

Staff Briefing Papers

Meeting Date April 23, 2020 Agenda Item No. 2*

Company Great Plains Natural Gas Co., a Division of Montana-Dakota Utilities Co. (Great Plains)

Docket No. **G-004/M-19-430**

In the Matter of the Petition of Great Plains Natural Gas Co, a Division of Montana-Dakota Utilities Co., for Approval of Changes in Contract Demand Entitlements for the 2019-2020 Winter Heating Season.

Issues Should the Commission accept Great Plains' proposed demand entitlement levels and cost changes?

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Relevant Documents

Date

Great Plains – Initial Filing for 2019-2020 Demand Entitlements	June 28, 2019
Great Plains – Information Update	November 1, 2019
Department of Commerce - Comments	January 27, 2020
Great Plain – Reply Comments	February 1, 2020

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

I. Statement of the Issues

Should the Commission accept Great Plains' proposed demand entitlement levels and cost changes?

II. Introduction

Great Plains in this annual demand entitlement 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 changes through its Purchased Gas Adjustment (PGA) charges.

This is the third Petition in which the Great Plains' South District and North District (PGA rate areas) were combined based on the Commission's September 6, 2016 Order in Docket No. G-004/GR-15-879.¹ Great Plains' customers are supplied natural gas through Viking Gas Transmission Company (VGT) pipeline in the North District and Northern Natural Gas Company (NNG) pipeline in the South District.

The Department recommends the Commission accept Great Plains' proposed level of demand entitlement and allow Great Plains to recover associated demand costs through the monthly Purchased Gas Adjustment effective November 1, 2019.²

III. Background

On June 28, 2019, Great Plains submitted its annual Demand Entitlement filing requesting the Commission approval to change levels of demand for natural gas pipeline capacity and recovery associated costs for 2019 – 2020 heating season.

On November 1, 2019, Great Plains submitted its Supplemental Filing (Supplement) detailing final entitlement levels, demand rates and commodity pricing for the 2019-2020 heating season.

On January 27, 2020, the Department of Commerce, Division of Energy Resources (Department) submitted Comments recommending the Commission accept GP' proposed level of demand entitlement and allow recovery of associated demand costs.

On February 6, 2020, Great Plains filed Reply Comments accepting the Department's recommendations.³

¹ See the Commission's September 6, 2016 Order in Docket No. G-004/GR-15-879, Findings of Fact, Conclusions, and Order, pp. 44-46 and Ordering Point 29, p. 57.

² Department of Commerce, Comments, p.1

³ Great Plains Reply Comments, p.1

IV. Minnesota Rules

Minnesota Rule, part 7825.2910, subpart 2, 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.

V. Parties' Comments

A. Great Plains

Great Plains requests that the Commission accept a 400 Dekatherm per day (Dkt/day) decrease, from 2,600 Dkt to 2,200 Dkt, in its expected capacity release for forward haul service on the Viking Gas Transmission Company (Viking or VGT) system.⁴ This results in a capacity increase of 400 Dkt/day on the Viking system for the 2019 – 2020 heating season over the available capacity in 2018-2019 heating season.

Also, Great Plains proposes to increase the amount of Northern Natural Gas (Northern or NNG) capacity by 1,000 Dkt/day.⁵ This increase in capacity to customers served off Northern involves shifting the capacity from supplemental capacity to direct capacity, which in the past was used to support backhaul transportation for GP' customers that were served off Viking pipeline.

Figure 1 below depicts the demand entitlement levels showing total capacity held by the each of the two pipelines (VGT and NNG), as extracted from Exhibit B of GP' petition.

Figure 1: Great Plains' Entitlement Levels

Pipeline Type	Previous Capacity(Dkt) 2018 -2019	Proposed Capacity(Dkt) 2019 - 2020
Viking	17,400	17,800
NNG	18,145	19,145
Total	35,545	36,945

GP projects an 8.45 percent reserve margin⁶ for the upcoming heating season based on winter period design day (DD) of 34,066 Dkt/day.

⁴ Great Plains, Petition, p.3.

⁵ Ibid.

⁶ Great Plains, Informational Update, p. 2.

B. Department

The Department reviewed and analyzed the reasonableness of Great Plains' proposed changes to demand entitlement levels, non-capacity items, design-day requirements, reserve margin, distribution planning and PGA cost recovery proposal. By virtue of its analysis, the Department concludes that GP' proposals seems reasonable.

