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OPEN MEETING AGENDA ITEM

elpaso Pipeline Group

February 21, 2011

The Honorable Commissioner Sandra D. Kennedy
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007-2927
Email: skennedy@azcc.gov

G-00000C-11-0081

Re: El Paso Natural Gas Company's Response

Dear Commissioner Kennedy:

I am writing regarding your letter dated February 7, 2011, in which you inquire about the natural gas outages in the Tucson and Sierra Vista areas of Arizona. In your letter you asked a number of questions about those outages and related events. Enclosed please find a copy of our responses to your specific questions. We hope that our responses provide you and your fellow Commissioners further insight into the very unfortunate energy outages of early February 2011. We are also prepared to meet with you personally, as soon as your schedule permits, to discuss these responses and any further questions you may have, as well as participate in the Commission's open meeting on the subject.

Please do not hesitate to contact me at 719-520-4443 with any questions about the enclosed response.

Sincerely,

Robert L. Perez
Vice President, Marketing & Business Development

Arizona Corporation Commission
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Brenda Burns, Commissioner
Honorable Russell Pearce, President of the Arizona Senate
Honorable Kirk Adams, Speaker of the Arizona House
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Steve Olea, Utilities Division Director
Robert Miller, Chief of Pipeline Safety
John Hester, Southwest Gas Corporation
Phil Dion, UNS Gas, Inc.
Shelley Corman, Transwestern Pipeline Company

El Paso Natural Gas Company's Response
to Commissioner Kennedy's Letter of February 7, 2011
Regarding Natural Gas Outages in Arizona

1. **In your opinion, what caused the outages to occur? Please provide as much detail as possible.**

   During February 1- 3, 2011, the Southwest experienced widespread severe cold weather that also impacted much of the nation. From El Paso Natural Gas Company's (EPNG) vantage point, the principal cause of these outages was the inability of the natural gas production basins and natural gas production facilities delivering gas into the EPNG pipeline system to function under the extreme weather-related conditions that were present in the production area. This precluded our customers' suppliers from providing the quantities of natural gas that were required by our customers. As discussed more fully below, the outages were not a result of insufficient pipeline capacity to transport the natural gas supply to the markets.

   To understand the context of EPNG's response to this question, it is important first to clarify the role performed by EPNG and the role performed by other parties in moving natural gas from the wellhead to the burner-tip. EPNG is an interstate natural gas pipeline company regulated by the Federal Energy Regulatory Commission. As an interstate natural gas pipeline company, our role, since 1993, is only to receive, transport and deliver to our customers the natural gas supplies that they purchase from third parties. We do not sell natural gas to our customers. Instead, our customers purchase natural gas from third parties who then cause the natural gas supplies to be delivered into our pipeline system at a variety of receipt locations. All of these locations where we receive gas from our customers' suppliers are after the gas has been produced, gathered, treated, and processed by other companies. The gas may also be received into EPNG's pipeline system from other pipelines or storage facilities. Our customers include natural gas utilities, municipalities, electric utilities and independent power plants, industrials, gas marketers and producers. At a variety of delivery locations on our system, our customers take from our pipeline the quantities of natural gas they need for their business. These quantities should equal the natural gas quantities that they have caused their suppliers to introduce at the various receipt points in our system. In this way, the receipts that our customers cause their suppliers to introduce into our system should "balance" the deliveries that our customers take from our system.

   During February 1-3, 2011, EPNG believes that the following factors affected natural gas supplies, our pipeline system operations, and some of our customers' abilities to distribute natural gas to all parts of their systems.

- Historically, both the San Juan natural gas supply basin in northern New Mexico and southern Colorado and the Permian natural gas supply basin in west Texas and southern New Mexico experience some reduction in natural gas supplies at the temperatures that were projected for the overnight lows on February 1 going into the morning hours of February 2. However, the actual overnight lows in West Texas were 10 to 15 degrees below what was forecasted.

- Another situation that reduced the natural gas delivered by third-parties to the EPNG pipeline system was the effect of cold weather on power plants that then affected various natural gas production and processing facilities. It has been reported in Texas that the winter storm caused 82 out of the 550 power generating stations to shut down or not be able to start due to the cold weather. These 82 power plants represented a combined generating capacity of 8,000 megawatts. Approximately forty percent of the plants that went down were powered by coal, 59 percent by natural gas and 1 percent by wind.

