-285, since GMG indicated in its February 13, 2015 filing in 14-651 its intention to file a new demand entitlement filing by April 1, 2015. Thus, the Department analyzes GMG's proposed 1,200 Dth/Day Viking Forward Haul contract in these *Comments*.

⁴ The total increase in demand entitlements from GMG's last approved level of 9.569 Dth/day in Docket G022/M-13-730 is 2,950 Dth/day.

⁵ The base cost for this calculation already includes the cost changes associated with the proposed Viking Forward Contract. The costs of the Viking Forward Contract were charged to GMG's ratepayers beginning in April, 2015, as discussed in Section II.D below.

customers by \$34.86 per year (calculated as $(\$1.2143 - \$0.8435) * 94.1$ Dth) or \$2.90 per month for average residential customers using approximately 94 Dth per year.⁶

The Company describes the factors contributing to the need for changing demand entitlements as follows:

- Insure that the Company has sufficient reserve to meet its customers' increasing need in light of; and
- Continued expected growth in the number of customers during the upcoming (2015-2016) heating season.

The Department's review of Greater Minnesota's *Petition* is provided below.

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

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

- A. the proposed overall demand entitlement level;
- B. the design-day requirement;
- C. the reserve margin;
- D. Viking Forward Haul contract;
- E. Capacity Release Contract;
- F. Customer Growth Forecast;
- G. Greater Minnesota's storage contract; and
- H. the PGA cost recovery proposal.

A. PROPOSED OVERALL DEMAND ENTITLEMENT LEVEL

As indicated in DOC Attachment 2, the Company proposed to increase its total entitlement level over the level procured for November 1, 2014 (beginning of the last heating season) in Dth as follows:

Previous Entitlement (Dth)	Proposed Entitlement (Dth)	Entitlement Changes (Dth)	% Change From Previous Year
9,659	12,509	2,850	29.51

⁶ The Department notes that Greater Minnesota used an average residential customer consumption figure of 87.1 Dth per year in last year's demand entitlement filing.

The Department analyzes below the proposed changes, the proposed design day requirement, Greater Minnesota's proposed storage contract, and proposed reserve margin. The Department concludes that the Company's proposed recovery of overall demand costs is not reasonable at this time. This recommendation is related to the Company's proposed cost recovery for its storage contract, which the Department discusses in greater detail in Section G below.

B. *DESIGN-DAY REQUIREMENT*

In past demand entitlement filings, Greater Minnesota employed a two-part design-day process to calculate its peak day sendout. Beginning with its last demand entitlement filing, the Company relied strictly upon regression analysis to estimate its design-day throughput. In its review of the design-day analysis in Docket 14-651, the Department identified certain concerns with the Company's design-day analysis but ultimately concluded that Greater Minnesota's method was reasonable at that time. The Department did, however, recommend that the Company provide the following information in its next demand entitlement filing:

- review its regression models and attempt to determine what factor, or factors, may be driving the under-estimation bias regarding consumption identified by the Department;
- explore other methods to estimate baseload consumption if regression models calculate negative baseload; 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 sendout.

The Department reviewed the Company's *Petition* and concludes that Greater Minnesota used a regression analysis similar to what it employed in its last demand entitlement filing. The Company was also responsive to two of the three recommendations that the Department made in the last demand entitlement filing. Greater Minnesota conducted an analysis and surmised that actual growth exceeding anticipated growth is likely a factor in its models under-estimating consumption. It appears that the Company explored other methods to estimate baseload consumption but concluded that it does not have sufficient historical data available, since rapid growth began on its system, to appropriately estimate baseload use on its system. Greater Minnesota concluded that its regression method was sufficient and the Company did not use a two-stage design-day process in this filing.

The Company used Ordinary Least Squares (OLS) regression to calculate the projected design day for Greater Minnesota's service territory using four separate regression models, one for each area the Company serves (Mankato, Faribault, Shakopee, and Swanville),

assuming area-specific weather parameters and Town Border Station (TBS) data. The Company's analysis was based on actual daily heating season TBS throughput and weather data over the period November 1, 2011 to February 28, 2015⁷ for the Mankato, Faribault, and Shakopee models and actual daily TBS throughput and weather data from November 1, 2013 to February 28, 2015 for the Swanville model. From these four separate regression equations, the Company estimated baseload usage and average use per heating degree day (HDD). Greater Minnesota provided a summary of its regression outputs in Attachment A, Page 2 of 3, of its *Petition*, but not its input data; these data were provided in an informal information request (DOC Attachment 3). While reviewing Greater Minnesota's model outputs and regression results, the Department observed two issues.

