

**BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION**

IN THE MATTER OF NEW MEXICO GAS COMPANY, )  
INC.'S APPLICATION FOR AN EXPEDITED VARIANCE )  
APPROVING ITS PLAN FOR RECOVERY OF THE GAS )  
COSTS RELATED TO THE 2021 WINTER EVENT )  
NEW MEXICO GAS COMPANY, INC., ) CASE NO. 21-\_\_\_\_\_-UT  
Applicant. )  
\_\_\_\_\_ )

**EXHIBIT 3**  
**DIRECT TESTIMONY AND EXHIBIT**  
**OF**  
**JOSHUA J. TILBURY**

**April 16, 2021**

**EXHIBIT 3**  
**DIRECT TESTIMONY OF**  
**JOSHUA J. TILBURY**  
**NMPRC CASE NO. 21-\_\_\_\_\_ -UT**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 **A.** My name is Joshua J. Tilbury. My business address is 7120 Wyoming, Albuquerque, New  
3 Mexico 87109.

4  
5 **Q. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?**

6 **A.** I am employed by New Mexico Gas Company, Inc. (“NMGC” or the “Company”) as the  
7 Director of Gas Management.

8  
9 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK**  
10 **EXPERIENCE.**

11 **A.** My educational background and work experience are described in NMGC Exhibit JJT-1.

12  
13 **Q. PLEASE DESCRIBE YOUR DUTIES AND RESPONSIBILITIES AS DIRECTOR,**  
14 **GAS MANAGEMENT FOR NMGC.**

15 **A.** I am responsible for developing the strategy to ensure system supply reliability, and then  
16 executing that strategy. I coordinate with others in the Company to ensure that we have  
17 adequate gas supply to provide reliable gas service to our customers at a fair and reasonable  
18 price. I am responsible for entering into contracts and placing orders with counterparties  
19 for the purchase of the natural gas used to supply our system. I also determine throughout  
20 the year how much gas to inject into storage for use during peak times and I am responsible

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1 for requesting withdrawals from storage. My other responsibilities include managing the  
2 transportation program, system planning, gas control and compression.

3

4 **Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY TO THE NEW MEXICO**  
5 **PUBLIC REGULATION COMMISSION (“NMPRC” OR THE “COMMISSION”)?**

6 **A.** No.

7

8 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

9 **A.** The purpose of my testimony is to describe what preparations the gas supply team made in  
10 anticipation of the winter storm that came to New Mexico in mid-February, 2021  
11 (hereinafter “2021 Winter Event” or “Event”). I will also describe what information we  
12 learned from weather forecasts, how that worked in our modeling, and the steps we took to  
13 ensure a continuous supply of gas throughout the Event. I will explain the circumstances  
14 that led to the pricing and supply disruptions that we saw during the 2021 Winter Event,  
15 and the details around the price paid for gas for our system before, during and immediately  
16 after the storm.

17

18 **Q. DOES YOUR TESTIMONY RELATE TO OTHER EVIDENCE IN THIS CASE?**

19 **A.** Yes, I, and my team in gas supply at NMGC, have been actively engaged in the preparation  
20 of the Chronology which accompanies this filing as Exhibit 1. I had direct input into,  
21 reviewed and hereby affirm the accuracy of the gas supply related entries in the

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1 Chronology. The Chronology is significantly more detailed than this testimony and is the  
2 best source to read to understand what we did in gas supply to ensure a reliable supply of  
3 gas to our customers during the Event. I will not repeat the details of the Chronology here,  
4 but where appropriate, I will refer to the Chronology throughout this testimony.

5  
6 **Q. PLEASE BRIEFLY DESCRIBE WHAT YOU AND YOUR TEAM DID TO**  
7 **ENSURE RELIABLE GAS SUPPLY TO NMGC’S CUSTOMERS DURING THE**  
8 **2021 WINTER EVENT.**

9 **A.** As more fully described in Exhibit 1, NMGC took the following actions in advance of, and  
10 in response to, the circumstances of the 2021 Winter Event:

