MINNESOTA
PUBLIC UTILITIES COMMISSION

Staff Briefing Papers

Meeting Date	April 26, 2018	Agenda Item # *4
Company	Great Plain Natural Gas Company, a Division of MDU Resources Group, Inc. (Great Plains)	
Docket No.	**G-004/M-17-521**	
	In the Matter of a Petition by Great Plains Natural Gas Company for Approval of Changes in Contract Demand Entitlements for the 2017-2018 Heating Season	
Issues	Should the Commission approve Great Plains' proposed demand entitlement capacity (levels) and cost changes to meet its Design Day and Reserve Margin requirements for the 2017-2018 Heating Season, effective November 1, 2017?	
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✓ **Relevant Documents**	**Date**
Great Plains – Initial Petition for 2017-2018 Demand Entitlements	June 30, 2017
Great Plains – Update for 2017-2018 Demand Entitlements	November 1, 2017
Department of Commerce (Department) - Comments	November 29, 2017

I. Statement of the Issues

Should the Commission approve Great Plains' proposed demand entitlement capacity (levels) and cost changes to meet its Design Day and Reserve Margin requirements for the 2017-2018 Heating Season, effective November 1, 2017?

II. Introduction

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

Great Plains' annual demand entitlement[1] petition requests Commission approval to recover certain cost and capacity changes in these interstate pipeline transportation entitlements, and other demand-related contract costs and to implement the rate impact of these petitions through its Purchased Gas Adjustment (PGA)[2] charges.

In this petition, Great Plains consolidated its North and South PGA areas, pursuant to the Commission's Order in Docket No. 15-879, effective July 1, 2017.[3] The Great Plains' customers receive natural gas transported through Northern Natural Gas Company (NNG) pipeline and Viking Gas Transmission Company (VGT) pipeline.

PUC staff reviewed Great Plains' 2017-2018 Demand Entitlement petition and the Department's November 29, 2017 *Comments*. The Department and Great Plains have resolved all of the issues raised by the Department. PUC staff generally agrees with the Department's November 29, 2017 recommendations.

III. Minnesota Rules

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

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[1] 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.

[2] The Purchased Gas Adjustment is a mechanism used by regulated utilities to recover its 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 its cost of energy delivered to customers based upon costs authorized by the Commission in the utility's most recent general rate case.

[3] See the Commission's September 6, 2016 Order in Docket No. 15-879, *Order-Findings of Fact, Conclusions, and Other*, pp. 44-46 and Ordering Point 29, p. 57.

[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.

IV. Parties' Comments

A. Great Plains

On June 30, 2017, pursuant to Minnesota Rules part 7825.2910, subpart 2, Great Plains filed its petition for Commission consideration to change its demand entitlement and associated cost levels for its interstate pipeline contracts (capacity) used to serve its retail natural gas customers. On November 1, 2017, Great Plains filed its Informational Update Filing in this docket. This petition is the first to consolidate Great Plains' South and North PGA areas. The Commission approved this consolidation in Great Plains' last general rate case, Docket No. 15-879.[5]

Great Plains holds pipeline capacity on Viking Gas Pipeline (Viking) and Northern Natural Gas Pipeline (NNG). The demand entitlement levels represent the capacity held on each pipeline, summarized as follows:

Table 1: Great Plains' Pipeline Capacity (Dth/day)

By Pipeline	Capacity Held
Viking	16,600
NNG	17,845
Total	34,445

As part of its initial petition, Great Plains included its bid for replacement capacity (for expired contracts) on Viking. In Viking's open season, Great Plains placed a capacity bid for up to 2,500 Dth/day, with a five-year term.[6] In the November 1 update, Great Plains stated that its open season capacity bid (on Viking) was unsuccessful (Great Plains was not awarded the open season capacity).[7] To replace the expired Viking contract capacity (1,400 Dth/day), Great Plains entered into a contract agreement with BP Canada Energy Marketing Corporation (BP) for 1,600 Dth/day (for the 2017-2018 Winter Heating Season). This resulted in a 200 Dth/day increase in pipeline capacity over the 2016-2017 Winter Heating Season.

