Minnesota Public Utilities Commission

Staff Briefing Papers

Meeting Date: **August 10, 2017 .... * Agenda Item 5**

Company: Greater Minnesota Gas, Inc. (GMG)

Docket No. **G-022/M-16-522**
In the Matter of a Petition by Greater Minnesota Gas, Inc. for Approval of Changes in Contract Demand Entitlements for the 2016-2017 Heating Season

Issue: Should the Commission approve Greater Minnesota Gas, Inc.'s proposed demand entitlement capacity (levels) and cost changes to meet its Design Day and Reserve Margin requirements for the 2016-2017 Heating Season, effective November 1, 2016?

Staff:
Bob Brill 651-201-2242
Sundra Bender... 651-201-2247
Jason Bonnett.. 651-201-2235

Relevant Documents

Greater Minnesota Gas, Inc. – Initial Petition .... June 15, 2016
Greater Minnesota Gas, Inc. – Update... June 22, 2016[1]
Department of Commerce (Department) - Comments.................................... September 20, 2016
Greater Minnesota Gas, Inc. – Letter in Lieu of Reply Comments .... September 22, 2016
Greater Minnesota Gas, Inc. – Supplemental Filing..October 27, 2016
Department – Response Comments ....November 17, 2016

The attached materials are workpapers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless otherwise noted.

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July 31, 2017

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[1] This document is dated June 22, 2016 but was not received by the Commission's e-Filing system until June 23, 2016. Pursuant to the Commission's rules of practice and procedure, Minn. Rules, part 7829.0400, subpart 5a, "… Filings are filed with the commission when received during regular business hours. …"

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Statement of the Issue

Should the Commission approve Greater Minnesota Gas, Inc.'s (GMG) proposed demand entitlement capacity (levels) and cost changes to meet its Design Day and Reserve Margin requirements for the 2016-2017 Heating Season, effective November 1, 2016?

Introduction

GMG entered into natural gas supply and interstate pipeline contracts to provide natural gas services to its customers. GMG annually reviews and updates these contracts to ensure continued system reliability of firm natural gas supply deliveries to its customers.

GMG's annual demand entitlement[2] petition requests Commission approval to recover certain cost and capacity changes in these interstate pipeline transportation entitlements, supplier reservation fees, and other demand-related contract costs and to implement the rate impact of these petitions through its monthly Purchased Gas Adjustment (PGA)[3] charges.

The Department recommended that the Commission approve GMG's proposed level of demand entitlements and allow it to recover associated demand costs through the PGA as reflected in GMG's October 27, 2016 Supplemental Filing, effective November 1, 2016. Further, the Department recommended additional filing requirements in future demand entitlement filings.

Minnesota Rules

Minnesota Rule, part 7825.2910, subpart 2[4] require gas utilities to make a filing whenever there is a change to its demand-related entitlement services provided by a supplier or transporter of natural gas.

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[2] D*emand entitlements* can be defined as reservation charges paid by the Local Distribution Company (LDC) to an interstate natural gas pipeline to reserve pipeline capacity used to store and transport the natural gas supply for delivery to its system and contract charges associated with the LDC procuring its gas supply; these costs are recovered through the LDC's PGA.

[3] The Purchased Gas Adjustment is a rider mechanism used by regulated utilities to recover the cost of energy. Minn. Rules 7825.2390 through 7825.2920 enable regulated gas and electric utilities to adjust rates on a monthly basis to reflect changes in the cost of energy delivered to customers based upon costs authorized by the Commission in the utility's most recent general rate case.

[4] Filing upon a change in demand, is included in the Automatic Adjustment of Charges rule parts 7825.2390 through 7825.2920 and requires gas utilities to file to increase or decrease demand, to redistribute demand percentages among classes, or to exchange one form of demand for another.

GMG – Initial Filing

GMG Design Day (DD) Requirements

GMG calculated its 2016-2017 Design Day (DD) requirements at 12,364 dekatherms (Dth)/day; see the Department discussion (and Table 2, Column 2 on p. 3 of the briefing papers).

