COMMENTS OF KINDER MORGAN, INC. ON PROPOSED ERCOT FRAMEWORK FOR FIRM GAS FIRM FUEL SUPPLY SERVICE PHASE 2

I. Introduction

Kinder Morgan, Inc. ("KMI") provides these comments to the Electric Reliability Council of Texas ("ERCOT") regarding the proposed Firm Fuel Supply Service ("FFSS"). The FFSS is intended to provide additional grid reliability and resiliency during extreme cold weather by compensating Generation Resources that meet the higher fuel supply resilience standard specified for the FFSS. As one of the largest natural gas transportation and storage companies in Texas, KMI believes it has a critical role to play in ensuring the success of the FFSS as it expands to encompass gas delivery from off-site storage to implement the legislative mandates in SB 3. To that end, it is critical that ERCOT and the Public Utility Commission of Texas ("PUC") construct the FFSS for off-site storage and transportation in a manner that ensures there are sufficient gas supply resources to support the amount of generation contemplated for the FFSS. As presently drafted, the FFSS proposal fails to do that.

Specifically, by limiting the definition of a "Qualifying Pipeline" to those intrastate gas utility pipelines that do not have contracts with local distribution companies ("LDCs") or human needs customers, the proposal eliminates the significant majority of natural gas storage and delivery capability available to support the FFSS. Moreover, such contracts with LDCs and human needs customers did not prevent KMI from meeting its firm delivery obligations to Generation Resources during Winter Storm Uri, and would not do so in a future gas curtailment event. For these reasons, KMI strongly urges ERCOT to remove these unnecessary limitations on the definition of Qualifying Pipeline.

II. KMI's Natural Gas Transportation and Storage Operations in Texas

A. KMI

Headquartered in Houston, Texas, KMI has an interest in or operates approximately 70,000 miles of natural gas pipelines and 700 billion cubic feet of working natural gas storage capacity – the largest natural gas network in North America. Its pipelines and storage facilities serve major domestic markets and transport approximately 40 percent of the natural gas consumed in the United States. KMI's gas pipeline and storage facilities in Texas are similarly extensive.

B. KMI's Texas intrastate natural gas pipelines

KMI is a significant source of gas transportation and delivery in Texas, as its pipelines are connected to every important natural gas resource play and supply area, including the Eagle Ford, Permian, Haynesville, and Barnett. Notably, within the last five years, KMI has placed in service the Gulf Coast Express Pipeline and the Permian Highway Pipeline, each of which has a capacity of approximately 2 billion cubic feet per day, to transport natural gas from the Permian Basin to gas markets along the Texas Gulf Coast. In addition to these new pipelines, KMI operates Kinder Morgan Texas Pipeline ("KMTP"), a full-service intrastate pipeline system with approximately 2,100 miles of pipeline located primarily along the Texas Gulf Coast. It also operates Kinder Morgan Tejas Pipeline ("Tejas"), a major intrastate pipeline system located primarily along the Texas Gulf Coast with approximately 3,700 miles of pipeline. Both KMTP and Tejas are used to transport, purchase, and sell natural gas in the Texas intrastate market, including for and to many gas-fired Generation Resources in ERCOT.

C. KMI's Texas natural gas storage facilities

Critically, KMI also operates a number of intrastate natural gas storage facilities in Texas that have a combined storage capacity of 136 billion cubic feet of natural gas, nearly 1/3 of the

available natural gas storage capacity in the State of Texas. These facilities have a total peak injection capacity of 1.15 billion cubic feet per day and a total peak withdrawal capacity of 2.875 billion cubic feet per day. The total peak withdrawal capacity is equivalent to approximately 14,373 megawatts of output capacity, which equates to approximately 345,000 megawatt hours per day.

In addition to these considerable gas storage resources, KMI is evaluating how it can bolster its ability to support fuel security for gas-fired generation in ERCOT. This includes the possibility of adding additional natural gas storage capacity and pipeline facilities that would provide firm gas supply reliability to markets that serve electric generation facilities in the Dallas, Beaumont, Austin, Houston, and San Antonio metro areas. Capital improvements to intrastate gas storage facilities incentivized by including intrastate gas pipeline utilities in the FFSS would enhance gas delivery reliability to Generation Resources in ERCOT, whether participating in the FFSS or not. ERCOT's proposed framework for the FFSS, however, eliminates that incentive.

III. ERCOT's FFSS Proposal Removes KMI's, and Much of the State's, Significant Gas Transport and Storage Resources from Eligibility to Support the FFSS.