In addition, Great Plains did not release 1,300 Dth/day of excess NNG capacity as it has in prior years (for example, the 2016-2017 Winter Heating Season). Great Plains instead proposed to use the NNG capacity to transport its gas supply to the Chisago NNG/Viking interconnection, and backhaul its natural gas supply to Minnesota communities along Viking's system. In other words, this capacity serves as upstream capacity to the old North PGA area. [8]

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[5] The Commission's Order states: "Regarding the consolidation of the rates in the North and South PGA areas: Great Plains shall implement a consolidated base cost of gas and purchased gas adjustment (PGA) beginning July 1, 2017."

[6] Great Plains planned to use 1,600 Dth/day to replace an expired contract of 1,400 Dth/day and hold 900 Dth/day in reserve for future growth.

[7] For interstate pipeline open seasons, if bids are received that exceed the total capacity available, the capacity winners are selected by calculating the NPV of the bids received.

[8] In addition, Great Plains holds additional NNG pipeline capacity of 16,300 Dth/day that is classified as

Great Plains calculated its winter period design day (DD) to be 32,733 Dth/day, which results in a 5.23 percent reserve margin for the 2017-2018 heating season.[9] Great Plains' petition estimated demand entitlement costs to be $3,915,522. Great Plains requested that the Commission allow recovery of the associated demand costs in its monthly PGA effective November 1, 2017.

B. Department

On November 29, 2017, the Department filed its Comments on Great Plains' petition and its analysis included a review of the following:

a. The proposed overall demand entitlement levels;[10]

The Department's demand entitlement analysis resulted in the following summary:

Table 2: Department Summary of Demand Entitlements (Dth/day)

Pipeline	Current Entitlements	Proposed Entitlements	Change	Percent Change
Viking	16,400	16,600	200	1.22%
NNG	17,845	17,845	0	0.00
Total	34,245	34,445	200	0.58%

b. Design-Day requirements - including Commission's 16-557 Order compliance ordering points[11]

The Department discovered that Great Plains used the same basic design-day method in this docket that the Commission accepted in Docket No. 03-303. In previous demand entitlement proceedings, the Department and Commission Staff expressed concern that Great Plains' design-day method might under-estimate the need for natural gas on a peak day for the South District and the North District.[12]

upstream capacity that delivers into Viking at Chisago. For demand entitlement purposes, only the Viking capacity is counted towards Great Plains' demand entitlements. To include the NNG capacity would effectively double count the same capacity. However, the related costs are included in the demand entitlement costs.

[9] Calculated as follows: 34,445 Dth/day - 32,733 Dth/day (DD) = 1,712 Dth/day / 32,733 Dth/day (DD) = 5.23 percent.

[10] See the Department's November 29, 2017 Comments on pp. 2-4.

[11] Ibid, pp. 4-14.

[12] The Department's concerns on this issue are discussed in detail in the following documents:

- the Department's July 2, 2008 Comments in Docket No.G004/M-07-1401;
- the Department's July 31, 2009 Comments in Docket No. G004/M-08-1306; and
- the Department's February 5, 2010 Comments in Docket No.G004/M-09-1262.

Consistent with its prior analyses,[13] the Department used two methods to test the reasonableness of Great Plains' design-day amount: 1) using data from the previous five years' heating seasons; and 2) using data from the heating season with the overall greatest peak send-out per firm customer that occurred before the previous five heating seasons.[14]

The Commission's 16-557 Order required Great Plains, in future demand entitlements filings, to check its OSL regression models it ultimately uses for autocorrelation, and correct its models if autocorrelation is present. The Department's analysis included a review of Great Plains' regression models and discovered that some of the customer classes' models had autocorrelation present.

The Department noted that Great Plains agreed to continue monitoring its data and models for autocorrelation. The Department concluded that Great Plains' OLS regression models appear to calculate sufficient capacity to serve its firm customers on design-day. The Department recommended that the Commission accept Great Plains' proposed design-day method for the 2017-2018 Winter Heating Season.

c. Telemetry

In Docket No. 12-740, the Commission's January 9, 2014 Order required (Ordering Point 4a):

> Great Plains shall provide, in its next rate case, a full discussion and cost analysis showing the impact of requiring telemetry for all current interruptible customers and as a requirement for any future customer to receive interruptible service.