Through the course of its analysis, the Company noted that weather during the 2011-2012 heating season were much warmer than normal and thus sales were much lower than normal. In the Company's eyes, it saw these weather conditions as an anomaly, so Greater Minnesota also conducted an analysis without data from the 2011-2012 heating season. When the Company conducted this analysis, the model did not estimate a negative amount of natural gas used during the baseload period (June through August) and the throughput results were only 7 Dth different than the regressions including data from 2011-2012. Given the small difference between the two analysis, Greater Minnesota decided to include data from the 2011-2012 heating season in the interest of consistency.

Despite the negative baseload issues, which are discussed in greater detail below, the Department concludes that use of data from the 2011-2012 heating season is acceptable. The similar results suggest that weather data from 2011-2012 is not necessarily anomalous, but given the issues of negative baseload, the Department believes that it is worthwhile to continue to assess whether to remove these data in future demand entitlement filings. In the next demand entitlement filing (for the 2016-2017 heating season) there will be four heating seasons worth of data available, which should be sufficient to produce robust estimates.

The Department also observed that two of Greater Minnesota's regression models (Fairbault and Marystown) estimate negative baseload (non-heat sensitive load). At first glance, this result appears inappropriate because baseload, by definition, is a specific, positive amount. However, it appears that the decision to report negative baseload is solely a result of the regression outputs, and not a real expectation. These concerns are similar to issues raised by the Department in previous demand entitlement filings. Specifically, the Department discussed this topic in depth on pages 3-5 of its September 2, 2014 *Comments* in Docket No. G022/M-14-651. The Department's concerns still exist and it will not repeat them at this time; however, as noted earlier in this section, if the negative "baseload" is related to data from the 2011-2012 heating season then this issue may cease in future demand entitlement filings. The Department will continue to monitor this issue.

⁷ Given the filing date, Greater Minnesota did not have sales and weather data available for March 2015.

The Department reviewed the Company's output data from its regression models and compared the results to actual TBS throughput data (DOC Attachment 3).⁸ Based on these data, it appears that Greater Minnesota's regression models may underestimate consumption. This concern is illustrated by the following regression output graphs provided by the Company in its response to informal requests for information.

Chart 1: Rapidan/Madison Regression

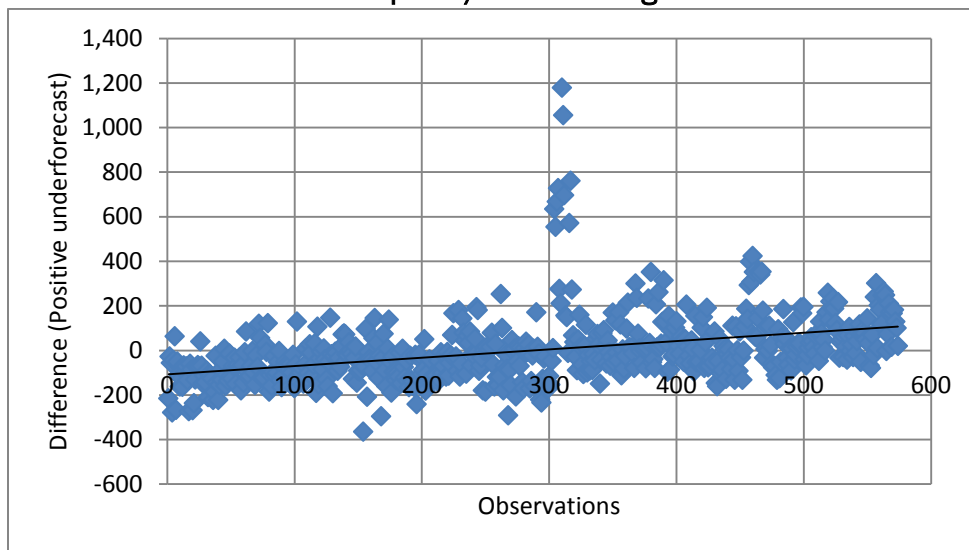
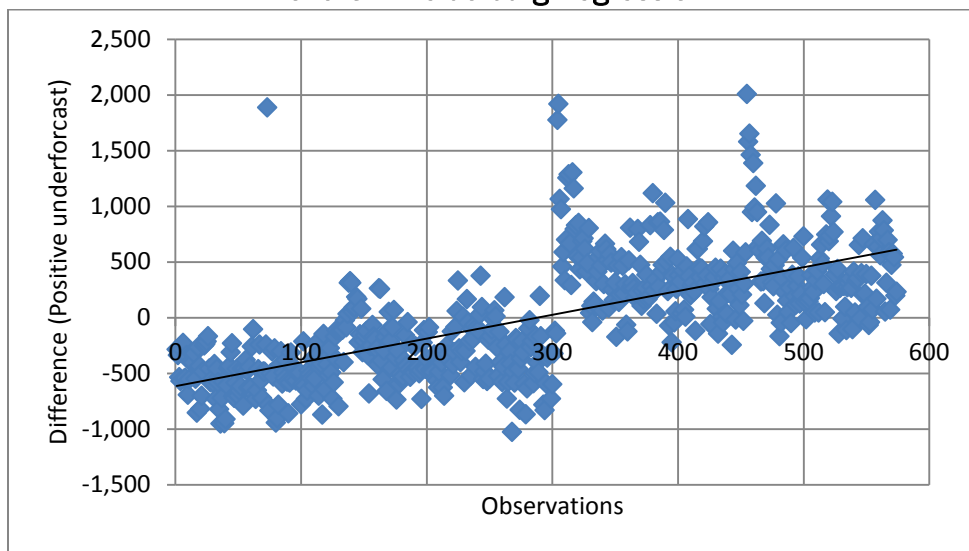