- 11 • NMGC Utilized Baseload Gas: NMGC relies on what is known as “baseload gas.”  
12 The baseload gas level for each winter heating month is set each spring prior to the  
13 heating season based upon average usage for each winter heating month over the  
14 last ten years. Having established its baseload levels for the upcoming heating  
15 season, in the summer before the heating season, NMGC ensures it has contracts in  
16 place to provide the baseload needs of the Company for each month during the  
17 winter heating season. While the quantities are fixed during the spring and summer,  
18 this baseload gas is typically priced at the beginning of each month utilizing the  
19 Platts published monthly index price (as described in Exhibit 1, and the  
20 Application). Additionally, NMGC hedges its baseload gas during the peak usage  
21 months of December through February by purchasing financial call options each

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1 summer to cover 100% of the forecasted baseload volume of gas. The hedging  
2 mechanisms allow NMGC to fix a maximum price it will pay (on behalf of  
3 customers) for gas. This price is determined each summer, well before the heating  
4 season occurs.

5  
6 For February 2021, NMGC had established a baseload demand of 116,600  
7 MMBtu/day, and this gas was priced according to the Platts index at \$2.67 per  
8 MMBtu. During the 2021 Winter Event, NMGC fully utilized its firm supply of  
9 index-priced baseload gas.

10  
11 In addition to its Monthly Index Priced baseload gas, NMGC also had one contract  
12 for baseload for 10,000 MMBtu/day priced at the Gas Daily average index which  
13 averaged \$93.47 over the 2021 Winter Event. NMGC contracted for this small  
14 amount of baseload gas priced at the Gas Daily index in order to maintain supplier  
15 diversity.

- 16  
17 • NMGC Obtained “Swing Gas”: When customer demand exceeds the volumes of  
18 baseload gas available, the difference in volume is defined as swing demand and  
19 any shortage is made up with access to or acquisition of what is called “Swing Gas”.  
20 At NMGC, Swing Gas can be sourced three ways: Storage Gas, Day-ahead Gas  
21 (i.e. gas purchased a day ahead of need in the “day ahead” market), and Intraday

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1 Gas (i.e. gas purchased on the day needed in the “intraday market”). Taking these  
2 in order of preference:

- 3       ▪ Storage Gas: For many years, NMGC annually has acquired and stored  
4 natural gas in storage caverns in West Texas at the Keystone Storage  
5 Facility (“Keystone Facility”) for use as needed, including during the high-  
6 demand winter months, and for events such as the 2021 Winter Event. Since  
7 this gas was previously purchased by the Company at a lower price and then  
8 placed in storage until needed it offers some price protection and additional  
9 reliability to NMGC and its customers. To receive delivery of this stored  
10 gas, NMGC has an ongoing storage contract with Kinder Morgan (“KM”)  
11 which allows the Company to call for and receive delivery of this gas owned  
12 by NMGC from the Keystone Facility at predetermined levels. As the 2021  
13 Winter Event was approaching, NMGC anticipated using up to 165,000  
14 MMBtu/day of gas from the Keystone Facility. This number reflects  
15 NMGC’s contractual allotment. Accordingly, during the 2021 Winter  
16 Event, NMGC began requesting its gas from the Keystone Facility. NMGC  
17 first requested delivery of gas from the Keystone Facility for delivery on  
18 Saturday, February 13<sup>th</sup> in order to increase linepack in preparation for the  
19 storm. This gas was delivered to the Company. NMGC again sought to  
20 withdraw gas from the Keystone Facility storage on Sunday, February 14<sup>th</sup>,  
21 however, as reflected in Exhibit 1, the Keystone Facility declared a Force

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1 Majeure event on Sunday, and cut the amount of gas it delivered to NMGC.  
2 This prevented NMGC from accessing the full amount of gas it was  
3 contractually entitled to from the Keystone Facility. Thereafter, throughout  
4 the remainder of the 2021 Winter Event, NMGC was able to obtain some  
5 gas from storage, but at amounts far less than it was contractually entitled  
6 to. Because of the Keystone Facility's failure to provide NMGC with the  
7 full amount NMGC should have been able to withdraw from storage,  
8 NMGC was forced to purchase more Swing Gas than it had anticipated  
9 purchasing in order to meet demand.