The Department requests the Commission require GP to conduct a design-day analysis based on daily data and compare the results to its current design-day method,⁷ in its next demand entitlement filing.

VI. Staff Analysis

The question the Commission needs to decide is whether to accept Great Plains' proposed demand entitlement levels and cost changes.

Great Plain proposed to effectively increase its demand entitlement levels by 400 Dkt/day on the Viking Gas Transmission system by reducing the amount of capacity it releases on the Viking and to increase its contracted amount of entitlement by 1,000 Dkt/day on Northern Natural, for the 2019-2020 heating season.

The Department performed its analysis of Great Plains' proposal to increase its demand entitlements levels as described below. Overall, staff reviewed this docket's record and agrees with the Department's conclusions and recommendations.

A. GP' Proposed Changes to Overall Entitlement Levels

GP proposed entitlements levels of 17,800 Dkt and 19,145 Dkt for VGT and NNG, respectively, and the changes are represented below in figure 2. The Department also shows in figure 2, the percentage change between current period and proposed period (2019-2020 heating season)

Figure 2: Great Plains Total Entitlement Levels⁸

November 1, 2019 Filing	Current Entitlement (Dkt)	Proposed Entitlement (Dkt)	Entitlement Level Changes (Dkt)	% Change in Entitlement Levels
Viking (VGT)	17,400	17,800	400	2.30%
Northern (NNG)	18,145	19,145	1,000	5.51%
Total	35,545	36,945	1,400	3.94%

The Department notes that Great Plains did not propose changes to its non-capacity items such as Firm Deferred Delivery (FDD) on Northern in this demand entitlement filing.

⁷ Department of Commerce, Comments, p. 8

⁸ Department of Commerce, Comments, p. 2.

According to the Department these items, such as storage, can be used as part of an integrated purchasing strategy to reduce baseload winter gas purchases and overall commodity price volatility.⁹

B. Design Day Requirements

The Department noted that GP calculated a projected design-day requirement of 34,066 Dkt/day, of which 16,936 Dkt/day is for firm customers that receive natural gas from city gates interconnecting with Viking and 17,130 for firm customers on NNG system. The Department presents in figure 3 below the GP' design-day levels as extracted from GP Petition, Exhibit A.¹⁰

Figure 3: Great Plains Design-Day Levels

Supplemental Filing	Previous Design Day (Dkt)	Proposed Design Day (Dkt)	Design Day Changes (Dkt)	% Change from Previous Year
North-4	9,693	9,689	(4)	(0.04)%
Crookston	3,592	3,603	11	0.31%
Wahpeton	3,187	3,644	457	14.64%
North District - Total (Viking)	16,472	16,936	464	2.82%
South District -Total (Northern)	17,202	17,130	(72)	(0.42)%
Total	33,674	34,066	392	1.16%

The Department noted that GP used the same basic design-day method in this docket that the Commission accepted in Docket No. G-004/M-03-303. In previous demand entitlement proceedings, both the Department and Commission Staff expressed concerns 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.¹¹

Regarding the issue of serial correlation and its potential impact, the Department did not repeat discussion offered previously,¹² and stated that it believes GP does not need to procure statistical software solely for addressing serial correlation. The Department instead will suggest corrections to GP' models for serial correlation where appropriate. Thus, the Department's corrected models result in a total system design-day estimate of 34,246 Dkt/day.¹³

This Department estimate is 180 Dkt/day, or 0.53 percent, greater than Great Plains' proposed design-day estimate of 34,066 Dkt/day. On a pipeline basis, the Department's corrected models estimate 17,062 Dkt/day for needed deliverability on Viking, which is 126 Dkt/day

⁹ Id, at p. 4.

¹⁰ Id.

¹¹ Department of Commerce' Comments, p. 5.

¹² See the Department's August 27, 2015 Comments in Docket No. G004/M-15-645, Pages 4-5; November 10, 2016 Response Comments in Docket No. G004/M-16-557, Page 8; and the Department's November 29, 2017, Comments in Docket No. G004/M-17-521, Pages 4-8.