Chart 2: Heidelberg Regression



⁸ The Company provided throughput data in response to an informal information request on April 22, 2015.

Chart 3: Marystown Regression

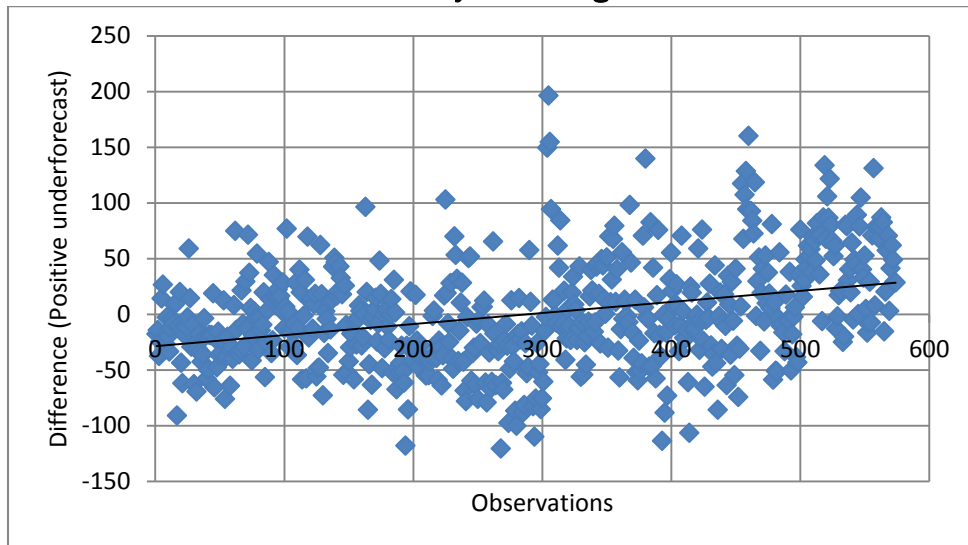
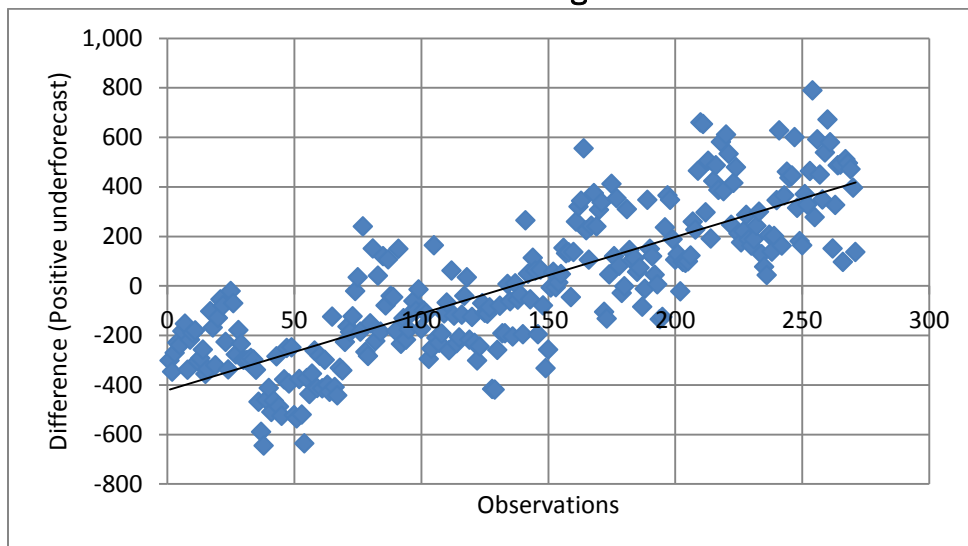


Chart 4: Randall Regression



In these charts, the Company compares estimated output on a given day to actual firm usage for that day. In the above charts, a negative value means that estimated usage is greater than actual, historical usage (use was over-estimated) and a positive value means that estimated usage is less than what actually occurred (use was under-estimated). The lines through the data show whether there are trends in over- or under-estimation over time.