- 10       ▪ Day-ahead and Intraday Markets: Day-ahead Gas is gas NMGC previously  
11 contracted-for which is then called for the day before it is required. Intraday  
12 Gas is gas ordered and used the same day. Day-ahead Gas is typically more  
13 expensive than baseload or Storage Gas when market demand for gas is  
14 increasing, which was the situation during the 2021 Winter Event. Intraday  
15 Gas is typically more expensive than Day-ahead Gas, and therefore it is  
16 purchased only as needed. Because of increased demand, lack of gas from  
17 storage, and concern about freeze-offs impacting supply coming from the  
18 Permian Basin, NMGC had no choice but to resort to purchasing both Day-  
19 ahead and Intraday Gas during the 2021 Winter Event. Purchasing Day-  
20 ahead and Intraday Gas, although expensive, helped NMGC maintain  
21 enough supply to meet demand throughout the 2021 Winter Event. Here, it

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1 is worth noting that NMGC does not hedge Day-ahead and Intraday Gas  
2 because the need for, volume of, and total cost for such gas is uncertain.  
3 NMGC is not aware of any utility that hedges Day-ahead or Intraday Gas  
4 volumes. The Company has primarily relied on its prior acquisition of and  
5 contracts for delivery of Storage Gas, index-priced Day-ahead Gas  
6 contracts, and occasionally small Intraday Gas purchases to provide reliable  
7 and cost-effective gas for its customers. The price impact to NMGC and its  
8 customers of purchasing Day-ahead and Intraday Gas during the 2021  
9 Winter Event is outlined in the Application.

- 10 • NMGC Utilized Linepack Capacity: Linepack is a term used to describe gas  
11 purchased and placed in the Company’s pipes that is available to meet customer  
12 demand during peak consumption hours. Linepack is sometimes described as  
13 “horizontal storage” since it is essentially gas “stored” in the Company’s pipes for  
14 later use. Typically, linepack can be increased throughout the day and at night and  
15 then used to help meet the evening demand as people return home from work, and  
16 the morning demand as people wake up and turn on their heat. Planning ahead to  
17 use linepack in this fashion allows the Company to effectively store gas in the  
18 system’s existing pipes in anticipation of increased demand the following day and  
19 avoid more expensive Intraday Gas purchases to the extent possible. As described  
20 in Exhibit 1, NMGC has a linepack goal for each day, and during the Event was  
21 generally successful in maintaining linepack.

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- 1           •     NMGC Switched Gas Supply Sources: NMGC has ongoing contracts for gas from  
2                   the San Juan, Permian, Piceance, and Green River Basins to allow for supply  
3                   diversity and flexibility in sourcing. Sourcing gas from multiple basins allows  
4                   NMGC to increase supplies from one basin should one of the other basins become  
5                   constrained. In preparation for, and during, the Event, NMGC switched as much  
6                   of its supply as possible from purchasing gas in the Permian Basin to initially  
7                   seeking withdrawal from the Keystone Facility, which is in the Permian Basin, and  
8                   then to purchases from the San Juan and Piceance Basins after anticipating and  
9                   observing disruptions in Texas and the Permian Basin. As the Event progressed,  
10                  as the Permian Basin supply disruptions increased more than anticipated, and as  
11                  other problems developed in the Texas energy markets, NMGC continued  
12                  switching more of its supply from the Permian Basin to the San Juan Basin and the  
13                  other Northern basins. Switching supply sources like this allowed NMGC to obtain  
14                  enough gas to maintain service throughout the 2021 Winter Event, but, as described  
15                  below, the price of gas from the San Juan Basin and elsewhere also increased  
16                  dramatically as the Event developed.

17  
18   **Q.    HOW ARE PURCHASES GENERALLY MADE IN THE DAY-AHEAD GAS**  
19   **MARKET AND WHAT CHALLENGES DID THIS PRESENT IN HANDLING**  
20   **THIS EVENT?**

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1    **A.**    As noted above, the day ahead market for gas is a market for the purchase of gas on one  
2            day for delivery the next day. For example, on Monday NMGC purchases its gas for  
3            Tuesday. These are referred to as next day purchases or day-ahead purchases. The market  
4            is closed on Saturday and Sunday, and this then requires NMGC to purchase enough gas  
5            on Friday to meet its demand for the entire weekend (Saturday, Sunday, and Monday). On  
6            holiday weekends, either Friday or Monday holidays, NMGC must purchase gas on the  
7            day before the holiday weekend, for four days.