As described above, KMI operates an extensive network of intrastate natural gas utility pipelines and storage facilities in Texas. These facilities operate to ensure reliable gas delivery to customers of all types – LDCs serving homes and business and industrial customers, as well as Generation Resources. As a result, KMI would not be able to certify to a Generation Entity, as required by the current FFSS proposal, that its intrastate gas utility pipelines have no contracts with LDCs or human needs customers – eliminating KMI's extensive intrastate resources from participating in the FFSS. The same is true for other major intrastate gas utility pipeline and storage operators in Texas. Thus, the consequence of the unnecessarily limiting language in the definition of Qualifying Pipeline is to remove from FFSS eligibility the significant majority of gas

storage and transport resources in ERCOT. This is evident from considering the impact on KMI's intrastate storage and transportation resources alone.

By evaluating the generation capacity[1] of gas-fired Generation Resources served by KMI's intrastate gas pipeline system, KMI estimates that it serves in excess of 24,000 MW of gas-fired Generation Resources in ERCOT. This is equivalent to approximately 43% of the total gas-fired Generation Resource capacity in ERCOT. And while KMI can only estimate the amount of gas-fired Generation Resources served by the other large intrastate pipeline systems, it appears that approximately 85% of the total natural gas-fired Generation Resources in ERCOT served by intrastate gas utility pipelines would be ineligible to support the FFSS.[2]

KMI's storage resources, which depend on its integrated network of intrastate gas utility pipelines to deliver gas to end-use customers, would also be unavailable to support the FFSS. Again, based on publicly available information, KMI's current natural gas storage withdrawal capacity is approximately 20% of the state's total withdrawal capacity,[3] and after the completion of improvements of its Markham, Texas storage facilities in early 2024, that amount will near 25% of the state's total natural gas withdrawal capacity. None of that significant gas storage resource is available to support the FFSS with the currently proposed definition of Qualifying Pipeline.

At the same time, KMI has identified that only one Generation Resource it serves has a connection with an interstate pipeline. That is consistent with expectations. Compared with intrastate storage and transportation service, there is far less available interstate storage and transportation service directly connected to Generation Resources within ERCOT. And for the FFSS to work now, and as it may be scaled up in the future, such limited storage and transportation

[1] As identified by publicly available information on the ERCOT web site.
[2] *Id.*
[3] As identified by publicly available information on the RRC web site: https://www.rrc.texas.gov/gas-services/publications-statistics/gas-storage-statistics/

service would need to be available and not otherwise committed on a long term basis to the many other types of customers such facilities serve. And as for such other firm transportation service customers on interstate pipelines, another feature of interstate pipeline service that ERCOT should consider is that interstate pipelines often prorate capacity on their pipelines on a pro rata basis among all firm service customers – with no elevated priority for Generation Resources as occurs under the Railroad Commission's Curtailment Rule. Consequently, Generation Resources could have a lower priority in a curtailment event on an interstate pipeline, than they would on an intrastate pipeline subject to the same curtailment event. Thus, notwithstanding ERCOT's desire to ensure greater fuel delivery reliability by limiting the definition of Qualifying Pipeline, it is likely that the change has the opposite effect.

IV. The Railroad Commission of Texas Curtailment Rule would not prevent KMI from meeting its firm delivery obligations to Generation Resources under the FFSS

A. The Railroad Commission of Texas Curtailment Rule

In response to natural gas supply limitations that arose during Winter Storm Uri, the Railroad Commission of Texas ("Commission") promulgated Commission Rule 7.455,[4] (the "Curtailment Rule") which established a series of gas curtailment delivery priorities among certain classes of customers. In particular, the Curtailment Rule instructs that during a "curtailment event" a gas utility pipeline must give highest priority gas delivery, including sale and transportation, to human needs customers and LDCs that serve human needs customers. The second highest priority category in the rule is "firm [i.e., pursuant to contracts for firm service] deliveries to electric generation facilities." In preliminary discussions on the content of a viable FFSS product for off-site gas storage and transportation, ERCOT expressed to KMI its concern that the Curtailment Rule priorities would limit a participating gas utility pipeline's ability to meet its firm delivery

[4] 16 TEX. ADMIN. CODE § 7.455.

commitments to a Generation Resource if the rule is invoked. That would not be the case for KMI, and likely other gas utility pipelines with significant storage resources, for several reasons described below.