Since the slopes of the lines are positive, the figures above show that, over the course of the historical estimation period, the Company's models all trended upward, which means that Greater Minnesota's models have become more prone to under-estimating firm usage.

Thus, it appears that there has been a bias toward under-estimating firm usage on a daily basis, including a peak day. Under-estimating consumption is a serious issue because it can put system reliability at risk if the reserve margin is too small. The Department raised the prospect of a bias toward under-estimation in Greater Minnesota's last demand entitlement filing, and the results in this analysis shows that there is a factor having an upward influence on sales that Greater Minnesota's design-day models has difficulty modeling.

In an effort to identify a factor, or factors, influencing regression estimated sales, the Department reviewed actual peak day sendout data for Greater Minnesota's system (DOC Attachment 3) and historical load profile data for the Company (*Petition*, Attachment A, Page 3 of 3). Based on this review, the Department concludes that there has been a significant shift in the Company's load make up and customer usage since Greater Minnesota entered the current expansion phase and, in particular, over the past two heating seasons. At Attachment A, Page 3 of 3, in its *Petition*, Greater Minnesota provided an estimated breakdown of its load profile on a peak day during the 2014-2015 heating season. The Company estimated approximately 47 percent of usage by Residential customers, approximately 45 percent by Industrial customers, and 8 percent by Commercial customers.

To determine whether Greater Minnesota's recent expansion impacted its load profile, the Department reviewed data from the Company's 2010-2011 heating season demand entitlement (DOC Attachment 4).⁹ During the 2009-2010 heating season, Greater Minnesota estimated peak day consumption being approximately 82 percent by Residential customers, approximately 8 percent by Industrial customers, and 10 percent by Commercial customers. These data show that over the past five heating seasons, the Company's heating season load profile changed significantly and, since Industrial customers typically use more than Residential customers, the load intensity on the Company's system has also changed.

The reported use per customer on a peak day during the 2012-2013 and 2013-2014 heating seasons, as shown in DOC Attachment 2 and Attachment 1, Page 1 of 3, of the initial *Petition*, were 1.485 Dth/customer and 1.430 Dth/customer, respectively, while the peak day use per customer in earlier heating seasons was generally between 0.90 Dth/customer and 1.20 Dth/customer. This change in the peak day use per customer strongly suggests that usage characteristics on the Greater Minnesota system changed significantly between the 2012-2013 and 2013-2014 heating seasons. If this change in peak day usage is related to the shift in the load profile to more Industrial customers, then the Company's linear regression modeling using a single method to estimate peak day consumption for all firm customers should be revised going forward to be segregated into larger and smaller firm customers.

⁹ Docket No. G022/M-10-1165.

In addition to linear regression, it is also possible to estimate peak day consumption using a mathematical analysis. The mathematical analysis uses firm use per customer on an all-time peak day multiplied by the projected number of firm customers. As with any method of estimation, there are pros and cons to the mathematical approach. This method is simple, easy to calculate, and is based on an actual, historical events. However, since it is based on an actual event, 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. Given that Greater Minnesota's all-time peak day happened during the 2013-2014 heating season, the mathematical approach is acceptable since consumption characteristics are likely similar to what will be expected during the 2015-2016 heating season.

Using the use per customer on Greater Minnesota's all-time peak day, 1.4854 Dth/customer, and the Company's projected firm customer count during the 2015-2016 heating season, the mathematical approach results in an estimated design-day of 11,497 Dth/day, which is 161 Dth/day, or 1.4 percent, greater than Greater Minnesota's regression estimated result. This result is also 1,012 Dth/day less than the proposed total entitlement procured by the Company, which suggests that the Company has sufficient entitlements to serve firm customers. However, as noted in the Department's *Comments* in last year's demand entitlement filing, the all-time peak day during the 2013-2014 heating season occurred on a day warmer than a Commission-prescribed peak day.¹⁰ Thus, it is necessary to adjust the above result to reflect conditions on a Commission-prescribed peak day.

Assuming a linear relationship between heating degree days (HDD) and consumption, an estimate of peak day consumption on a peak day is relatively straight-forward. The Company's all-time peak day occurred on a day with 82 HDD and with total consumption of 7,880 Dth. Based on baseload data reported by the Company in its last demand entitlement filing, Greater Minnesota had weather sensitive load of 7,700 Dth. Dividing 7,700 Dth by 82 HDD results in 93.9 Dth/HDD which, when added to the mathematical design-day estimate of 11,497 Dth/day, results in an estimated peak day consumption of 12,248 Dth/day.¹¹ Since the estimated value, which also includes some interruptible load, is less than Greater Minnesota's proposed procurement level, the Department concludes that the Company has sufficient entitlements to ensure firm reliability on a Commission-prescribed peak day.

¹⁰ A Commission peak day is generally defined as an average temperature over a 24-hour period of -25°F or 90 HDD.