¹³ The Department of Commerce's Comments, p. 6.

greater than GP' proposed figure of 16,936 Dkt/day, and 17,184 Dkt/day for needed deliverability on Northern, which is 54 Dkt/day greater than Great Plains' proposed figure of 17,130 Dkt/day.¹⁴

The Department believes that given the small difference between its design-day estimates and Great Plains' estimates, it is acceptable for GP to use its models in planning for its design-day and suggests the Commission accept GP's proposed design-day methodology for the 2019–2020 heating season.

Additionally, the Department notes that with the introduction of more sophisticated metering, many gas utilities are able to perform daily throughput analyses. Therefore, the Department recommends the Commission direct GP to conduct a design-day analysis based on daily data in its next demand entitlement filing and compare these results to its current design-day method.

In its reply comments, Great Plains agreed to the Department's recommendation but explained that to conduct a revised design-day analysis as requested, the Company will need to make two assumptions. One involves estimates of daily consumption for the customers for which Great Plains does have daily meter reads capability, and the other is about the amount of pipeline capacity it will be able to release on the Viking system.

C. Reserve Margin

In Great Plains' 2007, 2008, and 2009 demand entitlement proceedings, the Commission stated the following:¹⁵

Great Plains shall reduce its reserve margin in Docket No. G004/M-09-1262 to approximately five percent or explain why it is not reasonable to do so.

Great Plains' reserve margin is now proposed to be approximately 8.45 percent, which is greater than the 5 percent reserve margin reference in the above Commission Order. However, the Department believes the increase in the reserve margin from the last heating season is due to GP's inability to release 1,000 Dkt/day of capacity on Northern that it originally proposed to release.¹⁶ Ordinarily, had GP been able to release this capacity, its proposed reserve margin for the 2019-2020 heating season would have been 5.50 percent,¹⁷ which is closer to the 5 percent threshold referenced above.

The Department believes that the Company's reserve margin is reasonable.

¹⁴ Ibid.

¹⁵ Department of Commerce, Comments, Attachment 4.

¹⁶ Great Plains Petition, p. 3.

¹⁷ Great Plains Petition, Exhibit A.

D. Distribution Planning and Reliability

Regarding distribution and reliability, GP stated that it has recently employed distribution system planning models that will be updated and reviewed annually to analyze distribution capacity requirements. Great Plains new modeling uses weather assumptions that are based on the simple average of the coldest day in the last 30 years. The Department believes GP' current planning approach is reasonable.¹⁸

Further, the Commission's 18-454 Order Point No. 3 required Great Plains in future demand entitlements filings, to provide information on pressure issues in Fergus Falls, impact on GP' firm customers and on distribution/transmission system and city gates if there ever were a loss of a single compressor station on NNG, Viking and/or, both.

Great Plain noted that the pressure issues occurred in an outlying area near Fergus Falls on January 29, 2019 related to a feed to a distribution regulator station. GP personnel monitored and checked pressures manually throughout the evening of January 29 and into the morning of January 30. According to GP there was no loss of service because of the pressure issue, and the Company was prepared to curtail interruptible customers if needed to maintain system integrity.¹⁹

E. Demand Entitlement Cost Recovery Proposal

Great Plains in its November 1, 2019 Supplement compared its October 2019 PGA rates to the projected November 2019 PGA rates to highlight the changes in demand costs.²⁰ The Department reviewed GP' analysis indicating that the Company's demand entitlement proposal would result in rate impacts for customers in both its former North and South District area.

The estimated annual rate impacts on customers are not very different between the two former PGA districts and are (on average) as follows:

- An annual bill increase of approximately \$0.69, or 0.7 percent, for the average residential customer consuming 77.9 Dkt annually; and
- An annual bill increase of approximately \$3.87, or 0.7 percent, for the average firm general service customer consuming 434.4 Dkt annually.²¹

¹⁸ Department of Commerce, Comments, p. 9

¹⁹ Department of Commerce, Comments, Attachment 4.

²⁰ Great Plains Petition, Exhibit C.

²¹ Department of Commerce, Comments, p. 11

VII. Decision Alternatives

1. Accept Great Plains proposed Demand Entitlement levels for the 2019-2020 heating season. (GP, DOC)
2. Allow Great Plain to recover associated demand costs through monthly Purchased Gas Adjustment, effective November 1, 2019. (GP, DOC)
3. Accept Great Plains proposed design-day methodology for its consolidated PGA areas. (GP, DOC)
4. Require Great Plains to conduct a design-day analysis based on daily data in its next demand entitlement filing and compare these results to its current design-day method. (DOC, GP)