GMG Demand Entitlement Contract Levels

To transport its DD requirements, GMG uses interstate pipeline contracts to meet its annual system transportation requirements, i.e. demand entitlements. The 2016-2017 transportation demand entitlement contract levels were modified from the previous year's levels (for 2015-2016), which resulted in 13,009 Dth/day of available interstate pipeline transportation capacity, an increase of 500 Dth/day; see the Department discussion (and Table 3, Column 3 and Table 4 on p. 3 of the briefing papers).

GMG Reserve Margin

The Reserve Margin is the difference between GMG's transportation demand entitlements and DD requirements. GMG stated that its reserve margin is appropriate given the need to balance the uncertainty of DD conditions, customer demand during these peak conditions, and the need to protect against firm gas supply loss to maintain system reliability;[5] see the Department discussion (and Table 5, Column 2 on p. 3 of the briefing papers).

GMG Demand Entitlement Contract Costs

In Docket No. 15-285, the Commission approved GMG's 2015-2016 demand entitlement contract costs.[6] In this docket, GMG proposed to recover increased 2016-2017 demand entitlement costs; see Table 1. GMG added 500 Dth/day demand entitlement NNG contract.

Table 1: Summary of GMG's Transportation Costs

Demand Entitlement Cost	2015-2016	2016-2017	Difference
	(1)	(2)	(3)
Transportation Cost	$984,835	**$1,030,302**	$45,467

Changes from Docket No. 15-285, GMG 2015-2016 Demand Entitlement Petition

GMG made one change to its demand entitlement portfolio for the 2016-2017 heating season, securing additional interstate pipeline transportation capacity.

- 500 Dth/day of non-recallable capacity release from Northern Natural Gas (NNG)

In its October 27, 2016 Supplemental filing, GMG determined that it would not need to contract for the additional 350 Dth/day of Viking Gas Transmission (Viking) capacity due to a correction in its customer forecast for the 2016-2017 heating season. GMG revised its forecasted number

[5] GMG believes that maintaining its reserve margin at a conservative level continues to be prudent. GMG uses its portfolio in a manner that allows its reserve margin to be maintained without undue cost burdening its ratepayers.

[6] Approved at the September 17, 2015 Commission Agenda meeting, these factors were effective at November 1, 2015.

of new customers because road construction blocked further expansion of GMG system, this growth will not occur until the construction is completed.

Department – Comments

Design Day, Demand Entitlements, Reserve Margin, and Modeling[7]

From the Department's analysis, the following tables have been developed:

Table 2 – GMG Design Day (DD) requirements in Dth/day:

	2015-2016[8]	2016-2017[9]	Difference	% increase/ (decrease)
	(1)	(2)	(3)	(4)
Total System	11,336	**12,364**	1,028	9.06%

Table 3 – GMG Demand Entitlements in Dth/day:

	2015-2016	2016-2017	Difference	% increase/ (decrease)
	(1)	(2)	(3)	(4)
Total system	12,509	**13,009**	500	4.00%

Table 4 - GMG's proposed Total Entitlement Changes in Dth/day

Entitlement Type	Proposed Change
Non-Recallable NNG Capacity Release	500

Table 5 – Reserve Margin Comparison

	2015-2016 Demand Entitlement Filing	2016-2017 Demand Entitlement Filing	Difference
	(1)	(2)	(3)
Total System	10.35%	**5.22%**	(5.13%)

Additional NNG Contract

GMG noted that additional NNG capacity is rarely available, thus when the additional NNG capacity became available GMG was able to acquire 500 Dth/day. The capacity will be used to ensure that GMG has enough capacity to serve its design day requirements.

The Department concluded that this contract was necessary in order for GMG to satisfy its projected customer growth needs.

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[7] Based on GMG's October 27, 2016 Supplemental Filing. This supplemental filing updated the information originally filed by GMG on June 15, 2016, pursuant to the Department's request in its September 20, 2016 Comments.