¹¹ Based on a review of the Company's last demand entitlement filing, the Department notes that these calculations likely include interruptible and transportation usage; as such, the estimated consumption on a peak day should be lower.

The design-day issues identified above are a concern; however, the Department does not believe that the Company is intentionally estimating its design-day incorrectly or attempting to estimate the design-day in an inappropriate manner. Rather, the nature of the Company's system may be a significant factor explaining the difficulty modeling Greater Minnesota's design day. As discussed in previous demand entitlement filings, Greater Minnesota is a small, relatively fast growing natural gas utility that serves smaller communities and areas throughout rural Minnesota. The small size of the utility, coupled with higher growth rates, can make regression results unstable year-to-year because new customer groups, or changes in load characteristics, can have a significant impact on estimated peak-day usage, especially compared to other larger utilities.

Based on the issues identified above, and Greater Minnesota's system characteristics, the Department recommends that the Commission require Greater Minnesota to 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 sendout until such time that Greater Minnesota has sufficient historical load data beyond the 2012-2013 heating season.

In addition, the Company should explore segregating its linear regression modeling into two components, for larger and smaller firm customers. The Department is available to assist Greater Minnesota with any questions it may have regarding estimating its design-day through a two-part process or any other regression-related questions.

C. RESERVE MARGIN

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

Total Entitlement (Dth)	Design-day Estimate (Dth)	Difference (Dth)	Reserve Margin %	% Change From Previous Year ¹²
12,509	11,336	1,173	10.35%	2.66%

The figures in the above table include design-day estimates from the Company's four service area regression models. The reserve margin is necessary since it provides an extra cushion which 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.

¹² As shown on DOC Attachment 2, the Company's average reserve margin since 1996 is 13.31 percent.

The Department has generally used a 5 percent reserve margin as an indicator of an adequate reserve margin, and the Company proposed a reserve margin that is above 5 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. In addition, as noted in the previous section of these *Comments*, the Department identified changes with system load characteristics and potential concerns with Greater Minnesota's design-day analysis which may understate peak day consumption and result in a lower effective reserve margin than calculated by Greater Minnesota. Using a mathematical approach, the Department estimated a peak day consumption figure of approximately 12,248 Dth/day (12,153 Dth/day when the Company's interruptible consumption estimate is removed) in the previous section. Comparing this firm consumption figure of 12,153 Dth/day to the Company's proposed total entitlement level results in an effective reserve margin of 2.93 percent. This revised amount is below the 5 percent rule-of-thumb; however, as noted above, the Department concludes that Greater Minnesota's total entitlement level is expected to ensure firm deliverability on a peak day. As such, the Department concludes that the Company's proposed reserve margin is acceptable in this proceeding, given the expected level of customer growth. The Department discusses Greater Minnesota's customer growth estimates in sub-section F below.

D. VIKING FORWARD HAUL CONTRACT

The Company initially proposed this change in entitlement in its February 12, 2015 *Supplemental Filing* in Docket No. G022/M-14-651. In that filing, the Company explained that on January 26, 2015,¹³ Viking provided notice of an open season for capacity beginning on February 1, 2015. This three-day bidding window involved existing capacity on the Viking mainline that would be available beginning January 29, 2014 as a result of the U.S. Department of Transportation, Pipeline Hazardous Materials and Safety Administration (PHMSA) lifting restrictions. The Company further explained that 40,121 Dth/day were available and that Viking would not accept bids that did not start on February 1, 2015. The Company ultimately contracted for 1,200 Dth/day of capacity through January 31, 2026. Greater Minnesota also stated that it would seek approval for cost recovery of the Viking forward haul contract effective February 1, 2015, and that the Company would provisionally include the rate impact of the change in Greater Minnesota's monthly PGA effective March 1, 2015. In its April 1, 2015 *Response Comments* in Docket No. G022/M-14-651, the Department concluded that the Viking Forward Haul represented a separate change from the existing demand entitlement filing for the 2014-2015 heating and would defer analysis to this docket.

¹³ The February 13, 2015 submittal appears to contain typographical errors referring to 2014, rather than 2015 dates.

Based on projected customer growth and the Company's design-day estimates in this proceeding, the Department concludes that this contract is necessary to serve firm need on a peak day. Although it is unclear, or unlikely, based on data for the 2014-2015 heating season that firm customers needed this contract at the beginning of the term, it is not unreasonable that GMG entered into the contract when it did, given the circumstances described above and the expected growth in customers. Thus, the Department does not object to PGA cost recovery beginning on March 1, 2015. Generally speaking, interstate pipelines do not sell capacity in small chunks to identically meet a utility's needs (e.g., it is rare that projected capacity increases of, say, 173 Dth/day could be met by an additional 173 Dth/day purchased of entitlements) but, rather, the interstate pipelines sell in larger chunks over a certain time horizon (e.g., 500 Dth/day for 10 years).