- The Electric Reliability Council of Texas Inc. (ERCOT) ordered rolling blackouts in Texas. The rolling blackouts shut down some natural gas processing plants in the Permian Basin in the early morning of February 2, 2011. The significance of this is that some natural gas needs to be processed or treated to achieve the quality required for delivery to pipelines and eventually to consumers. If the processing plants cannot operate, the natural gas cannot be delivered to pipelines like EPNG.

- The cold weather affected the production of natural gas in both the San Juan and Permian Basins causing the well head production to freeze off. This factor coupled with the rolling blackouts in West Texas resulted in a more significant reduction in the gas supply produced in the Permian Basin for delivery to the EPNG pipeline system as well as to other pipelines in the region.

- With some of the natural gas processing plants unable to operate and the temperatures falling, our understanding is that:

    - Some of the processing plants sustained equipment damage due to the cold weather, which prolonged their outages.

    - Ice plugs formed in the lines upstream of EPNG's system that lead from the production wells to the gas processing facilities causing the natural gas supply to be reduced.

    - As electric power was restored and some processing plants were able to resume operations, in numerous cases the natural gas could not flow to the plants due to the ice plugs in the lines leading to the plants.

Consequently the gas was not available as supply to the purchasers of natural gas (i.e., EPNG's customers). Some processing plants were not able to resume operations for several days – and some were unable to resume operations for two weeks.

Market demand for natural gas in the Southwest was extremely high starting February 1 and lasting through the early morning of February 4, 2011. This quantity of gas demand was far greater than the quantity of gas supplies that were delivered to EPNG by our customer's suppliers for transportation to our customers.

- The weather-driven shortfall in gas supply resulted from a combination of two factors: on the receipt side of the pipeline, EPNG's customers and their suppliers were not able to tender as much gas as the market needed, and on the market side of the pipeline, increased demand for natural gas lead certain customers to take more gas than they had supply to support. Basically, customers took 18 % more natural gas out of EPNG's pipeline system than was provided by the customers' suppliers into EPNG's system.

- With more gas being delivered from the pipeline than was being supplied to it, pressures in the pipeline fell below normal, primarily on EPNG's south system. Please reference the attached map for the location of the Permian Basin as it relates to EPNG's south system.

- While not a contributing factor to the supply shortages, the rolling blackouts affected several of EPNG's compression stations which are dependent upon utility-supplied electric power. However, EPNG was able to use back-up generators in some cases to restore power, and it also staffed critical compressor stations 24 hours per day during the cold weather to ensure reliable operations to the extent gas supplies were available to transport.

During this period of cold weather, EPNG delivered not only the natural gas supplies tendered by its customers. EPNG also delivered gas from two other critically important sources: 1) EPNG's Washington Ranch storage field located near Carlsbad, New Mexico, and 2) EPNG's system line pack (natural gas stored within the pipeline itself). The Washington Ranch storage field operated at maximum withdrawal capacity during this period (gas was extracted from the storage field and delivered into the pipeline), and EPNG's system line pack helped sustain deliveries during the supply shortage, especially on February 2-3. Washington Ranch and EPNG's system line pack accounted for approximately 18% of all gas delivered during the weather-related supply shortage. EPNG also sought whatever assistance it could obtain from its affiliated pipelines and other interconnected pipelines to further support the needs of its customers. While EPNG did everything within its control to maximize the delivery of natural gas to its customers, the natural gas supply from the customers' suppliers was simply insufficient to meet the cold weather demands for natural gas and still maintain the pipeline's operating

pressures at the level needed by its customers to sustain their deliveries to all parts of their distribution systems.

2. **Were the outages a surprise to your company or did your company have some advance warning that the impending situation could result in outages to retail customers?**

   EPNG regularly monitors the forecasted weather for its entire service area as part of its normal planning process and thus had advanced warning of the colder than normal temperatures expected across the Southwestern United States. In preparation for the forecasted colder weather, EPNG worked to maintain its line pack at higher than normal levels and began withdrawing gas from the Washington Ranch storage facility on the afternoon of January 31 and maintained the maximum withdrawal rate throughout February 1-3.

