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March 25, 2013

Via Electronic Filing

Dr. Burl W. Haar Executive Secretary Minnesota Public Utilities Commission Suite 350 121 7<sup>th</sup> Place East St. Paul, MN 55101-2147

Re: Initial Filing Notice of Change in Contract Demand Entitlements Docket No. G022/M-12-1279

Dear Dr. Haar:

On November 1, 2012 Greater Minnesota Gas, Inc. (GMG) submitted to the Minnesota Public Utilities Commission (Commission) a compliance filing to notify the Commission of a Change in Contract Demand Entitlements. This filing was submitted under G022/M-10-1165.

GMG was notified that a new docket number of G022/M-12-1279 had been established in regard to this change and asked that the information be resubmitted under this new docket number. I have included the same information as previously submitted being e-filed under newly established docket number as instructed. Please see the attached

Greater Minnesota Gas, Inc. is available for any questions by contacting Nikki Kupser directly at (507) 665-8652 or by email at <a href="https://nkupser@greatermngas.com">nkupser@greatermngas.com</a>.

Sincerely,

/s/

Nikki Kupser Compliance & Regulatory Administrator

C: Service List

Enclosures

# **CERTIFICATE OF SERVICE**

I, Nikki Kupser, hereby certify that I have this day served a true and correct copy of the following document to all persons at the addresses indicated on the attached list by electronic filing, electronic mail, or by depositing the same enveloped with postage paid in the United States Mail at Mankato, Minnesota.

## Greater Minnesota Gas, Inc. Initial Filing Notice of Change in Contract Demand Entitlements Docket No. G022/M-12-1279

*Initially Filed the 1<sup>st</sup> day of November 2012* Refiled (under newly assigned docket number) this 25<sup>th</sup> day of March 2013

/s/ NIKKI KUPSER

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Julia	Anderson	Julia.Anderson@ag.state.m n.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	No	OFF_SL_10-1165_m-10- 1165
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Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	No	OFF_SL_10-1165_m-10- 1165
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# Greater Minnesota Gas, Inc. Contract Demand Entitlement Petition

# Minnesota Rule 7825.2910 Subp. 2 Filing Upon Change in Demand

Greater Minnesota Gas, Inc. (GMG) submits this demand entitlement petition to address changes in contract demand entitlements effective <u>October 1, 2012</u> and <u>November 1, 2012</u>. GMG will provisionally include the rate impact of these changes in GMG's Purchased Gas Adjustments effective November 1, 2012, pending Commission approval.

# A. Description of the factors contributing to the need for the change in demand.

The factors contributing to the need for a change in demand include:

- Increase in Design Day requirements,
- Change in resources required to meet the Design Day and provide an adequate reserve margin

### 1. Change in Design Day

GMG's objective for calculating Design Day customer demand is to accurately forecast anticipated firm customer demand at design temperatures, so that adequate firm resources will be available, if Design Day weather occurs.

To provide an accurate forecast of its Design Day, GMG has used linear regression analysis. GMG projects the number of firm customers to increase by approximately 462 to 4,678 for the 2012-2013 heating season. The Design Day forecast is 4,964 Dth, which is an increase in requirements of 274 Dth for the upcoming heating season. Section B below provides a description of the linear regression methodology used to forecast the Design Day. Attachment A details the Design Day forecast calculations and peak day use per customer.

### 2. Change in resources required to meet the Design Day Requirements

Additional firm transportation capacity is required to meet the increase in firm customer demand forecasted for the Design Day and to provide an adequate reserve margin. Attachments B and C provide details of the demand entitlement changes to meet the design day forecast for the 2012-13 Heating Season. Attachment D provides a summary of the rate impact to firm customers with the contract changes. While the impact is shown as a positive 0.78%, the Company expects the incremental sales to 600 customers will more than offset the incremental cost of this demand change.