In the case of this contract, Greater Minnesota was faced with the prospect of a very short open-season, with a specific contract start date, and the requirement that a contract be made for a 10-year period. Although the capacity was not needed during the end of the 2014-2015 heating season, the Company is ultimately expected to need this capacity, based on load growth the Company has experienced and the data provided in this proceeding indicating further growth in firm need. Greater Minnesota could have waited to procure additional capacity, perhaps beginning on November 1, 2015, but it is possible that these entitlements would be significantly higher in cost, especially if capacity were only available on the Northern Natural Gas (Northern) system.

E. CAPACITY RELEASE CONTRACT

The Company stated that in November 2014 it began evaluating the need for additional capacity and received quotes from Northern Natural Gas and ANR Pipeline. There was no capacity available on Viking at that time, so the Company did not receive bids from Viking. Greater Minnesota stated that it was quoted \$377 per year per Dth from Northern and \$331 per year per Dth from ANR Pipeline. These were higher priced entitlements, so Greater Minnesota explored other options to meet expected need. Through this process, the Company was able to obtain a capacity-release contract with Wisconsin Energy for 2,600 Dth/day at a cost of \$68.87 per year per Dth, which is significantly less than the Northern and ANR Pipeline quotes. The contract with Wisconsin Energy is for non-recallable capacity release so the volumes will be available to serve GMG's customer demand on any day during the heating season.

Given the capacity market present in November 2014, and the cost savings realized with this contract, the Department concludes that procurement of this contract is reasonable. However, despite the cost savings associated with this contract, there are some risks that the Commission should realize, especially as these risks relate to replacement costs. Since this contract is relatively short in length, two years, the potential replacement costs, if applicable, need to be considered. Given the expected growth on Greater Minnesota's system, it is likely that these entitlements will be needed into the future. When this contract

expires, Greater Minnesota will need to find replacement entitlements and it is probable that new costs will be similar, or perhaps higher, to what Northern and ANR quoted originally. These will likely be longer term contracts and, if prices increase in the next two years, it is possible that total costs over the long term may be greater with the proposed procurement strategy than if Greater Minnesota had procured the more expensive entitlements from either Northern or ANR. However, capacity through Viking or possibly other resources may be available in the future. After the open season, discussed in Section D above, it would appear that additional capacity may be available to Greater Minnesota in the future. Based on a review of Attachment D, Page 4 of 5, in the Company's *Petition*, if capacity is available on Viking, the future replacement costs for the capacity release contract will be similar, or even less, than the current per-Dth price for the Wisconsin Energy contract.

To reiterate, the Department concludes that this contract, and its associated costs, appear to be reasonable at this time.

F. CUSTOMER GROWTH FORECAST

As noted in the Company's *Petition* and attachments, Greater Minnesota anticipates significant firm customer growth prior to the 2015-2016 heating season. In fact, the Company projects firm customer growth of 1,888 customers or approximately 32 percent. This level is the largest projected increase in customers, year-to-year, in the Company's history and represents the largest percentage increase in roughly 15 years. Based on a review of this filing, it is clear that customer growth is the primary factor behind Greater Minnesota's requested increase in demand entitlements. Given the amount of projected customer growth, it is important to verify that this growth level is reasonable. If the amount of growth is over-estimated then existing firm customers would be subject to higher than reasonable demand costs.

The Department reviewed historical customer growth figures. Greater Minnesota's recent period of customer growth began between the 2010-2011 and 2011-2012 heating seasons, and the Department reviewed customer count forecasts in previous demand entitlement filings and compared them to actual customer additions.

Year	Original Forecast	Actual Growth	Difference*
2011-2012	257	319	(62)
2012-2013	462	558	(96)
2013-2014	430	531	(101)
2014-2015	595	547	48

*Negative numbers indicate that actual growth was higher than anticipated.

Although only four years of historical data exists since increased expansion began on the Greater Minnesota system, the Company has generally under-forecasted customer growth and, during the 2014-2015 heating season, actual growth was relatively close, within 10 percent, of original projections. If estimated customer growth of 1,888 for the 2015-2016 heating season does not materialize, and the difference in growth is similar to the 2014-2015 heating season, on a percentage basis, it is unlikely that the over-projection of customer growth will result in rates that are unreasonably high for existing customers, especially when considering the design-day analysis in Section B above.

In addition, the Department requested clarifying information from the Company in an informal information request regarding its planned customer additions prior to the 2015-2016 (DOC **Trade Secret** Attachment 5). The Company noted that the expected customer growth is derived from several large projects. Despite the large nature of the projects, Greater Minnesota further stated that it strives to protect its ratepayers from risk by conducting thorough market analysis and working with community and business leaders prior to predicting growth. The Company also noted that its customer figures are based on a customer equivalent (CE) calculation, which it uses in nearly all of its modeling and regulatory filings. Greater Minnesota explained that its CEs are based on the average revenue margin for a residential customer. For example, if an industrial or commercial customer is added to the system, the Company treats this new load, from a modeling standpoint, as a group of residential customers.