   The rolling blackouts, their duration and impact to the natural gas suppliers of our customers, along with the colder than forecasted temperatures were not known or anticipated by EPNG.

3. **If your company did have advance warning, how much in advance of the outages was that warning and when did your company notify the Arizona Corporation Commission of the possibility of outages?**

   Considering the factors described above, EPNG took prudent steps in advance of the weather front to check equipment, prepare its people, pack up the system with natural gas, and ensure Washington Ranch storage field was prepared to run at maximum output. When EPNG saw weather and, consequently, system conditions start to deteriorate on the morning of February 2, 2011, at 7:24 am MST EPNG issued a warning to its customers and third parties via its public Electronic Bulletin Board (EBB). This warning stated that due to the severe winter weather the demand for natural gas was much higher than expected and that several sources in the San Juan Basin and the Permian Basin were not delivering to EPNG's pipeline system the natural gas supplies ordered by customers. The EBB is a public web site maintained by EPNG to provide information to its customers, regulatory stakeholders, and other interested entities. Also, notices posted on the EBB are sent by email automatically to individuals and companies that subscribe to the electronic communications.

   Subsequently, at 10:20 am MST on February 2, EPNG declared a strained operating condition for its entire system which was then escalated to a critical operating condition at 11:51 am MST due to continued decrease in line pack within the pipeline as a result of the gas deliveries off the system being in excess of the gas supply coming onto the system. These notices described the severity of the situation and informed customers that EPNG would have to begin imposing penalties on customers that took more gas than was delivered into the system on their behalf. EPNG makes available to its customers a graph of line pack levels on its system and customers could see the fast decline.

Additionally, EPNG posted a list of all supply locations where our customers' suppliers were delivering lower than expected quantities of natural gas, so that our customers could try to find other supply sources capable of meeting their demand.

Entities in Arizona that have staff who received emails of these EBB notices included, among others, Southwest Gas Corporation, UNS Gas Inc., City of Mesa, AZ, Salt River Project, Arizona Public Service Company, Arizona Electric Power Cooperative, the Navajo Tribal Utility Authority, Freeport-McMoRan Corp., Arizona LNG, New Harquahala Generating Co., Gila River Power LP, and the Arizona Corporation Commission.

Early on the morning of February 3, EPNG began to receive information from its customers that parts of their distribution systems were experiencing outages due to the lower pipeline pressure caused by gas supplies that were insufficient to support gas demand.

The Arizona Office of Pipeline Safety contacted EPNG on February 3 to inquire about the reasons for the gas outages being experienced in Tucson and Sierra Vista, and EPNG provided the attached information to the pipeline safety staff. We are also subscribing Mr. Robert Miller, at his request, to receive future EBB notices automatically.

4. **Did your company have an emergency plan of some kind in place to deal with this type of situation? If no, why not?**

EPNG does have emergency response plans and winter preparedness plans to prepare its equipment and people for winter weather conditions. These plans do not address temporary natural gas supply shortages beyond our system, because EPNG does not control those supplies or have a natural gas supply function.

EPNG's process for responding to and notifying its customers of actions they need to take during a strained or critical operating conditions as a result of insufficient supply and/or increased demand is outlined in Section 11.1 of the General Terms and Conditions ("GT&C") of EPNG's Volume No. 1-A FERC Gas Tariff ("Tariff"). (EPNG's tariff is reviewed and approved by the FERC Energy Regulatory Commission (FERC).) Additionally, within Section 6.3 of the Tariff, EPNG's process for addressing a deficient source of supply is described. This process involves identifying the location of the deficient supply source and notifying customers via the EBB, so the relevant customers can find additional sources of supply to meet their needs.

5. **If your company did have an emergency plan in place, how did that plan work in this situation? In other words, what parts of the plan worked as desired and what parts need improvement? For those parts that need improvement, please provide as much detail as possible.**

The extreme weather of February 1-3 provided EPNG with new data regarding record low temperatures in many parts of its system. EPNG is now reviewing its

emergency response and winter preparedness plans to ensure they take into consideration the types of extremely low temperatures that were experienced system wide in early February. EPNG is seeking to identify plan adjustments which will render its pipeline operations even more reliable. However, no conceivable adjustments will overcome the fundamental problem of a lack of supply from third-parties at the levels we saw in early February.