B. Gas pipeline and storage facilities are a secure fuel delivery solution

The gas delivery interruptions that occurred during Winter Storm Uri were the result of gas supply limitations, not gas delivery limitations.[5] The storage and delivery infrastructure portion of the Generation Resource fuel equation is robust. Gas pipeline and storage facilities enjoy the key "weather hardening" feature that they are primarily underground. Pipelines are located underground as standard industry practice for safety reasons, and off-site gas storage facilities utilize naturally occurring underground caverns and depleted oil and gas wells. This provides significant insulation from extreme cold conditions. KMI has also made targeted investments to weather-harden aboveground gas storage withdrawal facilities, as well as gas compression facilities, based on prior operating experience in cold weather. Such facilities are also now subject to the Commission's weatherization inspection in conjunction with their designation as critical gas facilities under Commission Rule 3.66,[6] and have complied with the requirement to notify their local transmission and distribution utilities of their status as critical infrastructure.[7] All of this combines to provide an even more robust and dependable means to deliver available natural gas to Generation Resources than was the case during Winter Storm Uri. Because KMI had natural gas available during Uri, it did not curtail firm deliveries to Generation Resources that served human needs customers.

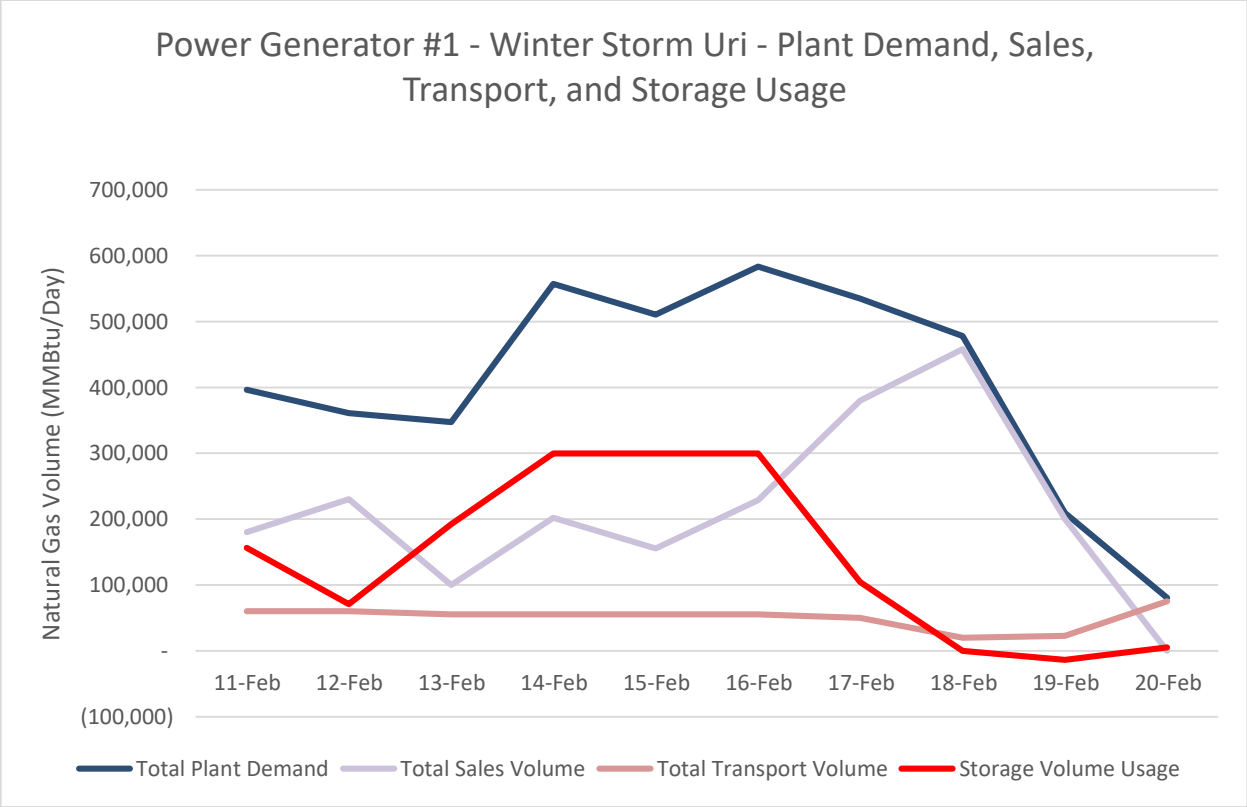
[5] https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_WRA_2022.pdf
[6] 16 TEX. ADMIN. CODE § 3.66.
[7] *Id.* §§ 3.65, 25.52(h).