On September 30, 2015, Great Plains filed a *General Rate Petition* (Docket No. 15-879) seeking Commission authorization to increase natural gas rates. The Department believed that Great Plains complied with the Commission's Order requirements in the 12-740 docket.[15]

In addition, in Docket Nos. 15-722, 15-723, and 15-724 (Minnesota Energy Resources Corporation demand entitlement petitions), the Commission's April 28, 2016 Order Point 13 requested:

> …..the Department to review and confirm how the other Minnesota natural gas utilities use metered daily interruptible data in the development of their Design Day requirements and provide a discussion explaining its conclusions. This review should determine if similar interruptible service tariff language requiring telemetering is already in each natural gas utilities' tariff for interruptible and transportation service and, if so, whether data from telemetering is being used effectively, and, if not, should a

[13] See Docket Nos. 11-1075, 12-740, and 13-566.

[14] See the Department's November 29, 2017 Comments, pp. 7-8 and p. 14. The Department performed sensitivity analysis on Great Plains' DD requirements by reviewing the peak-day send-out for the 1995-1996 Winter Heating season and the 1999-2000 Winter Heating Season.

[15] See the Department's November 29, 2017 Comments, pp. 8-13.

telemetering requirement be incorporated into their tariffs, and this data be used to possibly reduce costs.

The Department confirmed that Great Plains' design day calculation does not include its metered interruptible customers, but only includes its firm general services. The Department concluded that Great Plains' methodologies were appropriate and reasonable.

d. Reserve Margin

In its previous Orders in Docket Nos. 07-1401, 08-1306, and 09-1262, the Commission required:

> *"Great Plains shall reduce its reserve margin in Docket No. G-004/M- 09-1262 to approximately five percent or explain why it is not reasonable to do so."*[16]

The Department noted that Great Plains Reserve Margin for the 2016-2017 Winter Heating Season was 5.70 percent, and in this docket (17-521) Great Plains proposes a Reserve Margin of 5.23 percent. The Department concluded that Great Plains has complied with the Commission's Order and recommended that the Commission accept Great Plains' 2017-2018 Winter Heating Season Reserve Margin.[17]

e. Demand Entitlement PGA Cost Recovery.[18]

The Department reviewed Great Plains' analysis that reflected the estimated annual rate impacts for customers in both its former PGA areas, North and South. In the North PGA area, Great Plains estimated the following impacts:

- For residential customers, an annual bill increase of $19.93 or approximately 3.94 percent (assumes the average customer consumes 77.9 Dth annually); and
- For general service customers, an annual bill increase of $95.13 or approximately 3.60 percent (assumes the average customer consumes 434.4 Dth annually).

In the South PGA area, Great Plains estimated the following impacts:

- For residential customers, an annual bill increase of $13.19 or approximately 2.79 percent (assumes the average customer consumes 77.9 Dth annually); and
- For general service customers, an annual bill decrease of $57.56, or approximately 2.29 percent (assumes the average customer consumes 434.4 Dth annually).

The Department recommended that the Commission approve Great Plains' proposed PGA cost recovery, effective November 1, 2017.

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[16] See Ordering Paragraph No. 4 of the Commission's September 30, 2010 Order in Docket Nos. G004/M-07-1401, G004/M-08-1306, and G004/M-09-1262.
[17] See the Department's November 29, 2017 Comments, pp. 14-15.
[18] Id, pp. 15-16.

C. Department Recommendation

The Department recommends that the Commission:

- Accept Great Plains' proposed design-day method; and

- Approve Great Plains' proposed level of demand entitlement and allow Great Plains to recover associated demand costs through the monthly Purchased Gas Adjustment (PGA) effective November 1, 2017.

V. Staff Analysis

PUC staff reviewed this docket's record and appreciates the Department's thorough analysis in covering all of the relevant issues in this docket and those issues resulting from previous demand entitlement dockets. Staff agrees with the Department's conclusions and recommendations.

VI. Decision Options

1. Accept Great Plains' proposed design-day method for its consolidated PGA areas.

2. Require Great Plains, in its future demand entitlement filings, to check the regression models it ultimately uses for autocorrelation, and correct the models if autocorrelation is present;

    <u>and</u>

3. Approve Great Plains' proposed level of demand entitlement and proposed recovery of associated demand costs effective November 1, 2017.

    <u>or</u>

4. Do not approve Great Plains' proposed level of demand entitlement and proposed recovery of associated demand costs effective November 1, 2017.