The amount of customers, or more appropriately CEs, Greater Minnesota anticipates adding prior to the 2015-2016 heating season is significant and, if growth projections do not reach expectations, there is a risk of unreasonably higher costs to existing firm ratepayers. However, since growth has increased on the Company's system, actual customer additions have exceeded or been relatively close to forecasted customer additions so the risk to existing customers does not appear significant at this time. As such, the Department concludes that the projected customer additions do not appear unreasonable at this time. Further, the Company's use of CEs may also explain the change in peak day use per customer noted in Section B above. As noted above, the CEs are based on annual residential non-gas revenue. Hypothetically speaking, over the course of a year, a commercial or industrial "customer" may use the equivalent of 50 residential customers; however, on a peak day, these commercial or industrial CEs may use more than residential customers because, all else being equal, commercial and industrial load tends to be more constant.

As discussed in Section B above, the Department recommends that the Company explore segregating its linear regression modeling into two components, for larger and smaller firm customers.

G. *GREATER MINNESOTA'S PROPOSED STORAGE CONTRACT*

In addition to the proposed demand entitlement changes, Greater Minnesota entered into a contract with BP and requested that the Commission approve inclusion of the demand charges for a storage agreement in the PGA effective November 1, 2015. The Company explained that it has historically had to rely on the daily gas market to meet customer needs and that Greater Minnesota has actively been pursuing options to diversify its supply portfolio. The concerns associated with using the daily gas market were illustrated in 2014 following the TransCanada explosion and natural gas prices and volatility increased significantly. To protect against future price volatility, the Company entered into the storage agreement, which will entail purchase of gas based on the summer MichCon (Michigan Consolidated) Index with storage injection beginning on April 1 of each year. Greater Minnesota would then be able to access this gas, via the Viking pipeline, beginning on November 1 of each year. Using the 2013-2014 heating season as a guide, the Company estimates that this storage contract would have saved its ratepayers between \$650,000 and \$993,000 in gas costs.

For cost recovery, Greater Minnesota proposed to recover costs of this proposed storage through the demand portion of the PGA. The Company concluded that this proposal would be the most equitable approach and that ultimately no costs should be allocated to its interruptible customers. In support of this conclusion, Greater Minnesota explained that all but three of its interruptible customers are grain dryers or industrial asphalt plants, none of which operates during winter months. Given this fact, the Company determined that it would not be appropriate to allocate a portion of the storage costs to interruptible customers because they will not be using gas at the time storage withdraws occur. Greater Minnesota concluded its analysis by stating that, although demand costs would increase by slightly less than 1 percent, the potential benefits to ratepayers through lower commodity costs will outweigh the higher demand costs.

The Department is generally supportive of gas storage because it diversifies a utility's supply portfolio and, as noted above, it can reduce price volatility. Storage may not guarantee lower gas prices as the possibility exists that injection prices are higher than prevailing prices during withdrawal, but generally natural gas prices are lower during the summer months compared to the heating season. Based on its review, the Department concludes that GMG's decision to procure storage is reasonable; however, the Department does not support GMG's cost recovery proposal unless GMG can show that none of its interruptible customers will take any natural gas during the winter. Otherwise, since all customers are expected to benefit from lower commodity costs in the winter, GMG's proposal would be unreasonable. Further, GMG's proposal does not comply with previous Commission precedent and policy.

The Commission has ruled on the issue of storage and cost recovery through the PGA in the demand entitlements of other gas utilities.¹⁴ In these dockets, the Commission concluded that recovery of at least some storage related costs through the commodity portion of the PGA is appropriate because storage is designed to reduce the price volatility of commodity gas, which is something from which all ratepayers, not just firm customers, receive a benefit. The Commission also required all Minnesota regulated gas utilities to transfer the recovery balancing service costs, which are similar in many respects to storage costs, to the commodity portion of the PGA in its *Order* in Docket No. G999/AA-12-756. Clearly, the Company's cost recovery proposal does not match the Commission's recent decisions.

However, as noted above, the Company stated that the majority of its interruptible customers do not use gas during the heating season. The Department reviewed historical load data to confirm this statement (DOC Attachment 3), and Greater Minnesota's statements are generally correct. In terms of the Company's asphalt plants, which are individually represented in the design-day data, there is some use in the early parts of November, but then no usage for the rest of the heating season. However, any interruptible customer who uses gas between November 1 and March 31 each year will benefit from the proposed storage contract, in particular the three full-year customers. The Department agrees that the current number of full-year interruptible customers is small, but these customers will benefit from the proposed storage contract to the extent that they use any natural gas between November 1 and March 31 and reasonably should share in the costs. Further, it is conceivable that Greater Minnesota will add full-year interruptible customers and these potential customers should also share in the costs.