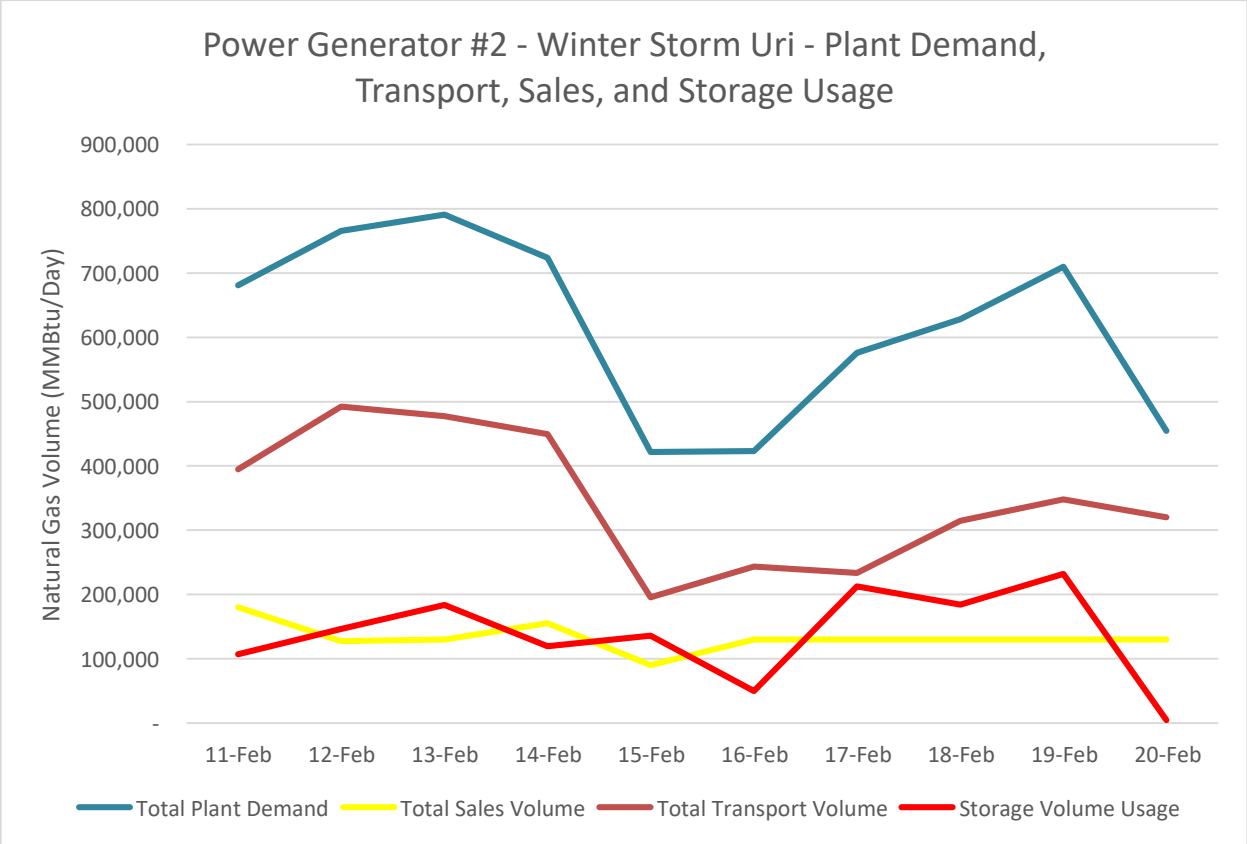
C. KMI Did Not Curtail Gas Delivery to Generation Resources during Uri While Under a Curtailment Order

KMI's weather-hardened system and significant gas storage resources mean it did not curtail service to Generation Resources serving human needs customers during Uri, and would not need to do so in the future. Shortly after the onset of the storm, the Commission invoked an Emergency Order that, not unlike the current Curtailment Rule, elevated gas deliveries to human needs customers above deliveries to "electric generation which serves human needs customers." Notwithstanding this limitation, gas remained available to KMI's Generation Resource customers that had firm storage and withdrawal rights, like those required by the FFSS, throughout the storm because of its significant gas storage resources. It never had to prioritize one group of human needs customers over another because gas was available and it was delivered. Both Calpine and NRG have stated this was the case in publicly filed comments before the PUC.[8] Indeed, *all* of the Generation Resources that had firm storage contracts at KMI's intrastate facilities received 100% of the gas volume that they nominated for service during Winter Storm Uri – even with the Commission's Emergency Order prioritizing human needs customers in effect.