The parts of our winter preparedness plan that worked well included the following: 1) locating personnel on site at critical locations 24 hours per day where needed; 2) weatherizing critical assets to the extent possible with the historically low temperatures; 3) ensuring that personnel travelling to and from locations were well prepared for the cold and difficult travel conditions; and 4) communicating with customers at the field operations levels. Preliminary discussions indicate that adjustments could be made in the use of our Winter Preparedness Plans as follows:

- Expand the plans to include winter preparations for the auxiliary support equipment.
- Expand the plans to include locations not historically exposed to extreme cold weather conditions such as in southern New Mexico and southern Arizona.
- Frequently test our capability to switch from purchased power to back-up generators seamlessly.
- Host a pre-winter meeting with customers, producers and plant operators to discuss winter operations, procedures, and preparations.

6. **How were the aspects of the outage and how your company was dealing with restoring service communicated to your customers, in particular those customers that were directly impacted by the outages?**

EPNG's communication with its customers was conducted through three principal venues: 1) postings on its Electronic Bulletin Board, as discussed above, which is public and available to all its customers, stakeholders, and others; 2) EPNG's gas control personnel interaction with the gas control personnel of our customers and other companies with facilities that connect to EPNG's system; and 3) communication between EPNG's field operations personnel and our customers' field personnel. These channels of communication, in addition to other communications with our customers that occur regularly, are used every day and certainly were used frequently throughout the period of time in question.

7. **There is no natural gas storage in Arizona. If there would have been natural gas storage available to your company in Arizona, would that have mitigated the impact of the outages? Please provide as much detail as possible.**

Considering the principal causes of the outages in Arizona, natural gas storage, properly designed and sited in the market area of Arizona, would likely have provided the amount of natural gas needed to mitigate – and potentially eliminate – the temporary natural gas supply shortages experienced in the market during the first few days of February 2011. The gas from a storage facility would have supplemented gas that was not delivered into the pipeline by our customers' natural gas suppliers. Having gas supplies stored in nearby underground fields or caverns would have given utilities an additional, localized tool to manage the rapid increase in market requirements caused by the increase in weather driven demand. From an operational perspective, a storage facility in Arizona not only would have helped to replace pipeline-based supplies of gas, but likely would have sustained the pipeline operating pressures required by the distribution system in order to safely and continuously deliver gas to the commercial and residential customers.

8. **Is your company working, either on its own or in conjunction with other entities, on establishing natural gas storage in Arizona? If no, why not? If yes, please provide as much detail as possible.**

Recognizing the potential benefits that natural gas storage would have for Arizona customers, EPNG has pursued the development of a storage field in Arizona several times over the past decade. EPNG invested, at our shareholders' expense, approximately $40 million in the development of two potential storage projects in the following locations: 1) at a west valley site called "Copper Eagle" in 2002-04, and 2) a site near the City of Eloy in 2004-08 where the project was named "Arizona Gas Storage". Neither project received enough market support to move forward. Both projects proposed storage withdrawal capabilities that would have offset all or a significant part of the supply reductions experienced in the Permian Basin in early February 2011. If there is strong market interest in a storage project in Arizona as evidenced by contractual commitments, and assuming project support within the State of Arizona and the local area, EPNG could reinitiate its efforts.

The benefits of market area storage for Arizona customers include increased reliability when the supply is needed, as well as operational flexibility to manage changes in market demand on short notice.

EPNG also owns and operates the Washington Ranch storage field near Carlsbad, New Mexico. Although Washington Ranch is not located in Arizona, it allows EPNG to withdraw gas to support its pipeline system operations to partially offset shortfalls in gas supply. During February 1-3, Washington Ranch provided EPNG's customers with approximately 250,000 Dth per day of incremental gas supply. In November 2008, EPNG conducted an open season to increase the withdrawal service provided by the Washington Ranch storage field by 60%, but there was not sufficient market interest in the proposed expansion. Even though the location is in New Mexico, this type of expansion could provide EPNG's customers in Arizona added flexibility during times where supply is limited.