The seasonal nature of Greater Minnesota's interruptible customers makes the proper cost recovery treatment for the proposed storage contract challenging. The Commission's policy decisions over the past few years are clear that the Commission wants interruptible customers to share in the costs of storage contracts; however, in the case of Greater Minnesota's system recovering storage costs in the commodity portion of the PGA versus the demand portion of the PGA would result in non-heating season interruptible customers paying for a service from which they would receive no benefit. On the other hand, if Greater Minnesota's cost recovery proposal is used then full-year interruptible customers and interruptible customer who use gas during part of the heating season will not be paying for services for which they receive a benefit.

In an effort to find a solution to this cost recovery situation, the Department offers the following proposal. Since storage withdrawal begins on November 1 each year, the Department believes that storage costs should be recovered, beyond firm customers, from any interruptible customer that used gas, at any point, during the most recent heating season. Further, any new interruptible customer will be charged the cost of the storage

¹⁴ Docket No. G007/M-08-1329; G011/M-08-1328; G002/M-07-1395; G008/M-08-648; and G001/M-07-1397.

contract until such point that actual, historical data is available or, if the prospective customer provides evidence that they will not consume gas during the heating season. In lieu of this approach, some type of annualized usage method, which would seek to weigh the storage costs charged to a customer based on heating season usage, may also be appropriate.¹⁵ The Department invites the Company to investigate an annualized cost recovery method if Greater Minnesota believes this is a more appropriate cost recovery method.

The Department recommends that the Commission find Greater Minnesota's proposed storage contract reasonable. However, the Department recommends that the Commission find the Company's proposed cost recovery inappropriate and, instead, require Greater Minnesota to recover storage costs, beyond firm customers, from any interruptible customer that used gas, at any point, during the most recent heating season. Further, any new interruptible customer should be charged the cost of the storage contract until such point that actual, historical data is available or, if the prospective customer provides evidence that they will not consume gas during the heating season.

H. THE COMPANY'S PGA COST RECOVERY PROPOSAL

The demand entitlement amounts listed in DOC Attachment 1 represent the demand entitlements for which the Company's firm customers will pay. In Attachment D Page 1 of 5 of its *Petition*, the Company compared its March 2015 PGA, assuming no demand entitlement changes, to its November 2015 PGA with the Company's proposed changes as a means of calculating the bill impact of its proposed changes. According to the Company, Greater Minnesota's demand entitlement proposal would result in the following annual rate impacts:

- Annual bill increase of \$34.89, or approximately 43.97 percent, for the average Residential customer consuming 94.1 Dth annually; and
- Annual bill increase of \$1,243.26, or approximately 43.97 percent, for the average Commercial and Industrial Firm customer consuming 3,352.9 Dth annually.

These rate impacts are based on Greater Minnesota's proposal that storage cost recovery would only be assessed to firm customers. The Department disputes this proposal, as noted in Section G above, and made an alternative cost recovery proposal and recommended that the Company provide additional discussion in *Reply Comments*. The Department will provide additional cost recovery discussion on this topic after it reviews the Company's

¹⁵ Minnesota Energy Resources Corporation and Xcel Energy use an annualized cost recovery for certain costs for Joint-Service and Demand Billed customers, respectively.

Reply Comments. Issues regarding cost recovery aside, given the possibility of changes in final entitlements, and costs, the Department also recommends that Greater Minnesota make a supplemental filing on November 1, 2015 with final demand costs.

III. THE DOC'S RECOMMENDATIONS

The Department recommends that the Commission:

- Approve Greater Minnesota's proposed level of demand entitlements, subject to any possible changes in anticipated entitlements between the filing of these *Comments* and November 1, 2015, as shown in the Company's *Petition*; and
- Withhold decision of Greater Minnesota cost recovery proposal until the Company provides additional discussion regarding its proposed storage contract and associated cost recovery proposal.

The Department also recommends that the Commission:

- Require Greater Minnesota to 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 sendout until such time that Greater Minnesota has sufficient historical load data beyond the 2012-2013 heating season;
- Explore segregating its linear regression modeling into two components, for larger and smaller firm customers; and
- If the Company does not provide additional clarifying information or an alternative cost recovery proposal, require Greater Minnesota to recover storage costs, beyond firm customers, from any interruptible customer that used gas, at any point, during the most recent heating season. Further, any new interruptible customer will be charged the cost of the storage contract until such point that actual, historical data is available or, if the prospective customer provides evidence that they will not consume gas during the heating season.

/ja

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
Comments**

Docket No. G022/M-15-285

Dated this 2nd day of June 2015

/s/Sharon Ferguson

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