8  
9            During the 2021 Winter Event, Monday February 15, 2021, was Presidents' Day, resulting  
10           in a four-day span for which we needed to purchase gas. Although the gas is purchased on  
11           the last working day before the long weekend (Friday in this instance), the price to be paid  
12           under the index pricing program in place for purchasing gas (described below) is not set  
13           until the following morning (Saturday). This is typically not an issue in itself, since price  
14           fluctuations are typically not great from any given Friday to Saturday. However, as  
15           described in the Chronology, and below, the price for natural gas between Friday, February  
16           12, and Saturday, February 13 went up dramatically, and then stayed up for days thereafter,  
17           and the Company was obligated to pay these higher prices.

18  
19           We approached this storm like we have done previously for all other storms and would do  
20           so again, but we had never faced price increases this dramatic or prices this high before,  
21           and as a result, this Event turned into a pricing event as opposed to a supply event.

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1 **Q. CAN YOU BUY ONLY AS MUCH GAS AS YOU FORECAST NEEDING FOR**  
2 **EACH DAY OF THE LONG WEEKEND?**

3 **A.** No, to make the situation over a long weekend even more challenging, we have to purchase  
4 gas “ratably” across those days. As used here, “ratably” means that we have to purchase  
5 the same amount of gas for each day per our contracts. This presents a challenge when  
6 there are large variations in temperature projected across the weekend. While NMGC has  
7 tools to assist with this challenge such as unratable intraday contracts and the ability to  
8 withdraw from storage, the challenge is to utilize those tools and create an effective strategy  
9 to meet the variations in demand. In this case, during the Event, the weather was projected  
10 to be much warmer on Saturday February 13, than it was to be for Sunday February 14.  
11 To buy ratably, either NMGC had to buy a lower amount of gas for each day to meet  
12 Saturday’s projected load and be short on Sunday, or buy a larger amount of gas for each  
13 day to meet Sunday’s projected load and store the excess on Saturday. As you will see, we  
14 chose the latter option.

15  
16 **Q. AS YOU SAW THE STORM APPROACHING, DID YOU ANTICIPATE ANY**  
17 **SUPPLY DISRUPTIONS DUE TO THE STORM?**

18 **A.** Yes, it has been NMGC’s experience that during any storm, as temperatures get colder,  
19 NMGC will experience some degree of supply disruption. As described in detail in the  
20 Chronology, throughout the week of February 9<sup>th</sup>, we were watching the storm and  
21 planning for it, although we held off buying gas for it until Friday the 12<sup>th</sup>, as is consistent

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1 with sound practices I have learned over the years, and consistent with market practices.  
2 As described in the Chronology, by Friday February 12, 2021, when we purchased our gas  
3 for the holiday weekend, the winter event was well into Texas and freeze-offs in Texas and  
4 Oklahoma were beginning to cause some supply disruptions. The same storm that was  
5 causing these supply disruptions in Texas and Oklahoma was moving into New Mexico,  
6 so we anticipated supply disruptions to occur in the Permian Basin as well.

7  
8 **Q. TAKING INTO ACCOUNT YOUR PRACTICES AND WHAT YOU KNEW**  
9 **ABOUT THE WINTER STORM, WHAT DID YOU DO TO PREPARE FOR THE**  
10 **STORM?**

11 **A.** As described more fully in the Chronology, we anticipated all of these challenges and came  
12 up with a strategy to address them. In preparing for the storm we: 1) planned to utilize our  
13 contracts for firm supply and firm transportation rights, 2) switched as much of our gas  
14 supply purchases as we could from the Permian to the San Juan and Piceance Basins, 3)  
15 intended to rely on storage, and 4) oversupplied our system, meaning we nominated more  
16 gas than we were forecasted to need from our storage so that we would have extra to  
17 account for supply disruptions.