[8] Docket No. 15-285.

[9] Docket No. 16-522.

Department Recommendations

The Department recommended that the Commission:

- Approve GMG's proposed level of demand entitlements, as shown in its October 27, 2016 Supplemental Filing, and
- Allow GMG to recover associated demand costs, based on the information in its October 27, 2016 Supplemental Filing, through the monthly PGA effective November 1, 2016.

The Department further recommended that the Commission require the following in GMG's future demand entitlement filings:

- Estimate its design day using data from multiple heating seasons when appropriate. If the results of these calculations are not acceptable, the Department recommended that GMG fully explain its decision to use a shorter estimation period in its initial filing;
- Require GMG to explore the use of separate regression analyses by service area, using area-specific weather stations (Mankato, Faribault, Shakopee, and Swanville) instead of using only Minneapolis; and
- Require GMG to maintain its two-part design-day process involving both regression analysis and mathematical analysis based on the Company's historical all-time peak-day send-out data.

PUC Staff Comment

PUC staff reviewed GMG's 2016-2017 demand entitlement petition and the parties' comments. PUC staff believes that for this docket, the majority of the issues have been resolved.

PUC staff generally agrees with the Department's September 20, 2016 and November 17, 2016 recommendations, but offers additional discussion and decision alternatives for Commission consideration.

Design Day and Demand Entitlement Modelling

GMG

In this docket, GMG stated that it employed its single ordinary least square regression analysis methodology to predict its DD requirements, similar to what it used in Docket 15-285 (GMG's 2015-2016 demand entitlement petition), but changed its weather station data from using four separate weather stations (Mankato, Faribault, Shakopee, and Swanville) to just using the Minneapolis weather station. Further, GMG used other analytical tools (its mathematical model) to verify its proposed statistical regression analysis DD requirements.

GMG's justification for using a single regression analysis was that it did not have sufficient historical data since a large percentage of its customer load did not go in-service until 2013. In this docket, GMG proposed to continue calculating its DD using its single regression analysis methodology until it has three solid years of data necessary to incorporate the Department's two-stage methodology.[10] To further complicate GMG's modelling is the shift in its load profile where GMG was primarily residential in its beginning stages, but since has changed to a more industrial based load profile.

Previously, in Docket No. 15-285, GMG agreed to the Department's suggestion that separating residential and industrial/commercial customer's regression analysis is appropriate when sufficient historical data becomes available. GMG requested that it be permitted to continue to use its current methodology until it has three years of data available to determine viable load profile usage data and baseload consumption estimates.

Department

The Department reviewed GMG's two-stage DD calculation approach and agreed that GMG should use this technique until sufficient data is available beyond the 2012-2013 heating season. GMG used its single ordinary least square regression analysis methodology, along with its mathematical model to calculate the DD requirement. The Department concluded that GMG's demand entitlement levels and costs were reasonable, and continued to recommend to the Commission that it require GMG to maintain its two-part design-day process involving both regression analysis and mathematical analysis based on GMG's historical all-time peak-day send-out data.

The Department had concerns regarding GMG's use of only the Minneapolis weather station data as opposed to using the weather stations located in Mankato, Faribault, Shakopee, and Swanville. The Department ultimately concluded that given GMG's circumstances, its use of the Minneapolis weather station produced reasonable results, but the Department recommended that the Commission require GMG to explore the use of separate regression analyses by service area, using area-specific weather stations.

The Department had further concerns with the data used by GMG to calculate its DD requirements. GMG used a 3-month (January, February, and March) period to estimate its DD requirements. The Department ultimately concluded that GMG's method was reasonable considering the circumstances that GMG faced in data preparations. The Department recommended that the Commission require GMG to estimate its design day using data from multiple heating seasons when appropriate. If the results of these calculations are not acceptable, the Department recommended that GMG fully explain its decision to use a shorter estimation period in its initial filing.

PUC staff agrees with the Department's recommendations.