9. **If your company is not working on establishing natural gas storage in Arizona, do you know of any entities that are working on this issue?**

   El Paso has limited information on any other entities seeking to develop storage in Arizona and suggests the Arizona utilities are best positioned to provide this information.

10. **Are there any other measures (other than storage) that you are considering or have considered that would help mitigate such a situation in the future?**

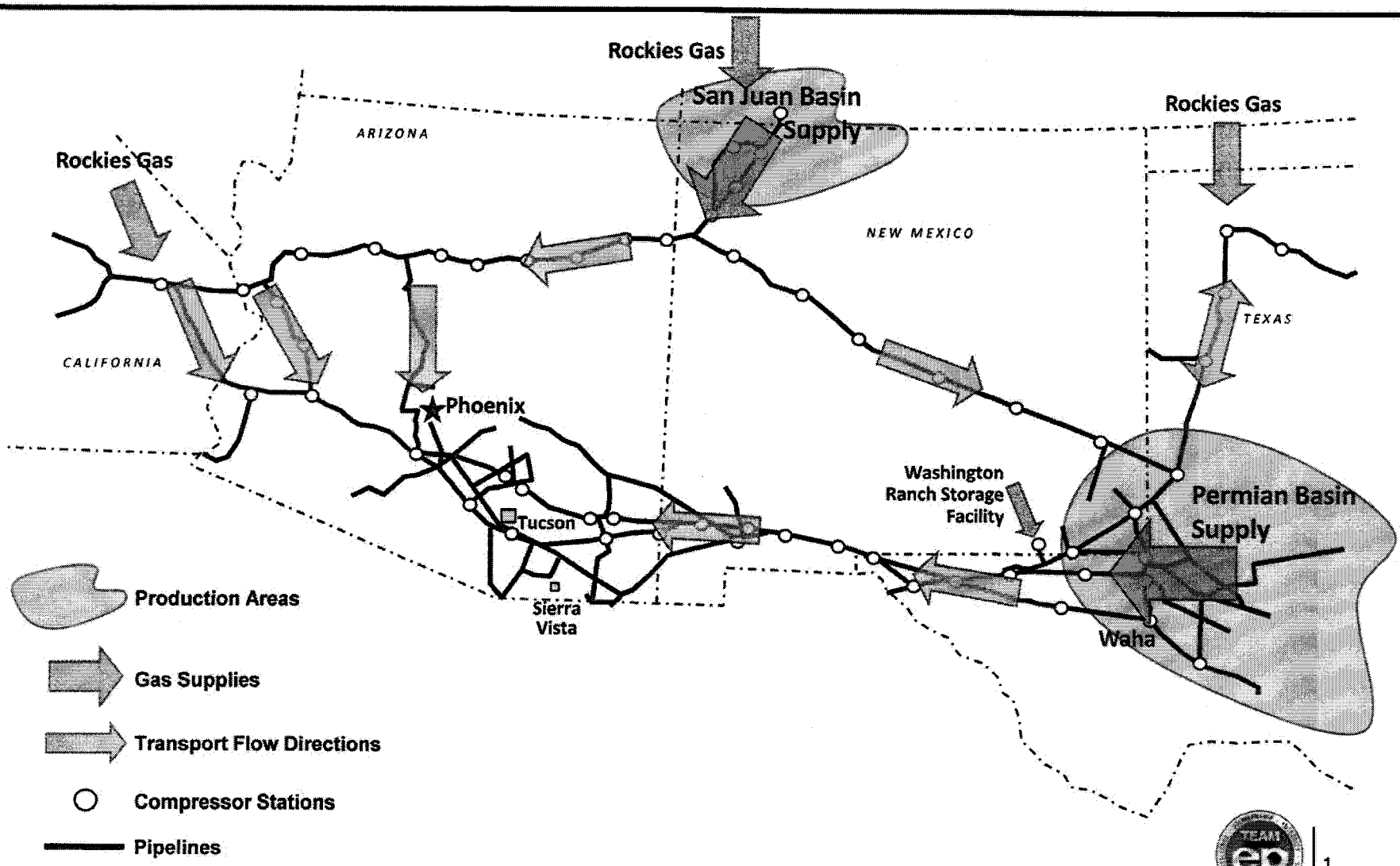
    Considering the extreme conditions seen in early February, we believe the pipeline and its customers should take full advantage of data gathered during this event to develop assessments of the adequacy of existing infrastructure. This should include the placement and sizing of interconnections between pipeline and gas distribution systems to further facilitate the delivery of available natural gas. EPNG will also pursue the following actions:

    - Determine if there are opportunities to enhance EPNG's connectivity to even more natural gas supply diversity.
    - Participate in industry opportunities to improve communications between the electric power generators and the natural gas community.
    - Collaborate with customers on lessons learned and prioritize action items for future improvements.

11. **Please provide any other information that you believe would be helpful to me and the other Commissioners in this inquiry.**

    EPNG has participated recently with Southwest electric utilities in an open discussion around the concept of interdependence between the gas and electric industries. In conjunction with the Desert Southwest Training Advisory Committee (DSTAC), EPNG is working to improve communication between the electric utilities and the natural gas transmission pipelines, particularly with regards to emergency response. This forum may be of interest to the ACC Commissioners and Staff.

El Paso Natural Gas Company System Overview
Supply Locations and Flow Direction



El Paso Natural Gas Company

2-3-2011 (3:00 p.m. Mountain Time)

EPNG System Status

El Paso Natural Gas Company (EPNG) has seen significant increase in demand for natural gas on its pipeline system over the last two days due to prolonged sub-freezing temperatures throughout its service area. EPNG's customers, many of which are natural gas utilities and electric power plants, purchase the natural gas supplies they need from producers, marketers and other parties. EPNG then transports and delivers the natural gas.

However, the gas supplied from production areas has been less than market demand.

- EPNG is transporting all natural gas being provided by its customers and their suppliers, and does not have any capacity issues.
- But there is not enough natural gas being supplied by the customers and their suppliers to meet the customers' high level of demand. Basically, more gas is being taken off the system than is being provided to the system. This situation causes lower operating pressure which in turn means some natural gas utilities have had to reduce service to some of their customers.
- In talking with producers, other pipelines and processing plants connected to the EPNG system, the primary issues being experienced appear to be (1) well freeze-offs due to extremely cold temperatures in the San Juan, Permian and Waha production areas, (2) rolling electric blackouts that occurred in the Permian and Waha supply areas on February 2 that shut down processing plants, and (3) demand for natural gas elsewhere in the country for supply due to cold weather nationwide. The circumstances affecting EPNG and its customers are affecting other pipelines in the region.

What is EPNG doing?

- Prior to the cold front, EPNG prepared its system by packing it with natural gas.
- We have used all available line pack to help maintain deliveries.
- We are operating our Washington Ranch storage field near Carlsbad, New Mexico, at maximum withdrawal to supplement customer supplies.
- To the extent possible, we are moving gas between the north and south main lines to hold up pressures on the south mainline where the heaviest market demand is located.
- We have staffed compressor stations to keep units running despite the challenges of cold weather. EPNG has experienced some equipment start-up issues during the cold weather but that has not caused delivery failures of available supply at this time.

- We are in constant communication with customers, producers and other operators regarding system conditions.
- We have solicited assistance from customers and other pipelines that might have available supply to support the system on a short-term basis.

On February 2, after the rolling electric blackouts affected processing plants in the Permian area, EPNG issued a notice to all of its customers of a strained operating condition on its system. Later that day, when system conditions continued to deteriorate, EPNG upgraded that notice to an Emergency Critical Operating Condition which remains in effect until further notice. When critical operating conditions are declared, customers are asked to increase the supply they bring to the system or reduce their demand for natural gas to match the supplies available to them. While some action has been taken, it has been insufficient to support demand.

Based on current supply shortfalls, notably from the Permian Basin, and continued high demand, EPNG does not expect conditions to improve until Friday when temperatures start warming or earlier if gas supply is increased. EPNG is working closely with its customers to provide as much assistance as possible.

For media inquiries, please contact Richard Wheatley, Manager of Media Relations for El Paso Corporation, at 832-643-8929.

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