#### Transportation Contract Changes Summary

GMG's contract number 102985 with Northern Natural Gas (Northern) for Firm Throughput service of 1,300 Dth per day during the heating season (SMS) was set to expire October 31, 2012. GMG notes that it extended this contract to October 31, 2017, with no change to contract demand entitlements. GMG's contract number 102985 with Northern Natural Gas (Northern) for Firm Throughput service of 500 Dth per day during the heating season (TFX-5) was set to expire March 31, 2013. GMG notes that it extended this contract to March 31, 2018, with no change to contract demand entitlements. To adequately cover Design Day conditions, GMG on November 1, 2010 contracted with Northern Natural Gas for additional firm transportation capacity of 500 Dth per day from November through March. This contract also includes April and October capacity to address shoulder month capacity needs. This contract has a built-in step increase in order to meet the grow needs of GMG. Effective October 1, 2012. The capacity was automatically increased from 500 Dth to 665 Dth for a net change of 165 Dth.

#### Reserve Margin

GMG contracted to provide a reserve margin of 10.3% for the 2011-2012 heating season. In the 2010-2011 filing GMG indicated it was contracting for two years growth because of GMG's limited ability to contract for small capacity increments from Northern. GMG is now in the third year of that growth period and estimates a reserve margin of 4.9% for the 2012-2013 heating season. GMG believes the reserve margin to be adequate and is not planning to purchase additional capacity at this time.

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# B. The utility's design-day demand by customer class and the change in design-day demand, if any, necessitating the demand revision.

Below is a description of the Design Day forecast methodology. Attachment A details the Design Day forecast calculations and peak day use per customer.

# Description of Design Day Forecast Method: 2012-13 Heating Season

GMG used linear regression analysis to calculate its firm design day forecast using -25 F average temperature (90 heating degree days) as the basis for the design day. The analysis was completed by using historical firm sales volume data and actual temperature data for the period from July 2009 thru June 2012.

The firm sales volume data was correlated to geographic weather data by assigning town border station locations geographically to weather sites as follows:

Weather Site	TBS Location
Mankato	Rapidan
Mankato	Madison Links
Faribault	Heidelberg
Faribault	Forest
Faribault	Jennie-O
Shakopee	Marystown

A linear equation is derived from the linear regression model that is used to calculate the design day usage per customer. The forecasted number of firm customers for the 2012-13 Heating Season is multiplied by the design day usage per customer to derive the design day.

The following is a description of linear regression model:

The linear regression models the linear relationship between heating degree day data and firm customer natural gas usage by fitting a linear equation to observed data. The linear regression line has an equation of the form:

$$Y=a+bX$$

Where X (Heating Degree Days) is the explanatory variable and Y (Firm Sales Volume) is the dependent variable. The slope of the line is b, and a is the intercept (Firm Non-Temp Sensitive Volume).

The strength of the linear association is quantified by the correlation coefficient. The correlation coefficient takes a positive value between 0 and 1, with 1 indicating perfect correlation (all points would lay along a straight line in this case). A correlation value close to 0 indicates no association between the variables. The formula for computing the correlation coefficient is given by:

$$r = \frac{1}{n-1} \sum \left( \frac{x - \overline{x}}{s_x} \right) \left( \frac{y - \overline{y}}{s_y} \right)$$

# **C.** A summary of the levels of winter versus summer usage for all customer classes Twelve months ended June 30, 2012 data:

	<u>Winter</u>	<u>Summer</u>	<u>Total</u>
Residential - Firm	216,783	68,931	285,714
Commercial - Firm	6,657	2,082	8,739
Industrial - Firm	16,088	6,825	22,913
Flexible Rate - Firm	12,171	4,087	16,258
Total Firm	251,699	81,925	333,624
Agricultural - Interruptible	961	3,384	4,345
Industrial - Interruptible	4,070	631	4,701
Flexible Rate - Interruptible	958	50,904	51,862
Total Industrial Interruptible	5,028	51,535	56,563
Total	257,688	136,844	394,532

# D. A description of design-day gas supply from all sources under the new level, allocation, or form of demand.

GMG's design day gas supply sources are identified on Attachment B. GMG is served by the Northern pipeline system with natural gas supplies provided by BP Canada, Concord and Shell. Attachment C provides a summary of short and long term contracts held with NNG to meet Design Day.