[10] See Docket No. 15-285, GMG *Initial Petition*, pp. 3-6.

Reserve Margin

GMG's proposed 2016-2017 demand entitlement petition's reserve margin is 5.22 percent (Table 5, Column 2) compared to the 2015-2016 demand entitlement petition's reserve margin of 10.35 percent (Table 5, Column 1). The Department generally considers a 5 percent reserve margin adequate.

The Department concluded that GMG's proposed reserve margin is acceptable for 2016-2017 and recommended the Commission approve the calculation.

PUC staff agrees with the Department's recommendation.

GMG's Customer Growth Projection

PUC staff is still concerned about GMG's customer count projections. In its 2015-2016 demand entitlement petition, GMG estimated its new customer count at 7,740 (a 1,888 increase over its 2014-2015 demand entitlement level of 5,852). In this docket, GMG has estimated its customer count at 7,482, later adjusted in GMG's October 27, 2016 Supplemental Filing by a 200 customer reduction. The difference between the customer count numbers is substantial, which leads to GMG having higher demand entitlements to serve its current customer count estimate, which could lead to GMG's reserve margin increasing above a reasonable level.

Staff will continue to monitor GMG's actual customer counts compared to its forecasted customer counts. This could be facilitated by the Commission requiring GMG to file monthly updates to its customer count in this docket. Staff believes this information will be useful in assessing GMG's 2017-2018 demand entitlement petition to determine if GMG has over-contracted for the demand entitlement levels necessary to cover its design day requirements.

Other Comments

In its petition, GMG discussed its largest customer who receives firm retail sales service at some locations and interruptible transportation service at others.[11] GMG and the customer developed a plan where the customer purchased one year of recallable capacity release from GMG equal to the customer's proportionate amount of GMG's demand entitlement capacity. GMG believed that it was not prudent to permanently surrender the capacity; but, by negotiating a recallable capacity release agreement for one year with the customer paying the full cost of the capacity, held its other customers harmless.

The Department noted that GMG's June 23, 2016 Letter discussed its strategy for the upcoming years to rebalance its entitlement levels. Further, as reflected in GMG's Petition, Attachment C - a large portion of GMG's current entitlement contracts are set to expire over the next two years. The Department concluded that GMG should have ample opportunity over the next two years to mitigate any entitlement impacts associated with this large customer's decision to transition from firm sales services to interruptible transportation service.

To better accommodate similar future customer requests to transition from one service to another, GMG proposed tariff revisions in Docket No. 16-920, where GMG proposed revised

[11] The customer believed the transition was in-line with its own broader corporate plan to provide it with more contract flexibility.

tariff language for firm sales customers transitioning to interruptible transportation services, (for further discussion, see staff briefing papers in Docket No. 16-920).

Decision Alternatives

1. Approve Greater Minnesota Gas'(GMG's) proposed level of demand entitlements[12] and design day requirements,[13] as shown in GMG's October 27, 2016 Supplemental Filing (Department, Staff), and

2. Allow GMG to recover associated demand costs, based on the information in its October 27, 2016 Supplemental Filing, through the monthly PGA effective November 1, 2016 (Department, Staff).

Additional Department recommendations for future GMG demand entitlement filings:

3. Require GMG to estimate its design day using data from multiple heating seasons when appropriate. If the results of these calculations are not acceptable, require GMG to fully explain its decision to use a shorter estimation period in its initial filing (Department, Staff);

4. Require GMG to explore the use of separate regression analyses by service area, using area-specific weather stations (Mankato, Faribault, Shakopee, and Swanville, instead of just Minneapolis) (Department, Staff); and

5. Require GMG to maintain its two-part design-day process involving both regression analysis and mathematical analysis based on its historical all-time peak-day send-out data (Department, Staff).

Additional PUC staff recommendations

6. Require GMG to file monthly customer count updates in this docket. (Staff)

[12] Please see Table 3 of these staff briefing papers.
[13] Please see Table 2 of these staff briefing papers.