18

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1 **Q. WHAT CIRCUMSTANCES CHANGED DURING THE WEEKEND OF**  
2 **FEBRUARY 13, AND 14, AND HOW DID YOU RESPOND TO THE CHANGING**  
3 **CIRCUMSTANCES?**

4 **A.** We had prepared for the storm, but events took place on the Presidents' Day weekend that  
5 were challenging:

- 6 • First, the weather got significantly worse than anticipated on Sunday the 14<sup>th</sup> and  
7 Monday the 15<sup>th</sup>, and because we had to purchase gas ratably on Friday, we were  
8 unable to increase our Day-ahead purchases until Tuesday for delivery on  
9 Wednesday. As described in the Chronology, this and the storage disruptions  
10 discussed herein forced us into the Intraday market on the 14<sup>th</sup> and 15<sup>th</sup>.
- 11 • Second, we anticipated that the storm would cause some freeze-offs and supply  
12 disruptions. However, we could not predict the extent of the supply disruptions in  
13 the Permian. Starting on Sunday the 14<sup>th</sup>, these supply disruptions and increased  
14 demand due to the increasingly severe weather, resulted in extraordinarily higher  
15 prices in the gas market on Saturday and then throughout the remainder of the  
16 Event. The prices in this region for gas to be delivered on Saturday and throughout  
17 the Event were higher than we've ever seen.
- 18 • Third, demand for natural gas increased significantly, more than anticipated, during  
19 the storm, both in the entire Southwest region, and in NMGC's territory.
- 20 • Fourth, as the storm approached, we had anticipated supply disruptions and we had  
21 planned to rely heavily on our storage gas to account for this. The gas in storage is

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1 a firm supply that is already paid for. However, we could not have anticipated that  
2 we would have such limited access to our storage supply. KM was affected by low  
3 pressure and equipment failure, causing them to declare Force Majeure. This cut  
4 NMGC's supply and prevented NMGC from accessing the full amount of gas it was  
5 entitled to.

6  
7 **Q. DID THE COMPANY EXPERIENCE SUPPLY DISRUPTIONS FROM OTHER**  
8 **SUPPLIERS DURING THIS EVENT?**

9 **A.** Yes, we experienced some cuts from other suppliers of both baseload gas and Day-ahead  
10 gas. As a result of these cuts, along with our disruption from the supply from storage, the  
11 Company was forced to go into the intra-day market, which was much more expensive.

12  
13 **Q. DID NMGC HAVE TO CURTAIL SERVICE TO ANY CUSTOMERS DUE TO**  
14 **THE SUPPLY ISSUES EXPERIENCED IN THE PERMIAN BASIN?**

15 **A.** No, because of some of the strategies we employed in our initial supply plan, switching  
16 our supply to the San Juan and Piceance Basins and oversupplying the system's forecasted  
17 demand and buying intraday gas to replace supply disruptions, we were able to address  
18 these challenges and obtain enough gas to meet demand. These strategies were successful  
19 and prevented us from having to curtail service to any of our customers during the 2021  
20 Winter Event.

21

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1 **Q. HAVE YOU PREPARED ANY EXHIBITS IN SUPPORT OF THE COMPANY'S**  
2 **APPLICATION AND REQUEST FOR A VARIANCE?**

3 **A.** Yes, I have prepared Exhibits 4, 5, 6 and 7 as attached to the Application. These exhibits  
4 were prepared by me or at my direction and are based upon my own knowledge and the  
5 information contained in Exhibit 1.

6  
7 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

8 **A.** Yes.

**Educational and Professional Summary**

**Name:** Joshua James Tilbury

**Address:** P.O. Box 97500  
Albuquerque, NM 87199

**Education:** B.S., Crime and Justice Studies and Sociology

**Professional**

<b>Experience:</b> New Mexico Gas Company, Inc. Albuquerque, NM Director, Gas Management Manager, Gas Supply	2020- Present 2013 – 2020
ENSTAR Natural Gas Company Anchorage, Alaska Operations Analyst	2010-2011
New Mexico Gas Company, Inc. Albuquerque, NM Rep, Acquisitions Senior Gas Supply Administrator	2007 – 2010 2006 – 2007

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**ELECTRONICALLY SUBMITTED AFFIRMATION OF JOSHUA J. TILBURY**

STATE OF NEW MEXICO )  
 )ss.  
COUNTY OF BERNALILLO )

In accordance with 1.2.2.10(E) NMAC, **JOSHUA J. TILBURY**, Director, Gas Management for New Mexico Gas Company, Inc., upon being duly sworn according to law, under oath, deposes and states under penalty of perjury under the laws of the State of New Mexico: I have read the foregoing Direct Testimony and Exhibit, and they are true and accurate based on my personal knowledge and belief.

**SIGNED** this 16th day of April 2021.

/s/ Joshua J. Tilbury  
JOSHUA J. TILBURY