Below are graphs depicting the following information for two of KMI's Generation Resource customers: (1) gas supply provided via transportation contracts, (2) gas supply provided via sales contracts, (3) gas supply from the generator's storage account with KMI, and (4) total plant demand, which is the sum of the supply under subparts (1), (2) and (3). As shown, as demand increased during Winter Storm Uri, these generators were able to meet that demand by utilizing their gas storage capacity with KMI, even as gas supplies were disrupted from producing basins in the state.

[8]Joint Comments [of NRG, Calpine, and Kinder Morgan] on Attributes Required for Resource Eligibility to Provide Firm Fuel Supply Service. https://interchange.puc.texas.gov/search/documents/?controlNumber=53298&itemNumber=14,


Power Generator #1 - Winter Storm Uri - Plant Demand, Sales, Transport, and Storage Usage
Natural Gas Volume (MMBtu/Day)
700,000
600,000
500,000
400,000
300,000
200,000
100,000
-
(100,000)
11-Feb
12-Feb
13-Feb
14-Feb
15-Feb
16-Feb
17-Feb
18-Feb
19-Feb
20-Feb
Total Plant Demand
Total Sales Volume
Total Transport Volume
Storage Volume Usage


Power Generator #2 - Winter Storm Uri - Plant Demand, Transport, Sales, and Storage Usage
Natural Gas Volume (MMBtu/Day)
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
-
11-Feb
12-Feb
13-Feb
14-Feb
15-Feb
16-Feb
17-Feb
18-Feb
19-Feb
20-Feb
Total Plant Demand
Total Sales Volume
Total Transport Volume
Storage Volume Usage

These two examples are consistent with KMI's delivery track record to other generators that had firm storage contracts at KMI's facilities during Winter Storm Uri, and demonstrate that firm off-site storage and delivery rights with intrastate resources provide a robust and secure fuel solution to support the FFSS.

D. The gas utility pipeline determines whether to invoke the Curtailment Rule

Finally, but equally importantly, it is critical to understand that under the Curtailment Rule, it is the gas utility pipeline, not the Railroad Commission, or any other entity, that determines when a curtailment event occurs and thereby invokes the curtailment delivery priorities. Specifically, the rule states that the gas delivery priorities apply in a "curtailment event." A curtailment event is defined as occurring "[w]hen a gas utility determines that its ability to deliver gas may become inadequate to support continuous service to firm customers on its system and it reduces deliveries to one or more firm customers."[9] Consequently, if an intrastate gas utility pipeline and storage company has sufficient natural gas supply to serve both of the two highest curtailment priorities, as KMI did during Winter Storm Uri, there would be no reason for it to invoke the Curtailment Rule with respect to Generation Resources and human needs customers and LDCs that serve human needs customers. Because KMI's gas storage and delivery resources have already demonstrated that they are sufficient to avoid curtailments to Generation Resources, and such storage resources are only increasing in scope, there is no evidence to conclude that it would need to invoke a curtailment event that triggers the delivery priorities in the Curtailment Rule.

V. Conclusion

KMI shares ERCOT's and the PUC's goal of adding truly secure off-site fuel delivery to Generation Resources in support of the FFSS. The narrow limitations on the definition of

[9] 16 TEX. ADMIN. CODE § 7.455(a)(3) (emphasis added).

Qualifying Pipeline, however, have the opposite effect by removing from eligibility the natural gas storage and transportation resources required to make the next iteration of the FFSS viable and scalable for future use consistent with the scope of ERCOT's gas-fired generation fleet. For that reason alone the above-described limitations should be removed. Moreover, they should certainly be removed for any gas utility pipeline and storage operator that demonstrates reliable gas delivery to Generation Resources while also serving LDCs and human needs customers during Winter Storm Uri, as KMI did. Finally, ERCOT should remove the limitations on the definition of Qualifying Pipeline because they are anticompetitive. The intrastate gas pipeline and storage market is built on market, rather than regulatory, incentives. The interstate pipeline and storage market, by contrast, is not. The Legislature has mandated a market-oriented mechanism (payments from Generation Resources to gas storage and transportation providers) to incentivize the deployment of the state's considerable gas resources to achieve secure fuel delivery to Generation Resources. To achieve the Legislature's mandate in SB 3, ERCOT should not so limit the eligibility of the intrastate gas resources that can more rapidly, and at scale, be deployed to support the FFSS.

Respectfully submitted,

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